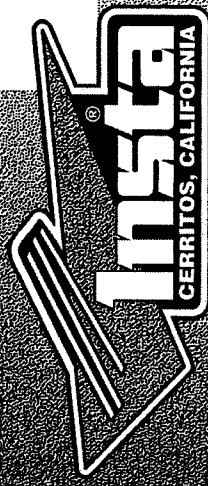
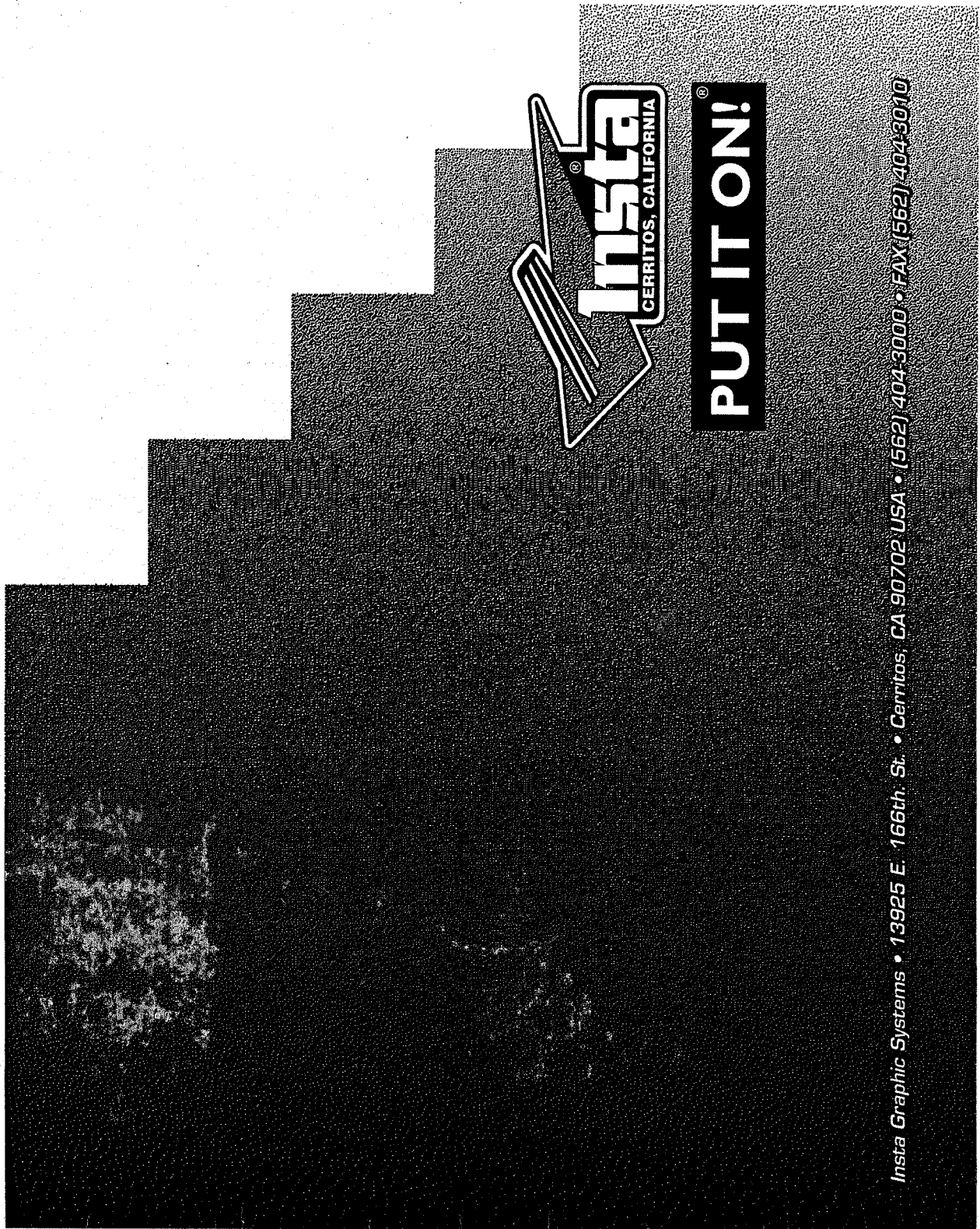


