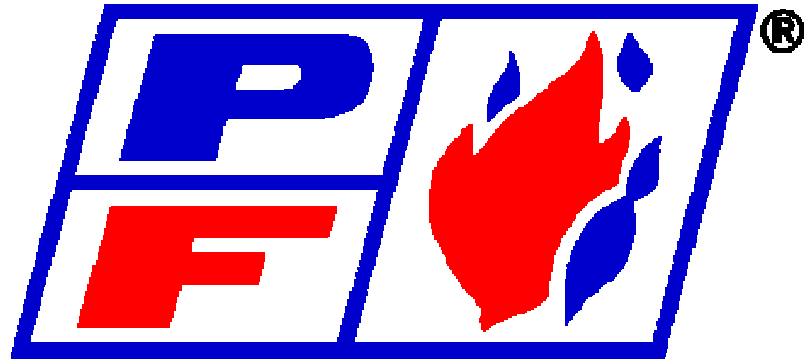


Power Flame Incorporated



“J (R) A” BURNER PARTS LIST

THE POWER TO MANAGE ENERGY

2001 South 21st Street, Parsons, Kansas 67357

Telephone 620-421-0480, Fax 620-421-0948

Web Site: www.powerflame.com

E-Mail: CSD@powerflame.com

JAPB 1186
REV 604

INSTRUCTIONS FOR ORDERING

1. Always specify model and serial number of burners.
2. Include nameplate information, such as model, job number, serial number, voltage, etc.
3. Certain fabricated components cannot be selected without reference to the specific Bill of Materials for your burner (these components are individually noted in this Book). Bill of Materials are included with all burner shipments. Should additional copies be required, they will be supplied at no charge. Consult factory.
4. For reference purposes, exploded view burner drawings are provided on pages 20, 21, 22 and 23. Call out numbers on these drawings match Item numbers found to the left of each part group title.

MINIMUM BILLING \$50.00 NET PLUS TRANSPORTATION CHARGES

**IDENTICAL ITEMS MAY NOT ALWAYS BE AVAILABLE
BUT ITEMS OF EQUAL OR BETTER QUALITY WILL BE FURNISHED**

ALL PUBLISHED PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

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(b)

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<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	<u>BLOWER HOUSING AND CABINET ASSEMBLIES</u>	
	J20000	J15A/J30A Cabinet and Blower Housing – prior to 03/01
	J20050	J15/30 Air Housing “01” – after 03/01
	J20003	JR15A/JR30A Blower Housing – prior to 03/01
	J20005	J50A Cabinet and Blower Housing – prior to 03/01
	J20008	JR50A Blower Housing – prior to 03/01
	J20055	J50 Air Housing “01” – after 03/01
2	<u>HOOD ASSEMBLIES AND HARDWARE</u>	
	J20315	J15A/J30A
	J20331	J50A
	910500	Southco Door Latch and Knob J15A, J30A, J50A
3	<u>BLAST TUBES</u>	
	Refer to Burner Bill of Materials	
4	<u>DIFFUSERS (INCLUDES STAINLESS STEEL MOUNTING SCREWS)</u>	
	Refer to Burner Bill of Materials	
5	<u>DIFFUSER SCREW</u>	
	X09381	6-32 x 3/4" Stainless Steel
	X09646	Stainless Steel External Tooth Lock Washers (Required)
6	<u>BOILER/BURNER FLANGES</u>	
	J10531	J15A, J30A, JR15A, JR30A
	J20440	J15A, J30A, JR15A, JR30A 2 Piece Adjustable Flange
	J10540	J50A, JR50A
7	<u>BLOWER WHEELS</u>	
	084650	5" x 2-1/2" x 1/2"
	080200	6-1/4" x 3" x 1/2"
	085300	7" x 3" x 5/8"
	081050	7-5/8" x 3" x 5/8"

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
8	<u>MOTOR PLATES</u>	
	J10731	J15A, JR15A
	J10732	J30A, JR30A, J50A, JR50A
9	<u>BLOWER MOTORS 3450 RPM</u>	
	050000	1/4 HP, 115/1, 48N
	054120	1/3 HP, 115/230/1, 56C
	054160	1/2 HP, 115/208/230/1, ODP 56C
10	<u>AIR PRESSURE SWITCH</u>	
	171010	8024204107 SPDT
	171000	AP4078
11	<u>TRANSFORMERS</u>	
	<u>GAS IGNITION TRANSFORMER</u>	
	320000	120/6000 Volt
	<u>STEPDOWN TRANSFORMER</u>	
	332000	AT72D 1048 40 VA 110/24 with Mounting Plate
	332230	AT150A 1007 50 VA 120/208/24 with Mounting Plate
12	<u>CONTROLS, FLAME SAFEGUARD, CIRCUIT BOARDS</u>	
	<u>FIREYE M II SERIES</u> (Replaces M Series)	
	<u>CONTROLS AND SUBBASE LESS PROGRAMMER AND AMPLIFIER</u>	
	360000	MC120 Chassis and Dustcover
	360010	MC120P Chassis and Dustcover with 15 Second Postpurge
	372200	61-3060 Subbase
	<u>PROGRAMMERS</u> (Purge Timer Integral to Programmer)	
	360100	MP100 Relight Control
	360110	MP230 Recycle Control with Prepurge

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
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PROGRAMMERS – Continued (Purge Timer Integral to Programmer)

360120	MP230H	Non-Recycle Control with Intermittent Pilot
360130	MP560	Non-Recycle Control with Interrupted Pilot
360140	MP562	Non-Recycle Control with Interrupted Pilot and Lockout on Air Flow Failure

AMPLIFIERS

360210	MAUV1	Ultraviolet 2-4 Seconds F.F.R.T.
360230	MART1	Rectification 2-4 Seconds F.F.R.T.

FIREYE MEP SERIES (Replaces MII Series)

CONTROLS AND SUBBASE LESS PROGRAMMER AND AMPLIFIER

361000	MEC120	Standard 120 Volt AC Chassis
372200	61-3060	Subbase

PROGRAMMERS

361100	MEP100	Standard Relight Module
361110	MEP101	Standard Relight, Flame Signal "Off" Cycle Module
361120	MEP102	Standard Relight, Non Recycle During FF Module
361130	MEP103	Standard Relight, Fixed 10 Second PTFI, MTFI Module
361140	MEP100P	Standard Relight, 10 Second, PTFI, 15 Second, Post Purge
361150	MEP230	Selectable Purge Timing, PTFI, Post Purge Module
361160	MEP230H	Selectable Purge Timing, PTFI, Post Purge with 8 Second Stabilization
361170	MEP560	Same as 230H with 10 Second MTFI, Run Check SW Module
361180	MEP561	Same as 560 without Pilot Stabilization Module
361190	MEP562	Same as 560 Lockout On Loss of Air Flow, Non Recycle Module

