INTRODUCTION

Anyone who might be expected to use this fire extinguisher should study and understand the information in this manual. Please read it completely and keep it accessible so that it may be reviewed on a periodic basis. OSHA requires training of personnel who might be expected to use an extinguisher in the case of an emergency. Familiarity with this manual and the instruction nameplate on the extinguisher will contribute to successful use of the extinguisher. You should know just what it CAN and CANNOT do, where it is located, how to use it and how to maintain it. Proper and effective use of any fire extinguisher begins with an understanding of the classes of fire. Extinguishers are tested and rated for certain classes and sizes of fires. Some are rated for single classifications, some for multiple classifications and others constitute a hazard if used on certain types of fires.

TYPES AND CLASSES OF FIRES

CLASSES OF FIRES	TYPES OF FIRES	PICTURE SYMBOL
A	Wood, paper, cloth, trash and other ordinary materials	
B	Gasoline, oil, paint and other flammable liquids	
C	May be used on fires involving live electrical equipment without danger to the operator	
D	Combustible metals and combustible metal alloys.	
K	Cooking media (Vegetable or animal oils and fats)	

IMPORTANT THINGS TO REMEMBER!

NEVER DISCHARGE A FIRE EXTINGUISHER INTO ANYONE'S FACE

NEVER THROW AN EXTINGUISHER INTO THE FIRE OR LEAVE IT UNATTENDED IF THE FIRE IS NOT OUT
(Pressure build-up could cause an explosion from even a partially full extinguisher)

KEEP FIRE EXTINGUISHERS AWAY FROM CHILDREN

Water, Water Mist and AFFF and FFFP Foam Extinguishers

The above referred to models are shipped EMPTY – they must be filled and pressurized before being placed into service.

Model 240, 250, 252, 254 – Never use involving live electrical equipment. The nameplate on the extinguishers have the international red slash across the Class C symbol designating the hazard of using them where electricity is involved.

Model B260, B262 – Wet Chemical (Class K) extinguishers are approved for use for fires involving cooking media.

Model B270, B272 – Water Mist Extinguishers must be charged using deionized water to avoid contaminates. These extinguishers are UL Listed for **Class A and Class C fires.**

Never use Water Mist, Water, AFFF or FFFP Foam extinguishers for fires in cooking media. The water in all could flash to steam due to the extremely high temperatures and cause serious burns.

Model's 250, 252, and 254 AR AFFF Foam may be used for fires involving water based flammable liquids such as alcohols or ketones.

DO NOT SUBJECT ANY OF THE EXTINGUISHERS IN THIS GROUP TO CONDITIONS WHERE THEY MIGHT FREEZE.

NOTE: Only the Model 240 2½ gallon water extinguisher may be chemically freeze protected to -40° F with the addition of an Amerex Model B506 charge. The B506 is not designed to protect Water Mist, Wet Chemical, AFFF or FFFP Foam extinguishers.

DRY CHEMICAL, DRY POWDER (CLASS D), HALOTRON I, HALON 1211, WET CHEMICAL (CLASS K) AND CARBON DIOXIDE EXTINGUISHERS

These extinguishers are shipped factory charged. **Do not test your extinguisher** since even a small amount of discharge could cause it to lose pressure making it less effective or useless in case of a fire.

Dry chemicals are non-poisonous but either the acidic based (ABC) or alkaline based (Regular or Purple K) chemicals could be an irritant if inhaled. If any physical discomfort is experienced, contact a physician immediately.

Dry chemical is not recommended for fires in delicate electrical equipment or aircraft. Use of this agent may extinguish the fire but may damage the equipment beyond repair.

Neither Halotron I nor Halon 1211 should be used in confined areas smaller than indicated on the extinguisher nameplate, food preparation areas or in the presence of people with cardiac problems. If problems occur, quickly remove the person from the area where the gas is present, apply artificial respiration and transport to a physician.

Never use ABC dry chemical, Halon 1211 or Halotron I fire extinguishers on fires involving chlorine containing oxidizers (example: pool chemicals). A violent explosive reaction could occur with the mixture of chemicals.

Wet Chemical (Class K) Extinguishers are approved for use for fires involving cooking media. Do not subject these extinguishers to conditions where they might freeze

Carbon Dioxide is discharged as a gas (with small particles of snow) at extremely low temperatures and will displace oxygen. Care should be exercised in confined areas. If problems occur, quickly remove the person from the area where the gas is present, apply artificial respiration and transport to a physician. Avoid skin contact which could cause cold burns.

NOTE: As required by OSHA, Safety Data Sheets (SDS) are available for all chemicals contained in these fire extinguishers. Contact your Amerex distributor or Amerex Corporation. In addition, the SDS information is contained in a special section of all extinguisher labels. All SDS are available on the Amerex website at www.amerex-fire.com.

MONTHLY

INSPECTION RECORD

FASTEN TO EXTINGUISHER BEFORE INSTALLATION

DO NOT REMOVE

FOLLOW THE INSPECTION INSTRUCTIONS IN OWNER'S MANUAL AND ON THE EXTINGUISHER

Date	Inspected By	Condition

HAVE YOUR EXTINGUISHER PROFESSIONALLY MAINTAINED AND RECHARGED

RECHARGE AFTER ANY USE

IMPORTANT NOTICE TO BOAT OWNERS

If the extinguisher is to be mounted in your boat, make sure that the proper mounting bracket is used. The nameplate (in the area of the UL manifest) says if it is Coast Guard approved and the mounting bracket which MUST be used to complete the approval. You will be cited by the Coast Guard if the correct type of extinguisher and bracket has not been installed.

INSPECTION RECORD
Model No: _____
Serial No: _____
Mfg. Date: _____
Date Installed New: _____

INSPECTION should be performed monthly or more frequently if circumstances dictate. The extinguisher should be checked to see that it is not damaged, the discharge outlet is not blocked, that it is fully charged, the seal is not broken and that the operating instructions are clearly visible.

ANNUAL MAINTENANCE is a more complete inspection of the extinguisher and should be done professionally. It will reveal the need for hydrotesting which must be done on Water Mist, Water, Wet Chemical, Foam and Carbon Dioxide every FIVE YEARS and Dry Chemical, Dry Powder, Halotron I and Halon 1211 extinguishers every TWELVE YEARS. Most local authorities require special tags be attached to the extinguisher to verify this service.

SIX YEAR MAINTENANCE – Every six years extinguishers requiring a 12 year hydrotest shall be emptied and subject to thorough examination of mechanical parts, extinguishing agent and expelling means. When applicable maintenance procedures are done during periodic recharging or hydrotesting, the six year requirement will begin from that date.

RECHARGE should be done professionally immediately after any use by your local Amerex Distributor who has the trained personnel, extinguishing agents and equipment to do it properly. This extinguisher must be recharged with the extinguishing agent specified on the nameplate. Substitutions could cause damage or injury **and will void the warranty.**

DISTRIBUTED BY:

INSTALLATION & DISTRIBUTION

Install, inspect, maintain and test your fire extinguisher in accordance with the National Fire Protection Assoc. Standard 10 "'Portable Fire Extinguishers".
Your fire extinguisher should be mounted in a clean dry area, accessible to possible fire hazards and preferably near an exit. Mount it so that the top is from 3 ½ to 5 feet above the floor and out of the reach of small children.
Use the mounting bracket furnished with the extinguisher or an approved Amerex vehicle bracket if required. Fasten to a solid surface using strong screws or fasteners (not included).

Follow the Mounting Instructions below, particularly in public areas where the extinguisher might be accidentally dislodged from the bracket or have objects placed on it.

MOUNTING INSTRUCTIONS

UL specifies that a hanging device must withstand a vertical force of five times the weight of the charged extinguisher but not less than 100 pounds. The extinguisher bracket should be mounted as follows:
Walls where 2"x4" studs can be found – ALL SIZES: Mount wall hanger bracket securely to stud using two #10 x 1¼" long wood screws through the diagonal smaller holes in the bracket.
Sheetrock – ALL SIZES: Mount a ¾" thick board to the wall using 3/16" toggle bolts – height and width of the board is dependent on extinguisher size. The board should extend a minimum of two inches beyond all sides of the extinguisher profile (excluding hose and horn). Mount wall hanger bracket to board using two #10 x 1" long wood screws as above.
Cinderblock or Cement – ALL SIZES: Mount wall hanger bracket using one ¼" toggle bolt or masonry lead screw expansion anchor through center hole in the bracket. Mount vehicle/marine strap type brackets using two 3/16" toggle bolts or #10 lead screw expansion anchors.
Concrete or Tile Wall – ALL SIZES – Mount wall hanger bracket using one ¼" masonry lead screw expansion anchor through center hole in wall bracket. Mount vehicle/marine strap type brackets using two No. 10 masonry lead screw expansion anchors.
Steel Posts or Beams – ALL SIZES: Special tools and fasteners are required – have extinguisher mounted by a professional fire extinguisher service company.
Tile Walls: Locate in joint.

INSPECTION

Your extinguisher should be inspected monthly, checking for any possible damage, corrosion, leakage or obstructions in the discharge outlet. The tamper seal should be unbroken. The extinguisher should be cleaned so that the instructions on the label are always clearly visible.
Carbon Dioxide extinguishers should be weighed and the weight verified to be within the tolerances specified on the nameplate (label).
Water Mist, Water, Wet Chemical, Foam, Dry Chemical, Dry Powder, **Halotron I and Halon 1211** extinguisher pressure gauges should be checked. The indicator will vary slightly due to temperature, but should always be in the GREEN area if it is fully pressurized. Heft or weigh the extinguisher to determine fullness.

IN CASE OF FIRE

1. Have everyone evacuate the area immediately.
2. Call the Fire Department even if the fire appears to be small (small fires quickly become LARGE fires). The Fire Dept. phone number should be posted at every phone.
3. Use your extinguisher properly, according to the instructions on the nameplate and in this manual. A large fire should be fought by professionals. Be prepared to leave the area if the fire cannot be immediately controlled.

HOW TO USE

NOTE: The following instructions are of a general nature, intended to familiarize the user with the basic operating techniques of Amerex hand portable extinguishers. **All operate by removing the ring (safety) pin and squeezing the handles together.** Since extinguishers differ, the extinguisher nameplate must be consulted for specific procedures and starting distances.

1. Hold the extinguisher upright and pull the ring (safety) pin breaking the plastic seal.
2. Stand back from the fire (the minimum distance stated on the nameplate) and aim at the base of the fire nearest you.
3. Keeping the extinguisher upright, squeeze the handles together to discharge and sweep from side to side. Move closer as the fire is extinguished but not so close as to scatter the burning material or liquid.
4. When the fire is out, back away while watching for possible re-ignition.
5. Evacuate and ventilate the area immediately after use. The fumes and smoke from any fire may be hazardous and can be deadly.

NOTE: Whenever possible, protective clothing and breathing equipment should be used while fighting a fire.

1. HOLD EXTINGUISHER UPRIGHT AND PULL THE RING (SAFETY) PIN

2. STAND BACK FROM THE FIRE AND AIM AT THE BASE OF THE FIRE NEAREST YOU

3. SQUEEZE HANDLES TOGETHER & SWEEP THE EXTINGUISHER STREAM SIDE TO SIDE

REMEMBER THIS SIMPLE WORD – P A S S

PULL AIM SQUEEZE SWEEP

OWNER'S MANUAL
for
HAND PORTABLE
Water & Water Mist
Wet Chemical (Class K)
AFFF & FFFP Foam
Dry Chemical
Dry Powder (Class D)
Carbon Dioxide
Halotron I
Halon 1211
FIRE EXTINGUISHERS

AMEREX LIMITED WARRANTY

Amerex warrants its fire extinguishers to be free from defects in material and workmanship from the date of purchase for a period of 6 (six) years for Dry Chemical, Dry Powder, & Halotron, 12 (twelve) years for High Performance, 1 (one) year for Halon, and 5 (five) years for CO2 and Water/Water Based. During the warranty period, any such defects will be repaired or the defective extinguisher replaced IF ONLY FACTORY REPLACEMENT PARTS HAVE BEEN USED TO SERVICE THE EXTINGUISHER. This warranty does not cover defects resulting from modification, alteration, misuse, exposure to corrosive conditions, improper installation or maintenance.
ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF FITNESS FOR PURPOSE AND MERCHANTABILITY, ARE LIMITED TO THE TIME PERIODS STATED ABOVE. IN NO EVENT SHALL AMEREX CORP. BE LIABLE TO INCIDENTAL OR CONSEQUENTIAL DAMAGES.
Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Amerex Corp. neither assumes nor authorizes any representative or other person to assume for it, any obligation or liability other than expressly set forth herein. This warranty gives you specific legal right and you may have other rights, which vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corp.,P. O. Box 81, Trussville, AL 35173-0081 for instructions.

AMEREX CORPORATION
P.O. BOX 81
TRUSSVILLE, AL, 35173-0081
Phone: (205) 655-3271 Fax: 1-800-654-5980
e-mail: sales@amerex-fire.com
web page: www.amerex-fire.com

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OWNER'S SERVICE MANUAL
NO. 05601
INSPECTION, MAINTENANCE AND RECHARGE

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – use of substitute parts releases Amerex of its warranty obligations. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, horns and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that are incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them void the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

WARNING

Do not use this extinguisher on Class C fires involving energized electrical equipment, Class D fires or any flammables that will react with water. Protect from freezing unless charged with an Amerex Model 506B Loaded Stream/Anti-freeze Charge.

REFERENCES IN THIS MANUAL	AVAILABLE FROM
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association P. O. Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders CGA C-6 Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association 1235 Jefferson Davis Hwy, Suite 501 Arlington, VA 22202

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081

Phone: 205/655-3271 Fax: 800/654-5980

e-mail: sales@amerex-fire.com Web Page: http://www.amerex-fire.com

STORED PRESSURE STAINLESS STEEL WATER FIRE EXTINGUISHERS
Model 240 - 2-1/2 Gallon

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THE MAINTENANCE AND RECHARGE PORTION OF THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances require) to insure that it is ready for use.

INSPECTION (NFPA-10) A “quick check” should be made of the extinguisher for the following:

1. Located in designated place.
2. No obstructions to access or visibility.
3. Operating instructions on nameplate (label) and facing outward.
4. Seals and tamper indicators not broken or missing.
5. Determine fullness by weighing or "hefting".
6. Examine for obvious physical damage, corrosion, leakage or clogged nozzle.
7. Pressure gauge reading in the operable area.

MAINTENANCE – SERVICE PROCEDURE

MAINTENANCE (NFPA-10) At least once a year (or more frequently if indicated by an inspection), maintenance should be performed. Maintenance is a “thorough check” of the extinguisher. It is intended to give maximum assurance that an extinguisher will operate effectively and safely. It includes a thorough examination and any necessary repair or replacement. It will normally reveal the need for hydrostatic testing.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test, using the proof pressure method and a suitable cage, in accordance with CGA Pamphlet C-1 and NFPA Pamphlet 10.
2. **NOTE**: When cleaning avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.
3. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
4. Weigh extinguisher and compare with weight printed on the Maintenance section of the nameplate (label). Recharge extinguisher if weight is not within the indicated allowable tolerances.
5. Check the date of manufacture on the extinguisher cylinder hanger loop or on the extinguisher nameplate. Cylinder must be hydrostatically tested every 5 years to the test pressure indicated on the label.

6. Visually inspect the pressure gauge:
    a. If bent, damaged or improper gauge, depressurize and replace
    b. If pressure is low, check for leaks
7. Inspect the foot stand (base). If cracked or broken replace with proper foot stand.
8. Check ring pin for freedom of movement by breaking the seal and removing the pin. Replace the ring pin if bent or if removal is difficult.
9. Inspect discharge lever for dirt or corrosion that might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged or distorted, replace with proper Amerex part (s).
10. Remove hose assembly, inspect hose assembly for damage, replace as necessary. Blow air through hose assembly to insure passage is clear of foreign material.
11. Examine the air pressurizing valve (Schrader) for damage. The cap should be in place to prevent leaking. Inspect the valve assembly for corrosion or damage to hose thread connections. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures.
12. Install hose and nozzle assembly.
13. Install new tamper seal and record service data on the extinguisher inspection tag.
14. Rehang the extinguisher on the wall hanger bracket making sure that it fits the hanger bracket properly – replace the bracket if necessary. Note: When a Loaded Stream/Anti-freeze charge is used to freeze protect this extinguisher, a complete discharge and maintenance is required annually. Use only the Amerex Model 506B charge and follow the instructions printed on the carton. Reuse of the 506B charge is permitted if the charge is reclaimed in a clean pail and the freeze point is verified. To verify the freeze point, pour the loaded stream solution into a 300 ml graduated container and check the specific gravity with a hydrometer. A minimum specific gravity of 1.270 will assure freeze protection to -40ºF. A lower specific gravity means that the charge should be replaced.

RECHARGE

RECHARGING (NFPA-10) The replacement of the extinguishing agent and includes the expellant for this type of extinguisher.

WARNING:

a. Before attempting to recharge be sure this extinguisher is completely depressurized.
b. Use a regulated pressurizing source (either air or nitrogen). Set the regulator no more than 25 psi (175 kPa) higher than the gauge operating pressure.
c. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.
d. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.

RECHARGING PROCEDURE

1. Complete the “Maintenance-Service Procedure”, items 1 thru 10.
2. Discharge all remaining pressure and water (or anti-freeze solution) making sure that there is no remaining pressure.
3. Remove the valve assembly and disassemble by removing downtube assembly (use a wrench on the brass retainer, not the plastic tube), spring and valve stem from the valve assembly. Remove the collar o-ring from the valve assembly. Discard the valve stem & collar oring.
4. Thoroughly rinse all parts with clean water and wipe dry with a soft cloth. Blow the valve out with air or nitrogen. Inspect the spring – replace parts if worn or damaged. Replace valve stem and collar o-ring with new components. Lubricate the collar o-ring and small o-ring on the valve stem with Bluesil V-711 (do not lubricate the valve stem seal). Inspect the downtube. If it is cracked, deformed or does not have a threaded brass spring retainer replace the downtube. Inspect downtube o-ring, replace if necessary.
5. Rinse the cylinder with clean water and inspect the interior following CGA Visual Inspection Standard, Pamphlet C-6.
6. Firmly replace the plastic fill tube and fill cylinder with clean water until it overflows (2 ½ gallons [9 ½ liters]).

NOTE: THE AMEREX WARRANTY DOES NOT COVER STAINLESS STEEL EXTINGUISHERS FILLED WITH WATER WHICH CONTAINS IN EXCESS OF 40 PPM OF CHLORIDES. IN MANY AREAS WATER INCLUDES HIGH LEVELS OF CHLORIDES.

7. Install a “Verification of Service” collar around neck of cylinder. Install valve assembly to the cylinder and properly align. **CAUTION: Hand-tighten the valve collar nut to 100-125 in. lbs. max (1.15 – 1.44 KG/m). Over-tightening with a wrench will damage the valve.**
8. Remove cap from the air pressurizing valve on the side of the valve body and pressurize with 100 psi (690 kPa) using air or nitrogen. **NOTE: A 02141 fill adapter may also be used by installing to the female valve outlet (where the hose assembly attaches).** The pressure regulator should be set to no more than 125 psi (862 kPa). Replace pressure valve cap. The cap must be in place to insure that the valve will not leak.
9. Check the collar, gauge, cylinder welds and valve orifice for leaks using a leak detection fluid or a solution of soapy water. Remove leak detection fluid from the valve assembly by blowing out with air and wipe exterior of the extinguisher to dry.
10. Install hose assembly into the operating valve.
11. Install ring pin with ring facing front of the extinguisher. Install new tamper seal. Record recharge date and attach new recharge tag.
12. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the Maintenance section on the extinguisher nameplate.

TROUBLESHOOTING GUIDE

WARNING: Determine the source of a leak before the extinguisher is depressurized. **EXTINGUISHER MUST BE COMPLETELY DEPRESSURIZED BEFORE ANY ATTEMPT IS MADE TO DEVALVE IT AND CORRECT ANY LEAKAGE PROBLEM**. To depressurize – hold the extinguisher in an Inverted position and slowly squeeze the discharge handle. Some liquid remaining in the downtube will be discharged so care should be taken in the area used for depressurization. Thoroughly clean all valve parts after depressurization and valve removal.

	PROBLEM	**CORRECTIVE ACTION**
1.	Leak at collar o-ring	Remove valve assembly, clean collar thoroughly and install new o-ring. Lubricate the o-ring with Bluesil V-711
2.	Leak through valve	Install new valve stem assembly. Check valve seat for scratches or foreign matter.
3.	Leak around gauge threads	Remove gauge***** and reinstall using Teflon tape on the gauge threads.
4.	Defective gauge	Remove defective gauge* and install a new P/N 06479 gauge using Teflon tape on the gauge threads.
5.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "Rejected" and return to owner.
	***** Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F) for two to four minutes. Remove gauge with a thin 7/16” open end wrench	

PARTS LIST
for
2 1/2 GALLON STAINLESS STEEL
STORED PRESSURE WATER EXTINGUISHER
(BRASS VALVE)

MODEL 240

ITEM NO.	PART NO.	DESCRIPTION
1	13281	Valve Ass'y – 240
2	06978	Hose Gasket (O-Ring)
3	06999	Hose & Nozzle Ass'y
4	00155	Pressure Valve & Cap Ass'y – 240 only
4A	00158	Cap only for Pressure Valve – 240 only
5	00160	Ring Pin, Stainless Steel
5A	00532	Chain (Nylon) for Ring Pin
6	01387	Lock Wire Seal (Yellow)
7	07762	Lever & Rivet
7A	01563	Rivet Only for Lever
8	09020	Handle & Rivets
8A	01564	Rivet Only for Handle (2 required)
9	06479	Gauge 100 psi (Stainless Steel Tube)
10	05240	Collar O-ring
11	06093	Valve Stem Ass'y
12	00383	Spring
13	02595	Fill Tube
14	05690	O-Ring–Downtube/Retainer
15	15943	Downtube/Retainer Ass'y – 240
16	03576	Rubber Foot Stand 7”
17	21777	Foot Stand w/clip (Black)-240
❄	24874	Model 506B Loaded Stream anti-freeze charge – Model 240 only
*	06247	Bluesil Lubricant (5 oz. tube)
*	21854	Rubber Foot stand Adhesive
NOTE: SEE PARTS BOOK FOR BRACKETS AND ADAPTERS		
*		PART NOT PICTURED

INSPECTION, MAINTENANCE AND RECHARGE SERVICE MANUAL P/N 05603

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 , or The National Fire Code of Canada and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. **DO NOT SUBSTITUTE**.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	**AVAILABLE FROM:**
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Pressure Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Steel Compressed Gas Cylinders **CGA C-6.1** Standard for Visual Inspection of Aluminum Alloy Compressed Gas Cylinders	Compressed Gas Association, Inc. 14501 George Carter Way, Suite 103 Chantilly, VA 20151-2923
National Fire Code of Canada	National Research Council Canda 1200 Montreal Rd. Ottawa, ON KIA 9Z9

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081
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CARBON DIOXIDE HAND PORTABLE FIRE EXTINGUISHERS
Model 320/321—2 1/2 LB
Model 322—5 LB Model 331—15 LB
Model 330—10 LB Model 332—20 LB

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY. AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

FIVE YEAR LIMITED WARRANTY

Amerex warrants its fire extinguishers to be free from defects in material and workmanship for a period of five (5) years from the date of purchase. During the warranty period, any such defects will be repaired or the defective extinguisher replaced if only factory replacement parts and recommended service equipment have been used to service the extinguisher. This warranty does not cover defects resulting from modification, alteration, misuse, exposure to unusually corrosive conditions nor improper installation or maintenance. All implied warranties, including, but not limited to, warranties of fitness for purpose and merchantability, are limited to the time periods as stated above. In no event shall Amerex Corporation be liable for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Amerex Corporation neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corporation, P. O. Box 81, Trussville, AL 35173-0081 for instructions.

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a “quick check” that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

OPERATION

NOTE: **Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.**

WARNING: **Carbon Dioxide extinguishes fires by diluting the surrounding atmosphere with inert gas keeping the oxygen level below the percentage required for combustion. When it is used in an unventilated space, such as a small room, closet or other confined area, prolonged occupancy of that space can result in loss of consciousness due to oxygen deficiency. Avoid skin contact – CO_2 is extremely cold and could cause burns or frostbite.**

1. **Remove extinguisher from wall hanger or vehicle bracket and move it to within approximately 6 feet (5 lb.) or 10 feet (10, 15 or 20 lb.) of the fire site.**

2. **Hold the extinguisher upright, twise and pull ring (safety) pin.**

3. **Stand back 8 feet (2 1/2 or 5 lb.) or 10 feet (10, 15 or 20 lb.) from the fire and aim the horn at base of flames nearest you. Hold horn at base hand grip only—grasping the horn or swivel discharge tube could cause cold burn.**

4. **Keeping the extinguisher upright, sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished, but not so close as to scatter or splash the burning materials.**

5. **When the fire is out, release the valve lever to stop discharge. Stand by and watch for possible reignition.**

6. **Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.**

DISCHARGE TIME (APPROXIMATELY)

2 1/2 or 5 lb – 9 seconds
10 lb – 11 seconds
15 lb – 15 seconds
20 lb – 19 seconds

DISCHARGE RANGE (APPROXIMATELY)

2 1/2, 5, 10, 15, 20 lb – 3 to 8 feet

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

PERIODIC INSPECTION PROCEDURES

(Monthly or more often if circumstances dictate)

NFPA-10 Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Operating instructions on nameplate and facing outward.
4. Safety seals and tamper indicators not broken or missing.
5. Examination for obvious physical damage, corrosion, leakage or clogged nozzle.
6. Determine fullness by weighing or hefting.

MAINTENANCE

At least once a year, or more frequently if indicated by an inspection, Maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that an extinguisher will operate effectively and safely. It includes a thorough examination and any necessary repair or replacement. It will normally reveal the need for hydrostatic testing.

MAINTENANCE - SERVICE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test in accordance with CGA Pamphlets C-1 and C-6 and NFPA 10.
2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
3. Weigh the extinguisher and compare with weight printed in the “Maintenance” section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.
4. Check the date of manufacture stamped on the cylinder dome. The agent cylinder must be hydrostatically tested every 5 years to the test pressure indicated on the nameplate in accordance with DOT requirements.
5. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.
6. Inspect discharge lever for any dirt or corrosion which might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged replace with proper Amerex part(s).
7. Remove the horn and discharge tube (2 1/2 & 5 lb.) or hose & horn assembly (10, 15, & 20 lb.),
8. Remove the horn and discharge tube (2 1/2 & 5 lb) or hose & horn assembly (10, 15 & 20 lb), inspect for damage, replace as necessary. Replace the horn if brittle, cracked or deformed. Blow air through nozzle and nozzle assemblies to insure passage is clear of foreign material.
9. Carbon dioxide hose assemblies have a continuous metal braid that connects to both couplings to minimize static shock. A hose continuity test should be performed using a basic conductivity tester consisting of a flashlight having an open circuit and a set of two wires with a conductor (clamps or probe) at each end. (NFPA 10)
10. Inspect the valve assembly for corrosion or damage to hose thread connection. Visually inspect the safety relief assembly for obstruction or damage . If necessary , replace with complete Amerex factory assembled safety relief P/N 04000 (tightening assembly to 250 in-lbs of torque). DO NOT SUBSTITUTE. Valve removal and/or valve part replacement should be made only after completely discharging the contents of the cylinder.
11. Inspect the 10, 15 & 20 lb elbow and diffusion tip for blockage or damage. The Amerex 2 1/2 & 5 lb CO2 diffuser is built into the discharge tube. Check elbow and discharge tube for blockage or damage. Replace damaged parts with genuine factory replacement parts only.

12. Reinstall horn and discharge tube (2 1/2 & 5 lb) or hose and horn assembly (10, 15 & 20 lb) to discharge valve. Check horn strap and clip (10, 15 & 20 lb) for damage and proper positioning. Replace, tighten or realign as necessary.

13. Install new tamper seal and record service data on the extinguisher inspection tag.

14. Replace the extinguisher on the wall hanger or in the vehicle bracket making sure that it fits the bracket properly and the bracket is securely attached – replace the bracket if necessary.

RECHARGE

WARNING: Before attempting to disassemble, be sure the extinguisher is completely empty/depressurized.

Use only an approved source of carbon dioxide (see minimum specifications in NFPA 10 "Inspection, Maintenance & Recharging". Do not use dry ice convertors.

Use an approved pump, hose and recharge adapter to insure safe and efficient charge operations.

RECHARGING PROCEDURE

1. Perform steps 1 through 11 of the "Maintenance-Service Procedure" section.

2. Discharge all remaining pressure and contents, making sure that there is no remaining pressure. Retighten valve assembly. A proper valve installation occurs when the **minimum** tightness is used to make a leak-tight, valve-to-cylinder seal. **Do not over-tighten valves!** (100 ft. lbs. [135.58 Nm] maximum torque). Over-tightening can damage both valves and cylinders and may lead to unsafe situations that can cause property damage, injury and/or loss of life.

3. Check the extinguisher nameplate (label) for the proper amount of CO2 to be pumped into the extinguisher.

4. Install the proper Amerex recharge adapter. Adapter must fit over diffuser tip on 2 1/2, 5 lb Discharge Tube and elbow on 10, 15 & 20 lb without blocking diffuser holes. Do not remove 2 1/2, 5 lb. discharge tube or 10, 15, 20 lb. elbow.

5. Place extinguisher on an accurate scale and attach carbon dioxide supply line to the recharge adapter.

6. Attach a device such as a "Pony Spring Clamp" to hold the extinguisher valve lever in the squeezed position or open position. Pump the proper amount of CO2 into the extinguisher. When the proper weight is reached, release the clamp, shut off the CO2 pump and vent the supply line.

7. Remove the CO2 supply line and recharge adapter from the extinguisher valve.

8. Check the collar and valve for leaks using a leak detection fluid or a solution of soapy water. Remove leak detection fluid from the valve assembly and wipe exterior of the extinguisher to dry.

9. Install ring pin with ring facing the front of the extinguisher.

10. Install tamper seal. Record recharge date and attach new recharge tag.

11. Install the horn or hose and horn assembly to the extinguisher valve.

TROUBLESHOOTING GUIDE

WARNING: Determine the source of a leak before the extinguisher is depressurized. The extinguisher must be completely depressurized before any attempt is made to devalve it and correct a leakage problem. To depressurize – hold the extinguisher in a vertical position and slowly squeeze the discharge handle. Thoroughly clean all valve parts after depressurization and valve removal.

Amerex CO2 valve bodies and aluminum cylinders are 1-1/8"-12 UNF straight threads. Use a proper straight thread adapter when hydrostatically testing. When reinstalling the valve assembly, the cylinder must be placed in a suitable securing vice. Lubricate o-ring area only. Threads of straight-threaded cylinders require no lubricant for proper valve installation. A proper valve installation occurs when the minimum tightness is used to make a leak-tight, valve-to-cylinder seal. Do not over-tighten valves! (100 ft. lbs. [135.58 Nm] maximum torque). Over-tightening can damage both valves and cylinders and may lead to unsafe situations that can cause property damage, injury and/or loss of life.

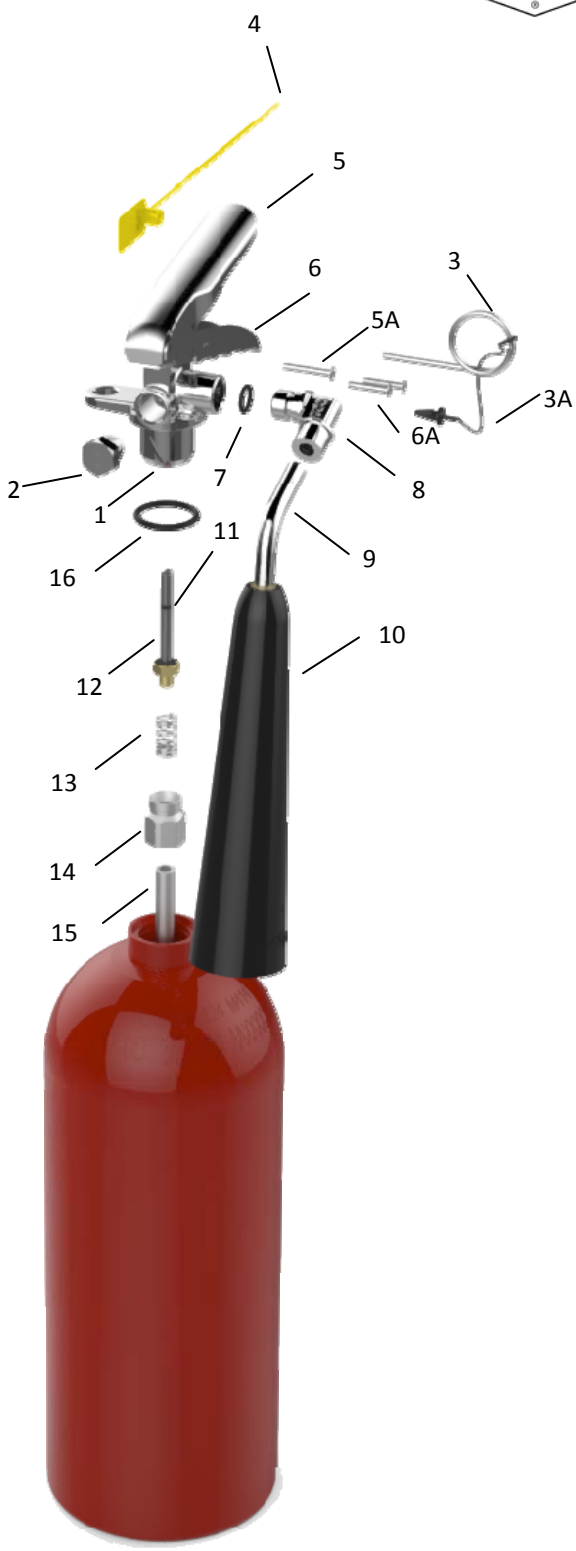
	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, clean collar thoroughly and install new collar o-ring. Lubricate with Bluestar V-711 and reinstall valve.
2.	Leak through valve	Check valve stem seating area for scratches or foreign matter. Clean seating area with a tooth brush and soft cloth. Install new valve stem assembly.
3.	Leak at safety relief nut	Remove safety nut, disc and gasket assembly. Replace with new Amerex P/N 04000 safety nut, disc and gasket assembly. Tighten assembly to 250 in-lbs maximum of torque.
4.	Leak during discharge under discharge lever	Remove valve assembly, downtube, spring and valve stem assembly. Install new valve stem assembly. Check valve seat for scratches or foreign matter.
5.	Leak during discharge at hose connection elbow	Tighten hose connection at elbow (10, 15, 20 lb). replace o-ring and/or elbow on 2 1/2 ,5 lb.
6.	Leak in the cylinder	Contact Amerex if under warranty – otherwise mark "Rejected" and remove from service or return to the owner.

PARTS LIST

For 2 1/2 –5 lb. Carbon Dioxide

Extinguishers

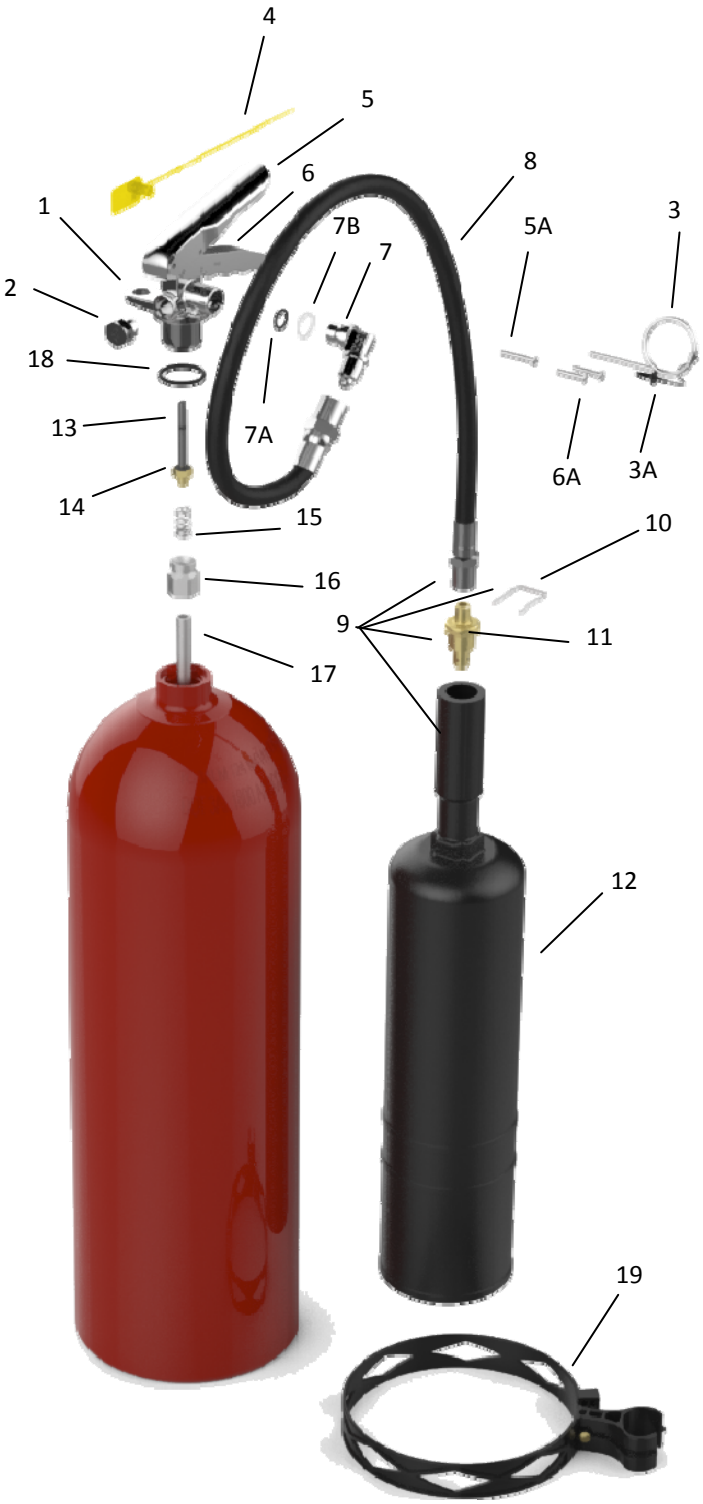
Model 322	Model 322NM
Model 320	Model 320NM
Model 321	Model 321M



Item	Part No.	Description
1	03090 22403 22455	Vlv Asy 322/322MN Vlv Asy 320/320MN/321 Vlv Asy 321M (valve asy does not include elbow/downtube)
2	04000 22895	Safety Disc Gasket & Nut 320/320NM/321/322/322NM Safety Disc Gasket & Nut 321M
3	00160 16268	Ring Pin, Lge Stainless Steel 322/322NM Ring pin Sml Stainless Steel 320/320NM/321/321M
3A	00532	Chain (Nylon) for Ring Pin
4	01387	Lockwire Seal (Yellow)
5	07762 23076	Lever & Rivet 322/322NM Lever & Rivet 320/320NM/321/321M
5A	01563	Rivet only for Lever
6	09020 23077	Handle & Rivets 322/322NM Handle & Rivets 320/320NM/321/321M
6A	01564	Rivet only for Handle (2 reqd)
7	05689	O-ring for Elbow
8	02735	Elbow with O-ring
9	01769 22582	Discharge Tube 322/322NM Discharge Tube 320/320NM/321/321M
10	01772 22400	Horn 322/322NM Horn 320/320NM/321/321M
11	05235	Valve Stem O-ring
12	01539	Valve Stem Assembly
13	00501	Spring
14	00503	Retainer
15	00533 22443	Downtube 322/322NM Downtube 320/320NM/321/321M
16	01124	Collar O-ring 1-1/8"
ALL BRACKETS – SEE BRACKET PAGE		
ALL FILL & HYDROTEST ADAPTERS – SEE ADAPTER PAGE		
ALL VALVE ASSEMBLIES INCLUDE VALVE BODY, VALVE STEM ASSEMBLY, SPRING, RETAINER, LEVER & HANDLE		

PARTS LIST
For
10-15-20 lb. Carbon Dioxide
Extinguishers

Model 330 Model 331 Model 332



Item	Part No.	Description
1	03090	Valve Assembly (does not include elbow or downtube
2	04000	Safety Disc, Gasket & Nut
3	00160	Ring Pin, Stainless Steel
3A	00532	Chain (Nylon) for Ring Pin
4	01387	Lockwire Seal (Yellow)
5	07762	Lever & Rivet
5A	01563	Rivet only for Lever
6	09020	Handle & Rivets
6A	01564	Rivet only for Handle (2 req'd)
7	02309	Elbow with O-ring & Spacer
7A	05689	O-ring for Elbow
7B	02216	Nylon Spacer for Elbow
8	01776	Hose Assembly–330,331,332
9	01782	Hose & Horn Assembly-330
	01705	Hose & Horn Assembly-331,332
10	00594	U-Pin
11	01777	Nozzle
12	00572	Horn – 330
	00593	Horn – 331, 332
13	05235	Valve Stem O-ring
14	01539	Valve Stem Assembly
15	00501	Spring
16	00503	Retainer
17	00564	Downtube – 330
	00589	Downtube – 331, 332
18	01124	Collar O-ring – 1 1/8"
19	20570 20571	Strap & Clip 330,331 Strap & Clip 332
ALL BRACKETS – SEE BRACKET PAGE		
ALL FILL & HYDROTEST ADAPTERS – SEE ADAPTER PAGE		
ALL VALVE ASSEMBLIES INCLUDE VALVE BODY, VALVE STEM ASSEMBLY, SPRING, RETAINER, LEVER & HANDLE		

INSPECTION, MAINTENANCE AND RECHARGE SERVICE MANUAL P/N 05603

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 , or The National Fire Code of Canada and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. **DO NOT SUBSTITUTE**.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	**AVAILABLE FROM:**
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Pressure Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Steel Compressed Gas Cylinders **CGA C-6.1** Standard for Visual Inspection of Aluminum Alloy Compressed Gas Cylinders	Compressed Gas Association, Inc. 14501 George Carter Way, Suite 103 Chantilly, VA 20151-2923
National Fire Code of Canada	National Research Council Canda 1200 Montreal Rd. Ottawa, ON KIA 9Z9

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081
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CARBON DIOXIDE HAND PORTABLE FIRE EXTINGUISHERS
Model 320/321—2 1/2 LB
Model 322—5 LB Model 331—15 LB
Model 330—10 LB Model 332—20 LB

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY. AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

FIVE YEAR LIMITED WARRANTY

Amerex warrants its fire extinguishers to be free from defects in material and workmanship for a period of five (5) years from the date of purchase. During the warranty period, any such defects will be repaired or the defective extinguisher replaced if only factory replacement parts and recommended service equipment have been used to service the extinguisher. This warranty does not cover defects resulting from modification, alteration, misuse, exposure to unusually corrosive conditions nor improper installation or maintenance. All implied warranties, including, but not limited to, warranties of fitness for purpose and merchantability, are limited to the time periods as stated above. In no event shall Amerex Corporation be liable for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Amerex Corporation neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corporation, P. O. Box 81, Trussville, AL 35173-0081 for instructions.

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a “quick check” that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

OPERATION

NOTE: **Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.**

WARNING: **Carbon Dioxide extinguishes fires by diluting the surrounding atmosphere with inert gas keeping the oxygen level below the percentage required for combustion. When it is used in an unventilated space, such as a small room, closet or other confined area, prolonged occupancy of that space can result in loss of consciousness due to oxygen deficiency. Avoid skin contact – CO_2 is extremely cold and could cause burns or frostbite.**

1. **Remove extinguisher from wall hanger or vehicle bracket and move it to within approximately 6 feet (5 lb.) or 10 feet (10, 15 or 20 lb.) of the fire site.**

2. **Hold the extinguisher upright, twise and pull ring (safety) pin.**

3. **Stand back 8 feet (2 1/2 or 5 lb.) or 10 feet (10, 15 or 20 lb.) from the fire and aim the horn at base of flames nearest you. Hold horn at base hand grip only—grasping the horn or swivel discharge tube could cause cold burn.**

4. **Keeping the extinguisher upright, sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished, but not so close as to scatter or splash the burning materials.**

5. **When the fire is out, release the valve lever to stop discharge. Stand by and watch for possible reignition.**

6. **Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.**

DISCHARGE TIME (APPROXIMATELY)

2 1/2 or 5 lb – 9 seconds
10 lb – 11 seconds
15 lb – 15 seconds
20 lb – 19 seconds

DISCHARGE RANGE (APPROXIMATELY)

2 1/2, 5, 10, 15, 20 lb – 3 to 8 feet

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

PERIODIC INSPECTION PROCEDURES

(Monthly or more often if circumstances dictate)

NFPA-10 Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Operating instructions on nameplate and facing outward.
4. Safety seals and tamper indicators not broken or missing.
5. Examination for obvious physical damage, corrosion, leakage or clogged nozzle.
6. Determine fullness by weighing or hefting.

MAINTENANCE

At least once a year, or more frequently if indicated by an inspection, Maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that an extinguisher will operate effectively and safely. It includes a thorough examination and any necessary repair or replacement. It will normally reveal the need for hydrostatic testing.

MAINTENANCE - SERVICE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test in accordance with CGA Pamphlets C-1 and C-6 and NFPA 10.
2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
3. Weigh the extinguisher and compare with weight printed in the “Maintenance” section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.
4. Check the date of manufacture stamped on the cylinder dome. The agent cylinder must be hydrostatically tested every 5 years to the test pressure indicated on the nameplate in accordance with DOT requirements.
5. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.
6. Inspect discharge lever for any dirt or corrosion which might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged replace with proper Amerex part(s).
7. Remove the horn and discharge tube (2 1/2 & 5 lb.) or hose & horn assembly (10, 15, & 20 lb.),
8. Remove the horn and discharge tube (2 1/2 & 5 lb) or hose & horn assembly (10, 15 & 20 lb), inspect for damage, replace as necessary. Replace the horn if brittle, cracked or deformed. Blow air through nozzle and nozzle assemblies to insure passage is clear of foreign material.
9. Carbon dioxide hose assemblies have a continuous metal braid that connects to both couplings to minimize static shock. A hose continuity test should be performed using a basic conductivity tester consisting of a flashlight having an open circuit and a set of two wires with a conductor (clamps or probe) at each end. (NFPA 10)
10. Inspect the valve assembly for corrosion or damage to hose thread connection. Visually inspect the safety relief assembly for obstruction or damage . If necessary , replace with complete Amerex factory assembled safety relief P/N 04000 (tightening assembly to 250 in-lbs of torque). DO NOT SUBSTITUTE. Valve removal and/or valve part replacement should be made only after completely discharging the contents of the cylinder.
11. Inspect the 10, 15 & 20 lb elbow and diffusion tip for blockage or damage. The Amerex 2 1/2 & 5 lb CO2 diffuser is built into the discharge tube. Check elbow and discharge tube for blockage or damage. Replace damaged parts with genuine factory replacement parts only.

12. Reinstall horn and discharge tube (2 1/2 & 5 lb) or hose and horn assembly (10, 15 & 20 lb) to discharge valve. Check horn strap and clip (10, 15 & 20 lb) for damage and proper positioning. Replace, tighten or realign as necessary.

13. Install new tamper seal and record service data on the extinguisher inspection tag.

14. Replace the extinguisher on the wall hanger or in the vehicle bracket making sure that it fits the bracket properly and the bracket is securely attached – replace the bracket if necessary.

RECHARGE

WARNING: Before attempting to disassemble, be sure the extinguisher is completely empty/depressurized.

Use only an approved source of carbon dioxide (see minimum specifications in NFPA 10 "Inspection, Maintenance & Recharging". Do not use dry ice convertors.

Use an approved pump, hose and recharge adapter to insure safe and efficient charge operations.

RECHARGING PROCEDURE

1. Perform steps 1 through 11 of the "Maintenance-Service Procedure" section.

2. Discharge all remaining pressure and contents, making sure that there is no remaining pressure. Retighten valve assembly. A proper valve installation occurs when the **minimum** tightness is used to make a leak-tight, valve-to-cylinder seal. **Do not over-tighten valves!** (100 ft. lbs. [135.58 Nm] maximum torque). Over-tightening can damage both valves and cylinders and may lead to unsafe situations that can cause property damage, injury and/or loss of life.

3. Check the extinguisher nameplate (label) for the proper amount of CO2 to be pumped into the extinguisher.

4. Install the proper Amerex recharge adapter. Adapter must fit over diffuser tip on 2 1/2, 5 lb Discharge Tube and elbow on 10, 15 & 20 lb without blocking diffuser holes. Do not remove 2 1/2, 5 lb. discharge tube or 10, 15, 20 lb. elbow.

5. Place extinguisher on an accurate scale and attach carbon dioxide supply line to the recharge adapter.

6. Attach a device such as a "Pony Spring Clamp" to hold the extinguisher valve lever in the squeezed position or open position. Pump the proper amount of CO2 into the extinguisher. When the proper weight is reached, release the clamp, shut off the CO2 pump and vent the supply line.

7. Remove the CO2 supply line and recharge adapter from the extinguisher valve.

8. Check the collar and valve for leaks using a leak detection fluid or a solution of soapy water. Remove leak detection fluid from the valve assembly and wipe exterior of the extinguisher to dry.

9. Install ring pin with ring facing the front of the extinguisher.

10. Install tamper seal. Record recharge date and attach new recharge tag.

11. Install the horn or hose and horn assembly to the extinguisher valve.

TROUBLESHOOTING GUIDE

WARNING: Determine the source of a leak before the extinguisher is depressurized. The extinguisher must be completely depressurized before any attempt is made to devalve it and correct a leakage problem. To depressurize – hold the extinguisher in a vertical position and slowly squeeze the discharge handle. Thoroughly clean all valve parts after depressurization and valve removal.

Amerex CO2 valve bodies and aluminum cylinders are 1-1/8"-12 UNF straight threads. Use a proper straight thread adapter when hydrostatically testing. When reinstalling the valve assembly, the cylinder must be placed in a suitable securing vice. Lubricate o-ring area only. Threads of straight-threaded cylinders require no lubricant for proper valve installation. A proper valve installation occurs when the minimum tightness is used to make a leak-tight, valve-to-cylinder seal. Do not over-tighten valves! (100 ft. lbs. [135.58 Nm] maximum torque). Over-tightening can damage both valves and cylinders and may lead to unsafe situations that can cause property damage, injury and/or loss of life.

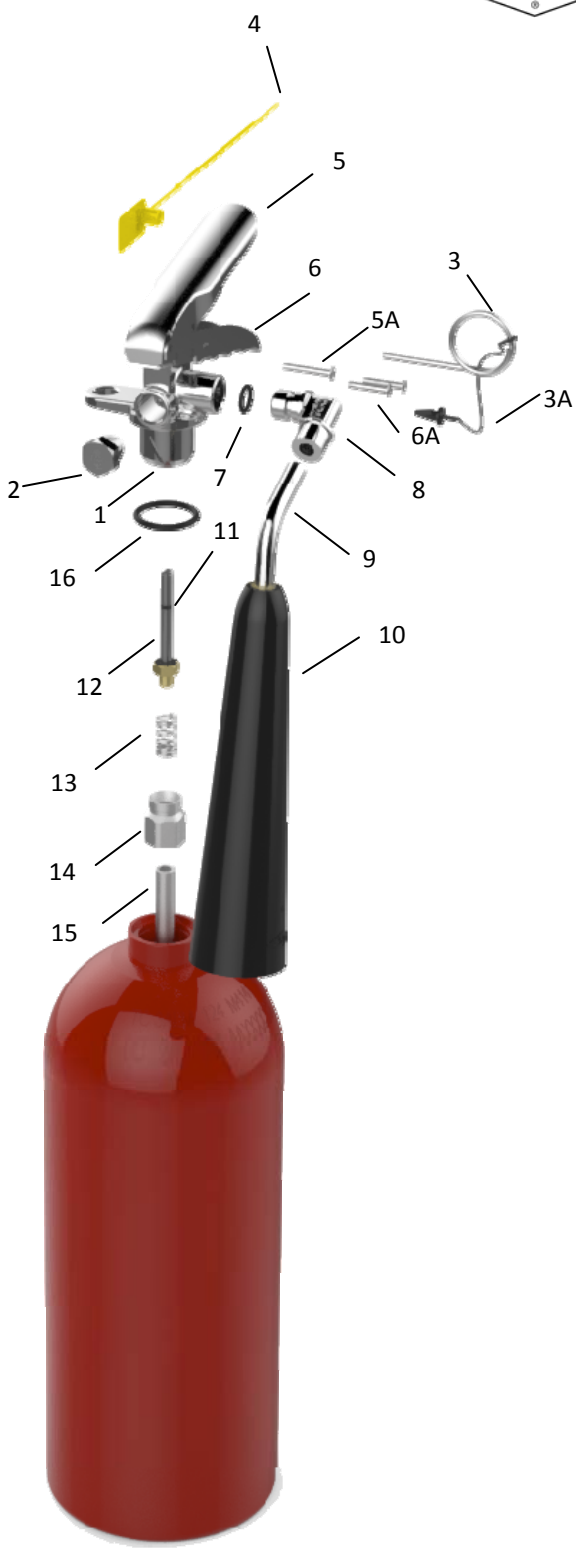
	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, clean collar thoroughly and install new collar o-ring. Lubricate with Bluestar V-711 and reinstall valve.
2.	Leak through valve	Check valve stem seating area for scratches or foreign matter. Clean seating area with a tooth brush and soft cloth. Install new valve stem assembly.
3.	Leak at safety relief nut	Remove safety nut, disc and gasket assembly. Replace with new Amerex P/N 04000 safety nut, disc and gasket assembly. Tighten assembly to 250 in-lbs maximum of torque.
4.	Leak during discharge under discharge lever	Remove valve assembly, downtube, spring and valve stem assembly. Install new valve stem assembly. Check valve seat for scratches or foreign matter.
5.	Leak during discharge at hose connection elbow	Tighten hose connection at elbow (10, 15, 20 lb). replace o-ring and/or elbow on 2 1/2 ,5 lb.
6.	Leak in the cylinder	Contact Amerex if under warranty – otherwise mark "Rejected" and remove from service or return to the owner.

PARTS LIST

For 2 1/2 –5 lb. Carbon Dioxide

Extinguishers

Model 322	Model 322NM
Model 320	Model 320NM
Model 321	Model 321M



Item	Part No.	Description
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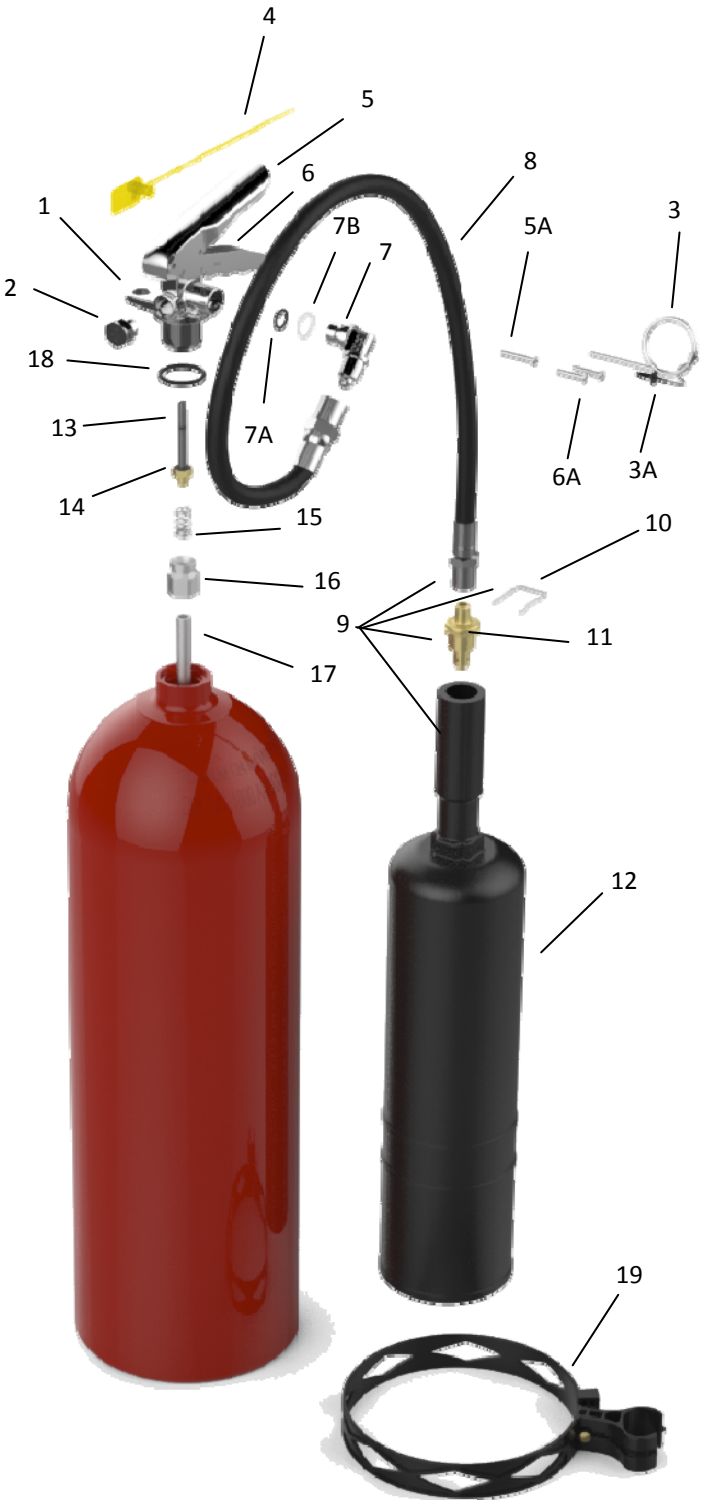
3	00160 16268	Ring Pin, Lge Stainless Steel 322/322NM Ring pin Sml Stainless Steel 320/320NM/321/321M
3A	00532	Chain (Nylon) for Ring Pin
4	01387	Lockwire Seal (Yellow)
5	07762 23076	Lever & Rivet 322/322NM Lever & Rivet 320/320NM/321/321M
5A	01563	Rivet only for Lever
6	09020 23077	Handle & Rivets 322/322NM Handle & Rivets 320/320NM/321/321M
6A	01564	Rivet only for Handle (2 reqd)
7	05689	O-ring for Elbow
8	02735	Elbow with O-ring
9	01769 22582	Discharge Tube 322/322NM Discharge Tube 320/320NM/321/321M
10	01772 22400	Horn 322/322NM Horn 320/320NM/321/321M
11	05235	Valve Stem O-ring
12	01539	Valve Stem Assembly
13	00501	Spring
14	00503	Retainer
15	00533 22443	Downtube 322/322NM Downtube 320/320NM/321/321M
16	01124	Collar O-ring 1-1/8"
ALL BRACKETS – SEE BRACKET PAGE		
ALL FILL & HYDROTEST ADAPTERS – SEE ADAPTER PAGE		
ALL VALVE ASSEMBLIES INCLUDE VALVE BODY, VALVE STEM ASSEMBLY, SPRING, RETAINER, LEVER & HANDLE		

PARTS LIST
For
10-15-20 lb. Carbon Dioxide
Extinguishers

Model 330 Model 331 Model 332



Item	Part No.	Description
1	03090	Valve Assembly (does not include elbow or downtube
2	04000	Safety Disc, Gasket & Nut
3	00160	Ring Pin, Stainless Steel
3A	00532	Chain (Nylon) for Ring Pin
4	01387	Lockwire Seal (Yellow)
5	07762	Lever & Rivet
5A	01563	Rivet only for Lever
6	09020	Handle & Rivets
6A	01564	Rivet only for Handle (2 req'd)
7	02309	Elbow with O-ring & Spacer
7A	05689	O-ring for Elbow
7B	02216	Nylon Spacer for Elbow
8	01776	Hose Assembly–330,331,332
9	01782	Hose & Horn Assembly-330
	01705	Hose & Horn Assembly-331,332
10	00594	U-Pin
11	01777	Nozzle
12	00572	Horn – 330
	00593	Horn – 331, 332
13	05235	Valve Stem O-ring
14	01539	Valve Stem Assembly
15	00501	Spring
16	00503	Retainer
17	00564	Downtube – 330
	00589	Downtube – 331, 332
18	01124	Collar O-ring – 1 1/8"
19	20570 20571	Strap & Clip 330,331 Strap & Clip 332
ALL BRACKETS – SEE BRACKET PAGE		
ALL FILL & HYDROTEST ADAPTERS – SEE ADAPTER PAGE		
ALL VALVE ASSEMBLIES INCLUDE VALVE BODY, VALVE STEM ASSEMBLY, SPRING, RETAINER, LEVER & HANDLE		

MAINTENANCE & RECHARGE SERVICE MANUAL NO. 05604

HAND PORTABLE HALON 1211 FIRE EXTINGUISHERS

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – use of substitute parts releases Amerex of its warranty obligations. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that are incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

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AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES
(Monthly or more often if circumstances dictate)

[NFPA-10] Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Pressure gauge reading or indicator in the operable range or position.
4. Operating instructions on nameplate and facing outward.
5. Safety seals and tamper indicators not broken or missing.
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Fullness determined by weighing or "hefting"

MAINTENANCE

[NFPA-10] Extinguishers should be subjected to maintenance at intervals of not more than 1 year, at the time of hydrostatic test, or when specifically indicated by an inspection or electronic notification. Maintenance procedures include a thorough examination of the basic elements of a fire extinguisher:

1. Mechanical parts
2. Extinguishing agent of cartridge or cylinder operated extinguishers, pump tanks and certain types of stored pressure extinguishers
3. Expelling means

NOTE: Stored pressure halon 1211 extinguishers do not require an internal examination of the cylinder or examination of the agent during annual maintenance, but shall receive a thorough external examination.

Maintenance [NFPA 10] is a thorough examination of the fire extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE – SERVICE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely attached and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure, using the proof pressure method in accordance with CGA C-1 and C-6 and NFPA 10. **See proper method of depressurizing and reclaiming Halon 1211 in SIX-YEAR MAINTENANCE/RECHARGE PROCEDURE.**

   Note: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Remove and check ring (safety) pin for freedom of movement. Replacement if bent or if removal appears difficult.

4. Check the date of manufacture printed on the extinguisher label (nameplate). All stored pressure Halon 1211 extinguishers must be hydrostatically (proof pressure) tested every 12 years.

5. Visually inspect the pressure gauge:
   a. If bent, damaged or improper gauge, depressurize and replace.
   b. If pressure is low or high and temperature/pressure relationship has been ruled out:
      1. If pressure is low, check for leaks.
      2. If over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions.

6. Inspect discharge lever for any dirt or corrosion which might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged, replace with proper Amerex part(s).

7. Check weight of extinguisher and compare to proper weight specified on extinguisher nameplate. If discrepancy is noted, remove nozzle or hose assembly and follow Complete Maintenance/Recharge Procedure for recharging.

8. Remove nozzle or hose and horn assembly. Inspect nozzle, hose gasket (o-ring), hose and horn assembly for damage – replace as necessary. Blow air through hose and horn or nozzle to insure passage is clear of foreign material and replace component parts as necessary.

9. Inspect the valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts as necessary following the proper recovery and recharge procedures. If valve removal is necessary, complete all steps in the Complete Maintenance/Recharge Procedure.

10. Install nozzle or hose and horn assembly.

11. Install new tamper seal if broken and record service data on the extinguisher inspection tag.

12. Replace the extinguisher on the wall hanger making sure that it fits the bracket properly – replace the bracket if necessary.

COMPLETE MAINTENANCE – SIX YEAR TEARDOWN

[NFPA-10] Every six years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

WARNING:

a. Before attempting to delvalve the extinguisher for Maintenance, Hydrotest or Recharging be sure that it is completely depressurized. Halon 1211 generates a vapor pressure of 22 psi @70°F. NEVER VENT TO THE ATMOSPHERE. Recover agent and vapor according to the instructions below.

b. Never have any part of your body over the extinguisher while removing the valve assembly.

c. Halon 1211 should not be mixed with even the slightest amount of moisture. Prolonged exposure of a devalved cylinder to ambient air should be avoided to prevent moisture contamination and cylinder rusting.

1. Complete items 1 through 9 in Maintenance/Service Procedure above.
2. Attach the appropriate recharge adapter to the extinguisher operating valve. Empty the extinguisher of all pressure and Halon 1211 using a Getz HR-1 (or UL approved equal) Halon Recharge/Recovery system and a bulk Halon supply cylinder with sufficient empty capacity to accept the contents of the extinguisher.

   NOTE: Every effort should be made to halt unnecessary escape of Halon 1211 to the atmosphere to prevent detrimental environmental effect. High efficiency Halon 1211 Recharge/Recovery (Vacuum Pump Type) Systems (UL Standard 2006) are commercially available. The Getz HR-1 (UL approved) unit assures a minimum of 99% recovery efficiency. It allows a means of checking for and removing moisture or contamination during the recovery process.

3. When the extinguisher is empty of all agent and pressure, remove valve assembly and disassemble by removing downtube, spring and valve stem assembly. Discard valve stem assembly and collar o-ring.

   NOTE: Keep cylinder opening covered while devalued to minimize interior corrosion.

4. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with dry nitrogen.
5. Install a **new** Amerex valve stem assembly after lightly lubricating the valve stem o-ring with Visilox 711 (do not lubricate the valve stem seal). Reassemble the spring and downtube. Carefully install a **new** collar o-ring which has been lightly lubricated with Visilox 711. Set the valve assembly aside.
6. Inspect the cylinder interior following CGA Visual Inspection Standard C-6 and current NFPA 10 guidelines. If a hydrotest has been performed or any moisture is evident, the cylinder should be immediately warm air dried.
7. Clean the o-ring seating groove in the cylinder neck. If any rust is evident, remove by using a fine emery cloth (200 grit). Clean the surface and lubricate the entire sealing area with a thin film of Visilox 711. Install the valve assembly in extinguisher cylinder. Hand tighten firmly.
8. Use the Getz HR-1 system to purge the residual air from the extinguisher cylinder.
9. Stand the extinguisher upright on a scale of sufficient size and capacity. Tare weight extinguisher or record empty weight.
10. Follow all recharging instructions on Getz HR-1 or other UL Approved Recharge/Recovery system.

11. Remove the recharge adapter. Some residual Halon vapor may remain in the valve outlet as a result of the charging procedure. Before attempting to leak detect, vacuum or blow the vapor away from the areas to be checked. Check extinguisher for leaks at the valve outlet, around the collar seal, cylinder welds and gauge using a Halogen Leak Detector (**Preferred Method**). The alternate method is to apply leak detecting fluid or a solution of soapy water to these areas. Use dry nitrogen to blow all liquid residue out of the valve and wipe the extinguisher to dry the exterior. **DO NOT LEAVE ANY LIQUID INSIDE THE VALVE BODY**.
12. Install nozzle or hose and horn assembly to the extinguisher discharge valve.
13. Weigh extinguisher to confirm that the total weight is within the tolerances indicated in the Maintenance section on the extinguisher nameplate.
14. Record service date and attach new tag in accordance with the requirements of the "Authority Having Jurisdiction".