**Operation and Maintenance Manual**

# **MODEL 216/221**

**H e a t S e a l M a c h i n e s**



**PUT IT ON!**

*Insta Graphic Systems • 13925 E. 166th. St. • Cerritos, CA 90702-USA • (562) 404-3000 • FAX (562) 404-3010*

# THIS MACHINE IS DESIGNED TO BE OPERATED BY ONE OPERATOR ONLY

## Congratulations!

Your selection of the Insta Graphic heat seal machine is a sound business decision. Insta Graphic equipment is the result of the highest quality engineering and time tested design. Your new machine combined with Insta's reputation of innovation in the heat sealing field, insures the continuing capability of delivering the best decorated garments possible.

This manual describes installation, operation, and maintenance procedures for your new model 216/221 machine, as well as easy to use instructions for on the spot maintenance. Proper heat sealing instructions and helpful hints are included in a separate brochure.

Your model 216/221 machine will have a long trouble free life. Read this manual. Keep it with your machine. It's your key to proper operation and lasting service.

## Installation



### DOMESTIC

Use a **separate** 15 amp AC circuit. Only industrial extension cords with proper wire size should be used: size 16/3 wire for distances up to 25 feet, and size 14/3 for distances up to 50 feet.



### INTERNATIONAL

Use a **designated** 16 amp AC circuit. Only industrial extension cords with proper wire size (2.5 sq. mm) shall be used.

## Limited Machine Warranty

Insta Graphic Systems (IGS) warrants this heat seal machine, when operated under normal conditions, to be free from manufacturing defects in material and workmanship for a period of one year on parts (lifetime on the heating element) and 90 days on labor from the date of shipment.

This warranty will be effective only when IGS authorizes the original purchaser to return the product to the factory in Cerritos, California, freight prepaid, and only when the product upon examination has proven to be defective.

This warranty does not apply to any machine which has been subjected to misuse, negligence or accident.

IGS shall not be liable for the injury, loss or damage, direct or consequential, arising out of the use or the inability to use the product.

No claim of any kind shall be greater in amount than the sale price of the product or part to which claim is made.

*This is the sole warranty given by the company, in lieu of any other warranties, expressed or implied, in law or in fact, including the warranties of merchantability and fitness for a particular use, and is accepted as such by the purchaser in taking delivery of this product.*

## Operation

1. It is recommended that you review the "How to Apply Instructions" (in our Product Catalog) before beginning heat sealing operations.
2. Push on/off switch to **ON** position.
3. Set desired temperature and swing the upper platen arm to its fully open position, away from lower platen.
4. Allow the machine to warm up for approximately 30 minutes. When the selected temperature is reached, the **green heater lamp** adjacent to the power switch will cycle on and off.

### NOTE

*The thermometer indicates the internal temperature of the heat platen and will indicate a temperature approximately 25F° (14C°) higher than the actual heat platen surface. The temperature*



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5. Set the desired pressure by adjusting the pressure adjust lever on the top of the machine. To increase pressure, pull lever forward.
6. Place the garment on lower platen, smoothing out all wrinkles.
7. Position transfer or lettering on garment.
8. Swing the upper arm into position directly over the lower platen.
9. Close machine by pulling handle down into locked position.
10. Set timer for desired time cycle.
11. Bell will ring at end of time cycle. Lift safety lock and pull handle up slowly and move upper platen handle to its full open position. This technique will avoid transfer paper (cover) from being pulled off prematurely due to suction from the separating platens.

12.



### NOTE

*For safety purposes, it is necessary to push the handle into the locked position after it is lifted. This will eliminate the accidental lowering of the heat platen handle.*

13. Swing away upper arm to the extreme right hand position and remove garment.

### Preventive Maintenance Suggestions

The Insta Graphic heat seal machines are relatively maintenance free. For long trouble-free life, the following preventive maintenance should be followed:

1. Do not heat seal items such as buttons, pins, snaps, or zippers which tend to cut the silicone rubber pad or scratch the Teflon heat platen.