AMPLIFIERS

361310	MEUV4	Ultraviolet 4 Second F.F.R.T.
361370	MERT4	Rectification 3 Second F.F.R.T.

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
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FIREYE E SERIES (Replaces D Series)

CONTROL AND SUBBASE LESS PROGRAMMER AND AMPLIFIER

372300	60-1386-2	Subbase
398800	E110	Fireye Microprocessor Flame Monitor
398420	ED510	Display

PROGRAMMERS

398100	EP160	60 Seconds Minimum Prepurge Interrupted Ignition
398130	EP260	60 Seconds Minimum Prepurge Interrupted Ignition
398160	EP380	30 Seconds Minimum Prepurge Interrupted Ignition/Intermittent or Interrupted Pilot
398180	EP390	90 Seconds Minimum Prepurge Interrupted Ignition/Intermittent or Interrupted Pilot

PROGRAMMER/DISPLAY MODULES

398820	EPD160	60 Seconds Prepurge Interrupted Ignition
398830	EPD260	60 Seconds Prepurge Interrupted Ignition
398840	EPD380	30 Seconds Prepurge Interrupted Ignition/Intermittent or Interrupted Pilot
398810	EPD390	90 Seconds Prepurge Interrupted Ignition/Intermittent or Interrupted Pilot

AMPLIFIERS

398200	ERT1	Rectification
398210	EUV1	Ultraviolet

HONEYWELL RM7800 SERIES

PRIMARY SAFETY CONTROLS, 4 OR 10 SECOND PFEP, LESS BASE, AMPLIFIER AND TIMER

397700	RM7895C-1012	Interrupted Pilot
397710	RM7895A-1014	Intermittent Pilot
397740	RM7896C-1010	Interrupted Pilot with Post Purge
397750	RM7896A-1012	Intermittent Pilot with Post Purge

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
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FLAME SAFEGUARD PROGRAMMER, 4 OR 10 SECOND PFEP, WITH PROOF OF CLOSURE CIRCUIT, LESS BASE, AMPLIFIER AND TIMER, LESS DISPLAY

397500	RM7840E-1016	Same as RM7840L plus Energy Saving Prepurge
397510	RM7840G-1014	Recycle Interlock, Low Fire Interlock
397520	RM7840L-1018	Lockout Interlock, Purge and Low Fire Interlock
397530	RM7840M-1017	Recycle Interlock, Low Fire Interlock

FLAME SAFEGUARD PROGRAMMER WITH DISPLAY, LESS BASE, AMPLIFIER AND TIMER

397540	RM7800E-1010	Same as RM7800L plus Energy Saving Prepurge
397550	RM7800G-1018	Recycle Interlock, Low Fire Interlock
397560	RM7800L-1012	Lockout Interlock, Purge and Low Fire Interlock
397570	RM7800M-1011	Recycle Interlock, Low Fire Interlock

SUBBASES

400900	Q7800A-1005	Plastic (Internal) Mount
400910	Q7800B-1003	Metal (External) Mount
400920	Q7800B-1011	Metal Base with additional Conduit Knockouts (JR without Cabinet Only)

AMPLIFIERS

406900	R7847A-1003	Non Self Check, Rectification, 3 Seconds
406910	R7847C-1005	Self Check, Ultraviolet, 3 Seconds
406920	R7848A-1008	Non Self Check, Infrared, 3 Seconds
406950	R7849A-1023	Non Self Check, Ultraviolet, 3 Seconds
406960	R7849B-1021	Dynamic Check, Ultraviolet, 3 Seconds
406970	R7848B-1006	Dynamic Check, Infrared, 3 Seconds

TIMING CARDS

407710	ST7800A-1039	30 Seconds
407720	ST7800A-1062	90 Seconds

HONEYWELL INTERMITTENT PILOT/IGNITION MODULE

396250	S8680J-1004	24 Volt, Pilot Module
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<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
12.1	<u>REPLACEMENT CIRCUIT BOARDS</u>	
	<u>SINGLE FUEL ON-OFF SYSTEM</u>	
	939280	Main Circuit Board
	939300	Light & Switch Circuit Board
	939340	Interconnecting Cable
	939325	Light & Switch Board Label
	<u>SINGLE FUEL MODULATION ODP</u>	
	939381	Main Circuit Board
	939302	Light & Switch Circuit Board
	939340	Interconnecting Cable
	939323	Light & Switch Board Label
	<u>SINGLE FUEL MODULATION 7895</u>	
	939282	Main Circuit Board
	939302	Light & Switch Circuit Board
	939340	Interconnecting Cable
	939323	Light & Switch Board Label
	<u>SINGLE FUEL LOW-HIGH-LOW</u>	
	939283	Main Circuit Board
	939304	Light & Switch Circuit Board
	939340	Interconnecting Cable
	939321	Light & Switch Board Label
	<u>TWO FUEL ON-OFF</u>	
	939284	Main Circuit Board
	939301	Light & Switch Circuit Board
	939340	Interconnecting Cable
	939324	Light & Switch Board Label
	<u>TWO FUEL MODULATION ODP</u>	
	939285	Main Circuit Board
	939303	Light & Switch Circuit Board
	939340	Interconnecting Cable
	939322	Light & Switch Board Label
	<u>TWO FUEL MODULATION 7895</u>	
	939286	Main Circuit Board
	939303	Light & Switch Circuit Board
	939340	Interconnecting Cable
	939322	Light & Switch Board Label

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
	<u>TWO FUEL LOW-HIGH-LOW</u>	
	939287	Main Circuit Board
	939305	Light & Switch Circuit Board
	939340	Interconnecting Cable
	939320	Light & Switch Board Label

13 SCANNERS - UV

	374610	UV-1A3 Fireye
	403200	C7027A-1023 Honeywell

14 SIGNAL LIGHTS

Standard 1"

	655100	Amber
	655200	Red
	657100	Dialco Base (oil tight)
	653050	Dialco Bulb
	657110	Dialco Red Lens
	657120	Dialco Green Lens
	657130	Dialco Amber Lens
	657140	Dialco Blue Lens
	657150	Dialco White Lens