TROUBLESHOOTING GUIDE

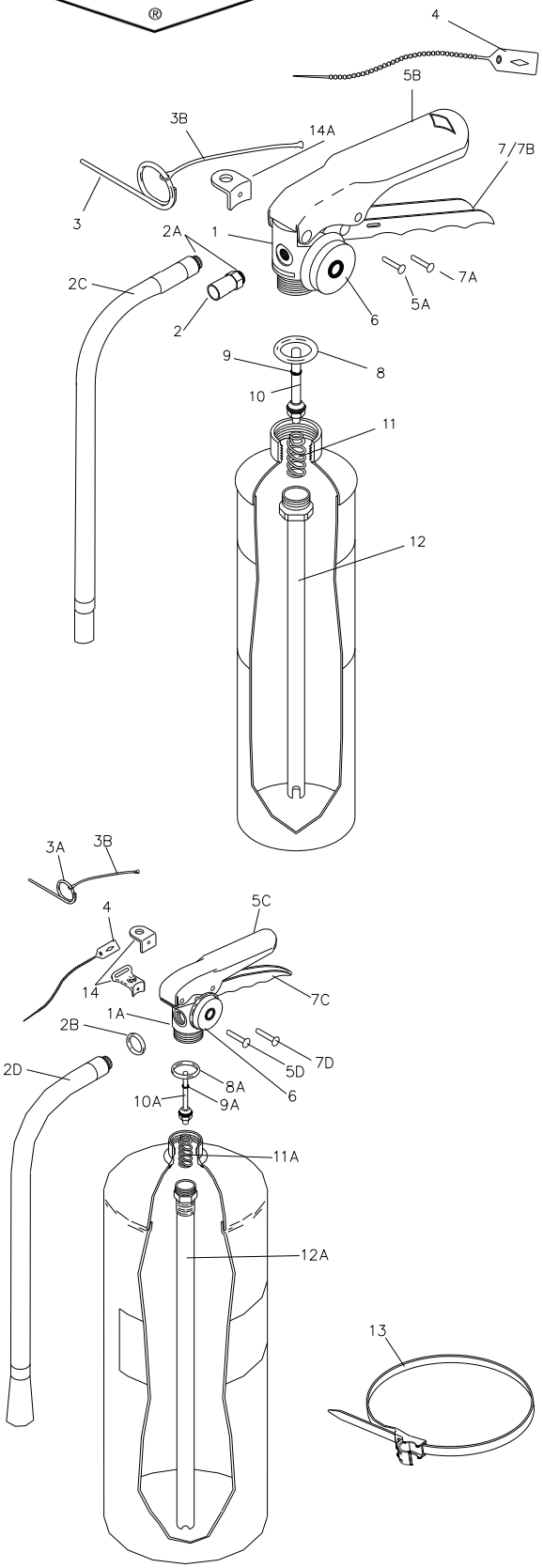
WARNING: ANY HALON 1211 EXTINGUISHER MUST BE COMPLETELY DEPRESSURIZED BEFORE ANY ATTEMPT IS MADE TO REMOVE THE VALVE AND CORRECT A LEAKAGE PROBLEM.

To depressurize, see instructions in the Complete Maintenance section. Halon 1211 is a liquid under nitrogen pressure. Variations in the temperature may affect gauge readings. The gauge dial has been calibrated to reflect the tested extinguisher temperature extremes (-65°F to +120°F). When in doubt about a gauge reading, place the extinguisher at room temperature (70°F) for several hours to obtain a true reading.

	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, remove and discard o-ring, clean collar thoroughly. Install new collar o-ring. Lubricate o-ring with Visilox V-711.
2.	Leak through valve	Check valve stem seating area for scratches or foreign matter. Clean seating area with a tooth brush and soft cloth. Install new valve stem assembly.
3.	Leak around gauge	Remove gauge*, clean threads and reinstall using Teflon tape on the gauge threads.
4.	Defective gauge	Remove defective gauge* an install a new Halon 1211 gauge (see parts list) using Teflon tape on the gauge threads.
5.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and remove from service or return to owner.
6.	Leak under operating lever during discharge	Replace valve stem assembly.
7.	Gauge indicator high or low in green operable area, no detectable temperature leakage	Extinguisher may have been subjected to extreme heat or cold. Condition the extinguisher to room temperature (70°F) overnight and check gauge reading.
	* Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F) for two to four minutes. Remove gauge with a thin 7/16" open end wrench.	

PARTS LIST
for
1-1/4 - 20 lb. Halon 1211
Extinguisher Models

344 **354** **A355**
A344T **A354** **B355T**
352 **A354TS** **369**
A352 **C354** **B369**
C352TS **355** **371**
372



Item No.	Part No.	Description	Std. Pkg.
1	11953	Valve Assembly – ALL ALUMINUM MODELS	1
1A	11954	Valve Assembly – ALL BRASS MODELS	1
2	06066	Nozzle w/O-ring – 344/344T, A344T (.067)	6
	01727	Nozzle w/O-ring – 355T, A/B355T (.144)	
2A	01532	Hose/Nozzle Gasket (O-ring) – Aluminum Valve	24
2B	06978	Hose Gasket (O-ring)	24
2C	06421	Hose & Horn Assembly – 354A, A354A, C354A (.098)	1
2D	05180	Hose & Horn Assembly – 369, B369 (.216)	1
	05178	Hose & Horn Assembly – 371, B371 (.234)	
	05176	Hose & Horn Assembly – 361 (.152)	
	05174	Hose & Horn Assembly – 372 (.177)	
3	01412	Ring Pin	24
	16353	Ring Pin 1 lb, 2-1/2 lb	
3A	00160	Ring Pin, Stainless Steel	24
3B	00532	Chain (Nylon) for Ring Pin	24
4	01387	Lockwire Seal (Yellow)	500
5A	01060	Rivet Only for Lever	24
5B	02625	Lever & Rivet	1
5C	07762	Lever & Rivet – Brass Valve	1
5D	01563	Rivet Only for Lever – Brass Valve	24
6	04839	Gauge – 100 PSI – 344/344T, A344T	6
	03105	Gauge – 125 PSI – 352T, A/C352T,C352TS, 355T, A/B355T	
	03106	Gauge – 195 PSI – 354A, A/C354A, 361, 369, B369, 371, B371, 372	
7	11826	Handle & Rivet – Brass Valve	1
7A	01064	Rivet Only for Handle – Old & "A/B" Valve	24
7B	09001	Handle & Rivet – 344/344T	24
	09002	Handle & Rivet – Old Valve 352T, A354A, 355T	24
7C	09020	Handle & Rivet – Brass Valve	1
7D	01564	Rivets for Handle (2 Required) – Brass Valve	24
8	05241	Collar O-Ring – Aluminum Valve	24
		Collar O-Ring – Aluminum Valve – Bulk Bag	100
8A	05240	Collar O-Ring	24
		Collar O-Ring – Bulk Bag	100
9	05235	Valve Stem O-Ring	24
9A	05243	Valve Stem O-Ring – Brass Valve	24
10	06092	Valve Stem Assembly – Aluminum Valve	6
		Valve Stem Assembly – Aluminum Valve – Bulk Bag	96
10A	06093	Valve Stem Assembly – Brass Valve	6
		Valve Stem Assembly – Brass Valve – Bulk Bag	96
11	01074	Spring – All Aluminum Valve	6
11A	00383	Spring – All Brass Valve	6
12	06069	Downtube/Retainer Assembly – 344/344T, A344T	1
	01075	Downtube/Retainer Assembly – 352T, 354A, A/C352T, C352TS, A/C354T	
	06212	Downtube/Retainer Assembly – 355T, A/B355T	
12A	03754	Downtube/Retainer Assembly – 369/B369	1
	02609	Downtube/Retainer Assembly – 371, B371	
	01667	Downtube/Retainer Assembly – 361, 372	
13	17207	Strap & Clip Assembly (Black Plastic) 3/8" Hose 354, A/C354	1
	14778	Strap & Clip Assembly (Black Plastic) ½" Hose 361, 369, B369, 371, B371, 372	
14	15363	Hanger Loop with Screw – B371	6
	16694	Hanger Loop with Screw – B369, 361, 372	
14A	14220	Hanger Loop with Screw – Aluminum Valve	6
ALL BRACKETS – SEE BRACKET PAGE			
ALL FILL & HYDROTEST ADAPTERS – SEE ADAPTER PAGE			
ALL VALVE ASSEMBLIES INCLUDE VALVE BODY, GAUGE, LEVER & HANDLE			

OWNERS SERVICE MANUAL
NO. 05605
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

Wheeled
Models 450, 451, 452 (25 Cu. Ft. Nitrogen Cylinder 16" wheels)
Models 467, 468, 469 (110 Cu. Ft. Nitrogen Cylinder 16" wheels)
Models 470, 471, 472 (110 Cu. Ft. Nitrogen Cylinder 36" wheels)
Stationary
Models 481, 482, 483 (23 Cu. Ft. Nitrogen Cylinder)
Models 484, 485, 486 (110 Cu. Ft. Nitrogen Cylinder)

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

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RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

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Printed in U.S.A. **0M05605H Rev.10/11**

125/150 LB. NITROGEN CYLINDER OPERATED DRY CHEMICAL FIRE EXTINGUISHERS

INTRODUCTION

THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

PREPARING YOUR NEW EXTINGUISHER FOR USE

WARNING: **<u>THIS FIRE EXTINGUISHER IS SHIPPED FROM THE FACTORY EMPTY</u>. AFTER INITIAL PREPARATIONS, CAREFULLY FOLLOW THE RECHARGING INSTRUCTIONS BEFORE PLACING IT INTO SERVICE.**

1. Remove all wrappings, straps and pallet retaining bolts.

2. Examine the extinguisher for shipping damage. Check to make sure that you have received the dry chemical charges that are shipped with the extinguisher (ABC and PURPLE K (two) 2 - 50 lb. pails and 1 (one) 25 lb. pail; REGULAR – three (3) 50 lb. pails).

3. Fill the extinguisher by carefully following the Recharge instructions.

4. Remove the nitrogen cylinder protective shipping cap. Save the cap as it must be installed whenever a charged nitrogen cylinder is transported. Remove temporary (shipping) ring pin and install large ring pin.

5. Install new lockwire seal. Check the nitrogen cylinder pressure. The gauge should read approximately 2015 psig (13.9 mPa) at 70ºF (21ºC) ambient temperature. See the "Troubleshooting Guide" for pressure-temperature allowances. The lockwire seal should be intact.

6. Remove (and save) the Safety Vent Plug installed on all "T" handle nitrogen valves. Connect the nitrogen supply hose firmly to the nitrogen cylinder valve. Make sure that there are no kinks in this hose.

7. Disconnect the discharge hose assembly from the agent cylinder. Make sure that the hose and nozzle are unobstructed and that the Moisture Seal is undamaged and properly seated on the agent cylinder discharge fitting. Reconnect the discharge hose to the agent cylinder and with the nozzle in the closed (forward) position, place it on the storage rack. (See Page 11)

8. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

9. Remove the caution (not charged) tag.

INSTALLATION

WARNING: DO NOT PLACE THIS EXTINGUISHER CLOSE TO A POTENTIAL FIRE

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is -65°F to +120°F (-54°C to +49°C). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants that may interfere with its proper operation. DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER. (Testing or any use may cause the extinguisher to gradually lose pressure over a period of time and make the extinguisher ineffective.)

OPERATION

NOTE: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.

1. Move the extinguisher to within approximately 50 feet of the fire site and keep extinguisher upright. Remove ring (safety) pin and pull "T" handle to open argon cylinder valve. This will pressurize the extinguisher.
2. Remove nozzle from the mount, and with the nozzle lever in the closed position, pull hose from rack.
3. Start back 20 feet from the fire and aim at base of fire nearest you.
4. Open hose and nozzle firmly and be prepared for discharge recoil. Open nozzle by pulling the handle fully toward you. Slowly sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished.

DISCHARGE TIME (APPROXIMATE) - See extinguisher nameplate (label)
EFFECTIVE RANGE OF THE AGENT THROW - 25 to 40 feet
HOSE LENGTH – 50 feet

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

SHUTDOWN

1. After making sure that the fire has been completely extinguished, close the nozzle valve and then close nitrogen cylinder valve (push “T” handle to closed position). **Wheeled Extinguisher** – Tip over until it rests on both wheels and handle (in this position much of the remaining chemical will stay in the cylinder). **Stationary Extinguisher** – see instructions below.
2. Open the nozzle valve slowly to clear the hose of any remaining pressure and chemical (be prepared for recoil and discharge of agent).
   WARNING: MAKE SURE THAT ALL PRESSURE HAS ESCAPED BEFORE ANY FURTHER DISASSEMBLY.
3. Stand unit upright after complete depressurization.
   NOTE: Nitrogen pressure in the agent cylinder cannot escape through a disconnected nitrogen hose assembly due to a check valve in the system. **Always be careful when removing the fill cap.**
4. Coil the extinguisher hose onto the storage rack and position the nozzle onto the mount in preparation for transport to the recharge location.

CAUTION: DO NOT TRANSPORT A NITROGEN CYLINDER WITHOUT INSTALLING THE PROTECTIVE SHIPPING CAP.

VENTING DEVICE

(**Standard** on all Stationary Extinguishers, **Optional** on Wheeled Extinguishers)

A venting device has been installed on all stationary extinguishers to provide a means of safely and easily relieving residual argon pressure from the agent cylinder while utilizing the same pressure to evacuate or "blow down" the hose.

See Below: Figure 1 – Models 484, 485 & 486 (Tall Units – 110 cu. ft. Nitrogen Cylinder)
Figure 2 – Models 481, 482 & 483 (Short Units – 23 cu. ft. Nitrogen Cylinder)

OPERATION – After the fire has been successfully extinguished and it has been determined that it is completely out:

1. Confirm that the nozzle lever is in the CLOSED position.
2. Close the argon valve (move "T" handle to CLOSED position)
3. Remove ring pin and CLOSE agent cylinder valve (Valve A in Fig. 1) to prevent further chemical from entering the hose.
4. Remove ring pin and OPEN pressure vent valve (Valve B in Fig. 1) to allow argon gas to by-pass the chemical and pressurize the hose.
5. Open discharge nozzle to vent all residual chemical and nitrogen gas pressure.
6. Re-open nitrogen valve if additional pressure is required.
7. When recharging this unit, reset agent cylinder and vent valves, install ring pins and lockwire seals.

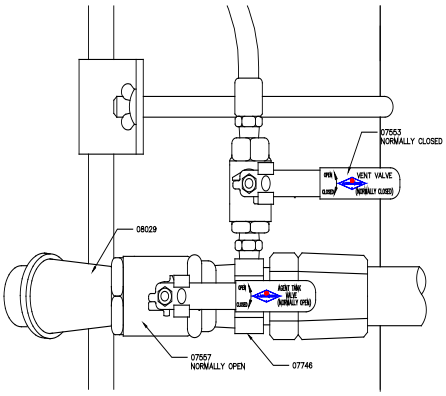


Figure 1

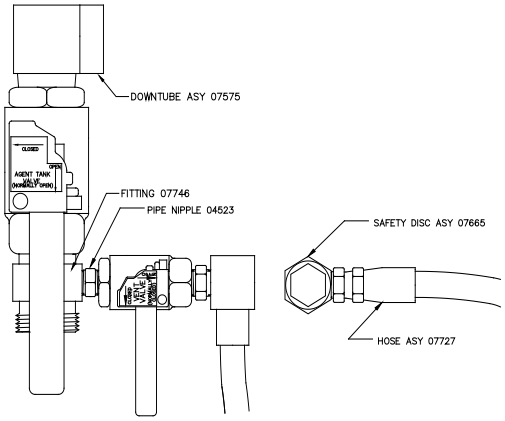


Figure 2

CAUTION: VALVE SHUT-OFF HANDLES MUST BE IN THE POSITIONS SHOWN WHEN EXTINGUISHER IS ON STANDBY OR IN ACTUAL OPERATION.

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

INSPECTING THE EXTINGUISHER

NFPA 10 - This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. (NFPA 10) Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES (Monthly or more often if circumstances dictate) A “quick check” should be made of the extinguisher for the following:

1. Located in designated place.
2. No obstructions to access or visibility.
3. Operating instructions on nameplate and facing outward.
4. Seals and tamper indicators not broken or missing.
5. Determine fullness by weighing (full weight is noted on the nameplate [label]).
6. Examine for obvious physical damage, corrosion, leakage or clogged nozzle.
7. Pressure gauge (nitrogen cylinder) reading in operable area.
8. Condition of tires & wheels, carriage, hose and nozzle.

MAINTENANCE

At least once a year or more frequently if circumstances require, maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing.

NOTE: NFPA-10 spells out wheeled extinguisher maintenance procedures. NFPA requires that regulators on wheeled extinguishers be checked annually to meet manufacturer’s “dead set” and “minimum flow” recommendations. This information is provided in a special section on page 6 (R-a thru R-d) for Amerex Regulated Wheeled Models 467, 468, 469, 470, 471 & 472 and Regulated Stationary Models 484, 485 and 486.

NOTE: The Getz Manufacturing Universal Wheeled Extinguisher Service Kit is available so that NFPA-10 required maintenance functions can be performed.

ANNUAL MAINTENANCE – SERVICE PROCEDURE

WARNING: BEFORE SERVICING, BE SURE THE EXTINGUISHER AGENT CYLINDER IS NOT PRESSURIZED. THIS PROCEDURE IS BEST ACCOMPLISHED WITH THE EXTINGUISHER IN AN UPRIGHT POSITION AND ON A LEVEL SURFACE.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test in accordance with instructions in CGA C-1 and C-6 and NFPA 10.

2. Inspect the extinguisher for damaged, missing or substitute parts. A careful inspection should be made of the safety relief (MODELS 450, 451 & 452) to make sure that it has not ruptured, corroded or been tampered with. ONLY FACTORY REPLACEMENT PARTS ARE APPROVED FOR USE ON AMEREX FIRE EXTINGUISHERS.

3. Check the date of manufacture printed on the extinguisher label (nameplate) or on the agent cylinder dome. The agent cylinder, the discharge hose assembly and nitrogen supply hose must be hydrostatically tested every 12 years. Test pressure:

    a. Agent Cylinder – 500 psi (3447 kPa)
    b. Hose Assembly – 300 psi (2068 kPa)

4. Check the hydrostatic test date on the crown of the nitrogen cylinder. The nitrogen cylinder must be retested in accordance with DOT regulations.

5. Check the gauge on the nitrogen cylinder. If the pressure is below 1700 psig (11.7 mPa) repressurize the cylinder to 2015 psig (13.9 mPa) or replace it. A low gauge pressure may indicate leakage. Check for leaks. A low gauge reading may also result from low temperature. See the temperature/pressure relationship chart in the Troubleshooting Guide. Check the tamper indicator (lockwire seal) on the argon valve and replace if necessary.

6. Wheeled extinguishers – Inspect the wheels to insure they rotate freely. Lubricate as required.

WARNING: THE FOLLOWING STEPS SHOULD ONLY BE PERFORMED BY PROFESSIONALLY TRAINED AND QUALIFIED SERVICE PERSONNEL THOROUGHLY FAMILIAR WITH INDUSTRY SERVICE PROCEDURES AND SAFETY PRECAUTIONS AND HAVING THE NECESSARY EQUIPMENT TO PERFORM THE SERVICE PROPERLY. ALL EXTINGUISHER AND SERVICE EQUIPMENT COMPONENTS, FITTINGS AND ADAPTERS MUST BE IN GOOD CONDIITON AND PROPERLY CONNECTED.

MAINTENANCE OF REGULATED WHEELED EXTINGUISHERS

NOTE: Steps R-a thru R-d apply to models with a Regulator. These procedures should be performed only by professionally trained and qualified service personnel thoroughly familiar with industry service procedures and safety precautions. All extinguisher and service equipment components, fittings and adapters must be in good condition and properly connected.

R-a. Disconnect the regulator from the agent cylinder. Visually examine the regulator and high pressure hose for signs of damage, corrosion or deterioration. To perform the regulator static pressure, dead set and minimum pressure flow rate checks. Connect the proper hose service kit Adapter (P/N 01740) to the low pressure outlet port of the regulator. Connect the service kit Hose Assembly (P/N 01410) and Flow Chamber (P/N 01250) to the regulator low pressure port adapter.

R-b. Make sure all service kit connections are secure and that the kit flow chamber valve is **closed**. Check nitrogen cylinder pressure to ensure that it is within the acceptable operating pressure range. Hold the kit flow chamber in one hand and slowly open the nitrogen cylinder (with either the "T" handle operating lever or by turning the handwheel if so equipped). Observe flow chamber pressure reading to see if it is within the specified static dead set pressure parameters noted below. The only type regulators used on Amerex dry chemical regulated wheeled extinguishers were Victor and MECO. Also see Amerex Tech Tip for Class D Dry Powder Wheeled Extinguisher Pressures.

Regulator Type	Model No.	Static Dead Set Pressure	Minimum Flow Pressure
Victor	SR-450L	225 – 245 psi	140 psi
MECO	P-600	235 – 255 psi	140 psi
Victor	SR-450E	225 – 245 psi	140 psi

WARNING: IF THE PRESSURE READING EXCEEDS THE GIVEN PARAMETERS, QUICKLY CLOSE THE NITROGEN CYLINDER "T" HANDLE OR HANDWHEEL VALVE AND VENT THE PRESSURE BY OPENING THE FLOW CHAMBER BALL VALVE. **REGULATORS CANNOT BE FIELD ADJUSTED – THEY MUST BE REPLACED IF FOUND TO BE OUT OF TOLERANCE**.

R-c. Observe the proper regulator static dead set pressure for a minimum of one minute – then fully open the flow chamber valve for 1-2 seconds and observe the pressure reading to ensure that the flow pressure does not drop below the minimum specified. Close the nitrogen cylinder valve after the test and vent the flow chamber pressure by opening the flow chamber valve.

NOTE: Prior to performing minimum flow check, make sure that the nitrogen cylinder valve ("T" handle or handwheel) is FULLY OPEN so that it does not restrict or alter the flow readings.

R-d Disconnect the service kit quick connect adapter from the low pressure regulator and reinstall the regulator securely to the agent cylinder. (THIS STEP IS FOR REGULATED EXTINGUISHERS ONLY)

7. Disconnect the discharge hose from the agent cylinder. Check the couplings, hose and hose gaskets for damage or deterioration – replace as necessary.

8. To perform an operational integrity check on the discharge hose and nozzle combination:
   a. Connect the test kit hose adapter to the female end of the discharge hose.
   b. Connect the discharge nozzle shut-off lever and properly secure it.
   c. Connect a properly regulated and verified nitrogen pressure source (set to the extinguisher operating pressure (235-245 psi) to the test kit hose adapter.
   d. Slowly pressurize the discharge hose/nozzle assembly to the extinguisher operating pressure and check for leaks or distortion.

e. Operate the nozzle lever to ensure proper operation and to clear the hose of any obstructions (if hose is obstructed – refer to Troubleshooting section of this manual.
f. Close the nitrogen pressure source and slowly relieve remaining pressure by fully operating the nozzle lever.

9. Remove the agent cylinder cap and examine it closely for any signs of damage, cracks or thread wear. Clean the agent cylinder fill cap threads and thread vent port on the cap with a stiff bristle nylon brush. Remove the fill cap gasket and check for wear, cracks or tears – replace if necessary. Lightly lubricate the gasket with Visilox and reinstall.

10. Examine the dry powder agent for proper type and condition. Replace chemical that is contaminated, caked or other than the type indicated on the nameplate (label). Do not trust the height of the chemical in the cylinder when determining agent fill. Dry powder settles and the only true indication of agent fill is to weigh the extinguisher and compare with the weight indicated on the nameplate (label).

11. Place the service kit Vent Spacer on top of the agent cylinder fill opening collar. Check again to see that the fill cap thread vent is clean and that the agent fill cap gasket is in place. Install the agent fill cap securely over the vent spacer. Record service data on the extinguisher inspection tag.

CAUTION: (STEP 12) The agent cylinder cap threads must be clear and the cap securely installed onto the vent spacer and agent cylinder to allow pressure to slowly vent after performing the siphon tube clearing and gas tube integrity checks.

12. To perform a siphon tube clearing and gas tube integrity check:

a. Remove the service kit Agent Hose Adapter from the discharge hose assembly and install it securely onto the agent cylinder siphon tube outlet.
b. Using a regulated argon pressure source set to the extinguisher operating pressure (110 psi), slowly and briefly pressurize the agent cylinder (**the siphon tube should be clear within a couple of seconds and the agent cylinder pressure slowly vent from the fill cap thread vent)**. Pressure and/or dry chemical agent leaks from the gas tube inlet port (where the hose connects) will indicate a defective gas tube and will require that the agent cylinder be emptied and the gas tube replaced.
c. Close the argon pressure source and allow all pressure to slowly vent from the thread vent port on the fill cap.
d. AFTER ALL PRESSURE HAS BEEN RELIEVED, **SLOWLY** OPEN THE FILL CAP AND **REMOVE THE TEST KIT VENT SPACER.**
e. Re-examine the agent to determine if any obstructions were cleared from the siphon tube and have risen to the surface.
f. Clean the fill cap and agent cylinder thread surfaces. Securely install the fill cap gasket and fill cap.

NOTE: THIS STEP (R-d.) IS FOR REGULATED EXTINGUISHERS ONLY

R-d. Disconnect the service kit quick connector adapter from the low pressure port of the regulator and reinstall the regulator securely to the agent cylinder.

13. Disconnect the high pressure hose from the argon cylinder valve. Securely install the service kit Argon/Nitrogen Cylinder Pressure Check Gauge Assembly to the nitrogen cylinder valve outlet and verify the indicated cylinder gauge pressure. Argon pressure should conform to the temperature correction chart provided in the Troubleshooting section of this manual. Close the nitrogen cylinder valve and disconnect the Pressure Check Gauge Assembly.

WARNING: IF THE NITROGEN CYLINDER VALVE HAS A "T" HANDLE QUICK OPENING OR A HANDWHEEL QUICK OPENING TRIP RELEASE, THE SAFETY VENT PLUG SHIPPED WITH THE EXTINGUISHER, OR THE TEST KIT SAFETY VENT PLUG MUST BE INSTALLED TO PROTECT SERVICE PERSONNEL FROM A HIGH VELOCITY DISCHARGE IN CASE THE LEVER IS ACCIDENTALLY OPENED.

14. Install a new Amerex Moisture Seal per instructions in the package. Securely connect the discharge hose to the extinguisher. **When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ¼ turn after contacting the hose gasket**.

15. Coil the hose on to the extinguisher hose rack using the Reverse Loop Procedure (see instructions in this manual). Install shut-off nozzle (and/or extension wand) with the lever in the Closed (forward) position into the nozzle mount.

16. Remove the safety vent plug from the argon cylinder. Reconnect the high pressure hose securely to the nitrogen cylinder valve. Wipe the extinguisher clean. Record service data on the inspection tag according to NFPA-10 requirements and attach to extinguisher. Return extinguisher to its proper location.

RECHARGE

NFPA 10 – Recharging is the replacement of the extinguishing agent and also includes the expellant for this type of extinguisher.

RECHARGING PROCEDURE

WARNING: BEFORE ATTEMPTING TO RECHARGE, BE SURE THIS EXTINGUISHER IS COMPLETELY DEPRESSURIZED. THERE IS A CHECK VALVE IN THE SYSTEM WHICH PREVENTS ARGON PRESSURE FROM ESCAPING FROM THE AGENT CYLINDER WHEN THE ARGON HOSE IS DISCONNECTED. THE AGENT CYLINDER MAY BE PRESSURIZED EVEN THOUGH NO PRESSURE ESCAPES FROM THE CYLINDER ARGON CONNECTION.

NOTE: Proper procedure for recharging any dry chemical extinguisher includes the use of a “closed recovery system (NFPA-10). The Getz Model SV1 400 VACU-FILL SYSTEM is ideal for this application – it provides for the recovery of the remaining agent by direct discharge into the system, trapping the “fines” while allowing the nitrogen to escape and provides a more accurate fill of the extinguisher.

IF A “CLOSED RECOVERY SYSTEM” IS NOT AVAILABLE PROCEED AS FOLLOWS:

1. To depressurize:
   a. Close the argon cylinder valve.

b. Carefully tip extinguisher over until it rests on both wheels and handle. (In this position much of the agent will remain in the cylinder).
c. Open nozzle valve slowly to clear hose of any remaining pressure and chemical (be prepared for a recoil and discharge of agent).
d. **Insure that all pressure has escaped before further disassembly**.
e. Stand extinguisher upright after complete depressurization.

2. Complete items 1-6 of Maintenance Procedures. Carefully remove the fill cap. Detach discharge hose from the agent cylinder and the nozzle assembly from the hose. Blow out any chemical remaining in the hose. While performing this procedure, all parts and seals should be cleaned, inspected and replaced where necessary.

3. Remove shutoff nozzle assembly from discharge hose and clean thoroughly. Check to make sure that the valve is closed when the lever is in the forward position (toward the nozzle tip).

4. Detach hose from nitrogen cylinder, install the shipping cap, unscrew the wing nuts and remove the nitrogen cylinder from the extinguisher.

5. Remove the 50 ft. discharge hose from the storage rack and disconnect the hose from the agent cylinder fitting. Blow out any dry chemical agent remaining in the hose. clean hose – remove and discard the clear hose gasket from the female coupling.

6. Remove remainder of ruptured moisture seal from the agent cylinder fitting. Replace with new Moisture Seal Assembly. **Carefully follow the installation instructions contained in the Moisture Seal Assembly package, including the installation of a new clear hose gasket in the female hose coupling**.

7. Remove the agent cylinder fill cap and gasket. Clean fill cap threads and vent port, lubricate the cap gasket and set parts aside. Check the condition and type of any remaining chemical (replace any dry chemical that is contaminated or caked). Fill extinguisher with the type and amount of dry chemical shown on the extinguisher label – verify gross weight. Clean agent cylinder collar threads. Install the fill cap and tighten securely.

   WARNING: DO NOT OVERFILL THE EXTINGUISHER. THIS COULD CAUSE A MALFUNCTION. DO NOT MIX TYPES OF AGENTS – THIS CAN CAUSE A DANGEROUS PRESSURE BUILD UP AND REDUCE EXTINGUISHER EFFECTIVENESS.

8. Install the proper nitrogen cylinder (pressurized to 2015 psi), remove the shipping cap, place on the extinguisher and attach the nitrogen hose. **Nitrogen cylinders with "T" handle quick opening valve:** Remove small temporary ring (safety) pin and install large ring pin. Install a lockwire seal (tamper indicator). **Nitrogen cylinders with handwheel or lever actuated quick opening valve:** Leadwire seal must be installed

9. Reattach the discharge hose to the extinguisher (tighten hand tight plus a ¼ turn). Properly coil the hose onto the storage rack (see page 11). Reattach the shutoff nozzle firmly to the hose and store it in the mount with the shutoff lever in the **closed** (forward) position.

10. Record the service date on the inspection tag and place the extinguisher in its proper location.

TROUBLESHOOTING GUIDE

WARNING: BEFORE ATTEMPTING TO CORRECT ANY LEAKAGE PROBLEM, BE SURE THAT THE AGENT CYLINDER IS COMPLETELY DEPRESSURIZED. Always use caution when opening the shutoff nozzle or any other connection as a leaking nitrogen cylinder valve seat may have pressurized the agent container refer to the recharge procedure for proper method of depressurization.

	PROBLEM	CORRECTIVE ACTION
1.	Nitrogen cylinder gauge reads low or high	Temperature may have affected the pressure reading Temperature (F) 35º 70º 120º Temperature (C) 2º 21º 49º Recommended Pressure psig 1880 2015 2200 mPa 13.0 13.9 15.2 Minimum Pressure psig 1590 1700 1900 mPa 11.0 11.7 13.1 NO CORRECTIVE ACTION IS REQUIRED IF THE PRESSURE IS WITHIN PARAMETERS STATED ABOVE.
2.	Nitrogen pressure is too low. Valve is closed. Tamper seal is intact. There is pressure in the agent and nitrogen cylinders.	Valve seat has leaked and has pressurized the agent cylinder. Follow Recharge Procedure for restoring the extinguisher to service.
3.	Nitrogen pressure is too low. Valve is closed. Tamper seal is intact. No pressure observed in the agent cylinder.	Leakage in the nitrogen valve at other than the valve seal. Replace with a properly charged nitrogen cylinder.
4.	Shutoff nozzle does not move freely.	Disassemble, clean and lubricate.
5.	Unable to remove the agent cylinder cap.	Agent cylinder may be pressurized. Make no further attempt to remove the cap until this is checked. See the Recharge Procedure for proper depressurization method.
6.	Nitrogen hose cut, cracked or abraded.	Replace hose assembly.
7.	Chemical agent and pressure leaking from the safety disc assembly. (Models 450, 451, 452)	Inspect safety outlet for tightness or damage. Tighten if necessary. NOTE: Only tighten the large hex nut of the assembly. The small round nut containing the holes is factory set to a specific torque value. Do not attempt to adjust. If damaged or ruptured, replace complete Amerex Safety Disc Assembly.

Guide to Proper Installation of Hose on Wheeled or Stationary Fire Extinguishers

1

Connect hose coupling to outlet on the extinguisher. Lay hose straight on ground to its full 25 ft. length. Start first regular loop counter-clockwise by placing between side brackets and over the top bracket.

2

The second loop is a REVERSE loop. Notice that the hose passes behind the loop on this reverse loop. **If instructions are followed, the hose will uncoil without kinks.**

3

The next loop is a regular "hose in front" loop. Succeeding loops are alternated: reverse, front, reverse, etc. for six full loops.

4

Adjust the loops so that the nozzle or extension wand fits into the nozzle mount. Loops should be approximately the same size.

PARTS LIST
for
125/150 lb. Wheeled & Stationary
Dry Chemical Extinguishers
110 Cu. Ft. Nitrogen Cylinder

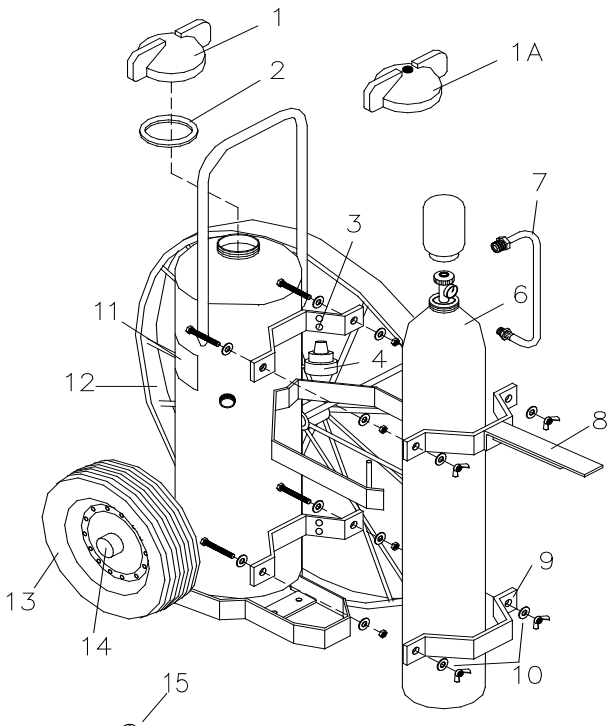
WHEELED MODELS

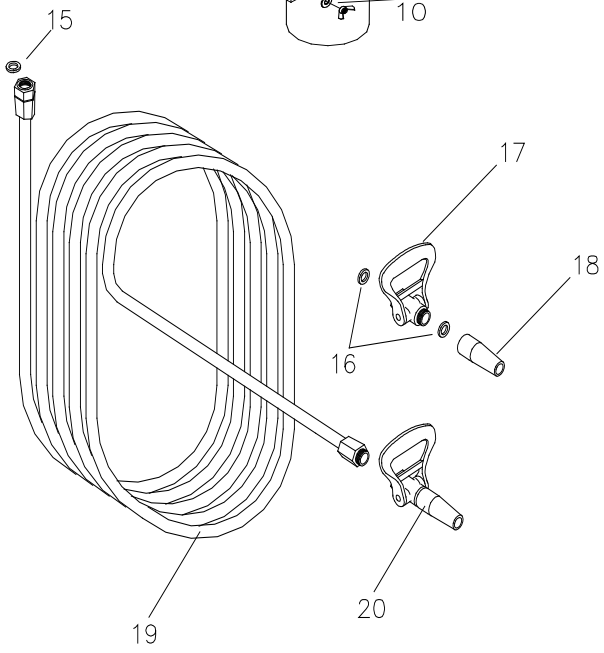
467	125 LB. ABC, 16" WHEELS	470	125 LB. ABC, 36" WHEELS
468	150 LB. REGULAR, 16" WHEELS	471	150 LB. REGULAR, 36" WHEELS
468	125 LB. PURPLE K, 16" WHEELS	472	125 LB. PURPLE K, 36" WHEELS

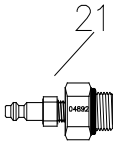
STATIONARY MODELS

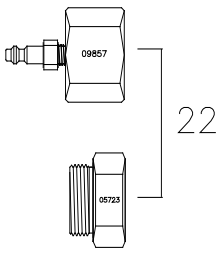
485	125 LB. ABC
486	150 LB. REGULAR
487	125 LB. PURPLE K

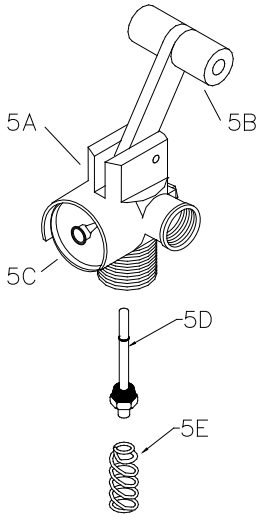
Item No.	Part No.	Description	Std. Pkg.
1	06993	Cap (Chrome Plated Brass), Agent Cylinder	1
1A	12576	Cap (Chrome Plated Brass), Agent Cylinder w/Pressure Indicator	1
2	02272	Gasket, Cap	1
3	13958	Bumper,Rrubber	12
4	02235	Nitrogen Pressure Regulator	1
5A	12467	Nitrogen Valve with Gauge ("T" Handle Quick Release)	1
5B	06373	Valve Lever ("T" Handle-Complete)	1
5C	10213	Gauge – 3000 psi	1
5D	09897	Valve Stem Assembly	6
5E	00501	Spring	6
6	04128	Nitrogen Cylinder (110 cu.ft.)-Charged with Cap, Valve & Gauge	1
7	02234	Nitrogen Hose Assembly	1
8	11024	Retaining Strap w/Hose Hanger	1
9	11021	Retaining Strap (Bottom) – Nitrogen Cylinder	1
10	16483	Bolt, Washer & Wing Nut	1
11	07485 07484	Pictogram-467,470, 485 Pictogram-468,469,471,472,486,487	1
12	07025	Wheel Asy – 36" x 2 ½" w/rubber tread	1
	07389	Hub Cap w/hardware – 36" Wheels	1
13	07751	Wheel Asy – 16" with Hub Cap, Washer & Retaining Pin (Semi-Pneu)	1
14	04945	Hub Cap – 16" Wheels	1
15	07411	Moisture Seal	1
16	03877	Gasket, Hose/Nozzle	6
17	06279	Ball Valve Assembly	1
18	06032	Nozzle Tip (.265)	1
19	03501	Hose Assembly, 50'	1
20	07574	Nozzle Assembly (Ball Valve & Tip)	1
21	04892	Hydrotest Adapter (Nitrogen Cylinder)	1
22	09857 05723	Fill Adapter Hydrotest Adapter (Hose)	1 1
*	06247	Visilox Lubricant (5 oz. tube)	1
*	PART NOT PICTURED		











PARTS LIST
for
125/150 lb. Wheeled & Stationary
Dry Chemical Extinguishers
23 Cu. Ft. Nitrogen Cylinder

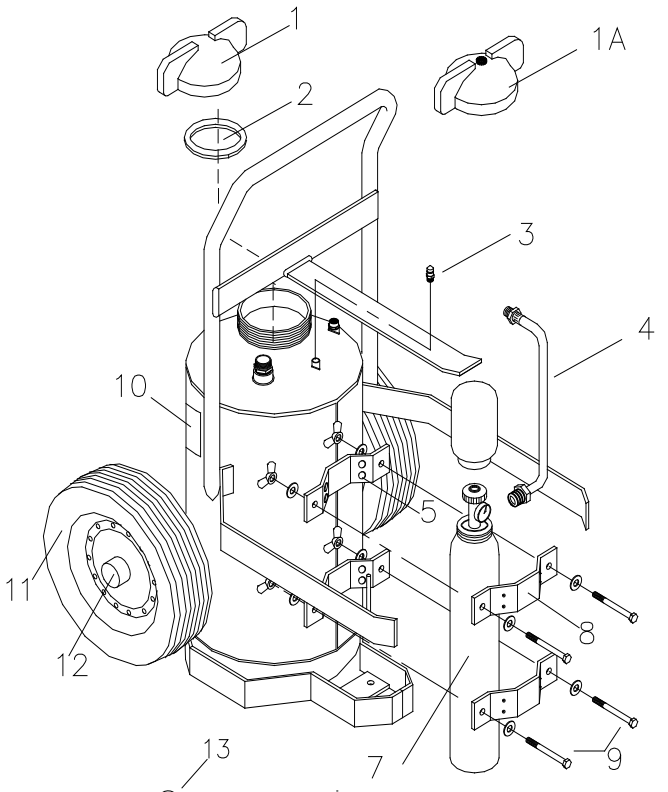
WHEELED MODELS

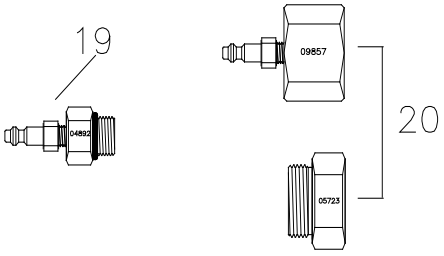
450	125 LB. ABC
451	150 LB. REGULAR
452	125 LB. PURPLE K

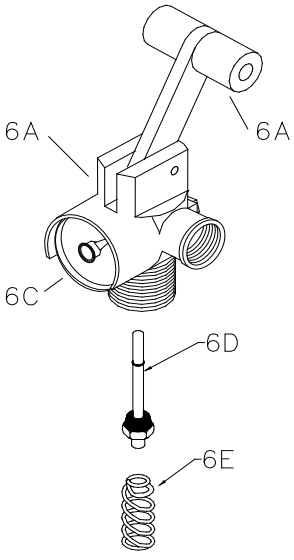
STATIONARY MODELS

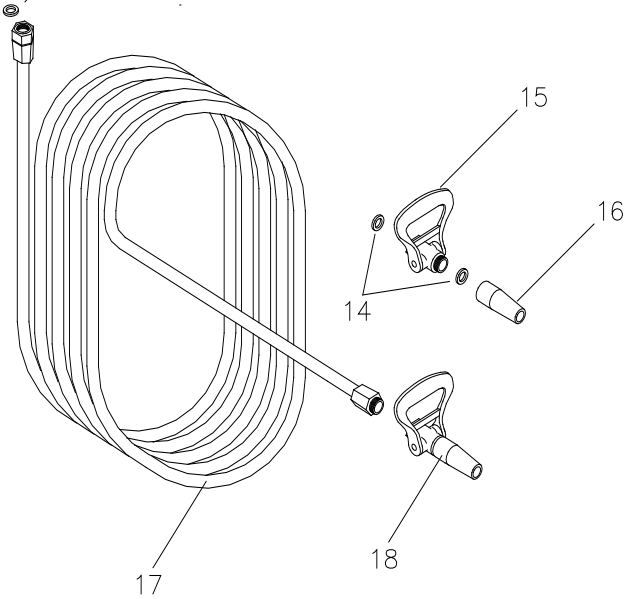
481	125 LB. ABC
482	150 LB. REGULAR
483	125 LB. PURPLE K

Item No.	Part No.	Description	Std. Pkg.
1	06993	Cap (Chrome Plated Brass), Agent Cylinder	1
1A	12576	Cap (Chrome Plated Brass), Agent Cylinder w/Pressure Indicator	1
2	02272	Gasket, Cap	1
3	03787	Safety Disc Assembly	1
4	03818	Nitrogen Hose Assembly	1
5	01990	Rubber Bumper	12
6A	12467	Nitrogen Valve with Gauge ("T" Handle Quick Release)	1
6B	06373	Valve Lever ("T" Handle-Complete)	1
6C	10213	Gauge – 3000 psi	1
6D	09897	Valve Stem Assembly	6
6E	00501	Spring	6
7	03817	Nitrogen Cylinder (23 cu.ft.)-Charged with Cap, Valve & Gauge	1
8	04072	Saddle Clamp WUS	1
9	16483	Bolt, Washer & Wing Nut	1
10	07485 07484	Pictogram-450 Pictogram-451, 452	1
11	07751	Wheel Asy – 16" with Hub Cap, Washer & Retaining Pin (Semi-Pneu)	1
12	04945	Hub Cap – 16" Wheels	1
13	07411	Moisture Seal	1
14	03877	Gasket, Hose/Nozzle	6
15	06279	Ball Valve Assembly	1
16	06032	Nozzle Tip (.312)	1
17	03501	Hose Assembly, 50'	1
18	07574	Nozzle Assembly (Ball Valve & Tip)	1
19	04892	Hydrotest Adapter (Nitrogen Cylinder)	1
20	09857 05723	Fill Adapter Hydrotest Adapter (Hose)	1 1
*	06247	Visilox Lubricant (5 oz. tube)	1
*	PART NOT PICTURED		









OWNERS SERVICE MANUAL
NO. 05606
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

WHEELED STORED PRESSURE
HALON 1211 FIRE EXTINGUISHERS
MODEL 695 (50 POUND)
MODEL 600 (150 POUND)

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081
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THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

INTRODUCTION

Amerex Wheeled Halon 1211 fire extinguishers provide "clean agent" fire fighting capability far exceeding that achievable with hand portable types. Models 695 (50 lb.) and 600 (150 lb.)are stored pressure wheeled Halon 1211 liquefied gas extinguishers. Highly effective on Class A (ordinary combustibles), Class B (flammable liquids) and non-conductive in Class C (energized electric) hazards. Model 600 may be towed at speeds up to 15 mph over paved surfaces and can be easily managed by one person.

To provide optimum extinguisher reliability, recharging should be performed by persons trained in fire extinguisher maintenance and servicing. This manual should be used as a guide for installing and servicing these Amerex extinguishers. The best place to have your extinguishers. The best place to have your extinguishers serviced and recharged is your "Authorized Amerex Distributor" who has the professional experience and equipment to do it properly.

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

PREPARING YOUR NEW EXTINGUISHER FOR USE

1. Remove all wrappings, straps and pallet retaining bolts.
2. Examine the extinguisher for shipping damage.
3. Check to insure that the hose connection at the discharge valve and the nozzle connection to the hose are tight.
4. Check to insure that the shut-off nozzle is in the closed position. The ring (safety) pin should be installed and the lockwire (tamper) seal intact.
5. Visually inspect the pressure gauge. The pressure gauge should be in the green zone (200 ±10 psi range). the method used to determine proper agent fill is by weighing the extinguisher. The gross weight is marked on each extinguisher nameplate.

NOTE: Halon 1211 is a liquefied gas that generates its own vapor pressure. Temperature can affect the pressure gauge reading. Normal "properly charged" markings are correct for 70°F (21°C.) Generally, as temperatures go up, pressure readings go up.

Conversely, lower temperatures result in lower readings. The relative pressure gauge vs. temperature reading for Amerex 50 and 150 lb. Halon 1211 wheeled extinguishers is as follows:

Temperature °F	**-40**	**32**	**70**	**120**
Temperature °C	**-40**	**0**	**21**	**49**
Pressure Gauge (psig)	**127**	**168**	**200**	**263**

When in doubt, condition the extinguisher to 70°F (21°C) for several hours to obtain accurate indications.

6. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is -65º to +120ºF (-54º to +49ºC). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants which may interfere with its proper operation. Do not functionally test this fire extinguisher. (Testing or any use may cause the extinguisher to gradually lose pressure and become ineffective.)

OPERATION

WARNING: HIGH CONCENTRATIONS OF HALON 1211 CAN CAUSE RESPIRATORY PROBLEMS. CONCENTRATIONS GREATER THAN 2% BY VOLUME SHOULD BE AVOIDED.

CAUTION: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. "Dry Run" and visual aid training will prepare personnel with the feel for this extinguisher so that the most effective application can be utilized in an emergency. The basic operating instructions are contained in the pictogram portion of every extinguisher nameplate (label). The following elaborates on these instructions:

1. Move the extinguisher to within approximately 30 feet (50 lb.), 40 feet (150 lb.) of the fire site. Keep the extinguisher upright.

   NOTE: The model 600 extinguisher may be operated in either the vertical or reclined position; however, it will discharge more agent in the vertical position. The model 695 MUST be operated in the UPRIGHT position.

2. Twist and pull ring pin. Open cylinder discharge valve by rotating (pulling) the valve lever toward the hose 90°. The hose is now pressurized with chemical.
3. Pull nozzle, with lever in the closed position, from the mount and extend the hose from the storage rack.

4. Stand back 15 to 20 feet from the fire and aim the nozzle at base of flames nearest you. Open nozzle by pulling handle toward you (be prepared for a discharge recoil by holding the nozzle firmly).
5. Sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning materials.
6. When the fire is out, push the nozzle lever forward to the closed position.
7. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

WARNING: **SYMPTOMS OF OVER-EXPOSSURE TO PURE HALON ARE DIZZINESS, IMPAIRED COORDINATION AND REDUCED MENTAL ACUITY. PERSONS SUFFERING FROM OVER-EXPOSURE SHOULD BE IMMEDIATELY REMOVED TO FRESH AIR. IF UNCONSCIOUS GIVE RESPIRATION AND OBTAIN MEDICAL AID. <u>USE OF ADRENALIN OR SIMILAR DRUGS SHOULD BE AVOIDED.</u>**

	MODEL 695	**MODEL 600**
Discharge Time (approx.)	**35 seconds**	**44 seconds**
Range (Agent Throw)	**25 to 35 feet**	**35 to 40 feet**
Hose Length	**25 feet**	**50 feet**

SHUTDOWN

CAUTION: **BEFORE PERFORMING THE SHUTDOWN PROCEDURE AND PREPARING TO MOVE THE EXTINGUISHER TO THE RECHARGE LOCATION, DETERMINATION MUST BE MADE THAT THE FIRE IS COMPLETELY EXTINGUISHED AND THERE IS NO DANGER OF A FLASHBACK.**

1. Rotate cylinder discharge valve lever 90° to the closed position. Install ring (locking) pin to prevent accidental actuation while transporting to recharge location.
2. Remove residual agent from hose.

   CAUTION: Do not leave halon in the hose as over-pressurization and deterioration of the hose may occur.

3. Return the extinguisher to the upright position.
4. Coil the hose onto the storage rack and position the nozzle into the mount in preparation for transport to the recharge location.

<u>RECHARGE EXTINGUISHERS IMMEDIATELY AFTER ANY USE</u>

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES
(Monthly or more often if circumstances dictate)

[NFPA-10] Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Pressure gauge reading or indicator in the operable range or position.
4. Operating instructions on nameplate and facing outward.
5. Safety seals and tamper indicators not broken or missing.
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Determine fullness by weighing.
8. Hose properly coiled and shut-off nozzle in its mount.
9. Wheels rotate freely.

MAINTENANCE

[NFPA-10] Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure, using the proof pressure method, in accordance with instructions in CGA pamphlet C-6 and NFPA 10. See proper method of depressurizing and reclaiming Halon 1211 in Complete Maintenance procedures.

   NOTE: WHEN CLEANING, AVOID USE OF SOLVENTS AROUND THE PRESSURE GAUGE. THEY COULD SERIOUSLY DAMAGE THE PLASTIC GAUGE FACE.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Weigh the extinguisher and compare with weight printed in the "Maintenance" section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.

4. Check the date of manufacture printed on the extinguisher label (nameplate) or on the agent cylinder dome. The agent cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate (will vary according to size). Model 695, 50 lb. (480 psi); Model 600, 150 lb. (500 psi). Discharge hoses must also be hydrostatically tested (proof pressure) every 12 years to 300 psi, or service pressure, whichever is higher.

5. Visually inspect the pressure gauge:
   a. If bent, damaged or improper gauge, depressurize and replace.
   b. If pressure is low, check for leaks.
   c. If over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions.

6. If the Model 600 is so equipped, check the agent lever indicator. The indicator arrow should be in the Green zone. Refer to the Trouble Shooting guide if there are any problems with the indicator.

7. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

8. **WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. ANY EVIDENCE OF AGENT IN THE NOZZLE INDICATES THAT THE UNIT MAY HAVE BEEN USED AND THE USE NOT REPORTED. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL.**

   Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.

9. After making sure that there is no residual pressure in the discharge hose, disconnect it from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration – replace as necessary.

10. Inspect the valve assembly for corrosion or damage to hose thread connection. Visually inspect the safety disc assembly on the Model 600 discharge valve. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures. If valve removal is necessary, complete all steps in the Recharge Procedure.

11. Reconnect the hose to the agent cylinder. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount.

    NOTE: WHEN ASSEMBLING THE HOSE TO THE AGENT CYLINDER OR NOZZLE TO THE HOSE, TIGHTEN THE COUPLING ¼ TURN AFTER CONTACTING THE HOSE GASKET.

12. Inspect the wheels on to insure they rotate freely. Lubricate as required.

13. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.

14. Install new lockwire (tamper) seal and record service data on the extinguisher inspection tag.

15. If the extinguisher has been moved to perform service, make sure that it is returned to its proper location.

COMPLETE MAINTENANCE (SIX YEAR MAINTENANCE)

[NFPA-10] Every 6 years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

WARNING: a. Before attempting to devalve the extinguisher for Maintenance, Hydrotest or Recharging be sure that it is completely depressurized. Halon 1211 generates a vapor pressure of 22 psi @ 70°F. NEVER VENT TO THE ATMOSPHERE. Recover agent and vapor according to the instructions below.
b. Never have any part of your body over the extinguisher while removing the valve assembly.
c. Halon 1211 should not be mixed with even the slightest amount of moisture. Prolonged exposure of a devalved cylinder to ambient air should be avoided to prevent moisture contamination and cylinder rusting.

COMPLETE MAINTENANCE (SIX YEAR MAINTENANCE) PROCEDURES

1. Complete items 1 through 9 in Maintenance Procedure above.
2. Attach the appropriate recharge adapter to the extinguisher operating valve on the extinguisher cylinder. Empty the extinguisher of all pressure and Halon 1211 using a listed Halon Recharge/Recovery system and a bulk Halon supply cylinder with sufficient empty capacity to accept the contents of the extinguisher.

   NOTE: Every effort should be made to halt unnecessary escape of Halon 1211 to the atmosphere to prevent detrimental environmental effect. High Efficiency Halon 1211 Recharge/Recovery (vacuum pump type) systems (UL Standard 2006) are commercially available. The Getz HR-1 (UL Approved) unit assures a minimum of 99% recovery efficiency. It allows a means of checking for and removing moisture or contamination during the recovery process.

3. When extinguisher is empty of all agent and pressure, remove valve assembly and disassemble by removing downtube, spring and valve stem assembly. **Discard valve stem assembly and collar o-ring.**
4. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with dry nitrogen.
5. Install a NEW Amerex valve stem assembly after lightly lubricating the valve stem o-ring with V-711 or equivalent (do not lubricate the valve stem seal). Reassemble the spring and downtube. Carefully install a NEW collar o-ring which has been lightly lubricated with V-711 or equivalent. Set the valve assembly aside.
6. Inspect the cylinder interior following CGA Visual Inspection Standard C-6. If a hydrotest has been performed or any moisture is evident, the cylinder should be immediately warm air dried.
7. Clean the o-ring seating groove in the cylinder neck. If any rust is evident, remove by using a fine emery cloth (200 grit). Clean the surface and lubricate the entire sealing area with a thin film of V-711 or equivalent. Install the valve assembly in extinguisher cylinder. Hand tighten firmly.
8. Use the Getz HR-1 system to purge the residual air from the extinguisher cylinder.

RECHARGE

[NFPA-10] is the replacement of the extinguishing agent (also includes the expellant for this type of extinguisher.

WARNING:

a. Use a protective shield between you and the pressure gauge while charging an extinguisher. Do not stand in front of the gauge if a shield is not available.

b. Use a regulated pressurizing source of dry nitrogen only with a minimum dew point of minus 70ºF (minus 57ºC). Set the regulator to no more than 25 psi above the extinguisher operating pressure.

c. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.

d. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.

RECHARGING PROCEDURE

1. Perform steps 1 through 8 of the "Complete Maintenance (Six Year Teardown)" section.

   CAUTION: All extinguisher and charging system valves must be closed before starting this procedure.

2. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with air or nitrogen. Inspect the collar o-ring, valve stem, spring and downtube assembly, and replace parts if worn or damaged. Lubricate the collar o-ring and small o-ring on the valve stem with Visilox V-711 (do not lubricate the valve stem seal).

3. Follow all recharging instructions on Getz HR-1 or other "approved" Recharge/Recovery System.

4. Fill extinguisher with amount of halon 1211 specified on nameplate and pressurize to the pressure specified with dry nitrogen.

5. Remove the recharge adapter. Some residual halon vapor may remain in the valve orifice as a result of the charging procedure. Before attempting to leak detect, vacuum or blow the vapor away from the areas to be checked. Check extinguisher for leaks at the valve orifice, around the collar seal, cylinder welds and gauge using a Portable Halogen Leak Detector (preferred method). The alternate method is to apply leak detecting fluid or a solution of soapy water to these areas. Use dry nitrogen to blow all liquid residue out of the valve and wipe the extinguisher to dry the exterior. DO NOT LEAVE ANY LIQUID INSIDE THE VALVE BODY.

6. Install hose assembly, with shut-off nozzle attached, to the extinguisher discharge valve. Tighten hose coupling ¼ turn after contact with hose gasket. Coil hose onto the hose rack and nozzle into mount.

7. Weigh extinguisher to confirm that the total weight is within the tolerances indicated in the Maintenance section of the extinguisher label (nameplate).

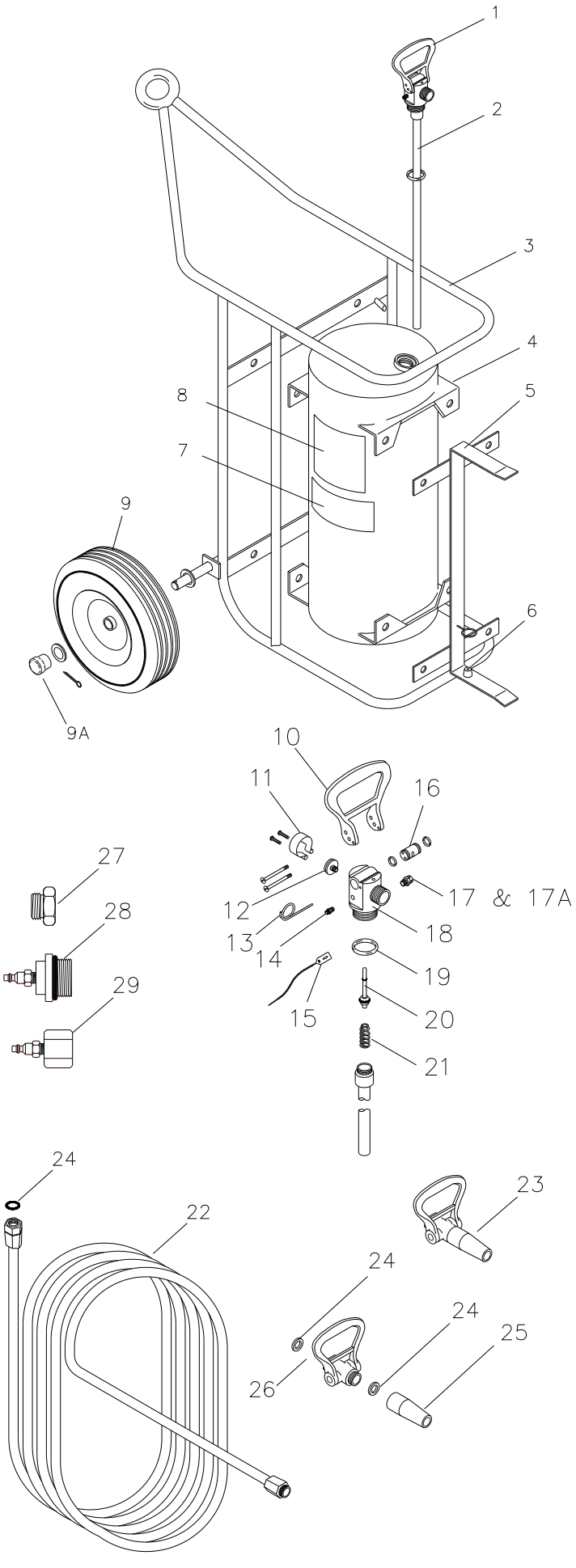
8. Record recharge date and attach new recharge tag in accordance with the requirements of the "Authority Having Jurisdiction".

TROUBLESHOOTING GUIDE

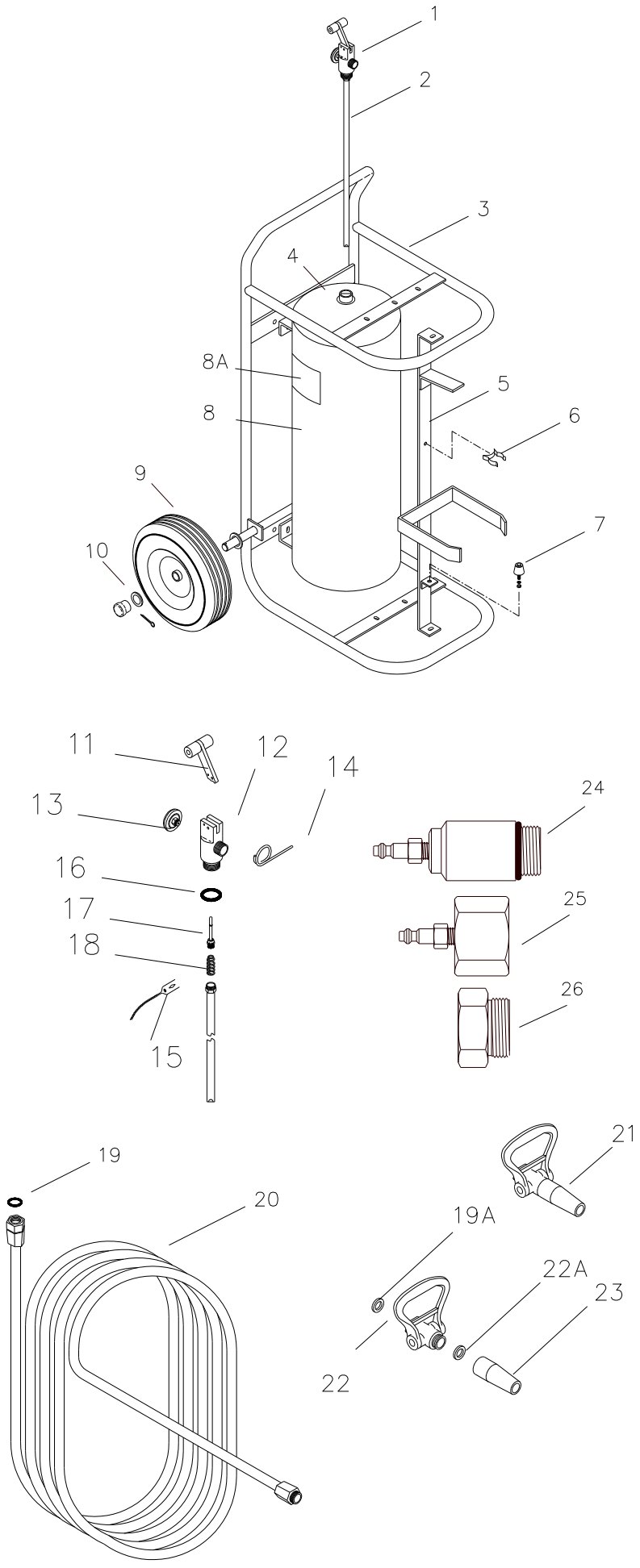
WARNING: Before attempting to correct any leakage problem, be sure that the agent cylinder and hose are completely depressurized. Check to determine the source of a leak before the extinguisher is depressurized. Leakage repairs will require depressurization and removal of the valve assembly. Use Getz HR-1 or other approved recharge/recovery system to depressurize extinguisher.

	PROBLEM	CORRECTIVE ACTION
1.	Pressure gauge reads high or low	Temperature may have affected pressure – see temperature/pressure relationship chart.
2.	Leak through valve	Remove valve assembly, downtube, spring and valve stem assembly. Install new valve stem assembly. Check valve seat for scratches or foreign matter.
3.	Leak at collar o-ring	Remove valve assembly, clean collar o-ring seating surface thoroughly and lubricate lightly with V-711 or equivalent. Install a new collar o-ring after lubricating with V-711 or equivalent.
4.	Leak around gauge threads	Remove gauge*, and install a new Halon 1211 gauge (see parts list) using Teflon tape on the gauge threads.
5.	Defective gauge	Remove defective gauge* an install a new Halon 1211 gauge (see parts list) using Teflon tape on the gauge threads.
6.	Visible deterioration of discharge hose	Replace hose assembly. Extinguishing agent has been stored in hose for a prolonged time. see Caution in Shut-Down procedures
	MODEL 600 ONLY	
1.	Leak at safety disc assembly	Inspect safety outlet for tightness or damage. If loose, remove entire assembly and reinstall using Teflon tape on the threads. If damaged, replace with new P/N 03787 Safety Disc Assembly using Teflon tape on the threads. Tighten only the large hex nut.
2.	Agent level gauge not functioning (if so equipped)	Remove agent level gauge and discard. Replace agent level gauge with Amerex P/N 06370
	* Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F/82°C) for two to four minutes. Remove gauge with a 7/16" open end wrench.	

PARTS LIST
for
150 lb. Wheeled Stored Pressure
Halon 1211 Extinguisher
Model 600



Item No.	Part No.	Description	Std. Pkg.
1	03499	Valve Assembly with Downtube	1
2	04938	Downtube/Retainer Assembly	1
3	10523	Carriage Assembly w/o Wheels	1
4	03506	Cylinder w/Mounting Brackets	1
5	06061	Hose Support Asy with Mounting Hardware	1
6	06130	Nozzle Mount with Hardware	1
7	03624	Nameplate (Mylar label) non U/L	1
8	07481	Pictogram	1
9	06062	Wheel Assembly, 16" with Hubcap, Washer and Retaining Pin Pneumatic, Green	1
9	07778	Wheel Assembly, 16" with Hubcap, Washer and Retaining Pin Semi-Pneumatic, Black	1
9A	04945	Hubcap	1
10	06059	Valve Lever w/Screws	1
11	03562	Gauge Guard Assembly	1
12	03523	200 PSI Gauge	1
13	06100	Ring Pin, SS with Wire	12
14	00155	Pressure Valve & Cap Assembly	12
15	01387	Lockwire Seal (Yellow)	500
16	06060	Cam Assembly w/o-rings	1
17	03787	Safety Disc Assembly	1
17A	13956	Vinyl Protector Cap	1
18	03678	Valve Body	1
19	05239	Collar O-Ring	12
20	05067	Valve Stem Assembly	6
21	03556	Spring	6
22	03501	Hose Assembly, 50 ft.	1
23	05295	Nozzle Asy (Ball Valve & Tip)	1
24	03877	Gasket, Hose/Nozzle	6
25	06355	Nozzle Tip (.375)	1
26	06279	Ball Valve Assembly	1
27	05723	Hydrotest Adapter (Male Plug) Use with P/N 09857 to test 50 ft. Hose Assembly	1
28	05152	Hydrotest Adapter (Cyl)	1
29	09857	Recharge Adapter	1
⊗	05606	Owners Service Manual	1
⊗	06247	Visilox Lub. (5 oz. tube)	1
⊗	06370	Plug, ¾ NPT SS Socket	1
⊗	Part Not Pictured		



PARTS LIST
For
50 lb. Wheeled Stored Pressure
Halon 1211 Extinguisher
Model 695

Item No.	Part No.	Description	Std. Pkg.
1	06200	Valve Assembly with Downtube	1
2	06072	Downtube Asy 50 DC	1
3	06624	Carriage Assembly w/o Wheels	1
4	00155	Pressure Valve & Cap Assembly	12
5	06379	Hose Support Asy with Hose Clip, Hardware & Nozzle Mount	1
6	06380	Hose Clip w/Mounting Hardware	1
7	06376	Nozzle Mount w/Hardware	1
8	06313	Cylinder w/Mounting Brackets	1
8A	07480	Pictogram	1
9	06381	Wheel Assembly, 12½" with Hubcap, Washer and Retaining Pin	1
10	04945	Hubcap	1
11	06373	Valve Lever w/Dowel Pin and Knobs	1
12	06153	Valve Body	1
13	03523	200 PSI Gauge	1
14	06100	Ring Pin, SS with Wire	12
15	01387	Lockwire Seal (yellow)	500
16	05240	Collar O-Ring	24
17	06022	Valve Stem Assembly	6
18	00383	Spring	6
19	07247	Gasket, Hose	6
19A	06056	Gasket, Ball Valve	6
20	06015	Hose Assembly, 25' w/Gasket	1
21	06395	Nozzle Asy (Ball Valve & Tip)	1
22	06031	Ball Valve Assembly	1
22A	03877	Gasket, Nozzle	6
23	06032	Nozzle Tip (.265)	2
24	03038	Hydrotest Adapter (Cylinder)	1
25	06160	Recharge Adapter	1
26	06157	Hydrotest Adapter (Male Plug). Use with P/N 06160 to test 25' Hose Assembly	
⊗	06247	Visilox Lub. (5 oz. tube)	1
⊗	05606	Owners Service Manual	1

⊗ Part Not Pictured

OWNER'S SERVICE MANUAL
NO. 05607
INSPECTION, MAINTENANCE AND RECHARGE

WARNING: DO NOT USE THESE EXTINGUISHERS ON FIRES INVOLVING ENERGIZED ELECTRICAL EQUIPMENT (CLASS C HAZARDS), FLAMMABLE METALS (CLASS D HAZARDS) OR ANY FLAMMABLE THAT WILL REACT WITH WATER. PROTECT FROM FREEZING!