2. Periodically clean the Teflon-coated heat platen with a non-abrasive piece of cloth. Stubborn stains may be cleaned, **when platen is cool**, with mineral spirits.
3. When the heat platen is hot and not in use, keep in open position (away from the silicone rubber pad).
4. To prevent soiling of garment, periodic wiping of the entire exterior machine, including platens, with a clean rag is recommended. If necessary, use mineral spirits for cleaning a **cold** machine. Since mineral spirits are flammable, use precautions and keep away from sparks, flame, or hot heat platen.

5. The model 216/221 machines require periodic lubrication with a high-temperature, non-melting grease, such as Lubramatic SM-111 or equivalent.

A. Lubricate the post, handle and cam assembly depending upon usage.  
(Once every month if used continuously.)

B. There are four (4) points of lubrication:

- a) Post
- b) Lower Cam
- c) Guide Post
- d) Upper Pin Area

In addition, occasionally apply a few drops of heavy machine oil to the upper portion of the cam assembly. To Lubricate adjustment knob and cover retaining screw, raise cover an inch or two and apply heavy machine oil to threads.

### NOTE



*Wipe off any excess oil or grease. Replace cover, screw, and knob.*

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**Specifications**

Voltage **120 Volts AC** 50/60 Hertz  
Model 216 Wattage 1500 Watts  
Model 221 Wattage 1750 Watts

Voltage **240 Volts AC** 50/60 Hertz  
Model 216 Wattage 1500 Watts  
Model 221 Wattage 2200 Watts

Weight Model 216 75 Pounds (34.1 KG)  
Weight Model 221 87 Pounds (39.5 KG)

**Safety Summary**



**WARNING**

In case of power cord damage, do not attempt to repair or replace the power cord. Contact the manufacturer or the local distributor.



**WARNING**

Avoid touching hot surfaces while operating the machine.



**CAUTION**

During normal operation, the base of the machine needs to be installed or placed above the wall socket.

**International Symbols**



**Power Off**



**Power On**



**Hot Surface**



**Risk of Electrical Shock**



**Protective Earth Terminal**



**Ground**



**Caution - Warning**

# FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY

## Model 216/221 General Maintenance

It is recommended that you have the following items available:

- A. Regular screw driver
- B. Phillips head screw driver
- C. Small adjustable wrench
- D. Needle nose pliers with insulated handle
- E. Set of Allen wrenches
- F. Grease gun
- G. Special high temperature grease

With the above items you should be able to accomplish most repairs.

### WARNING

*Power cord replacement should be from the manufacturer only (because it requires a specially prepared cord).*



## Replacement of Silicone Rubber Pads

1. Make sure heat platen is cool.
2. Use tube of RTV-106 (or RTV-108) adhesive to bond silicone rubber pad to metal platen.  
**NOTE:** *Read instructions on the tube package.*

3. Be sure that the surface of the silicone platen is clean. Use a **mild** solvent such as **mineral spirits**.

4. The pad and metal must be thoroughly dry and clean, before starting the bonding operation.

5. Apply adhesive sealant to the metal platen. Spread a thin even coat and apply pad immediately. Apply pressure and position pad making sure that there is no air entrapment.

**NOTE:** *A serrated blade such as used for laying down rubber floor tiles would be helpful.*

6. Allow to cure overnight under low pressure at normal room temperature.

## Temperature Control Replacement

### NOTE

*Disconnect Power Supply*



1. Remove knob
2. Remove the two screws which secure the control to the front panel.
3. Disconnect the wires going to the control.