Rectangular

	654000	White
	654010	Amber
	654020	Red
	654030	Blue
	654040	Green

14.1 SIGNAL LIGHTS – CHICAGO MINIATURE – LENS CAP

	655900	Red
	655901	Amber
	655902	Green
	655903	Blue
	655904	White

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
14.2	<u>LIGHT AND SWITCH CIRCUIT BOARDS</u>	
	939250	4 LED Annunciator
	939251	4 LED Annunciator Label – Specify Light Functions
	939260	6 LED Annunciator
	939261	6 LED Annunciator Label – Specify Light Functions
	939270	8 LED Annunciator
	939271	8 LED Annunciator Label – Specify Light Functions
14.3	<u>CIRCUIT BOARD RELAYS & FUSES</u>	
	927700	AGG Glass 6 Amp Fuse
	927701	AGG Glass 15 Amp Fuse
	939410	Relay
	939420	Relay Clip
15	<u>DIRECTOR LIGHTS AND ACCESSORIES</u>	
	655700	5SD1LRN1-36 1/2" Red
	655710	5SD1LAN1-36 1/2" Amber
	655720	5SD1LBZ1-36 1/2" Blue
	655730	5SD1LGX1-36 1/2" Green
	655750	1/2" Timmerman Clip
	938900	60843-1 2 Circuit Commoning Tab
	938910	60842-1 3 Circuit Commoning Tab
	938920	60620-1 Loose Piece Pin
	938930	60619-1 Loose Piece Socket
	938940	1-480324-0 Pin Housing
	938950	1-480323-0 Socket Housing
16	<u>SIDE ORIFICE TEES AND PLUGS</u>	
	873260	1" Tee, not drilled
	873310	1 1/4" Tee, not drilled
	879260	1" Plug, drilled and tapped
	879310	1 1/4" Plug, drilled and tapped
17	<u>SIDE ORIFICE SPRINGS</u>	
	911500	1" J15A, J30A, JR15A, JR30A
	911510	1 1/4" J50A, JR50A

ITEM PART
NO NUMBER DESCRIPTION

18 SIDE ORIFICES - PREDRILLED

<u>Orifice</u> <u>Size</u>	<u>Drill</u>	<u>Size</u>	<u>Set Quantity</u>		<u>10</u>
			<u>1</u>	<u>3</u>	
1"	3/16"	X04360	-----	-----	
1"	9/32"	M11001	M11031	M11061	
1"	19/64"	M11002	M11032	M11062	
1"	5/16"	M11003	M11033	M11063	
1"	21/64"	M11004	M11034	M11064	
1"	23/64"	M11005	M11035	M11065	
1"	25/64"	M11006	M11036	M11066	
1"	13/32"	M11007	M11037	M11067	
1"	27/64"	M11008	M11038	M11068	
1"	7/16"	M11009	M11039	M11069	
1"	1/2"	M11010	M11040	M11070	
1"	9/16"	M11011	M11041	M11071	
1"	5/8"	M11012	M11042	M11072	
1"	45/64"	M11013	M11043	M11073	
1"	25/32"	M11014	M11044	M11074	
1"	53/64"	M11015	M11045	M11075	
1"	7/8"	M11016	M11046	M11076	
1 1/4"	9/16"	X04365	-----	-----	
1 1/4"	19/32"	M11102	M11122	M11142	
1 1/4"	5/8"	M11103	M11123	M11143	
1 1/4"	11/16"	M11104	M11124	M11144	
1 1/4"	23/32"	M11105	M11125	M11145	
1 1/4"	25/32"	M11106	M11126	M11146	
1 1/4"	7/8"	M11107	M11127	M11147	
1 1/4"	1"	M11108	M11128	M11148	

- M31001 1" Orifice Set, Nat/LP, 17 Pieces, Drilled Assorted Sizes
- M31002 1" Orifice Set, Nat, 13 Pieces, Drilled Assorted Sizes
- M31003 1" Orifice Set, LP, 12 Pieces, Drilled Assorted Sizes
- M31011 1-1/4" Orifice Set, Nat/LP, 8 Pieces, Drilled Assorted Sizes
- M31012 1-1/4" Orifice Set, Nat, 5 Pieces, Drilled Assorted Sizes
- M31013 1-1/4" Orifice Set, LP, 6 Pieces, Drilled Assorted Sizes

19 PILOT VALVES

- 202170 U-28-45-21-18-24/60 1/4" Alcon (24 Volt)
- 202190 S311-AF02V2AD7 1/8" GC (120 Volt)
- 202390 S301AFO2N9CF5 3/8" GC (120 Volt)
- 202450 U-28-45-21-18 1/4" Alcon (120 Volt)

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
20	<u>PILOT GAS REGULATORS</u>	
	300000	RV-12T 1/8" Cad 3.0" - 6.0" Spring - (0.5 PSI Maximum Inlet)
	300100	RV-20L 3/8" Cad 2.8" - 5.2" Spring - (0.5 PSI Maximum Inlet)
	302800	325-3 3/8" Cad 2.0" - 6.0" Spring - (10 PSI Maximum Inlet)
	309120	Vent Fitting for RV-20
21	<u>CONTROL SWITCH</u>	
	140400	SPST Control Circuit, Round
	140700	CRTP1A9M9 Rocker Switch – SPST
	140220	DPDT No Center Off Rocker Switch
22	<u>TERMINAL STRIP COMPONENTS</u>	
	610350	KT3 3 Pole 600V Connectron Terminal Block
	610360	KAD End Mounting Adaptor
	610370	MT 12 1/2" Marking Strip
	612010	D6/8 ADO 14-16 GA, Screw Terminal Grey Block
	612040	10 Pole Jumper Bar for D6/8 Block
	612050	10 Pole Jumper Bar for D2.5/5 Block
	612070	M10/10 Screw Terminal, 6-20 GA, 65 A
	612080	End Section for M10/10
	612090	M35/16, 0-16 GA, 150 A
	612100	End Section for M35/16
	612110	MTC6 Thermocouple Block
	612120	End Section for MTC 6 Block
	612130	D6/8 ADO, 14-16 GA Screw Terminal Red
	612140	D4/6 ADO, 16-22 GA ADO Screw Terminal Ivory
23	<u>GROUNDING BAR</u>	
	610400	SLU-35 Grounding Lug
24	<u>HONEYWELL DIAPHRAGM GAS VALVES</u>	
	190100	V48A-2169 1" 115V
	190200	V48A-2177 1-1/4" 115V
	190300	V48A-2185 1-1/2" 115V
	199850	V88A-1618 1" 24V
	199860	V88A-1626 1-1/4" 24V