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

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CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection	**Compressed Gas Association** 1235 Jefferson Davis Hwy, Suite 501 Arlington, VA 22202

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Phone: 205/655-3271 Fax: 800/654-5980

e-mail: sales@amerex-fire.com Web Page: http://www.amerex-fire.com

FOAM FIRE EXTINGUISHERS

MODEL 254- 6 LITER AR-AFFF FOAM WITH SPRAY NOZZLE

Models 250 and 252– 2 ½ GALLON AR-AFFF FOAM WITH ASPIRATED NOZZLE

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1. Located in designated place.
2. No obstructions to access or visibility.
3. Operating instructions on nameplate (label) and facing outward.
4. Seals and tamper indicators not broken or missing.
5. Determine fullness by weighing or "hefting".
6. Examine for obvious physical damage, corrosion, leakage or clogged nozzle.
7. Pressure gauge reading in the operable area.

MAINTENANCE – SERVICE PROCEDURE

MAINTENANCE At least once a year (or more frequently if indicated by an inspection), maintenance should be performed. Maintenance is a “thorough check” of the extinguisher. It is intended to give maximum assurance that an extinguisher will operate effectively and safely. It includes a thorough examination and any necessary repair or replacement. It will normally reveal the need for hydrostatic testing.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test, using the proof pressure method and a suitable cage, in accordance with CGA Pamphlet C-1 and NFPA Pamphlet 10. **NOTE**: When cleaning avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Check the date when last recharged. **The foam charge must be replaced every three years with the proper Amerex charge (model 502/504 AR-AFFF charge for models 250, 252 and 254).** If the extinguisher is to be hydrostatically tested, do not reuse the charge even if within a three year cycle (the foaming action will make it almost impossible to get complete charge back into the extinguisher).

4. Weigh extinguisher and compare with weight printed on the Maintenance section of the nameplate (label). Recharge extinguisher if weight is not within the indicated allowable tolerances.

5. Check the date of manufacture on the extinguisher hanger loop or on the extinguisher nameplate. Cylinder must be hydrostatically tested every 5 years to the test pressure indicated on the label.

6. Visually inspect the pressure gauge:
    a. If bent, damaged or improper gauge, depressurize and replace
    b. If pressure is low, check for leaks
    c. If over pressurized (overcharged), depressurize (discharge) and follow recharging instructions.
7. Inspect the footstand (base). If cracked or broken replace with proper footstand.
8. Inspect ring pin for freedom of movement by breaking the seal and removing the pin. Replace the ring pin if bent or if removal is difficult.
9. Inspect discharge lever for dirt or corrosion that might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged or distorted, replace with proper Amerex part(s).
10. Remove hose assembly, inspect hose assembly for damage, replace as necessary. Blow air through hose assembly to insure passage is clear of foreign material.
11. Inspect the valve assembly for corrosion or damage to hose thread connections. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures.
12. Install hose and nozzle assembly.
13. Install new tamper seal and record service data on the extinguisher inspection tag.
14. Rehang the extinguisher on the wall hanger bracket making sure that it fits the hanger bracket properly – replace the bracket if necessary.

RECHARGE

RECHARGING is the replacement of the extinguishing agent and includes the expellant for this type of extinguisher.

THE FIRE EXTINGUISHING AGENT IN THIS EXTINGUISHER MUST BE COMPLETELY REPLACED EVERY THREE YEARS. Use only the Amerex Model 502/504 AR-AFFF charge to retain the UL approval and manufacturer's warranty. Substitute charges could make the extinguisher less effective.

WARNING:

a. Before attempting to recharge be sure this extinguisher is completely depressurized.
b. Use a regulated nitrogen pressurizing source. Set the regulator no more than 125 psi (862 kPa) higher than the gauge operating pressure.
c. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.
d. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.

RECHARGING PROCEDURE

1. Complete the “Maintenance-Service Procedure”, items 1 thru 11.
2. Discharge all remaining pressure and foam solution.
3. Remove the valve assembly and disassemble by removing downtube assembly, spring and valve stem from the valve assembly. Remove the collar O-ring from the valve assembly. Remove collar O-ring from the valve and plastic fill tube from the cylinder.
4. Thoroughly rinse all parts with clean water and wipe dry with a soft cloth. Inspect the valve components and replace the collar O-ring and valve stem with new components. Lubricate the collar O-ring and small O-ring on the valve stem with Bluesil V-711 (do not lubricate the valve stem seal). Inspect the downtube. If it is cracked or deformed replace with proper downtube (see Parts List). Inspect downtube O-ring, replace if necessary.
5. Rinse the cylinder with clean, fresh water and inspect the interior following CGA Visual Inspection Standard C-6.
6. Firmly replace the plastic fill tube.
7. Refill the extinguishers as follows:
    a. Models 250 and 252 2-1/2 gal. AR-AFFF Premix
        1. Fill a clean bucket with 2.33 gallons (8.82 liters) [19.34 lbs. (8.77kg)]of clean tap or distilled water. Continue with steps b2 through b4.
    b. Model 254 6 Liter AR-AFFF Premix
        1. Fill a clean bucket with 1.41 gallons. (5.34 liters) [11.70lbs. (5.31 kg)] of clean tap or distilled water.
        2. Add an Amerex 502/504 AR-AFFF charge to the water.
        3. Mix water and foam charge slowly and thoroughly in the bucket (paint stirrer and electric drill work well).
        4. Pour the well mixed foam charge into the cylinder using a long spout funnel, filling from the bottom of the cylinder to reduce foaming.

    Alternatively, on an accurate scale:

    c. Models 250 and 252 2-1/2 gal. AR-AFFF Premix
        1. Fill cylinder with 2.33 gallons (8.82 liters) [19.34 lbs (8.77kg)]of clean tap or distilled water. Continue with steps d2 through d4.
    d. Model 254 6 Liter AR-AFFF Premix
        1. Fill cylinder with 1.41 gallons (5.34 liters) [11.70lbs. (5.31 kg)] of clean tap or distilled water.
        2. Slowly add an Amerex 502/504 AR-AFFF charge to the water. The liquid level should now be close to the bottom of the fill tube.
        3. If necessary add water very slowly to bring the liquid to this level.
        4. Mix water and foam charge thoroughly in the cylinder (a “mix-stir” wine degasser tool and electric drill work well).
8. Install a “Verification of Service” collar around neck of cylinder. Install valve assembly to the cylinder and properly align. Shake the extinguisher to assure a thorough mix of the foam solution. **CAUTION**: HAND TIGHTEN THE VALVE COLLAR NUT 100-125 IN LBS. MAX. (1.15-1.44 KG/m). OVER-TIGHTENING WITH A WRENCH WILL DAMAGE THE VALVE.

9. Install a P/N 02141 Fill (Pressurizing) Adapter on the valve outlet (where the hose assembly attaches) and pressurize with nitrogen to 100 psi (690 kPa). The pressure regulator should be set to no more than 125 psi (862 kPa). Remove Fill Adapter.
10. Check the collar, gauge, cylinder welds and valve orifice for leaks using a leak detection fluid or a solution of soapy water. Remove leak detection fluid from the valve assembly by blowing out with air and wipe exterior of the extinguisher to dry.
11. Install hose assembly into the operating valve. Torque swivel nut lightly with a 15/16" wrench. Install in hose clip.
12. Install ring pin with ring facing front of the extinguisher. Install new tamper seal. Record recharge date and attach new recharge tag.
13. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the Maintenance section on the extinguisher nameplate (label).

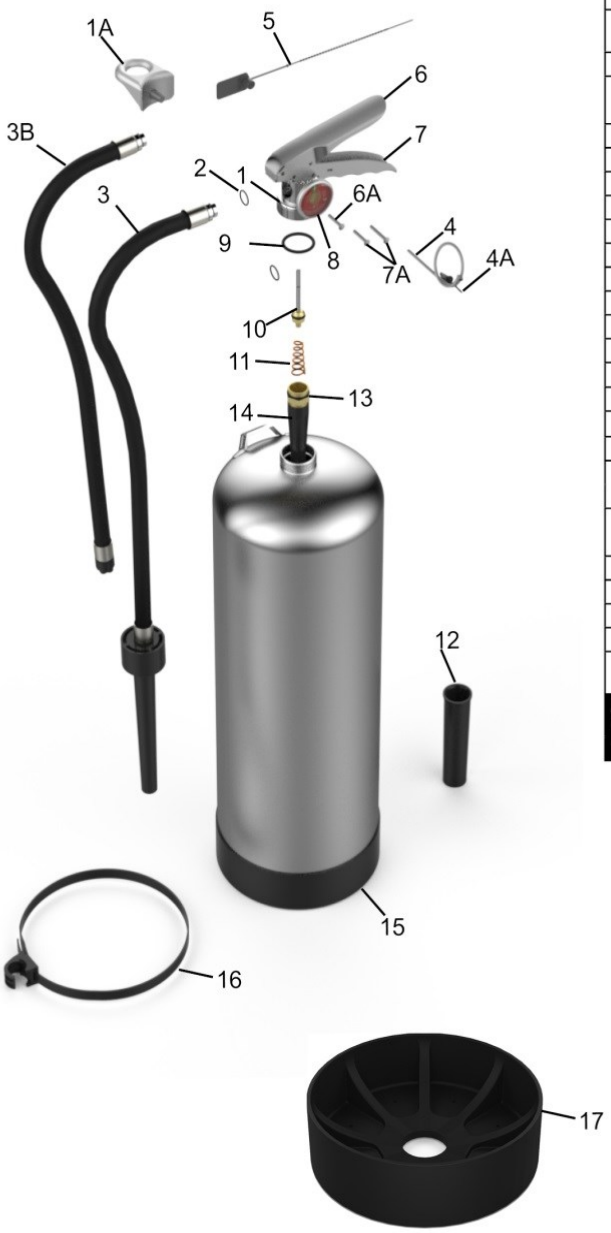
TROUBLESHOOTING GUIDE

WARNING: Determine the source of a leak before the extinguisher is depressurized. THE EXTINGUISHER MUST BE COMPLETELY DEPRESSURIZED BEFORE ANY ATTEMPT IS MADE TO DEVALVE IT AND CORRECT ANY LEAKAGE PROBLEM. To depressurize – hold the extinguisher in an inverted position and slowly squeeze the discharge handle. Some liquid remaining in the downtube will be discharged so care should be taken in the area used for depressurization. Thoroughly clean all valve parts after depressurization and valve removal.

	PROBLEM	**CORRECTIVE ACTION**
1.	Leak at collar O-ring	Remove valve assembly, clean collar (knurled) nut thoroughly and install new O-ring. Lubricate the O-ring with Bluesil V-711 (P/N 06247).
2.	Leak through valve	Install new valve stem assembly. Check valve seat for scratches or foreign matter.
3.	Leak around gauge threads	Remove gauge* and reinstall using Teflon tape on the gauge threads.
4.	Defective gauge	Remove defective gauge* and install a new gauge using Teflon tape on the gauge threads.
5.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "Rejected" and return to owner.
6.	Broken footstand	Install new footstand (see parts list)
*	Pressure gauge threads are coated with a special epoxy at the factory. For easy removal soak the valve assembly (minus the downtube assembly) in hot water (180°F/82°C) for two to four minutes. Remove gauge with a 7/16" open end wrench.	

PARTS LIST
for
6 Liter and 2½ Gal.
Water & Foam Models

250 - 2 1/2 Gallon AR-AFFF Foam
252 - 2 1/2 Gallon FFFP Foam
254 - 6 Liter AR-AFFF Foam



ITEM NO.	PART NO.	DESCRIPTION
1	17616	Valve Assembly - 250, 252, 254 w/o air valve
1A	14380	Hanger Loop with Screw (OPTIONAL ON FOAM)
2	06978	Hose Gasket (O-Ring)
3	07000	Hose & Aspirated Black Nozzle Assembly - 250
	06982	Hose & Aspirated Gray Nozzle Assembly - 252
3B	13162	Hose & Spray Nozzle Assembly - 254
4	00160	Ring, Pin Stainless Steel
4A	00532	Chain (Nylon) for Ring Pin
5	01387	Lock Wire Seal (Yellow)
6	07762	Lever & Rivet - **ALL MODELS**
6A	01563	Rivet Only for Lever
7	09020	Handle & Rivets - **ALL MODELS**
7A	01564	Rivets Only for Handle (2 Required)
8	06479	Gauge - 100 PSI (S/S Tube)
9	05240	Collar O-Ring
10	06093	Valve Stem Assembly
11	00383	Spring
12	02595	Fill Tube
13	05690	O-Ring Downtube / Retainer
14	15943	Downtube/Retainer Ass'y - 250,252
	15941	Downtube/Retainer Ass'y - 254
15	03776	Foot Stand with Post (Black) - 250, 252
	03109	Foot Stand (Black) - 254
16	14776	Strap & Clip Assembly (Model 254 Only)
17	21777	Rubber Footstand 7"
*	21854	Rubber Footstand Adhesive
ALL BRACKETS - SEE BRACKET PAGE		
ALL FILL & HYDROTEST ADAPTERS - SEE ADAPTERS PAGE		

All Valve Assemblies include Valve Body, Gauge, Collar Nut, O-Ring, Lever and Handle

* Not Shown

OWNERS SERVICE MANUAL
NO. 05608
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

STORED PRESSURE, WHEELED & STATIONARY 125/150 POUND DRY CHEMICAL FIRE EXTINGUISHERS

ABC (AMMONIUM PHOSPHATE BASE), REGULAR (SODIUM BICARBONATE BASE), PURPKE K (POTASSIUM BICARBONATE BASE)

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

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THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

INTRODUCTION

The Amerex Models 488 (ABC), 489 (Regular) & 490 (Purple K) Stored Pressure Wheeled and Models 476 (ABC), 477 (Regular) & 478 (Purple K) Stored Pressure Stationary Dry Chemical fire extinguishers are designed to provide larger volumes of dry chemical fire fighting agent than hand portable types for industrial applications. The wheeled version can easily be transported and operated by one person and in a stationary configuration and can be mounted in a small space. The cage type carriage provides protection for the operating valve, cylinder and hose assembly. Easy rolling 16 inch semi-pneumatic rubber tires assure minimum effort to quickly transport them through narrow spaces to a fire scene.

Maximum protection from severe corrosive environment is afforded by the Amerex corrosion resistant metal preparation and paint finish. The operating valve, handle, gauge guard, fill cap, house couplings and ball type shutoff are brass, or brass chrome plated for years of trouble free use. These models carry an Amerex warranty of six years – see full wording of the warranty below.

Field recharging is possible utilizing maintenance/recharge equipment available through your Amerex Distributor. To provide optimum extinguisher reliability, recharging should be performed by persons trained in fire extinguisher maintenance and servicing. This manual should be used as a guide for installing, operating and servicing this extinguisher. The best place to have your extinguisher serviced and recharged is your Authorized Amerex Distributor who has the professional experience and equipment to do it properly.

SIX YEAR LIMITED WARRANTY

Amerex warrants its fire extinguishers to be free from defects in material and workmanship for a period of six (6) years from the date of purchase. During the warranty period, any such defects will be repaired or the defective extinguisher replaced if only factory replacement parts and recommended service equipment have been used to service the extinguisher. This warranty does not cover defects resulting from modification, alteration, misuse, exposure to unusually corrosive conditions nor improper installation or maintenance. All implied warranties, including, but not limited to, warranties of fitness for purpose and merchantability, are limited to the timer periods as stated above. In no event shall Amerex Corp. be liable for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Amerex Corp. neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corp., P. O. Box 81, Trussville, AL 35173-0081 for instructions.

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

PREPARING YOUR NEW EXTINGUISHER FOR USE

1. Examine the extinguisher for evidence of shipping damage. Notify the delivering carrier immediately if any damage is discovered.
2. Remove all wrappings, straps and pallet retaining bolts.
3. Check to insure that the hose connection to the operating valve and shut-off nozzle to the hose are tight.
4. Check to insure that the shut-off nozzle is in the closed position. The ring (safety) pin should be installed in the operating valve and the lockwire (tamper) seal intact.
5. Check to make sure that the cap is on the "bleeder valve" (located on the side of the extinguisher operating valve). The pressure seal is in the cap and it must be in place to prevent leakage.
6. This extinguisher is shipped from the factory fully charged. Visually inspect the pressure gauge – the pressure should be in the green zone (240 psi ± approx. 10 psi range). The most accurate method to determine if the extinguisher is filled with the proper amount of chemical is to weigh the unit. The gross weight is indicated on the nameplate (label).

   NOTE: Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70ºF (21ºC) for several hours to obtain more accurate pressure gauge readings.

7. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is -65º to +120ºF (-54º to +49ºC). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants which may interfere with its proper operation. Do not functionally test this fire extinguisher. (Testing or any use may cause the extinguisher to gradually lose pressure and become ineffective.)

OPERATION

NOTE: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.

1. Move the extinguisher to within approximately 50 feet of the fire site. Keep the extinguisher upright.

   CAUTION: This extinguisher must be operated in an upright position. If equipped with an optional tow loop and vehicle towed to the fire scene, remove from tow hitch and operate in a vertical position.

2. Twist and pull ring pin. Open cylinder discharge valve by rotating (pulling) the handle valve lever toward the hose. The hose is now pressurized with chemical.
3. Pull nozzle, with lever in the closed position, from the mount and extend the hose from the storage rack.
4. Stand back 30 feet from the fire and aim the nozzle at base of flames nearest you. Open nozzle by pulling handle toward you (be prepared for a discharge recoil by holding the nozzle firmly).
5. Sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning materials.
6. When the fire is out, push the hose (discharge) lever forward to the closed position. Stand by and watch for possible reignition.
7. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

DISCHARGE TIME – 488/476 – 49 Seconds 489/477 – 60 Seconds 490/478 – 52 Seconds
EFFECTIVE RANGE OF AGENT THROW IS 25 TO 40 FEET
HOSE LENGTH – 50 FEET

SHUTDOWN

CAUTION: BEFORE PERFORMING THE SHUTDOWN PROCEDURE AND PREPARING TO MOVE THE EXTINGUISHER TO THE RECHARGE LOCATION, DETERMINATION MUST BE MADE THAT THE FIRE IS COMPLETELY EXTINGUISHED AND THERE IS NO DANGER OF A FLASHBACK.

1. Tip the extinguisher to the horizontal position (resting on the carriage handle) and slowly rotate the cylinder discharge valve lever to the open position. Slowly push the hose (discharge) nozzle lever to the open position and be prepared for some chemical discharge.

2. When all pressure has been evacuated from the extinguisher, return the hose (discharge) nozzle lever and cylinder discharge valve lever to the closed position.

   NOTE: These steps will allow easy depressurization of the extinguisher and clear the hose assembly with a minimal loss of remaining chemical.

3. Return the extinguisher to the upright position. Coil the hose onto the storage rack and position the nozzle into the mount in preparation for transport to the recharge location.

<u>RECHARGE EXTINGUISHERS IMMEDIATELY AFTER ANY USE</u>

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES
(Monthly or more often if circumstances dictate)

[NFPA-10] Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Pressure gauge reading or indicator in the operable range or position.
4. Operating instructions on nameplate and facing outward.
5. Safety seals and tamper indicators not broken or missing.
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Determine fullness by weighing.
8. Wheels rotate freely.

MAINTENANCE

[NFPA-10] At least once a year or more frequently if circumstances require, maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE – SERVICE PROCEDURE

NOTE: THIS PROCEDURE WILL BE BEST ACCOMPLISHED WITH THE EXTINGUISHER IN AN UPRIGHT POSITION AND ON A LEVEL SURFACE.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test to factory test pressure 500 psi (3448 kPa), using the proof pressure method, in accordance with instructions in C-6 and NFPA 10. See proper method of depressurizing and reclaiming chemical in Recharge procedures.

   NOTE: WHEN CLEANING, AVOID USE OF SOLVENTS AROUND THE PRESSURE GAUGE. THEY COULD SERIOUSLY DAMAGE THE PLASTIC GAUGE FACE.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Weigh the extinguisher and compare with weight printed in the "Maintenance" section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.

4. Check the date of manufacture printed on the extinguisher label (nameplate) or on the agent cylinder dome. The agent cylinder must be hydrostatically tested in accordance with DOT requirements to the test pressure indicated on the nameplate 500 psi (3448 kPa).

5. Visually inspect the pressure gauge:
   a. If bent, damaged or improper gauge, depressurize and replace.
   b. If pressure is low, check for leaks.
6. Check ring pin for freedom of movement. Replace if bent, or if removal appears difficult.

7. Visually inspect, without removing, the agent fill plug for damage or distortion. Replace as necessary only after proper depressurization procedures have been performed (see complete Maintenance – Six Year Teardown instructions).

8. **WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. ANY EVIDENCE OF AGENT IN THE NOZZLE INDICATES THAT THE UNIT MAY HAVE BEEN USED AND THE USE NOT REPORTED. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL.**

   Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.

9. After making sure that there is no residual pressure in the discharge hose, disconnect it from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration – replace as necessary.

10. Inspect the valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures. If valve removal is necessary, complete all steps in the Complete Maintenance Procedure.

11. Reconnect the hose to the agent cylinder. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount.

    NOTE: WHEN ASSEMBLING THE HOSE TO THE AGENT CYLINDER OR NOZZLE TO THE HOSE, TIGHTEN THE COUPLING ¼ TURN AFTER CONTACTING THE HOSE GASKET.

12. Inspect the wheels on Models 488, 489 or 490 to insure they rotate freely. Lubricate as required. On stationary models, check mountings to insure that they are securely fastened.

13. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.

14. Install new lockwire (tamper) seal and record service data on the extinguisher inspection tag.

15. If the extinguisher has been moved to perform service, make sure that it is returned to its proper location.

COMPLETE MAINTENANCE – SIX YEAR TEARDOWN

[NFPA-10] Every six years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

NOTE: Some states have legislation which requires "Complete Maintenance" on an annual basis. Please contact your local Amerex Distributor to see if these requirements apply to you. NFPA 10 recommendation requires that a "verification of service" external collar tag be installed on the extinguisher whenever a Six Year Maintenance is performed. The "verification of service" tag can only be installed if the operating valve has been removed.

1. Discharge chemical and pressure into a "closed" dry chemical recovery system (several are commercially available). **Make sure that the extinguisher is completely empty and depressurized**.

   CAUTION: These extinguishers operate at 240 psi. Some recovery systems may require that the pressure be reduced to safely discharge the chemical and pressure into the system. Use the pressure bleeder valve on the extinguisher valve to reduce the pressure to a point registering just below the green operable area on the pressure gauge. Discharge extinguisher into recovery system. Repressurize the extinguisher (to no more than 200 psi) to exhaust any chemical remaining in the extinguisher.

   NOTE: A "closed recovery system is designed to prevent loss of the chemical "fines" Loss of the "fines" could result in reduced extinguisher efficiency.

2. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure marked on the nameplate (label) in accordance with CGA C-1 and NFPA 10 and DOT regulations.

   NOTE: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

3. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

4. Check the date of manufacture on the extinguisher dome. Cylinder must be hydrostatically (proof pressure) tested every 12 years (first time), every 7 years thereafter, to the test pressure indicated on the nameplate (500 psi [3448 kPa]). Cylinder may be hydrostatically tested every 12 years using the water jacket method.

5. Visually inspect the pressure gauge – if bent, damaged or improper gauge replace with the proper Amerex pressure gauge (see Parts List).

6. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

7. **Verify that no pressure remains in the extinguisher**. (Operating valve and nozzle shutoff in open position and there is no discharge). Remove and inspect the agent fill cap for damage or distortion.

8. Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.

9. Disconnect the discharge hose from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration – replace as necessary. The discharge hose should be hydrostatically tested to 300 psi (2068 kPa) every twelve years.

10. Inspect the wheels to insure they rotate freely. Lubricate as required.

11. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.

12. **WARNING: Valve removal and/or valve part replacement should be made only after completing the depressurizing procedures listed in Step 1 of the Complete Maintenance section.**

    Remove operating valve assembly. Inspect for corrosion or damage to hose thread connection.

13. Complete steps 2 through 15 of Recharge Procedure.

RECHARGE

WARNING:

a. Before attempting to disassemble, be sure the extinguisher is completely depressurized.
b. Never have any part of your body over the extinguisher while removing the valve assembly.
c. Use a protective shield between you and the pressure gauge while charging an extinguisher. Do not stand in front of the gauge if a shield is not available.
d. Use a <u>regulated</u> pressurizing source of dry nitrogen only with a minimum dew point of minus 70ºF (minus 57ºC). Set the regulator to no more than 265 psi (1827 kPa).
e. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.
f. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.
g. Do not mix types of dry chemicals in extinguishers, recharge or recovery systems. Mixing ABC (acidic base) with Regular, Purple-K, Super-K or Monnex (alkaline base) dry chemicals may result in a chemical reaction capable of developing a dangerous pressure buildup.

RECHARGING PROCEDURE

1. Perform steps 1 through 12 of the "Complete Maintenance (Six Year Teardown)" section.

2. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with air or nitrogen. Inspect spring and downtube assembly, and replace parts if worn or damaged. Install a new valve stem and collar o-ring after lightly lubricating with Visilox V-711 (do not lubricate the valve stem seal).

3. Reassemble the valve assembly, including downtube and set aside.

4. Remove any chemical remaining in the cylinder and check the condition. Properly dispose of any chemical that is contaminated or caked.

5. Inspect the cylinder interior following CGA Visual Inspection Standard C-6.

6. Using an accurate scale, fill cylinder with the correct amount and type of dry chemical specified on the label (nameplate). Use Amerex chemical which has been kept free of moisture and contamination. See Warning (g) – **DO NOT MIX TYPES OF CHEMICALS**.

7. Clean cylinder collar o-ring seat and collar threads with a small brush and then wipe off surfaces with a clean cloth to remove dust. Lightly brush the collar o-ring seat with Visilox V-711.

8. Install "verification of service" external collar tag. Install discharge valve assembly and attach pressurizing adapter (P/N 06160) to discharge port.

9. With the extinguisher properly secured in an upright position, connect your nitrogen pressurizing line with a quick connect to the nitrogen charging adapter. Rotate the extinguisher operating valve lever to the open position and pressurize extinguisher with dry nitrogen to 240 psi. When the desired pressure has been reached, rotate the operating lever to the closed position. Shut off nitrogen supply and remove the quick connect.

   CAUTION: Pressurizing the extinguisher in this manner will allow for proper aeration of the chemical through the downtube. Do not use the "bleeder" valve to pressurize the extinguisher.

10. Check extinguisher for leaks by applying detecting fluid or a solution of soapy water to the nitrogen charging adapter orifice, around the collar o-ring sealing area, cylinder welds and gauge. Remove the pressurizing adapter.

11. Reconnect the hose to the operating valve. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount.

    NOTE: When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ¼ turn after contacting the hose gasket.

12. Install ring (safety) pin and lockwire (tamper) seal. Record recharge date and attach new recharge tag.

13. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the Maintenance section of the nameplate (label).

14. Return extinguisher to its proper location. Mountings for stationary extinguishers should be properly secured.

TROUBLESHOOTING GUIDE

WARNING: Before attempting to correct any leakage problem, be sure that the agent cylinder and hose are completely depressurized. Check to determine the source of a leak before the extinguisher is depressurized. Leakage repairs will require depressurization and removal of the valve assembly. Depressurize by discharging into a Closed Recovery System or inverting the extinguisher. After depressurizing the extinguisher and correcting the problem, it will be necessary to clean all valve parts thoroughly.

	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, remove and discard o-ring, clean collar and lube lightly with Visilox V-711. Clean o-ring groove on valve and install new collar o-ring. Lubricate with Visilox V-711.
2.	Leak at agent fill cap	Remove cap, clean threads thoroughly and install new o-ring. Lubricate o-ring with Visilox V-711.
3.	Leak through valve	Check valve stem seating area for scratches or foreign matter. Clean seating area with a tooth brush and soft cloth. Install new valve stem assembly.
4.	Leak at "bleeder" valve.	Remove and reinstall valve using Teflon tape on threads. Note: "Bleeder" valve cap must be installed to prevent leakage.
5.	Leak around gauge threads	Remove gauge*, clean threads and reinstall using Teflon tape on the gauge threads.
6.	Defective gauge	Remove defective gauge* an install the proper Amerex pressure gauge (P/N 05225 240 psi) using Teflon tape on the gauge threads.
7.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and remove from service or return to owner.
	* Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F) for two to four minutes. Remove gauge with a thin 7/16" open end wrench.	

Guide to Proper Installation of Hose on Wheeled or Stationary Dry Chemical Fire Extinguishers

1

Connect hose coupling to outlet on the extinguisher. Lay hose straight on ground to its full 25 ft. length. Start first regular loop counter-clockwise by placing between side brackets and over the top bracket.

2

The second loop is a REVERSE loop. Notice that the hose passes behind the loop on this reverse loop. **If instructions are followed, the hose will uncoil without kinks.**

3

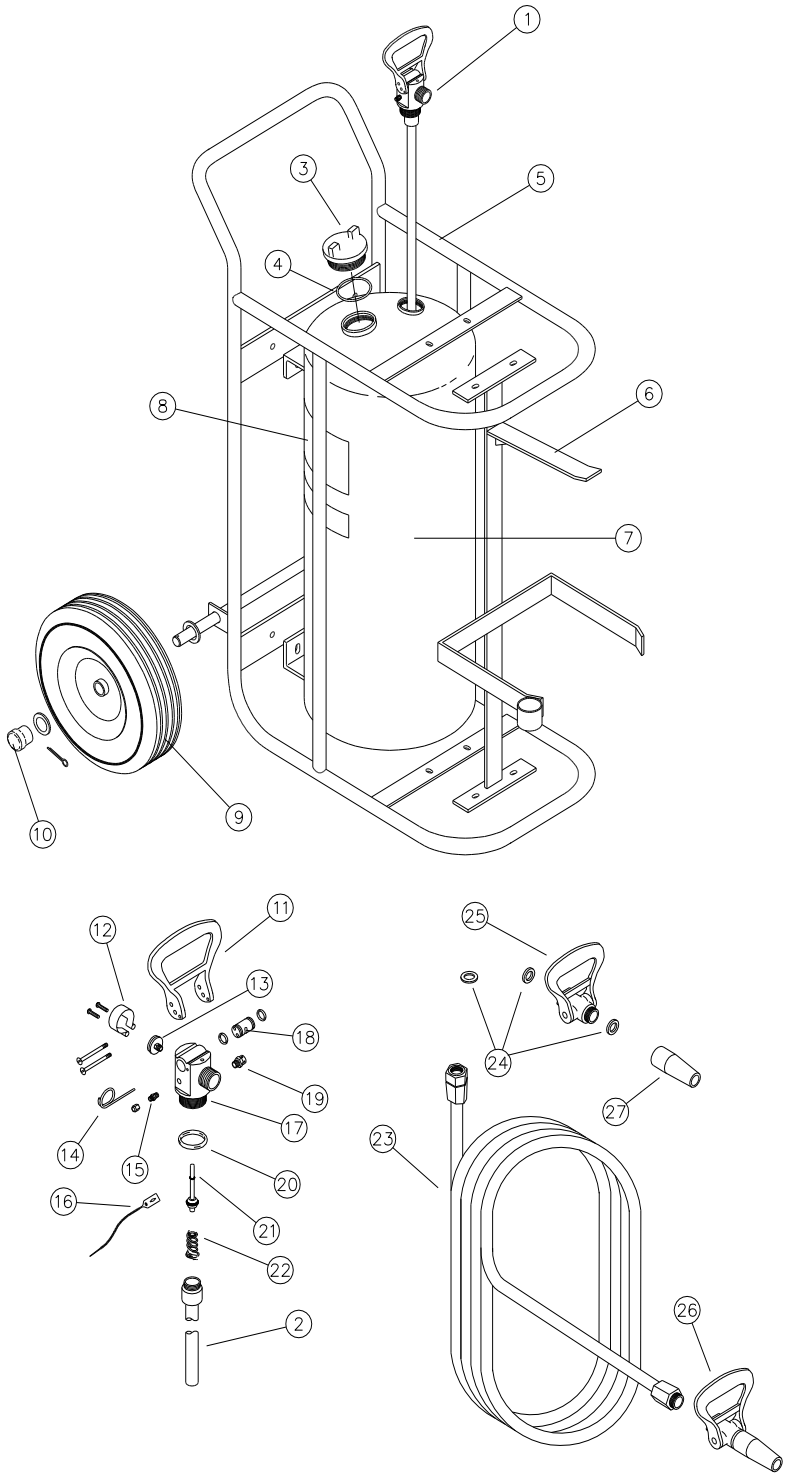
The next loop is a regular "hose in front" loop. Succeeding loops are alternated: reverse, front, reverse, etc. for six full loops.

4

Adjust the loops so that the nozzle fits into the nozzle mount. Loops should be approximately the same size.

PARTS LIST
for
125/150 lb.
Wheeled/Stationary
Stored Pressure
Dry Chemical Extinguishers

476 488
477 489
478 490



Item No.	Part No.	Description	Std. Pkg.
1	05197	Valve Asy Complete w/Downtube	1
2	04938	Downtube/Retainer Assembly	1
3	09300	Fill Cap	1
4	08392	Gasket, Fill Cap	1
5	10431	Carriage Asy w/o Wheels, New Style	1
6	10430	Hose Support w/Mounting Hdwe, - New Style	1
7	10467	Cylinder	1
8	07481	Pictogram – 488, 476	1
	07483	Pictogram – 489, 490, 477, 478	
9	07751	Wheel Asy 16" w/Hub Cap, Washer & Retaining Pin (Semi-Pneumatic)	1
10	04945	Hub Cap	1
11	06059	Valve Lever w/Screws	1
12	03562	Gauge Guard Assembly	1
13	05225	Gauge – 240 psi	1
14	06100	Ring Pin, Stainless Steel w/Wire	12
15	00155	Pressure Valve and Cap Asy	12
16	01387	Lock Wire Seal (Yellow)	500
17	03678	Valve Body	1
18	06060	Cam Assembly w/O-rings	1
19	14218	Pipe Plug – For Safety Disc Port	1
	03787	Safety Disc Asy (OPTIONAL)	
20	05239	Collar O-Ring	12
21	05067	Valve Stem Assembly	6
22	03556	Spring	6
23	03501	Hose Assembly 50 ft. w/Gasket	1
24	03877	Gasket, Hose and Nozzle	6
25	06279	Ball Valve Assembly	1
26	05191	Nozzle Asy (Ball Valve & Tip) 488, 489, 476, 477	1
	07432	Nozzle Asy (Ball Valve & Tip) 490, 478	
27	06470	Nozzle Tip – 488, 489, 476, 477 (.344)	1
	06208	Nozzle Tip – 490, 478 (.328)	

ALL FILL AND HYDROTEST ADAPTERS – SEE ADAPTERS PAGE

REPLACEMENT VALVE ASSEMBLIES INCLUDE VALVE BODY, GAUGE, GAUGE GUARD, CAM, PRESSURE VALVE & CAP, LEVER, VALVE STEM ASSEMBLY, SPRING, DOWNTUBE/RETAINER ASSEMBLY

OWNERS SERVICE MANUAL
NO. 05612
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

STORED PRESSURE, WHEELED & STATIONARY 50 POUND DRY CHEMICAL FIRE EXTINGUISHERS

ABC (AMMONIUM PHOSPHATE BASE), REGULAR (SODIUM BICARBONATE BASE), PURPLE K (POTASSIUM BICARBONATE BASE)

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

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THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

INTRODUCTION

The Amerex 50 pound Models 495 (ABC), 496 (Regular) & 497 (Purple K) Stored Pressure Wheeled and Models 473 (ABC), 474 (Regular) & 475 (Purple K) Stationary Dry Chemical fire extinguishers are designed to provide larger volumes of dry chemical fire fighting agent than hand portable types for industrial applications. The wheeled version can easily be transported and operated by one person and in a stationary configuration and can be mounted in a small space. The cage type carriage provides protection for the operating valve, cylinder and hose assembly. Easy rolling 12 ½ inch semi-pneumatic rubber tires assure minimum effort to quickly transport them through narrow spaces to a fire scene.

An easy to operate "T" handle assures "instant on" extinguisher discharge. All valve components, hose couplings and nozzle shut-off are machined brass for easy maintenance. A quality paint finish tops off a prime coated cylinder and carriage assembly for years of trouble free use. These models carry an Amerex warranty of six years – see full wording of the warranty below.

Field recharging is possible utilizing maintenance/recharge equipment available through your Amerex Distributor. To provide optimum extinguisher reliability, recharging should be performed by persons trained in fire extinguisher maintenance and servicing. This manual should be used as a guide for installing, operating and servicing this extinguisher. The best place to have your extinguisher serviced and recharged is your Authorized Amerex Distributor who has the professional experience and equipment to do it properly.

SIX YEAR LIMITED WARRANTY

Amerex warrants its fire extinguishers to be free from defects in material and workmanship for a period of six (6) years from the date of purchase. During the warranty period, any such defects will be repaired or the defective extinguisher replaced if only factory replacement parts and recommended service equipment have been used to service the extinguisher. This warranty does not cover defects resulting from modification, alteration, misuse, exposure to unusually corrosive conditions nor improper installation or maintenance. All implied warranties, including, but not limited to, warranties of fitness for purpose and merchantability, are limited to the time periods as stated above. In no event shall Amerex Corp. be liable for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Amerex Corp. neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corp., P. O. Box 81, Trussville, AL 35173-0081 for instructions.

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

PREPARING YOUR NEW EXTINGUISHER FOR USE

1. Examine the extinguisher for evidence of shipping damage. Notify the delivering carrier immediately if any damage is discovered.
2. Remove all wrappings, straps and pallet retaining bolts.
3. Check to insure that the hose connection to the operating valve and shut-off nozzle to the hose are tight.
4. Check to insure that the shut-off nozzle is in the closed position. The ring (safety) pin should be installed in the operating valve and the lockwire (tamper) seal intact.
5. This extinguisher is shipped from the factory fully charged. Visually inspect the pressure gauge – the pressure should be in the green zone (240 psi ± approx. 10 psi range). The most accurate method to determine if the extinguisher is filled with the proper amount of chemical is to weigh the unit. The gross weight is indicated on the nameplate (label).

   NOTE: Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70ºF (21ºC) for several hours to obtain more accurate pressure gauge readings.

6. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is -40ºF to +120ºF (-40ºC to +49ºC). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants which may interfere with its proper operation. Do not functionally test this fire extinguisher. (Testing or any use may cause the extinguisher to gradually lose pressure and become ineffective.)

OPERATION

NOTE: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.

1. Move the extinguisher to within approximately 30 feet of the fire site. Keep the extinguisher upright.

   CAUTION: This extinguisher must be operated in an upright position. If equipped with an optional tow loop and vehicle towed to the fire scene, remove from tow hitch and operate in a vertical position.

2. Twist and pull ring pin. Open cylinder discharge valve by rotating (pulling) the "T" handle valve lever toward the hose. The hose is now pressurized with chemical.
3. Pull nozzle, with lever in the closed position, from the mount and extend the hose from the storage rack.
4. Stand back 15 feet from the fire and aim the nozzle at base of flames nearest you. Open nozzle by pulling handle toward you (be prepared for a discharge recoil by holding the nozzle firmly).
5. Sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning materials.
6. When the fire is out, push the nozzle lever forward to the closed position. Push the "T" handle on the cylinder discharge valve to the closed position.
7. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

DISCHARGE TIME – 35 SECONDS (APPROXIMATELY)
EFFECTIVE RANGE OF AGENT THROW IS 25 TO 30 FEET
HOSE LENGTH – 25 FEET

SHUTDOWN

CAUTION: BEFORE PERFORMING THE SHUTDOWN PROCEDURE AND PREPARING TO MOVE THE EXTINGUISHER TO THE RECHARGE LOCATION, DETERMINATION MUST BE MADE THAT THE FIRE IS COMPLETELY EXTINGUISHED AND THERE IS NO DANGER OF A FLASHBACK.

1. Tip the extinguisher to the horizontal position (resting on the carriage handle) and slowly push the "T" handle on the cylinder discharge valve to the open position. Slowly push the nozzle lever to the open position and be prepared for some chemical discharge.
2. When all pressure has been evacuated from the extinguisher, return the nozzle lever and cylinder discharge valve to the closed position.

   NOTE: These steps will allow easy depressurization of the extinguisher and clear the hose assembly with a minimal loss of remaining chemical.

3. Return the extinguisher to the upright position. Coil the hose onto the storage rack and position the nozzle into the mount in preparation for transport to the recharge location.

RECHARGE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES
(Monthly or more often if circumstances dictate)

[NFPA-10] Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Pressure gauge reading or indicator in the operable range or position.
4. Operating instructions on nameplate and facing outward.
5. Safety seals and tamper indicators not broken or missing.
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Determine fullness by weighing.

MAINTENANCE

[NFPA-10] At least once a year or more frequently if circumstances require, maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE – SERVICE PROCEDURE

NOTE: THIS PROCEDURE WILL BE BEST ACCOMPLISHED WITH THE EXTINGUISHER IN AN UPRIGHT POSITION AND ON A LEVEL SURFACE.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test to factory test pressure 480 psi (3310 kPa), using the proof pressure method, in accordance with instructions in C-6 and NFPA 10. See proper method of depressurizing and reclaiming chemical in Recharge procedures.

   NOTE: WHEN CLEANING, AVOID USE OF SOLVENTS AROUND THE PRESSURE GAUGE. THEY COULD SERIOUSLY DAMAGE THE PLASTIC GAUGE FACE.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Weigh the extinguisher and compare with weight printed in the "Maintenance" section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.

4. Check the date of manufacture printed on the extinguisher label (nameplate) or on the agent cylinder dome. The agent cylinder must be hydrostatically tested every 12 years to the test pressure indicated on the nameplate 480 psi (3310 kPa).

5. Visually inspect the pressure gauge:
   a. If bent, damaged or improper gauge, depressurize and replace.
   b. If pressure is low, check for leaks.
   c. If over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions.

6. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

7. **WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. ANY EVIDENCE OF AGENT IN THE NOZZLE INDICATES THAT THE UNIT MAY HAVE BEEN USED AND THE USE NOT REPORTED. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL.**

   Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.

8. After making sure that there is no residual pressure in the discharge hose, disconnect it from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration – replace as necessary.

9. Inspect the valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures. If valve removal is necessary, complete all steps in the Recharge Procedure.

10. Reconnect the hose to the agent cylinder. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount.

    NOTE: WHEN ASSEMBLING THE HOSE TO THE AGENT CYLINDER OR NOZZLE TO THE HOSE, TIGHTEN THE COUPLING ¼ TURN AFTER CONTACTING THE HOSE GASKET.

11. Inspect the wheels on Models 495, 496 or 497 to insure they rotate freely. Lubricate as required. On stationary models, check mountings to insure that they are securely fastened.

12. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.

13. Install new lockwire (tamper) seal and record service data on the extinguisher inspection tag.

14. If the extinguisher has been moved to perform service, make sure that it is returned to its proper location.

COMPLETE MAINTENANCE – SIX YEAR TEARDOWN

[NFPA-10] Every six years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

NOTE: Some states have legislation which requires "Complete Maintenance" on an annual basis. Please contact your local Amerex Distributor to see if these requirements apply to you. NFPA 10 recommendation requires that a "verification of service" external collar tag be installed on the extinguisher whenever a Six Year Maintenance is performed. The "verification of service" tag can only be installed if the operating valve has been removed.

1. Discharge chemical and pressure into a "closed" dry chemical recovery system (several are commercially available). **Make sure that the extinguisher is completely empty and depressurized**.

   NOTE: A "closed recovery system" is designed to prevent loss of the chemical "fines". Loss of the "fines" could result in reduced extinguisher efficiency.

2. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure marked on the nameplate (label), using the proof pressure method, in accordance with CGA C-1 and NFPA 10.

   NOTE: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

3. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

4. Check the date of manufacture on the extinguisher label (nameplate). Cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate (480 psi [3310 kPa]).

5. Visually inspect the pressure gauge – if bent, damaged or improper gauge replace with the proper Amerex pressure gauge (see Parts List).

6. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

7. **Verify that no pressure remains in the extinguisher**. (Operating valve and nozzle shutoff in open position and there is no discharge).

8. Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.

9. Disconnect the discharge hose from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration – replace as necessary. The discharge hose should be hydrostatically tested to 480 psi (3310 kPa) every twelve years.

10. Inspect the wheels to insure they rotate freely. Lubricate as required.

11. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.

    WARNING: Valve removal and/or valve part replacement should be made only after completing the depressurizing procedures listed in Step 1 of the Complete Maintenance section.

12. Remove operating valve assembly. Inspect for corrosion or damage to hose thread connection.

13. Complete steps 2 through 14 of Recharge Procedure.

RECHARGE

WARNING:

a. Before attempting to disassemble, be sure the extinguisher is completely depressurized.
b. Never have any part of your body over the extinguisher while removing the valve assembly.
c. Use a protective shield between you and the pressure gauge while charging an extinguisher. Do not stand in front of the gauge if a shield is not available.
d. Use a <u>regulated</u> pressurizing source of dry nitrogen only with a minimum dew point of minus 70ºF (minus 57ºC). Set the regulator to no more than 265 psi (1827 kPa).
e. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.
f. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.
g. Do not mix types of dry chemicals in extinguishers, recharge or recovery systems. Mixing ABC (acidic base) with Regular, Purple-K, Super-K or Monnex (alkaline base) dry chemicals may result in a chemical reaction capable of developing a dangerous pressure buildup.

RECHARGING PROCEDURE

1. Perform steps 1 through 12 of the "Complete Maintenance (Six Year Teardown)" section.

2. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with air or nitrogen. Inspect the collar o-ring, spring and downtube assembly, and replace parts if worn or damaged. Replace the valve stem. Lubricate the collar o-ring and small o-ring on the valve stem with Visilox V-711 (do not lubricate the valve stem seal).

3. Reassemble the valve assembly, including downtube and set aside.

4. Remove any chemical remaining in the cylinder and check the condition. Properly dispose of any chemical that is contaminated or caked.

5. Inspect the cylinder interior following CGA Visual Inspection Standard C-6.

6. Using an accurate scale, fill cylinder with the correct amount and type of dry chemical specified on the label (nameplate). Use Amerex chemical which has been kept free of moisture and contamination. See Warning (g) – **DO NOT MIX TYPES OF CHEMICALS**.

7. Clean cylinder collar o-ring seat and collar threads with a small brush and then wipe off surfaces with a clean cloth to remove dust. Lightly brush the collar o-ring seat with Visilox V-711.

8. Install "verification of service" external collar tag. Install discharge valve assembly and attach pressurizing adapter (P/N 06160) to discharge port.

9. Pressurize extinguisher with dry nitrogen to 240 psi. Nitrogen supply regulator should be set to no more than 265 psi. This will insure proper aeration of the chemical.

10. Check extinguisher for leaks by applying detecting fluid or a solution of soapy water to the nitrogen charging adapter orifice, around the collar o-ring sealing area, cylinder welds and gauge. Remove the pressurizing adapter.

11. Install discharge hose and discharge nozzle assembly (see instructions).

12. Install ring (safety) pin and lockwire (tamper) seal. Attach new recharge tag.

13. Return extinguisher to its proper location. Mountings for stationary extinguishers should be properly secured.

TROUBLESHOOTING GUIDE

WARNING: Before attempting to correct any leakage problem, be sure that the agent cylinder and hose are completely depressurized. Check to determine the source of a leak before the extinguisher is depressurized. Leakage repairs will require depressurization and removal of the valve assembly. Depressurize by discharging into a Closed Recovery System or inverting the extinguisher. After depressurizing the extinguisher and correcting the problem, it will be necessary to clean all valve parts thoroughly.

	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, remove and discard o-ring, clean collar and lube lightly with Visilox V-711. Clean o-ring groove on valve and install new collar o-ring. Lubricate with Visilox V-711.
2.	Leak through valve	Check valve stem seating area for scratches or foreign matter. Clean seating area with a tooth brush and soft cloth. Install new valve stem assembly.
3.	Leak around gauge	Remove gauge*, clean threads and reinstall using Teflon tape on the gauge threads.
4.	Defective gauge	Remove defective gauge* an install the proper Amerex pressure gauge (P/N 05225 240 psi) using Teflon tape on the gauge threads.
5.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and remove from service or return to owner.
	* Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F) for two to four minutes. Remove gauge with a thin 7/16" open end wrench.	

Guide to Proper Installation of Hose on 50 lb. Wheeled or Stationary Dry Chemical Fire Extinguishers

1

Connect hose coupling to outlet on the extinguisher. Lay hose straight on ground to its full 25 ft. length. Start first regular loop counter-clockwise by placing between side brackets and over the top bracket.

2

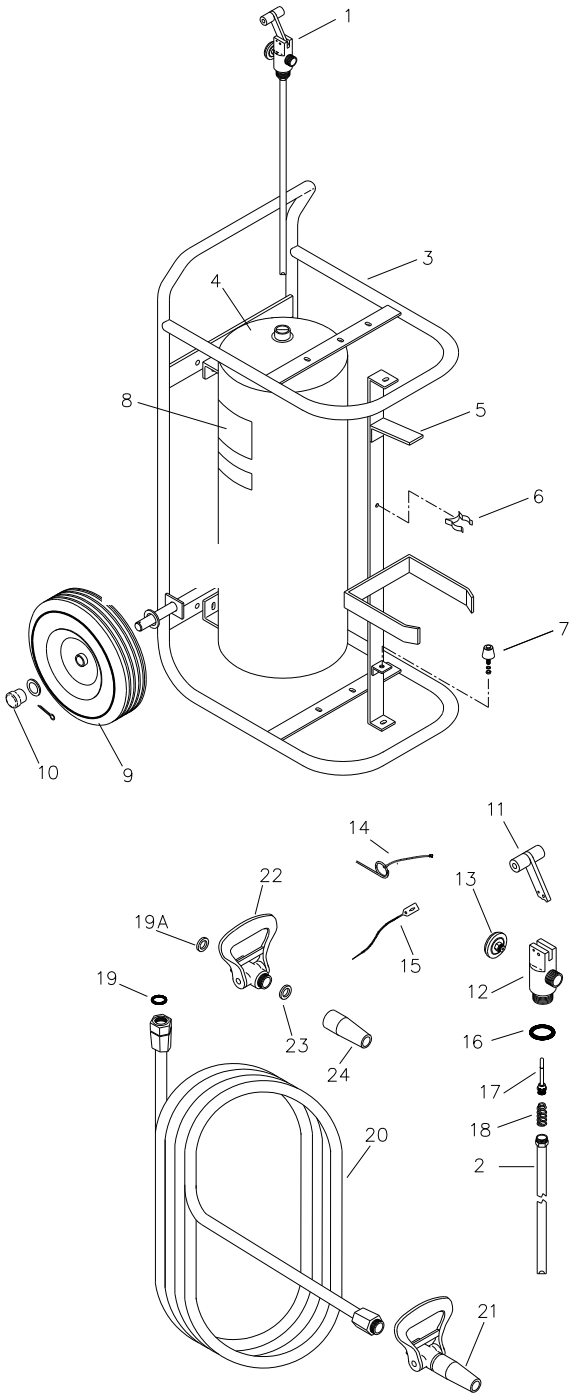
The second loop is a REVERSE loop. Notice that the hose passes behind the loop on this reverse loop. **If instructions are followed, the hose will uncoil without kinks.**

3

The next loop is a regular "hose in front" loop. Succeeding loops are alternated: reverse, front, reverse, etc. for six full loops.

4

Adjust the loops so that the nozzle fits into the nozzle mount. Loops should be approximately the same size.



PARTS LIST
for
50 lb. Wheeled
Stored Pressure
Dry Chemical Extinguishers

473 495
474 496
475 497

Item No.	Part No.	Description	Std. Pkg.
1	06018	Valve Asy Complete w/Downtube	1
2	06072	Downtube/Retainer Assembly	1
3	06625	Carriage Assembly w/o Wheels	1
4	00155	Pressure Valve & Cap Assembly (Older Models Only)	12
5	06374	Hose Support w/Hardware, Hose Clip and Nozzle Mount	1
6	06375	Hose Clip w/Mounting Hardware	1
7	06376	Nozzle Mount w/Hardware	1
8	07480	Pictogram – Model 495, 473	1
	07482	Pictogram – Models 496, 497, 474, 475	
9	06377	Wheel Assembly 12 ½" w/Hub Cap, Washer & Retaining Pin	1
10	04945	Hub Cap	1
11	06373	Valve Lever ("T" Handle – Complete)	1
12	06153	Valve Body	1
13	05225	Gauge – 240 psi	1
14	06100	Ring Pin, Stainless Steel w/Wire	12
15	01387	Lockwire Seal (Yellow)	500
16	05240	Collar O-Ring	24
		Collar O-ring – Bulk Bag	100
17	06022	Valve Stem Assembly	6
18	00383	Spring	6
19	07247	Gasket, Hose	6
20A	06056	Gasket, Valve	6
20	06015	Hose Assembly 25 ft. w/Gasket	1
21	06397	Nozzle Asy (Ball Vlv & Tip) 495, 473	1
	06395	Nozzle Asy (Ball Vlv & Tip) 496, 474	
	06396	Nozzle Asy (Ball Vlv & Tip) 497, 475	
22	06031	Ball Valve Assembly	1
23	03877	Gasket, Nozzle	6
24	06208	Nozzle Tip – 495, 473 (.328)	1
	06032	Nozzle Tip – 496, 474 (.265)	
	06210	Nozzle Tip – 497, 475 (.281)	

ALL FILL & HYDROTEST ADAPTERS – SEE ADAPTER PAGE

REPLACEMENT VALVE ASSEMBLIES INCLUDE VALVE BODY, GAUGE, LEVER VLV STEM ASY, SPRING & HANDLE

OWNERS SERVICE MANUAL
NO. 05614
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

MODELS 491/492/493 WHEELED / MODELS 464/465/466 STATIONARY 300/350 LB. NITROGEN OPERATED DRY CHEMICAL FIRE EXTINGUISHERS 55 CU FT NITROGEN CYLINDER

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them void the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081
Phone: 205/655-3271 Fax: 800/654-5980
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INTRODUCTION

THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

PREPARING YOUR NEW EXTINGUISHER FOR USE

WARNING: <u>THIS FIRE EXTINGUISHER IS SHIPPED FROM THE FACTORY EMPTY</u>. AFTER INITIAL PREPARATIONS, CAREFULLY FOLLOW THE RECHARGING INSTRUCTIONS BEFORE PLACING IT INTO SERVICE.

1. Remove all wrappings, straps and pallet retaining bolts.
2. Examine the extinguisher for shipping damage. Check to make sure that you have received the dry chemical charges that are shipped with the extinguisher (ABC and Purple K – 6 each 50 lb. pails; Regular – 7 each 50 lb. pails).
3. Fill the extinguisher by carefully following the Recharge instructions (Page 5).
4. Remove the nitrogen cylinder protective shipping cap. Save the cap as it must be installed whenever a charged nitrogen cylinder is transported. Remove temporary (shipping) ring pin and install large ring pin.
5. Install new lockwire seal. Check the nitrogen cylinder pressure. The gauge should read approximately 2015 psig (13.9 mPa) at 70ºF (21ºC) ambient temperature. See the "Troubleshooting Guide" for pressure-temperature allowances. The lockwire seal should be intact.
6. Remove (and save) the Safety Vent Plug installed on all "T" handle nitrogen valves. Connect the nitrogen supply hose firmly to the nitrogen cylinder valve. Make sure that there are no kinks in this hose.
7. Disconnect the discharge hose assembly from the agent cylinder. Make sure that the hose and nozzle are unobstructed and that the P/N 07411 Moisture Seal is undamaged and properly seated on the agent cylinder discharge fitting. Reconnect the discharge hose to the agent cylinder and with the nozzle in the closed (forward) position, place it on the storage rack. (See Page 7)
8. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.
9. Remove the caution (not charged) tag.

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is -65°F to +120°F (-54°C to +49°C). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants that may interfere with its proper operation. DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER. (Testing or any use may cause the extinguisher to gradually lose pressure over a period of time and make the extinguisher ineffective.)

OPERATION

NOTE: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.

1. Move the extinguisher to within approximately 50 feet of the fire site and keep extinguisher upright. Remove ring (safety) pin and pull "T" handle to open cylinder valve. This will pressurize the extinguisher.
2. Remove nozzle from the mount, and with the nozzle lever in the closed position, pull hose from rack.
3. Start back 30 feet from the fire and aim at base of fire nearest you.
4. Hold hose and nozzle firmly and be prepared for discharge recoil. Open nozzle by pulling the handle fully toward you. Slowly sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished.

CAUTION: USE OF DRY CHEMICAL AGENT EXTINGUISHERS ON FIRES ON DELICATE ELECTRONIC EQUIPMENT IS NOT RECOMMENDED. IT MAY SUCCESSFULLY EXTINGUISH THE FIRE BUT MAY DAMAGE THE EQUIPMENT BEYOND REPAIR. (Consult your Amerex Distributor for more details.)

Discharge Time (approx.):	**60 - 70 seconds**
Effective Range of the agent throw is:	**30 - 40 feet**
Hose Length:	**50 feet**

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

SHUTDOWN

1. After making sure that the fire has been completely extinguished, close the nozzle valve and then close the "T" handle nitrogen valve. Wheeled Extinguisher – Tip over until it rests on both wheels and handle (in this position much of the remaining chemical will stay in the cylinder). Stationary Extinguisher – see instructions below.
2. Open the nozzle valve slowly to clear the hose of any remaining pressure and chemical (be prepared for recoil and discharge of agent).
   WARNING: MAKE SURE THAT ALL PRESSSURE HAS ESCAPED BEFORE ANY FURTHER DISASSEMBLY.
3. Stand unit upright after complete depressurization.
   NOTE: Nitrogen pressure in the agent cylinder cannot escape through a disconnected nitrogen hose assembly due to a check valve in the system. **Always be careful when removing the fill cap.**
4. Coil the extinguisher hose onto the storage rack and position the nozzle onto the mount in preparation for transport to the recharge location.

CAUTION: DO NOT TRANSPORT A NITROGEN CYLINDER WITH ANY REMAINING PRESSURE WITHOUT INSTALLING THE PROTECTIVE SHIPPING CAP.

VENTING DEVICE

(**Standard** on all Stationary Extinguishers, **Optional** on Wheeled Extinguishers)

A venting device has been installed on all stationary extinguishers to provide a means of safely and easily relieving residual nitrogen pressure from the agent cylinder while utilizing the same pressure to evacuate or "blow down" the hose.

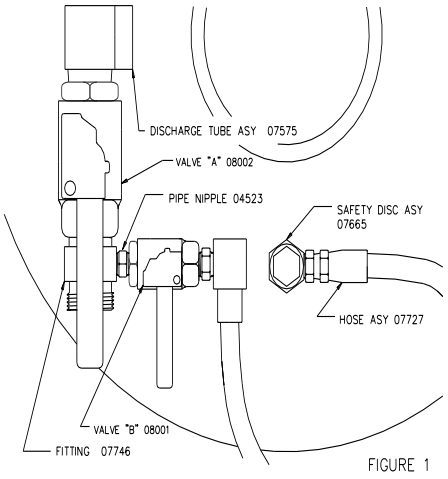


FIGURE 1

CAUTION: VALVE SHUT-OFF HANDLES MUST BE IN THE POSITIONS SHOWN WHEN EXTINGUISHER IS ON STANDBY OR IN ACTUAL OPERATION.

OPERATION – After the fire has been successfully extinguished and it has been determined that it is completely out:

1. Confirm that the nozzle lever is in the CLOSED position.
2. Close the nitrogen valve (move "T" handle to CLOSED position)
3. Remove ring pin and CLOSE agent cylinder valve (Valve A in Fig. 1) to prevent further chemical from entering the hose.
4. Remove ring pin and OPEN pressure vent valve (Valve B in Fig. 1) to allow nitrogen gas to by-pass the chemical and pressurize the hose.
5. Open discharge nozzle to vent all residual chemical and nitrogen gas pressure.
6. Re-open nitrogen valve if additional pressure is required.
7. When recharging this unit, reset agent cylinder and vent valves, install ring pins and lockwire seals.

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

MAINTENANCE

At least once a year or more frequently if circumstances require, maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

NOTE: The Getz Manufacturing Universal Wheeled Extinguisher Service Kit is available so that NFPA-10 required maintenance functions can be performed.

MAINTENANCE – SERVICE PROCEDURE

WARNING: BEFORE SERVICING BE SURE THE EXTINGUISHER AGENT CYLINDER IS NOT PRESSURIZED. THIS PROCEDURE IS BEST ACCOMPLISHED WITH THE EXTINGUISHER IN AN UPRIGHT POSITION AND ON A LEVEL SURFACE.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test in accordance with instructions in CGA C-1 and C-6 and NFPA 10.

2. Inspect the extinguisher for damaged, missing or substitute parts. A careful inspection should be made of the safety relief to make sure that it has not ruptured, corroded or been tampered with. ONLY FACTORY REPLACEMENT PARTS ARE APPROVED FOR USE ON AMEREX FIRE EXTINGUISHERS.

3. Check the date of manufacture printed on the extinguisher label (nameplate) or on the agent cylinder dome. The agent cylinder, the discharge hose assembly and nitrogen supply hose must be hydrostatically tested every 12 years. Test pressure:

    a. Agent Cylinder – 500 psi (3447 kPa)
    b. Hose Assembly – 300 psi (2068 kPa)
    c. Nitrogen Supply Hose – 3000 psi (20,682 kPa)

4. Check the hydrostatic test date on the crown of the nitrogen cylinder. The nitrogen cylinder must be retested in accordance with DOT regulations.

5. Check the gauge on the nitrogen cylinder. If the pressure is below 1700 psig (11.7 mPa) repressurize the cylinder to 2015 psig (13.9 mPa) or replace it. A low gauge pressure may indicate leakage. Check for leaks. A low gauge reading may also result from low temperature. See the temperature/pressure relationship chart in the Troubleshooting Guide. Check the tamper indicator (lockwire seal) on the nitrogen valve and replace if necessary.

6. Wheeled extinguishers – Inspect the wheels to insure they rotate freely. Lubricate as required.
Stationary extinguishers – Check to insure that any mounting fixtures are secure.

WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. ANY PRESSURE IN THE AGENT CYLINDER WILL CAUSE THE EXTINGUISHER TO DISCHARGE. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL. ANY EVIDENCE OF AGENT IN THE NOZZLE INDICATES THAT THE UNIT MAY HAVE BEEN USED AND THE USE NOT REPORTED.

7. Disconnect the discharge hose from the agent cylinder. Check the couplings, hose and hose gaskets for damage or deterioration – replace as necessary.

8. To perform an operational integrity check on the discharge hose and nozzle combination:
    a. Connect the test kit hose adapter to the female end of the discharge hose.
    b. Close the discharge nozzle shut-off lever and properly secure it.
    c. Connect a properly regulated and verified nitrogen pressure source, set to the extinguisher operating pressure (235-245 psi) to the test kit hose adapter.
    d. Slowly pressurize the discharge hose/nozzle assembly to the extinguisher operating pressure and check for leaks or distortion.
    e. Operate the nozzle lever to ensure proper operation and to clear the hose of any obstructions. If hose is obstructed - refer to Troubleshooting Guide.
    f. Close the nitrogen pressure source and slowly relieve remaining pressure by fully operating the nozzle lever.

9. Remove the agent cylinder cap and examine it closely for any signs of damage, cracks or thread wear. Clean the agent cylinder fill cap threads and thread vent port on the cap with a stiff bristle nylon brush. Remove the fill cap gasket and check for wear, cracks or tears – replace if necessary. Lightly lubricate the gasket with Visilox and reinstall.

10. Examine the dry chemical agent for proper type and condition. Replace chemical that is contaminated, caked or other than the type indicated on the nameplate (label) do not trust the height of the chemical in the cylinder when determining agent fill. Dry chemical settles and the only true indication of agent fill is to weigh the extinguisher and compare with the weight indicated on the nameplate (label).

11. Place the service kit Vent Spacer on top of the agent cylinder fill opening collar. Check again to see that the fill cap thread vent is clean and that the agent fill cap gasket is in place. Install the agent fill cap securely over the vent spacer.

CAUTION: (STEP 12) The agent cylinder cap threads must be clear and the cap securely installed onto the vent spacer and agent cylinder to allow pressure to slowly vent after performing the siphon tube clearing and gas tube integrity checks.

12. To perform a siphon tube clearing and gas tube integrity check:

    a. Remove the service kit Agent Hose Adapter from the discharge hose assembly and install it securely onto the agent cylinder siphon tube outlet.
    b. Using a regulated nitrogen pressure source set to the extinguisher operating pressure, slowly and briefly pressurize the agent cylinder (**the siphon tube should be clear within a couple of seconds and the agent cylinder pressure slowly vent from the fill cap thread vent)**. Pressure and/or dry chemical agent leaks from the gas tube inlet port (where the hose connects) will indicate a defective gas tube and will require that the agent cylinder be emptied and the gas tube replaced.
    c. Close the nitrogen pressure source and allow all pressure to slowly vent from the thread vent port on the fill cap.

d. AFTER ALL PRESSURE HAS BEEN RELIEVED, SLOWLY OPEN THE FILL CAP AND **REMOVE THE TEST KIT VENT SPACER.**

e. Re-examine the dry chemical agent to determine if any obstructions were cleared from the siphon tube and have risen to the liquid surface.

f. Clean the fill cap and agent cylinder thread surfaces. Install the fill cap gasket and securely install fill cap.

13. Disconnect the high pressure hose from the nitrogen cylinder valve. Securely install the service kit Nitrogen Cylinder Pressure Check Gauge Assembly to the nitrogen cylinder valve outlet and verify the indicated cylinder gauge pressure. Nitrogen pressure should conform to the temperature correction chart provided in the Troubleshooting section of this manual. Close the nitrogen cylinder valve and disconnect the Pressure Check Gauge Assembly.