### NOTE

*There is only one wire going to the terminal (this is the **HOT** side of the line). The other terminal has two wires—one from the heating elements and one from the lamp*



4. Carefully remove the capillary tube clamp and temperature sensing bulb from the rear of the upper heat platen.

### NOTE

*Do not squeeze or sharply bend the thin capillary tube which connects the temperature control of the sensing bulb.*



5. Make sure that the temperature sensing bulb on the new control is straight. Carefully straighten if necessary.

6. Carefully insert the new sensing bulb into the upper heat platen. If necessary, the sensing bulb (**NOT THE CAPILLARY BULB**) may be grasped **GENTLY** with a pair of pliers to aid in installation.

### NOTE

*Do not grasp capillary tube with pliers.*



7. Reconnect the three (3) wires to temperature control as stated in Step 3.
8. Insert the two screws which secure the control to the front panel.

# FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY

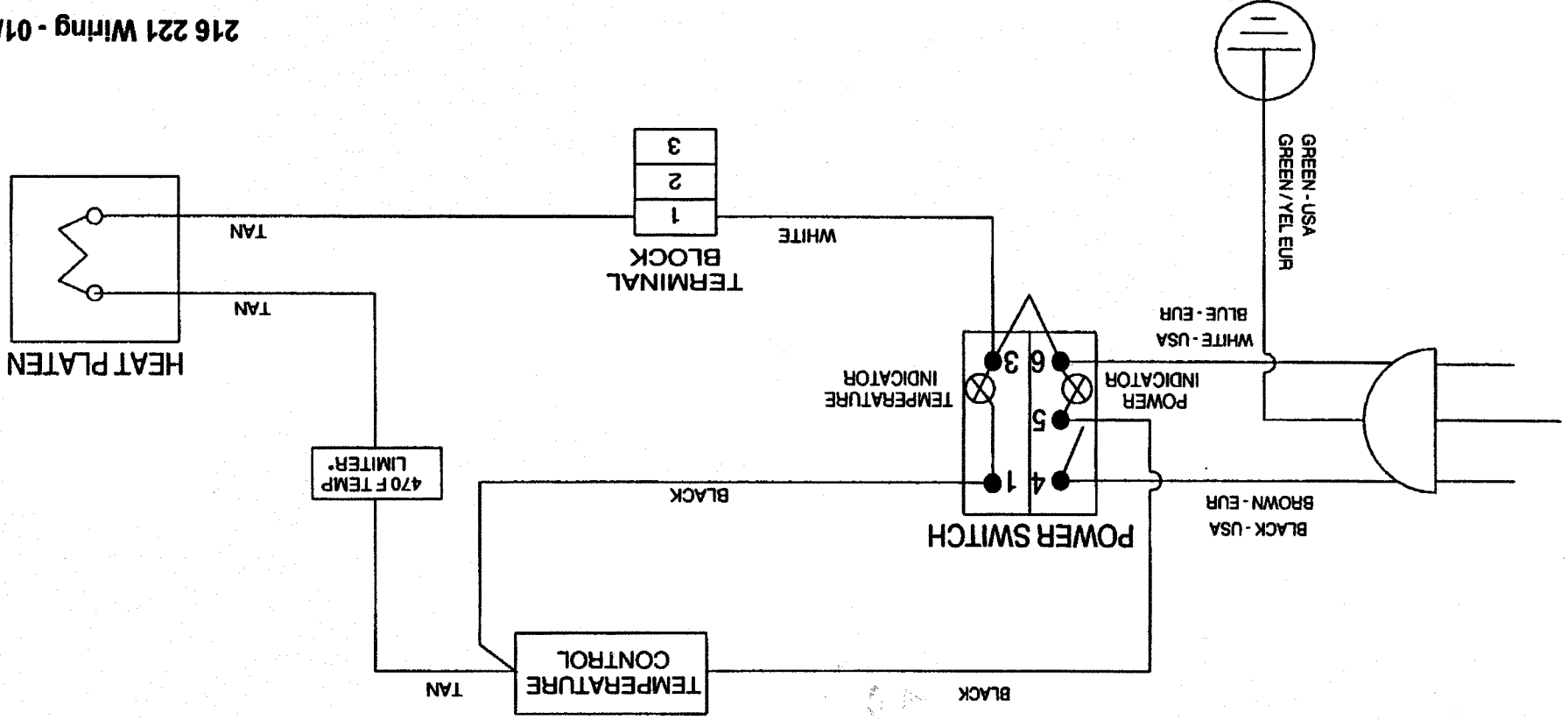
9. Replace the knob with the pointer indexed to the **OFF** position.