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
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24 HONEYWELL DIAPHRAGM GAS VALVES - Continued

199870	V88A-1634	1 1/2" 24V
199600	V8843A-1005 (V8943A-1012)	1" 24V
199610	V8843A-1021 (V8943A-1020)	1-1/4" 24V
199620	V8843A-1047 (V8943A-1038)	1-1/2" 24V
199720	V4843A-1038 (V4943A-1011)	1" 115V
199730	V4843A-1020 (V4943A-1029)	1-1/4" 115V
199700	V4843A-1012 (V4943A-1037)	1-1/2" 115V

24.1 ROBERT SHAW

285100	7000DERHC	Gas Valve, 24V
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25 HONEYWELL COMBINATION DIAPHRAGM GAS VALVE AND PRESSURE REGULATORS (0.5 PSI MAXIMUM INLET)

199800	V4843B-1002 (V4943B-1019)	1" 115V
199810	V4843B-1051 (V4943B-1027)	1-1/4" 115V
199820	V4843B-1028 (V4943B-1035)	1-1/2" 115V
199910	V8843B-1094 (V8943B-1010)	1" 24V
199960	V8843B-1011 (V8943B-1028)	1-1/4" 24V
199970	V8843B-1029 (V8943B-1036)	1-1/2" 24V

26 ASCO-GENERAL CONTROLS SOLENOID GAS VALVES

		<u>Maximum Inlet Pressure</u>
280250	K3A461T 1" 24V	0.5 PSI
280300	K3A562T 1" 115V	1.5 PSI
280320	K3A771T 1-1/4" 24V	1.5 PSI
280400	K3A772T 1-1/4" 115V	1.5 PSI
280500	K3A782T 1-1/2" 115V	1.5 PSI
280520	K3A781T 1-1/2" 24V	1.5 PSI

27 GAS VALVE OPERATORS

ASCO-GENERAL CONTROLS

199000	AH2B112A1	15 Seconds
199100	AH2B102A4	30 Seconds
199200	AH4B112A4	Low-High-Low

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
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OPERATORS WITH PROOF OF CLOSURE

199010	AH2B112S4	15 Seconds
199300	AH4B112S4	Low-High-Low

HONEYWELL

190700	V4055A-1098	13 Seconds
190800	V4055A-1064	26 Seconds
190400	V4062A-1008	26 Seconds, Low-High-Low
190430	V4062A-1131	13 Seconds, Low-High-Low

OPERATORS WITH PROOF OF CLOSURE

190900	V4055D-1019	13 Seconds
191000	V4055D-1001	26 Seconds
190500	V4062D-1002	26 Seconds, Low-High-Low
190600	V4062D-1010	13 Seconds, Low-High-Low

28 GAS VALVE BODIES

ASCO - GENERAL CONTROLS

196000	V710FAS	1"
196100	V710GAS	1-1/4"
196200	V710HAS	1-1/2"

BODIES WITH GUIDE

196600	V710FASV15	1"
196700	V710GASV15	1-1/4"
196800	V710HASV15	1-1/2"

BODIES WITH PROOF OF CLOSURE

197410	V710FASV22	1"
197420	V710GASV22	1-1/4"
197430	V710HASV22	1-1/2"

HONEYWELL

192300	V5055A-1004	1"
192400	V5055A-1012	1-1/4"
192500	V5055A-1020	1-1/2"

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
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BODIES WITH GUIDE

193000	V5055B-1002	1"
193100	V5055B-1010	1-1/4"
193200	V5055B-1028	1-1/2"

BODIES WITH PROOF OF CLOSURE

193900	V5055C-1034	1"
194000	V5055C-1042	1-1/4"
194100	V5055C-1059	1-1/2"

29 **HONEYWELL COMBINATION DUAL (REDUNDANT) GAS VALVES (0.5 PSI MAXIMUM INLET PRESSURE)**

199930	VR8305M-4009,	24 Volt, Combination Dual Main Gas Valve
199940	VR4305M4060,	115 Volt, Combination Dual Main Gas Valve

30 **GAS VALVE ACCESSORIES**

195000	Bleed Valve for V48A
200600	Conduit Cover for VR8305

31 **MAIN GAS REGULATORS**

300400	RV-53	1" Cad Plated 3" - 6" Spring (0.5 PSI Maximum Inlet)
300500	RV-61	1" Pink 3" - 8" Spring (1.0 PSI Maximim Inlet)
300550	RV-61	1-1/4" Pink 3" - 8" Spring (1.0 PSI Maximum Inlet)
300600	RV-81	1-1/4" Pink 3" - 8" Spring (1.0 PSI Maximum Inlet)
300700	RV-81	1-1/2" Pink 3" - 8" Spring (1.0 PSI Maximum Inlet)

32 **GAS COCKS AND HANDLES**

274500	3/4" Milwaukee BB2-100	without Tappings
274550	1" Milwaukee BB2-100	without Tappings
352100	1" Homestead 611 Lube	without Tappings
354100	1" Essex 500	with two Tappings
274600	1-1/4" Milwaukee BB2-100	without Tappings
352200	1-1/4" Homestead 611 Lube	without Tappings
354200	1-1/4" Consolidated Brass	with two Tappings
274650	1-1/2" Milwaukee BB2-100	with two Tappings
352300	1-1/2" Homestead 611 Lube	without Tappings

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
32	<u>GAS COCKS AND HANDLES - Continued</u>	
	354300	1 1/2" Consolidated Brass with two Tappings
	353000	Size F Wrench for Homestead 611 1"
	353100	Size G Wrench for Homestead 611 1-1/4" & 1-1/2"
33	<u>BALL VALVES (NO TAPPINGS)</u>	
	980060	3/8" Combu Model 740
	980140	1/2" Combu Model 740
	980160	3/4" Combu Model 740
	980210	1" Combu Model 740
	980270	1-1/4" Combu Model 740
	<u>VALVES WITH TWO 1/4" TAPPINGS</u>	
	980240	1" Combu Model 68
	980260	1-1/4" Combu Model 68
	980310	1-1/2" Combu Model 68
34	<u>PILOT SHUTOFF COCKS</u>	
	980030	1/4" Combu Model 740
35	<u>RELAYS</u>	
	554800	SPST Motor Load - G7L-1A-T-CB-AC100/120
	554810	SPST Motor Load 24V - G7L-1A-T-CB-AC24
	553200	DPST (Modulation Only) - PRD7AYO
	554900	Base for G7L-1A-T-CB-AC100/120
36	<u>BUTTERFLY VALVES</u>	
	273000	103BV 3/4"
	273100	104BV 1"
	273200	105BV 1-1/4"
	273300	106BV 1-1/2"
	273690	104BVR 1"
	273700	105BVR 1-1/4"
	273710	106BVR 1-1/2"
	273720	108BVR 2"