WARNING: IF THE NITROGEN CYLINDER VALVE HAS A "T" HANDLE QUICK OPENING OR A HANDWHEEL QUICK OPENING TRIP RELEASE, THE SAFETY VENT PLUG SHIPPED WITH THE EXTINGUISHER, OR THE TEST KIT SAFETY VENT PLUG P/N 01560, MUST BE INSTALLED TO PROTECT SERVICE PERSONNEL FROM A HIGH VELOCITY DISCHARGE IN CASE THE LEVER IS ACCIDENTALLY OPENED.

14. Install a new Amerex P/N 07411 Moisture Seal per instructions in the package. Securely connect the discharge hose to the extinguisher. **When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ¼ turn after contacting the hose gasket**.

15. Coil the hose on to the extinguisher hose rack using the Reverse Loop Procedure (see Page 7). Install nozzle with the lever in the Closed (forward) position into the nozzle mount.

16. Remove the safety vent plug from the nitrogen cylinder. Reconnect the high pressure hose securely to the nitrogen cylinder valve. Wipe the extinguisher clean. Record service data on the inspection tag according to NFPA-10 requirements and attach to extinguisher. Return extinguisher to its proper location.

RECHARGE

WARNING: BEFORE ATTEMPTING TO RECHARGE BE SURE THIS EXTINGUISHER IS COMPLETELY DEPRESSURIZED. THERE IS A CHECK VALVE IN THE SYSTEM WHICH PREVENTS NITROGEN PRESSURE FROM ESCAPING FROM THE AGENT CYLINDER WHEN THE NITROGEN HOSE IS DISCONNECTED. THE AGENT CYLINDER MAY BE PRESSURIZED EVEN THOUGH NO PRESSURE ESCAPES FROM THE CYLINDER NITROGEN CONNECTION.

NOTE: Proper procedure for recharging any dry chemical extinguisher includes the use of a "closed recovery system" (NFPA 10). The Getz Model SV1 400 Vacu-Fill System is ideal for this application – it provides for the recovery of the remaining agent by direct discharge into the system, trapping the "fines" while allowing the nitrogen to escape and provides a more accurate fill of the extinguisher.

IF A "CLOSED RECOVERY SYSTEM" IS NOT AVAILABLE – PROCEED AS FOLLOWS:

RECHARGING PROCEDURE

1. To depressurize:
   a. Close the "T" handle on the nitrogen valve (or hand wheel valve if so equipped).
   b. Carefully tip extinguisher over until it rests on both wheels and handle. (In this position much of the agent will remain in the cylinder).
   c. Open nozzle valve slowly to clear hose of any remaining pressure and chemical (be prepared for a recoil and discharge of agent).
   d. Insure that all pressure has escaped before further disassembly.
   e. Stand extinguisher upright after complete depressurization.

2. Complete items 1 – 6 of Maintenance Procedures. Carefully remove the fill cap. While performing this procedure, all parts and seals should be cleaned, inspected and replaced where necessary.

3. Remove shutoff nozzle assembly from discharge hose and clean thoroughly. Check to make sure that the valve is closed when the lever is in the forward position (toward the nozzle tip).

4. Detach the nitrogen hose from the nitrogen cylinder ("T" handle valve – remove and save large ring pin and install temporary ring pin), install the shipping cap, unscrew the wing nuts and remove the nitrogen cylinder from the extinguisher.

5. Remove the 50 ft. discharge hose from the storage rack and disconnect the hose from the agent cylinder fitting. Blow out any dry chemical agent remaining in the hose. Clean hose, agent cylinder fitting and gaskets.

6. Remove the remainder of the ruptured moisture seal and moisture seal gasket from female hose coupling. Replace with a new P/N 07411 Moisture Seal Assembly. **Carefully follow the installation instructions contained in the P/N 07411 package including the installation of a new clear hose gasket in the female house coupling**.

7. Remove agent fill cap and gasket. Clean, lubricate and set parts aside. Check the condition of remaining chemical (replace any dry chemical that is contaminated or caked). Fill extinguisher with the type and amount of dry chemical shown on the extinguisher label – verify gross weight. Install the fill cap securely.

   WARNING: DO NOT OVERFILL THE EXTINGUISHER. THIS COULD CAUSE A MALFUNCTION OR PREMATURE RUPTURE OF THE SAETY DISC. DO NOT MIX TYPES OF AGENTS – THIS CAN CAUSE A DANGEROUS PRESSURE BUILD UP AND REDUCE EXTINGUISHER EFFECTIVENESS.

8. Install the 55 ft^3 nitrogen cylinder (pressurized to 2015 psi), remove the shipping cap, remove temporary ring (shipping) pin, and install large ring pin and lockwire seal – "T" quick release valve. Place nitrogen cylinder on the extinguisher, tighten nuts securely and attach the nitrogen hose. On handwheel type nitrogen valve a lead wire seal (tamper indicator) position.

9. Reattach the hose to the extinguisher (tighten hand tight plus a ¼ turn). Properly coil the hose onto the storage rack. Reattach the shutoff nozzle firmly to the hose and store it in the mount with the shutoff lever in the **closed** (forward) position.

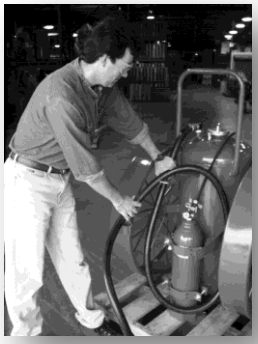
10. Record the service date on the inspection tag and place the extinguisher in its proper location.

TROUBLESHOOTING GUIDE

WARNING: BEFORE ATTEMPTING TO CORRECT ANY LEAKAGE PROBLEM, BE SURE THAT THE AGENT CYLINDER IS COMPLETELY DEPRESSURIZED. Always use caution when opening the shutoff nozzle or any other connection as a leaking nitrogen cylinder valve seat may have pressurized the agent container refer to the recharge procedure for proper method of depressurization..

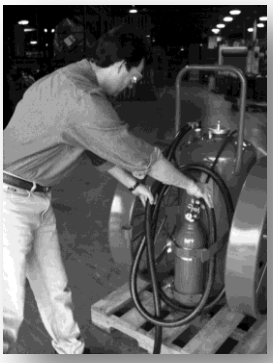
	PROBLEM	CORRECTIVE ACTION
1.	Nitrogen cylinder gauge reads low or high	Temperature may have affected the pressure reading Temperature (F) 35º 70º 120º Temperature (C) 2º 21º 49º Recommended Pressure psig 1880 2015 2200 mPa 13.0 13.9 15.2 Minimum Pressure psig 1590 1700 1900 mPa 11.0 11.7 13.1 NO CORRECTIVE ACTION IS REQUIRED IF THE PRESSURE IS WITHIN PARAMETERS STATED ABOVE.
2.	Nitrogen pressure is too low. Valve is closed. Tamper seal is intact. There is pressure in the agent and nitrogen cylinders.	Valve seat has leaked and has pressurized the agent cylinder. Follow Recharge Procedure for restoring the extinguisher to service.
3.	Nitrogen pressure is too low. Valve is closed. Tamper seal is intact. No pressure observed in the agent cylinder.	Leakage in the nitrogen valve at other than the valve seal. Replace with a properly charged nitrogen cylinder.
4.	Shutoff nozzle does not move freely.	Disassemble, clean and lubricate.
5.	Unable to remove the agent cylinder cap.	Agent cylinder may be pressurized. Make no further attempt to remove the cap until this is checked. See the Recharge Procedure for proper depressurization method.
6.	Nitrogen hose cut, cracked or abraded.	Replace hose assembly with P/N 02234.
7.	Chemical agent and pressure leaking from the safety disc assembly.	Inspect safety outlet for tightness or damage. Tighten if necessary. NOTE: Only tighten the large hex nut of the assembly. The small round nut containing the holes is factory set to a specific torque value. Do not attempt to adjust. If damaged or ruptured, replace complete Amerex P/N 03787 safety disc assembly.

Guide to Proper Installation of Hose on Wheeled or Stationary Fire Extinguishers



1

Connect hose coupling to outlet on the extinguisher. Lay hose straight on ground to its full 50 ft. length. Start first regular loop counter-clockwise by placing between side brackets and over the top bracket.

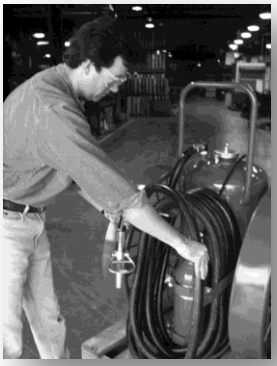


2

The second loop is a REVERSE loop. Notice that the hose passes behind the loop on this reverse loop. **If instructions are followed, the hose will uncoil without kinks.**

3

The next loop is a regular "hose in front" loop. Succeeding loops are alternated: reverse, front, reverse, etc. for six full loops.



4

Adjust the loops so that the nozzle fits into the nozzle mount. Loops should be approximately the same size.

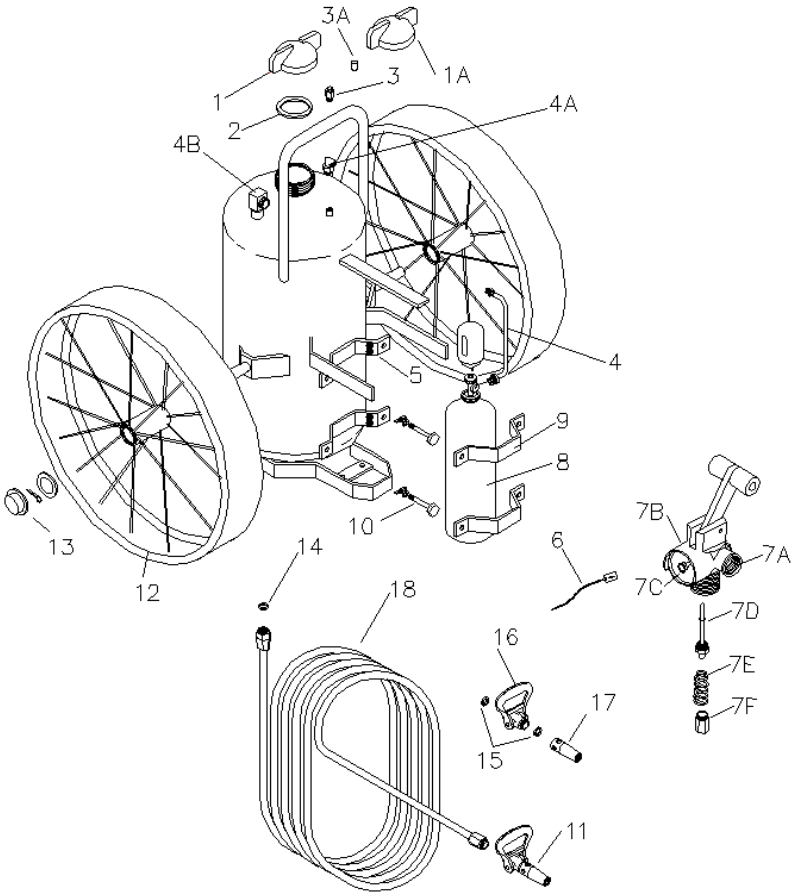
PARTS LIST
for
300/350 lb. Wheeled/Stationary
Dry Chemical Extinguishers
55 Cu. Ft. Nitrogen Cylinder

Wheeled Models

491 300 lb. ABC
492 350 lb. Regular
493 300 lb. Purple K

Stationary Models

464 300 lb. ABC
466 300 lb. Purple K



Item No.	Part No.	Description	Std. Pkg.
1	06993	Cap, Agent Cylinder	1
1A	12576	Cap, Agent Cylinder w/Pressure Indicator	1
2	02272	Gasket, Cap	1
3	03787	Safety Disc Asy – 491,492,493	1
	07665	Safety Disc Asy – 464,466	
3A	13956	Protective Vinyl Cap	1
4	07292	Nitrogen Hose Assembly	1
4A	06789	Nitrogen Tube Assembly	1
5	13958	Bumper, Rubber	12
6	01387	Lock Wire Seal (Yellow)	500
7A	16516	Safety Disc Assembly	1
7B	12467	Nitgrogen Vlv ("T" Handle – Complete)	1
7C	10213	Gauge – 3000 psi	1
7D	09897	Valve Stem Assembly	6
7E	12466	Spring	6
7F	09627	Retainer	1
8	06809	Nitrogen Cylinder (55 cu ft.) – Charged, w/Vlv, Gauge & Cap	1
9	11021	Retaining Strap – Nitrogen Cylinder	1
10	16483	Bag Assembly (Bolt, Washers, Hex Nut, Wing Nut)	1
11	07385	Nozzle Asy (Ball Vlv & Tip) – 491,492,464,465	
	07387	Nozzle Asy (Ball Vlv & Tip) – 493,466	1
12	07026	Wheel Assembly 36” x 6” (Red)	1
☒	07607	Wheel Assembly 36" x 6" w/Rubber Tread	1
13	07389	Hub Cap w/Washer & Cotter Pin	1
14	07411	Moisture Seal	1
15	03877	Gasket, Hose and Nozzle	6
16	06279	Ball Valve Assembly	1
17	08260	Nozzle Tip- 491,492,464,465(.531)	1
	08261	Nozzle Tip – 493, 466 (.469)	
18	06814	Hose Asy – 1" x 50'	1

OWNERS SERVICE MANUAL
NO. 05615
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

MODEL 630 WHEELED / MODEL 631 STATIONARY
33 GALLON (AR-AFFF) ALCOHOL RESISTANT FOAM FIRE EXTINGUISHER
23 CU FT NITROGEN CYLINDER OPERATED

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances.

O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them void the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081
Phone: 205/655-3271 Fax: 800/654-5980
e-mail: sales@amerex-fire.com Web Page: http://www.amerex-fire.com

INTRODUCTION

Amerex Model 630 33 gal. Wheeled and Model 631 Stationary AR-AFFF foam fire extinguisher provides large volume Class A and Class B firefighting capability. The Model 630 can be transported and operated by one person and the Model 631 fits easily into a pick-up truck. The alcohol resistant AR-AFFF foam charge makes it particularly effective on fires and spills involving hydrocarbons, alcohols, esters, ketones and gasohols. The nitrogen cylinder operated design features a unique stainless steel agent storage cylinder which requires no interior coating to prevent corrosion. The agent cylinder is connected to a high pressure nitrogen cylinder through quick opening "T" handle type valve. Field recharging is possible but to provide optimum extinguisher reliability, recharging should be performed by persons trained in fire extinguisher maintenance and servicing. This manual should be used as a guide for installing, operating and servicing this extinguisher. The best place to have your extinguisher serviced and recharged is your "Authorized Amerex Distributor" who has the professional experience and equipment to do it properly.

THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

PREPARING YOUR NEW EXTINGUISHER

WARNING: **<u>THIS FIRE EXTINGUISHER IS SHIPPED FROM THE FACTORY EMPTY</u>. AFTER INITIAL PREPARATIONS, CAREFULLY FOLLOW THE RECHARGING INSTRUCTIONS BEFORE PLACING IT INTO SERVICE.**

1. Remove all wrappings, straps and pallet retaining bolts.
2. Examine the extinguisher for shipping damage. Check to make sure that you have received the Model 534 gal. AR-AFFF foam concentrate charge which is packaged with the extinguisher.
3. Fill the extinguisher by carefully following the Recharge instructions (Page 8).
4. Remove the nitrogen cylinder protective shipping cap. Save the cap as it must be installed whenever a charged nitrogen cylinder is transported. Remove temporary (shipping) ring pin and install large ring pin.
5. Install new lockwire seal. Check the nitrogen cylinder pressure. The gauge should read approximately 2015 psig (13.9 mPa) at 70ºF (21ºC) ambient temperature. See the "Troubleshooting Guide" for pressure-temperature allowances. The lockwire seal should be intact.
6. Remove (and save) the Safety Vent Plug installed on all "T" handle nitrogen valves. Connect the nitrogen supply hose firmly to the nitrogen cylinder valve. Make sure that there are no kinks in this hose.
7. Disconnect the discharge hose assembly from the agent cylinder. Make sure that the hose and nozzle are unobstructed and that the P/N 07411 Moisture Seal is undamaged and properly seated on the agent cylinder discharge fitting. Reconnect the discharge hose to the agent cylinder and with the nozzle in the closed (forward) position, place it on the storage rack. (See Page 8)
8. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.
9. Remove the caution (not charged) tag.

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is +35°F to +120°F (+2°C to +49°C). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants that may interfere with its proper operation. DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER. (Testing or any use may cause the extinguisher to gradually lose extinguishing agent over a period of time and make the extinguisher ineffective.)

WARNING: **The models 630 and 631 AR-AFFF foam fire extinguishers have been tested and listed for Class A & B fires only. DO NOT USE ON CLASS C FIRES INVOLVING ENERGIZED ELECTRICAL EQUIPMENT, CLASS D FIRES OR ANY FLAMMABLES THAT WILL REACT WITH WATER.**

WARNING: **These extinguishers must be located in an area in which they will be protected from freezing. THERE ARE NO KNOWN ANTI-FREEZE ADDITIVES WHICH WILL PROTECT THESE UNITS FROM FREEZING without adversely affecting the foam fire fighting effectiveness. In some cases, a properly sized barrel heater may afford adequate protection.**

OPERATION

NOTE: **Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.**

1. Move the extinguisher to within approximately 50 feet of the fire site and remove ring (safety) pin. Pull "T" handle to open nitrogen valve. This will pressurize the extinguisher.
2. Remove nozzle from the mount, and with the nozzle lever in the closed position, pull hose from rack.
3. Start back 30 feet from the fire and aim at base of fire nearest you.
4. Hold hose and nozzle firmly and be prepared for discharge recoil. Open nozzle by pulling the handle toward you. Slowly sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. **Note: Do not cover the nozzle aspirating holes when discharging this extinguisher.**

Discharge Time (approx.):	**60 seconds**
Effective Range of the agent throw is:	**35 – 40 feet**
Hose Length:	**50 feet**

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

SHUTDOWN

1. After making sure that the fire has been completely extinguished, expel all remaining extinguishing agent and pressure, then push the nozzle lever forward to the closed position. Close the nitrogen valve (PUSH "T" HANDLE TO CLOSED POSITION).
2. When the hose is empty, push the nozzle lever to the CLOSED position.
3. Slowly open the nozzle lever again to insure that the extinguisher and hose have been completely cleared of agent and pressure.
4. Coil the extinguisher hose onto the storage rack and position the nozzle onto the mount in preparation for transport to the recharge location.

CAUTION: **DO NOT TRANSPORT A NITROGEN CYLINDER WITH ANY REMAINING PRESSURE WITHOUT INSTALLING THE PROTECTIVE SHIPPING CAP.**

VENTING DEVICE

(Standard on all Stationary Extinguishes, Optional on Wheeled Extinguishers)

A venting device has been installed on all stationary extinguishers to provide a means of safely and easily relieving residual nitrogen pressure from the agent cylinder while utilizing the same pressure to evacuate or "blow down" the hose.

CAUTION:VALVE SHUT-OFF HANDLES MUST BE IN THE POSITIONS SHOWN WHEN EXTINGUISHER IS ON STANDBY OR IN ACTUAL OPERATION.

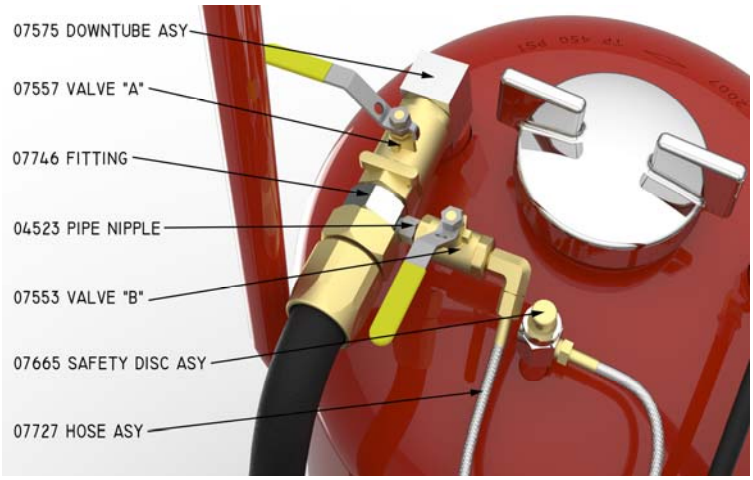


Figure 1

OPERATION – After the fire has been successfully extinguished and it has been determined that it is completely out:

1. Confirm that the discharge nozzle lever is in the CLOSED position.
2. Close the nitrogen valve (move "T" handle to CLOSED position)
3. Remove ring pin and CLOSE agent cylinder valve (Valve A in Fig. 1) to prevent further chemical from entering the hose.
4. Remove ring pin and OPEN pressure vent valve (Valve B in Fig. 1) to allow nitrogen gas to by-pass the chemical and pressurize the hose.
5. Open discharge nozzle to vent all residual chemical and nitrogen gas pressure.
6. Re-open nitrogen valve if additional pressure is required.
7. When recharging this unit, reset agent cylinder and vent valves, install ring pins and lockwire seals.

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

THE AR-AFFF FOAM CHARGE IN THIS EXTINGUISHER MUST BE REPLACED EVERY THREE YEARS PER NFPA 10. USE ONLY THE AMEREX MODEL 534 CHARGE. USE OF ANY OTHER AGENTS OR SUBSTITUTES WILL VOID THE UL LISTING AND AMEREX WARRANTY. SEE THE RECHARGE SECTION OF THIS MANUAL FOR THE APPROPRIATE EMPTYING AND RECHARGING INSTRUCTIONS.

MAINTENANCE

At least once a year or more frequently if circumstances require, maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

NOTE: The Getz Manufacturing Universal Wheeled Extinguisher Service Kit is available so that NFPA-10 required maintenance functions can be performed.

MAINTENANCE – SERVICE PROCEDURE

WARNING: BEFORE SERVICING BE SURE THE EXTINGUISHER AGENT CYLINDER IS NOT PRESSURIZED. THIS PROCEDURE IS BEST ACCOMPLISHED WITH THE EXTINGUISHER IN AN UPRIGHT POSITION AND ON A LEVEL SURFACE.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test in accordance with instructions in CGA C-1 and C-6 and NFPA 10.
2. Inspect the extinguisher for damaged, missing or substitute parts. A careful inspection should be made of the safety relief to make sure that it has not ruptured, corroded or been tampered with. Only factory replacement parts are approved for use on Amerex fire extinguishers.
3. Check the date of manufacture printed on the extinguisher label (nameplate) or on the agent cylinder dome. The agent cylinder, the discharge hose assembly and nitrogen supply hose must be hydrostatically tested every 5 years. Test pressure:
    a. Agent Cylinder – 450 psi (3103 kPa)
    b. Hose Assembly – 300 psi (2068 kPa)
    c. Nitrogen Supply Hose – 3000 psi (20,628 kPa)
4. Check the hydrostatic test date on the crown of the nitrogen cylinder. The nitrogen cylinder must be retested in accordance with DOT regulations.
5. Check the gauge on the nitrogen cylinder. If the pressure is below 1700 psig (11.7 mPa) repressurize the cylinder to 2015 psig (13.9 mPa) or replace it. A low gauge pressure may indicate leakage. Check for leaks. A low gauge reading may also result from low temperature. See the temperature/pressure relationship chart in the Troubleshooting Guide. Check the tamper indicator (lockwire seal) on the nitrogen valve and replace if necessary.
6. Wheeled extinguishers (Model 630) – Inspect the wheels to insure they rotate freely. Lubricate as required. Stationary extinguishers (Model 631) – Check to insure that any mounting fixtures are secure.
7. **WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. ANY PRESSURE IN THE AGENT CYLINDER WILL CAUSE THE EXTINGUISHER TO DISCHARGE. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL. ANY EVIDENCE OF AGENT IN THE NOZZLE INDICATES THAT THE UNIT MAY HAVE BEEN USED AND THE USE NOT REPORTED.**

   Disconnect the discharge hose from the agent cylinder. Check the couplings, hose and hose gaskets for damage or deterioration – replace as necessary.

8. To perform an operational integrity check on the discharge hose and nozzle combination:
    a. Connect the test kit hose adapter to the female end of the discharge hose.
    b. Close the discharge nozzle shut-off lever and properly secure it.
    c. Connect a properly regulated and verified nitrogen pressure source, set to the extinguisher operating pressure (235-245 psi) to the test kit hose adapter.

d. Slowly pressurize the discharge hose/nozzle assembly to the extinguisher operating pressure and check for leaks or distortion.
e. Operate the nozzle lever to ensure proper operation and to clear the hose of any obstructions. If hose is obstructed refer to Troubleshooting Guide. Make sure that the nozzle aspirating holes and screen are clear and unobstructed – clean if necessary.
f. Close the nitrogen pressure source and slowly relieve remaining pressure by fully operating the nozzle lever.

9. Remove the agent cylinder cap and examine it closely for any signs of damage, cracks or thread wear. Clean the agent cylinder fill cap threads and thread vent port on the cap with a stiff bristle nylon brush. Remove the fill cap gasket and check for wear, cracks or tears – replace if necessary. Lightly lubricate the gasket with Visilox and reinstall.

10. Check the condition of the chemical solution. The level of the solution should be 9 inches (23 cm) below the top of the fill opening. Recharge if contaminated, if the solution level is down or if the charge is over three years old. See Recharge instructions and procedures.

11. Place the service kit Vent Spacer on top of the agent cylinder fill opening collar. Check again to see that the fill cap thread vent is clean and that the agent fill cap gasket is in place. Install the agent fill cap securely over the vent spacer.

12. **CAUTION: The agent cylinder cap threads must be clear and the cap securely installed onto the vent spacer and agent cylinder to allow pressure to slowly vent after performing the siphon tube clearing and gas tube integrity checks.**

To perform a siphon tube clearing and gas tube integrity check:

a. Remove the service kit Agent Hose Adapter from the discharge hose assembly and install it securely onto the agent cylinder siphon tube outlet.
b. Using a regulated nitrogen pressure source set to the extinguisher operating pressure, slowly and briefly pressurize the agent cylinder (**the siphon tube should be clear within a couple of seconds and the agent cylinder pressure slowly vent from the fill cap thread vent)**. Pressure and/or foam agent leaks from the gas tube inlet port (where the hose connects) will indicate a defective gas tube and will require that the agent cylinder be emptied and the gas tube replaced.
c. Close the nitrogen pressure source and allow all pressure to slowly vent from the thread vent port on the fill cap.
d. **AFTER ALL PRESSURE HAS BEEN RELIEVED, <u>SLOWLY</u> OPEN THE FILL CAP AND <u>REMOVE THE TEST KIT VENT SPACER</u>**.
e. Re-examine the foam agent to determine if any obstructions were cleared from the siphon tube and have risen to the liquid surface.
f. Clean the fill cap and agent cylinder thread surfaces. Install the fill cap gasket and securely install fill cap.

13. Disconnect the high pressure hose from the nitrogen cylinder valve. Securely install the service kit Nitrogen Cylinder Pressure Check Gauge Assembly to the nitrogen cylinder valve outlet and verify the indicated cylinder gauge pressure. Nitrogen pressure should conform to the temperature correction chart provided in the Troubleshooting section of this manual. Close the nitrogen cylinder valve and disconnect the Pressure Check Gauge Assembly.

WARNING: IF THE NITROGEN CYLINDER VALVE HAS A "T" HANDLE QUICK OPENING OR A HANDWHEEL QUICK OPENING TRIP RELEASE, THE SAFETY VENT PLUG SHIPPED WITH THE EXTINGUISHER, OR THE TEST KIT SAFETY VENT PLUG, MUST BE INSTALLED TO PROTECT SERVICE PERSONNEL FROM A HIGH VELOCITY DISCHARGE IN CASE THE LEVER IS ACCIDENTALLY OPENED.

14. Install a new Amerex P/N 07411 Moisture Seal per instructions in the package. Securely connect the discharge hose to the extinguisher. **When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ¼ turn after contacting the hose gasket**.

15. Coil the hose on to the extinguisher hose rack using the Reverse Loop Procedure (see Page 10). Install nozzle with the lever in the Closed (forward) position into the nozzle mount.

16. Remove the safety vent plug from the nitrogen cylinder. Reconnect the high pressure hose securely to the nitrogen cylinder valve. Wipe the extinguisher clean. Record service data on the inspection tag according to NFPA-10 requirements and attach to extinguisher. Return extinguisher to its proper location.

RECHARGE

CAUTION: THE FIRE EXTINGUISHING AGENT IN THIS EXTINGUISHER MUST BE COMPLETELY REPLACED EVERY THREE YEARS.

WARNING: BEFORE ATTEMPTING TO RECHARGE BE SURE THIS EXTINGUISHER IS COMPLETELY DEPRESSURIZED. THERE IS A CHECK VALVE IN THE SYSTEM WHICH PREVENTS NITROGEN PRESSURE FROM ESCAPING FROM THE AGENT CYLINDER WHEN THE NITROGEN HOSE IS DISCONNECTED. THE AGENT CYLINDER MAY BE PRESSURIZED EVEN THOUGH NO PRESSURE ESCAPES FROM THE CYLINDER NITROGEN CONNECTION.

RECHARGING PROCEDURE

1. To depressurize:
   a. Close the nitrogen valve.
   b. Open the nozzle lever slowly to discharge all remaining agent and pressure (be prepared for nozzle recoil).
   c. Insure that all pressure has escaped before further disassembly.
2. Carefully remove the fill cap. Thoroughly rinse the complete interior of the agent cylinder with clean water. Dump or siphon all liquid from the cylinder. Detach discharge hose from the agent cylinder and the nozzle assembly from the hose. Remove the ruptured moisture seal from the female hose coupling and flush the hose and nozzle assemblies with clean water.
3. Perform Maintenance-Service Procedures 1 through 6.
4. Detach the hose from the nitrogen cylinder, install the shipping cap, unscrew the wing nuts and remove the nitrogen cylinder from the extinguisher.
5. Fill the agent cylinder with 28 gallons of clean, fresh water (to a level just touching the bottom of the internal nitrogen tube). Pour 2.69 gallons (10.18L) 22.45 lbs. (10.18 kg) of clean, fresh water into an Amerex

   2.31 gallon (8.74L) Model 534 AR-AFFF charge. (NOTE: Charge contains 2.31 gallons (8.74L) of concentrate in a 5 gallon pail.) Carefully stir until you have a complete and homogeneous mixture. Slowly pour the solution into the agent cylinder. The liquid level in the extinguisher cylinder should now be 9 inches (23 cm) from the top of the fill opening. Clean, lubricate and install (or replace if necessary) the fill cap gasket. Install the fill cap and tighten securely. Rock the extinguisher back and forth for two minutes to accomplish a more thorough agent mix.

   WARNING: DO NOT OVERFILL THE EXTINGUISHER. THIS COULD CAUSE A MALFUNCTION OR PREMATURE RUPTURE OF THE SAFETY DISC.
6. Install an Amerex P/N 03817 23 cu. Ft. nitrogen cylinder (pressurized to 2015 psi). Remove the shipping cap, tighten the wing nuts securely and attach the nitrogen hose.

   NOTE: NITROGEN CYLINDERS WITH A "T" HANDLE "QUICK OPENING" VALVE. REMOVE SMALL TEMPORARY RING (SAFETY) PIN AND INSTALL A LARGE RING PIN. INSTALL A LOCKWIRE SEAL (TAMPER INDICATOR.) NITROGEN CYLINDERS WITH A HANDWHEEL OR LEVER ACTUATED "QUICK OPENING" VALVE. A LEADWIRE SEAL MUST BE INSTALLED.
7. Remove the remainder of the ruptured moisture seal from the agent cylinder fitting. Replace with a new

   P/N 07411 Moisture Seal Assembly. **Carefully follow the installation instructions contained in the P/N 07411 package including the installation of a new hose gasket in the female house coupling**.
8. Reattach the hose to the extinguisher (tighten hand tight plus a ¼ turn). Properly coil the hose onto the storage rack ring leverage loop. Reattach the shutoff nozzle firmly to the hose and store it in the mount with the shutoff lever in the **closed** (forward) position.
9. Record the service date on the inspection tag and place the extinguisher in its proper location

TROUBLESHOOTING GUIDE

WARNING: BEFORE ATTEMPTING TO CORRECT ANY LEAKAGE PROBLEM, BE SURE THAT THE CYLINDER AND HOSE ARE COMPLETELY EMPTY AND DEPRESSURIZED. Check to determine the source of a leak before the extinguisher is emptied. Leakage repairs will require depressurization and removal of the valve assembly. Use Getz HR-1 or other "APPROVED" recharge/recovery system to depressurize extinguisher.

	PROBLEM	CORRECTIVE ACTION
1.	Nitrogen cylinder gauge reads low or high	Temperature may have affected the pressure reading Temperature (F) 35º 70º 120º Temperature (C) 2º 21º 49º Recommended Pressure psig 1880 2015 2200 mPa 13.0 13.9 15.2 Minimum Pressure psig 1590 1700 1900 mPa 11.0 11.7 13.1 NO CORRECTIVE ACTION IS REQUIRED IF THE PRESSURE IS WITHIN PARAMETERS STATED ABOVE.
2.	Nitrogen pressure is too low. Valve is closed. Tamper seal is intact. There is pressure in the agent and nitrogen cylinders.	Valve seat has leaked and has pressurized the agent cylinder. Follow Recharge Procedure for restoring the extinguisher to service.
3.	Nitrogen pressure is too low. Valve is closed. Tamper seal is intact. No pressure observed in the agent cylinder.	Leakage in the nitrogen valve at other than the valve seal. Replace with a properly charged nitrogen cylinder.
4.	Shutoff nozzle does not move freely.	Disassemble, clean and lubricate.
5.	Unable to remove the agent cylinder cap.	Agent cylinder may be pressurized. Make no further attempt to remove the cap until this is checked. See the Recharge Procedure for proper depressurization method.
6.	Nitrogen hose cut, cracked or abraded.	Replace hose assembly with P/N 02234.
7.	Chemical agent and pressure leaking from the safety disc assembly.	Inspect safety outlet for tightness or damage. Tighten if necessary. **NOTE: Only tighten the large hex nut of the assembly. The small round nut containing the holes is factory set to a specific torque value. Do not attempt to adjust. If damaged or ruptured, replace complete Amerex P/N 03787/07665 safety disc assembly.**

Guide to Proper Installation of Hose on Wheeled or Stationary Fire Extinguishers

1

Connect hose coupling to outlet on the extinguisher. Lay hose straight on ground to its full 50 ft. length. Start first regular loop counter-clockwise by placing between side brackets and over the top bracket.

2

The second loop is a REVERSE loop. Notice that the hose passes behind the loop on this reverse loop. **If instructions are followed, the hose will uncoil without kinks.**

3

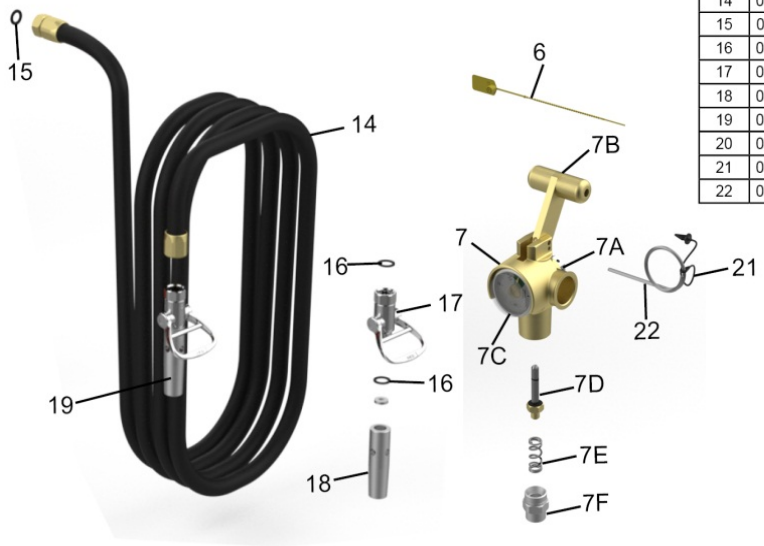
The next loop is a regular "hose in front" loop. Succeeding loops are alternated: reverse, front, reverse, etc. for six full loops.

4

Adjust the loops so that the nozzle fits into the nozzle mount. Loops should be approximately the same size.

PARTS LIST
for
33 Gal. AR-AFFF Foam
23 CU. FT. Nitrogen Cylinder
Wheeled/Stationary
Extinguisher Models

630 - 33 gal. AR-AFFF
631 - 33 gal. AR-AFFF STA.



ITEM NO.	PART NO.	DESCRIPTION
1	06993	Cap, Agent Cylinder
	12576	Cap, Agent Cylinder with Pressure Indicator
2	02272	Gasket, Cap
3	03787	Safety Disc Assembly - 630
	07665	Safety Disc Assembly - 631
3A	13956	Protective Vinyl Cap
4	02234	Nitrogen Hose Assembly
	06883	Nitrogen Tube Assembly
4A	06784	Downtube Assembly
5	13958	Bumper, Rubber
6	01387	Lock Wire Seal (Yellow)
7	12467	Nitrogen Valve with Gauge ("T" Handle Quick Release)
7A	16516	Safety Disc, Gasket and Nut Assembly
7B	06373	Valve Lever ("T" Handle - Complete)
7C	10213	Gauge - 3000 PSI
7D	09897	Valve Stem Assembly
7E	12466	Spring
7F	09627	Retainer
8	03817	Nitrogen Cylinder (23 cu. ft.) - Charged with Cap
9	04072	Retaining Strap - Nitrogen Cylinder
10	11970	Bolt, Washer and Wing Nut
11	07479	Pictogram - 630, 631
12	07026	Wheel Assembly 36" x 6"
	07607	Wheel Assembly 36" x 6" with Rubber Tread
13	07389	Hub Cap with Washer and Cotter Pin
14	06814	Hose Assembly - 50 ft.
15	07411	Moisture Seal
16	03877	Gasket, Hose and Nozzle
17	06279	Ball Valve Assembly
18	06749	Nozzle Tip (Aerated)
19	07560	Nozzle Assembly (Ball Valve & Tip)
20	04444	Nitrogen Elbow
21	00532	Chain (Nylon) for Ring Pin
22	00160	Ring Pin Stainless Steel

OWNERS SERVICE MANUAL
NO. 05616
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

HIGH PERFORMANCE HEAVY DUTY INDUSTRIAL STORED PRESSURE HAND PORTABLE DRY CHEMICAL FIRE EXTINGUISHERS – 6KG, 20 & 30 LB.

ABC (AMMONIUM PHOSPHATE BASE),Regular (SODIUM BICARBONATE BASE), PURPKE K (POTASSIUM BICARBONATE BASE)

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

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THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

INTRODUCTION

The Amerex High Performance, stored pressure 13.2 (6kg), 20 lb. (9 kg) and 30 lb. (13.6 kg) dry chemical fire extinguishers have been designed and manufactured to accommodate the rigorous needs of environmental extremes and heavy industrial use. The finest materials, workmanship and finishes have been utilized, backed by several years of development and field testing to insure many years to trouble free fire protection.

These extinguishers operate at a 240 psi (1655 kPa) pressure and are intended for use by trained fire fighters. The higher discharge velocity and superior range necessary for quick extinguishment of many industrial fire hazards dictates formal training for development of proper fire fighting techniques and a feel for the most effective use of the extinguisher.

All sizes feature a large, durable stainless steel operating lever and carrying handle, large brass, chrome plated operating valve, large pressure gauge with gauge guard, molded performance discharge hose and the Amerex "Ultra" corrosion resistant paint finish over a "galvanized" cylinder. The stored pressure design allows easy upright, squeeze grip operation, assures a constant, instant state of readiness, and minimizes operating parts and cuts down on maintenance costs. Amerex is confident in the superior features of these products and have extended our warranty to 12 years to prove it.

EXTENDED (TWELVE YEAR) LIMITED WARRANTY

Amerex warrants its High Performance fire extinguishers to be free from defects in material and workmanship for a period of twelve (12) years from the date of purchase. During the warranty period, any such defects will be repaired or the defective extinguisher replaced if only factory replacement parts and recommended service equipment have been used to service the extinguisher. Excluded items: pressure gauge and hose, nozzle assembly (these items carry the standard Amerex 6 year warranty).This warranty does not cover defects resulting from modification, alteration, misuse, exposure to unusually corrosive conditions nor improper installation or maintenance. All implied warranties, including, but not limited to, warranties of fitness for purpose and merchantability, are limited to the time periods as stated above. In no event shall Amerex Corp. be liable for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Amerex Corp. neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corp., P. O. Box 81, Trussville, AL 35173-0081 for instructions.

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

PREPARING YOUR NEW EXTINGUISHER FOR USE

1. Examine the extinguisher for evidence of shipping damage. Notify the delivering carrier immediately if any damage is discovered.
2. Check to insure that the hose connection to the operating valve is tight.
3. The ring (safety) pin should be installed in the operating valve and the lockwire (tamper) seal intact.
4. This extinguisher is shipped from the factory fully charged. Visually inspect the pressure gauge – the pressure should be in the green zone (240 psi ± approx. 10 psi range). The most accurate method to determine if the extinguisher is filled with the proper amount of chemical is to weigh the unit. The gross weight is indicated on the nameplate (label).

   NOTE: Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70ºF (21ºC) for several hours to obtain more accurate pressure gauge readings.

5. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

INSTALLATION

Your plant layout and particular hazards dictate the placement of fire extinguishers. Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from a potential hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is -65º to +120ºF (-54º to +49ºC). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants which may interfere with its proper operation. Do not functionally test this fire extinguisher. (Testing or any use may cause the extinguisher to gradually lose pressure and become ineffective.)

OPERATION

NOTE: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.

1. Remove extinguisher from wall hanger or vehicle bracket.
2. Hold the extinguisher upright, twist and pull ring pin, snapping the plastic lockwire seal.
3. Stand back 15 feet from the fire and aim the nozzle at base of flames nearest you.
4. Sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning materials.
5. When the fire is out, stand by and watch for possible reignition.
6. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

DISCHARGE TIME – VARIES ACCORDING TO THE MODEL
EFFECTIVE RANGE OF AGENT THROW IS 40-50 feet

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES
(Monthly or more often if circumstances dictate)

[NFPA-10] Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Pressure gauge reading or indicator in the operable range or position.
4. Operating instructions on nameplate and facing outward.
5. Safety seals and tamper indicators not broken or missing.
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Determine fullness by weighing.

MAINTENANCE

[NFPA-10] At least once a year or more frequently if circumstances require, maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE – SERVICE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test to factory test pressure 720 psi (4964 kPa), using the proof pressure method, in accordance with instructions in C-6 and NFPA 10. See proper method of depressurizing and reclaiming chemical in Recharge procedures.

   NOTE: WHEN CLEANING, AVOID USE OF SOLVENTS AROUND THE PRESSURE GAUGE. THEY COULD SERIOUSLY DAMAGE THE PLASTIC GAUGE FACE.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Weigh the extinguisher and compare with weight printed in the "Maintenance" section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.

4. Check the date of manufacture printed on the extinguisher label (nameplate) or inside the bottom lip of the cylinder. The agent cylinder must be hydrostatically tested every 12 years to the test pressure indicated on the nameplate [720 psi (4964 kPa)].

5. Visually inspect the pressure gauge:
   a. If bent, damaged or improper gauge, depressurize and replace.
   b. If pressure is low, check for leaks.
   c. If over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions.

6. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

7. Inspect the discharge lever for any dirt of corrosion which might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged replace with factory replacement parts.

8. Remove hose and horn assembly and visually inspect inside valve body. Chemical in the valve body may indicate that the extinguisher has been partially discharged and should therefore be recharged. Inspect the hose and horn assembly for damage and replace if necessary. Blow air through the hose and horn to insure passage is clear of foreign material.

9. Inspect the valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures. If valve removal is necessary, complete all steps in the Recharge Procedure.

10. Install hose and horn assembly.

11. Record service data on the extinguisher inspection tag.

12. If the extinguisher has been moved to perform service, replace it on the wall hanger or in the vehicle bracket making sure it fits the bracket properly. Replace the bracket if necessary.

COMPLETE MAINTENANCE – SIX YEAR TEARDOWN

[NFPA-10] Every six years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

NOTE: Some states have legislation which requires "Complete Maintenance" on an annual basis. Please contact your local Amerex Distributor to see if these requirements apply to you. NFPA 10 recommendation requires that a "verification of service" external collar tag be installed on the extinguisher whenever a Six Year Maintenance is performed. The "verification of service" tag can only be installed if the operating valve has been removed.

1. Discharge chemical and pressure into a "closed" dry chemical recovery system (several are commercially available). **Make sure that the extinguisher is completely empty and depressurized**.

   NOTE: A "closed recovery system" is designed to prevent loss of the chemical "fines". Loss of the "fines" could result in reduced extinguisher efficiency.

2. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure marked on the nameplate (label), using the proof pressure method, in accordance with CGA C-1 and NFPA 10.

   NOTE: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

3. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

4. Check the date of manufacture on the extinguisher label (nameplate). Cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate (720 psi [4964 kPa]).

5. Visually inspect the pressure gauge – if bent, damaged or improper gauge replace with the proper Amerex pressure gauge (see Parts List).

6. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

7. **Verify that no pressure remains in the extinguisher**. (Operating valve and nozzle shutoff in open position and there is no discharge).

8. Inspect the discharge lever for any dirt of corrosion which might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged replace with factory replacement parts.

9. Remove hose and horn assembly and visually inspect inside valve body. Chemical in the valve body may indicate that the extinguisher has been partially discharged and should therefore be recharged. Inspect the hose and horn assembly for damage and replace if necessary. Blow air through the hose and horn to insure passage is clear of foreign material.

10. Disassemble valve assembly by removing downtube, spring and valve stem assembly. Remove collar o-ring from valve

11. Complete steps 2 through 13 of Recharge Procedure.

RECHARGE

WARNING:

a. Before attempting to disassemble, be sure the extinguisher is completely depressurized.
b. Never have any part of your body over the extinguisher while removing the valve assembly.
c. Use a protective shield between you and the pressure gauge while charging an extinguisher. Do not stand in front of the gauge if a shield is not available.
d. Use a <u>regulated</u> pressurizing source of dry nitrogen only with a minimum dew point of minus 70ºF (minus 57ºC). Set the regulator to no more than 265 psi (1827 kPa).
e. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.
f. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.
g. Do not mix types of dry chemicals in extinguishers, recharge or recovery systems. Mixing ABC (acidic base) with Regular, Purple-K, Super-K or Monnex (alkaline base) dry chemicals may result in a chemical reaction capable of developing a dangerous pressure buildup.

RECHARGING PROCEDURE

1. Perform steps 1 through 12 of the "Complete Maintenance (Six Year Teardown)" section.
2. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with air or nitrogen. Inspect the spring and downtube assembly, and replace parts if worn or damaged. Replace the valve stem and collar o-ring. Lubricate the collar o-ring and small o-ring on the valve stem with Visilox V-711 (do not lubricate the valve stem seal).
3. Reassemble the valve assembly, including downtube and set aside.
4. Remove any chemical remaining in the cylinder and check the condition. Properly dispose of any chemical that is contaminated or caked.
5. Inspect the cylinder interior following CGA Visual Inspection Standard C-6.
6. Using an accurate scale, fill cylinder with the correct amount and type of dry chemical specified on the label (nameplate). Use Amerex chemical which has been kept free of moisture and contamination. See Warning (g) – **DO NOT MIX TYPES OF CHEMICALS**.
7. Clean cylinder collar o-ring seat and collar threads with a small brush and then wipe off surfaces with a clean cloth to remove dust. Lightly brush the collar o-ring seat with Visilox V-711.
8. Carefully center the downtube and install valve assembly hand tight to the cylinder (the bottom of the valve body should touch the top of the cylinder collar). Attach the nitrogen charging adapter to the male hose connector. Valve installation can be made easier by tapping the sidewall of the cylinder with a rubber mallet as the downtube is eased into the cylinder.
9. With the extinguisher properly secured in an upright position, connect your nitrogen pressurizing line with a quick connect to the nitrogen charging adapter. Pressurize

extinguisher with dry nitrogen to 240 psi. Nitrogen supply regulator should be set to no more than 265 psi. This will insure proper aeration of the chemical.

10. Check extinguisher for leaks by applying detecting fluid or a solution of soapy water to the nitrogen charging adapter orifice, around the collar o-ring sealing area, cylinder welds and gauge. Remove the pressurizing adapter.

11. Install ring (safety) pin and lockwire (tamper) seal. Attach new recharge tag.

12. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the "Maintenance" section of the nameplate (label).

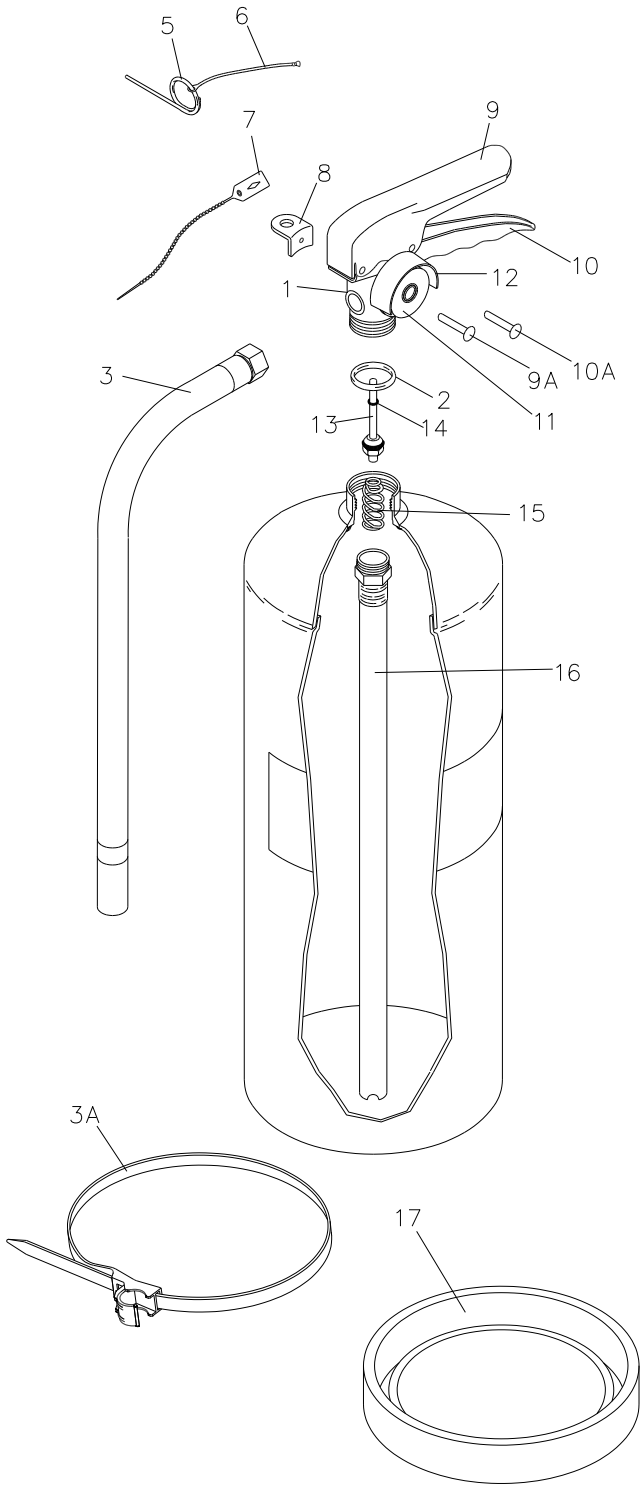
TROUBLESHOOTING GUIDE

WARNING: Before attempting to correct any leakage problem, be sure that the agent cylinder and hose are completely depressurized. Check to determine the source of a leak before the extinguisher is depressurized. Leakage repairs will require depressurization and removal of the valve assembly. Depressurize by discharging into a Closed Recovery System or inverting the extinguisher. After depressurizing the extinguisher and correcting the problem, it will be necessary to clean all valve parts thoroughly.

	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, remove and discard o-ring, clean collar and lube lightly with Visilox V-711. Clean o-ring groove on valve and install new collar o-ring. Lubricate with Visilox V-711.
2.	Leak through valve	Check valve stem seating area for scratches or foreign matter. Clean seating area with a tooth brush and soft cloth. Install new valve stem assembly.
3.	Leak around gauge	Remove gauge*, clean threads and reinstall using Teflon tape on the gauge threads.
4.	Defective gauge	Remove defective gauge* an install the proper Amerex pressure gauge (P/N 05225 240 psi) using Teflon tape on the gauge threads.
5.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and remove from service or return to owner.
	* Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F) for two to four minutes. Remove gauge with a thin 7/16" open end wrench.	

PARTS LIST
for
6 Kg – 30 lb. Dry Chemical
High Performance Models

594	**567**	**589**
595	**568**	**591**
580	**569**	**592**
581	**599**	
582	**564**	
584	**566**	



Item No.	Part No.	Description	Std. Pkg.
1	14874	Valve Assembly-Female Thread	1
2	05240	Collar O-Rring	24
		Collar O-Ring – Bulk Bag	100
3*	14785	Hose & Horn Assembly-594 (.213)	1
	14791	Hose & Horn Assembly-595 (.204)	1
	14788	Hose & Horn Assembly-580,581,582 (.250)	1
	14790	Hose & Horn Assembly-592 (.166)	1
	14794	Hose & Horn Assembly-599 (.149)	1
	14787	Hose & Horn Assembly-564 (.166)	1
	14786	Hose & Horn Assembly-566 (.157)	1
	14789	Hose & Horn Assembly-567, 568, 569, 584 (.312)	1
	14947	Hose & Horn Assembly-589 (.213)	1
	14948	Hose & Horn Assembly-591 (.180)	1
3A	14778	Strap & Clip Assembly (Black Plastic) ½" Hose 6 Kg & 20 lb.	1
	14871	Strap & Clip Assembly (Black Plastic) ½" Hose 30 lb.	1
4	06978	Hose Gasket (O-Ring)	24
5	00160	Ring Pin – Stainless Steel	24
6	00532	Chain (Nylon) for Ring Pin	24
7	01387	Lockwire Seal (Yellow)	500
8	09584	Hanger Loop w/Screw	6
9	09840	Lever & Rivet – All Models	1
9A	01563	Rivet Only for Lever	24
10	09020	Handle & Rivet – All Models	1
10A	01564	Rivets Only for Handle	24
11	05225	Gauge – 240 psi	6
12	09102	Gauge Guard – Chrome Plated Brass	1
13	06093	Valve Stem Assembly	6
		Valve Stem Assembly – Bulk Bag	96
14	05243	Valve Stem O-Ring	24
15	00383	Spring	6
16	01700	Dtube/Retainer Asy – 6 Kg	1
	01667	Dtube/Retainer Asy – 20lb.	
	09583	Dtube/Retainer Asy – 30 lb.	
17	12383	Prot Foot Ring for Bottom of Cyl - 7"	1
	12952	Prot Foot Ring for Bottom of Cyl - 8"	
ALL BRACKETS – SEE BRACKET PAGE			
ALL FILL & HYDROTEST ADAPTERS – SEE ADAPTER PAGE			
REPLACEMENT VALVE ASSEMBLIES INCLUDE VALVE BODY, GAUGE, LEVER VLV STEM ASY, SPRING & HANDLE			

OWNERS SERVICE MANUAL
P/N 05617
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

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RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	**AVAILABLE FROM:**
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CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 14501 George Carter Way, Suite 103 Chantilly, VA 20151-1788 cga@cganet.com

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081
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HIGH PERFORMANCE STORED PRESSURE
125 & 250 POUND STORED PRESSURE WHEELED & STATIONARY FIRE EXTINGUISHER
ABC (AMMONIUM PHOSPHATE BASE), REGULAR (SODIUM BICARBONATE BASE),
PURPLE K (POTASSIUM BICARBONATE BASE)
MODELS 573,574,575,596,597,598,690

THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

INTRODUCTION

The Amerex Models 573 (ABC), 574 (Regular) & 575 (Purple K) Stored Pressure Wheeled 690 (purple K) and Models 596 (ABC), 597 (Regular) & 598 (Purple K) Stored Pressure Stationary Dry Chemical fire extinguishers are designed to provide larger volumes of dry chemical fire fighting agent for extra high hazard industrial applications in a unit which can be transported and operated by one person. These extinguishers are the culmination of several years of research, field trials and listening to the suggestions and particular needs of potential end users. High pressure delivers the chemical at a range, volume and velocity particularly suited for the needs of many critical industrial hazards. The cage type carriage configuration provides protection for the operating valve, cylinder and hose assembly. Lift points are incorporated into the carriage frame so that these units can be easily on/off loaded at off-shore platforms or placed by a crane into remote areas in land based installations. Models 573, 574, 575 & 690 feature large 36 inch wheels to assure minimum effort for one person to quickly transport them to a fire scene.

Maximum protection from severe corrosive environment is afforded by the Amerex corrosion resistant metal preparation and paint finish. The operating valve, handle, gauge guard, fill cap, house couplings and ball type shutoff are brass, or brass, chrome plated for years of trouble free use. These models carry an extended Amerex warranty of twelve (12) years excluding abuse, hydrotest, carriage, wheels and hose assembly. See full wording of the warranty and unique, fire equipment industry first, refurbishing program.

Field recharging is possible utilizing maintenance/recharge equipment available through your Amerex Distributor. To provide optimum extinguisher reliability, recharging should be performed by persons trained in fire extinguisher maintenance and servicing. This manual should be used as a guide for installing, operating and servicing this extinguisher. The best place to have your extinguisher serviced and recharged is your Authorized Amerex Distributor who has the professional experience and equipment to do it properly.

EXTENDED TWELVE YEAR LIMITED WARRANTY

Amerex warrants its high performance fire extinguishers to be free from defects in material and workmanship for a period of twelve (12) years, up to but not including hydro test, from the date of purchase. During the warranty period, any such defects will be repaired or the defective extinguisher replaced if only factory replacement parts and recommended service equipment have been used to service the extinguisher. This warranty does not cover defects resulting from modification, alteration, misuse, exposure to unusually corrosive conditions nor improper installation or maintenance (Excluded Items: carriage, wheels, pressure gauge and hose – these items carry the standard Amerex six (6) year warranty). All implied warranties, including, but not limited to, warranties of fitness for purpose and merchantability, are limited to the time periods as stated above. In no event shall Amerex Corp. be liable for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Amerex Corp. neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corp., P. O. Box 81, Trussville, AL 35173-0081 for instructions.

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PREPARING YOUR NEW EXTINGUISHER FOR USE

1. Examine the extinguisher for evidence of shipping damage. Notify the delivering carrier immediately if any damage is discovered.
2. Remove all wrappings, straps and pallet retaining bolts.
3. Check to insure that the hose connection to the operating valve and shut-off nozzle to the hose are tight.
4. Check to insure that the shut-off nozzle is in the closed position. The ring (safety) pin should be installed in the operating valve and the lockwire (tamper) seal intact.
5. Visually inspect the safety relief on the discharge valve for evidence of obstruction or damage. (DO NOT REMOVE)
6. Check to make sure that the cap is on the "bleeder valve" (located on the side of the extinguisher operating valve). The pressure seal is in the cap and it must be in place to prevent leakage.
7. This extinguisher is shipped from the factory fully charged. Visually inspect the pressure gauge—the pressure should be in the green zone (350 psi ± approx. 15 psi range or 240 psi ± approx. 10 psi for 690). The most accurate method to determine if the extinguisher is filled with the proper amount of chemical is to weigh the unit. The gross weight is indicated on the nameplate (label).

   NOTE: Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70°F (21°C) for several hours to obtain more accurate pressure gauge readings.

8. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is -40º to +120ºF (-40º to +49ºC). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants which may interfere with its proper operation. Do not functionally test this fire extinguisher. (Testing or any use may cause the extinguisher to gradually lose pressure and become ineffective.)

OPERATION

NOTE: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire-fighting technique. Familiarize all personnel with this information before an emergency occurs.

1. Move the extinguisher to within approximately 50 feet of the fire site. Keep the extinguisher upright.

   CAUTION: This extinguisher must be operated in an upright position. If equipped with an optional tow loop and vehicle towed to the fire scene, remove from tow hitch and operate in a vertical position.

2. Twist and pull ring pin. Open cylinder discharge valve by rotating (pulling) the handle valve lever toward
3. Pull nozzle, with lever in the closed position, from the mount and extend the hose from the storage rack.
4. Stand back 30 feet from the fire and aim the nozzle at base of flames nearest you. Open nozzle by pulling handle toward you

   (WARNING: this extinguisher operates at high pressure - be prepared for a discharge recoil by holding the nozzle firmly).
5. Sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning materials.
6. When the fire is out, push the hose (discharge) lever forward to the closed position. Stand by and watch for possible re-ignition.
7. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

DISCHARGE TIME:

573 & 596	**ABC – 50 Seconds**
574 & 597	**REGULAR – 38 Seconds**
575 & 598	**PURPLE K – 38 Seconds**
690	**PURPLE K—30 Seconds**

EFFECTIVE RANGE OF AGENT THROW IS 50 TO 70 FEET
HOSE LENGTH – 50 FEET

SHUTDOWN

CAUTION: BEFORE PERFORMING THE SHUTDOWN PROCEDURE AND PREPARING TO MOVE THE EXTINGUISHER TO THE RECHARGE LOCATION, DETERMINATION MUST BE MADE THAT THE FIRE IS COMPLETELY EXTINGUISHED AND THERE IS NO DANGER OF A FLASHBACK.

1. Tip the extinguisher to the horizontal position (resting on the carriage handle) and slowly rotate the cylinder discharge valve lever to the open position. Slowly push the hose (discharge) nozzle lever to the open position and be prepared for some chemical discharge.
2. When all pressure has been evacuated from the extinguisher, return the hose (discharge) nozzle lever and cylinder discharge valve lever to the closed position.

   NOTE: These steps will allow easy depressurization of the extinguisher and clear the hose assembly with a minimal loss of remaining chemical.

3. Return the extinguisher to the upright position. Coil the hose onto the storage rack and position the nozzle into the mount in preparation for transport to the recharge location.

RECHARGE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES
(Monthly or more often if circumstances dictate)

Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Pressure gauge reading or indicator in the operable range or position.
4. Operating instructions on nameplate and facing outward.
5. Safety seals and tamper indicators not broken or missing.
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Determine fullness by weighing.
8. Check condition of wheels (rotate freely), carriage, hose & nozzle.

MAINTENANCE

At least once a year or more frequently if circumstances require, maintenance should be performed in accordance with NFPA10. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE – PROCEDURE

NOTE: THIS PROCEDURE WILL BE BEST ACCOMPLISHED WITH THE EXTINGUISHER IN AN UPRIGHT POSITION AND ON A LEVEL SURFACE.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test to factory test pressure using the proof pressure method, in accordance with instructions in C-6 and NFPA Standard 10. See proper method of depressurizing and reclaiming chemical in Recharge procedures.

NOTE: WHEN CLEANING, AVOID USE OF SOLVENTS AROUND THE PRESSURE GAUGE. THEY COULD SERIOUSLY DAMAGE THE PLASTIC GAUGE FACE.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Weigh the extinguisher and compare with weight printed in the "Maintenance" section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.

4. Check the date of manufacture on the extinguisher dome. Cylinder must be hydrostatically (proof pressure) tested every 12 years (first time), every 7 years thereafter, to the test pressure indicated on the nameplate (500psi 3448 kPa). Cylinder may be hydrostatically tested every 12 years using the water jacket method.

5. Visually inspect the pressure gauge:

    a. If bent, damaged or improper gauge, depressurize and replace.
    b. If pressure is low, check for leaks.
    c. If over-pressurized (overcharged) depressurize the extinguisher and follow recharge instructions.

6. Check ring pin for freedom of movement. Replace if bent, or if removal appears difficult.

7. Visually inspect, without removing, the agent fill plug for damage or distortion. Replace as necessary only after proper depressurization procedures have been performed (see complete Maintenance – Six Year Teardown instructions). Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.

8. After making sure that there is no residual pressure in the discharge hose, disconnect it from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration – replace as necessary.

9. Inspect the valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures. If valve removal is necessary, complete all steps in the Complete Maintenance Procedure.

10. Reconnect the hose to the agent cylinder. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount.

NOTE: WHEN ASSEMBLING THE HOSE TO THE AGENT CYLINDER OR NOZZLE TO THE HOSE, TIGHTEN THE COUPLING ¼ TURN AFTER CONTACTING THE HOSE GASKET.

11. Inspect the wheels to insure they rotate freely. Lubricate as required. On stationary models, check mountings to insure that they are securely fastened.

12. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.

13. Install new lockwire (tamper) seal and record service data on the extinguisher inspection tag.

14. If the extinguisher has been moved to perform service, make sure that it is returned to its proper location.

COMPLETE MAINTENANCE – SIX YEAR TEARDOWN

Every six years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

NOTE: Some states have legislation which requires "Complete Maintenance" on an annual basis. Please contact your local Amerex Distributor to see if these requirements apply to you. NFPA 10 recommendation requires that a "verification of service" external collar tag be installed on the extinguisher whenever a Six Year Maintenance is performed. The "verification of service" tag can only be installed if the operating valve has been removed.

1. Discharge chemical and pressure into a "closed" dry chemical recovery system (several are commercially available). **Make sure that the extinguisher is completely empty and depressurized**.

CAUTION: **Some of these extinguishers operate at 350 psi. Some recovery systems may require that the pressure be reduced to safely discharge the chemical and pressure into the system. Use the pressure bleeder valve on the extinguisher valve to reduce the pressure to a point registering just below the green operable area on the pressure gauge. Discharge extinguisher into recovery system. Re-pressurize the extinguisher (to no more than 200 psi) to exhaust any chemical remaining in the extinguisher.**

NOTE: **A "closed recovery system is designed to prevent loss of the chemical "fines" Loss of the "fines" could result in reduced extinguisher efficiency.**

2. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure marked on the nameplate (label) in accordance with CGA C-1 and NFPA 10 and DOT regulations.

   NOTE: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

3. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
4. Check the date of manufacture on the extinguisher dome. Cylinder must be hydrostatically (proof pressure) tested every 12 years (first time), every 7 years thereafter, to the test pressure indicated on the nameplate (500 psi 3448 kPa). Cylinder may be hydrostatically tested every 12 years using the water jacket method.
5. Visually inspect the pressure gauge – if bent, damaged or improper gauge replace with the proper Amerex pressure gauge (see Parts List).
6. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.
7. **Verify that no pressure remains in the extinguisher**. (Operating valve and nozzle shutoff in open position and there is no discharge). Remove and inspect the agent fill cap for damage or distortion.

8. Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.
9. Disconnect the discharge hose from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration – replace as necessary. The discharge hose should be hydrostatically tested to 300 psi (2068 kPa) every twelve years.
10. Inspect the wheels to insure they rotate freely. Lubricate as required.
11. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.
12. **WARNING: Valve removal and/or valve part replacement should be made only after completing the depressurizing procedures listed in Step 1 of the Complete Maintenance section.**

    Remove operating valve assembly. Inspect for corrosion or damage to hose thread connection.
13. Complete steps 2 through 15 of Recharge Procedure.

RECHARGE

WARNING:

a. Before attempting to disassemble, be sure the extinguisher is completely depressurized.

b. Never have any part of your body over the extinguisher while removing the valve assembly.

c. Use a protective shield between you and the pressure gauge while charging an extinguisher. Do not stand in front of the gauge if a shield is not available.

d. Use a <u>regulated</u> pressurizing source of dry nitrogen only with a minimum dew point of minus 70ºF (minus 57ºC). Set the regulator to no more than 375 psi (2585) kPa or 265 psi (1827) kPa for model 690.

e. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.

f. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.

g. Do not mix types of dry chemicals in extinguishers, recharge or recovery systems. Mixing ABC (acidic base) with Regular, Purple-K, Super-K or Monnex (alkaline base) dry chemicals may result in a chemical reaction capable of developing a dangerous pressure buildup.