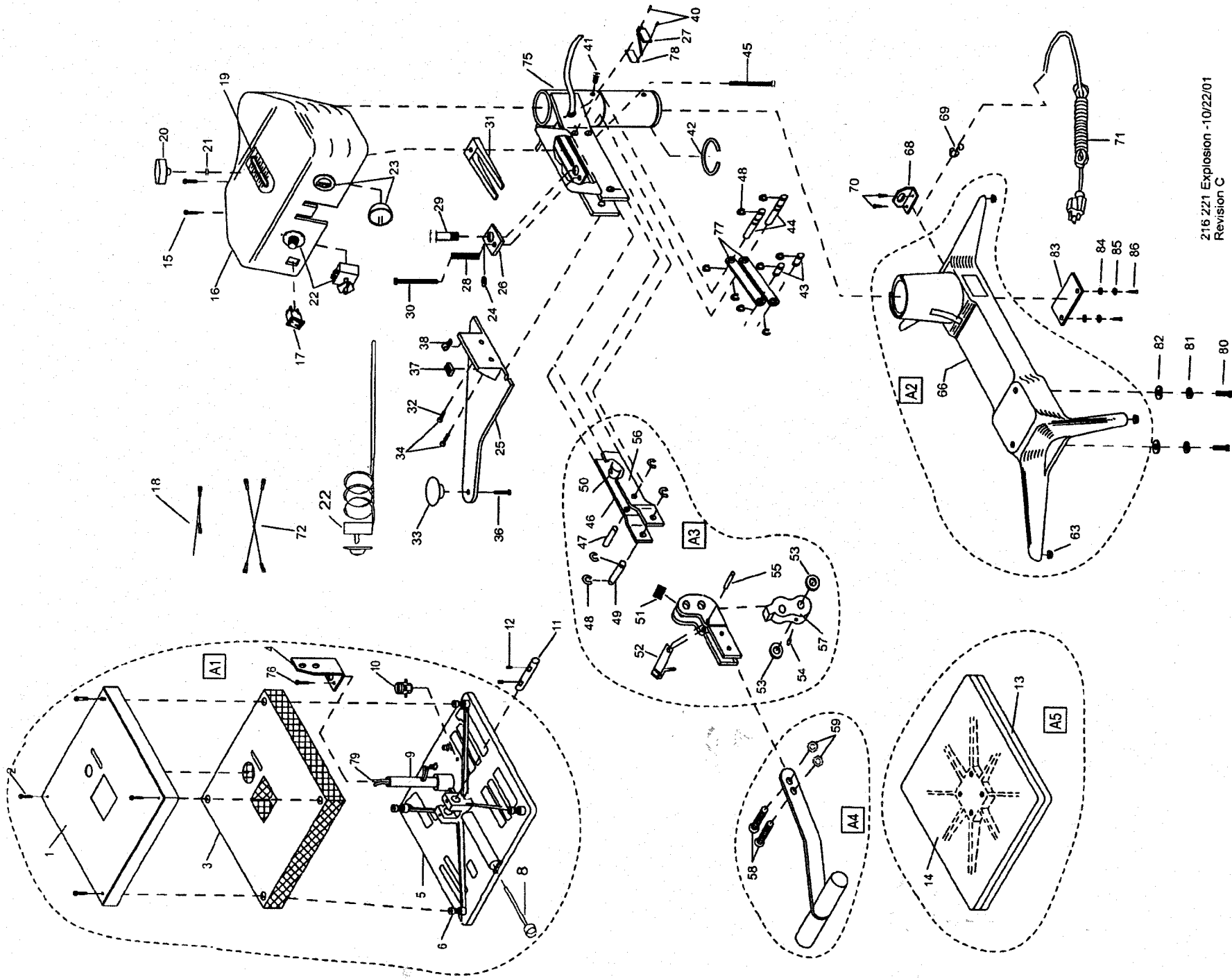
## Heat Platen Removal

1. Remove temperature control as explained in the **Temperature Control Replacement** section.
2. Disconnect the two heat platen wires which come up through the guide post, **one from the terminal block and one from the lamp.**
3. Remove the heat platen wire clamps.