ITEM NO PART NUMBER DESCRIPTION

36 BUTTERFLY VALVES - Continued

M90010 PF-FP 3/4" – Includes M90201 Damper Linkage Arm Assembly
M90015 PF-FP 1" – Includes M90201 Damper Linkage Arm Assembly
M90020 PF-FP 1-1/4" – Includes M90204 Damper Linkage Arm Assembly
M90025 PF-FP 1-1/2" – Includes M90204 Damper Linkage Arm Assembly
M90030 PF-FP 2" – Includes M90204 Damper Linkage Arm Assembly

37 PILOT ASSEMBLIES – Pilot Stops are standard on all Pilot Assemblies sold after 03/03

		<u>Includes</u>		
		<u>Electrode</u>	<u>Flame Rod</u>	
F30031	X04210	X04225		J15A, J30A, JR15A, JR30A Complete Flame Rod Pilot, Natural Gas, with #44 Pilot Orifice
F31002	X04249	X04225		J50A, JR50A, Complete Flame Rod Pilot Assembly with Extended Electrode Assembly for S8680 Systems, Natural Gas, with #48 Pilot Orifice
F31000	X04249	X04225		J15A, J30A, JR15A, JR30A, Complete Flame Rod Pilot Assembly with Extended Electrode Assembly for S8680 Systems, Natural Gas, with #48 Pilot Orifice
F30041	X04210	X04225		J50A, JR50A Complete Flame Rod Pilot, Natural Gas, with #44 Pilot Orifice
F31008	X04210	N/A		J15A, J30A, JR15A, JR30A Complete Scanner Pilot, with #44 Natural and LP Gas Pilot Orifice
F31009	X04210	N/A		J50A, JR50A Complete Scanner Pilot, with #44 Natural Gas and LP Gas

38 PILOT COMPONENTS IGNITION ELECTRODE

X04249 HD Pilot Ignition Electrode with Porcelain for use with 24Volt S860J
X04210 Pilot Ignition Electrode With Porcelain

FLAME ROD

X04225 Flame Rod With X04600 Porcelain
X04600 Porcelain Only for Flame Rod

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
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PILOT HEAD AND CASE

F20320	J15A, J30A, J50A, JR15A, JR30A, JR50A	For Flame Rod
F20330	J15A, J30A, J50A, JR15A, JR30A, JR50A	For Scanner
X04036	Pilot Electrode Clamp	

PILOT BACK PLATE

B20410	J Flamerod	
J20401	J Scanner	

39 IGNITION CABLE

Y08000	#14-19 GTO 15,000V 3 Foot Cable	With One (1)
X09927	#2 Rajah Ring Terminal	and
931110	#CT-11 Rajah Cage Terminal	

40 FLAME ROD CABLE

Y08000	#14-19 GTO 15,000V 3 Foot Cable	With Two (2)
937410	#10 Stud Ring	

41 MODULATING MOTOR

060250	M9174C-1025	
B11680	Mod Motor Mounting Bracket	
060770	ML9184C-3004	
M15105	1" ML9184 Bracket Assembly	
M15100	1-1/4" ML9184 Bracket Assembly	
502731	SQM 71 Mod Motor	
060840	Honeywell Adj. Stroke Stop	
M15107	ML9184 Stop Kit Spacer (2 required)	
060932	AM24-MFT-US-SAZA Aux Sw Belimo 4-20 MA	
060938	AM24-MFT95-US with SAZUS Aux Sw Belimo 0-135 OHM	

41.1 DIRECT DRIVE SHAFT

X09102	Butterfly Extension Shaft, 8-13/16	
M10281	10 mm Aluminum Lock Collar	
M15102	3/8" square Damper Shaft	
X09396	1/4 - 20 x 3/4 Screw, Serrated	
X09366	1/4 - 20 x 1/4 Alan Head Set Screw	

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
42	<u>DAMPER BLADES</u>	
	M10143	J15, J30 - UL - Standard, Low-High-Low, Low-High-Off, Modulating
	M10144	J15, J30 - UL HTD-Standard, Low-High-Low, Low-High-Off, Modulating
	M20047	J15, J30 - CGA - On-Off, On-Off-Modulating (Top Blade)
	M10147	J15, J30 - CGA - On-Off, On-Off-Modulating (Bottom Blade)
	M10157	J50 - UL - Standard, Low-High-Low, Low-High-Off, Modulating
	M10161	J50 - UL HTD - Standard, Low-High-Low, Low-High-Off, Modulating
	M20046	J50 - CGA - On-Off, On-Off-Modulating (Top Blade)
	M10159	J50 - CGA - On-Off, On-Off-Modulating (Bottom Blade)
43	<u>DAMPER AXLES</u>	
	M80170	5-1/2" X 6" J15A, J30A, JR15A, JR30A
	M80171	5-1/2" X 6" Slotted Axle, J15A, J30A, JR15A, JR30A
44	<u>DAMPER WEIGHTS</u>	
	M10500	J15A, J30A, JR15A, JR30A, J50A, JR50A for Low-High-Low and Low-High-Off
	M10501	J15A, J30A, JR15A, JR30A, J50A, JR50A CGA
45	<u>LOCKING ARMS</u>	
	M80020	5/16" x 1-1/8"
	M80010	5/16" x 1-5/8"
	M80011	5/16" x 1-5/8" (Tapped)
	M80019	CW (CGA)
	M80048	Spring (CGA)
	M80049	Spring (CGA)
46	<u>SWIVELS</u>	
	911000	Ball Joints
47	<u>LINKAGE CROSS STRAPS</u>	
	M80045	5-1/2" Box Damper J15A, J30A, JR15A, JR30A
	M80046	5-1/2" Box CGA Cross Linkage J15A, J30A, JR15A, JR30A
	M80047	6" Box Damper J50A, JR50A
	X02387	Long Brass Pin (2 Required)
	X09662	Horseshoe Clip (2 Required)

