

IMPORTANT

1. Always include complete heater model and serial number so that any specification change can be considered for parts shipment. It can save time and expense.
2. Specifications are subject to change without notice.
3. We reserve the right to substitute functional replacements.
4. Order either by Kit or Component Part No.

Functional Replacement Pilots

Quick Reference Replacement Pilot Kit Selection Table

(Refer to FIGURES 1-12, pages 1-4, for illustrations and component part numbers.)

Type of Heater	Model Designation*/Sizes	Match Lit Pilot Kits			Spark Pilot Kits**		
		Natural	Propane	FIGURE	Natural	Propane	FIGURE
Infrared	T, TR-H 50	-	-	-	110854	110854	2
	T, TR-H 75-200	-	-	-	110853	110853	2
Unit Heaters	F, B 25-400	110851	110852	1	110853	110854	2
	FE, BE 25-400	-	-	-	110853	110854	2
	UA, XL, XLB, CXL, CXLB 30-105	110855	110856	3	110857	110858	4
	XL, XLB, CXL, CXLB 125-400	110859	110860	5	110861	110862	6
	EEXL, EEXLB, CEEXL, CEEXLB 30-105	-	-	-	110857	110858	4
	EEXL, EEXLB, CEEXL, CEEXLB 125-400	-	-	-	110861	110862	6
	SCA, SCB prior to Series 6	-	-	-	110861	110862	6
	SCA, SCB Series 6	-	-	-	131457	131458	8
Duct Furnaces and Packaged Systems (Also applies to Models with prefix "H")	EEDU, HEEDU Series 6	-	-	-	110853	110854	2
	EEDU, HEEDU prior to Series 6	-	-	-	110861	110862	6
	X, XA, XB, XC, XD, XE, XG XJ, PAK, DFAH prior to 9/73	110863	110864	8	-	-	-
	X, XA, XB, XC, XD, XE, XG XJ, PAK, DFAH, CX, CXE, CPAK beginning 9/73	110859	110860	5	110861	110862	6
	SC, SCE Series 6	-	-	-	131457	131458	8
	RX, REB, RXE, RXJ, CRX, CREB, CRXE, RPAK, CRPAK, SC, SCE, SCJ prior to Series 6; RPV, RPVE, RPBE, RPVAK, CRPV, CRPVE, CRPBE, CRPVAK Series 6; RG, CRG, RP, CRP, RGB, CRGB, RPB, CRPB, RGBL, CRGBL, RPBL, CRPBL, SSCBL	-	-	-	110861	110862	6
	RPV, RPBE, RPVE, RPVAK RPVJ. CRPV, CRPBE, CRPVE, CRPVAK prior to Series 6	-	-	-	110865	110866	9
Heating/Cooling	RCG 7-1/2, 10 ton	-	-	-	110865	110866	9
	RCG 2 - 5 ton - with vertical pilot	-	-	-	110867	110868	10
	- with horizontal pilot	-	-	-	110861	110862	6
Direct Fired	ADF, ADFH with hot surface ignition	-	-	-	120048	120048	11
	RDF -with spark ignition and flame probe	-	-	-	110869	110869	11
	-with spark ignition and ultraviolet sensor	-	-	-	110918	110918	11
	-with hot surface ignition	-	-	-	120048	120048	11
	DV with hot surface ignition	-	-	-	120048	120048	11
	DFA with hot surface ignition	-	-	-	120048	120048	11

* If the replacement pilot changes with the introduction of a Model Series, the Series is indicated in the Selection Table. The Series indicator is on the heater rating plate; it is the suffix number on the Model Size (Ex: SC400-6; "6" is the Series).

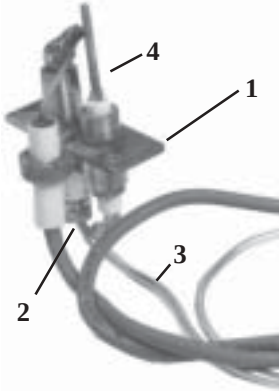
** Spark pilot kits for all indirect-fired products are for use with Model G60, G65, G67, or G770 ignition controllers only. Pilot kits are not available for other spark ignition systems used on indirect-fired products.