RECHARGING PROCEDURE

Recharging is the replacement of the extinguishing agent and also includes the expellant this type of extinguisher.

1. Perform steps 1 through 12 of the "Complete Maintenance (Six Year Teardown)" section.
2. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with air or nitrogen. Inspect spring and downtube assembly, and replace parts if worn or damaged. Install a new valve stem and new collar o-ring after lightly lubricating with Bluestar V-711 (do not lubricate the valve stem seal).

3. Reassemble the valve assembly, including downtube and set aside.

4. Remove any chemical remaining in the cylinder and check the condition. Properly dispose of any chemical that is contaminated or caked.

5. Inspect the cylinder interior following CGA Visual Inspection Standard C-6.

6. Using an accurate scale, stand the extinguisher upright and fill cylinder with the correct amount and type of dry chemical specified on the label (nameplate). Use Amerex chemical which has been kept free of moisture and contamination. See Warning (g) – **DO NOT MIX TYPES OF CHEMICALS**.

7. Clean cylinder collar o-ring seat and collar threads with a small brush and then wipe off surfaces with a clean cloth to remove dust. Lightly brush the collar o-ring seat with Bluestar V-711.

8. Install "verification of service" external collar tag. Install discharge valve assembly and attach pressurizing adapter (P/N 06160) to discharge port.

9. With the extinguisher properly secured in an upright position, connect your nitrogen pressurizing line with a quick connect to the nitrogen charging adapter. Rotate the extinguisher operating valve lever to the open position and pressurize extinguisher with dry nitrogen to 350 psi (or 240 for model 690). When the desired pressure has been reached, rotate the operating lever to the closed position. Shut off nitrogen supply and remove the quick connect.

CAUTION: Pressurizing the extinguisher in this manner will allow for proper aeration of the chemical through the downtube. Do not use the "bleeder" valve to pressurize the extinguisher.

10. Check extinguisher for leaks by applying detecting fluid or a solution of soapy water to the nitrogen charging adapter orifice, around the collar o-ring sealing area, cylinder welds and gauge. Remove the pressurizing adapter.

11. Reconnect the hose to the operating valve. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount.

    NOTE: When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ¼ turn after contacting the hose gasket.

12. Install ring (safety) pin and lock wire (tamper) seal. Record recharge date and attach new recharge tag.

13. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the Maintenance section of the nameplate (label).

14. Return extinguisher to its proper location. Mountings for stationary extinguishers should be properly secured.

TROUBLESHOOTING GUIDE

WARNING: Before attempting to correct any leakage problem, be sure that the agent cylinder and hose are completely depressurized. Check to determine the source of a leak before the extinguisher is depressurized. Leakage repairs will require depressurization and removal of the valve assembly. Depressurize by discharging into a Closed Recovery System or inverting the extinguisher. After depressurizing the extinguisher and correcting the problem, it will be necessary to clean all valve parts thoroughly.

	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, remove and discard o-ring, clean collar and lube lightly with Bluestar V-711. Clean o-ring groove on valve and install new collar o-ring. Lubricate with BluesatrV-711.
2.	Leak at Agent fill cap	Remove cap, clean threads thoroughly and install new o-ring. Lubricate with Bluestar V-711.
3.	Leak through valve	Check valve stem seating area for scratches or foreign matter. Clean seating area with a tooth brush and soft cloth. Install new valve stem assembly.
4.	Pressure leak at safety disc assembly	Inspect safety outlet for tightness or damage. If loose, remove and reinstall using Teflon tape on the threads. If damaged, replace with a new safety disc assembly Amerex P/N 08573 using Teflon Tape on the threads. NOTE: Only tighten the large hex nut assembly. The small hex nut containing the exhaust holes is factory present to specific torque values.
5.	Leak at "bleeder" valve	Remove and reinstall valve using Teflon tape on threads. Note: "Bleeder" valve cap must be installed to prevent leakage.
6.	Leak around gauge threads	Remove gauge[1], clean threads and reinstall using Teflon tape on the gauge threads.
7.	Defective gauge	Remove defective gauge[1] and install the proper Amerex pressure gauge (P/N 08714 350psi) using Teflon tape on the gauge threads. Install p/n 05617 for model 690.
8.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and remove from service or return to owner.
	[1] Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F) for two to four minutes. Remove gauge with a thin 7/16" open end wrench.	

Guide to Proper Installation of Hose on Wheeled or Stationary Dry Chemical Fire Extinguishers

1

Connect hose coupling to outlet on the extinguisher. Lay hose straight on ground to its full 25 ft. length. Start first regular loop counter-clockwise by placing between side brackets and over top bracket.

2

The second loop is a REVERSE loop. Notice that the hose passes behind the loop on this reverse loop. **If instructions are followed, the hose will uncoil without kinks.**

3

The next loop is a regular “hose in front” loop. Succeeding loops are alternated: reverse, front, reverse, etc. for six full loops.

4

Adjust the loops so that the nozzle fits into the nozzle mount. Loops should be approximately the same size.

PARTS LIST
for
125/250 lb. Dry Chemical Stored Pressure Wheeled/Stationary High Performance Extinguisher Models

573 - 250lb. ABC
574 - 250lb. REG
575 - 250lb. PK
596 - 250lb. ABC STA.
597 - 250lb. REG STA.
598 - 250lb. PK STA.
690 - 125lb. PK

ITEM NO.	PART NO.	DESCRIPTION
1	08715	Valve Assembly Complete with Downtube
	05197	Valve Assembly Complete with Downtube - 690
2	09856	Downtube/Retainer Assembly
	04938	Downtube/Retainer Assembly - 690
3	09300	Cap, Agent Cylinder
3A	08392	Gasket, Fill Cap
4	12176	Carriage Ass'y (Galvanized) w/o Wheels
	16786	Carriage Ass'y (Galvanized) w/o Wheels - 690
5	07481	Pictogram - 573, 596
	07483	Pictogram - 575, 574, 597, 598, 690
6	09553	Hose Support Ass'y w/ Mounting Hardware
	10430	Hose Support Ass'y w/ Mounting Hardware - 690
7	12180	Wheel Assembly 36" x 6" (Red) Galvanized
	15791	Wheel Assembly 36" x 6" (Red) Glavanized with Rubber Tread
8	07389	Hub Cap with Washer and Cotter Pin
9	06059	Valve Lever with Screws
10	16723	Gauge Guard Assembly
11	08714	Gauge - 350 PSI
	05225	Gauge - 240 PSI - 690
12	06100	Ring Pin, Stainless Steel with Wire
13	07309	Pressure Valve
	03559	Pressure Valve - 690
14	07310	Cap for Pressure Valve
	00158	Cap for Pressure Valve - 690
15	01387	Lock Wire Seal (Yellow)
16	06060	Cam Assembly with O-Rings
17	08573	Safety Disc Assembly (except 690)
	03787	Safety Disc Assembly (optional on 690)
	13956	Protective Vinyl Cap
	14218	Pipe Plug - 690
18	03678	Valve Body
19	05239	Collar O-Ring
20	05067	Valve Stem Assembly
21	03556	Spring
22	03877	Gasket, Hose / Nozzle
23	06279	Ball Valve Assembly
24	09399	Nozzle Tip - 573, 574, 596, 597 (.625)
	08260	Nozzle Tip - 575, 598, 690 (.531)
25	06814	Hose Assembly - 50 ft.
26	09543	Nozzle Assembly (Ball Valve & Tip) - 573, 574, 596, 597
	07385	Nozzle Assembly (Ball Valve & Tip) - 575, 598, 690
27	09711	Pistol Grip
NOTE:		Replacement Valve Assemblies include Valve Body, Gauge, Gauge Guard, Safety Disc Assembly, Cam, Pressure Valve & Cap, Lever, Valve Stem Assembly, Spring and Downtube/Retainer Assembly (as required).

OWNERS SERVICE MANUAL
NO. 05618
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS
for

AMEREX
CARBON DIOXIDE

MODEL 333 50 POUND WHEELED
MODEL 334 100 POUND WHEELED
MODEL 335 100 POUND STATIONARY

* * * RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE * * *

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – use of substitute parts releases Amerex of its warranty obligations. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that are incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P. O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

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LIMITED WARRANTY

Amerex warrants its fire extinguishers to be free from defects in material and workmanship for a period of six (6) years from the date of purchase. During the warranty period, any such defects will be repaired or the defective extinguisher replaced **if the original grey lockwire seal is intact and/or if only factory replacement parts and recommended service equipment have been used to service the extinguisher**. This warranty does not cover defects resulting from the modification, alteration, misuse, exposure to unusually corrosive conditions nor improper installation or maintenance. All implied warranties, including but not limited to, warranties of fitness for purpose and merchantability, are limited to the time periods as stated above. In no event shall Amerex Corporation be liable for incidental or consequential damages. Some states do allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may no apply to you. Amerex Corporation neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than as expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corporation, P. O. Box 81, Trussville, AL 35173-0081 for instructions.

THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

PREPARING YOUR NEW EXTINGUISHER FOR USE

1. Remove all wrappings, straps and pallet retaining bolts.
2. Examine the extinguisher for shipping damage.
3. Remove shipping cap(s) from CO2 cylinder(s). Install discharge hose (50 lb.) or manifold (100 lb.) to cylinder valve(s). check to insure that the hose connection to the operating valve/or manifold and hose to the squeeze grip shut-off valve are tight.
4. Check to insure that the cylinder valve(s) are in the CLOSED position. The ring (locking) pin should be installed and the lockwire seal intact.
5. Visually inspect the safety relief on the cylinder valve for evidence of obstruction or damage. DO NOT REMOVE.
6. This extinguisher is shipped from the factory fully charged. The most accurate method to determine if the extinguisher is filled with the proper amount of Caron Dioxide is to weigh the unit. The gross weight is indicated on the lower right hand corner of the pictogram operation INSTRUCTIONS (plus weight of cylinders stamped on cylinder valve{s}),
7. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 20 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is –40°F to 120°F (-40°C to 49°C). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants that may interfere with its proper operation. DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER. (Testing or any use may cause the extinguisher to gradually lose extinguishing agent over a period of time and make the extinguisher ineffective.)

OPERATION

WARNING: HIGH CONCENTRATIONS OF CARBON DIOXIDE CAN CAUSE RESPIRATORY PROBLEMS. SELF CONTAINED BREATHING APPARATUS OR AIR LINE RESPIRATORS SHOULD BE USED IF OXYGEN LEVEL HAS BEEN DIMINISHED BELOW 19%. AVOID SKIN CONTACT – CO2 IS VERY COLD AND COULD CAUSE BURNS OR FROSTBITE.

CAUTION: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. "Hands on" training will prepare personnel with the feel for this extinguisher so that the most effective application can be utilized in an emergency situation. The basic operating instructions are contained in the pictogram portion of every extinguisher nameplate (label). The following elaborates on these instructions.

1. Move the extinguisher (wheeled unit) to within approximately 10 feet (50 lb.), 30 feet (100 lb.) of the fire site.
2. Twist and pull ring pin(s). Pull "T" handle cylinder valve lever(s) to open cylinder valve. Pull hose from rack. Start back 10 feet from the fire.
3. Grasp horn squeeze grip shut-off valve and aim horn at base of fire nearest you.
4. Squeeze horn shut-off valve lever. Sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning material.
5. When the fire is out, release the horn shut-off valve lever to stop discharge. Stand by and watch for possible re-ignition.
6. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

	50 LB.	**100 LB.**
Discharge Time (approx.)	**44 seconds ±5 sec.**	**74 seconds ±8 sec.**
Hose Length	**15 feet**	**40 feet**

BEFORE PREPARING TO MOVE THE EXTINGUISHER TO THE RECHARGE LOCATION DETERMINATION MUST BE MADE THAT THE FIRE IS COMPLETELY EXTINGUISHED AND THERE IS NO DANGER OF A FLASHBACK.

HAVE EXTINGUISHER RECHARGED IMMEDIATELY AFTER ANY USE

SHUTDOWN

1. Push cylinder valve "T" handle(s) to the closed position and install ring (locking) pin. Squeeze nozzle shut-off valve to release any carbon dioxide remaining in the hose.
2. When all pressure has been evacuated from the hose, remove hose (50 lb.) or manifold (100 lb.) from cylinder valve(s). Install shipping cap(s) to protect valve assembly. Coil the extinguisher hose onto the storage rack and position the nozzle onto the mount in preparation for transport to the recharge location.

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AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

INSPECTING THE EXTINGUISHER

INSPECTION [NFPA-10] is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES
(monthly or more often if circumstances dictate)

[NFPA-10] A “quick check” should be made of the extinguisher for the following:

1. Located in designated place
2. No obstruction to access or visibility
3. Operating instructions on nameplate legible and facing outward
4. Seals and tamper indicators not broken or missing
5. Determine fullness by weighing
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle or horn
7. obstruction
8. Condition of tires, carriage and hose

MAINTENANCE

Maintenance [NFPA 10] At least once a year (or more frequently if indicated by an inspection) Maintenance should be performed. Maintenance is a thorough examination of the fire extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE PROCEDURE

NOTE: This procedure will be best accomplished with the extinguisher in an upright position on a level surface.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate and UL manifest are securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure, using the proof pressure method in accordance with CGA C-6 and NFPA 10. Properly dispose of cylinder if in violation of the standard.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Check the date of manufacture on the extinguisher cylinder dome. Cylinder must be hydrostatically tested every 5 years to the test pressure indicated on the nameplate (3000 psi [20.69 MPa]).

   Note: Complete maintenance should be performed whenever a hydrostatic test is being done. This includes an inspection of the interior of the valve assembly, the spring and valve stem assembly, as well as the interior of the cylinder.

4. Remove ring (locking) pin and check for freedom of movement. Replace if bent or if removal appears difficult.

5. Check the horn shutoff lever for freedom of movement (squeeze and release several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the horn is clear and unobstructed.

   WARNING: SQUEEZE HORN SHUT-OFF LEVER SLOWLY. CARBON DIOXIDE MAY HAVE BEEN LEFT IN THE HOSE FROM A PREVIOUS DISCHARGE. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL.

6. Remove the hose and horn and inspect for damage. Replace the hose if cut or cracked, or if threaded couplings are damaged. Replace the horn if brittle, cracked or deformed. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material.

   CAUTION: Carbon dioxide hose assemblies have a continuous metal braid that connects to both couplings to minimize static shock. A hose continuity test should be performed using a basic conductivity

tester consisting of a flashlight having an open circuit and a set of two wires with a conductor (clamps or probe) at each end. (NFPA-10 Appendix A).

NOTE: Carbon dioxide hose assemblies require hydrostatic testing every 5 years to the same test pressure as the cylinder (3000 psi [20.69 MPa]).

7. Inspect cylinder valve assembly for corrosion or damage to hose thread connection. Visually inspect the safety disc assembly for obstruction or damage. Valve removal and/or valve part replacement should be made only after completely discharging the contents of the cylinder.

8. Inspect the wheels to insure they rotate freely. Lubricate as required.

9. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.

10. Reinstall horn to shut-off valve and valve to hose. Reconnect the hose to the agent cylinder. Properly coil the hose on the rack and horn in the clips.

11. Weigh extinguisher and compare with weight printed on the Pictogram operating instruction on the label (plus the weight of the cylinder(s) stamped on the cylinder valve(s). recharge extinguisher if weight is not within indicated allowable tolerances (more than 5 lbs. per cylinder).

12. Install new tamper seal and record service data on the extinguisher inspection tag.

13. If the extinguisher has been moved to perform service, make sure that it is returned to its proper location.

RECHARGE

RECHARGING [NFPA-10] is the replacement of the extinguishing agent .

RECHARGING PROCEDURE

WARNING: Before attempting to recharge be sure the extinguisher is completely empty and depressurized. Use only an approved source of carbon dioxide (see minimum specifications in NFPA-10 Chapter 4 Inspection, Maintenance and Recharging). Do not use dry ice converters. Use an approved pump, hose and recharge adapter to insure safe and efficient recharge operations.

1. Perform steps 1 thru 10 of the Maintenance procedure.
2. Discharge all remaining carbon dioxide from the extinguisher.

   NOTE: The Model 334 & 335 (100 lb.) extinguishers have two 50 lb. cylinders manifolded to a common discharge hose. The manifold must be removed before attempting to recharge the cylinders.
3. Place 50 lb. cylinder on an accurate scale (the full weight – cylinder, valve and CO2 is stamped on the valve). Install recharge adapter. Connect carbon dioxide supply line to the recharge adapter.
4. Move “T” handle on the cylinder valve to the open position and pump 50 lbs. (22.7 KG) of clean, dry carbon dioxide into the cylinder.
5. When the proper weight is reached, move the “T” handle on the cylinder valve to the closed position. Shut off CO2 pump and vent supply line.
6. Remove the CO2 supply line and recharge adapter from the cylinder valve. .
7. Check for leaks using leak detection fluid or a solution of soapy water. If any leaks occur, refer to the Troubleshooting Guide.
8. Install ring (locking) pin and lockwire seal on cylinder valve(s). Attach new recharge tag.
9. Install cylinder(s) to the carriage and properly secure.
10. Attach the hose and horn assembly to the cylinder valve. Install hose and horn assembly on carriage.

CAUTION: The Models 334 and 335 extinguishers have two 50 lb. cylinders manifolded to a common discharge hose. Properly align the cylinders, then attach manifold hoses with manifold and discharge hose and horn assembly to the cylinder valves.

11. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated on the pictogram operating instructions (plus weight of cylinder[s] stamped on cylinder valve[s]).

TROUBLE SHOOTING GUIDE

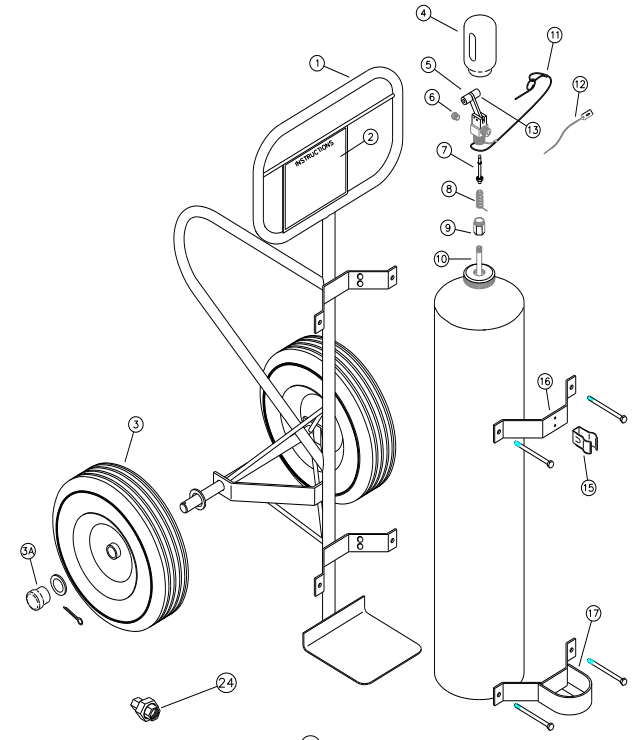
WARNING: BEFORE ATTEMPTING TO CORRECT ANY LEAKAGE PROBLEM, BE SURE THAT THE CYLINDER AND HOSE ARE COMPLETELY EMPTY AND DEPRESSURIZED.

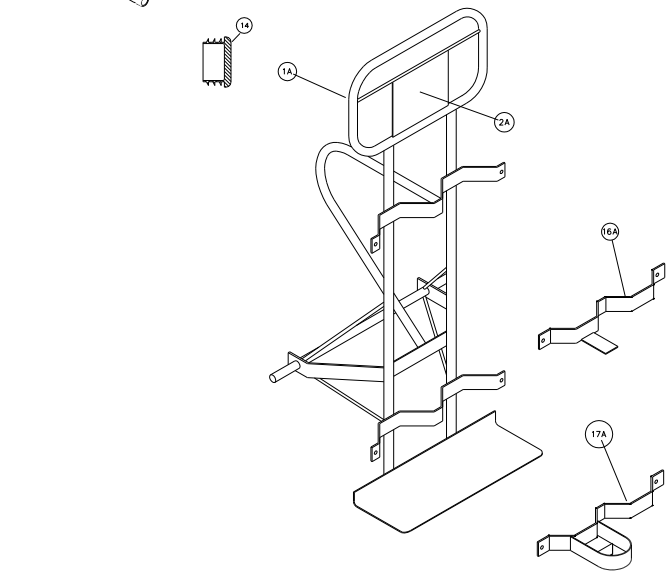
NOTE: Check to determine the source of a leak before the extinguisher is emptied. Leakage repairs will require that the Carbon Dioxide cylinder be completely empty and the valve assembly removed. When reinstalling the cylinder valve assembly, the cylinder must be placed in a suitable securing vice and valve installed to 150 ft. lbs. of torque.

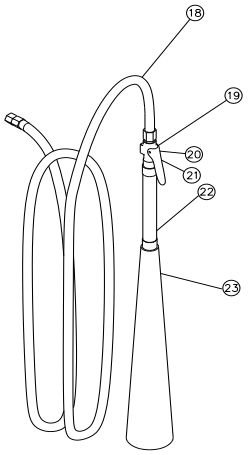
	PROBLEM	CORRECTIVE ACTION
1.	Leak at valve to cylinder connection	Remove valve assembly, install new Teflon sealing tape, reinstall valve to a maximum of 150 ft. lbs. torque.
2.	Leak through valve	Remove valve assembly, downtube, spring and valve stem assembly. Install new valve stem assembly. Check valve seat for scratches or foreign matter.
3.	Leak at safety relief nut	Remove safety nut, disc and gasket assembly. Replace with new Amerex P/N 04000 safety nut, disc and gasket assembly. Tighten assembly to 250 in. lbs. of torque.
4.	Leak at base of "T" handle on valve.	Remove valve assembly, downtube, spring and valve cylinder stem assembly. Install new valve stem assembly. Check valve seat for scratches or foreign matter.
5.	Leak at any hose connections	Tighten hose connections and check for hose coupling damage. Replace hose assembly as necessary.
6.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and return to owner.
	NOTE: When valve removal is performed at hydrotest, the cylinder neck threads must be examined per CGA C-6. "Cylinders shall be rejected if the required number of effective threads is materially reduced so that a gas tight seal cannot be obtained by reasonable valving methods. Common defects are worn or corroded crests and broken or nicked threads."	

Item No.	Part No.	Description	Std. Pkg.
1 1A 1B	09891 09903 17209	Carriage Asy w/o wheels – 333 Carriage Asy w/o wheels – 334 Frame Asy - 335	 1
2 2A 2B	09618 09787 17304	Pictogram – 333 Pictogram – 334 Pictogram – 335	1 1 1
3	10234 07751	Wheel Asy – 16" w/hubcap, washers & retaining pin-full pneumatic " -semi pneumatic	1 1
3A	04945	Hub Cap	1
4	12470	Cap – Valve Protector	1
5	06373	Valve Lever ("T" handle w/roll pin & knobs)	1
6	04000	Safety Disc, Gasket & Nut Asy	6
7	09897	Valve Stem Asy	6
8	00501	Spring	6
9	09627	Retainer	1
10	09623	Downtube	1
11	06100	Ring Pin, Stainless Steel w/Wire	12
12	01387	Lockwire Seal (Yellow)	500
13	09895	Valve Asy Complete w/downtube	1
14	17301	Plastic Plug	2
15	09892	Horn Clip w/Mounting Hardware	1
16 16A	09893 09904	Cyl Restraining (Saddle) straps w/ Mounting Hardware – 333 " -334 & 335	1 1
17 17A	09380 09396	Horn Holder – 333 " - 334 &335	1
18	09365 09545	Hose Asy – 333 – 15 ft. Hose Asy – 334 & 335 – 40 ft.	1
19	09366	Shut-off Valve Asy	1
20	09899	Vlv Stem Asy for Shut-off Valve	6
21	09901	Spring for Shut-off Valve	6
22	09896	Handle w/Rubber Cover	1
23	09369	Horn & Nozzle	1
24	08169	Union (Manifold) – 334 & 335	1
25	09905	Manifold (w/Union) – 334 & 335	1

PARTS LIST
for
50 and 100 lb. Carbon Dioxide Extinguishers
Model 333 - 50 lb.
Model 334 – 100 lb. (Two 50 lb. Cylinders)
Model 335 – 100 lb. Stationary







OWNERS SERVICE MANUAL
NO. 05619
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS
for
AMEREX MODEL 571/B571
30 POUND CLASS D
STORED PRESSURE FIRE EXTINGUISHER

COPPER DRY POWDER FOR
LITHIUM AND LITHIUM ALLOY COMBUSTIBLE METAL FIRES

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to insure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – use of substitute parts releases Amerex of its warranty obligations. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that are incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P. O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

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INTRODUCTION

The Amerex Model 571/B571 30 lb. Stored Pressure Class D fire extinguisher contains a specially formulated copper powder developed by and for the U. S. Navy specifically for combating LITHIUM and LITHIUM ALLOY fires. The heavy duty cylinder, valve assembly and hose/extension wand have been designed with innovative and dependable fire fighting capabilities as well as long life and ease of service. The unique soft flow extension applicator allows a continuous, even distribution of the dry powder agent while the operator stands four to five feet from the burning material. Easy to read instruction labels provide a quick and convenient guide to proper use. To provide optimum extinguisher reliability, recharging should be performed by persons trained in fire extinguisher maintenance and servicing. This manual should be used as a guide for installing, servicing and operating these Amerex extinguishers. The best place to have your extinguishers serviced and recharged is your "Authorized Amerex Distributor" who has the professional experience and equipment to do it properly.

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WARNINGS

USE THIS EXTINGUISHER ONLY ON CLASS D BURNING METALS. (At the date of this printing, the Model 571/B571 has been laboratory tested and approved for molten LITHIUM fires only.)

CLASS D FIRES NORMALLY GENERATE EXTREMELY HIGH HEAT. AMEREX RECOMMENDS THE USE OF PROTECTIVE CLOTHING AND SELF CONTAINED BREATHING APPARATUS WHILE OPERATING THIS EXTINGUISHER.

TO AVOID REIGNITION AFTER A METAL FIRE HAS BEEN EXTINGUISHED, DO NOT MOVE THE REMAINS UNTIL THE METAL HAS COOLED.

NEVER USE WATER ON A COMBUSTIBLE METAL FIRE. CHEMICAL AND PRESSURIZING GAS MUST BE MOISTURE FREE.

THIS EXTINGUISHER SHOULD BE PRESSURZIED WITH DRY ARGON ONLY.

PREPARING YOUR NEW EXTINGUISHER FOR USE

THIS MANUAL IS PACKAGED WITH EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION THAT SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

1. Remove the model 571/B571 and discharge hose assembly from the shipping carton. Examine both for shipping damage.

2. Connect the wand assembly to the extinguisher hose male connector by retracting the locking sleeve on the wand female swivel coupling. Push the female coupling firmly onto the male swivel adapter and release the locking sleeve. Tug firmly on the wand to verify that the swivel coupling is completely engaged.

3. Arrange the discharge hose and extension applicator assembly in the retaining clips as shown in the installation diagrams on Page 8.

4. Install your extinguisher in an accessible location with the top of the handle no more than 3½ feet (6 m) above the floor, the base at least 4 inches (.1m) above the floor, and near a doorway. **DO NOT INSTALL THE EXTINGUISHER WHERE YOU WOULD HAVE TO WALK THROUGH A POTENTIAL FIRE LOCATION TO REACH IT!**

5. Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a fifty (50) feet from the hazard, leaving unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range is –40° to + 120°F (–40° to + 49°C). Adequately protect the extinguisher if temperatures outside this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants that may interfere with its proper operation. DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER – testing or any use may cause it to gradually lose pressure and become ineffective. Never throw any extinguisher in a fire as it could explode from heat/pressure buildup.

   NOTE: Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70°F (21°C) for several hours to obtain more accurate pressure gauge reading.

6. Record the date the extinguisher is placed into service on the inspection tag and attach it to the extinguisher.

IN CASE OF FIRE

1. **HAVE EVERYONE EVACUATE THE AREA IMMEDIATELY!**
2. **CALL THE FIRE DEPARTMENT EVEN IF THE FIRE APPEARS TO BE SMALL! THE FIRE DEPARTMENT NUMBER SHOULD BE POSTED AT EACH TELEPHONE.**
3. **USE YOUR EXTINGUISHER PROPERLY AND ONLY ON THE TYPE OF FIRES LISTED ON THE NAMEPLATE (LABEL)!**
4. **TRAINED PERSONNEL SHOULD FIGHT LARGE FIRES!**
5. **BE PREPARED TO LEAVE THE AREA IF THE FIRE CANNOT BE IMMEDIATELY CONTROLLED!**

OPERATION

CAUTION: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. "Hands on" training will prepare personnel with the feel for this stored pressure extinguisher so that the most effective application can be utilized in an emergency situation. The basic operating instructions are contained in the pictogram portion of every extinguisher nameplate (label). The following elaborates on these instructions.

1. Hold the extinguisher upright. Twist and pull the ring pin snapping the plastic seal.
2. Extend the bell shaped nozzle over the fire.
3. Keep the extinguisher upright. Squeeze the lever to discharge the extinguisher. Cover all burning metal with dry powder until the fire is extinguished.

   NOTE: If greater range is required, disconnect the wand assembly at the quick connect and use the hose to lob the chemical onto the fire. Be careful not to spread the fire surface when using this technique.
4. Reapply powder to visible hot spots.
5. To avoid reignition, allow metal to cool before cleanup.
6. Evacuate and ventilate the area immediately after use. The fumes and smoke from any fire may be hazardous and can be deadly.

Model 571/B571

Discharge time (approximate):	**24 seconds**
Effective range of the extinguisher:	**3-6 feet (with applicator)**
	8-10 feet (with nozzle)

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

INSPECTION

INSPECTION (NFPA 10) is a "quick check intended to give reasonable assurance that the extinguisher is fully charged and operable. This is done by seeing that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent operation.

PERIODIC INSPECTION PROCEDURES
(Monthly or more often if circumstances dictate)

(NFPA 10) A "quick check" should be made of the extinguisher for the following:

1. Located in designated place.
2. No obstructions to access or visibility.
3. Operating instructions on nameplate and facing outward.
4. Seals and tamper indicators not broken or missing.
5. Determine fullness by weighing or "hefting".
6. Examine for obvious physical damage, corrosion, leakage or clogged nozzle..
7. Pressure gauge reading in the operable area.

MAINTENANCE

MAINTENANCE (NFPA-10) At least once a year (or more frequently if indicated by any inspection), Maintenance is a "thorough check" of an extinguisher. It is intended to give maximum assurance that an extinguisher will operate effectively and safely. It includes a thorough examination and any unnecessary repair or replacement. It will normally reveal the need for hydrostatic testing.

MAINTENANCE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate and FM manifest are securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure (585 psi [4035 kPa]), using the proof pressure method, in accordance with CGA Pamphlet C-6 and NFPA Pamphlet 10. See proper method of depressurizing and reclaiming chemical in "**Recharge Procedures**". **NOTE**: When cleaning avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.
2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
3. Weigh extinguisher and compare with weight printed in the "**Maintenance"** section on the nameplate (label). Recharge the extinguisher if weight is not within indicated allowable tolerances. (See instructions in "**Recharge Procedure**").

4. Check the date of manufacture stamped on the bottom of the extinguisher for model B571 and on the wall hanger loop for model 571. Cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate (585 psi [4035 kPa]).

5. Visually inspect the pressure gauge:

   a. if bent, damaged or improper gauge, depressurize and replace
   b. if pressure is low, check for leaks
   c. if over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions

6. Remove and check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

7. Inspect the discharge lever for dirt or corrosion that might impair free movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged, replace with proper Amerex parts.

8. Remove the hose and extension applicator by detaching the female swivel adapter from the hose and hose from the discharge valve. Inspect the hose, female swivel and extension applicator for damage. Make sure that the rubber o-ring inside the female swivel coupling is in place and in good condition. Replace damaged parts as necessary. Blow air through the hose and extension applicator assembly to insure that the passage is clear of foreign material and powder residue. Inspect the diffuser in the extension applicator horn - it must be tight to allow proper discharge characteristics.

9. Visually inspect the inside of the valve body (through the hose connection orifice). Appearance of powder in the valve may indicate that the extinguisher has been partially discharged and should be recharged.

10. Inspect the valve body for signs of corrosion or damage to the hose thread connection. Replace valve assembly as necessary following the depressurizing and recharge procedures. If valve removal is required, complete all steps in the **"Recharge Procedure**".

11. Reconnect the extension applicator to the discharge hose male swivel coupling. Rotate the hose assembly several times to verify that the swivel operates freely (disconnect again and clean the inside of the female swivel with a small brush and compressed air if the rotation is impeded). Arrange the hose and extension applicator assembly according to the installation instructions on page 10.

12. Install new tamper seal and record service data on the extinguisher inspection tag.

13. Return to its proper location. Install on/in wall hanger bracket, vehicle bracket or dolly cart making sure it fits properly. Replace mounting bracket if necessary.

RECHARGE

Recharging (NFPA 10) is the replacement of the extinguishing agent and also includes the expellant for this type of extinguisher.

WARNING:

1. **Before attempting to recharge be sure the extinguisher is completely depressurized.**
2. **Never have any part of your body over the extinguisher while removing the valve assembly.**
3. **Use a protective shield between you and the pressure gauge while charging an extinguisher. Do not stand in front of the gauge if a shield is not available.**
4. **Use a regulated pressurizing source of ARGON ONLY. Set the regulator to not more than 220 psi (1520 kPa).**
5. **Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.**
6. **Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.**
7. **Do not mix types of chemicals in extinguishers, recharge or recovery systems. Mixing ABC, regular, Purple-K, Super-K or Monnex dry chemicals with a dry powder agent could cause a serious flare up or explosion if the dry chemical were to contact a combustible metal fire.**

RECHARGE PROCEDURE

1. Perform steps 1 through 4 of the **"Complete Maintenance (Six Year Teardown)"** section including those required in the **"Maintenance Procedure"**.

2. Thoroughly clean all parts with a soft bristle brush or soft cloth. Blow the valve and downtube out with air or argon. Inspect the collar o-ring, valve stem, spring and downtube assembly – replace parts if worn or damaged. Lubricate the collar o-ring and small o-ring on the valve stem with Visilox V-711. **DO NOT LUBRICATE THE VALVE STEM SEAL.**

3. Reassemble the valve assembly, including downtube and set aside.

4. Remove any dry powder remaining in the cylinder. Properly dispose of any dry powder that is contaminated or caked.

5. Inspect the cylinder interior following CGA Visual Inspection Standard, Pamphlet C-6.

6. Fill the cylinder with 30 pounds (13.6 kg) of Amerex Copper Powder, which has been kept free of moisture and contamination.

7. Clean cylinder o-ring seat and threads inside of cylinder collar with a small brush and wipe surfaces with a clean damp cloth to remove dust. Lightly brush the collar o-ring seat with Visilox V-711. Install the operating valve/downtube assembly hand tight.

8. Attach the charging adapter to the valve discharge port.

   WARNING: THIS EXTINGUISHER IS FACTORY PRESSURIZED USING ARGON. ARGON IS AN INERT GAS THAT WILL NOT ADVERSELY REACT WITH COMBUSTIBLE METALS. NITROGEN PRESSURIZING GAS COULD CAUSE A REACTION WHEN USED ON CERTAIN TYPES OF COMBUSTIBLE METAL FIRES. DRY AIR PRESSURIZATION SHOULD NEVER BE USED AS EVEN THE SLIGHTEST AMOUNT OF MOISTURE WILL CAUSE A VIOLENT REACTION WITH CLASS D METALS.

9. With the extinguisher properly secured in an upright position connect your Argon pressurizing line with a quick connect to the charging adapter. Set the Argon supply cylinder regulator to no more than 220 psi (1520 kPa). Depress the extinguisher operating valve lever and pressurize the extinguisher with Argon to 195 psi (1345 kPa). When the desired pressure has been reached, release the operating lever. Shut off Argon supply and remove the quick connect.

10. Remove the charging adapter. Check extinguisher for leaks by applying leak detecting fluid or a solution of soapy water to the valve discharge orifice, around the collar o-ring sealing area, cylinder welds and gauge. Remove leak detecting fluid from valve assembly by blowing out with air or Argon. Wipe exterior of extinguisher to remove any remaining residue.

11. Install the hose assembly to the operating valve. Reconnect the female swivel on the extension applicator to the male swivel on the hose. Rotate the hose assembly several times to verify that the swivel operates freely. Disconnect and clean the inside of the female swivel with a small brush and compressed air if rotation is impeded. Install hose and extension applicator according to instructions on page 10.

12. Install ring pin and tamper seal. Record recharge date and attach new recharge tag.

13. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the "**Maintenance**" section of the nameplate (label).

COMPLETE MAINTENANCE (SIX YEAR TEARDOWN)

COMPLETE MAINTENANCE (Six Year Teardown) [NFPA-10] Every six years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

> **Note**: some states require Complete Maintenance on an Annual Basis. Check with your Amerex servicing distributor to see if this applies to you. NFPA-10 requires that a "verification of service" external collar tag be installed on the extinguisher whenever "Six Year Maintenance" is performed. The "verification of service" tag can only be installed if the operating valve has been removed. A "Six Year Maintenance" service decal must also be attached to the extinguisher cylinder.

COMPLETE MAINTENANCE (SIX YEAR TEARDOWN) PROCEDURE

1. Discharge powder and pressure into a "closed" dry powder recovery system (several are commercially available). Make sure that the extinguisher is completely empty and depressurized.

   CAUTION: Do not contaminate by mixing with other types of dry powder or dry chemical.

2. Perform all required maintenance in Steps 1 through 8 of "**Maintenance Procedure**" (Annual).

3. **VERIFY THAT NO PRESSURE REMAINS IN THE EXTINGUISHER** (slowly squeeze discharge lever, aiming away from persons or objects which might be injured or damaged). Remove the valve assembly from the cylinder and inspect it for signs of corrosion or damage to the threads. Replace parts as necessary.

4. Disassemble valve assembly by removing the downtube, spring and valve stem assembly. Remove the collar o-ring from the valve assembly.

5. Complete steps 2 through 13 of Recharge Procedure.

TROUBLE SHOOTING GUIDE

WARNING: CHECK TO DETERMINE THE SOURCE OF A LEAK BEFORE THE EXTINGUISHER IS DEPRESSURIZED. LEAKAGE REPAIRS WILL REQUIRE DEPRESSURIZATION OF THE EXTINGUISHER AND REMOVAL OF THE VALVE ASSEMBLY. DEPRESSURIZE BY HOLDING THE EXTINGUISHER IN AN INVERTED POSITION AND SLOWLY SQUEEZING THE DISCHARGE LEVER. SOME POWDER REMAINING IN THE DOWNTUBE WILL BE EXPELLED SO CARE SHOULD BE TAKEN IN THE AREA BEING USED FOR DEPRESSURIZING. DO NOT DIRECT DISCHARGE TOWARD ANY PERSON OR OBJECT WHICH COULD BE INJURED OR DAMAGED. THOROUGHLY CLEAN ALL VALVE PARTS AFTER DEPRESSURIZATION AND VALVE REMOVAL.

PROBLEM	CORRECTIVE ACTION
1. Leak at operating valve collar o-ring.	Remove valve assembly, clean collar thoroughly and install new collar o-ring. Lubricate with Visilox V-711.
2. Leak through valve.	Install new valve stem assembly. Check valve seat for scratches or foreign matter. Install new valve stem assembly.
3. Leak around gauge threads.	Remove gauge***** and reinstall using Teflon tape on the gauge threads.
4. Defective gauge.	Remove defective gauge***** and install new P/N 03965 195 psi (1345 kPa) gauge using Teflon tape on the gauge threads.
5. Leak in the cylinder.	Contact Amerex if under warranty, otherwise – mark "Rejected" and remove from service or return to owner.

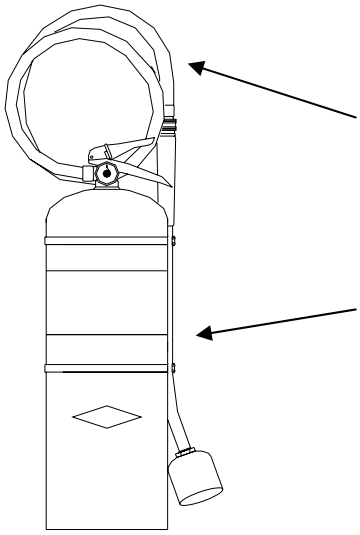
***** Pressure gauge threads are coated with a special epoxy at the factory. For easy removal soak the valve assembly in hot water (180°F [82°C]) for two to four minutes. Remove gauge with a 1/16" open end wrench.

SIX YEAR LIMITED WARRANTY

Amerex warrants its fire extinguishers to be free from defects in material and workmanship for a period of six (6) years from the date of purchase. During the warranty period, any such defects will be repaired or the defective extinguisher replaced if the original gray tamper seal is intact and/or if only factory replacement parts and recommended service equipment have been used to service the extinguisher. This warranty does not cover defects resulting from modification, alteration, misuse, exposure to unusually corrosive conditions nor improper installation or maintenance. All implied warranties, including but not limited to, warranties of fitness for purpose and merchantability, are limited to the time periods as stated above. In no event shall Amerex Corp. be liable for incidental or consequential damages, so the above limitations or exclusions may not apply to you. Amerex Corp. neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than as expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corporation, P. O. Box 81, Trussville, Alabama 35173-0081 for instructions.

MOUNTING INSTRUCTIONS
For
Hose and Extension Applicator
Model 571/B571

Extinguisher Installation

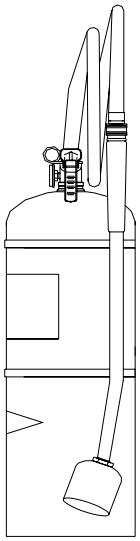


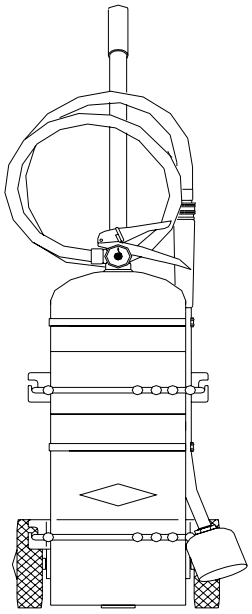
Step 1

Install the hose into the Valve Assembly. Loop the hose as shown.

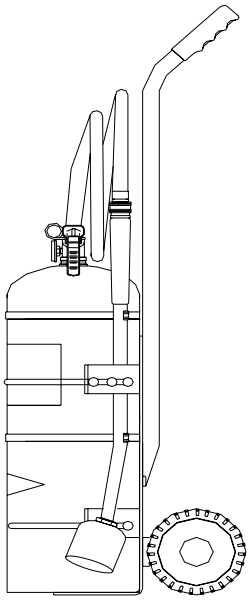
Step 2

After looping the hose, snap the Extension Applicator into both clips with the bottom of the rubber handle grip resting on the top clip.

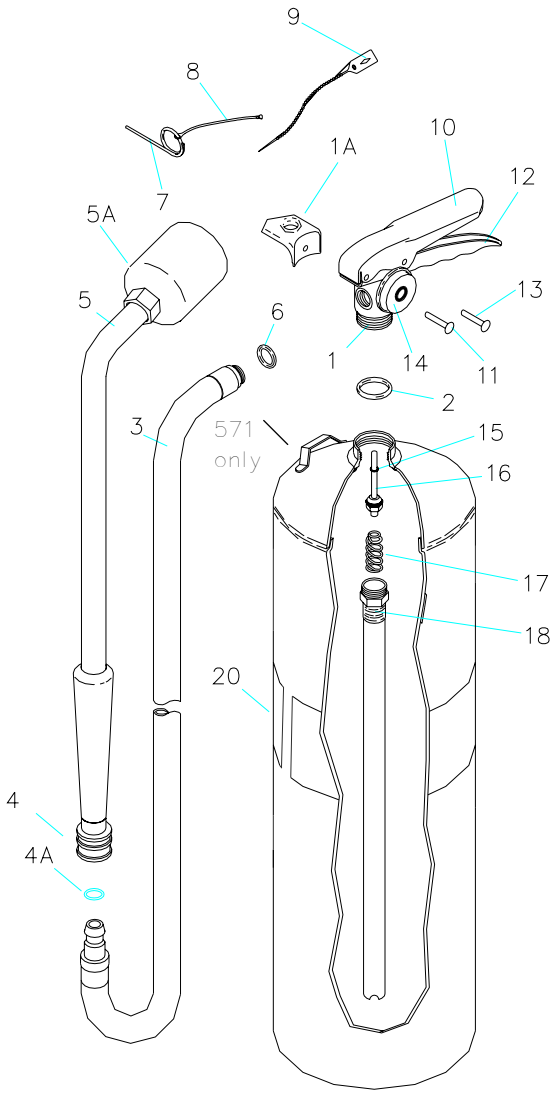


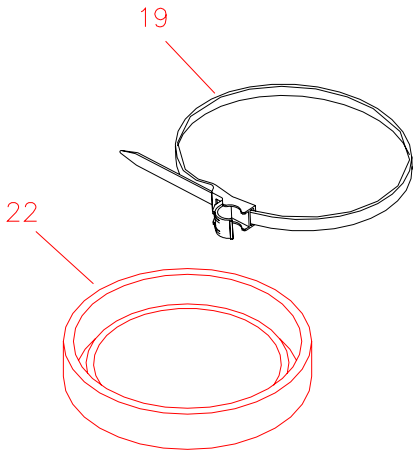


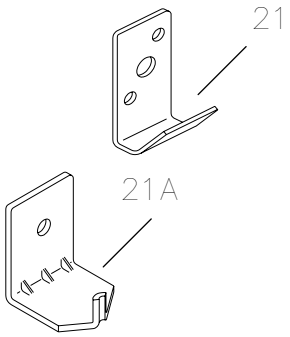
Place the extinguisher into the model 589 dolly and fasten the rubber "bungee" straps around the cylinder. Install the hose and extension applicator into both clips as instructed above (steps 1 & 2). DO NOT INSTALL THE RUBBER STRAPS OVER THE HOSE & APPLICATOR.

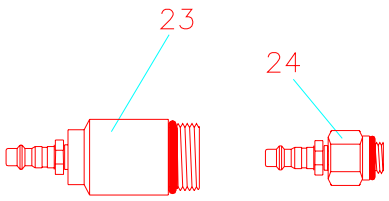


PARTS LIST
For
30 Lb. Class D (Lithium) Copper Powder Extinguisher with Hose & Extension Applicator (Brass Valve)
Model 571/B571









Item No.	Part No.	Description	Std. Pkg.
1 1A	11952 17144	Valve Assembly Hanger Loop & Screw B571	1
2	05240	Collar O-Ring Collar O-Ring (bulk bag)	24 100
3	10744	Hose Asy w/½ " Male Quick Connect	1
4 4A	10802 09073	½ " Female Quick Connect O-Ring for Quick Connect	1
5 5A	10800 14595	Extension Applicator Horn Blk Cl-D	1
6	06978	Hose Gasket (o-ring)	24
7	00160	Ring Pin – stainless steel	24
8	00532	Chain (nylon) for Ring Pin	24
9	01387	Lock Wire Seal (Yellow)	500
10	07762	Lever & Rivet	1
11	01563	Rivet only for lever	24
12	09020	Handle & Rivets	1
13	01564	Rivets only for Handle (2 required)	24
14	03965	Gauge – 195 psi	6
15	05243	Valve Stem O-Ring	24
16	06093	Valve Stem Assembly Valve Stem Assembly (bulk bag)	6 96
17	17139	Spring	6
18	17215 17214	D'tube/Retainer Asy (model 571) D'tube/Retainer Asy (model B571)	1
19	16904	Strap & Hose Clip Asy (black plastic) 3/8" (2 reqd. per extinguisher)	1
20	10853	Label (Fire Ratings)	1
21 21A	01007 00577	Wall Hanger Bracket 571 Wall Hanger Bracket B571	1
22	12383 12952	Protective Ring for Btm of Cyl – 571 Protective Ring for Btm of Cyl – B571	1
23	03038	Hydrotest Adapter	1
24	02141	Fill Adapter, Hansen Quick Connect Type 5/8" UNF Thread	1
NOTE:	All valve assemblies include new valve body, gauge, lever and handle		

OWNERS SERVICE MANUAL

NO. 05620

INSTALLATION, OPERATING AND SERVICING INSTRUCTIONS
for

MODEL 680 150 LB. CLASS D (Sodium Chloride)
&
MODEL 681 250 LB. CLASS D (Copper)

WHEELED FIRE EXTINGUISHERS
WITH DISCHARGE EXTENSION WAND

110 CU. FT. ARGON CYLINDER OPERATED
36 IN. RUBBER TREADED WHEELS

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled “Portable Fire Extinguishers”, NFPA-10; and the requirements of local authorities having jurisdiction

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corp. makes original factory parts available to insure proper maintenance – use of substitute parts releases Amerex of its warranty obligations. Amerex parts have machined surfaces and threads which are manufactured to exacting tolerances. All parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available which are incorrectly labeled as U/L component parts, some are advertised as Amerex type. None of these meet U/L requirements and all of them void the Amerex extinguisher warranty and U/L listing.. **DO NOT SUBSTITUTE**.

REFERENCES IN THIS MANUAL:		**AVAILABLE FROM:**
NFPA-10	**PORTABLE FIRE EXTINGUISHERS**	**National Fire Protection Assoc., Inc. Batterymarch Park Quincy, MA 02269**
CGA C-1	**METHODS FOR HYDROSTATIC TESTING OF COMPRESSED GAS CYLINDERS**	**Compressed Gas Association, Inc, 1235 Jefferson Davis Highway Suite 501 Arlington, VA 22202**
CGA C-6	**STANDARD FOR VISUAL INSPECTION OF COMPRESSED GAS CYLINDERS**	

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AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY. AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL

PREPARING YOUR NEW EXTINGUISHER FOR USE

WARNING: THIS FIRE EXTINGUISHER IS SHIPPED FROM THE FACTORY EMPTY. AFTER INITIAL PREPARATIONS, CAREFULLY FOLLOW THE RECHARGING INSTRUCTIONS BEFORE REPLACING IT INTO SERVICE.

1. Remove all wrappings, straps and pallet retaining bolts.

2. Examine the extinguisher for shipping damage. Check to make sure that you have received the Class D powder charge containers and Extension Wand which are packaged with the extinguisher.

3. Fill the extinguisher by carefully following the RECHARGE instructions.

4. Remove the ARGON cylinder protective shipping cap. **Save the cap as it must be installed whenever a charged ARGON cylinder is transported.**

5. Check the ARGON cylinder pressure. The gauge should read approximately 2015 psig (13.9 mPa) at 70°F (21°C) ambient temperature. See the “Troubleshooting Guide” for pressure-temperature allowances. The lead wire seal should be intact.

6. Connect the Argon supply hose firmly to the Argon cylinder valve. Make sure that there are no kinks in this hose.

7. Disconnect the discharge hose assembly from the agent cylinder. Make sure that the hose and nozzle (and Extension Wand) are unobstructed. Reconnect the discharge hose to the agent cylinder and with the shut-off valve in the closed (forward) position, properly coil the hose onto the storage rack. Place the shut-off nozzle (or Extension Wand if used) into the retaining clips [see hose coiling - last page].

8. Record the date the extinguisher is being placed into service on the inspection tag and attach it to the unit.

9. **Remove the CAUTION (NOT CHARGED) tag.**

INSTALLATION

WARNING: THE MODEL 680 CLASS D FIRE EXTINGUISHER HAS BEEN TESTED AND APPROVED FOR CLASS D FIRES INVOLVING MAGNESIUM, SODIUM, POTASSIUM OR POTASSIUM ALLOYS ONLY.
THE MODEL 681 CLASS D FIRE EXTINGUISHER HAS BEEN TESTED AND APPROVED FOR CLASS D FIRES INVOLVING LITHIUM ONLY.
DO NOT USE EITHER EXTINGUISHER ON CLASS A, B OR C FIRES.

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location at a 50 foot minimum distance from the hazard with an unobstructed access. Avoid placing it in an extremely hot or cold place. The temperature range for this extinguisher is –40° to 120°F (-40° to 49°C). Keep the extinguisher clean and free from dirt, ice, chemicals and other contaminants which may interfere with its proper operation.
DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER. Testing or any use may cause the extinguisher to gradually lose pressure and become ineffective.

OPERATION

CAUTION: PERSONS EXPECTED TO USE THIS EXTINGUISHER SHOULD BE TRAINED IN INITIATING ITS OPERATION AND IN THE PROPER FIRE FIGHTING TECHNIQUE. FAMILIARIZE ALL PERSONNEL WITH THIS INFORMATION BEFORE AN EMERGENCY OCCURS.

1. Move the extinguisher to within approximately 25 feet of the fire site. REMOVE RING (SAFETY) PIN.
Pull "T" handle to OPEN ARGON VALVE. This will pressurize the extinguisher.

2. Remove nozzle from the mount, and with the nozzle lever in the CLOSED position, PULL HOSE FROM RACK AND START BACK 15 FEET from the fire.
Note: <u>When using the wand applicator START BACK 6 FEET FROM FIRE</u>.

3. OPEN NOZZLE SHUT-OFF slowly by pulling handle fully towards you (hold the nozzle firmly and be prepared for a discharge recoil). COVER ALL BURNING METAL WITH POWDER.

4. REAPPLY AGENT TO HOT SPOTS until the fire is fully extinguished.

DISCHARGE TIME (APPROXIMATE)
Model 680 – 80 Seconds Model 681 – 120 Seconds
EFFECTIVE RANGE OF THE AGENT THROW
With Nozzle (both units) – 20 to 30 feet
With Applicator (both units) – 4 to 6 feet
HOSE LENGTH - 25 FEET

☞☞ *RECHARGE EXTINGUISHER IMMEDIATELY AFTER ANY USE* ☜☜

SHUTDOWN

1. After making sure that the fire has been completely extinguished, push the nozzle lever forward to the CLOSED position.

2. Close the Argon cylinder valve (push "T" handle to closed position).

3. Tip extinguisher over to rest on wheels and handle, then slowly open the nozzle lever again to clear the hose of chemical agent and pressure *(be prepared for recoil and discharge of agent).*
WARNING: MAKE SURE THAT ALL PRESSURE HAS ESCAPED BEFORE FURTHER DISASSEMBLY.

4. Stand the extinguisher upright after complete depressurization.
Note: Argon pressure in the agent cylinder cannot escape through a disconnected pressurizing hose due to a check valve in the system. ***Always be careful when removing the fill cap.***

5. Coil the extinguisher hose onto the storage rack and position the nozzle (and/or Extension Wand) onto the mount in preparation for transport to the recharge location.
WARNING: THE SHIPPING CAP MUST BE INSTALLED ON THE ARGON CYLINDER PRIOR TO TRANSPORT TO THE RECHARGE LOCATION.

INSPECTING THE EXTINGUISHER

INSPECTION (NFPA-10 4.2.1) is a "quick check" that an extinguisher is available and will operate. It is intended to give reasonable assurance that the extinguisher is fully charged and operable. This is done by seeing that it is in its designed place, that it has not bee actuated or tampered with, and that there is no obvious physical damage or condition to prevent operation.

PERIODIC INSPECTION PROCEDURES

(Monthly or more often if circumstances dictate)

(NFPA-10 4-3.2) A "quick check" should be made of the extinguisher for the following:

1. Located in designated place.
2. No obstructions to access or visibility.
3. Operating instructions on nameplate and facing outward.
4. Seals and tamper indicators not broken or missing.
5. Determine fullness by weighing on a scale with adequate capacity.
6. Examine for obvious physical damage, corrosion, leakage or clogged nozzle.
7. Pressure gauge (Argon cylinder) reading in the operable area.

MAINTENANCE

MAINTENANCE (NFPA-10 4-4.1 & 4-4.2) At least once a year (or more frequently if indicated by an inspection), MAINTENANCE should be performed. MAINTENANCE is a "thorough check" of the extinguisher. It is intended to give maximum assurance that an extinguisher will operate effectively and safely. It includes a thorough examination and any necessary repair or replacement. It will normally reveal the need for hydrostatic testing.

Note: NFPA-10 (4-3.2) spells out wheeled extinguisher maintenance procedures. Para. 4-4.1.3 requires that REGULATORS on wheeled extinguishers be checked annually to meet manufacturer's "dead set" and "minimum flow" recommendations.
The Getz Mfg. P/N: 52576 Wheeled Extinguisher Service Kit is available so that you can perform these required functions. Getz part numbers from the kit are referenced in this manual.

ANNUAL MAINTENANCE PROCEDURES

WARNING: BEFORE SERVICING BE SURE THE EXTINGUISHER AGENT CYLINDER IS NOT PRESSURIZED.

Note: This procedure will be best accomplished with the extinguisher in an upright position and on a level surface.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If damage is found, hydrostatically test in accordance with instructions in CGA Pamphlet C-1 and C-6 and NFPA Pamphlet 10.

2. Inspect the extinguisher for damaged, missing or substitute parts. A careful inspection should be made of the safety relief to make sure that it has not ruptured, corroded or been tampered with. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Check the date of manufacture on the extinguisher nameplate or on the agent cylinder dome. The agent cylinder assembly and discharge hose assembly must be hydrostatically tested every 12 years. Test pressure for the agent cylinder is 500 psi (3448 kPa). Test pressure for the hose assembly is 300 psi (0268 kPa).

4. Check the hydrostatic test date on the crown of the Argon cylinder. The Argon cylinder must be retested in accordance with D.O.T. regulations every 5 years.

5. Check the gauge on the Argon cylinder. If the pressure is below 1700 psig (11.7 mPa) repressurize the cylinder to 2015 psig (13.9 mPa) or replace it. A low pressure may indicate leakage. Check for leaks. A low gauge reading may also result from low temperature. See the temperature/pressure relationship chart in the "Troubleshooting Guide". Check the tamper indicator (lockwire seal) on the Argon valve and replace if necessary.
6. Inspect the wheels to insure they rotate freely. Lubricate as required.

WARNING: THE FOLLOWING STEPS SHOULD ONLY BE PERFORMED BY PROFESSIONALLY TRAINED AND QUALIFIED SERVICE PERSONNEL THOROUGHLY FAMILIAR WITH INDUSTRY SERVICE PROCEDURES AND SAFETY PRECAUTIONS AND HAVING THE NECESSARY EQUIPMENT TO PERFORM THE SERVICE PROPERLY.
ALL EXTINGUISHER AND SERVICE EQUIPMENT COMPONENTS, FITTINGS AND ADAPTERS MUST BE IN GOOD CONDITION AND PROPERLY CONNECTED.

7. Disconnect the regulator from the agent cylinder. Visually examine the regulator and high pressure hose for signs of damage, corrosion or deterioration. To perform the regulator static pressure, dead set and minimum pressure flow rate checks:
   a) Connect the proper service kit ADAPTER (P/N: 01740) to the low pressure outlet port of the regulator.
   b) Connect the service kit HOSE ASSEMBLY (P/N: 01410) and FLOW CHAMBER (P/N: 01250) to the regulator low pressure port adapter.

8. Make sure all service kit connections are secure and that the kit flow chamber is CLOSED. Check the ARGON cylinder pressure to ensure that it is within the acceptable operating range. Hold the kit flow chamber in one hand and slowly open the Argon cylinder (with either "T" handle operating lever or by turning the handwheel if so equipped). Observe flow chamber pressure reading to see if it is within the recommended static dead set pressure parameters for the Models 680 & 681 regulator listed below.

Regulator Type	Static Dead Set Pressure	Minimum Flow Pressure
Victor	120 ± 10 PSI	110 PSI minimum

   WARNING: IF THE PRESSURE READING EXCEEDS THE GIVEN PARAMETERS, QUICKLY CLOSE THE ARGON CYLINDER "T" HANDLE OR HANDWHEEL VALVE AND VENT THE PRESSURE BY OPENING THE FLOW CHAMBER BALL VALVE.
   REGULATORS CANNOT BE FIELD ADJUSTED. THEY MUST BE REPLACED IF FOUND TO BE OUT OF TOLERANCE.

9. Observe the proper regulator static dead set pressure for a minimum of one minute, then fully open the flow chamber valve for 1 - 2 seconds. Observe the pressure reading to ensure that the flow pressure does not drop below the minimum specified. Close the Argon cylinder valve after the test and vent the flow chamber pressure by opening the flow chamber valve.

   Note: Prior to performing the minimum flow check, make sure that the nitrogen cylinder valve ("T" handle or handwheel) is FULLY OPEN so that it does not restrict or alter the flow readings.

   WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. ANY PRESSURE IN THE AGENT CYLINDER WILL CAUSE THE EXTINGUISHER TO DISCHARGE. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL. ANY EVIDENCE OF AGENT IN THE NOZZLE INDICATES THAT THE UNIT MAY HAVE BEEN USED AND THE USE NOT REPORTED.

10. Disconnect the discharge hose from the agent cylinder. Check the couplings, hose and hose gaskets for damage or deterioration – replace as necessary.

11. ***To perform an operational integrity check on the discharge hose and nozzle combination:***
   a) Connect the test kit hose adapter to the female end of the discharge hose.
   b) Close the discharge nozzle shut-off lever **and properly secure it.**
   c) Connect a properly regulated and verified nitrogen pressure source (set to the extinguisher operating pressure [110 - 130 psi] to the test kit hose adapter.
   d) Slowly pressurize the discharge hose/nozzle assembly to the extinguisher operating pressure and check for leaks or distortion.
   e) Operate the nozzle lever to ensure proper operation and to clear the hose of any obstructions (if hose is obstructed - refer to the TROUBLE SHOOTING section of this manual.
   f) Close the nitrogen pressure source and relieve remaining pressure by slowly and fully opening the nozzle lever.

12. Remove the agent cylinder cap and examine it closely for signs of damage, cracks or thread wear. Clean the agent cylinder fill cap threads and thread vent port on the cap with a stiff bristle nylon brush. Remove the fill cap gasket and check for wear, cracks or tears - replace if necessary. Lightly lubricate the gasket with Visilox 711 and reinstall.

13. Examine the condition of the chemical agent for proper type and condition. Replace chemical that is contaminated, caked or different than the type indicated on the nameplate (label). Do not trust to the "height" of the chemical when determining agent fill. Dry powder will settle and the only true indication of agent fill is to weigh the extinguisher and compare with the weight indicated on the nameplate (label).

14. Place the service kit VENT SPACER (P/N: 01530) on top of the agent cylinder fill opening collar. Check again to see that the fill cap thread vent is clean and that the agent ill cap gasket is in place. Install the agent fill cap securely over the vent spacer.

CAUTION: STEP 15 - THE AGENT CYLINDER CAP THREADS MUST BE CLEAR AND THE CAP SECURELY INSTALLED ONTO THE VENT SPACER AND AGENT CYLINDER TO ALLOW PRESSURE TO SLOWLY VENT AFTER PERFORMING THE SIPHON TUBE CLEARING AND GAS TUBE INTEGRITY CHECKS.

15. ***To perform a siphon tube clearing and gas tube integrity check:***
    a) Remove the service kit AGENT HOSE ADAPTER (P/N: 01455) from the discharge hose assembly and install it securely onto the agent cylinder siphon tube outlet.
    b) Use a regulated Argon pressure source, set to the extinguisher operating pressure (110 PSI) and briefly pressurize the agent cylinder **(the siphon tube should clear within a couple of seconds and the agent cylinder pressure slowly vent from the fill cap thread vent).** Pressure and/or dry powder leaking from the gas inlet port, where the regulator was installed, will indicate a defective gas tube. This will require emptying the agent cylinder and replacing the gas tube.
    c) Close the Argon pressure source and allow all pressure to slowly vent from the thread vent port on the fill cap.
    d) **AFTER ALL PRESSURE HAS BEEN RELIEVED, *SLOWLY* OPEN THE FILL CAP AND -** *REMOVE THE TEST KIT VENT SPACER.*
    e) Re-examine the Class D dry powder agent to determine if any obstructions have been cleared from the siphon tube and have risen to the surface.
    f) Clean the fill cap and agent cylinder thread surfaces. Securely install the fill cap gasket and fill cap.

16. Disconnect the service kit quick connect adapter from the low pressure port of the regulator and reinstall the regulator securely to the agent cylinder.

17. Disconnect the high pressure hose from the Argon cylinder valve. Securely install the service kit ARGON/NITROGEN CYLINDER PRESSURE CHECK GAUGE ASSEMBLY (P/N: 01300) to the Argon cylinder valve outlet and verify the indicated cylinder gauge pressure. Argon pressure should conform to the temperature correction chart provided in the TROUBLE SHOOTING section of this manual. Close the Argon cylinder valve and disconnect the Pressure Check Gauge Assembly.

    WARNING: IF THE ARGON CYLINDER VALVE HAS A "T" HANDLE QUICK OPENING OR QUICK OPENING TRIP LEVER RELEASE, THE SAFETY VENT PLUG (P/N: 01560) MUST BE INSTALLED TO PROTECT SERVICE PERSONNEL FROM A HIGH VELOCITY DISCHARGE IN CASE THE LEVER IS ACCIDENTALLY OPENED.

18. Install a new Amerex P/N: 7411 Moisture Seal per instructions in the package. Securely connect the discharge hose to the extinguisher. *When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ¼ turn after contacting the hose gasket.*

19. Coil the hose onto the extinguisher hose rack using the reverse loop procedure (see instructions later in this manual). Install the shut-off nozzle (and/or Extension Wand) with the lever in the CLOSED (forward) position on the mount.

20. *Remove the safety vent plug from the Argon cylinder.* Re-connect the high pressure hose securely to the Argon cylinder valve. Wipe the extinguisher clean. Record the service data on the inspection tag according to NFPA-10 requirements and attach to the extinguisher. Return the extinguisher is in its proper location.

RECHARGE

RECHARGING (NFPA-10 4-2.3) is the replacement of the extinguishing agent and also includes the expellant for this type of extinguisher.

RECHARGE PROCEDURE

WARNING: BEFORE ATTEMPTING TO RECHARGE BE SURE THIS EXTINGUISHER IS COMPLETELY DEPRESSURIZED. THERE IS A CHECK VALVE IN THE SYSTEM WHICH PREVENTS ARGON PRESSURE FROM **ESCAPING** FROM THE AGENT CYLINDER WHEN THE ARGON SUPPLY HOSE IS DISCONNECTED. THE AGENT CYLINDER MAY BE PRESSURIZED EVEN THOUGH NO PRESSURE ESCAPES FROM THE ARGON CYLINDER HIGH PRESSURE HOSE CONNECTION.

1. **TO DEPRESSURIZE:**
   a) Close the Argon cylinder valve.
   b) Carefully tip extinguisher over until it rests on both wheels and handle. (in this position much of the agent will remain in the cylinder.)
   c) Open the nozzle lever slowly to discharge all remaining agent and pressure. (be prepared for a nozzle recoil).
   d) ***Insure that all pressure has escaped before further disassembly.***
   e) Return extinguisher to the upright position after complete depressurization.

2. Carefully remove the fill cap. Detach discharge hose from the agent cylinder and the nozzle assembly from the hose. Blow out any chemical agent remaining in the hose. Clean hose and container fittings and gaskets. Replace gaskets as necessary.

3. Inspect the cylinder interior following CGA Visual Inspection Standard, Pamphlet C-6.

4. Perform MAINTENANCE-SERVICE PROCEDURES 1 through 3, 6 and 7. All parts should be inspected, clean and replaced if necessary.