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
48	<u>LINKAGE ACCESSORIES</u>	
	M90001	Standard Steel Crank Arm and Aluminum Hub Assembly for Mod Motor and Gas Valve (3/8" sq)
	C83170	Stamped Steel Crank Arm Only
	X06002	Aluminum Hub Only (3/8" sq)
	M10405	1/2" ID Steel Arm for Mod Motor Ext. Shaft
	X09101	Mod Motor Ext. Shaft
	M80035	Stamped Steel Crank Arm and Steel Hub Assembly for Modulating Butterfly (3/8" ID)
	P82130	Stamped Steel Crank Arm and Steel Hub Assembly for Damper (5/16" ID)
	X09374	Screws for Mounting Hub to Crank Arm 10-24 x 1/2" Round Slot Head Machine Screws
	Y00470	5/16" Push Rod 36"
48.1	See M90001 Above.	
49	<u>AIR SENSING TUBES</u>	
	J10615	J15A, J30A, JR15A, JR30A, CGA
	J10616	J50A, JR50A CGA
50	<u>SIGHT GLASS</u>	
	X09913	1-1/16" x 1-1/8" Sight Glass
51	<u>TAPPED NIPPLES</u>	
	M10550	3/4" x 2"
	M10551	1" x 2-1/2"
	M10552	1-1/4" x 2-1/2"
	M10553	1-1/2" x 2-1/2"
52	<u>TEST PORT NIPPLES INCLUDING WELDED HALF COUPLING</u>	
	M20225	1" x 4" x 1/4"
	M20227	1" x 4" Pilot x 1/4" and 3/8"
	M20226	1-1/4" x 4" Pilot x 1/4" and 3/8"
	M20220	1-1/2" x 4" x 1/4"
	M20228	1-1/2" x 4" Pilot x 1/4" and 3/8"

<u>ITEM NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
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53 PANEL BOX AND ACCESSORIES

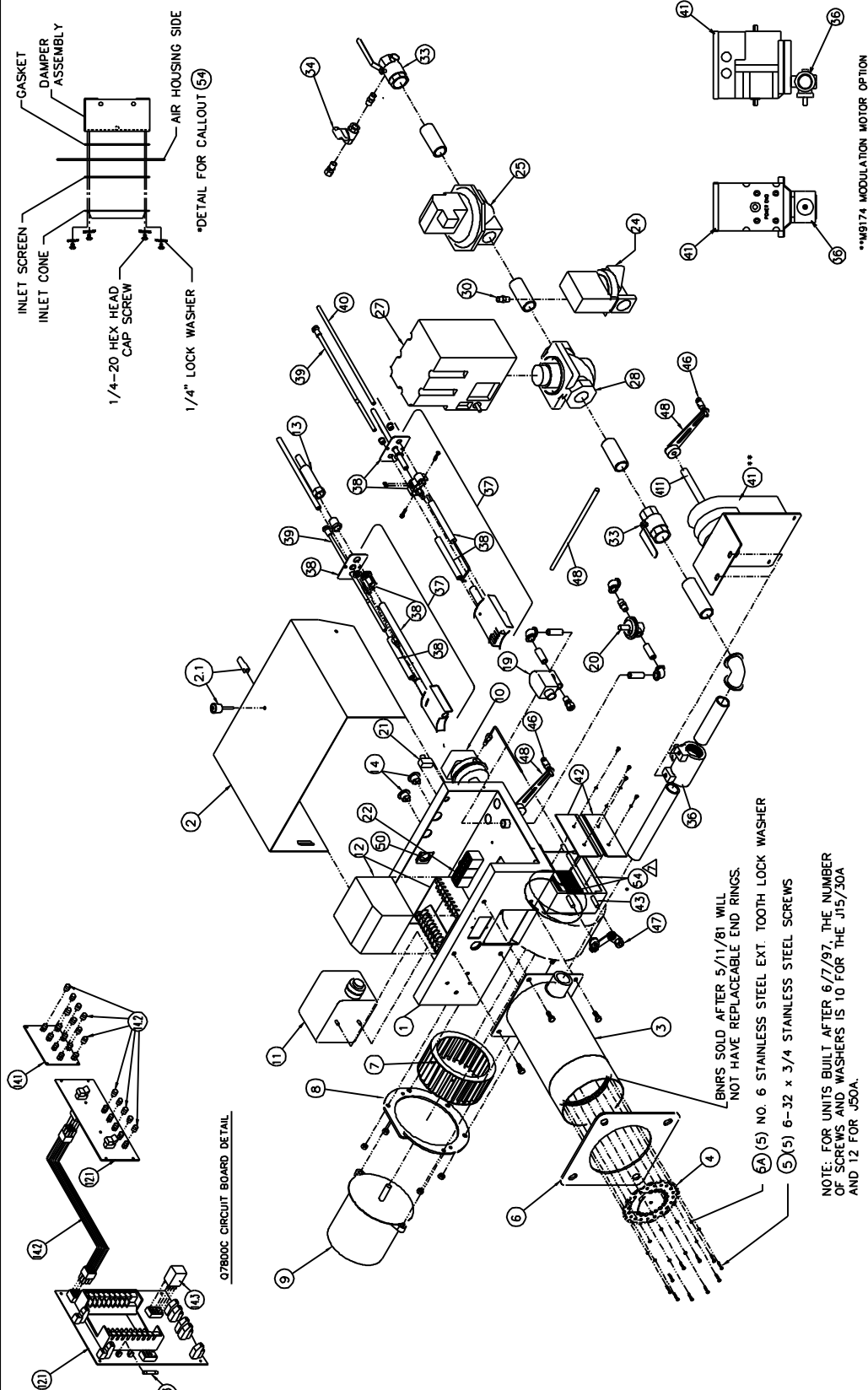
X09950	6" x 8" Panel Box with Lid
X09868	8"x 8" x 4" Hoffman box
E20170	Isolation Shield Assembly
X07002	SR-7K-2 Strain Relief Bushing
408000	S7899A-1001 Keyboard Display Module

54 BOLT ON DAMPER BOX ASSEMBLY AND AIR INLET

961100	J15, J30 Bolt On Damper Gasket
961110	J50 Bolt On Damper Gasket
J20027	J15, J30 Bolt On Damper Assembly
J20028	J50 Bolt On Damper Assembly
M10301	J15, J30, J50 Air Inlet Screen
X08667	J15, J30 Air Inlet Cone
X08668	J50 Air Inlet Cone
X09346	1/4 - 20 x 3/4 Hex Head Cap Screw (6 ea. per burner)
X09653	1/4 Medium Split Lock Washer (6 ea. per burner)
M10302	J15/30 Inlet with Screen *
M10303	J50 Inlet with Screen *