Pilot Kits and Components

FIGURE 1 - Vertical Match-Lit Pilot for Models F and B

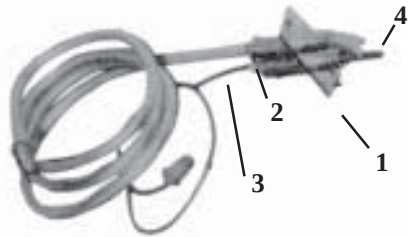
Replacement Pilot Kits		Natural Gas - P/N 110851 Propane Gas - P/N 110852
Code	P/N	Component Description
1	96360	Natural Gas Pilot Assembly with orifice, pilot tubing, and thermocouple; less fitting (Johnson #J994HKA-9731-715)
	96361	Propane Gas Pilot Assembly with orifice, pilot tubing, and thermocouple; less fitting (Johnson #J994HKA-9733-410)
2	103034	Natural Gas Orifice only, Johnson #9731-715 (brass)
	98695	Propane Gas Orifice only, Johnson #9733-410 (black)
3	98698	Pilot Tubing, 1/8" x O.D. x 18" long, Johnson #B10499-995-11
	97572	Compression Fitting, FTG 75 (2 required when replacing pilot tubing)
4	84761	Thermocouple, 24", #K15FA-24D

FIGURE 2 - Vertical Spark Pilot for Unit Heater Models F/FE/B/BE, Infrared Models TR/TR-H, and Duct Furnace Models EEDU/HEEDU Series 6



Replacement Pilot Kits		Models F/FE/B/BE	Natural Gas - P/N 110853; Propane Gas - P/N 110854	
		Model TR 50	Natural Gas - P/N 110854; Propane Gas - P/N 110854	
		Models TR 75-200	Natural Gas - P/N 110853; Propane Gas - P/N 110853	
		Models (H)EEDU Series 6	Natural Gas - P/N 110853; Propane Gas - P/N 110854	
Code	P/N	Application	Gas	Component Description
1	97534	F/FE/B/BE and (H)EEDU Series 6	Natural	Pilot Assembly with orifice, pilot tubing, and flame rod; less flame sensor lead and fitting (Johnson #J982HKW-9731-713)
		TR 75-200	Natural & Propane	
	97535	F/FE/B/BE and (H)EEDU Series 6	Propane	Pilot Assembly with orifice, pilot tubing, and flame rod; less flame sensor lead and fitting (Johnson #J982HKW-9733-410)
		TR 50	Natural & Propane	
2	103034	F/FE/B/BE and (H)EEDU Series 6	Natural	Orifice only, Johnson # 9731-713 (brass)
		TR 75-200	Natural & Propane	
	98695	F/FE/B/BE and (H)EEDU Series 6	Propane	Orifice only, Johnson # 9733-410 (black)
		TR 50	Natural & Propane	
3	98698	F/FE/B/BE/TR and (H)EEDU Series 6	Natural & Propane	Pilot Tubing, 1/8" OD x 18" lg, Johnson #B10499-99-11
	97572			Compression Fitting, FTG75 (2 required when replacing pilot tubing)
4	98697	F/FE/B/BE/TR and (H)EEDU Series 6	Natural & Propane	Flame Rod, Johnson #Y75AA-10
5	97575			Flame Sensor Lead, 21"