4. Place some padding on the base of the machine to protect the Teflon coating on the heat platen during disassembly.
5. Using an Allen wrench, loosen the two lower pivot pin set screws.
6. Using a long, thin punch or screw driver, drive the lower pivot pin from the platen.
7. Swing the arm to the extreme right and slowly lower the heat platen until the guide post clears the bushing. The wires may then be pulled free.
8. Reverse this procedure to install.

216 221 Wiring - 01/16/01





216 221 Explosion -10/22/01  
Revision C



NO	PART NAME	MODEL 216		MODEL 221		MODEL 240V AC	
		120V AC	240V AC	120V AC	240V AC	120V AC	240V AC
1	HEAT SHROUD	MPSS215	MPSS215	MPSS220	MPSS220	MPSS220	MPSS220
2	SCREW, SHROUD	MPSS143	MPSS143	MPSS143	MPSS143	MPSS143	MPSS143
3	FIBERGLASS INSULATION	MPSP251	MPSP251	MPSP250	MPSP250	MPSP250	MPSP250
4	BRACKET, STABILIZING LEVER	MPSB228	MPSB228	MPSB228	MPSB228	MPSB228	MPSB228
5	UPPER PLATEN	MPSP070	MPSP071	MPSP043	MPSP043	MPSP049	MPSP049
6	SHROUD INSULATORS (4/SET)	MPSI089	MPSI089	MPSI089	MPSI089	MPSI089	MPSI089
8	THERMOMETER	MPPT056	MPPT056	MPPT056	MPPT056	MPPT056	MPPT056
9	GUIDE POST	MPSP085	MPSP085	MPSP085	MPSP085	MPSP085	MPSP085
10	HI-TEMPERATURE LIMITER	MPPT046	MPPT046	MPPT046	MPPT046	MPPT046	MPPT046
11	PIVOT PIN (PLATEN)	MPSP083	MPSP083	MPSP083	MPSP083	MPSP083	MPSP083
12	SET SCREW, PIVOT PIN	MHST142038	MHST142038	MHST142038	MHST142038	MHST142038	MHST142038
14	PAD, SILICONE RUBBER	MPPP030	MPPP030	MPPP031	MPPP031	MPPP031	MPPP031
15	SCREW, HOUSING	MPSP102438	MPSP102438	MPSP102438	MPSP102438	MPSP102438	MPSP102438
16	INSTRUMENT HOUSING	MPSH200	MPSH200	MPSH200	MPSH200	MPSH200	MPSH200
17	POWER SWITCH ASSEMBLY	MPPS230	MPPS230	MPPS230	MPPS230	MPPS230	MPPS230
18	WIRE ASSY (WHITE)	MPPW221	MPPW221	MPPW221	MPPW221	MPPW221	MPPW221
19	SCALE OVERLAY (PRESSURE ADJ.)	MPPL012	MPPL012	MPPL012	MPPL012	MPPL012	MPPL012
20	KNOB, PRESSURE ADJUST	MPPK019	MPPK019	MPPK019	MPPK019	MPPK019	MPPK019
21	NUT, KNOB (JAM)	MHNHJ51618	MHNHJ51618	MHNHJ51618	MHNHJ51618	MHNHJ51618	MHNHJ51618
22	TEMPERATURE CONTROL ASSEMBLY	MPPT052	MPPT052	MPPT052	MPPT052	MPPT052	MPPT052