5. Detach hose from the Argon cylinder, install the shipping cap, unscrew the wing nuts and remove the Argon cylinder from the extinguisher

6. Fill the agent cylinder with the proper amount of Amerex Class D Powder (Model 680 – capacity 150 lbs., Super D [Sodium Chloride] or Model 681 – capacity 250 lbs. Copper). Lubricate the fill cap gasket. Install the fill cap and tighten securely.

   WARNING: REPLACE ANY CHEMICAL THAT IS CONTAMINATED OR CAKED. DO NOT OVERFILL THE EXTINGUISHER - THIS COULD CAUSE MALFUNCTION. NEVER MIX TYPES OF AGENTS.

7. Install an Amerex P/N 10904 110 cu. ft. ARGON cylinder (pressurized to 2015 psi), remove the shipping cap, place on the extinguisher and attach the Argon hose. The Ring (safety) Pin and tamper indicator (lockwire seal) [“T” handle valve] or lead wire seal [handwheel valve] must be in place.

8. Reattach the hose to the extinguisher (tighten hand tight plus a ¼ turn). Properly coil the hose onto the storage rack. Reattach the shutoff nozzle (and/or Extension Wand) firmly to the hose and store it in the mount with the shutoff lever in the CLOSED (forward) position.

9. Record the service date on the inspection tag and place the extinguisher in its proper location.

TROUBLESHOOTING GUIDE

WARNING: BEFORE ATTEMPTING TO CORRECT ANY LEAKAGE PROBLEM, BE SURE THAT THE AGENT CYLINDER IS COMPLETELY DEPRESSURIZED. ALWAYS USE CAUTION WHEN OPENING THE SHUTOFF NOZZLE, AGENT CLINDER CAP OR ANY OTHER CONNECTION AS A LEAKING ARGON VALVE SEAT MAY HAVE PRESSURIZED THE AGENT CONTAINER. REFER TO THE PREVIOUS PAGE IN THE RECHARGE PROCEDURE FOR PROPER METHOD OF DEPRESSURIZATION.

PROBLEM	CORRECTIVE ACTION
1. Argon cylinder gauge reads low or high.	1. Temperature may have affected the pressure reading.

Temp. F	35°	70°	120°
Temp. C	2°	21°	49°
Recommended Pressure			
psig	1880	2015	2200
mPa	13.0	13.9	15.2
Minimum Pressure			
psig	1590	1700	1900
mPa	11.0	11.7	13.1

No corrective action is required if the pressure is within parameters stated above.

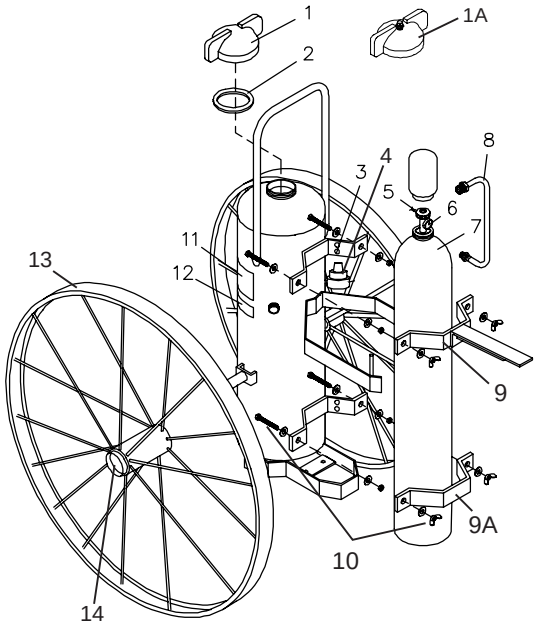
2. Argon pressure is too low. Valve is closed. Tamper seal is intact. Pressure in agent and the Argon cylinders.	2. Valve seat has leaked and has pressurized the agent cylinder. Follow RECHARGE PROCEDURE for restoring the extinguisher to service.
3. Argon pressure is too low. Valve is closed. Tamper seal is intact. No pressure observed in the agent cylinder.	3. Leakage in the Argon valve at other than the valve seat. Replace with a properly charged Argon cylinder
4. Unable to remove the agent cylinder cap.	4. Agent cylinder may be pressurized. ***Make no further attempt to remove the cap until this is checked.*** See the RECHARGE PROCEDURE for proper depressurization method.
5. Argon supply hose cut, cracked or abraded.	5. Replace hose assembly with Amerex P/N: 06814.

PARTS LIST

for

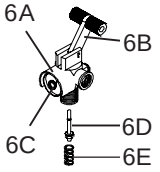
150 / 250 LB. WHEELED CLASS D
DRY POWDER Extinguishers with
36 In. Steel Wheels w/ Rubber Treads
110 CU. FT. Argon Cylinder

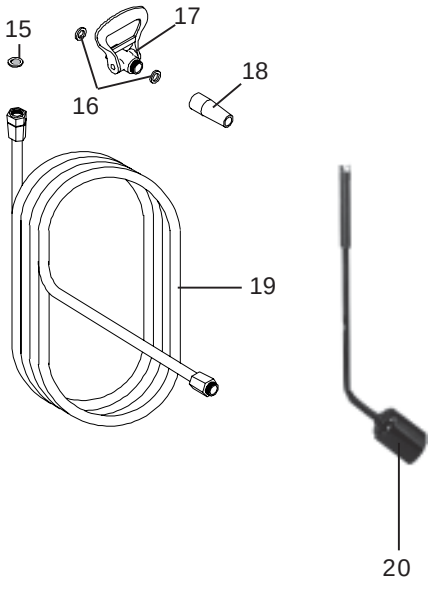
Models 680 150 LB. Super D (Sodium Chloride)
681 250 LB. Copper



ITEM NO.	PART NO.	DESCRIPTION	STD. PKG.
1	6993	Cap (Forged Brass), Agent Cylinder	1
1A	12576	Cap (Forged Brass), Agent Cylinder with Pressure Indicator	1
2	2272	Gasket, Cap	1
3	1990	Bumper, Rubber	12
4	10915	Argon Pressure Regulator	1
5	4195	Lead Wire Seal for Argon Valve	12
6	2233	Argon Cylinder Valve (Hand Wheel) with Gauge	1
6A	12467	Argon Cylinder Valve (Quick Release) with Gauge	1
6B	6373	Valve Lever ("T" Handle with Roll Pin and Knobs)	1
6C	10213	Gauge - 3000 PSI	1
6D	9897	Valve Stem Ass'y	6
6E	0501	Spring	6
7	10904	Argon Cylinder, 110 cu. ft., charged, Including Valve, Gauge and Protective Cap	1
8	2234	Pressurizing Hose Ass'y	1
9	10906	Retaining Strap (Top) with Hose Hanger - Argon Cylinder	1
9A	11020	Retaining Strap (Bottom) - Argon Cylinder	1
10	11970	Bolt, Washer and Wing Nut	1
11	10910	Pictogram - 680 & 681	1
12	10909 10911	Nameplate (Mylar Label) - Non F.M. - 680 681	1
13	10917	Wheel Ass'y - 36" X 2 1/2" with Rubber Tread	1
14	10903	Hub Cap - 36" Wheels	1
15	7411	Moisture Seal	1
16	3877	Gasket, Hose / Nozzle	6
17	6279	Ball Valve Ass'y	1
18	6467	Nozzle Tip (.312)	1
19	10913	Hose Ass'y - 3/4" x 25 Ft.	1
20	11181	Extension Wand Ass'y	1

Quick Release Argon Valve





HOSE (25 ft.) / WAND INSTALLATION

1. Connect hose coupling to outlet on the extinguisher. Lay hose straight on ground to its full 50 ft. length.
Start first regular loop clockwise by placing over the top and between side brackets

2. The second loop is a REVERSE loop. Notice that the hose passes behind the loop on this reverse loop.
If instructions are followed, the hose will uncoil without kinks.

3. The next loop is a regular "hose in front" loop. Adjust the loops so that they are approximately the same size and then attach the hose to the shutoff valve with either the extension wand or nozzle installed.

OWNERS SERVICE MANUAL

NO. 08220

INSTALLATION, OPERATING AND SERVICING INSTRUCTIONS
for
AMEREX MODEL 570/B570
30 POUND (13.6 KG) CLASS D
STORED PRESSURE FIRE EXTINGUISHER

SODIUM CHLORIDE FOR COMBUSTIBLE METAL FIRES

FACTORY MUTUAL APPROVED

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to insure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers is done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – use of substitute parts releases Amerex of its warranty obligations. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, horns and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that are incorrectly labeled as FM component parts, some are advertised as Amerex type. None of these meet FM requirements and all of them void the Amerex extinguisher warranty and FM listing. DO NOT SUBSTITUTE.

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02269
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 1235 Jefferson Davis Highway, Suite 101 Arlington, VA 22202

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INTRODUCTION

The Amerex Model 570/B570 30 lb. (13.6 KG) Stored Pressure Class D fire extinguisher contains Sodium Chloride dry powder which has been tested and approved by Factory Mutual Systems (FM) for use on the combustible metals listed in the table below. The heavy duty cylinder, valve assembly and hose/extension wand has been designed with innovative and dependable fire fighting capabilities as well as long life and ease of service. The unique soft flow extension applicator allows a continuous, even distribution of the dry powder agent while the operator stands a safe distance from the burning material. Easy to read instruction labels provide a quick and convenient guide to proper uses. This manual should be used as a guide for installing, operating and servicing this extinguisher. The best place to have your extinguisher serviced and recharged is your authorized Amerex distributor who has the professional experience and equipment to do it properly.

USE MODEL 570/B570 EXTINGUISHER ON CLASS D BURNING METALS ONLY

Extinguishing Capacity of Model 570/B570	Approximate Hazard Size			
HAZARD	AREA		QUANTITY	
	(ft^2)	(m^2)	(lbs)	(kg)
Magnesium Chips	4	.37	6	2.72
Sodium Spill	5	.46	5	2.26
(depth over ½ inch [1.3 cm])	3	.27	6	2.72
Potassium Spill	5	.46	5	2.26
(depth over ½ inch [1.3 cm])	3	.27	6	2.72
Sodium Potassium Alloy Spill	3	.27	2	.90

The model 570/B570 extinguishers have been manufactured and tested in accordance with the applicable standards of Factory Mutual to ANSI/UL 711 and ANSI/UL 299. It also complies with industry standards as presented in the National Fire Protection Association Standard No. 10 "Standard for Portable Fire Extinguishers."

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY. AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

WARNINGS

USE THIS EXTINGUISHER ONLY ON CLASS D BURNING METALS. CLASS D FIRES NORMALLY GENERATE EXTREMELY HIGH HEAT. AMEREX RECOMMENDS THE USE OF PROTECTIVE CLOTHING AND SELF-CONTAINED BREATHING APPARATUS WHILE OPERATING THIS EXTINGUISHER.

TO AVOID RE-IGNITION AFTER A METAL FIRE HAS BEEN EXTINGUISHED, DO NOT MOVE THE REMAINS UNTIL THE METAL HAS COOLED.

SODIUM CHLORIDE BASED POWDER CAN BE VERY CORROSIVE, ESPECIALLY ON METALS. AFTER THE FIRE HAS BEEN EXTINGUISHED AND REMAINS HAVE COOLED, CLEAN ALL SURFACES CONTACTED BY THE DRY POWDER.

NEVER USE WATER ON A COMBUSTIBLE METAL FIRE. CHEMICAL AND PRESSURIZING GAS MUST BE MOISTURE FREE.

THIS EXTINGUISHER SHOULD BE PRESSURIZED WITH DRY ARGON ONLY.

PREPARING YOUR NEW EXTINGUISHER FOR USE

THIS MANUAL IS PACKAGED WITH EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

1. Remove the Model 570/B570 and its discharge hose assembly from the shipping carton. Examine both for shipping damage.

2. Connect the wand assembly to the extinguisher hose male connector by retracing the locking sleeve on the wand female swivel coupling. Push the female coupling firmly onto the male swivel adapter and release the locking sleeve. Tug firmly on the wand to verify that the swivel coupling is completely engaged.

3. Arrange the discharge hose and extension applicator assembly in the retaining clips as shown in the installation diagrams on page 9.

4. Install your extinguisher in an accessible location with the top of the handle no more than 3½ feet (1 m) above the floor, the base at least 4 inches (.1 m) above the floor and near a doorway. **DO NOT INSTALL IT WHERE YOU WOULD HAVE TO WALK THROUGH A POTENTIAL FIRE LOCATION TO REACH IT!**

5. Do not place this extinguisher close to a potential fire hazard. Amerex recommends a location no less than 50 feet (15 m) from the hazard, leaving unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range is –40°F to +120°F (40°C to +49°C). Adequately protect the extinguisher if temperatures outside this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants that may interfere with its proper operation. DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER – testing or any use may cause it to gradually lose pressure and become ineffective. Never throw any extinguisher in a fire as it could explode from heat/pressure buildup.

   NOTE: Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt condition the extinguisher to 70°F (21°C) for several hours to obtain a more accurate pressure gauge reading.

6. Record the date the extinguisher is being placed into service on the inspection tag and attach it to the extinguisher.

IN CASE OF FIRE

1. **HAVE EVERYONE EVACUATE THE AREA IMMEDIATELY!**

2. **CALL THE FIRE DEPARTMENT EVEN IF THE FIRE APPEARS TO BE SMALL! THE FIRE DEPARTMENT NUMBER SHOULD BE POSTED AT EACH TELEPHONE.**

3. **USE YOUR EXTINGUISHER PROPERLY AND ONLY ON THE TYPE OF FIRES LISTED ON THE NAMEPLATE (LABEL)!**

4. **TRAINED PERSONNEL SHOULD FIGHT LARGE FIRES!**

5. **BE PREPARED TO LEAVE THE AREA IF THE FIRE CANNOT BE IMMEDIATELY CONTROLLED!**

OPERATION

CAUTION: Persons expected to use this extinguisher should be trained in its operation and in the proper fire fighting technique. "Hands-on" training will prepare personnel with the feel for this stored pressure extinguisher so that the most effective application can be utilized in an emergency situation. The basic operating instructions are contained in the pictogram portion of every extinguisher nameplate (label). The following elaborates on these instructions:

1. Hold the extinguisher upright. Twist and pull the ring pin snapping the plastic seal.
2. Extend the bell shaped nozzle over the fire.
3. Keep the extinguisher upright. Squeeze the lever to discharge the extinguisher. Cover all burning metal with dry powder until the fire is extinguished.

   NOTE: If greater range is required, disconnect the wand assembly at the quick connect and use the hose to lob the chemical onto the fire. Be careful not to spread the fire surface when using this technique.
4. Reapply powder to visible hot spots.
5. To avoid re-ignition allow metal to cool before cleanup.
6. Evacuate and ventilate the area immediately after use. The fumes and smoke from any fire may be hazardous and can be deadly.

	Model 570	**Model B570**
Discharge Time (approximate)	30 seconds	24 seconds
Effective ranges:		
3-6 feet (with applicator)	1 – 2 m	1 – 2 m
8-10 feet (with nozzle)	2.5 – 3 m	2.5 – 3 m

RECHARGE FIRE EXTINGUISHER IMMEDIATELY AFTER ANY USE

INSPECTION

INSPECTION (NFPA-10) is a "quick check" intended to give reasonable assurance that an extinguisher is fully charged and operable. This is done by seeing that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent operation.

PERIODIC INSPECTION PROCEDURES

(Monthly or more often if circumstances dictate)

(NFPA-10) A "quick check" should be made of the extinguisher for the following:

1. Located in designated place.
2. No obstructions to access or visibility.
3. Operating instructions on nameplate and facing outward.
4. Seals and tamper indicators not broken or missing.
5. Determine fullness by weighing or "hefting".
6. Examine for obvious physical damage, corrosion, leakage or clogged nozzle.
7. Pressure gauge reading in the operable area.

MAINTENANCE

MAINTENANCE (NFPA-10) Maintenance should be performed at least once a year (or more frequently if indicated by an inspection). Maintenance is a "thorough check" of an extinguisher. It is intended to give maximum assurance that an extinguisher will operate effectively and safely. It includes a thorough examination and any necessary repair or replacement. It will normally reveal the need for hydrostatic testing.

MAINTENANCE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate and FM manifest are securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure (585 psi [4035 kPa]), using the proof pressure method, in accordance with CGA Pamphlet C-6 and NFPA Pamphlet 10. See proper method of depressurizing and reclaiming chemical in "**Recharge Procedures**". **NOTE**: When cleaning avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.
2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
3. Weigh extinguisher and compare with weight printed in the "**Maintenance**" section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances (see instructions in "**Recharge Procedure**").
4. Check the date of manufacture stamped on the bottom of the extinguisher for model B570 and on the wall hanger loop for Model 570. Cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate (585 psi [4035 kPa]).

5. Visually inspect the pressure gauge:

   a. if bent, damaged or improper gauge, depressurize and replace
   b. if pressure is low, check for leaks
   c. if overpressurized (overcharged), depressurize the extinguisher and follow recharge instructions

6. Remove and check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

7. Inspect the discharge lever for dirt or corrosion that might impair free movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged, replace with proper Amerex parts.

8. Remove the extension applicator and hose by detaching the female swivel adapter from the hose and hose from the discharge valve. Inspect the hose, female swivel and extension applicator for damage. Make sure that the rubber o-ring inside the female swivel coupling is in place and in good condition. Replace damaged parts as necessary. Blow air through the hose and extension applicator assembly to insure that the passage is clear of foreign material and powder residue. Inspect the diffuser in the extension applicator horn – it must be tight to allow proper discharge characteristics.

9. Visually inspect the inside of the valve body (through the hose connection orifice). Appearance of powder in the valve may indicate that the extinguisher has been partially discharged and should be recharged.

10. Inspect the valve body for signs of corrosion or damage to the hose thread connection. Replace valve assembly as necessary following the depressurizing and recharge procedures. If valve removal is required complete all steps in the "**Recharge Procedure**".

11. Reconnect the extension applicator to the discharge hose male swivel coupling. Rotate the hose assembly several times to verify that the swivel operates freely (disconnect again and clean the inside of the female swivel with a small brush and compressed air if the rotation is impeded). Arrange the hose and extension applicator assembly according to the installation instructions on page 9.

12. Install new tamper seal and record service data on the extinguisher inspection tag.

13. Return to its proper location. Install on/in wall hanger bracket, vehicle bracket or dolly cart making sure that it fits properly. Replace mounting bracket if necessary.

RECHARGE

Recharging (NFPA-10) is the replacement of the extinguishing agent and also includes the expellant for this type of extinguisher.

WARNING:

1. **Before attempting to recharge be sure the extinguisher is completely depressurized.**

2. **Never have any part of your body over the extinguisher while removing the valve assembly.**

3. **Use a protective shield between you and the pressure gauge while charging an extinguisher. Do not stand in front of the gauge if a shield is not available.**

4. **Use a regulated pressurizing source of <u>ARGON ONLY</u>. Set the regulator to no more than 220 psi (1520 kPa).**

5. **Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.**

6. **Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.**

7. **Do not mix types of chemicals in extinguishers, recharge or recovery systems. Mixing ABC, Regular, or Purple K dry chemicals with a dry powder agent could cause a serious flare up or explosion if the dry chemical were to contact a combustible metal fire.**

<u>RECHARGE PROCEDURE</u>

1. Perform steps 1 through 4 of the "**Complete Maintenance (Six-Year Teardown)**" section including those required in the "**Maintenance Procedure**."

2. Thoroughly clean all parts with a soft bristle brush or soft cloth. Blow the valve and downtube out with air or argon. Inspect the collar o-ring, valve stem, spring and downtube assembly – replace parts if worn or damaged. Lubricate the collar o-ring on the valve stem with Visilox V-711. **DO NOT LUBRICATE THE VALVE STEM SEAL**.

3. Reassemble the valve assembly, including downtube, and set aside.

4. Remove any dry powder remaining in the cylinder. Properly dispose of any dry powder that is contaminated or caked.

5. Inspect the cylinder interior following CGA Visual Inspection Standard, Pamphlet C-6.

6. Fill Amerex Model 570/B570 cylinder with 30 pounds (13.6 KG) of Amerex Super D (Sodium Chloride) dry powder. Use Amerex dry powder that has been kept moisture and contamination free.

7. Clean cylinder o-ring seat and threads inside of cylinder collar with a small brush and wipe surfaces with a clean damp cloth to remove dust. Lightly brush the collar o-ring seat with Visilox V-711. Install the operating valve/downtube assembly hand tight.

8. Attach the charging adapter to the valve discharge port.

   WARNING: THIS EXTINGUISHER IS FACTORY PRESSURIZED USING ARGON. ARGON IS AN INERT GAS THAT WILL NOT ADVERSELY REACT WITH COMBUSTIBLE METALS. NITROGEN PRESSURIZING GAS COULD CAUSE A REACTION WHEN USED ON CERTAIN TYPES OF COMBUSTIBLE METAL FIRES. DRY AIR PRESSURIZATION SHOULD NEVER BE USED, AS EVEN THE SLIGHTEST AMOUNT OF MOISTURE WILL CAUSE A VIOLENT REACTION WITH CLASS D MATERIALS.

9. With the extinguisher properly secured in an upright position, connect your argon pressurizing line with a quick connect to the charging adapter. Set the Argon supply cylinder regulator to no more than 220 psi (1520 kPa). Depress the extinguisher operating valve lever and pressurize

the extinguisher with argon to 195 psi (1345 kPa). When the desired pressure has been reached, release the operating lever. Shut off Argon supply and remove the quick connect.

10. Remove the charging adapter. Check extinguisher for leaks by applying leak detecting fluid or a solution of soapy water to the valve discharge orifice, around the collar o-ring sealing area, cylinder welds and gauge. Remove leak detecting fluid from valve assembly by blowing out with air or argon. Wipe exterior of extinguisher to remove any remaining residue.

11. Install the hose assembly to the operating valve. Reconnect the female swivel on the extension applicator to the male swivel on the hose. Rotate the hose assembly several times to verify that the swivel operates freely. Disconnect and clean the inside of the swivel female with a small brush and compressed air if rotation is impeded. Install hose and extension applicator according to instructions on page 9.

12. Install ring pin and tamper seal. Record recharge date and attach new recharge tag.

13. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the "**Maintenance**" section of the nameplate (label).

COMPLETE MAINTENANCE (SIX YEAR TEARDOWN)

Complete Maintenance (Six Year Teardown) [NFPA-10] Every six years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

> **Note**: some states require Complete Maintenance on an Annual Basis. Check with your Amerex servicing distributor to see if this applies to you. NFPA-10 requires that a "verification of service" external collar tag be installed on the extinguisher whenever "Six Year Maintenance" is performed. The "verification of service" tag can only be installed if the operating valve has been removed. A "Six Year Maintenance" service decal must also be attached to the extinguisher cylinder.

COMPLETE MAINTENANCE (SIX YEAR TEARDOWN) PROCEDURE

1. Discharge powder and pressure into a "closed" dry powder recovery system (several are commercially available). Make sure that the extinguisher is completely empty and depressurized.

   CAUTION: Do not contaminate by mixing with other types of dry powder or dry chemical.

2. Perform all required maintenance in Steps 1 through 8 of "**Maintenance Procedure**" (Annual).

3. **VERIFY THAT NO PRESSURE REMAINS IN THE EXTINGUISHER** (slowly squeeze discharge lever, aiming away from persons or objects which might be injured or damaged), Remove the valve assembly from the cylinder and inspect it for signs of corrosion or damage to the threads. Replace parts as necessary.

4. Disassemble valve assembly by removing the downtube, spring and valve stem assembly. Remove the collar o-ring from the valve assembly.

5. Complete steps 2 through 13 of Recharge Procedure.

TROUBLESHOOTING GUIDE

WARNING: CHECK TO DETERMINE THE SOURCE OF A LEAK BEFORE THE EXTINGUISHER IS DEPRESSURIZED. LEAKAGE REPAIRS WILL REQUIRE DEPRESSURIZATION OF THE EXTINGUISHER AND REMOVAL OF THE VALVE ASSEMBLY. DEPRESSURIZE BY HOLDING THE EXTINGUISHER IN AN INVERTED POSITION AND SLOWLY SQUEEZING THE DISCHARGE LEVER. SOME POWDER REMAINING IN THE DOWNTUBE WILL BE EXPELLED SO CARE SHOULD BE TAKEN IN THE AREA BEING USED FOR DEPRESSURIZING. DO NOT DIRECT DISCHARGE TOWARD ANY PERSON OR OBJECT WHICH COULD BE INJURED OR DAMAGED. THOROUGHLY CLEAN ALL VALVE PARTS AFTER DEPRESSURIZATION AND VALVE REMOVAL.

PROBLEM	CORRECTIVE ACTION
1. Leak at operating valve collar o-ring.	Remove valve assembly, clean collar thoroughly and install new collar o-ring. Lubricate with Visilox V-711.
2. Leak through valve.	Install new valve stem assembly. Check valve seat for scratches or foreign matter. Install new valve stem assembly.
3. Leak around gauge threads.	Remove gauge***** and reinstall using Teflon tape on the gauge threads.
4. Defective gauge.	Remove defective gauge***** and install new P/N 03965 195 psi (1345 kPa) gauge using Teflon tape on the gauge threads.
5. Leak in the cylinder,	Contact Amerex if under warranty, otherwise – mark "Rejected" and remove from service or return to owner.

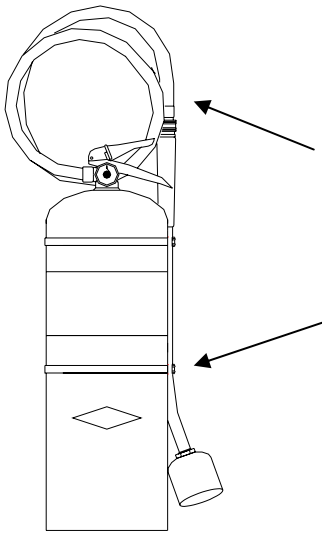
***** Pressure gauge threads are coated with a special epoxy at the factory. For easy removal soak the valve assembly in hot water (180°F [82°C]) for two to four minutes. Remove gauge with a 1/16" open end wrench.

SIX YEAR LIMITED WARRANTY

Amerex warrants its fire extinguishers to be free from defects in material and workmanship for a period of six (6) years from the date of purchase. During the warranty period any such defects will be repaired or the defective extinguisher replaced if the original gray tamper seal is intact and/or if only factory replacement parts and recommended service have been used to service the extinguisher. This warranty does not cover defects resulting from modification, alternation, misuse, exposure to unusually corrosive conditions nor improper installation or maintenance. All implied warranties, including but not limited to warranties of fitness for purpose and merchantability, are limited to the time periods as stated above. In no event shall Amerex Corporation be liable for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Amerex Corporation neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than as expressly set forth herein. This warranty gives you specific legal rights and you may also have other rights that vary from state to state. To obtain performance of the obligation of this warranty write to Amerex Corporation, P.O. Box 81, Trussville, Alabama 35173 for instructions.

MOUNTING INSTRUCTIONS
For
Hose and Extension Applicator
Model 570/B570

Extinguisher Installation

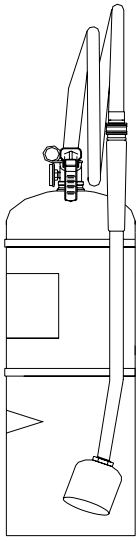


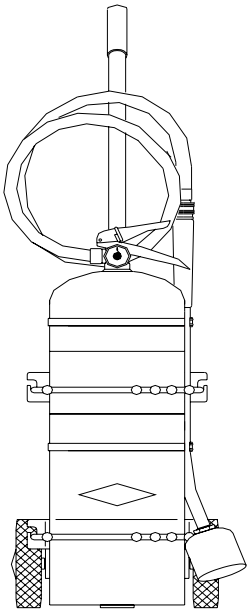
Step 1

Install the hose into the Valve Assembly. Loop the hose as shown.

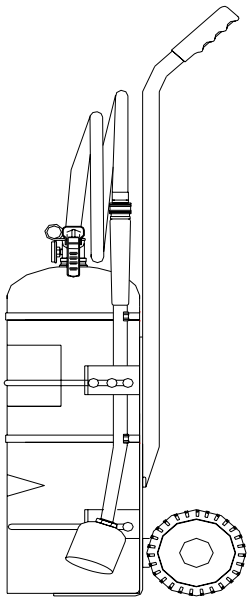
Step 2

After looping the hose, snap the Extension Applicator into both clips with the bottom of the rubber handle grip resting on the top clip.

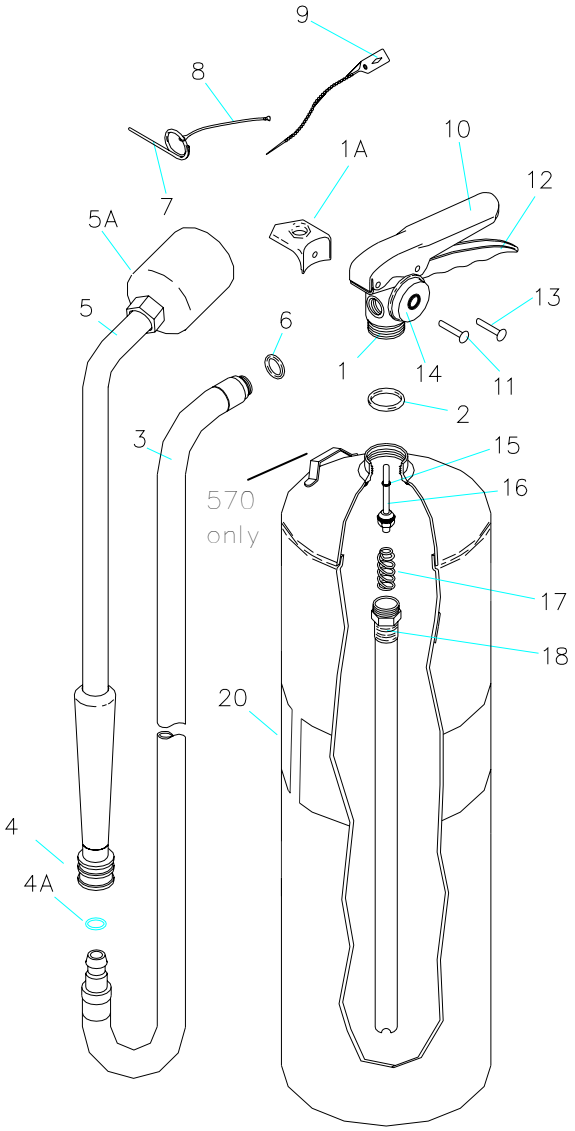


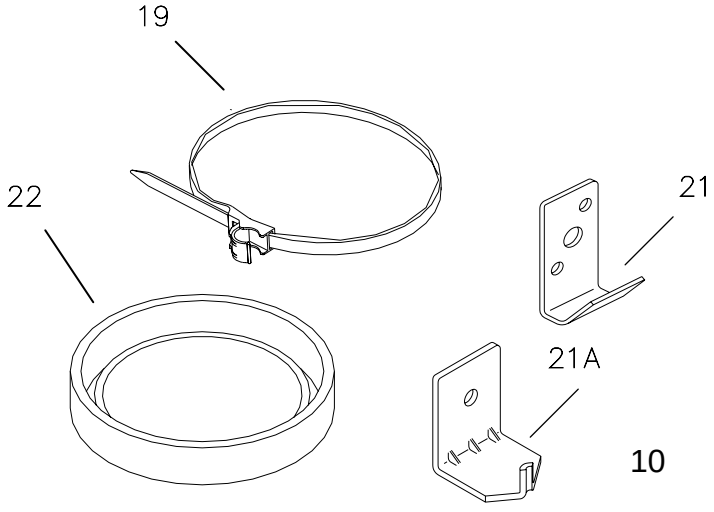


Place the extinguisher into the model 589 dolly and fasten the rubber "bungee" straps around the cylinder. Install the hose and extension applicator into both clips as instructed above (steps 1 & 2). DO NOT INSTALL THE RUBBER STRAPS OVER THE HOSE & APPLICATOR.

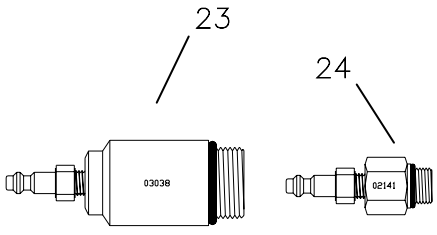


PARTS LIST
For
30 Lb. Class D Sodium Chloride Dry Powder Extinguisher with Hose & Extension Applicator (Brass Valve)
Model 570/B570





Item No.	Part No.	Description	Std. Pkg.
1 1A	11952 17144	Valve Assembly Hanger Loop & Screw B570	1
2	05240	Collar O-Ring Collar O-Ring (bulk bag)	24 100
3	10744	Hose Asy w/½ " Male Quick Connect	1
4 4A	10802 09073	½ " Female Quick Connect O-Ring for Quick Connect	1
5 5A	10800 14595	Extension Applicator Horn Blk Cl-D	1
6	06978	Hose Gasket (o-ring)	24
7	00160	Ring Pin – stainless steel	24
8	00532	Chain (nylon) for Ring Pin	24
9	01387	Lock Wire Seal (Yellow)	500
10	07762	Lever & Rivet	1
11	01563	Rivet only for lever	24
12	09020	Handle & Rivets	1
13	01564	Rivets only for Handle (2 required)	24
14	03965	Gauge – 195 psi	6
15	05243	Valve Stem O-Ring	24
16	06093	Valve Stem Assembly Valve Stem Assembly (bulk bag)	6 96
17	17139	Spring	6
18	17215 17214	D'tube/Retainer Asy (model 570) D'tube/Retainer Asy (model B570)	1
19	16904	Strap & Hose Clip Asy (black plastic) 3/8" (2 reqd. per extinguisher)	1
20	08281	Label (Fire Ratings)	1
21 21A	01007 00577	Wall Hanger Bracket 570 Wall Hanger Bracket B570	1
22	12383 12952	Protective Ring for Btm of Cyl – 570 Protective Ring for Btm of Cyl – B570	1
23	03038	Hydrotest Adapter	1
24	02141	Fill Adapter, Hansen Quick Connect Type 5/8" UNF Thread	1
NOTE:	All valve assemblies include new valve body, gauge, lever and handle		



AMEREX MODEL 868 I-BEAM BRACKET ASSEMBLY INSTRUCTIONS

INSTALLATION

This package contains all the necessary parts for the size bracket you have ordered.

To mount the 868 bracket across the flange of the beam:

Preassemble the bolts, washers, clips and rails to the beam clamps as shown in Figure 1 below. Hand tighten so that rails can slide freely through the clips. Note that the hole in the center of the clip is off center and that the clip should be rotated so that it does not to extend beyond the edge of the beam clamp. With the remaining bolt, nut, and 2 washers, attach the appropriate fire extinguisher mounting bracket to the rails as shown by the dashed lines in Figure 1 and tighten with a 7/16" wrench. Slide one clamp assembly to each end of the rails. Align the bracket on the beam, fastening either of the clamps to the flange of the beam and tighten with a 5/16" wrench. Slide the remaining clamp onto the other lip of the flange and tighten with 5/16" wrench. Align the rails so that the fire extinguisher mounting bracket is centered on the beam and tighten the bolts with a 7/16" wrench. Each bolt must be securely tightened to ensure proper and safe installation of the bracket. Figures 2 and 3 below show proper installation of the bracket.

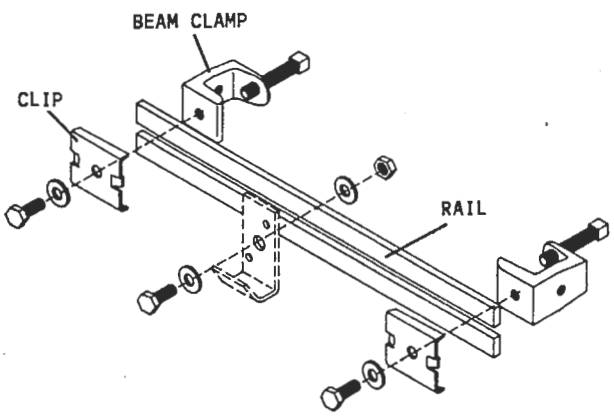


Figure 1.

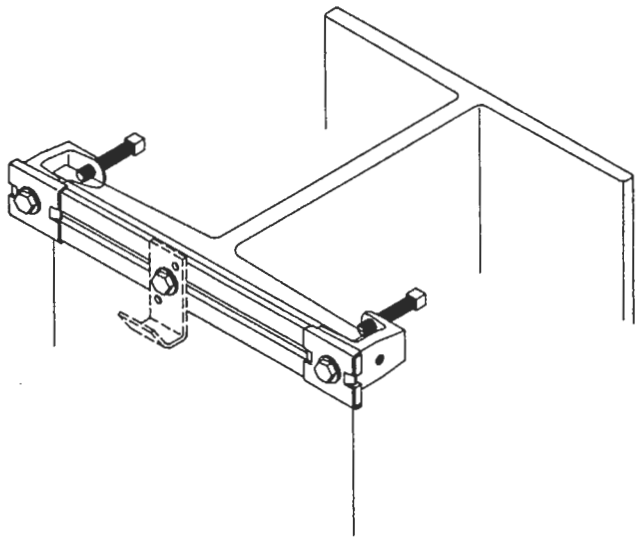


Figure 2.

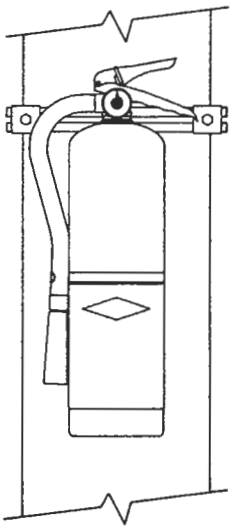


Figure 3.

See reverse for instructions on mounting across open face of beam.

PN: 09179

To mount the 868 bracket across the open face of the beam:

If this bracket is used to hang an extinguisher across the open face of the beam it will be necessary to use two 868 brackets across the beam to prevent the extinguisher from tilting into the open face of the beam. Attach one as described below and one at the bottom of the extinguisher with no fire extinguisher mounting bracket attached. The lower bracket must be aligned so the bottom of the shell rests against it. See Figure 6 below. The Model 872 bracket has been designed specifically for extinguisher installation across the open face of the beam and may be the prefereable bracket to use.

To install top 868 bracket:

Preassemble the bolts, washers, clips, and rails to the beam clamps as shown in Figure 4 below. Hand tighten so that rails can slide freely through the clips. Note that the hole in the center of the clip is off center and that the clip should be rotated so as not to extend beyond the edge of the beam clamp. Also note that the beam clamp bolts are to be aligned so as to fit on the inside of the beam. With the remaining bolt, nut, and 2 washers, attach the appropriate fire extinguisher mounting bracket to the rails as shown by the dashed lines in Figure 4 and tighten with a 7/16" wrench. Spread the clamp assemblies toward the ends of the rails to a width that matches that of the beam and attach the bracket to the beam. Tighten beam clamps with an 5/16" wrench. Align the fire extinguisher mounting bracket so that it is centered on the beam and between the clamps. Tighten the bolts through washers and clips with a 7/16" wrench. Each bolt must be securely tightened to ensure proper and safe installation of the bracket.

Note: On smaller beams where it is difficult to reach the beam clamp bolts with a wrench, it may be necessary to first attach the clamps to the beam and tighten, then apply the rails, clips, washers, and bolts.

To install bottom 868 bracket:

Follow above steps, omitting the fire extinguisher mounting bracket. Be sure to align bracket so that bottom of fire extinguisher cylinder rests against the rails of the bottom bracket. Figures 5 and 6 below show proper installation of the bracket.

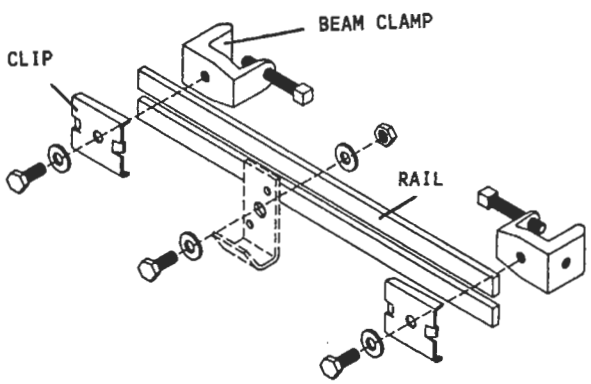


Figure 4.

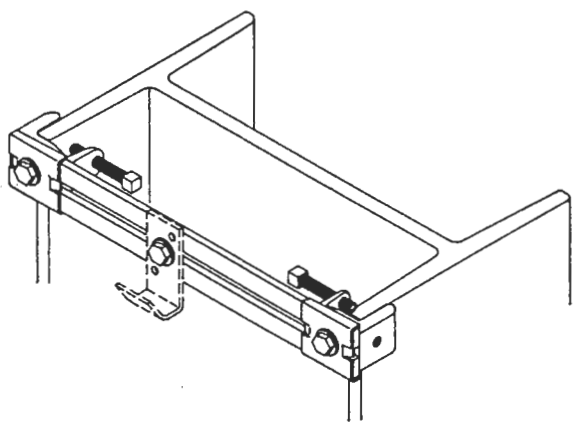


Figure 5.

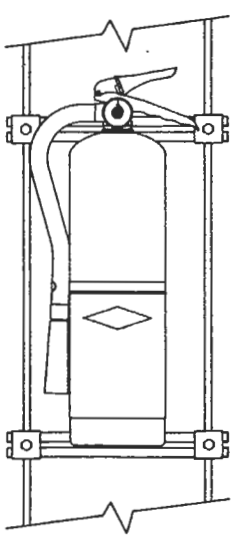


Figure 6.

OWNER'S SERVICE MANUAL
NO. 13259
INSPECTION. MAINTENANCE AND RECHARGE

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – use of substitute parts releases Amerex of its warranty obligations. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, horns and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that are incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them void the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL

NFPA-10 Portable Fire Extinguishers

CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders
CGA C-6 Standard for Visual Inspection of Compressed Gas Cylinders

AVAILABLE FROM

National Fire Protection Association
P. O. Box 9101
Quincy, MA 02269-9101

Compressed Gas Association
1235 Jefferson Davis Hwy, Suite 501
Arlington, VA 22202

WET CHEMICAL STORED PRESSURE
STAINLESS STEEL FIRE EXTINGUISHERS
FOR RESTAURANT KITCHEN FIRES
Model 260 - 6 Liter Model 262 - 2-1/2 Gallon

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081
Phone: 205/655-3271 Fax: 800/654-5980
e-mail: sales@amerex-fire.com Web Page: http://www.amerex-fire.com

Printed in U.S.A. **0M13259K Rev. 02/10**

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THE MAINTENANCE AND RECHARGE PORTION OF THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances require) to insure that it is ready for use.

INSPECTION (NFPA-10) A "quick check" should be made of the extinguisher for the following:

1. Located in designated place.
2. No obstructions to access or visibility.
3. Operating instructions on nameplate (label) and facing outward.
4. Seals and tamper indicators not broken or missing.
5. Determine fullness by weighing or "hefting".
6. Examine for obvious physical damage, corrosion, leakage or clogged nozzle.
7. Pressure gauge reading in the operable area.

MAINTENANCE – SERVICE PROCEDURE

MAINTENANCE (NFPA-10) At least once a year (or more frequently if indicated by an inspection), maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that an extinguisher will operate effectively and safely. It includes a thorough examination and any necessary repair or replacement. It will normally reveal the need for hydrostatic testing.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test, using the proof pressure method and a suitable cage, in accordance with CGA Pamphlet C-1 and NFPA Pamphlet 10.

    a. **NOTE**: When cleaning avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Weigh extinguisher and compare with weight printed on the Maintenance section of the nameplate (label). Recharge extinguisher if weight is not within the indicated allowable tolerances.

4. Check the date of manufacture on the extinguisher cylinder hanger loop or on the extinguisher nameplate. Cylinder must be hydrostatically tested every 5 years to the test pressure indicated on the label. **REPLACE EXTINGUISHING AGENT WITH NEW AMEREX CHARGE AT TIME OF HYDROTEST.**

5. Visually inspect the pressure gauge:
    a. If bent, damaged or improper gauge, depressurize and replace
    b. If pressure is low, check for leaks
    c. If over pressurized (overcharged), invert the extinguisher and reduce to 50 psi (345 kPa) by depressing the valve lever. Repressurize to 100 psi (690 kPa). Check for leaks.

    CAUTION: Be prepared for some discharge of liquid.

6. Inspect the footstand (base). If cracked or broken replace with proper footstand.

7. Check ring pin for freedom of movement by breaking the seal and removing the pin. Replace the ring pin if bent or if removal is difficult.

8. Inspect discharge lever for dirt or corrosion that might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged or distorted, replace with proper Amerex part(s).

9. Remove hose assembly, inspect hose assembly for damage, replace as necessary. Blow air through hose assembly to insure passage is clear of foreign material.

10. Inspect the valve assembly for corrosion or damage to hose thread connections. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures.

11. Install hose assembly into operating valve. Torque swivel nut lightly with 15/16" wrench. Install in hose clip.

12. Install new tamper seal and record service data on the extinguisher inspection tag.

13. Rehang the extinguisher on the wall hanger bracket making sure that it fits the hanger bracket properly – replace the bracket if necessary.

RECHARGE

RECHARGING (NFPA-10) The replacement of the extinguishing agent and includes the expellant for this type of extinguisher.

WARNING: a. Before attempting to recharge be sure this extinguisher is completely depressurized.
b. Use a regulated nitrogen pressurizing source. Set the regulator no more than 25 psi (172 kPa) higher than the gauge operating pressure.
c. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.
d. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.

RECHARGING PROCEDURE

1. Complete the "Maintenance-Service Procedure", items 1 thru 10.

2. Discharge all remaining pressure and wet chemical solution, making sure that there is no remaining pressure. Do not top off or reuse wet chemical.

3. Remove the valve assembly and disassemble by removing downtube assembly (use a wrench on the brass retainer, not the plastic tube), spring and valve stem from the valve assembly. Remove the collar o-ring from the valve assembly.

4. Thoroughly rinse all parts with clean water and wipe dry with a soft cloth. Blow the valve out with air or nitrogen. Inspect the collar o-ring, valve stem and spring – replace parts if worn or damaged. Lubricate the collar o-ring and small o-ring on the valve stem with Visilox V-711 (do not lubricate the valve stem seal). Inspect the downtube. If it is cracked or deformed replace with proper downtube (see Parts List). Inspect downtube o-ring, replace if necessary.

5. Remove fill tube. Rinse the cylinder with clean water and inspect the interior following CGA Visual Inspection Standard, Pamphlet C-6. Replace fill tube.

6. Model B260 (6 liter) – Recharge using the Model 530-2 Liquid Charge following the instructions on the package.
Model B262 (2½ Gallon) – Recharge using the Model 660 Liquid Charge following the instructions on the package.

7. Install a "Verification of Service" collar around neck of cylinder. Install valve assembly to the cylinder and properly align.

   CAUTION: HAND TIGHTEN THE VALVE COLLAR NUT 100-125 IN LBS. MAX. (1.15-1.44 KG/M). OVER-TIGHTENING WITH A WRENCH WILL DAMAGE THE VALVE.

8. Install a P/N 09492 Fill (Pressurizing) Adapter on the valve outlet (where the hose assembly attaches) and pressurize with nitrogen to 100 psi (690 kPa). The pressure regulator should be set to no more than 125 psi (862 kPa). Remove Fill Adapter.

9. Check the collar, gauge, cylinder welds and valve orifice for leaks using a leak detection fluid or a solution of soapy water. Remove leak detection fluid from the valve assembly by blowing out with air and wipe exterior of the extinguisher to dry.

10. Install hose assembly into the operating valve. Torque swivel nut lightly with a 15/16" wrench. Install in hose clip.

11. Install ring pin with ring facing front of the extinguisher. Install new tamper seal. Record recharge date and attach new recharge tag.

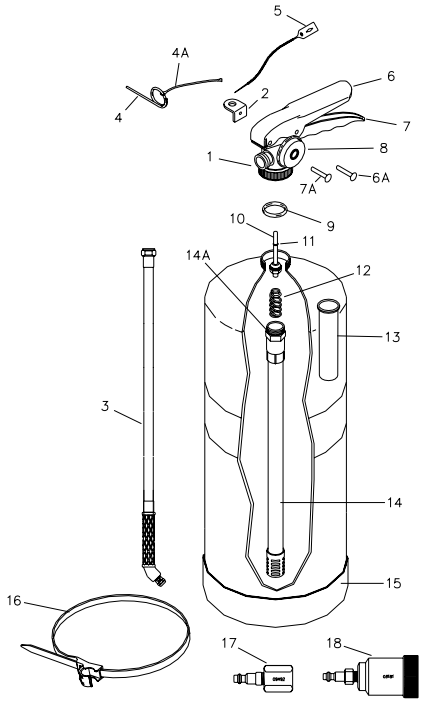
12. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the Maintenance section on the extinguisher nameplate (label).

TROUBLESHOOTING GUIDE

WARNING: Determine the source of a leak before the extinguisher is depressurized. THE EXTINGUISHER MUST BE COMPLETELY DEPRESSURIZED BEFORE ANY ATTEMPT IS MADE TO DEVALVE IT AND CORRECT ANY LEAKAGE PROBLEM. To depressurize – hold the extinguisher in an inverted position and slowly squeeze the discharge handle. Some liquid remaining in the downtube will be discharged so care should be taken in the area used for depressurization. Thoroughly clean all valve parts after depressurization and valve removal.

	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, clean collar (knurled) nut thoroughly and install new o-ring. Lubricate the o-ring with Visilox V-711.
2.	Leak through valve	Install new valve stem assembly. Check valve seat for scratches or foreign matter.
3.	Leak around gauge threads	Remove gauge* and reinstall using Teflon tape on the gauge threads.
4.	Defective gauge	Remove defective gauge* and install a new P/N 06479 gauge using Teflon tape on the gauge threads.
5.	Restricted or intermittent agent discharge stream	Check downtube strainer and discharge nozzle for dirt, sediment or impediments. Clean or replace parts as necessary.
6.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "Rejected" and return to owner.
7.	Broken footstand	Install new footstand (P/N 03109) using Dow Corning RTV-732 silicon rubber adhesive (P/N 04488).

PARTS LIST
For
6 Liter & 2 ½ Gal. WET CHEMICAL
Stored Pressure Stainless Steel Extinguishers (Brass Valve)
Models B260 & B262



ITEM NO.	PART NO.	DESCRIPTION	STD PKG
1	14249	Valve Assembly	1
2	14380	Hanger Loop w/Screw (optional)	6
3	16043 16101	6L Hose Assembly 2 ½ Hose Assembly	1 1
4	00160	Ring Pin, Stainless Steel	24
4A	00532	Chain(Nylon) for Ring Pin	24
5	01387	Lock Wire Seal (Yellow)	500
6	07762	Lever & Rivet	1
6A	01563	Rivet only for Lever	24
7	09020	Handle & Rivets	1
7A	01564	Rivet only for Handle (2 required)	24
8	17420	100 psi Pressure Gauge (SS Tube)	6
9	05240	Collar O-ring	24
10	14878	Valve Stem Asy	6
11	05243	Valve Stem O-ring	24
12	00383	Spring	6
13	02595	Fill tube	1
14	16266 16267	Downtube/Retainer Assembly 6L Downtube/Retainer Assembly 2½ Gal	1 1
14A	05690	O-ring – Downtube/Retainer	12
15	03109	Footstand (black)	1
16	14776	Strap & Clip Asy (Black Plastic) 3/8"	1
17	09492	Fill (Pressurizing) Adapter	1
18	03181	Hydrotest Adapter	1
◆	01007	Wall Bracket	1
◆	04488	Adhesive (3 oz. tube for Footstand)	1
◆	06247	Visilox Lubricant (5 oz. Tube)	1
◆	13503	Model 530-2 Wet Chemical charge 6L	2
◆	13815	Model 660 Wet Chemical charge 2½ Gal	1
◆	14669	Caution Placard English/Spanish	1
◆	15874	Caution Placard English/French	1
NOTE:		All Valve Assemblies include new Valve Body, Pressure Gauge, Wing Nut Lever & Handle	
◆		PARTS NOT PICTURED	

SERVICE MANUAL
NO. 14425
for
AMEREX
HALOTRON I
HAND PORTABLE
"CLEAN AGENT" FIRE EXTINGUISHERS

(FOR NON-RESIDENTIAL APPLICATIONS)

* * * HAVE EXTINGUISHERS RECHARGED IMMEDIATELY AFTER ANY USE * * *

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REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P. O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081
Phone: (205) 655-3271 Fax: (800) 654-5980
e-mail: sales@amerex-fire.com Web Page: http://www.amerex-fire.com

Printed in U.S.A. **OM14425D-02/05**

INTRODUCTION

This manual covers specific instructions for the Amerex Halotron I hand portable extinguishers. Special maintenance and recharge instructions contained in this manual apply to these extinguishers only. Halotron I "Clean Agent" extinguishers are designed for Class A, B, and C hazards formerly protected with Halon 1211 extinguishers. They contain dichlorotrifluoroethane (R-123), which is designated for streaming fire extinguisher applications. Halotron I is listed in the U.S. Environmental Protection Agency (EPA) "Significant New Alternative Policy" (SNAP) as acceptable for nonresidential applications. Halotron I has acceptable toxicity and cardiac sensitization levels for use in occupied spaces when used according to the instructions on the nameplate and rules of the EPA SNAP Program.

PHYSICAL PROPERTIES OF HALOTRON I

Primary Component	Dichlorotrifluoroethane (R-123) or (HCFC-123)
Boiling Point	80.6°F [27°C]
Liquid Density	92.3 lb./ft³ (1.48 kg / liter)
Gas Density	0.385 lb./ft³ (6.17 kg / m³)
Molecular Weight	150.68
Physical State	Pressurized Liquid
Vapor Pressure @ 68°F [20°C] (liquid alone)	11.2 psi [77 kPa]
Pressure of mixture in Container @ 68°F [20°]	95 psig in bulk container

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

INSTALLATION

THIS MANUAL SHOULD BE CAREFULLY STUDIED BY ALL WHO MIGHT USE OR SERVICE THE EXTINGUISHER. STORE IT IN A CONVENIENT PLACE FOR EASY REFERENCE.

Your layout and particular hazards dictate the placement of fire extinguishers. NFPA-10 (1-6.9) recommends that hand portable extinguishers with a gross weight less than 40 lbs. be hung with the top of the extinguisher **not more** than 5 ft. (1.53 m) above the floor. Extinguishers having a gross weight greater than 40 lbs. (18.14 kg) should be installed so that the top of the extinguisher is **not more** than 3 ½ ft. (1.07 m) above the floor. All extinguishers should be in an accessible location and near an exit. **Never install the extinguisher in a location where a potential hazard would prevent easy access.**

The operational temperature range is -40°F to +120°F (-40°C to +60°C). The extinguisher must be protected if temperatures outside of these ranges are anticipated. Never throw an extinguisher into a fire because rapid heat buildup could cause pressure expansion and exceed the limitations of the cylinder.

MOUNTING INSTRUCTIONS

Your extinguisher should be mounted in a clean, dry area accessible to the fire hazards and preferably near an exit. Hang it so that the top is from 3½ to 5 feet above the floor and out of the reach of small children. Use the mounting bracket furnished with the extinguisher. Fasten to a solid surface using strong screws or fasteners (not included). Follow the Mounting Instructions below.

MOUNTING INSTRUCTIONS

U/L specifies that the hanging device must withstand a vertical force of five times the weight of the charged extinguisher but not less than 100 pounds. The extinguisher bracket should be mounted as follows:

WALLS WHERE 2 X 4 STUDS CAN BE FOUND Mount wall hanger bracket securely to stud using two No. 10 x 1¼ inch long wood screws through the diagonal smaller holes in the bracket.

SHEET ROCK Mount a ¾ inch thick board to wall using 3/16 inch toggle bolts. Board should extend a minimum of two inches beyond all sides of the extinguisher profile (excluding hose and wand). Mount hanger racket to board using two No. 10 x 1 inch long wood screws as above.

CINDER BLOCK OR CEMENT Mount wall hanger bracket using one ¼ inch toggle bolt or masonry lead screw expansion anchor through center hole in wall bracket.

CONCRETE OR TILE WALLS Mount wall hanger bracket using one ¼ inch masonry lead screw expansion anchor through center hole in wall bracket. FOR TILE WALLS – locate in joint.

STEEL POSTS OR BEAMS Special tools and fasteners are required – have extinguisher mounted by a professional fire extinguisher service company.

OPERATION

WARNING: PERSONS EXPECTED TO USE THIS EXTINGUISHER SHOULD BE MADE AWARE OF THE CONFINED SPACE LIMITATIONS AND TRAINED IN INITIATING ITS OPERATION AND PROPER FIRE FIGHTING TECHNIQUE. THE CONCENTRATED AGENT CAN PRODUCE TOXIC BY-PRODUCTS. AVOID INHALATION OF THESE MATERIALS BY EVACUATING THE CONFINED SPACE. DO NOT USE IN CONFINED SPACES SMALLER THAN THE MINIMUM STATED ON THE EXTINGUISHER LABEL.

1. **Remove extinguisher from wall hanger bracket.**
2. **Hold extinguisher upright, twist and pull ring (safety) pin.**
3. **Start back a minimum of 8 feet from the fire. Aim the nozzle at the base of the fire nearest you.**
4. **Keeping the extinguisher upright, squeeze the lever to discharge. Sweep the agent stream from side to side.**
5. **Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.**

WARNING: SYMPTOMS OF OVER-EXPOSURE TO PURE Halotron I MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS DIZZINESS, DROWSINESS, ANESTHESIA, OR UNCONSCIOUSNESS. PERSONS SUFFERING FROM OVER-EXPOSURE SHOULD BE IMMEDIATELY REMOVED TO AREA WITH FRESH AIR. APPLY ARTIFICAL RESPIRATION IF NECESSARY. CONTACT A PHYSICIAN.

INSPECTION

Extinguishers should be INSPECTED when initially placed in service and at regular intervals (monthly or more often if circumstances dictate) to insure they are ready for use. Inspections may be accomplished manually or, in some cases, by electronic monitoring.

INSPECTION [NFPA-10] is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully changed. Inspections may be accomplished manually, or in some cases by electronic means.

PERIODIC INSPECTION PROCEDURES

(monthly or more often if circumstances dictate)

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use.

A "quick check" should be made of the extinguisher for the following:

1. Location in designated place
2. No obstruction to access or visibility
3. Operating instructions on nameplate legible and facing outward
4. Safety Seals and tamper indicators not broken or missing
5. Determine fullness by weighing or "hefting"
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle
7. Pressure gauge reading in the operable range

MAINTENANCE

Extinguishers should be subjected to maintenance at intervals of not more than 1 year, at the time of hydrostatic test, or when specifically indicated by an inspection or by electronic notification. Maintenance procedures include a thorough examination of the basic elements of a fire extinguisher:

1. **Mechanical parts**
2. **Extinguishing agent of cartridge operated extinguishers, pump tanks and certain types of stored pressure extinguishers**
3. **Expelling means**

NOTE: Stored pressure Halotron I extinguishers do not require an internal examination of the cylinder or examination of the agent during annual maintenance, but shall receive a thorough external examination.

Maintenance [NFPA 10] Maintenance is a thorough examination of the fire extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal the need for hydrostatic testing.

MAINTENANCE/SERVICE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate and UL manifest are securely fastened and legible. Inspect the cylinder for corrosion, abrasion, and dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure, using the proof pressure method in accordance with CGA C-1 and NFPA 10.

   NOTE: When cleaning avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Weigh extinguisher and compare with weight printed in the Maintenance section on the nameplate. Recharge extinguisher if weight is not within indicated allowable tolerances.

4. Check the date of manufacture on the extinguisher nameplate. Cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate. Check the last date complete maintenance was performed. Per NFPA 10 these extinguishers shall be emptied and subject to complete maintenance every six years. All maintenance/service and recharge procedures shall be done at that time.
5. Visually inspect the pressure gauge:
    a. if bent, damaged or improper gauge, depressurize and replace.
    b. If pressure is low, check for leaks
    c. if pressure is low or high and temperature/pressure relationship has been ruled out:
        1. Low pressure – check for leaks. Follow procedure for reclaiming Halotron I agent, install necessary part(s) to repair leak and recharge according to instructions.
        2. High pressure (over pressurized or over charged) - depressurize and recharge extinguisher following instructions in Recharge section.

6. Remove nozzle or hose and nozzle assembly and inspect for damage. Blow air through nozzle or hose and nozzle to insure that passage is clear of foreign material. Replace component parts with proper Amerex part as necessary.

7. Check ring pin for freedom of movement by breaking the seal and removing the pin. Replace the ring pin if bent or if removal is difficult.

8. Inspect discharge lever for dirt or corrosion that might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged or distorted, replace with proper Amerex part(s).

9. Inspect valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures. If valve removal is necessary complete all steps in the Recharge Procedure.

10. Install nozzle or hose and nozzle assembly.

11. Install new tamper seal and record service data on the extinguisher inspection tag.

12. Rehang the extinguisher on the wall hanger bracket making sure that it fits the hanger bracket properly – replace the bracket if necessary.

RECHARGE

Recharging [NFPA-10]. The replacement of the extinguishing agent and also includes the expellant for this type of extinguisher.

WARNING

a. Halotron service should be performed only in a well ventilated room by a properly trained service technician wearing proper eye protection and rubber gloves.

b. Before attempting to recharge be sure this extinguisher is completely depressurized by slowly and carefully depressing the operating lever and discharging the extinguisher into a proper collection area.

c. Use a regulated pressurizing source using ARGON ONLY. Set the regulator to no more than 25 psi higher than the extinguisher gauge operating pressure.

d. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. DO NOT USE THE EXTINGUISHER GAUGE FOR THIS PURPOSE.

e. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.

RECHARGE

Note: The following procedure is for an EMPTY Halotron I extinguisher. If you are recharging an extinguisher, which has been partially discharged (with agent remaining in the cylinder) or has been recharged and the pressure leaked, follow the instructions contained in the Recharging Instructions packaged with the Amerex Recharge Kit (P/N 14538) or with Getz Halotron recovery equipment.

1. Complete items 1 through 9 in Maintenance Service Procedure above.

2. **Verify that there is no pressure remaining in the extinguisher**.

3. Remove the valve assembly by turning it counter clockwise. Disassemble by removing downtube assembly (use a wrench on the downtube retainer, not the tube), spring and valve stem from the valve assembly.

4. **REMOVE AND DISCARD THE COLLAR O-RING AND VALVE STEM ASSEMBLY**. Inspect and clean the spring with a clean, dry cloth – replace if worn or damaged. Clean internal valve body surfaces and threads with a soft bristle brush making sure that the valve stem seating area is not scratched. Install a new (green) collar o-ring and valve stem assembly (green seal). Lightly lubricate the collar o-ring and small o-ring on the valve stem with Visilox V-711 (do not lubricate the valve stem seal). Inspect the downtube. If it is damaged replace with proper downtube (see Parts List). Install downtube securely.

   NOTE: Valve assemblies are not indexed. Keep original valve assembly/cylinder combinations together while performing maintenance or recharge to assure proper nameplate orientation.

5. Inspect the interior of the cylinder following CGA Visual Inspection Standard, C-6.

6. Install the valve assembly to the cylinder in a clockwise direction Install the proper Amerex recharge adapter and draw a vacuum of 27" of mercury (adjusted for altitude variations – see your vacuum pump manual for detailed instructions). Place the extinguisher on a scale and tare weight prior to filling.

7. Connect the extinguisher to a Halotron I supply cylinder using the Amerex P/N 14538 Halotron I Recharge Kit or equivalent.

   NOTE: The Halotron I supply cylinder **MUST** be pressurized to approximately 100 psi with **ARGON** at all times.

8. Depress the operating lever and fill extinguisher with the amount of agent specified on the nameplate USING ONLY CLEAN, UNCONTAMINATED HALOTRON I AGENT. (See detailed instructions on your recharging system).

   CAUTION: AVOID LIQUID HALOTRON I CONTACT WITH EXTINGUISHER CYLINDER. WIPE DRY IMMEDIATELY WITH A CLEAN CLOTH.

9. Pressurize to the extinguisher operating pressure with **ARGON** only. Repeatedly rock the extinguisher to thoroughly mix the **ARGON** pressurizing gas until proper pressure is reached. Add additional **ARGON** as necessary until the pressure stabilizes.

10. Check for leaks at the gauge, valve outlet and valve/cylinder connection using a halogen type leak detector or leak detection fluid. **DO NOT USE SOAPY WATER**! Thoroughly remove all leak detection fluid residue from the valve assembly and cylinder. Remove recharge adapter.

    CAUTION: IF YOU USE A HALOGEN TYPE LEAK DETECTOR A RESIDUAL AMOUNT OF HALOTRON I WILL REMAIN IN THE VALVE BODY UNTIL THE LIQUID EVAPORATES. TO PROPERLY LEAK TEST USING THE HALOGEN LEAK DETECTOR IT IS RECOMMENDED THAT THE EXTINGUISHER BE SET ASIDE A MINIMUM OF 24 HOURS AFTER RECHARGING, THEN LEAK TESTING.

11. Place nozzle or hose and nozzle on scale with extinguisher. Weigh and confirm that the total weight is within the allowable tolerances indicated in the maintenance section of the extinguisher nameplate.

12. Install nozzle or hose and nozzle assembly.

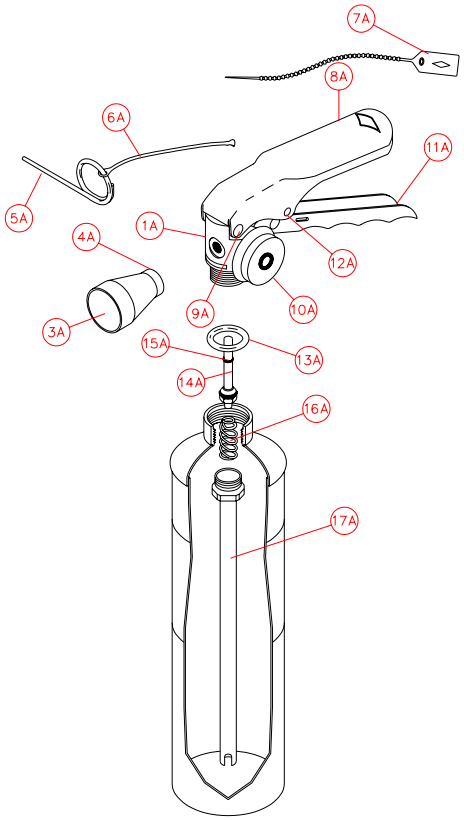
13. Install ring pin with ring facing front of the extinguisher. Install new tamper seal. Record recharge date and attached new recharge tag.