FIGURE 3 - Horizontal Match Lit Pilot for Models UA, XL, XLB, CXL, CXLB 30 - 105



Replacement Pilot Kits		Natural Gas - P/N 110855	Propane Gas - P/N 110856
Code	P/N	Component Description	
1	40964	Natural Gas Pilot Assembly with orifice; less pilot tubing, less thermocouple (Baso #J999HKA4213)	
	40420	Propane Gas Pilot Assembly with orifice; less pilot tubing, less thermocouple (Baso #J999HKA4207)	
2	40966	Natural Gas Orifice only, #4213	
	40965	Propane Gas Orifice only, #4207	
3	5145	Pilot Tubing, 22" long	
	9664	Nut with breakaway ferrule (2 required when replacing pilot tubing)	
4	84761	Thermocouple, TC2-24"	

FIGURE 4 - Horizontal Spark Pilot for Models EEXL, EEXLB, CEEXL, CEEXLB 30 - 105. May also be used on XL, XLB, CXL CXLB when equipped with G60, G65 or G67 ignition controller (with or without Serial No. Suffix "B")



Replacement Pilot Kits		Natural Gas - P/N 110857	Propane Gas - P/N 110858
Code	P/N	Component Description	
1	93971	Natural Gas Pilot Assy with orifice and high tension lead; less pilot tubing, less flame probe, less sensor lead (Baso #J983HKW7715)	
	93972	Propane Gas Pilot Assy with orifice and high tension lead; less pilot tubing, less flame probe, less sensor lead (Baso #J983HKW4709)	
2	93973	Natural Gas Orifice only, #7715	
	93974	Propane Gas Orifice only, #4709	
3	5145	Pilot Tubing, 22" long	
	9664	Nut with breakaway ferrule (2 required when replacing pilot tubing)	
4	50450	Sensor lead, 16" lg	
5	43594	Flame probe, Y75BA	

Above pilot replaces Baso #J987HKW, natural gas P/N 50449 and propane gas P/N 51330. Also replaces General Controls #26C27113 with 16" high tension lead, natural gas pilot P/N 64463 and propane gas P/N 64464; and General Controls #26C27113 with 24" high tension lead, natural gas pilot P/N 73614 and propane pilot P/N 73615.

FIGURE 5 - Horizontal Match Lit Pilot - Starting 9/73 for Models X, XA, XB, XC, XD, XE, XG, XJ, PAK, DFAH, HX, HXE, CX, CXE, HCX, HCXE, CPAK; Also XL, XLB, CXL, CXLB 125-400



Replacement Pilot Kits		Natural Gas - P/N 110859	Propane Gas - P/N 110860
Code	P/N	Component Description	
1	17890	Natural Gas Pilot with orifice; less pilot tubing, less thermocouple (Baso #J963HXA6218)	
	46136	Propane Gas Pilot with orifice; less pilot tubing, less thermocouple (Baso #J963HXA4211)	
2	46392	Natural Gas Orifice only, #6218	
	42089	Propane Gas Orifice only, #4211	
3	7671	Pilot Tubing, 26" lg for X Series	
	9664	Nut with breakaway ferrule (2 required when replacing pilot tubing)	
3A	5145	Pilot Tubing, 22" lg for XL, XLB, CXL, CXLB 125-400	
	9664	Nut with breakaway ferrule (2 required when replacing pilot tubing)	
4	84761	Thermocouple TC2, 24" lg for X Series	
4A	84760	Thermocouple TC2, 18" lg for XL, XLB, CXL, CXLB 125-400	

This pilot may be used in place of GC #26C23114.

FIGURE 6 - Horizontal Spark Pilots for Models

XL, XLB, CXL, CXLB 125-400

EEXL, EEXLB, CEEXL, CEEXLB 125-400; EEDU, HEEDU prior to Series 6

Starting 9/73 for X, XA, XB, XC, XD, XE, XG, XJ, PAK, DFAH, CX, CXE, CPAK

RX, REB, RXE, RXJ, CRX, CREB, CRXE, RPAK, CRPAK; SC, SCA, SCB, SCE, SCJ Prior to Series 6; RPV, RPVE, RPBE, RPVAK, CRPV, CRPVE, CRPBE, CRPVAK Series 6; RG, CRG, RP, CRP, RGB, CRGB, RPB, CRPB, RGBL, CRGBL, RPBL, CRPBL, SSCBL