* Burner with Bolt On Air Damper Assemblies

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Power Flame Incorporated
2001 SOUTH 21st STREET
PARSONS, KANSAS 67357
PHONE (620) 421-0480
FAX (620) 421-0848

SCALE: 1" = 1"
DATE: 9/21/00

DO NOT SCALE FROM DRAWING
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LOC: NETWORK
TILE: NETWORK
J/A BURNER MODULATION PARTS DRAWING
90P402C-11

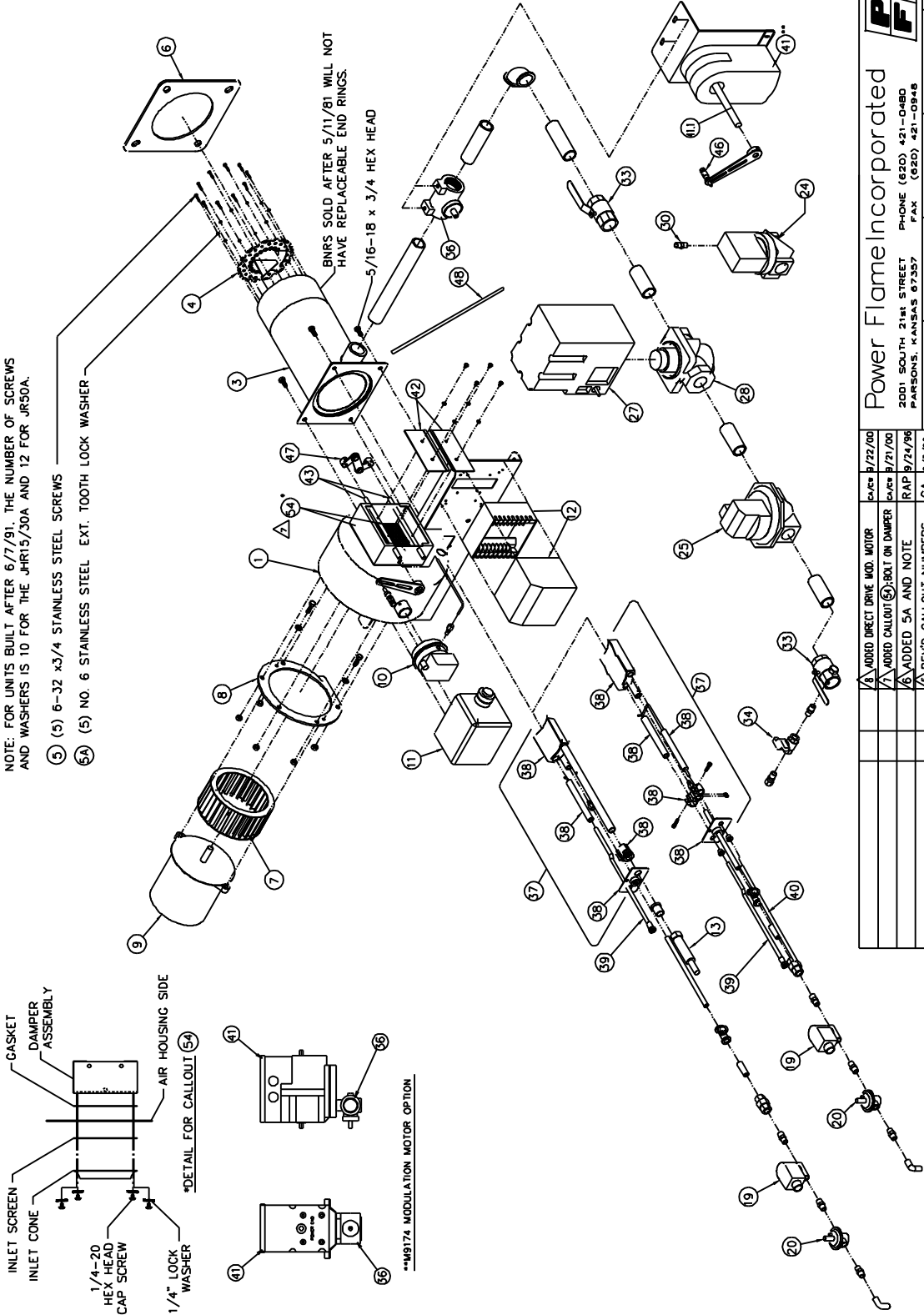
REVISED	DATE	BY	CHKD	DATE	REVISION
Δ	5/26/04	CA	RAP	7/14/05	Δ ADDED DIRECT DRIVE MOD. MOTOR
Δ	5/26/04	CA	RAP	7/14/05	Δ ADDED CALLOUT (5). BOLT ON DAMPER
Δ	5/26/04	CA	RAP	7/14/05	Δ ADDED SA AND NOTE
Δ	5/26/04	CA	RAP	7/14/05	Δ REV'D CALLOUT NUMBERS
Δ	5/26/04	CA	RAP	7/14/05	Δ ADDED V4843B ITEM (5)
Δ	5/26/04	CA	RAP	7/14/05	Δ ADDED 07B00C CIRCUIT BOARD DETAIL
Δ	5/26/04	CA	RAP	7/14/05	Δ SWITCHED IN 07B AND IN 07B6 MOD. MOTORS
Δ	1/14/00	CA	RAP	5/11/92	Δ NEW PI CLAMP, AIR SW.

***07B74 MODULATION MOTOR OPTION

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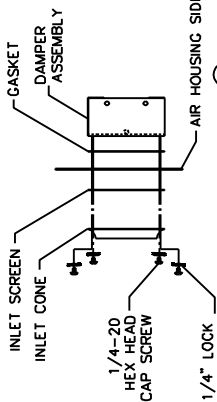
NOTE: FOR UNITS BUILT AFTER 6/7/91, THE NUMBER OF SCREWS AND WASHERS IS 10 FOR THE JRR15/30A AND 12 FOR JR30A.

- (5) 6-32 x3/4 STAINLESS STEEL SCREWS
- (5A) NO. 6 STAINLESS STEEL EXT. TOOTH LOCK WASHER



BNRS SOLD AFTER 5/11/81 WILL NOT HAVE REPLACEABLE END RINGS.