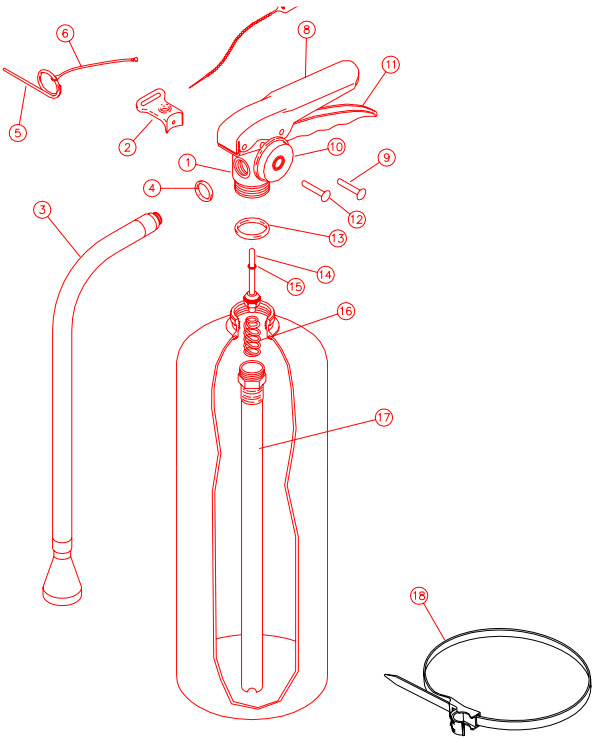
TROUBLE SHOOTING GUIDE

WARNING: DETERMINE THE SOURCE OF A LEAK BEFORE THE EXTINGUISHER IS DEPRESSURIZED. THE EXTINGUISHER MUST BE COMPLETELY DEPRESSURIZED BEFORE ANY ATTEMPT IS MADE TO REMOVE THE VALVE ASSEMBLY AND CORRECT THE LEAKAGE PROBLEM. SEE INSTRUCTIONS PACKAGE WITH THE AMEREX HALOTRON I RECHARGE KIT P/N 14538 OR GETZ HALOTRON RECOVERY SYSTEM FOR THE PROPER METHOD OF DEPRESSURIZING THE EXTINGUISHER TO AVOID UNNECESSARY DISCHARGE AND MINIMUM AGENT LOSS.

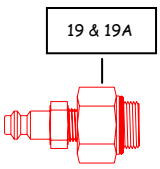
	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, clean collar thoroughly and install new ring. (Optional)
2.	Leak through valve	Install new valve stem assembly. Check valve seat for scratches or foreign matter
3.	Leak around gauge threads	Remove gauge* and reinstall using Teflon tape on the gauge threads
4.	Defective gauge	Remove defective gauge* and install a new gauge using Teflon tape on the gauge threads.
6.	Leak in cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and return to owner.
*	Pressure gauge threads are coated with a special epoxy at the factory. For easy removal soak the valve assembly in hot water (180° F/82°C) for two to four minutes. Remove gauge with a 7/16" open end wrench.	

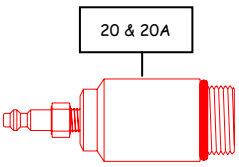
PARTS LIST
For
1.4,2½,5,5½ 11 & 15½ HALOTRON I Clean Agent Stored Pressure Extinguishers
Models A384, A/B385, A/B386, B394 – Aluminum Valve
Models 387,397 & 388,398 – Brass Valve





Item No.	Part No.	Description	Std. Pkg.
1	14527	Vlv Asy–387/388, 397/398	
1A	14525	Vlv Asy–A384	
	14526	Vlv Asy–A/B385, A/B386	
	17051	Vlv Asy – B394	
2	16694	Hanger Loop & Screw–387/388, 397/398	
3	14436	Hose & Noz Asy–387/397 (.247)	
	14449	Hose & Noz Asy–388/398 (.295)	
3A	14407	Nozzle – A384 (.121)	
	14408	Nozzle – A/B385 (.166)	
	14409	Nozzle - A/B386, B394 (.277)	
4	06978	O-ring (hose) – 387/388, 397/398	
4A	01532	O-ring (nozzle) – A384, A/B385, A/B386, B394	
5	00160	Ring (safety) Pin SS – 387/388, 397/398	
5A	01412	Ring (safety) Pin AL – A384, A/B385, A/B386, B394	
6 & 6A	00532	Chain (Nylon) for Ring Pin – ALL	
7 & 7A	01387	Lock Wire Seal (yellow) – ALL	
8	07762	Lever & Rivet – 387/388, 397/398	
8A	06067	Lever & Rivet – A384	
	11825	Lever & Rivet - A/B385, A/B386	
	02625	Lever & Rivet - B394	
9	01563	Rivet only for Lever – 387/388, 397/398	
9A	01060	Rivet only for Lever – A384, A/B385, A/B386, B394	
10 & 10A	14418	Gauge 125 psi – 387/388, 397/398 & A384	
10A	14417	Gauge 100 psi - A/B385 & A/B386	
	16332	Gauge 150 psi – B394	
11	09020	Handle & Rivets – 387/388, 397/398	
11A	09001	Handle & Rivet – A384	
	11826	Handle & Rivet – A/B385 & A/B386	
	09002	Handle & Rivet – B394	
12	01564	Rivet only for handle (2 Req'd) 387/388, 397/398	
12A	01064	Rivet Only for Handle (2 Req'd) – A384, A/B385, A/B386, B394	
13	13305	Collar O-ring – 387/388, 397/398	
13A	14268	Collar O-ring – A384, A/B385, A/B386, B394	
14	13288	Vlv Stem Asy – 387/388, 397/398	
14A	14327	Vlv Stem Asy – A384, A/B385 A/B386 & B394	
15	05243	Vlv Stem O-ring – 387/388, 397/398	
15A	05235	Vlv Stem O-ring – A384, A/B385 & A/B386	
16	00383	Spring – 387/388, 397/398	
16A	01074	Spring – A384, A/B385 A/B386. B394	
17	15507	Dtube/Retainer Asy –397/398	
17A	14285	Dtube/Retainer Asy – 387/388	
17A	06069	Dtube/Retainer Asy – A384	
	01075	Dtube/Retainer Asy – A385	
	06212	Dtube/Retainer Asy – A/B386, B385, B394	
18	14778	Strap & Clip Asy (blk plastic) – 387/388, 397/398	
19	14568	Fill Adapter – 387/388, 397/398	
19A	14569	Fill Adapter – A384, A/B385 A/B386, B394	
20	03038	Hydrotest Adapter (1¼" – 12UN2B) – 387/388, 397/398	
20A	03610	Hydrotest Adapter (1" – 12UN2B) – A384, A/B385, A/B386,B394	
NOTE:	Replacement valve assemblies include new valve body, gauge, handle and lever.		





RECHARGE/RECOVERY MANUAL
NO. 14795
for HALOTRON I FIRE EXTINGUISHERS

Using
AMEREX
P/N 14535 Halotron I Recharge Kit
and Bulk Recharge Cylinders
Models
890 – 35 lb. 891 – 80 lb. 892 – 200 lb.

RECHARGE/RECOVERY MANUAL
HALOTRON I FIRE EXTINGUISHERS

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INTRODUCTION

The principles and procedures contained in this manual are intended for the filling and agent recovery associated with the servicing of Amerex Halotron I hand portable fire extinguishers. They are intended for qualified service agencies using the Amerex P/N 14538 Halotron Recharge Kit and any of the Amerex supplied Bulk Recharge Cylinders (Model 890 – 35 lb., Model 891 – 80 lb. or Model 892 – 200 lb.). The process of charging fire extinguishers with Halotron I involves working with a pressurized liquid and high pressure gas, so it should only be undertaken by trained personnel.

It is recognized that most fire extinguisher service technicians will have had prior experience servicing halon 1211 extinguishers. While the procedures for Halotron I are similar in most respects, there are two main differences: the type of elastomers (collar o-rings, valve stem seals) and the use of argon (instead of nitrogen) for pressurization. The elastomers used with halon 1211 (or dry chemical) are not compatible with Halotron I. Chloroprene based or EPDM rubber is used in all Amerex o-rings, valve stem seals and recharge kit seals. If incompatible elastomers are used, the result can be loss of extinguisher pressure or blockage of the valve preventing proper discharge.

Extinguisher performance is enhanced and required cylinder volume is reduced by pressurizing extinguishers with argon, which is more soluble in Halotron I than nitrogen. As the extinguisher discharges and the extinguisher's internal pressure drops, argon in solution will move from the Halotron I liquid into the vapor space. This transfer of argon from the liquid to the vapor space helps maintain a higher and more even pressure throughout the extinguisher discharge, especially at cold temperatures. **NITROGEN SHOULD NOT BE USED TO PRESSURIZE HALOTRON I EXTINGUISHERS OR BULK RECHARGE CYLINDERS**.

SAFETY PRECAUTIONS

The process of filling extinguishers and bulk recharge cylinders with Halotron I involves the use of a pressurized liquid and high pressure gas. The process should only be undertaken by personnel trained in the use of these kinds of materials. High pressure (compressed) gases can be extremely dangerous if not handled properly. Improperly installed or maintained pressure regulators or hose assemblies can cause system failures and result in possible personal injury. Follow the instructions precisely for the installation of these components.

A. Chemical Hazards

The primary component of Halotron I is HCFC-123 (2,2-dichloro-1, 1, 1-trifluoromethane). Toxicologically, this chemical has been widely studied. The LC_{50} (4 hr., rats) has been determined to be between 2.8 and 3.2% by volume. The cardiotoxic LOAEL (lowest observable adverse effect level) is 2% by volume. The NOAEL (no adverse effect level) is 1% by volume. HCFC-123 is relatively non-toxic, however, all measures should be taken to minimize inhalation of any vapors.

The primary hazard associated with argon used for extinguisher pressurization is its ability to function as a simple asphyxiant (i.e. to displace oxygen. **FILLING OPERATIONS SHOULD BE CONDUCTED IN A WELL VENTILATED ENVIRONMENT.**

B. Personal Protective Equipment

To insure proper protection, it is recommended that standard equipment for handling compressed gases and refrigerants be used for filling operations. This would include the use of rubber gloves and eye goggles.

All containers (including high pressure gas cylinders) used in filling operations should be secured to stationary objects to prevent uncontrolled movement.

It is recommended that persons involved in filling operations refrain from smoking.

NOTE: Consult the Halotron I Material Safety Data Sheet (MSDS) for more safety information. The "Halotron I Health and Toxicity Summary Bulletin" should also be consulted for additional information.

FILLING/AGENT RECOVERY PRINICPLES

It is imperative that before performing filling or agent recovery procedures, the following guidelines are followed:

1. All of the Maintenance Procedures detailed in Amerex P/N 14425 "Owners Service Manual" be completed.
2. All extinguisher components and filling equipment components are compatible for use with Halotron I.

Extinguisher filling/agent recovery should be performed only by trained technicians. Amerex parts and service equipment should be used in the performance of these procedures. Contact Amerex Corporation if you have any questions regarding parts, recharging equipment, hydrostatic testing or need for any specialized tools.

All equipment should be maintained dry and free of moisture. Purging all lines with argon each time the filling apparatus has been exposed to air will help minimize the amount of moisture that can gain entry to the system.

The general filling procedure follows three basic steps:

1. Extinguisher evacuation
2. Halotron I filling (liquid transfer)
3. Extinguisher final pressurization

A. Evacuation Principals

Extinguishers may be evacuated one at a time, or in groups through the use of a manifold system. Cylinder evacuation prior to filling is strongly recommended for two reasons.

1. To remove moist air from the cylinder, which if present can cause corrosion.
2. To accelerate the filling process by removing some of the back pressure that results from entrapped air.

The vacuum pump selected should be capable of pulling a minimum vacuum of 27 inches (686 mm) mercury (at sea level).

B. Halotron I Filling (Liquid Transfer) Principals

Once the extinguisher has been vacuumed, it is ready to be filled with Halotron I (sometimes referred to as Halotron I Presat Base). The filling lines and quick connect used in the filling process should be compatible with Halotron I. Elastomers should be Chloroprene based on EPDM rubber.

One of the key differences between Halon 1211 and Halotron I is that the Halotron I bulk supply cylinder must be kept under pressure during the transfer of liquid from the bulk supply cylinder to an extinguisher. Halotron I is a blend of two gases forced into a base of HCFC-123 by pressure. To insure that the uniformity of the Halotron I blend stays consistent during transfer, a supply of argon must be connected to the Halotron I bulk supply cylinder to maintain a minimum pressure of 95 psig (655 kPa). This is easily accomplished with a high pressure argon cylinder and a regulator.

No pumps are necessary to transfer the Halotron I liquid into the extinguishers. The transfer can be completed by connecting the filling hose to the extinguisher and opening the extinguisher valve. Once the extinguisher valve is opened, the pressure difference will allow the Halotron I to fill the extinguisher. Once the desired Halotron I weight is reached, the extinguisher valve can be closed.

C. Final Pressurization Principals

The pressurizing gas for Halotron I is argon and should conform to the specification in Fig. A. Argon is somewhat soluble in Halotron I. When an extinguisher is discharged, the argon in solution is released into the extinguisher vapor space, helping to maintain the pressure. Since nitrogen is considerably less soluble in Halotron I, it should **NEVER** be used to pressure Halotron I. Pressurization with nitrogen could cause a decrease in the performance of the extinguisher.

The final pressurization of an extinguisher is accomplished by:

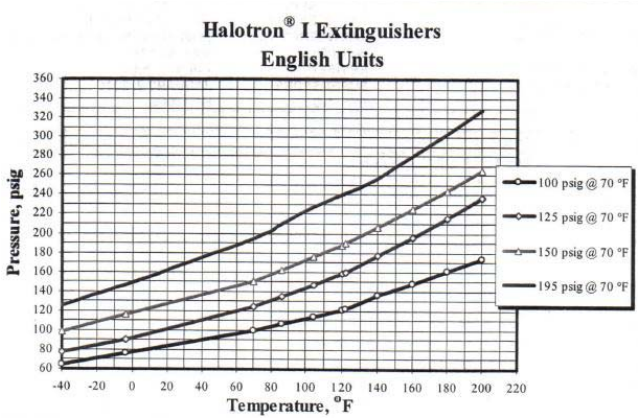
1. Pressurizing the extinguisher with argon to the desired pressure.
2. Agitating the extinguisher until the pressure equalizes
3. Repeating Steps 1 and 2 until pressure stabilizes at the correct operating pressure.

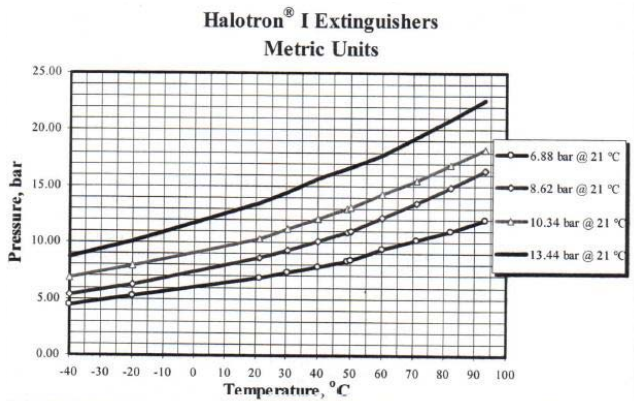
ARGON SPECIFICATIONS		
Property	**Minimum**	**Maximum**
Assay	99.998%	- - -
Oxygen		4.0 ppm
Total Hydrocarbons	- - -	0.5 ppm
Water	- - -	4 ppm
Dew Point	- - -	-90°F (-68°C)

Fig. A

The agitation of the extinguisher aids in the absorption of argon into the Halotron I liquid. The agitation does not have to be vigorous but can be accomplished by a gentle rocking of the extinguisher for 5 to 10 seconds. It is not uncommon for the extinguisher to drop more than 20 or 30 psig (38 kPa to 207 kPa) the first time it is agitated.

Depending on the temperature when filling the extinguisher, it may be necessary to adjust the final pressure. See temperature vs. pressure charts below.





D. Agent Recovery Principles:

Halotron I should always be stored and transferred under pressure to ensure that the inert gases in the blend are not released. The Halotron I agent in the extinguisher can be transferred to a recovery cylinder either by a pump or by using pressure differentials. If using a pump, ensure that all pump materials and seals are compatible with Halotron I.

Generally, there are four steps to this transfer when not using a pump:

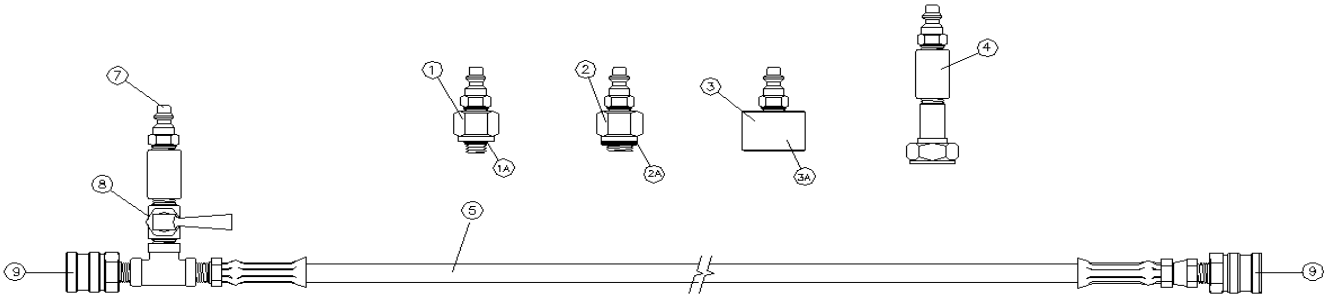
1. Connect the extinguisher to the line leading to the recovery cylinder liquid valve.
2. Open the extinguisher valve to allow the liquid from the extinguisher to transfer to the recovery cylinder (because of back-pressure, not all liquid will transfer).
3. Re-pressurize the extinguisher to operating pressure with argon (flip valve allows this to be accomplished without disconnecting the extinguisher from the line to the recovery cylinder).
4. Repeat Steps 2 and 3 until no more liquid will transfer from the extinguisher (usually 2-3 times).

When the transfer is complete, the extinguisher can be vented and serviced according to the step by step procedure. There will be a small amount of residual Halotron I left in the extinguisher which will evaporate when the extinguisher is opened. Agent recovery should be performed in a well-ventilated area to prevent vapor accumulation.

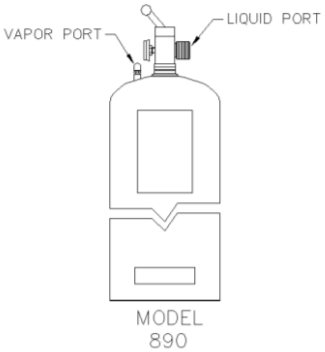
After servicing has been completed and the extinguisher is ready to be refilled, the recovery cylinder can be treated as any other Halotron I bulk cylinder. Refill the extinguisher according to the step by step procedure. Between each extinguisher service, the recovery cylinder should be vented down to approximately 5 psig (34 kPa). By venting to this minimal pressure, a small liquid heal will remain (minimizing further heal loss) and the positive pressure will ensure that no contaminants enter the cylinder.

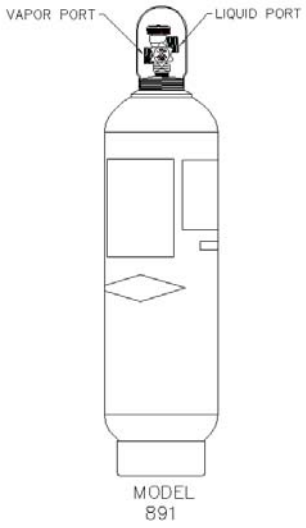
Prior to the first time use of a recovery cylinder, the cylinder should be internally inspected for cleanliness and then vacuumed to a minimum of 27 inches (686 mm) mercury (at sea level).

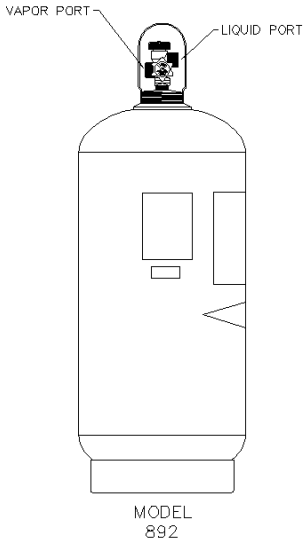
AMEREX
P/N 14538
HALOTRON I RECHARGE KIT



AMEREX P/N 14538 HALOTRON I RECHARGE KIT			
Item No.	Part No.	Description	Quantity Included in Kit
1	14569	Fill Adapter – Aluminum Valve	1
1A	01532	Hose/Nozzle Gasket (o-ring)	1
2	14568	Fill Adapter – Brass Valve	1
2A	06978	Hose Gasket – Brass Valve	1
3	14649	Fill Adapter Assembly (Installs to Vapor Port on 890, 891 & 892)	1
3A	14540	Gasket for Fill Adapter Assembly	1
4	14648	CGA Fill Adapter Assembly	1
5	14537	Hose Assembly (6 ft.)	1
6	14536	Adapter “Quick Connect” Male (Fill Adapters)	4
7	01406	Adapter “Quick Connect” Male (Recharge Hose Assembly)	1
8	01733	Toggle Valve	1
9	14535	Adapter “Quick Connect” Female	2







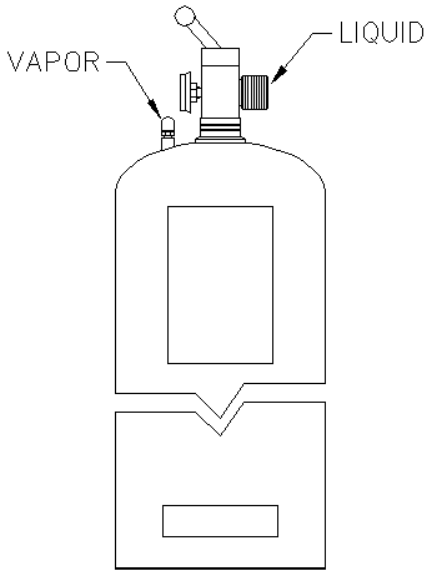
HALOTRON I RECOVERY
using
Amerex P/N 14796 Recovery Cylinder & P/N 14538 Halotron I Recharge Kit

NOTE: In order that a partially discharged or leaking Halotron I extinguisher may be properly serviced and recharged, it will be necessary to have a Recovery Cylinder (either empty or with sufficient capacity to void the extinguisher of remaining Halotron I). The P/N 14796, 35 lb. capacity Recovery Cylinder is ideal for this purpose.

TRANSFER TO RECOVERY CYLINDER

1. Confirm that the hoses and components are clean and free of debris. Purge all hoses with argon. Check for leaks and repair if necessary.
2. Ensure that the recovery cylinder is ready for the liquid transfer. It should be either under a vacuum or have a minimal pressure, about 5 psig (34 kPa).
3. Starting with all valves closed, connect the charging hose female quick connect (toggle valve end) to the extinguisher fill adapter male quick connect.
4. Connect the charging hose female quick connect to the recovery cylinder fill adapter male quick connect.
5. Connect the argon gas supply hose female quick connect to the toggle valve male quick connect.
6. Adjust the toggle valve to direct the flow from the extinguisher to the recovery cylinder.
7. Set the argon regulator to 0 psig (0 kPa) and then open the argon cylinder valve.
8. Set the argon regulator to the extinguisher operating pressure and open the toggle valve. Depress extinguisher operating lever – this will pressurize the extinguisher. After operating pressure is reached, release the operating lever and close the toggle valve.
9. Open the “T” handle valve on the recovery cylinder (rotate towards charging hose).
10. Open extinguisher valve (depress operating lever) to allow the extinguisher contents to flow into the recovery cylinder.
11. After the flow has stopped, close the extinguisher valve (release operating lever). Close the recovery cylinder valve.
12. Open the toggle valve to allow the flow of additional argon to repressurize the extinguisher.
13. Open the extinguisher valve (depress lever) and re-pressurize the extinguisher with argon to its operating pressure.
14. Close the toggle valve, open the recovery cylinder valve and open the extinguisher valve (depress lever).
15. After the flow has stopped, close the extinguisher valve (release lever). Close the recovery cylinder valve.
16. If there is still appreciable liquid in the extinguisher, repeat Steps 12 through 15 as necessary.
17. Make sure that your area is well ventilated and vent the remaining contents of the extinguisher and perform the maintenance procedures detailed in P/N 14425 Owner’s Service Manual prior to recharging the extinguisher.

NOTE: In the Recovery/Recharge procedure, it will be impossible to completely empty the recovery cylinder contents. A heal in the recovery cylinder of up to 1 pound is normal and should be expected. If recovering a full extinguisher (leaker), the need for an additional supply of Halotron I agent should be anticipated so that the extinguisher may be brought back to its full charged weight. If the Halotron I in the Recovery Cylinder will not be used immediately, the cylinder should be stored with 95 – 100 psig argon pressure maintained to keep the Halotron I/argon mix in solution. The pressure should be checked once a week or more frequently.



P/N 14796
RECOVERY CYLINDER

RECHARGING HALOTRON I EXTINGUISHERS
with
Amerex Model 890, 35 lb. Halotron I Recharge System & P/N 14538 Halotron I Recharge Kit

SET UP INSTRUCTIONS

1. Attach fill adapter P/N 14649 to the recharge cylinder valve.
2. Install "Female Quick connect" end of charging hose assembly with toggle valve to the fill adapter.
3. Verify that there is at least 100 psig of argon pressure in the recharge system cylinder. Add argon gas if required.

RECHARGING AN EMPTY HALOTRON I EXTINGUISHER

1. Extinguisher to be recharged must be properly serviced and a new o-ring and valve stem assembly installed (see Amerex Halotron I parts sheet). The extinguisher cylinder interior must be clean and dry.
2. Connect the empty extinguisher to a vacuum pump. Open extinguisher valve (depress operating lever) and evacuate the extinguisher to approximately 27 inches (at sea lever). Close extinguisher valve (release operating lever) and disconnect from the vacuum pump.
3. Install proper Halotron I fill adapter to extinguisher (see parts sheet).
4. Connect charging hose to the extinguisher fill adapter. Place extinguisher on an accurate scale.
5. Open the valve on the Model 890 recharging system by rotating the "T" handle toward the charging hose, filling the hose with Halotron I.
6. Set tare on the scale.
7. Open the extinguisher valve (depress operating lever) and begin transfer of Halotron I liquid to the extinguisher.
8. Periodically close the extinguisher valve (release operating lever) and check the weight. Also check the pressure in the recharge system cylinder (a pressure of 100 psig argon must be maintained in the recharge system cylinder).
9. When the extinguisher has reached the proper fill weight, close the extinguisher valve (release operating lever) and close the recharge system cylinder valve (rotate "T" handle away from charging hose).
10. Attach a regulated argon supply hose to the male quick connect of the toggle valve on the charging hose. the regulator should be set to approximately 10 psi higher than the extinguisher operating pressure.
11. Open the toggle valve on the charging hose.
12. Open the extinguisher valve (depress lever) and pressure with argon until the pressure equalizes.
13. Close the extinguisher valve (release lever) and gently rock the extinguisher back and forth for 10-15 seconds allowing the argon to be absorbed into the Halotron I and causing the extinguisher pressure gauge reading to fall.
14. Repeat Steps 12 and 13 until the extinguisher pressure gauge equalizes with the argon pressure supply (just slightly above the extinguisher operating pressure). This normally takes 3 repetitions.
15. Close the toggle valve and disconnect the argon gas supply line.
16. Disconnect the filled and pressurized extinguisher from the charging hose and check for proper fill weight. Check extinguisher for leaks and remove all liquid residue.
17. Install ring (safety) pin, lockwire (tamper) seal and recharge tag.
18. Install nozzle or hose assembly.
19. Hold extinguisher for 24 to 48 hours, verify pressure and return to customer.

SHUT DOWN INSTRUCTIONS

After following the above procedure, there may be a small amount of Halotron I left in the charging hose. If it will be more than 8 hours before another extinguisher will be filled, Amerex recommends bleeding this Halotron I off into the atmosphere. The bleed off process will prolong the life of your recharge equipment.

Follow this procedure to remove Halotron I captured in the charging hose:

1. Make sure that the Halotron I recharge cylinder is CLOSED.
2. Point the male quick connect plug for the argon supply away from yourself and others and open the toggle valve. A small amount of Halotron I and argon may be discharged. Close the toggle valve. The charging hose is now empty of Halotron I and argon pressure.

FILLING (LIQUID TRANSFER) OF HALOTRON I EXTINGUISHERS with Amerex Models 891 (80 lb.) and 892 (200 lb.) Halotron I Recharge Systems and P/N 14538 Halotron I Recharge Kit

SET UP INSTRUCTIONS

1. Attach fill adapter (P/N 14648) to the recharge cylinder valve.
2. Confirm that all hoses and components are clean and free of debris. Purge all hoses with argon. Check for leaks and repair if necessary.
3. Install female quick connect end of charging hose assembly with toggle valve to the fill adapter.
4. Connect the argon supply line quick connect to the vapor port quick connect on the recharge system cylinder.

NOTE: IT IS VERY IMPORTANT THAT BULK CYLINDER PRESSURE BE MAINTAINED AT A MINIMUM OF 100 PSIG (689 kPa) THROUGHOUT THE FILLING PROCESS USING A CONSTANT FLOW OF ARGON.

REFILLING (LIQUID TRANSFER) OF AN EMPTY HALOTRON I EXTINGUISHER

1. EXTINGUISHER TO BE REFILLED MUST BE PROPERLY SERVICED AND A NEW O-RING AND VALVE STEM ASSEMBLY INSTALLED (SEE Amerex Halotron I parts sheet). The extinguisher cylinder interior must be clean and dry.
2. Connect the empty extinguisher to a vacuum pump. Open extinguisher valve (depress operating level) and evacuate the extinguisher to approximately 27 inches (at sea level). Close extinguisher valve (release operating lever) and disconnect from the vacuum pump.
3. Install proper Halotron I fill adapter to extinguisher (see parts sheet).
4. Starting with all valves closed, set the argon regulator at 0 psig (0 kPa) and then open the argon cylinder valve. Set the regulator to 100 psig (689 kPa). Verify the correct pressure on the pressure gauge and adjust as necessary.
5. Completely open the bulk cylinder vapor valve and let the cylinder pressure stabilize for one minute before proceeding to the next step. **This valve is to remain open during the entire liquid transfer.**
6. Connect the charging hose to the extinguisher fill adapter.
7. Open the cylinder liquid valve on the model 891 or 892 recharging system, filling the hose with liquid.
8. Place the extinguisher on an accurate scale.
9. Tare weight (zero) the scale. This will take into account the liquid now in the hose and the net weight transferred will be indicated.
10. Open the extinguisher valve (depress operating lever) and allow liquid transfer into the extinguisher until the desired weight is achieved as determined by the scale.
11. When the desired liquid weight is reached, close the extinguisher valve (release lever) and close the Halotron I bulk cylinder liquid valve.
12. Close the bulk cylinder vapor valve and the argon supply cylinder valve.
13. Open the argon gas hose vent (if installed) to relieve pressure in the gas hose.
14. Disconnect the argon gas hose quick connect from the bulk cylinder vapor valve quick connect.
15. Proceed with final pressurization – page 12.

FINAL PRESSURIZATION OF HALOTRON I EXTINGUISHERS with Amerex Models 891 (80 lb.) and 892 (200 lb.) Halotron I Recharge System and P/N 14538 Halotron I Recharge Kit

FINAL PRESSURIZATION PROCEDURE

1. Confirm that the hoses and components are clean and free of debris. Purge all hoses with argon. Check for leaks and repair if necessary.
2. Start with all valves closed, connect the argon gas supply cylinder female quick connect to the extinguisher fill adapter male quick connect.
3. Set the regulator at 0 psig (0 kPa) and open the argon cylinder valve.
4. Open the argon gas cylinder valve and set the regulator to the extinguisher operating pressure. If the temperature range is not in the range of 70±5°F, consult the pressure/temperature chart on page 5 for the correct temperature/pressure adjustment. Verify the correct pressure on the pressure gauge and adjust as needed.
5. Open the extinguisher valve (depress lever) and allow argon gas to transfer into the extinguisher until the pressure equalizes.
6. Close the extinguisher valve (release lever) and agitate the extinguisher by vigorously rocking it back and forth for 5 to 10 seconds.

   Note: A large amount of argon will be absorbed into the Halotron. It is very important that the extinguisher be rocked well to allow this absorption.

7. Repeat steps 5 and 6 until the extinguisher pressure equalizes at the correct operating pressure for the extinguisher. This will normally require 3 repetitions.
8. Close the argon supply valve and then open the argon supply hose vent (if installed) to relieve the pressure in the hoses.
9. Disconnect the argon supply hose quick connect from the extinguisher adapter. Remove the extinguisher adapter.
10. Install ring (safety) pin and lockwire seal.
11. Install nozzle or hose assembly and recharge tag.
12. Hold extinguisher for 24 to 48 hours, verify pressure and return to customer.

    Caution: Never leave pressure in a hose (either argon supply or recharge) for a prolonged period of time.

SHUT DOWN INSTRUCTIONS

After following the above procedure, there may be a small amount of Halotron I left in the charging hose. if it will be more than 8 hours before another extinguisher will be filled, Amerex recommends bleeding this Halotron I off into the atmosphere. The bleed off process will prolong the life of your recharge equipment.

Follow this procedure to remove Halotron I captured in the charging hose:

1. Make sure that the Halotron I recharge cylinder is **CLOSED**.
2. Point the male quick connect plug for the argon supply away from yourself and others and open the toggle valve. A small amount of Halotron I and argon may be discharged. Close the toggle valve. The charging hose will be empty of Halotron I and argon pressure.

HALOTRON I EXTINGUISHER SERVICE PROCEDURES
for
A Leaking Extinguisher or Bulk Supply Cylinder

If an extinguisher is leaking but has not lost substantial pressure, the Halotron I can be recovered following the procedures on Page 7 (Halotron I Recovery). If the extinguisher has lost all or most of the pressure, which would cause a loss of the gases from the Halotron I blend, perform the following:

1. Pressurize the extinguisher with argon before attempting a transfer of the contents into a recovery cylinder.
2. Recover the Halotron I liquid in the extinguisher through the prescribed normal agent recovery techniques (see page 7) into a Halotron I bulk cylinder (supply or recovery) which contains “fresh” Halotron I. There will be enough additional gases in the bulk cylinder to “reconstitute” the recovered Halotron I.

If a bulk cylinder is leaking but has not lost substantial pressure, the Halotron I can be transferred to a new cylinder by performing the following:

NOTE: If your Halotron I bulk cylinder has lost a substantial amount of pressure or has lost total pressure, please notify Amerex immediately.

Model 890 – 35 lb. Halotron I Bulk Recharge Cylinder only

1. Attach the P/N 14649 fill adapter to the model 890 operating valve. Connect the argon supply hose to the adapter, open the “T” handle valve and pressurize the model 890 to 100 psig (689 kPa). Attach the recharge kit hose assembly to the fill adapter.
2. Attach the recharge hose assembly to a new empty bulk cylinder which is empty and under a vacuum.

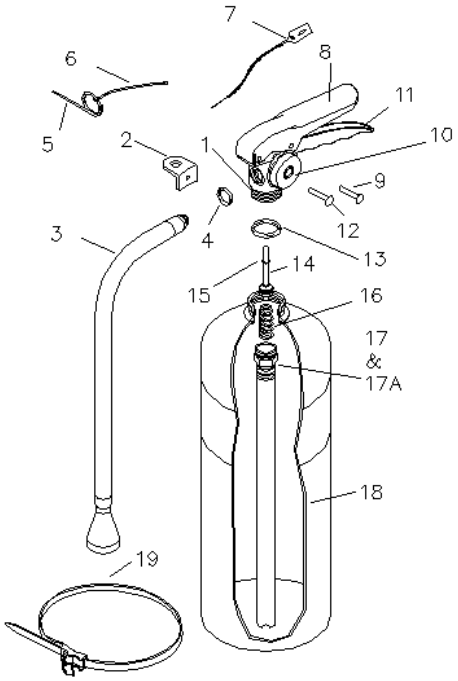
NOTE: An additional P/N 14649 fill adapter will be required. The Halotron I recharge kit includes only one.

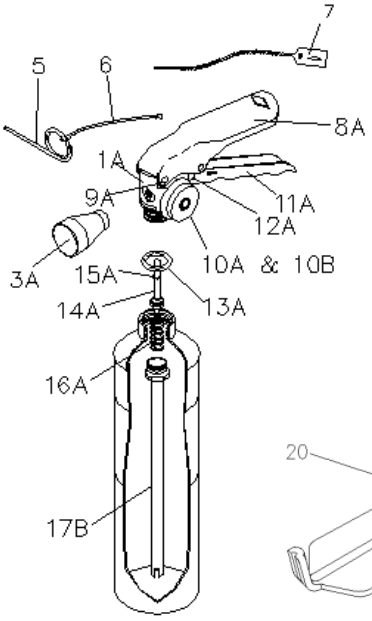
3. Open the valves on the leaking and new cylinder and transfer the agent into the new cylinder. When the pressure equalizes and no further liquid is moving from leaking to new cylinder, close bot cylinder valves. Depress the air (vapor) valve needle on the “new” cylinder and vent argon gas pressure until the “new” cylinder pressure is lower than the “leaker”.
4. Detach the recharge hose assembly quick connect from the leaking cylinder and repressurize with argon to 100 psig (689 kPa).
5. Repeat this process until the maximum amount of liquid Halotron I has been transferred to the new cylinder. Vent the recharge hose assembly when completed. Keep in mind that up to a pound heel will always be left in the leaking cylinder.

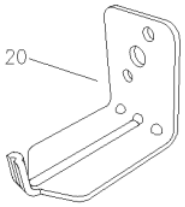
Models 891 and 892 – 80 and 200 lb. Halotron I Bulk Recharge Cylinders

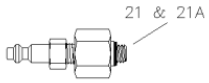
1. Connect the argon supply hose to the vapor valve on the leaking supply cylinder and maintain a constant argon pressure of 100 psig (689 kPa) throughout the transfer.
2. Connect the recharge hose assembly to the liquid supply on the leaking cylinder to the liquid supply on a new cylinder that is under a vacuum.
3. Open the liquid valves on both cylinders to allow the liquid to transfer into the new cylinder.
4. When the liquid transfer is complete, allow the cylinders to equalize pressure at 100 psig (689 kPa) before closing the liquid valves and venting the hose.

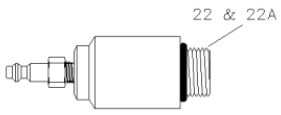
Parts List
for
1.4, 2½, 5, 5½, 11 & 15½ lb. Halotron I "Clean Agent"
Stored Pressure Fire Extinguishers
A384(1.4 lb), A385, B385(2½ lb), A386, B386 (5 lb),B394(5½ lb) Aluminum Valve
387 (11 lb), 388 (15½ lb), 397 (11 lb) 398 (15½ lb) Brass Valve

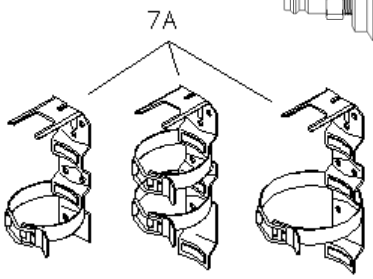












Item No.	Part No.	Description	Std. Pkg.
1	14527	Vlv Asy – 387 & 388, 397 & 398	1
1A	14525	Vlv Asy – 384	1
	14526	Vlv Asy – A385 & A386	
2	16694	Hanger Loop & Screw – 387,388,397,398	6
3	14436	Hose & Nozzle Asy – 387, 397 (.247)	1
	14449	Hose & Nozzle Asy – 388, 398 (.295)	1
3A	14407	Nozzle – A384 (.121)	1
	14408	Nozzle – A385, B385 (.166)	
	14409	Nozzle – A386, B394 (.277)	
4	06978	O-ring (hose) – 387 & 388	24
4A	01532	O-ring (nozzle) – A386,A385,A386	24
5	00160	Ring Pin, Stainless Steel – ALL	24
6	00532	Chain (Nylon) for Ring Pin - ALL	24
7	01387	Lockwire Seal (Yellow) – ALL	500
8	07762	Lever & Rivet – 387, 388, 397, 398	1
8A	06067	Lever & Rivet – A384	1
	11825	Lever & Rivet – A385 & A386, B394	
9	01563	Rivet Only for Lever – 387,388,397,398	24
9A	01060	Rivet Only for Lever – A384,A385,A386	24
10	14418	Gauge – 125 PSI – 387,388,A384,397,398	1
10A	14417	Gauge – 100 PSI – A385 & A386	1
10B	16221	Gauge – 150 PSI – B394	1
11	09020	Handle & Rivets – 387, 388, 397, 398	1
11A	09001	Handle & Rivets – A384	1
12	01564	Rivet Only for Handle (2 req)- 387,388,397,398	24
12A	01064	Rivet Only for Handle – A384, A385, A386	24
13	13305	Collar O-ring (Green) – 387, 388, 397, 398	12
13A	14268	Collar O-ring (Green) – A384, A385, A386, B394	12
14	13288	Vlv Stem Asy (Grn Seal) - 387, 388, 397, 398	6
14A	14327	Vlv Stem Asy (Grn Seal) – A384, B384, A385, B385, A386, B386, B384	6
15	05243	Vlv Stem O-ring – 387, 388, 397, 398	24
15A	05235	Vlv Stem O-ring – A384, A385, A386, B394	24
16	00383	Spring – 387, 388, 397, 398	6
16A	01074	Spring, A384, A385, A386, B394	6
17	14285	Downtube/Retainer Asy – 387, 388	1
17A	15507	Downtube/Retainer Asy – 397, 398	1
17B	06069	Downtube/Retainer Asy – A384	1
	01075	Downtube/Retainer Asy – A385	
	06212	Downtube/Retainer Asy – A386, B394	
19	14478	Strap & Hose Clip Asy (Black) Plastic – ½" Hose) – 387 & 388	1
20	00575	Wall Hanger – 387, 388, 397, 398	1
20A	05530	845 Vehicle Bkt (Red) – A384	1
	01089	817 Vehicle Bkt, A385	1
	06098	817S Vehicle Bkt, 2 Strap (Red) – A385	1
	01211	818 Vehicle/Marine Bkt (Red) – A386, B394	1
	05294	818SVehicle/Marine Bkt, 2 Strap(Red) – A386, B394	1
21	14568	Fill Adapter (w/Snap Tite Quick Connect) – 387, 388, 397, 398	1
21A	14579	Fill Adapter (w/Snap Tite Quick Connect) – A384, A385, A386, B394	1
22	03038	Hydrotest Adapter (1¼"-12UN2B) – 387 & 388, 397, 398	1
22A	03610	Hydrotest Adapter (1"-12UN2B) – A384, A385, A386, B394	1
ALL VALVE ASY INCLUDES VLV BODY, GAUGE, HANDLE & LEVER			

NOTES:

INSPECTION, MAINTENANCE AND RECHARGE SERVICE MANUAL P/N 16303

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

WARNING: DO NOT USE THIS EXTINGUISHER ON CLASS D FIRES OR ANY FLAMMABLES THAT WILL REACT WITH WATER.

PROTECT FROM FREEZING.

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

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WATER MIST HAND PORTABLE FIRE EXTINGUISHERS
Model B270 – 1 ¾ Gallon
Model B272 – 2 ½ Gallon

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

MAINTENANCE

[NFPA-10] At least once a year or more frequently if circumstances require, maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE – SERVICE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely attached and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test in accordance with instructions in CGA C-1 and C-6 and NFPA 10.

   Note: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Weigh the extinguisher and compare with weight printed in the "Maintenance" section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.

4. Check the date of manufacture printed on the extinguisher label (nameplate) or on the agent cylinder dome. The agent cylinder must be hydrostatically tested every 5 years to the test pressure indicated on the nameplate. REPLACE EXTINGUISHING AGENT WITH NEW AMEREX CHARGE AT TIME OF HYDROTEST.

5. Visually inspect the pressure gauge:
   a. If bent, damaged or improper gauge, depressurize and replace.
   b. If pressure is low, check for leaks.
   c. If over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions.

6. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

7. Inspect discharge lever for any dirt or corrosion which might impair freedom of movement. Inspect carrying handle for proper installation. If lever, handle or rivets are damaged replace with proper Amerex part(s).

8. Install new tamper seal if broken and record service data on the extinguisher inspection tag.

9. Remove hose & wand assembly, inspect for damage, replace as necessary. Blow air through nozzle or hose and horn to insure passage is clear of foreign material.

10. Inspect the valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures. If valve removal is necessary, complete all steps in the Recharge Procedure.

11. Install hose & wand assembly. Torque swivel nut lightly with 15/16" wrench.

12. Replace the extinguisher on the wall hanger or in the vehicle bracket making sure that it fits the bracket properly and the bracket is securely attached – replace the bracket if necessary.

RECHARGE

WARNING:

a. Before attempting to disassemble, be sure the extinguisher is completely depressurized.
b. Use a regulated nitrogen pressurizing source. Set the regulator no more than 125 psi (862 kPa).
c. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher for this purpose.
d. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.

RECHARGING PROCEDURE

1. Perform steps 1 through 10 of the "Maintenance-Service Procedure" section.

2. Discharge all remaining pressure and contents, making sure that there is no remaining pressure. Do not top off or reuse water.

3. Remove the valve assembly and disassemble by removing downtube assembly (use a wrench on the brass retainer, not the plastic tube), spring and valve stem assembly. Remove the collar o-ring from the valve and plastic fill tube from the cylinder.

4. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with air or nitrogen. Inspect the spring and downtube assembly, and replace parts if worn or damaged. Replace the valve stem and collar o-ring. Lubricate the collar o-ring and small o-ring on the valve stem with Visilox V-711 (do not lubricate the valve stem seal). Inspect the downtube. If it is cracked or deformed replace with proper downtube. Inspect downtube o-ring, replace if necessary.

5. Rinse the cylinder with clean water and inspect the interior following CGA Visual Inspection Standard C-6.

6. Firmly replace the plastic fill tube and fill cylinder with DE-IONIZED WATER to the bottom of the fill tube. (Model B270 1.8 U.S. gals./6.81 liters Amerex Charge 670)(Model B272 2-½ U.S. gals/9 ½ liters Amerex Charge 671).

   NOTE: THE USE OF DE-IONIZED WATER CONFORMING TO NFPA 10 IS REQUIRED.

7. Install a "Verification of Service" collar around neck of cylinder. Install valve assembly to the cylinder and properly align.

   CAUTION: HAND TIGHTEN THE VALVE COLLAR NUT 100-125 IN LBS. MAX (1.15-1.44 KG/M. OVER-TIGHTENING WITH A WRENCH WILL DAMAGE THE VALVE.

8. Install a P/N 09492 Fill Adapter (High Performance) to the male valve outlet (where the hose assembly attached) and pressurize with nitrogen to 100 psi (690 kPa). The pressure regulator should be set to no more than 125 psi (862 kPa). Remove Fill Adapter.

   CAUTION: DO NOT USE COMPRESSED AIR TO PRESSURIZE THIS EXTINGUISHER.

9. Check the collar, gauge, cylinder welds and valve orifice for leaks using a leak detection fluid or a solution of soapy water. Remove leak detection fluid from the valve assembly by blowing out with air and wipe exterior of the extinguisher to dry.

10. Install house & wand assembly into the operating valve

    NOTE: CAREFULLY POSITION THE HOSE TO A NATURAL ANGLE BEFORE TIGHTENING THE HOSE FEMALE SWIVEL NUT. TORQUE SWIVEL NUT LIGHTLY USING 15/16" WRENCH. INSTALL IN HOSE CLIPS.

11. Install ring pin with ring facing the front of the extinguisher.

12. Install tamper seal. Record recharge date and attach new recharge tag.

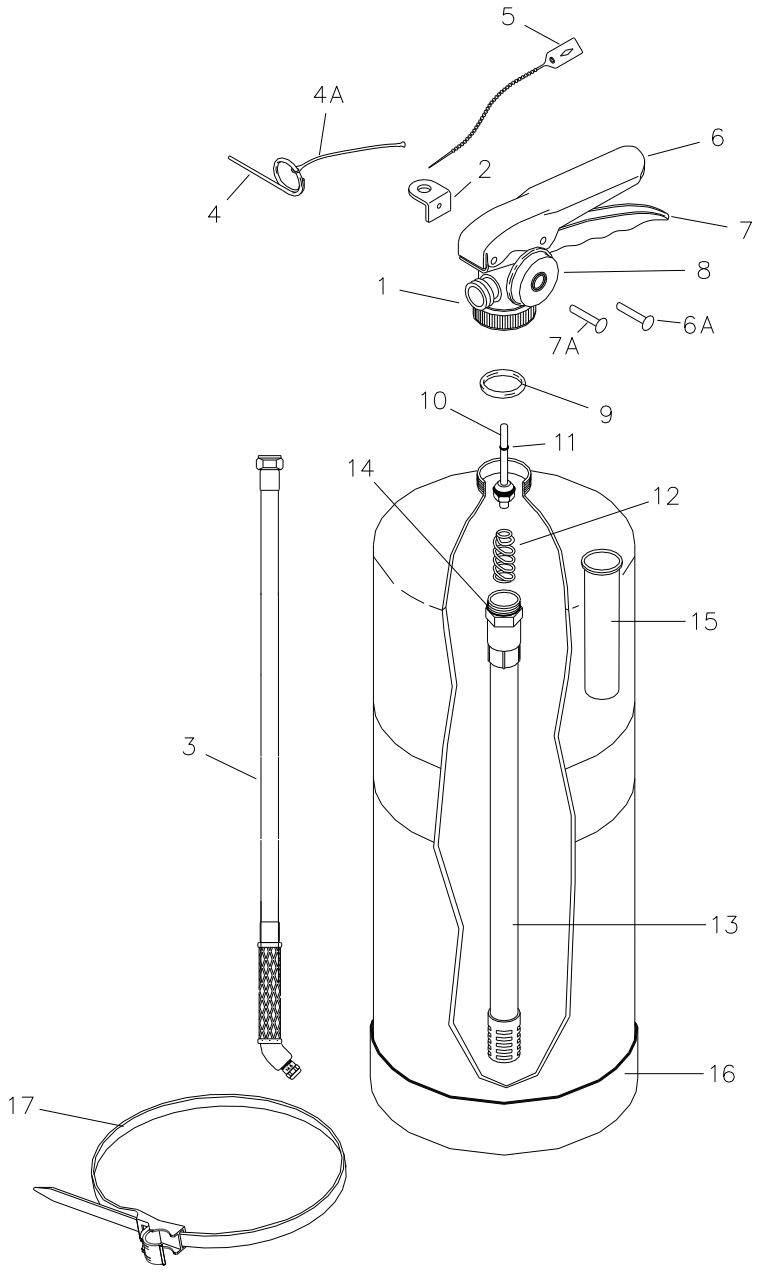
13. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the Maintenance section of the nameplate (label).

TROUBLESHOOTING GUIDE

WARNING: Determine the source of a leak before the extinguisher is depressurized. The extinguisher must be completely depressurized before any attempt is made to devalve it and correct a leakage problem. To depressurize – hold the extinguisher in an inverted position and slowly squeeze the discharge handle. Some water remaining in the downtube will be expelled so care should be taken in the area being used for depressurizing. Thoroughly clean all valve parts after depressurization and valve removal.

	PROBLEM	CORRECTIVE ACTION
1.	Leak at collar o-ring	Remove valve assembly, clean collar (knurled) nut thoroughly and install new collar o-ring. Lubricate with Visilox V-711.
2.	Leak through valve	Check valve stem seating area for scratches or foreign matter. Clean seating area with a tooth brush and soft cloth. Install new valve stem assembly.
3.	Leak around gauge	Remove gauge*, clean threads and reinstall using Teflon tape on the gauge threads.
4.	Defective gauge	Remove defective gauge* an install the proper Amerex pressure gauge using Teflon tape on the gauge threads.
5.	Leak in the cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and remove from service or return to owner.
	* Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F) for two to four minutes. Remove gauge with a thin 7/16" open end wrench.	

PARTS LIST
for
1-3/4 Gallon "Water Mist" – Model B270
2-1/2 Gallon "Water Mist" – Model B272
Model 270
Model 272



Item	Part No.	Description	Std Pkg
1	17615	Valve Assembly – All Models	1
2	14380	Hanger Loop w/Screw (Optional)	6
3	14184	Hose & Wand Asy - all 272 models	1
	14318	Hose & Wand Asy – all 270 models	
4	06901	Ring Pin, SS (Non-Magnetic)	24
4A	00532	Chair (Nylon) for Ring Pin	24
5	01387	Lock Wire Seal (Yellow)	500
6	07762	Lever & Rivet – All Models	1
6A	01563	Rivet Only for Lever	24
7	09020	Handle & Rivets – All Models	1
7A	01564	Rivets Only for Handle (2 req'd)	24
8	06479	Gauge – 100	6
9	05240	Collar O-Ring	24
	Collar O-Ring – Bulk Bag		100
10	06093	Valve Stem Assembly	6
	Valve Stem Assembly – Bulk Bag		96
11	05243	Valve Stem O-Ring	24
12	00383	Spring	6
13	15943	Downtube Retainer Assembly – all 272 models	1
	15941	Downtube Retainer Assembly – all 270 models	
14	05690	O-Ring Downtube/Retainer	12
15	02595	Fill Tube – all 272 models	1
	14316	Fill Tube – all 270 models	
16	14187	Foot Stand (blue)	1
17	14838	Strap & Clip Assembly (Blue plastic – 3/8") (2 required)	1

ALL BRACKETS – SEE BRACKET PAGE

ALL FILL & HYDROTEST ADAPTERS – SEE ADAPTER PAGE

ALL VALVE ASSEMBLIES INCLUDE VALVE BODY, VALVE STEM ASSEMBLY, SPRING, RETAINER, LEVER & HANDLE

INTRODUCCIÓN

Cualquier persona que pudiera hacer uso de este extintor de incendios debe estudiar y comprender la información de este manual. Por favor, léalo completamente y manténgalo asequible para que pueda ser revisado periódicamente. La OSHA (Administración de salud y seguridad laboral de EE.UU.) exige capacitar al personal que podría usar un extintor en caso de emergencia. Familiarizarse con la información que aparece en este manual y en la placa de instrucciones del extintor ayudará a su correcto uso. Debe saber simplemente lo que PUEDE y NO PUEDE hacer, dónde está ubicado, cómo usarlo y cómo darle mantenimiento. El uso adecuado y eficaz de cualquier extintor empieza con el conocimiento de las clases de incendios. Los extintores son probados y evaluados para ciertas clases y tamaños de incendios. Algunos son evaluados para clasificaciones únicas, algunos para clasificaciones múltiples, y otros constituyen un peligro si son usados en ciertos tipos de incendios.

TIPOS Y CLASES DE INCENDIOS

CLASES DE INCENDIOS	TIPOS DE INCENDIOS	SÍMBOLO
A	Madera, papel, tela, basura y otros materiales comunes	
B	Gasolina, aceite, pintura y otros líquidos inflamables	
C	Se puede usar en incendios donde haya equipo eléctrico energizado sin riesgo para el operador	
D	Metales y aleaciones de metal combustibles	
K	Medios de cocina (aceites y grasas vegetales o animales)	

¡IMPORTANTE!

NUNCA DESCARGUE UN EXTINTOR DE INCENDIOS EN EL ROSTRO DE LAS PERSONAS

NUNCA ARROJE UN EXTINTOR AL FUEGO O LO DEJE DESATENDIDO SI EL FUEGO NO SE HA EXTINGUIDO
(La acumulación de presión puede causar una explosión incluso en un extintor parcialmente lleno)

MANTENGA LOS EXTINTORES FUERA DEL ALCANCE DE LOS NIÑOS

Extintores de agua, agua pulverizada y espuma AFFF y FFFP

Los modelos antes mencionados se entregan VACÍOS, deben ser llenados y presurizados antes de ponerlos en servicio.

Modelo 240 – Para proteger su inversión, cárguelo con el Inhibidor de Corrosión Modelo 507 de Amerex si el agua de uso contiene más de 40 P.P.M. de cloro.

Modelos 240, 250, 252, 254 – Nunca los use en equipo eléctrico energizado. La placa en los extintores tiene el símbolo internacional de la diagonal roja sobre el símbolo de la Clase C advirtiendo el riesgo de utilizarlo en dispositivos conectados a la corriente.

Modelo B270, B272 – Los extintores de agua pulverizada se deben cargar con agua desionizada para evitar contaminantes. Estos extintores están catalogados por UL para incendios **Clase A y Clase C**.

Nunca use extintores de Agua pulverizada, Agua, Espuma AFFF o FFFP para incendios con medios de cocina. El agua que contienen podría convertirse rápidamente en vapor por las temperaturas extremadamente altas y causar quemaduras graves.

Sólo el modelo 252 de Espuma FFFP puede ser usado en incendios relacionados con líquidos inflamables a base de agua, como alcoholes y acetonas.

NO SOMETA A LOS EXTINTORES DE ESTE GRUPO A CONDICIONES DE POSIBLE CONGELAMIENTO.

NOTA: Sólo el extintor de 2½ galones (9.5 litros) de agua Modelo 240 se puede proteger del congelamiento con un medio químico a temperaturas de -40° C (-40° F) añadiendo la carga Modelo 506 de Amerex. El 506 no está diseñado para proteger extintores de Agua pulverizada, de Químicos húmedos, de Espuma AFFF o FFFP.

EXTINTORES DE QUÍMICOS SECOS, POLVO SECO (CLASE D), HALOTRON I, HALON 1211, QUÍMICOS HÚMEDOS (CLASE K) Y DIÓXIDO DE CARBONO

Estos extintores vienen cargados de fábrica. **No pruebe el extintor** porque incluso una pequeña descarga puede causar pérdida de presión, haciéndolo menos eficaz o inútil en caso de incendio.

Los químicos secos no son tóxicos, pero tanto los de ácido (ABC) como los alcalinos (Regular y Púrpura K) pueden ser irritantes al inhalarlos. En caso de malestar físico, contacte a un médico de inmediato.

Los extintores de químicos secos no se recomiendan para incendios en equipo eléctrico delicado o aeronaves. El uso de este agente puede extinguir el incendio, pero podría dañar permanentemente el equipo.

El Halotron I y el Halon 1211 no se deben usar en áreas cerradas menores a las indicadas en la placa del extintor, en áreas de preparación de alimentos o en presencia de personas con problemas cardíacos. En caso de problemas, desaloje rápidamente a la persona del área donde está el gas, administre respiración artificial y llévela con un médico.

Nunca use extintores con químicos secos ABC, Halon 1211 o Halotron I en incendios donde haya oxidantes que contengan cloro (ejemplo: químicos para albercas). La mezcla de esas sustancias puede producir una reacción explosiva violenta.

Los extintores de Químicos húmedos (Clase K) están aprobados para incendios que impliquen medios de cocina. No someta a los extintores de este grupo a condiciones de posible congelamiento.

El dióxido de carbono es descargado como un gas (con pequeñas partículas de nieve) a temperaturas extremadamente bajas y desplazará el oxígeno. Se debe tener mucho cuidado en áreas cerradas. En caso de problemas, desaloje rápidamente a la persona del área donde está el gas, administre respiración artificial y llévela con un médico. Evite el contacto con la piel, podría causar quemaduras por frío.

NOTA: En cumplimiento de los requisitos de la OSHA, contamos con Hojas de Datos de Seguridad de Materiales (MSDS por sus siglas en inglés) de todas las sustancias químicas contenidas en estos extintores de incendios. Comuníquese con su distribuidor de Amerex o con Amerex Corporation. Además, la información de la MSDS aparece en una sección especial de las etiquetas de todos los extintores. Todas las MSDS están disponibles en el sitio Web de Amerex en www.amerex-fire.com.

REGISTRO DE INSPECCIÓN

MENSUAL

SUJÉTELO AL EXTINTOR ANTES DE INSTALARLO

NO REMOVER

SIGA LAS INSTRUCCIONES DE INSPECCIÓN EN EL MANUAL DEL PROPIETARIO Y EN EL EXTINTOR

Fecha	Inspeccionado por	Condición

TENGA SU EXTINTOR MANTENIDO Y RECARGADO PROFESIONALMENTE

RECÁRGUELO DESPUÉS DE CUALQUIER USO

AVISO IMPORTANTE PARA PROPIETARIOS DE BOTES

Si va a montar el extintor en su bote, asegúrese de usar el soporte adecuado. La placa (en el área del manifiesto UL) dice si está aprobado por la Guardia Costera (de EE.UU.) e indica el soporte que DEBE usar para que la aprobación sea completa. Si no instala el tipo de extintor y soporte de montaje correctos será emplazado por la Guardia Costera.

REGISTRO DE INSPECCIÓN

No. de modelo: _____

No. de serie: _____

Fecha de fabricación: _____

Fecha de 1ª. instalación: _____

INSPECCIÓN. Debe ser mensual o con mayor frecuencia según las circunstancias. Se debe revisar que el extintor no esté dañado, no esté obstruida la salida de la descarga, esté totalmente cargado, no esté roto el sello y las instrucciones de uso estén claramente visibles.

MANTENIMIENTO ANUAL. Es una inspección más completa y debe ser hecha profesionalmente. Revelará si hay necesidad de hacer pruebas hidrostáticas, que se deben hacer a los extintores de Agua pulverizada, Agua, Químico húmedo, Espuma y Dióxido de carbono cada CINCO AÑOS y a los extintores de Químicos secos, Polvo seco, Halotron I y Halon 1211 cada DOCE AÑOS. La mayoría de las autoridades locales exigen que se coloque etiquetas especiales al extintor para certificar este servicio.

MANTENIMIENTO DE LOS SEIS AÑOS – Los extintores que necesitan pruebas hidrostáticas cada 12 años se deben vaciar cada seis años y someterlos a una revisión exhaustiva de las piezas mecánicas, el agente extintor y los medios expelentes. Cuando es necesario, se realizan procedimientos de mantenimiento durante la recarga periódica o las pruebas hidrostáticas, los seis años empezarán a contar a partir de esa fecha.

LA RECARGA debe ser hecha profesionalmente por un Distribuidor Amerex de su localidad que tenga personal capacitado, agentes extintores y equipo para hacerlo correctamente, inmediatamente después de cualquier uso. Este extintor se debe recargar con el agente extintor especificado en la placa del nombre. Las sustituciones pueden causar daños o lesiones e invalidarán la garantía.

DISTRIBUIDO POR:

INSTALACIÓN Y DISTRIBUCIÓN

Instale, inspeccione, dé mantenimiento y haga pruebas al extintor de incendios conforme a la Norma 10 "Extintores Portátiles de Incendios" de la Asociación Nacional de Protección de Incendios (de EE.UU.).

Su extintor de incendios debe estar montado en un área limpia, seca y accesible en lugares con riesgo de incendio, de preferencia cerca de una vía de salida. Móntelo de modo que la parte superior esté de 1 a 1.5 metros (3.5 a 5 pies) sobre el suelo y fuera del alcance de los niños pequeños.

Use el soporte de montaje que viene con el extintor o un soporte de vehículo Amerex aprobado de ser necesario. Fíjelo a una superficie sólida con tornillos o abrazaderas resistentes (no incluidos).

Siga las instrucciones de montaje que aparecen a continuación, especialmente en áreas públicas donde el extintor podría desencajarse accidentalmente del soporte o pudieran colocar objetos encima.

INSTRUCCIONES DE MONTAJE

UL especifica que el soporte de suspensión debe resistir una fuerza vertical cinco veces mayor al peso del extintor lleno pero no menos de 45.4 kilos (100 libras). El soporte debe montarse así:

Paredes donde puedan encontrarse montantes de 5 cm x 10 cm (2" x 4") – TODOS LOS TAMAÑOS: Fije bien el soporte de suspensión para pared usando dos tornillos para madera #10 x 31 mm (1¼") de largo a través de los orificios diagonales más pequeños del soporte.

Tabla roca – TODOS LOS TAMAÑOS: Monte una tabla de 1.9 cm (¾") de grueso a la pared con pernos acodados de 5 mm (3/16") – las medidas de la tabla dependen del tamaño del extintor. La tabla debe rebasar por lo menos 2 pulgadas de cada lado del perfil del extintor (excluyendo la manguera y la boquilla). Monte el soporte de pared a la tabla usando dos tornillos para madera #10 x 25 mm (1") de largo como se indica arriba.

Block o cemento – TODOS LOS TAMAÑOS: Monte el soporte usando un perno acodado de 6 mm (¼") o un taquete de expansión y tornillo guía para concreto a través del orificio central del soporte. Monte soportes de banda para vehículo/marino usando dos pernos acodados de 5 mm (3/16") o taquetes de expansión y tornillos guía #10.

Pared de concreto o azulejo – TODOS LOS TAMAÑOS: Monte el soporte usando un taquete de expansión y tornillo guía para concreto de 6 mm (¼") a través del orificio del centro del soporte para pared. Monte los soportes de banda para vehículo/marino usando dos taquetes de expansión y tornillos guía para cemento No. 10.

Postes o vigas de acero – TODOS LOS TAMAÑOS: Se necesitan herramientas y sujetadores especiales – tenga montado el extintor por una empresa profesional en extintores de fuego.

Paredes de azulejo: Colóquelo en la unión.

INSPECCIÓN

Debe inspeccionar el extintor mensualmente, revisando que no tenga daños, corrosiones, fugas ni obstrucciones en la boquilla. El sello debe estar intacto. El extintor debe estar limpio para que las instrucciones en la etiqueta siempre estén visibles y claras.

Hay que verificar que el peso de los extintores de dióxido de carbono esté dentro de las tolerancias especificadas en la placa (etiqueta).

Se deben revisar los medidores de presión de los extintores de Agua pulverizada, Agua, Químicos húmedos, Espuma, Químicos secos, Polvo seco, Halotron I y Halon 1211. El indicador variará ligeramente por la temperatura, pero siempre debe estar en el área VERDE si están completamente presurizados. Verifique manualmente o con una báscula el peso del extintor para determinar su nivel de contenido.

EN CASO DE INCENDIO

1. Evacue el área de inmediato.
2. Llame a la Estación de Bomberos, aunque parezca pequeño (los fuegos pequeños rápidamente se convierten en GRANDES incendios). El número de la Estación de Bomberos debe estar colocado en todos los teléfonos.
3. Use el extintor correctamente, de acuerdo a las instrucciones en la placa y en este manual. Un incendio grande debe ser combatido por profesionales. Esté preparado para abandonar el área si no se puede controlar el incendio de inmediato.

CÓMO USARLO

NOTA: Las siguientes son instrucciones generales para familiarizar al usuario con las técnicas básicas de operación de los extintores manuales portátiles Amerex. **Todos funcionan quitando el anillo del pasador de seguridad y apretando las asas.** Puesto que los extintores son diferentes, debe consultar en la placa del extintor los procedimientos específicos y distancias para activarlo.

1. Sostenga el extintor en posición vertical y jale el anillo del pasador de seguridad rompiendo el sello de plástico.
2. Manténgase alejado del fuego (la distancia mínima indicada en la placa) y apunte hacia la base de las llamas más cercanas a usted.
3. Sostenga el extintor en posición vertical y apriete las asas rociando de un lado a otro. Acérquese a medida que se vaya extinguiendo el fuego, pero no tanto que se esparzan los materiales o líquidos que se están quemando.
4. Cuando se apague el fuego retroceda observando si se vuelve a encender.
5. Al terminar de usarlo evacue y ventile el área de inmediato. Los vapores y el humo de cualquier incendio pueden ser peligrosos y mortales.

NOTA: Cuando sea posible, ropa de protección y equipo de respiración deben ser usados al extinguir un incendio.

1. SOSTENGA EL EXTINTOR VERTICAL Y JALE EL ANILLO DEL PASADOR DE SEGURIDAD

2. MANTÉNGASE ALEJADO DEL INCENDIO Y APUNTE A LA BASE DE LAS LLAMAS MÁS CERCANAS A USTED

3. APRIETE LAS ASAS Y ROCÍE DE UN LADO A OTRO

RECUERDE ESTE SENCILLO ACRÓNIMO –

J A A R

JALE APUNTE APRIETE ROCÍE

AMEREX

MANUAL DEL PROPIETARIO de EXTINTORES DE INCENDIOS MANUALES PORTÁTILES DE

Agua y Agua pulverizada
Químicos húmedos (Clase K)
Espuma AFFF y FFFP
Químicos secos
Polvo seco (Clase D)
Dióxido de carbono
Halotron I
Halon 1211

GARANTÍA AMEREX LIMITADA A 6 AÑOS *

Amerex garantiza los extintores contra defectos de material y mano de obra por un periodo de seis (6) años a partir de la fecha de compra. Durante el periodo de garantía, todos esos defectos serán reparados, o se reemplazará el extintor defectuoso SI EL SELLO GRIS CONTRA VIOLACIONES ESTÁ INTACTO Y/O SI SOLAMENTE SE HAN USADO REFACCIONES DE FÁBRICA PARA DAR SERVICIO AL EXTINTOR. Esta garantía no cubre defectos producidos por modificación, alteración, uso indebido, exposición a condiciones corrosivas, instalación o mantenimiento incorrectos.