RCG 2 through 5 ton with horizontal pilot

NOTES:

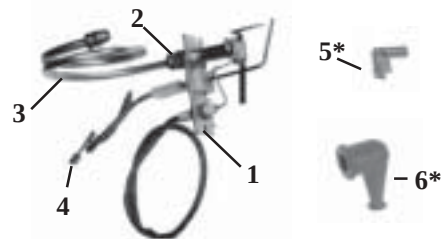
- Horizontal spark pilots for ignition systems other than G60, G65, G67 and G770 are no longer available.

- Kits also apply to models listed with the prefix "H"

*Included in all kits. Used only with the above models equipped with any Model G60 ignition controller, a Model G67BG-2, or a Model G67NG-2. Not used with ignition controller Models G67BG-5 and G770NGC-4. See Instructions on page 4.

- This pilot replaces Baso #J991HXW, natural gas P/N 45150, propane P/N 45141; #J994HXW, natural gas P/N 47303, propane P/N 47384. May be used as a substitution for J993HXW and J999HXW.

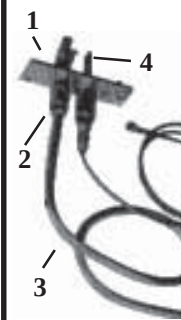
*See instructions on page 4.



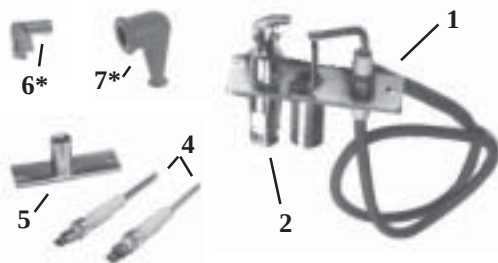
Replacement Pilot Kits		Natural Gas - P/N 110861 Propane Gas - P/N 110862
Code	P/N	Component Description
1	61145	Natural Gas Pilot Assy with orifice, high tension lead, flame probe; less pilot tubing, less flame sensor lead (Baso #J992HXW7221)
	61146	Propane Gas Pilot Assy with orifice, high tension lead, flame probe; less pilot tubing, less flame sensor lead (Baso #J992HXW9817)
2	63088	Natural Gas Orifice only, #7221
	37801	Propane Gas Orifice only, #4209
3	5145	Pilot Tubing, 22" lg
	9664	Nut with breakaway ferrule (2 required when replacing pilot tubing)
4	50450	Sensor lead, 16" lg
5*	112647	Crimp-on, 90° Rajah terminal connector
6*	112648	90° Boot Terminal Protector

FIGURE 7 - Vertical Spark Pilot for Models SC, SCA, SCB, SCE Series 6

Replacement Pilot Kits		Natural Gas - P/N 131457 Propane Gas - P/N 131458
Code	P/N	Component Description
1	125251	Natural Gas Pilot Assy with orifice, pilot tubing, and flame probe; less flame sensor lead and fitting (Johnson #J981HKW-9731-713)
	125671	Propane Gas Pilot Assy with orifice, pilot tubing, and flame probe; less flame sensor lead and fitting (Johnson #J981HKW-9715-413)
2	103034	Natural Gas Orifice only, Johnson # 9731-713 (brass)
	126024	Propane Gas Orifice only, Johnson # 9715-413 (black)
3	98698	Pilot Tubing, 1/8" OD x 18" lg, Johnson #B10499-99-11
	97572	Compression Fitting, FTG75 (2 required when replacing pilot tubing)
4	126104	Flame Probe, Johnson #Y75AA-2
5	126101	Auxiliary flame probe w/bracket, J/C Y5-GB-1
6	125401	(2) Sensor lead assy, 18 ga x 14", 150°C

FIGURE 8 - Vertical Match Lit Pilot for Models X, XA, XB, XC, XD, XE, XG, XJ, PAK, DFAH prior to 9/73