5/16-18 x 3/4 HEX HEAD



**J9174 MODULATION MOTOR OPTION

Power Flame Incorporated
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 PARSONS, KANSAS 67357
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 FAX (620) 421-0848

SCALE: 1" = 1"
 DATE: 9/21/00
 NETWORK

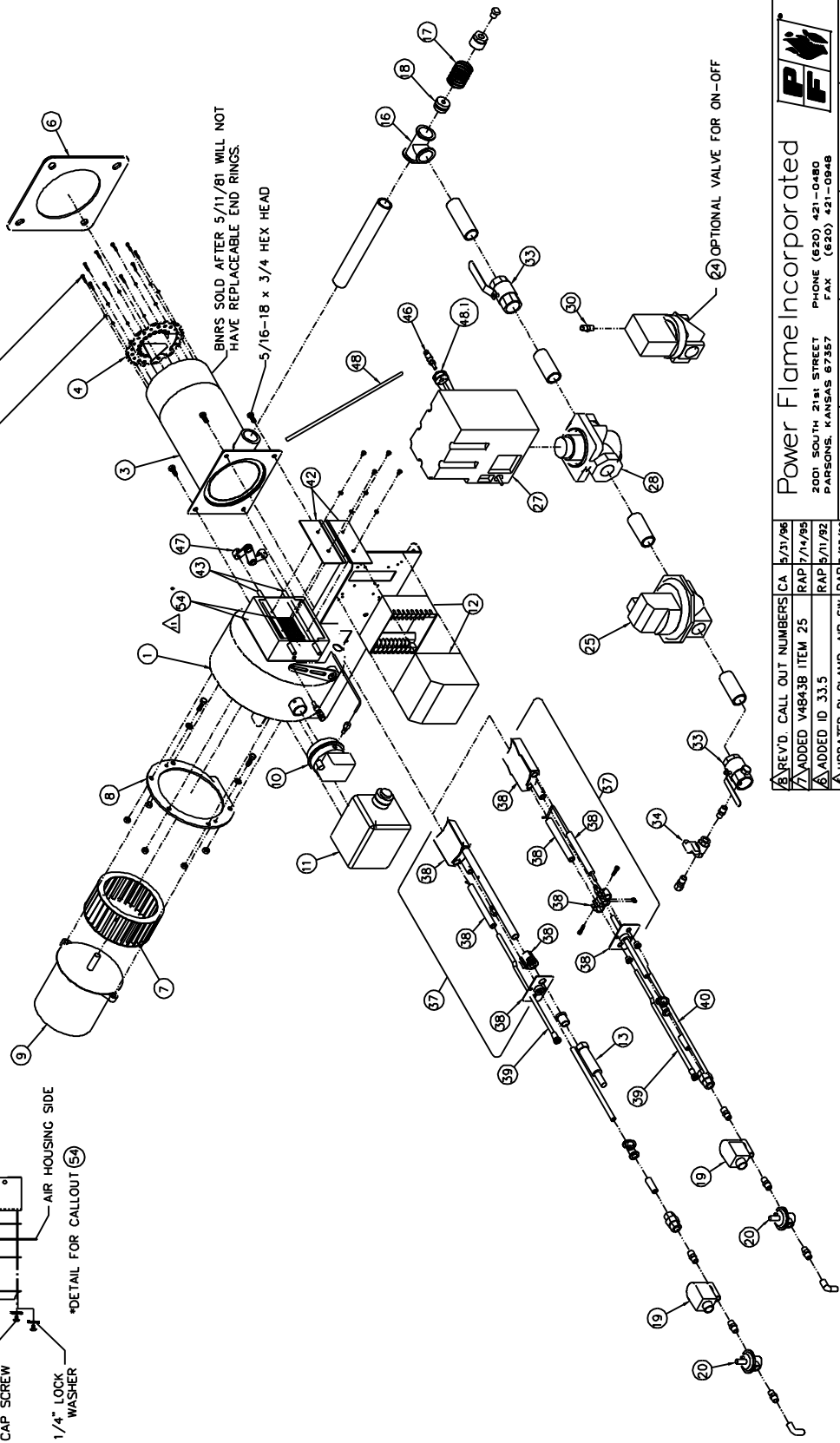
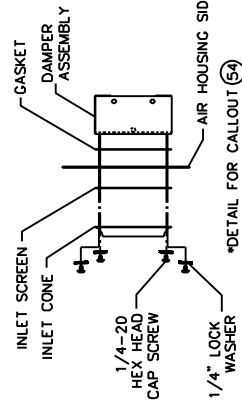
REV	DESCRIPTION	DATE	BY	CHKD	DATE
1	ADDED DIRECT DRIVE MOD. MOTOR	9/22/00			
2	ADDED CALLOUT (6) BOLT ON DAMPER	9/21/00			
3	ADDED SA AND NOTE	9/24/96			
4	REV'D CALLOUT NUMBERS	6/3/96			
5	ADDED V48438 ITEM 25	7/14/95			
6	ADDED ITEM 33.5	5/11/92			
7	REVISED DIRECT DRIVE MOD. MOTOR	1/14/00			
8	REVISED MOTOR AND MOTOR MOD. MOTOR	7/24/90			

DO NOT SCALE FROM DRAWING
 FILE LOC:
 NETWORK
 JRA BURNER MODULATION PARTS DRAWING
 90P401C-10

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NOTE: FOR UNITS BUILT AFTER 6/7/91, THE NUMBER OF SCREWS AND WASHERS IS 10 FOR THE JR15/30A AND 12 FOR JR50A.

- 5 (5) 6-32 x 3/4 STAINLESS STEEL SCREWS
- 5A (5) NO. 6 STAINLESS STEEL EXT. TOOTH LOCK WASHER



Power Flame Incorporated
2001 SOUTH 21st STREET
PARSONS, KANSAS 67357
PHONE (620) 421-0480
FAX (620) 421-0948

REV'D. CALL OUT NUMBERS	CA	5/31/96	SCALE: 1" = 1"	DATE: 4/7/99
ADDED 5A AND NOTE	CA	9/24/98	DO NOT SCALE FROM DRAWING	FILE
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REV'D. TO CAD & UPDATED	CA	7/14/95	BY: JRA	FILE
REV'D. DIFF. APPEARANCE	RAP	9/29/92	BY: JRA	LOC: NETWORK
ADDED 5A AND NOTE	CA	9/24/98	BY: JRA	FILE
ADDED ID 33.5	RAP	5/11/92	BY: JRA	LOC: NETWORK
ADDED PI CLAMP, AIR SW.	RAP	7/23/90	BY: JRA	FILE
ADDED 48A3B ITEM 25	RAP	7/14/95	BY: JRA	LOC: NETWORK
REV'D. CALL OUT NUMBERS	CA	5/31/96	BY: JRA	FILE

TITLE: JRA BURNER LO-HI-LO, LO-HI-OFF AND ON-OFF PARTS DRAWING.