TODAS LAS GARANTÍAS IMPLÍCITAS, INCLUYENDO PERO NO LIMTADAS A, GARANTÍAS DE ADECUACIÓN PARA SU OBJETIVO Y COMERCIABILIDAD, SE LIMITAN AL PERÍODO ANTES MENCIONADO. EN NINGÚN CASO AMEREX CORP. SERÁ RESPONSABLE DE DAÑOS INCIDENTALES O CONSECUENCIALES.

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*Garantía de un año en HALOTRON I y HALON 1211

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OWNERS SERVICE MANUAL
NO. 16672
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

HALOTRON 1 "CLEAN AGENT" WHEELED STORED PRESSURE FIRE EXTINGUISHERS 65 POUND AND 150 POUND

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 or The National Fire Code of Canada and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. **DO NOT SUBSTITUTE**.

REFERENCES IN THIS MANUAL:	**AVAILABLE FROM:**
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Pressure Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of Compressed Gas Cylinders	Compressed Gas Association, Inc. 14501 George Carter Way, Suite 103 Chantilly, VA 20151-2923
National Fire Code of Canada	National Research Council Canada 1200 Montreal Road Ottawa, ON K1A9Z9

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081
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INTRODUCTION

This manual covers specific instructions for the Amerex wheeled stored pressure Halotron1 fire extinguishers. Special maintenance and recharge instructions contained in this manual apply to these extinguishers only. Halotron I "Clean Agent" extinguishers are designed for Class A, B, and C hazards formerly protected with Halon 1211 extinguishers. They contain dichlorotrifluoroethane (R-123), which is designated for streaming fire extinguisher applications. Halotron I is listed in the U.S. Environmental Protection Agency (EPA) "Significant New Alternative Policy" (SNAP) as acceptable for nonresidential applications. Halotron I has acceptable toxicity and cardiac sensitization levels for use in occupied spaces when used according to the instructions on the nameplate and rules of the EPA SNAP Program.

PHYSICAL PROPERTIES OF HALOTRON I

Primary Component	**Dichlorotrifluoroethane (R-123) or (HCFC-123)**
Boiling Point	**80.6°F [27°C]**
Liquid Density	**92.3 lb./ft³ (1.48 kg / liter)**
Gas Density	**0.385 lb./ft³ (6.17 kg / m³)**
Molecular Weight	**150.7**
Physical State	**Pressurized Liquid**
Vapor Pressure @ 68ºF [20ºC] (liquid alone)	**11.2 psi [77 kPa]**
Pressure of mixture in Container @ 68ºF [20º]	**95 psig in bulk container**

HALOTRON I LIMITED WARRANTY

Amerex warrants its Halotron I fire extinguishers to be free from defects in material and workmanship for a period on SIX (6) YEAR from the date of purchase or first recharge, whichever comes first. During the warranty period, any such defects will be repaired or the defective extinguisher replaced at Amerex discretion. This warranty does not cover defects resulting from modification, alteration, misuse, exposure to corrosive conditions or improper installation. ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF FITNESS FOR PURPOSE AND MERCHANTABILITY, ARE LIMITED TO THE TIME PERIODS AS STATED ABOVE. IN NO EVENT SHALL AMEREX CORPORATION BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Amerex Corporation neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than as expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corporation, P.O. Box 81, Trussville, AL 35173-0081 for instructions.

Amerex Corporation does not service, maintain or recharge fire extinguishers. The maintenance and recharge portion of this manual is published as a guide to assist service personnel in the inspection, maintenance and recharge of Amerex Halotron I wheeled fire extinguishers only. No instruction manual can anticipate all possible malfunctions that may be encountered in the service of fire extinguishers. Amerex assumes no liability for service, maintenance or recharge of fire extinguishers by publishing this manual. To provide optimum extinguisher reliability, recharging should be performed by persons trained in fire extinguisher maintenance and servicing. This manual should be used as a guide for installing and servicing these Amerex extinguishers. The best place to have your extinguishers serviced and recharged is your "Authorized Amerex Distributor" who has the professional experience and equipment to do it properly.

THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

PREPARING YOUR NEW EXTINGUISHER FOR USE

1. **Remove all wrappings, straps and pallet retaining bolts.**
2. **Examine the extinguisher for shipping damage.**
3. **Check to insure that the hose connection at the discharge valve and the nozzle connection to the hose are tight.**
4. **Check to insure that the nozzle shut-off lever is in the CLOSED position. The pull pin should be installed and the tamper seal intact.**
5. **Visually inspect the pressure gauge. The pressure gauge should be in the green zone. Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70ºF (21ºC) for several hours to obtain more accurate pressure gauge readings.**
6. **The method used to determine proper agent fill is by weighing the extinguisher. The gross weight is marked on each extinguisher nameplate.**
7. **Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.**

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends a location no less than a 50-foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold area. The operational temperature range for this extinguisher is –40°F to 120°F (-40°C to 49°C). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants that may interfere with its proper operation. DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER. (Testing or any use may cause the extinguisher to gradually lose extinguishing agent over a period of time and make the extinguisher ineffective.)

OPERATION

WARNING: **PERSONS EXPECTED TO USE THIS EXTINGUISHER SHOULD BE MADE AWARE OF THE CONFINED SPACE LIMITATIONS AND TRAINED IN INITIATING ITS OPERATION AND PROPER FIRE FIGHTING TECHNIQUE. THE CONCENTRATED AGENT CAN PRODUCE TOXIC BY-PRODUCTS. AVOID INHALATION OF THESE MATERIALS BY EVACUATING THE CONFINED SPACE. DO NOT USE IN CONFINED SPACES SMALLER THAN THE MINIMUM STATED ON THE EXTINGUISHER LABEL.**

CAUTION: **Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. "Dry Run" and visual aid training will prepare personnel with the feel for this extinguisher so that the most effective application can be utilized in an emergency situation. The basic operating instructions are contained on the pictogram of every extinguisher. The following elaborates on these instructions:**

1. **Move the extinguisher to within approximately 50 feet of the fire site. KEEP UPRIGHT.**

2. **Twist and pull ring pin and open cylinder valve by rotating (pulling) the valve lever toward the hose 90°. The hose is now pressurized.**

3. **Pull nozzle with nozzle lever in the closed position from the nozzle mount and extend hose from the storage rack.**

4. **Stand back 30 feet from the fire and aim just in front of the base of the flames nearest you.**

5. **Hold hose and nozzle firmly and be prepared for a discharge recoil. Open nozzle by pulling lever toward you. Slowly sweep side to side extending the discharge beyond the edges of the fire. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning material. Shut off nozzle lever to stop discharge. Stand and watch for possible re-ignition.**

6. **Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.**

WARNING: SYMPTOMS OF OVER-EXPOSURE TO PURE HALOTRON I MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS DIZZINESS, DROWSINESS, ANESTHESIA, OR UNCONSCIOUSNESS. PERSONS SUFFERING FROM OVER-EXPOSURE SHOULD BE IMMEDIATELY REMOVED TO AREA WITH FRESH AIR. APPLY ARTIFICAL RESPIRATION IF NECESSARY. CONTACT A PHYSICIAN.

	65 LB. MODELS	150 LB. MODELS
Discharge Time (approx.)	**22 seconds**	**31 seconds**
Range (Agent Thow)	**30 to 45 feet**	**30 to 45 feet**
Hose Length	**50 feet**	**50 feet**

BEFORE PREPARING TO MOVE THE EXTINGUISHER TO THE RECHARGE LOCATION, DETERMINATION MUST BE MADE THAT THE FIRE IS COMPLETELY EXTINGUISHED AND THERE IS NO DANGER OF A FLASHBACK.

SHUTDOWN

1. Close the discharge hose valve. Rotate cylinder discharge valve lever 90° to the CLOSED position.
2. Locate the extinguisher in an open area where blow down can be accomplished safely.
3. Tip the extinguisher to rest the carriage handle/tow loop on the ground. Slowly open the discharge hose valve and cylinder valve. Be prepared for some chemical discharge. Relieve all pressure in the cylinder and clear the discharge hose of all Halotron I. To prevent any loss of remaining agent, the carriage handle/tow loop should be positioned as low as possible in a plane below the bottom on the cylinder.

   CAUTION: DO NOT LEAVE HALOTRON I IN THE HOSE AS OVER-PRESSURIZATION AND DETERIORATION OF THE HOSE MAY OCCUR.

4. When the hose is empty, push the discharge hose valve nozzle lever and cylinder valve lever to the CLOSED positions.
5. Return the extinguisher to an upright position. Coil the extinguisher hose onto the storage rack and position the nozzle onto the mount in preparation for transport to the recharge location.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

INSPECTING THE EXTINGUISHER

INSPECTION is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES
(monthly or more often if circumstances dictate)

NFPA 10 - Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place
2. No obstruction to access or visibility
3. Operating instructions on nameplate legible and facing outward
4. Seals and tamper indicators not broken or missing
5. Determine fullness by weighing
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle
7. Pressure gauge reading in the operable range
8. Hose properly coiled and shut-off nozzle in its mount in closed position
9. Condition of tires/wheels and that they rotate freely
10. HMIS label in place

MAINTENANCE
(At least once a year or when specifically indicated by an inspection)

MAINTENANCE is a thorough examination of the fire extinguisher. It is intended to give maximum assurance that the fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate and UL manifest are securely fastened and legible. Inspect the cylinder for corrosion, abrasion, and dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure, using the proof pressure method in accordance with CGA C-1 and NFPA 10.

   NOTE: When cleaning avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.
2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
3. Weigh extinguisher and compare with weight printed in the Maintenance section on the nameplate. Recharge extinguisher if weight is not within indicated allowable tolerances.
4. Check the date of manufacture stamped into the cylinder. Cylinder must be hydrostatically tested in accordance with DOT specifications 12 years (water jacket) or 7 years (proof pressure) to the pressure indicated on the nameplate. Model 673, 65 lb. = 480 psi (3309 kPa); Models 674 and 675, 150 lb. = 1000 psi (6895 kPa).

5. Visually inspect the pressure gauge:
   a. if bent, damaged or improper gauge, depressurize and replace
   b. if pressure is low or high and temperature/pressure relationship has been ruled out:
      1. low pressure – check for leaks
      2. high pressure (over pressurized or over charged) depressurize and recharge extinguisher following instructions listed below

6. Remove and check ring pin for freedom of movement. Replace if bent or if removal appears difficult.

7. Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, replace ball valve assembly. Make sure that the nozzle tip is clear and unobstructed.
   WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL.

8. After making sure that there is no residual pressure in the discharge hose, disconnect it from the cylinder operating valve. Blow air through the hose and nozzle assembly to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration – replace as necessary.
9. Inspect valve assembly for corrosion or damage to hose thread connection. Valve removal and/or valve part replacement should be made only after following the depressurizing and recovery procedures listed in the Complete Maintenance procedures.
10. Inspect the wheels to insure they rotate freely. Lubricate as required
11. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.
12. Reconnect the hose to the agent cylinder. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount.

    NOTE: When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ¼ turn after contacting the hose gasket.

13. Install new tamper seal and record service data on the extinguisher inspection tag.
14. If the extinguisher has been moved to perform service, make sure that it is returned to its proper location.

Six Year Maintenance (NFPA 10) . Every 6 years, stored pressure fire extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during the periodic recharging or hydrotesting, the 6– year requirement shall begin from that date.

COMPLETE MAINTENANCE (SIX YEAR MAINTENANCE)

WARNING

a. Before attempting to devalve the extinguisher for maintenance, hydrotest or recharging be sure that it is completely depressurized. Recover agent and vapor according to the instructions below.

b. Never have any part of your body over the extinguisher while removing the valve assembly.

c. Prolonged exposure of a devalved cylinder to ambient air should be avoided to prevent moisture contamination and cylinder rusting.

COMPLETE MAINTENANCE (SIX YEAR MAINTENANCE) PROCEDURES

1. Complete items 1 through 11 in Maintenance Procedure above.
2. Attach the appropriate recharge adapter (P/N 09857) to the extinguisher operating valve on the extinguisher cylinder. Empty the extinguisher of all pressure and Halotron l using an Amerex P/N 14538 Halotron l Recharge Kit and a bulk Halotron l supply cylinder with sufficient empty capacity to accept the contents of the extinguisher.
3. When extinguisher is empty of all agent and pressure, remove valve assembly and disassemble by removing downtube, spring and valve stem assembly. **Discard valve stem assembly and collar o-ring**.

   NOTE: Keep cylinder opening covered while devalved to minimize interior corrosion.
4. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with dry nitrogen.
5. Install a new valve stem assembly (GREEN SEAL) after lightly lubricating the valve stem o-ring and valve stem seal with Bluestar V-711. Reassemble the spring and downtube. Carefully install a new collar o-ring (GREEN) which has been lightly lubricated with Bluestar V-711. Set the valve assembly aside.
6. Inspect the cylinder interior following CGA Visual Inspection Standard C-6. If a hydrotest has been performed or any moisture is evident, the cylinder should be immediately warm air dried.
7. Clean the o-ring seating groove in the cylinder neck. If any rust is evident, remove by using a fine emery cloth (200 grit). Clean the surface and lubricate the entire sealing area with a thin film of Bluestar V-711. Install the valve assembly in extinguisher cylinder. Hand tighten firmly.
8. Complete the Recharge steps, items 2 through 11.

RECHARGE

RECHARGING (NFPA 10) is the replacement of the extinguishing agent (also includes the expellant for this type of extinguisher).

WARNING:

a. Halotron l service should be performed only in a well ventilated room by a properly trained service technician wearing proper eye protection and rubber gloves.

b. Before attempting to recharge be sure this extinguisher is completely depressurized by slowly and carefully depressing the operating lever and discharging the extinguisher into a proper collection area.

c. Use a REGULATED pressurizing source of ultra high purity ARGON ONLY. Set the regulator to no more than 25 PSI higher than the extinguisher gauge operating pressure.

d. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.

e. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.

RECHARGING PROCEDURE

Note: The following procedure is for an EMPTY Halotron l extinguisher. If you are recharging an extinguisher, which has been partially discharged (with agent remaining in the cylinder) or has been recharged and the pressure leaked, follow the instructions contained in the Recharging Instructions, which is packaged with the Amerex Recharge Kit (P/N 14538).

1. Perform the Complete Maintenance steps 1 through 7.
2. Install the proper Amerex Recharge Adapter and draw a vacuum of 27" of mercury (adjusted for altitude variations) [see your vacuum pump manual for detailed instructions].
3. Stand the extinguisher upright on a scale of sufficient size and capacity (200 lbs. minimum). Tare weight extinguisher or record empty weight. The extinguisher should be fully discharged and empty.
4. Connect the extinguisher to a Halotron l supply cylinder using the Amerex P/N 14538 Halotron l Recharge Kit.

   Note: The Halotron l supply cylinder must be pressurized to approximately 100 psi with ARGON to properly charge the extinguisher.

5. Open the agent cylinder discharge valve by pulling 90º toward the hose rack and fill extinguisher to the agent fill weight noted on the nameplate USING ONLY CLEAN UNCONTAMINATED HALOTRON l AGENT. [see detailed instructions on your recharging system]

   CAUTION: Avoid liquid Halotron l contact with the external extinguisher cylinder.

6. Pressurize to the extinguisher operating pressure with ARGON only. Repeatedly rock the extinguisher to thoroughly mix the ARGON pressurizing gas until proper pressure is reached. Add additional Argon as necessary until the pressure stabilizes.
7. Check extinguisher for leaks at the valve orifice, around the collar seal, and gauge using a Halogen Leak Detector. The alternate method is to apply leak detecting fluid or a solution of soapy water to these areas. Thoroughly remove all leak detection fluid residue using dry nitrogen to blow all liquid residue out of the valve and wipe the extinguisher to dry the exterior. DO NOT LEAVE ANY LIQUID INSIDE THE VALVE BODY. Remove the recharge adapter.

   CAUTION: If you use a Halogen type leak detector: A residual amount of Halotron l will remain in the valve body until the liquid evaporates. To properly leak test using the Halogen leak detector it is recommended that the extinguisher be set aside a minimum of 24 hours after recharging, then leak tested.

8. Install ring pin and new tamper seal.
9. Install hose assembly, with shut-off nozzle attached, to the extinguisher cylinder discharge valve. Tighten hose coupling ¼ turn after contact with hose gasket. Coil hose onto the hose rack and install nozzle into mount.
10. Weigh extinguisher to confirm that the total weight is within the tolerances indicated in the maintenance section on the extinguisher nameplate.
11. Record recharge date and attach new recharge tag in accordance with the requirements of the "Authority Having Jurisdiction".

TROUBLE SHOOTING GUIDE

WARNING: DETERMINE THE SOURCE OF A LEAK BEFORE THE EXTINGUISHER IS DEPRESSURIZED. THE EXTINGUISHER MUST BE COMPLETELY DEPRESSURIZED BEFORE ANY ATTEMPT IS MADE TO REMOVE THE VALVE ASSEMBLY AND CORRECT THE LEAKAGE PROBLEM. SEE INSTRUCTIONS PACKAGE WITH THE AMEREX HALOTRON I RECHARGE KIT P/N 14538 FOR THE PROPER METHOD OF DEPRESSURIZING THE EXTINGUISHER TO AVOID UNNECESSARY DISCHARGE AND MINIMUM AGENT LOSS.

	PROBLEM	CORRECTIVE ACTION
1.	Pressure gauge reads high or low	Pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70ºF (21ºC) for several hours to obtain more accurate pressure gauge readings.
2.	Leak through valve	Remove valve assembly, downtube, spring and valve stem assembly. Install new valve stem (GREEN SEAL) assembly. Check valve seat for scratches or foreign matter.
3.	Leak at collar o-ring	Remove valve assembly, clean collar o-ring seating surface thoroughly and lubricate lightly with Bluestar-V-711. Install new collar o-ring (GREEN) after lubricating with Bluestar V-711.
4.	Leak around gauge threads	Remove gauge* and reinstall using Teflon tape on the gauge threads.
5.	Defective gauge	Remove defective gauge* and install a new gauge using Teflon tape on the gauge threads.
6.	Leak in cylinder	Contact Amerex if under warranty, otherwise mark “REJECTED” and return to owner.
7.	Visible deterioration of discharge hose	Replace hose assembly. Extinguishing agent has been stored in hose for a prolonged time. See Caution in Shut-Down procedures.
*	Pressure gauge threads are coated with a special epoxy at the factory. For easy removal soak the valve assembly in hot water (180° F/82°C) for two to four minutes. Remove gauge with a 7/16” open end wrench.	

PARTS LIST
for
65 lb. Stored Pressure
Wheeled
Halotron I
Extinguisher Models

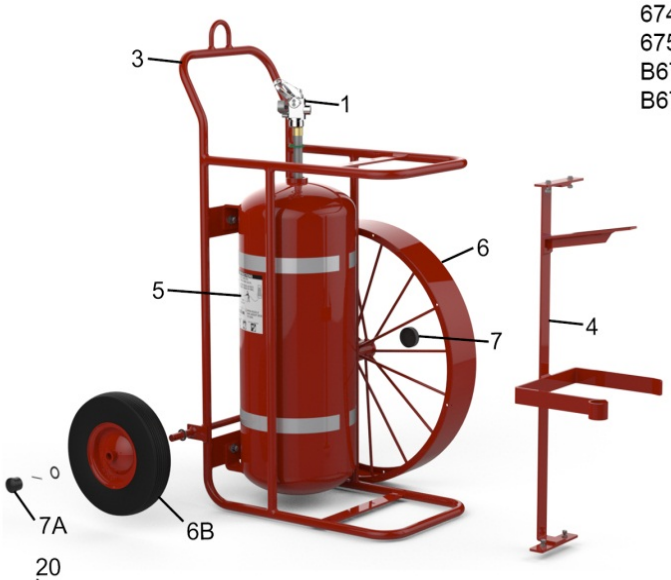
673 - 16" Semi-Pneumatic Galvanized Wheels
B673 - 16" Semi-Pneumatic Non-Galvanized Wheels

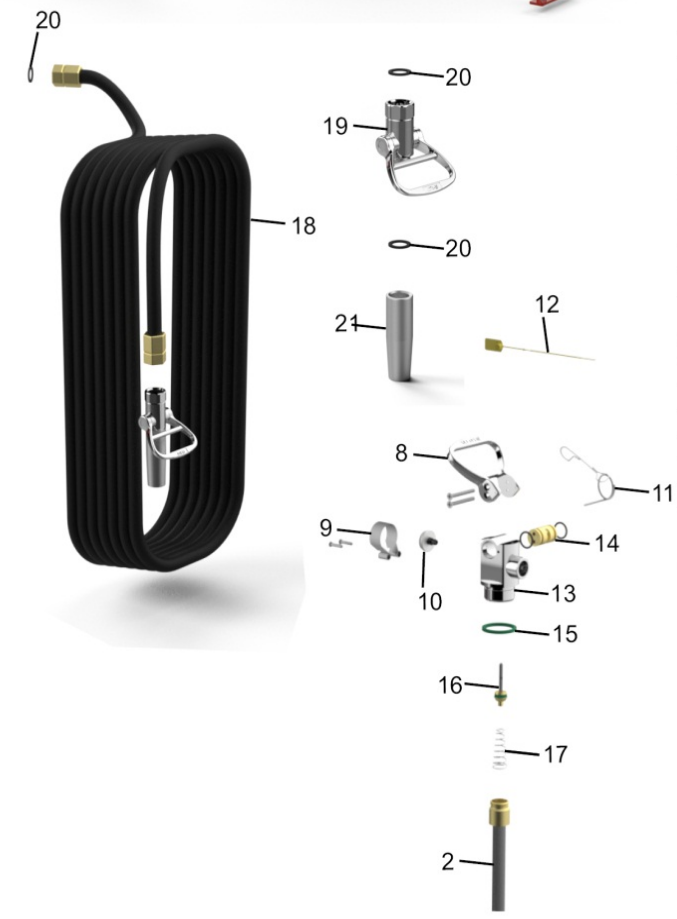
ITEM NO.	PART NO.	DESCRIPTION
1	16661	Valve Assembly Complete with Downtube 673
	24760	Valve Assembly Complete with Downtube B673
2	04938	Downtube/Retainer Assembly 673
	24795	Downtube/Retainer Assembly B673
3	16724	Carriage Assembly without Wheels
4	16690	Hose Support with Mounting Hardware
5	06130	Nozzle Mount with Hardware
6	07481	Pictogram
7	07751	Wheel Assembly - 16" with Hub Cap, Washer and Retaining Pin - Semi-Pneumatic 673 (optional B673)
	23823	Wheel Assembly - 16" with Hub Cap, Washer and Retaining Pin - Semi-Pneumatic B673 (optional 673)
8	04945	Hub Cap
9	06059	Valve Lever with Screws
10	16723	Gauge Guard Assembly
11	14417	Gauge - 100 PSI
12	06100	Ring Pin, Stainless Steel with Wire
13	01387	Lock Wire Seal (Yellow)
14	16666	Valve Body 673
	22979	Valve Body B673
15	06060	Cam Assembly with O-Rings
16	16664	Collar O-Ring
17	16668	Valve Stem Assembly 673
	23811	Valve Stem Assembly B673
18	03556	Spring 673
	22983	Spring B673
19	03501	Hose Assembly - 3/4" x 50'
20	06279	Ball Valve Assembly
21	03877	Gasket, Hose/Nozzle
22	16659	Nozzle Tip (.395) 673
	24755	Nozzle Tip (.330) B673

Replacement Valve Assemblies include Valve Body, Gauge, Gauge Guard, Cam, Lever, Valve Stem Assembly, Spring and Downtube/ Retainer Assembly

PARTS LIST
for
150 lb. Stored Pressure
Wheeled
Halotron I
Extinguisher Models

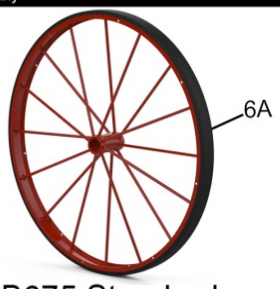
674 - 16" Semi-Pneumatic Galvanized Wheels
675 - 36" x 6" Steel Wheels
B674 - 16" Semi-Pneumatic Non-Galvanized Wheels
B675 - 36" x 2 1/2" Steel w/ Rubber Tread Wheels





ITEM NO.	PART NO.	DESCRIPTION
1	16677	Valve Assembly Complete with Downtube 674, 675
	23808	Valve Assembly Complete with Downtube B674, B675
2	16726	Downtube/Retainer Assembly 674, 675
	23809	Downtube/Retainer Assembly B674,B675
3	16727	Carriage Assembly without Wheels 674
4	16725	Hose Support with Mounting Hardware
5	07481	Pictogram
6	07026	Wheel Assembly - 36" x 6" - 675 (Optional B675)
6A	07050	Wheel Assembly - 36" x 2 1/2" - B675 (Optional 675)
6B	07751	Wheel Assembly - 16" with Hub Cap, Washer and Retaining Pin - Semi-Pneumatic - Galvanized - 674 (Optional B674)
	23823	Wheel Assembly - 16" with Hub Cap, Washer and Retaining Pin - Semi-Pneumatic - Non-Galvanized - B674 (Optional 674)
7	16984	Hub Cap for 36" Wheels
	07389	Hub Cap for 36" Wheels with Washer and Cotter Pin
7A	04945	Hub Cap
8	06059	Valve Lever with Screws
9	16723	Gauge Guard Assembly
10	14418	Gauge - 125 PSI 674, 675
	16332	Gauge - 150 PSI B674, B675
11	06100	Ring Pin, Stainless Steel with Wire
12	01387	Lock Wire Seal (Yellow)
13	16666	Valve Body 674, 675
	22979	Valve Body B674, B675
14	06060	Cam Assembly with O-Rings
15	16664	Collar O-Ring
16	16668	Valve Stem Assembly 674, 675
	23811	Valve Stem Assembly B674, B675
17	16679	Spring 674, 675
	22983	Spring B674, B675
18	03501	Hose Assembly - 3/4" x 50'
19	06279	Ball Valve Assembly
20	03877	Gasket, Hose/Nozzle
21	16674	Nozzle Tip (.687) 674, 675
	23665	Nozzle Tip (.692) B674, B675

Replacement Valve Assemblies include Valve Body, Gauge, Gauge Guard, Cam, Lever, Valve Stem Assembly, Spring and Downtube/ Retainer Assembly



B675 Standard
675 Optional

OWNERS SERVICE MANUAL

INSTALLATION, OPERATING AND SERVICING

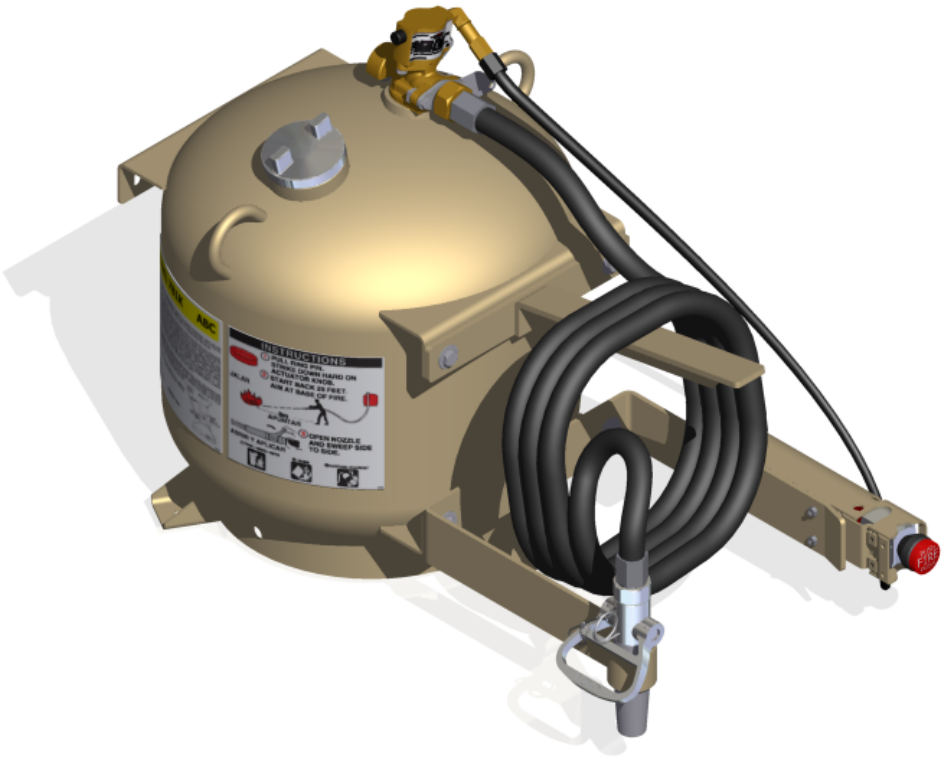
Model SGMH 781K

ABC (AMMONIUM PHOSPHATE BASE)

Model SGMH 783K

PK (Potassium Bicarbonate)

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE



AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY. AMEREX ASSUMES NO LIABILITY FOR SERVICE, MAINTENANCE OR RECHARGE OF FIRE EXTINGUISHERS BY PUBLISHING THIS MANUAL.

PREPARING YOUR NEW EXTINGUISHER FOR USE

THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

1. Remove all wrappings, straps and pallet retaining bolts. There will be a small carton affixed to the shipping pallet. Remove the carton and set it aside. **Do Not Discard** this as it includes 781 components.

2. Examine the extinguisher for shipping damage.

3. Check to insure that the hose connection to the operating valve and nozzle connection to the hose are tight.

4. Check to insure that the discharge nozzle is in the **CLOSED** position. A ring (safety) pin should be installed in the body of the discharge nozzle sealed with a tamper seal.

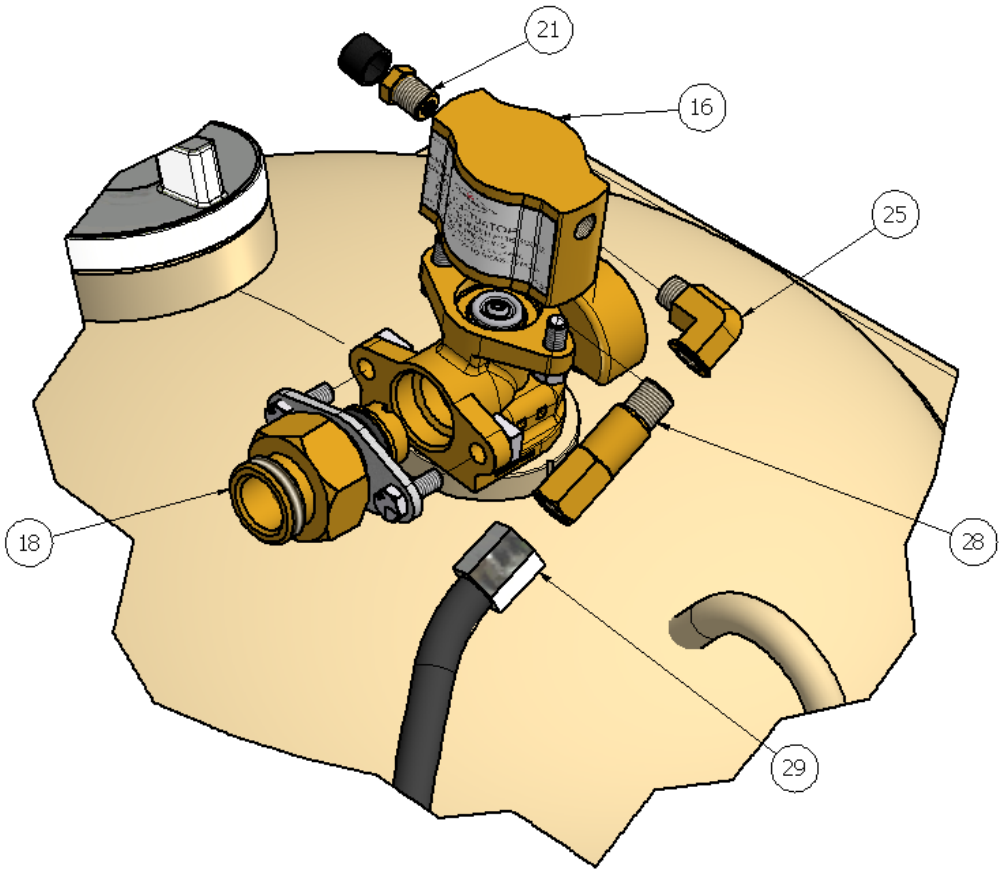
5. All Models 781 and 783 are shipped from the factory fully charged. Visually inspect the pressure gauge – the pressure should be in the **GREEN ZONE** (240 +/- 15 psi range). The most accurate method to determine if the extinguisher is filled with the proper amount of chemical is to weigh the unit. The gross weight is indicated on the nameplate (label).

Note: Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70°F (21°C) for several hours to obtain more accurate pressure gauge readings.

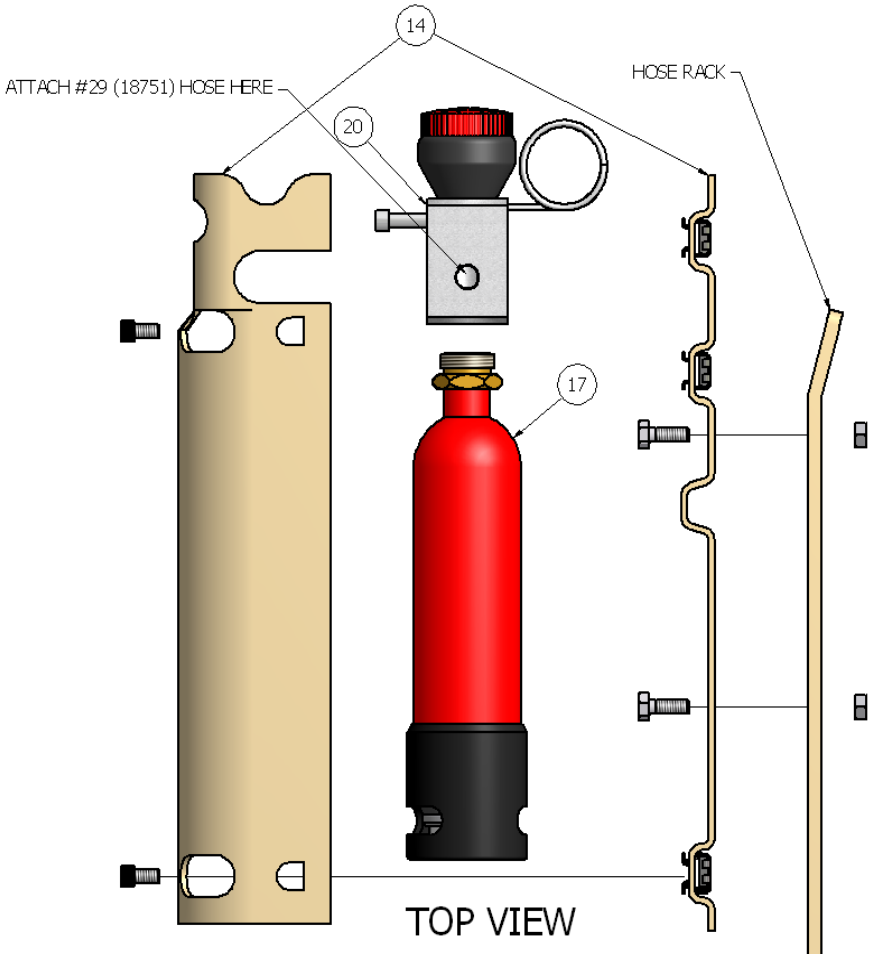
6. A carton containing the following items will be attached to the shipping pallet: #14-19272, #16-10147, #17-09956, #18-18313, #20-10210, #21-10173, #25-04444, #28-10262, and #29-18751.

7. Remove these items from the carton and assemble them as follows:

DISCHARGE VALVE ASSEMBLY



ACTUATION CYLINDER ASSEMBLY



8. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER. Testing or any use may cause the extinguisher to gradually lose pressure and become ineffective.

OPERATION

CAUTION: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. "Hands on" training will prepare personnel with the feel for this high pressure extinguisher so that the most effective application can be utilized in an emergency situation. The basic operating instructions are contained in the pictogram portion of every extinguisher nameplate. The following elaborates on these instructions.

1. Move the extinguisher to within approximately 15-20 feet of the fire site.

2. Twist and pull the ring pin from the manual actuator located on the right side of the hose retention rack. With the nozzle lever in the **CLOSED** position, **PULL HOSE FROM RACK. START BACK 15-20 FEET** from the fire.

3. Grasp nozzle hand twist and pull the ring pin for the nozzle body, **AIM AT BASE OF FIRE** nearest you.

4. OPEN HOSE NOZZLE by pulling the handle fully towards you (brace yourself, hold the nozzle firmly and be prepared for discharge recoil). **SWEEP SIDE TO SIDE** across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning material.

WARNING: THIS EXTINGUISHER OPERATES AT HIGH PRESSURE - BE PREPARED FOR HIGH VELOCITY DISCHARGE RECOIL.

5. When the fire is out, push the nozzle lever forward to the **CLOSED** position. Stand by and watch for the possibility of the hazard reigniting.

6. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

DISCHARGE TIME (APPROX.)
36 SECONDS AT A RATE OF 4LBS/SECOND
MAXIMUM RANGE OF THE AGENT THROW IS 45-50 FEET EFFECTIVE DISCHARGE RANGE IS 15-20 FEET
HOSE LENGTH IS 40 FEET

RECHARGE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

SHUTDOWN

BEFORE PERFORMING THE SHUTDOWN PROCEDURE AND PREPARING TO MOVE THE EXTINGUISHER TO THE RECHARGE LOCATION, DETERMINATION MUST BE MADE THAT THE FIRE IS COMPLETELY EXTINGUISHED AND THERE IS NO DANGER OF A FLASHBACK.

Note: These steps will allow easy depressurization of the extinguisher and clear the hose assembly of any remaining chemical.

1. Aim the discharge nozzle away from yourself and others. Slowly push the **NOZZLE LEVER** to the **OPEN** position and be prepared for some chemical discharge.

2. When all pressure has been evacuated from the extinguisher, return the **NOZZLE LEVER** to the **CLOSED** position.

3. Coil the extinguisher hose onto the storage rack and position the nozzle onto the mount in preparation for transport to the recharge location.

INSPECTING THE EXTINGUISHER

INSPECTION is defined as a “quick check” to give assurance that an extinguisher is available and will operate. It is intended to give reasonable assurance that the extinguisher is fully charged and operable. This is done by seeing that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent operation.

Note: This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use.

PERIODIC INSPECTION PROCEDURES

(Monthly or more often if circumstances dictate)

A “quick check” should be made of the extinguisher for the following:

1. Confirm that the Model 781K or 783K is properly secured/fastened in place.

2. No obstructions to access or visibility.

3. Operating instructions on nameplate and facing outward and are intact.

4. Seals and tamper indicators are located on the manual actuator and discharge nozzle.

5. Examine for obvious physical damage, corrosion, leakage or clogged nozzle.

6. Pressure gauge reading in the operable area. (In the Green Pie @ 70˚ F)

MAINTENANCE PROCEDURE

(Annually or more often if circumstances dictate)

Note: This procedure will be best accomplished with the extinguisher in an upright position and on a level surface.

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure (480 PSI), using the proof pressure method in accordance with CGA Pamphlet C-6 and NFPA Pamphlet 10. See proper method of depressurizing and reclaiming chemical in **RECHARGE** procedures.

Note: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

3. Weigh extinguisher and compare with weight printed in the “Recharge” section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances. The Model 781K is filled using 3-50# pails of Amerex ABC Dry Chemical Model 550. The Model 783K is filled with 3-50# pails of Amerex PK Dry Chemical Model 515. The unit must be completely empty prior to recharge so as to accommodate the full recharge agent. **DO NOT FILL WITH MORE THAN 150 POUNDS OF DRY CHEMCIAL AS THE UNITS PERFORMACE WILL BE AFFECTED.**

4. Check the date of manufacture stamped on the extinguisher cylinder dome. Cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate (480 PSI per DOT Requirements).

5. Visually inspect the pressure gauge:

   a. if bent, damaged or improper gauge, depressurize and replace
   b. if pressure is low, check for leaks
   c. if over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions

6. Remove Ring (Safety) Pin from the manual actuator and discharge nozzle checking for freedom of movement. Replace if bent or if removal appears difficult.

7. Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.

WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. ANY EVIDENCE OF AGENT IN THE NOZZLE INDICATES THAT THE UNIT MAY HAVE BEEN USED AND THE USE NOT REPORTED. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL.

8. After making sure that there is no residual pressure in the discharge hose, disconnect it from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration - replace as necessary.

9. Inspect valve assembly for corrosion or damage to hose thread connection.

10. Reconnect the hose to the agent cylinder. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount.
Note: When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ¼ turn after contacting the hose gasket.

11. Check all mounting bolts and fixtures.

12. Remove the 10 cubic inch nitrogen cartridge from the manual actuator. The cartridge has a pressure gauge located on the bottom. Confirm that the needle is in the operating range (green pie area). Check the cartridge for corrosion, dents, and defects. If you find any defects replace the cartridge. If no defects are found return the cartridge to the manual actuator.

13. Install new tamper seal and record service data on the extinguisher inspection tag.

14. Return the Model 781 or 783 to its proper location if it has been removed for service.

COMPLETE MAINTENANCE (SIX YEAR TEARDOWN)

COMPLETE MAINTENANCE (SIX YEAR TEARDOWN). Every six years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures.

1. Discharge chemical and pressure into a “closed” dry chemical recovery system. These recovery systems are currently used by the US Military for recharge.

(Make sure that the extinguisher is completely empty and depressurized).

Note: A “closed” recovery system is designed to prevent loss of the chemical “fines”. Loss of the “fines” could result in reduced extinguisher efficiency.

2. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinder for corrosion, abrasion, dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure (480 PSI), using the proof pressure method, in accordance with CGA Pamphlet C-6 and NFPA 10.

Note: When cleaning, avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.

3. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.

4. Check the date of manufacture on the extinguisher cylinder dome. Cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate (480 PSI).

5. Visually inspect the pressure gauge - if bent, damaged or improper type or pressure it must be replaced.

6. Remove Ring (Safety) pin from the manual actuator and discharge nozzle checking for freedom of movement. Replace if bent or if removal appears difficult.

7. **VERIFY THAT NO PRESSURE REMAINS IN THE EXTINGUISHER** (Operating valve and nozzle shutoff in open position and there is no discharge). Remove and inspect the agent fill cap for damage or distortion.

8. Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.

9. Disconnect the discharge hose from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration - replace as necessary.

10. Check cylinder mounting assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.

11. Remove operating valve assembly. Inspect for corrosion or damage to hose thread connection. Visually inspect the safety disc assembly on the discharge valve for obstruction or damage.

WARNING: VALVE REMOVAL AND/OR VALVE PART REPLACEMENT SHOULD BE MADE ONLY AFTER COMPLETING THE DEPRESSURIZING PROCEDURES LISTED IN STEP 1 OF THE COMPLETE MAINTENANCE PROCEDURES.

13. Complete steps 2 thru 15 of **RECHARGE PROCEDURE**.

RECHARGE

RECHARGING is the replacement of the extinguishing agent and also includes the expellant gas for this type of extinguisher.

WARNINGS:

A. BE SURE THE EXTINGUISHER IS COMPLETELY DEPRESSURIZED BEFORE ATTEMPTING TO RECHARGE.

B. NEVER HAVE ANY PART OF YOUR BODY OVER THE EXTINGUISHER WHILE REMOVING THE VALVE ASSEMBLY OR FILL CAP.

C. USE A PROTECTIVE SHIELD BETWEEN YOU AND THE PRESSURE GAUGE WHILE CHARGING AN EXTINGUISHER. DO NOT STAND IN FRONT OF THE GAUGE IF A SHIELD IS NOT AVAILABLE.

D. USE A REGULATED PRESSURIZING SOURCE OF DRY NITROGEN ONLY WITH A MINIMUM DEW POINT OF MINUS 70°F (MINUS 57°C). SET THE REGULATOR TO NO MORE THAN 275 PSI.

E. CHECK AND CALIBRATE REGULATOR GAUGE AT FREQUENT INTERVALS. THE REGULATOR GAUGE SHOULD BE USED TO DETERMINE WHEN THE INTENDED CHARGING PRESSURE HAS BEEN REACHED. DO NOT USE THE EXTINGUISHER GAUGE FOR THIS PURPOSE.

F. NEVER LEAVE AN EXTINGUISHER CONNECTED TO A REGULATOR OF A HIGH PRESSURE SOURCE FOR AN EXTENDED PERIOD OF TIME. A DEFECTIVE REGULATOR COULD CAUSE THE CYLINDER TO RUPTURE DUE TO EXCESSIVE PRESSURE.

G. DO NOT MIX TYPES OF DRY CHEMICALS IN EXTINGUISHERS, RECHARGE OR RECOVERY SYSTEMS. MIXING ABC (ACIDIC BASE) WITH REGULAR, PURPLE-K, SUPER-K OR MONNEX (ALKALINE BASE) DRY CHEMICALS MAY RESULT IN A CHEMICAL REACTION CAPABLE OF DEVELOPING A DANGEROUS PRESSURE BUILDUP.

RECHARGING PROCEDURE

1. Perform steps 1 thru 12 of the "**COMPLETE MAINTENANCE (SIX YEAR TEARDOWN)**" section.

2. Remove down tube, spring and valve stem assembly from the operating valve and thoroughly clean all parts with a soft bristle brush or soft cloth. Blow the valve and down tube out with air or nitrogen. Inspect the collar o-ring, valve stem, spring and down tube assembly - replace parts if worn or damaged. Lubricate the collar o-ring and small o-ring on the valve stem with Visilox V-711 **(DO NOT LUBRICATE THE VALVE STEM SEAL)**. Visilox V-711 is provided as part of the Model 781K Recharge station assembly.

3. Reassemble the valve assembly, including down tube and set aside.

4. Remove agent fill cap and place to the side. Remove any chemical remaining in the cylinder and check the condition. Properly dispose of any chemical that is contaminated or caked.

5. Inspect the interior of the cylinder following CGA Visual Inspection Standard, Pamphlet C-6.

6. Clean cylinder collar o-ring seat and collar threads with a small brush and then wipe off surfaces with a clean damp cloth to remove dust. Lightly brush the collar o-ring seat with Visilox V-711. Install operating valve/down tube assembly HAND TIGHT.

7. Stand the extinguisher upright on an accurate scale of sufficient size and capacity. Use the Amerex Fill Station Assembly to accomplish this process. Fill cylinder through chemical agent fill opening with the correct amount and type of dry chemical specified on the label (nameplate). Use AMEREX chemical (Included with the Model 781K or 783K Recharge Kit) which has been kept free of moisture and contamination.

WARNING: FILLING BY EYE ALONE COULD CAUSE POTENTIALLY DANGEROUS OVER-FILLING - ALWAYS USE A SCALE.

8. Remove agent fill cap 0-ring. Clean cap and cylinder threads with a small brush and wipe surfaces with a clean damp cloth to remove dust. Inspect o-ring and replace if damaged or deformed. Install o-ring and lightly brush it and all threads with Visilox V-711. Install agent fill cap **HAND TIGHT**.

9. Attach the nitrogen charging adapter to the male hose connector on the operating valve.

10. With the extinguisher properly secured in an upright position, connect your nitrogen pressurizing line with a quick connect to the nitrogen charging adapter. Rotate the operating Tee Handle Pressurizing Adaptor valve lever to the **OPEN** position and pressurize extinguisher with dry nitrogen to 240 psi. When the desired pressure has been reached, rotate the operating lever to the **CLOSED** position. Shut off nitrogen supply and remove the quick connect.

11. Remove the nitrogen charging adapter. Check extinguisher for leaks by applying leak detecting fluid or a solution of soapy water to the male hose connector orifice, around the collar o-ring sealing areas of valve and fill cap, cylinder welds and gauge. Remove leak detecting fluid from valve assembly by blowing out with air or nitrogen. Wipe exterior of extinguisher to remove any remaining residue.

12. Reconnect the hose to the operating valve. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount. **CAUTION: WHEN ASSEMBLING THE HOSE TO THE AGENT CYLINDER OR NOZZLE TO THE HOSE, TIGHTEN THE COUPLING ¼ TURN AFTER CONTACTING THE HOSE GASKET.**

13. Install the Ring (Safety) pin and lock wire (tamper) seal in the manual actuator. Record recharge date and attach new recharge tag.

14. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the “Maintenance” section of the nameplate (label).

15. Return the extinguisher to its proper location.

14. Weigh assembled extinguisher and confirm that the total weight is within the allowable tolerances indicated in the “Maintenance” section of the nameplate (label).

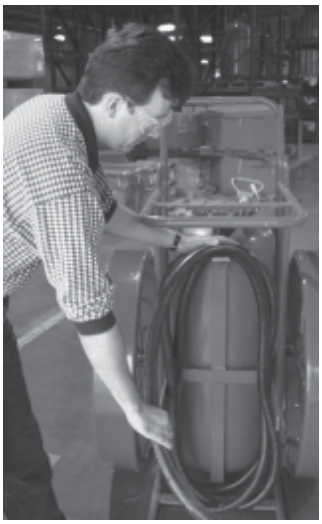
15. Return the extinguisher to its proper location.

The following installation instructions should be followed to avoid hose twisting and kinking as the hose is coiled on the retention rack.

Lay the hose straight on the ground to its full 40' length. Start the first loop counter-clockwise by placing it over the retention bracket as shown.

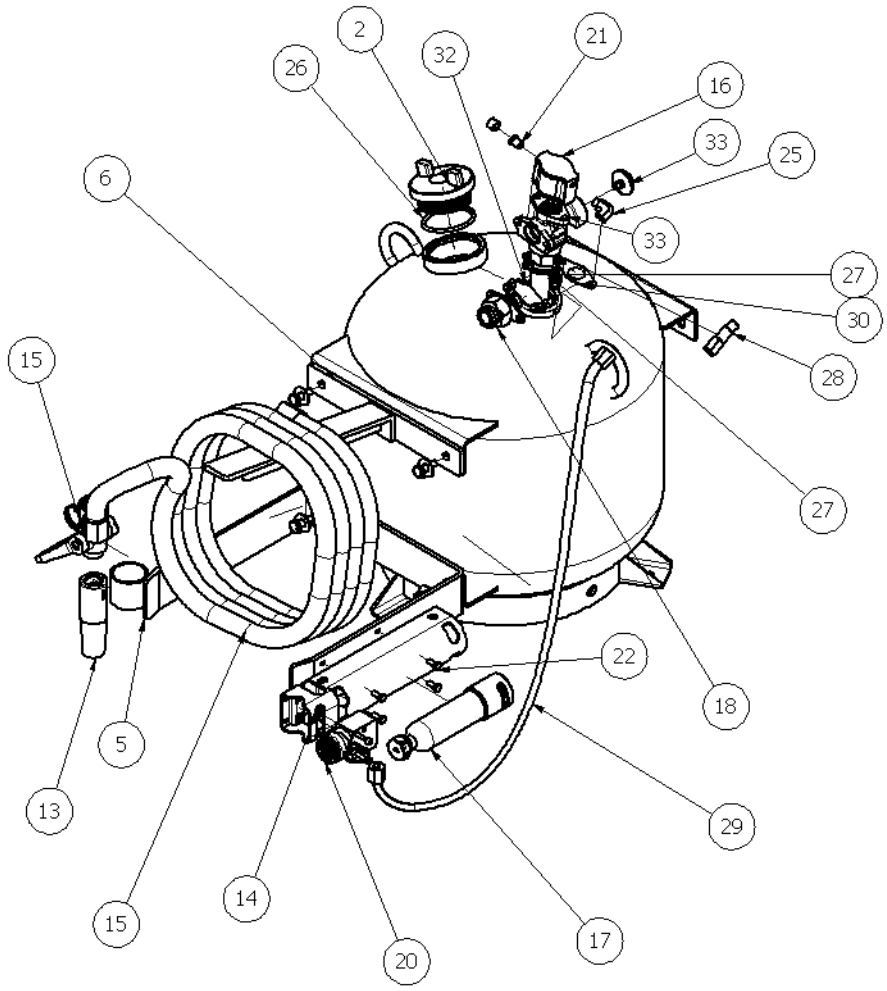
The second loop is a "reverse" loop. Note that the hose passes behind the loop on this coil.

The next loop is a regular "hose in front" loop. Succeeding loops are alternated, reverse, front, etc. until the hose is installed.



Adjust loops so that the nozzle fits into the nozzle mount. Loops should be approximately the same length.

Parts List and Description
781K
783K



PARTS LIST		
ITEM	PART #	DESCRIPTION
1	18249	CYL DP 150 MIL TAN
2	09300	CAP FILL 250 PLTD
33	18242	VLV DCH ASY 150 DC STA
4	10124	BOLT HEX 5/16-18 7/8 SS
5	18307	GUARD HOSE 150 20" CYL TAN
6	18308	SUPPORT HOSE ASY 20" CYL TAN
7	07073	NUT HEX 1/2-13 LOCK SS
8	15589	SCREW HH SS 1/2-13 X 1 1/4
9	04907	WASHER FLAT 9/16 SS
10	18740	NPLATE 781K 150 STA
11	18743	PICTOGRAM 781K 150 STA
12	18742	VLV ASY BALL 781K 150
13	08260	NOZ .531 WU ANOD
14	19272	BKT & COVER REM ACT VS RD
15	18758	HOSE ASY 3/4" X 40'
16	10147	CTRL HD PNEU ASSY
17	09956	CYL NIT 15 CU IN ASY
18	18313	FTNG DCH ASY ADAPTER 1" NH
19	10125	NUT SQUARE 5/16-18 SS
20	10210	ACT ASY REMOTE VS
21	10173	VENT CHECK
22	18763	SCREW HH 1/4-20 X 3/4 SS
23	06424	NUT LOCK 1/4-20 SS
24	13761	CAP VENT CHECK VSS
25	04444	ELBOW ST 1/4BR 3000PSI
26	08392	ORING FILL CAP 125CG & 250
27	05239	ORING QUAD COLR 150
28	10262	CHECK VALVE
29	18751	HOSE NIT ASY
30	10099	CAP SHIP AGENT CYL SYS
31	10573	SCREW CAP 1/4-20 X2 SS
32	10646	CAP ANTI-RECOIL SYS
33	05525	GAUGE 240 PSI

OWNERS SERVICE MANUAL NO. 19795
INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:	AVAILABLE FROM:
NFPA-10 Portable Fire Extinguishers	National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101
CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders **CGA C-6** Standard for Visual Inspection of	Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

WHEELED STORED PRESSURE
3M™ NOVEC™ 1230 FIRE EXTINGUISHER
MODEL 775 AND 776

AMEREX CORPORATION – P.O. BOX 81 – TRUSSVILLE, ALABAMA 35173-0081

Phone: 205/655-3271 Fax: 800/654-5980

e-mail: sales@amerex-fire.com **Web Page:** http://www.amerex-fire.com

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is -40º to +120ºF (-40º to +49ºC). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants which may interfere with its proper operation. Do not functionally test this fire extinguisher. (Testing or any use may cause the extinguisher to gradually lose pressure and become ineffective.)

OPERATION

CAUTION: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. "Dry Run" and visual aid training will prepare personnel with the feel for this extinguisher so that the most effective application can be utilized in an emergency. The basic operating instructions are contained in the pictogram portion of every extinguisher nameplate (label). The following elaborates on these instructions:

1. Move the extinguisher to within approximately 30 feet of the fire site. Keep the extinguisher upright. **NOTE: The model 775 and 776 extinguisher may be operated in either the vertical or reclined position; however, it will discharge more agent in the vertical position.**

2. Twist and pull ring pin. Open cylinder discharge valve by rotating (pulling) the valve lever toward the hose 90°. The hose is now pressurized with chemical.

3. Pull nozzle, with lever in the closed position, from the mount and extend the hose from the storage rack.

4. Stand back 15 to 20 feet from the fire and aim the nozzle at base of flames nearest you. Open nozzle by pulling handle toward you (be prepared for a discharge recoil by holding the nozzle firmly).

5. Sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning materials.

6. When the fire is out, push the nozzle lever forward to the closed position.

7. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

MODEL 775 and 776

Discharge Time (approx.)	**23 seconds**
Range (Agent Throw)	**25 to 35 feet**
Hose Length	**40 feet**

SHUTDOWN

CAUTION: BEFORE PERFORMING THE SHUTDOWN PROCEDURE AND PREPARING TO MOVE THE EXTINGUISHER TO THE RECHARGE LOCATION, DETERMINATION MUST BE MADE THAT THE FIRE IS COMPLETELY EXTINGUISHED AND THERE IS NO DANGER OF A FLASHBACK.

1. Rotate cylinder discharge valve lever 90° to the closed position. Install ring (locking) pin to prevent accidental actuation while transporting to recharge location.
2. Remove residual agent from hose.
3. Return the extinguisher to the upright position.
4. Coil the hose onto the storage rack and position the nozzle into the mount in preparation for transport to the recharge location.

RECHARGE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES

(Monthly or more often if circumstances dictate)

[NFPA-10] Periodic inspection of fire extinguishers shall include a check of at least the following items:

1. Location in designated place.
2. No obstruction to access or visibility.
3. Pressure gauge reading or indicator in the operable range or position.
4. Operating instructions on nameplate and facing outward.
5. Safety seals and tamper indicators not broken or missing.
6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle.
7. Determine fullness by weighing.
8. Hose properly coiled and shut-off nozzle in its mount.
9. Wheels rotate freely.

MAINTENANCE

[NFPA-10] Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE PROCEDURE

1. Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure, using the proof pressure method, in accordance with instructions in CGA pamphlet C-6 and NFPA 10. See proper method of depressurizing and reclaiming 3M™Novec™ 1230 in Complete Maintenance procedures. **NOTE: WHEN CLEANING, AVOID USE OF SOLVENTS AROUND THE PRESSURE GAUGE. THEY COULD SERIOUSLY DAMAGE THE PLASTIC GAUGE FACE.**
2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
3. Weigh the extinguisher and compare with weight printed in the "Maintenance" section on the nameplate (label). Recharge extinguisher if weight is not within indicated allowable tolerances.
4. Check the date of manufacture printed on the extinguisher label (nameplate) or on the agent cylinder dome. The agent cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate (will vary according to size). Discharge hoses must also be hydrostatically tested (proof pressure) every 12 years to 300 psi, or service pressure, whichever is higher.
5. Visually inspect the pressure gauge:

   If bent, damaged or improper gauge, depressurize and replace.

   If pressure is low, check for leaks.

   If over pressurized (overcharged), depressurize the extinguisher and follow recharge instructions.
6. Check ring pin for freedom of movement. Replace if bent or if removal appears difficult.
7. **WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. ANY EVIDENCE OF AGENT IN THE NOZZLE INDICATES THAT THE UNIT MAY HAVE BEEN USED AND THE USE NOT REPORTED. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL.** Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, disassemble the nozzle, replace parts and/or properly lubricate as necessary. Make sure that the nozzle tip is clear and unobstructed.
8. After making sure that there is no residual pressure in the discharge hose, disconnect it from the operating valve. Blow air through the hose and nozzle assemblies to insure that the passage is

clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration – replace as necessary.

9. Inspect the valve assembly for corrosion or damage to hose thread connection. Replace valve assembly or component parts as necessary following the proper depressurization and recharge procedures. If valve removal is necessary, complete all steps in the Recharge Procedure.
10. Reconnect the hose to the agent cylinder. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount. **NOTE: WHEN ASSEMBLING THE HOSE TO THE AGENT CYLINDER OR NOZZLE TO THE HOSE, TIGHTEN THE COUPLING ¼ TURN AFTER CONTACTING THE HOSE GASKET.**
11. Inspect the wheels on to insure they rotate freely. Lubricate as required.
12. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.
13. Install new lockwire (tamper) seal and record service data on the extinguisher inspection tag.
14. If the extinguisher has been moved to perform service, make sure that it is returned to its proper location.

COMPLETE MAINTENANCE (SIX YEAR MAINTENANCE)

[NFPA-10] Every 6 years, stored pressure extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing, the six year requirement shall begin from that date.

WARNING:

a. **Before attempting to devalve the extinguisher for Maintenance, Hydrotest or Recharging be sure that it is completely depressurized. NEVER VENT TO THE ATMOSPHERE. Recover agent and vapor according to the instructions below.**
b. **Never have any part of your body over the extinguisher while removing the valve assembly.**
c. **3M™Novec™1230 should not be mixed with even the slightest amount of moisture. Prolonged exposure of a devalved cylinder to ambient air should be avoided to prevent moisture contamination and cylinder rusting.**

COMPLETE MAINTENANCE (SIX YEAR MAINTENANCE) PROCEDURES

1. Complete items 1 through 9 in Maintenance Procedure above.
2. Attach the appropriate recharge adapter to the extinguisher operating valve on the extinguisher cylinder. Empty the extinguisher of all pressure and 3M™Novec™using a listed Recharge/ Recovery system and a bulk supply cylinder with sufficient empty capacity to accept the contents of the extinguisher. **NOTE: Every effort should be made to halt unnecessary escape of 3M™Novec™ to the atmosphere. High Efficiency Recharge/Recovery (vacuum pump type) systems (UL Standard 2006) are commercially available. They allow a means of checking for and removing moisture or contamination during the recovery process.**

3. When extinguisher is empty of all agent and pressure, remove valve assembly and disassemble by removing downtube, spring and valve stem assembly. Discard valve stem assembly and collar O-ring.
4. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with dry nitrogen.
5. Install a NEW Amerex valve stem assembly after lightly lubricating the valve stem O-ring with V-711 or equivalent (do not lubricate the valve stem seal). Reassemble the spring and downtube. Carefully install a NEW collar O-ring which has been lightly lubricated with V-711 or equivalent. Set the valve assembly aside.
6. Inspect the cylinder interior following CGA Visual Inspection Standard C-6. If a hydrotest has been performed or any moisture is evident, the cylinder should be immediately warm air dried.
7. Clean the O-ring seating groove in the cylinder neck. If any rust is evident, remove by using a fine emery cloth (200 grit). Clean the surface and lubricate the entire sealing area with a thin film of V-711 or equivalent. Install the valve assembly in extinguisher cylinder. Hand tighten firmly.
8. Use the Getz system to purge the residual air from the extinguisher cylinder.

RECHARGE

[NFPA-10] is the replacement of the extinguishing agent (also includes the expellant for this type of extinguisher.

WARNING:

a. Use a protective shield between you and the pressure gauge while charging an extinguisher. Do not stand in front of the gauge if a shield is not available.

b. Use a regulated pressurizing source of dry nitrogen only with a minimum dew point of minus 70ºF (minus 57ºC). Set the regulator to no more than 25 psi above the extinguisher operating pressure.

c. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.

d. **Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.**

RECHARGING PROCEDURE

1. Perform steps 1 through 8 of the "Complete Maintenance (Six Year Teardown)" section. **CAUTION:** All extinguisher and charging system valves must be closed before starting this procedure.

2. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with air or nitrogen. Inspect the spring and downtube assembly, and replace parts if worn or damaged. Install a new valve stem & O-ring after lightly lubricating with Bluestar V-711 (do not lubricate the valve stem seal).
3. Follow all recharging instructions on Getz or other "approved" Recharge/Recovery System.
4. Fill extinguisher with amount of 3M™Novec™ 1230 specified on nameplate and pressurize to the pressure specified with dry nitrogen.
5. Remove the recharge adapter. Some residual agent may remain in the valve orifice as a result of the charging procedure. Before attempting to leak detect, vacuum or blow the vapor away from the areas to be checked. Check extinguisher for leaks at the valve orifice, around the collar seal, cylinder welds and gauge. One method is to apply leak detecting fluid or a solution of soapy water to these areas. Use dry nitrogen to blow all liquid residue out of the valve and wipe the extinguisher to dry the exterior. **DO NOT LEAVE ANY LIQUID INSIDE THE VALVE BODY.**
6. Install hose assembly, with shut-off nozzle attached, to the extinguisher discharge valve. Tighten hose coupling ¼ turn after contact with hose gasket. Coil hose onto the hose rack and nozzle into mount.
7. Weigh extinguisher to confirm that the total weight is within the tolerances indicated in the Maintenance section of the extinguisher label (nameplate).
8. Record recharge date and attach new recharge tag in accordance with the requirements of the "Authority Having Jurisdiction".

TROUBLESHOOTING GUIDE

WARNING: Before attempting to correct any leakage problem, be sure that the agent cylinder and hose are completely depressurized. Check to determine the source of a leak before the extinguisher is depressurized. Leakage repairs will require depressurization and removal of the valve assembly. Use Getz or other approved recharge/recovery system to depressurize extinguisher.

	PROBLEM	CORRECTIVE ACTION
1.	Pressure gauge reads high or low	Temperature may have affected pressure – see temperature/pressure relationship chart.
2.	Leak through valve	Remove valve assembly, downtube, spring and valve stem assembly. Install new valve stem assembly. Check valve seat for scratches or foreign matter.
3.	Leak at collar O-ring	Remove valve assembly, clean collar O-ring seating surface thoroughly and lubricate lightly with V-711 or equivalent. Install a new collar O-ring after lubricating with V-711 or equivalent.
4.	Leak around gauge threads	Remove gauge*, and install a new 3M™Novec™ 1230 gauge (see parts list) using PTFE tape on the gauge threads.
5.	Defective gauge	Remove defective gauge* an install a new 3M™Novec™ gauge (see parts list) using PTFE tape on the gauge threads.
6.	Visible deterioration of discharge hose	Replace hose assembly. Extinguishing agent has been stored in hose for a prolonged time. See Caution in Shut-Down procedures
	* Pressure gauge threads are coated with a special epoxy at the factory. For easy removal, soak the valve assembly in hot water (180°F/82°C) for two to four minutes. Remove gauge with a 7/16" open end wrench.	

PARTS LIST
for
150lb. Stored Pressure
Wheeled
Novec 1230
Extinguisher Model

775
776R

ITEM NO.	PART NO.	DESCRIPTION
1	22978	VLV DCH ASY BR 150 NOVEC
2	21941	Hose Support w/ Hardware
3	21920	Carriage Assy 150 Novec GR 775
	23633	Carriage Assy 150 Novec GR 36"
4	06062	Wheel Assy 16" Pneumatic w/ Hardware
	07778	Wheel Assy 16" Semi-Pneumatic w/ Hardware
4A	23632	Wheel Assy 36" x 2.5 Steel w/ Hardare
5	04945	Hub Cap Black
	07389	Hub Cap and Washer, Pin for 36" Wheel
6	06130	Mount Noz Rubber w/ Hardware
7	19793	Noz .531 WU ANOD
8	03877	Gasket
9	06279	Valve Assembly Ball WU 150
	23634	Noz Ball Valve Assembly .531
10	07481	Pictogram
11	23544	Hose ASY 1" x 40'
12	01387	Tamper Seal
13	22979	Valve Body
14	22984	Valve Stem Assembly
15	06060	CAM w/ Orings
16	06059	Valve Lever w/ Screws
17	22983	Valve Spring
18	16723	Guage Guard Assembly
19	06100	Pull Pin and Wire
20	19789	Gauge 125 Novec
21	19787	Downtube Assembly
22	05239	Oring Collar
ALL FILL & HYDROTEST ADAPTERS - SEE ADAPTERS PAGE		
Replacement Valve Assemblies include Valve Body, Gauge, Lever, Valve Stem Assembly, Spring and Downtube/Retainer Assembly		