23	BELL TIMER	MPPT058	MPPT058	MPPT058	MPPT058	MPPT058	MPPT058
24	WASHER, PRESSURE ADJUST	MHWSAE516	MHWSAE516	MHWSAE516	MHWSAE516	MHWSAE516	MHWSAE516
25	SWING AWAY HANDLE	MPSP013	MPSP013	MPSP013	MPSP013	MPSP013	MPSP013
26	WEDGE WASHER	MPSP010	MPSP010	MPSP010	MPSP010	MPSP010	MPSP010
28	SPRING, PRESSURE ADJUST	MPSS200	MPSS200	MPSS200	MPSS200	MPSS200	MPSS200
29	SCREW, PRESSURE	MHH1213234	MHH1213234	MHH1213234	MHH1213234	MHH1213234	MHH1213234
30	SCREW, PRESSURE ADJUST	MH51618212	MH51618212	MH51618212	MH51618212	MH51618212	MH51618212
31	CAM WEDGE	MPSP001	MPSP001	MPSP001	MPSP001	MPSP001	MPSP001
32	SCREW, SWING HANDLE	MHSH142058	MHSH142058	MHSH142058	MHSH142058	MHSH142058	MHSH142058
33	MUSHROOM KNOB	MPPK017	MPPK017	MPPK017	MPPK017	MPPK017	MPPK017
34	SCREW, SWING HANDLE	MHSH142012	MHSH142012	MHSH142012	MHSH142012	MHSH142012	MHSH142012
36	SCREW, SWING HANDLE	MHSB142078	MHSB142078	MHSB142078	MHSB142078	MHSB142078	MHSB142078
37	TERMINAL BLOCK	MPPT201	MPPT201	MPPT201	MPPT201	MPPT201	MPPT201
38	CABLE CLAMP 5/16	MHCC516	MHCC516	MHCC516	MHCC516	MHCC516	MHCC516
40	SCREW, ROUND HEAD	MHSR44012	MHSR44012	MHSR44012	MHSR44012	MHSR44012	MHSR44012
41	SCREW, POST ARM	MHSH381612	MHSH381612	MHSH381612	MHSH381612	MHSH381612	MHSH381612
42	SNAP RING	MPSR268	MPSR268	MPSR268	MPSR268	MPSR268	MPSR268
43	PIN, SHORT LINKAGE	MPSP263	MPSP263	MPSP263	MPSP263	MPSP263	MPSP263
44	PIN, LONG LINKAGE	MPSP264	MPSP264	MPSP264	MPSP264	MPSP264	MPSP264
45	BOLT, CARRIAGE	MH51618234	MH51618234	MH51618234	MH51618234	MH51618234	MH51618234
46	PRESSURE ADJUST LEVER (LH)	MPSP2200	MPSP2200	MPSP2200	MPSP2200	MPSP2200	MPSP2200
47	PIVOT PIN, ADJUSTMENT (LOWER)	MPSP2211	MPSP2211	MPSP2211	MPSP2211	MPSP2211	MPSP2211
48	E CLIPS	MPSC240	MPSC240	MPSC240	MPSC240	MPSC240	MPSC240
49	CAM PIVOT PIN (UPPER)	MPSP262	MPSP262	MPSP262	MPSP262	MPSP262	MPSP262
50	PRESSURE ADJUSTMENT NUT	MPSP2209	MPSP2209	MPSP2209	MPSP2209	MPSP2209	MPSP2209
51	SPRING, CAM	MPSS201	MPSS201	MPSS201	MPSS201	MPSS201	MPSS201
52	SAFETY LOCK	MPSL240	MPSL240	MPSL240	MPSL240	MPSL240	MPSL240
53	WASHER, CAM	MHWSAE12	MHWSAE12	N/A	N/A	N/A	N/A