Replacement Pilot Kits		Natural Gas - P/N 110863 Propane Gas - P/N 110864
Code	P/N	Component Description
1	9661	Natural Gas Pilot Assy with orifice; less pilot tubing, less thermocouple (Baso J915HHA6221)
	30126	Propane Gas Pilot Assy with orifice; less pilot tubing, less thermocouple (Baso J915HHA4211)
2	44048	Natural Gas Orifice only, #6221
	42089	Propane Gas Orifice only, #4211
3	7671	Pilot Tubing, 26" lg
	9664	Nut with breakaway ferrule (2 required when replacing pilot tubing)
4	84761	Thermocouple, TC2, 24" lg

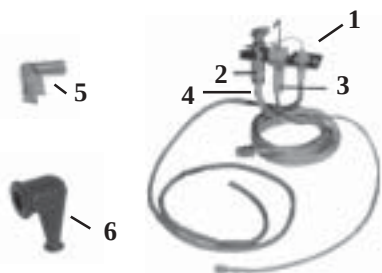
FIGURE 9 - Vertical Spark Pilot for Models RPV, RPBE, RPVE, RPVJ, RPAK, HRPV, HRPBE, HRPVE, CRPV, HCRPV, CRPBE, HCRPBE, CRPVE, HCRPVE; CRPVAK prior to Series 6 and RCG 7-12/, 10 ton equipped with G60 or G67 ignition Controller

*See Instructions, page 4.

NOTE: Vertical spark pilots for ignition systems other than G60 and G67 are no longer available.

Replacement Pilot Kits		Natural Gas - P/N 110865 Propane Gas - P/N 110866
Code	P/N	Component Description
1	41775	Natural Gas Pilot Assy with orifice, high tension lead; less pilot tubing, less flame probe, less sensor lead (Baso #J999HHW6221)
	44673	Propane Gas Pilot Assy with orifice, high tension lead; less pilot tubing, less flame probe, less sensor lead (Baso #J999HHW4209)
2	44048	Natural Gas Orifice only, #6221
	37801	Propane Gas Orifice only, #4209
3	92848	Sensor lead assembly, 16" lg and 21" lg wires (not illustrated)
4	43594	(2) Flame probe Y75BA-3
5	44678	Bracket Y59DD-1
6*	112647	Crimp-on, 90° Rajah terminal connector
7*	112648	90° Boot Terminal Protector
8	7671	Pilot tubing 26" lg (not illustrated)
	9664	Nut with breakaway ferrule (2 required when replacing pilot tubing)

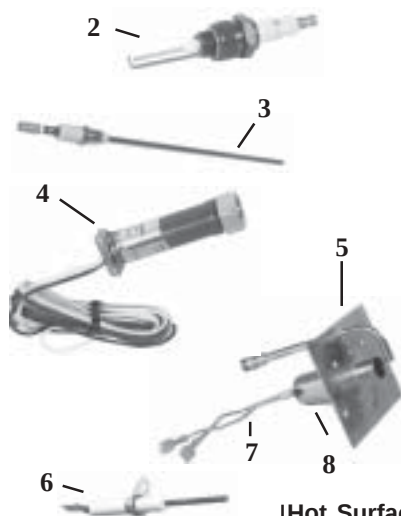
FIGURE 10 - Vertical Spark Pilot for Models RCG 2 - 5 ton with Vertical Pilot



***See instructions below.**

Replacement Pilot Kits		Natural Gas - P/N 110867 Propane Gas - P/N 110868
Code	P/N	Component Description
1	47484	Natural Gas Pilot with orifice, high tension lead and built-in flame probe; less pilot tubing, less sensor lead (Baso #J993HHW6221)
	47485	Propane Gas Pilot with orifice, high tension lead and built-in flame probe; less pilot tubing, less sensor lead (Baso #J993HHW4211)
2	44048	Natural Gas Orifice only, #6221
	42089	Propane Gas Orifice only, #4211
3	44183	Sensor lead, 38" lg
4	7671	Pilot tubing 26" lg
	9664	Nut with breakaway ferrule (2 required when replacing pilot tubing)
5*	112647	Crimp-on, 90° Rajah terminal connector
6*	112648	90° Boot Terminal Protector

FIGURE 11 - Pilot Systems used on Direct-Fired Models RDF/ADF/ADFH/DFA/DV



*P/N 135435 is a replacement flame sensor only kit for ADF/ADFH units manufactured prior to 11/94.