NO	PART NAME	MODEL		MODEL		MODEL	
		216 120V AC	216 240V AC	221 120V AC	221 240V AC	221 120V AC	221 240V AC
54	GREASE FITTING	MPSF145	MPSF145	MPSF145	MPSF145	MPSF145	MPSF145
55	ROLL PIN (SAFETY LOCK)	MPSR141	MPSR141	MPSR141	MPSR141	MPSR141	MPSR141
56	PRESSURE ADJUST LEVER (RH)	MPSP2201	MPSP2201	MPSP2201	MPSP2201	MPSP2201	MPSP2201
57	CAM	MPSC228	MPSC228	MPSC228	MPSC228	MPSC228	MPSC228
58	SCREW, HANDLE	MHSB516181	MHSB516181	MHSB516181	MHSB516181	MHSB516181	MHSB516181
59	JAM NUT	MHNHJ51618	MHNHJ51618	MHNHJ51618	MHNHJ51618	MHNHJ51618	MHNHJ51618
63	RUBBER FEET (4/SET)	MPSF460	MPSF460	MPSF460	MPSF460	MPSF460	MPSF460
66	BASE	MPSB204	MPSB204	MPSB204	MPSB204	MPSB204	MPSB204
68	BRACKET, POWER CORD	MPSS163	MPSS163	MPSS163	MPSS163	MPSS163	MPSS163
69	STRAIN RELIEF	MPSS168	MPSS168	MPSS168	MPSS168	MPSS168	MPSS168
70	SCREW, BRACKET	MHSP102438	MHSP102438	MHSP102438	MHSP102438	MHSP102438	MHSP102438
71	POWER CORD (USA MODEL)	MPPW141	MPPW142	MPPW141	MPPW141	MPPW142	MPPW142
71A	POWER CORD (EUROPEAN MODEL)*	N/A	MPPW202	N/A	N/A	MPPW202	MPPW202
71B	POWER CORD (UK MODEL)*	N/A	MPPW203	N/A	N/A	MPPW203	MPPW203
72	WIRE ASS'Y (BLACK)	MPPW222	MPPW222	MPPW222	MPPW222	MPPW222	MPPW222
75	POST, ARM	MPSP229	MPSP229	MPSP229	MPSP229	MPSP229	MPSP229
76	SCREW, PARALLEL LEVER BRACKET	MHSB142012	MHSB142012	MHSB142012	MHSB142012	MHSB142012	MHSB142012
77	LEVERS, PARALLEL STABILIZING	MPSL228	MPSL228	MPSL228	MPSL228	MPSL228	MPSL228
79	WIRE, HEATER	MPPW700	MPPW700	MPPW700	MPPW700	MPPW700	MPPW700
80	SCREW, LOWER PLATEN	MHSH5161834	MHSH5161834	MHSH5161834	MHSH5161834	MHSH5161834	MHSH5161834
81	LOCK WASHER, LOWER PLATEN	MHWL516	MHWL516	MHWL516	MHWL516	MHWL516	MHWL516
82	WASHER, LOWER PLATEN	MHWSAE516	MHWSAE516	MHWSAE516	MHWSAE516	MHWSAE516	MHWSAE516
83	REAR POST STOP PLATE	MPSP2303	MPSP2303	MPSP2303	MPSP2303	MPSP2303	MPSP2303
84	WASHER, REAR POST STOP PLATE	MHWSAE516	MHWSAE516	MHWSAE516	MHWSAE516	MHWSAE516	MHWSAE516
85	LOCK WASHER, REAR POST STOP	MHWL516	MHWL516	MHWL516	MHWL516	MHWL516	MHWL516
86	SCREW, REAR POST STOP PLATE	MHSH516181	MHSH516181	MHSH516181	MHSH516181	MHSH516181	MHSH516181
A1	UPPER PLATEN ASS'Y	MPSP024	MPSP025	MPSP025	MPSP025	MPSP045	MPSP046
A2	BASE ASS'Y	MPSB204	MPSB204	MPSB204	MPSB204	MPSB204	MPSB204
A3	CAM / PRESSURE LEVER ASS'Y	MPSC201	MPSC201	MPSC201	MPSC201	MPSC201	MPSC201
A4	PRESSURE HANDLE ASS'Y	MPSH515	MPSH515	MPSH515	MPSH515	MPSH515	MPSH515
A5	PLATEN, LOWER ASS'Y	MASP010	MASP010	MASP010	MASP010	MASP007	MASP007
* EUROPEAN MODELS ONLY							