Hot Surface Ignition Kits below include all components needed to change RDF units from a spark pilot system with either a flame probe or ultraviolet sensor to hot surface ignition

- for an RDF unit with a 200VA Transformer - **P/N 146268**
- for a 115V RDF unit with an 80VA transformer - **P/N 146318**
- for a 208V RDF unit with an 80VA transformer - **P/N 146319**
- for a 240V, 480V, or 575V RDF unit with an 80VA transformer - **P/N 146320**

NOTE: Model, Serial No., and Wiring Diagram No. MUST be provided when ordering these kits.

Replacement Pilot Kits		w/Flame Probe - P/N 110869 (Includes Codes 1, 2, 3) w/Ultraviolet Sensor - P/N 110918 (Includes Codes 1, 2, 4) w/Hot Surface Ignition - P/N 120048 (Includes Codes 5, 6, 7, and 8)	RDF with spark pilot RDF with spark pilot ADF/DFA/RDF/DV with hot surface ignition
Code	P/N	Component Description	Applies to
1		Pilot Supply Connection including: (1) brass elbow, P/N 93388; (3) connectors, P/N 95188; (1) long nut, P/N 95189	RDF Models with a spark pilot and either a probe or ultraviolet flame sensor
2	87936	Spark Plug, 27750-1-31, Maxon #18075	
3	87937	Flame Probe, Auburn AA67-7892-1 - Standard on units with date code prior to ANI (9/88)	
4	89411	Ultraviolet Minipeeper, #C7027A - Standard on units with date code from ANI (9/88) through AVB (2/96) - optional on prior units	
5	122840	Pilot Plate and Tubing Assembly	ADF/ADFH*; DFA; DV; and RDF with hot surface ignition
6	134706*	Flame Sensor, J/C #Y75MK-1D	
7	121865	Ignitor, Norton #401E	
8	121730	Pilot Bushing	

Instructions for connecting ignitor lead on replacement spark pilots to Model G60 and G67 ignition controllers (applies to Pilot Kits in FIGURES 6, 9, and 10):



Crimp-on, 90° Rajah Terminal Connector, P/N 112647

Protective Boot, P/N 112648

Effective with replacement pilots purchased 9/91, these parts are required (in the kit or separately) when the replacement pilot is for heater Models listed in **FIGURES 6, 9 and 10** equipped with a Model G60 or G67BG-NG-2 ignition controller. (Note: These parts are not required when the ignition controller is a Model G67BG-5 or G770NGC-4.)

1. Identify the ignitor wire attached to the pilot electrode. Slip the 90° protective boot on to the wire, as illustrated e.
2. On the "open" leg of the 90° crimp-on terminal (P/N 112647), locate a flat, triangular spike tab punched in the metal. With the tip of a small, straight screwdriver, force the spike tab toward the inside of the connector. Straighten the tab to a vertical position.
3. Insert the ignitor wire into that same connector leg (just to the 90° bend) and push the wire onto the protruding spike tab, making sure that the tab penetrates the insulation. (Do not strip the ignitor wire.) Using a crimping tool or pliers, squeeze the sides of the terminal to form a "C" shape. The ignitor wire should now be firmly held by the terminal.
4. Slide the protective boot over the terminal. Holding the boot, attach the 90° Rajah terminal to the ignitor lead Rajah connector on the Model G60 or G67BG/NG-2 ignition controller.

