Replacement Parts

Applies to: **Serial No. Explanation; Model No. Explanation; Replacement Ignition Systems and Gas Valves by Serial No. Code; and Maxitrol System Components by Serial No. Suffix**

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WARNINGS

Selection of replacement control parts from this manual and all servicing of products must be done by your local Distributor or other qualified technician. Improper selection or servicing could result in severe personal injury, death, or property damage. The manufacturer will not accept responsibility or liability as a result of improper servicing of products.

In the United States, all installations of gas-fired products must be in accordance with the Standards of the NFPA (National Fire Protection Association), the National Fuel Gas Code, and all local authorities. In Canada, all installations of gas-fired products must be in accordance with the CAN/CSA Installation Code for Gas Burning Appliances and Equipment and all provincial and local authorities.

SAFETY WARNINGS AND GUIDELINES FOR A QUALIFIED SERVICE TECHNICIAN

- **When selecting a replacement control, always have the complete Model No. and Serial No. of the heater. (See pages 2-4 for instructions on decoding those numbers.) If the model and serial number are not available, contact your local Representative. DO NOT SELECT REPLACEMENT CONTROLS WITHOUT COMPLETE INFORMATION.**
- **Before servicing a heater, always turn off the gas and the power supply. Because of the electrical safety features, never turn off the power supply without turning off the gas.**
- **The electrical operating valve is the primary safety shutoff. The gas supply line must be free of dirt or scale before connecting the valve.**
- **Leak test all gas connections including pilot connections. Test using a commercial leak detecting or a soap solution. WARNING: DO NOT TEST WITH OPEN FLAME. If a leak cannot be stopped by tightening, replace the part.**
- **In the event of pilot outage or improper ignition, wait at least five minutes before attempting to relight the heater.**
- **After any service is completed, always test for proper operation. Re-connect the electrical supply and turn on the gas. Verify against operating sequence information on the heater and in the heater installation manual. Safety check the installation and equipment. CHECK THAT ALL SAFETY DEVICES ARE FUNCTIONING PROPERLY.**

FOR YOUR SAFETY

WARNINGS

The use and storage of gasoline or other flammable vapors and liquids in the vicinity of this heating appliance is hazardous.

DANGER

The gas burner in all gas-fired equipment is designed and equipped to provide safe, complete combustion. However if the installation does not permit the burner to receive the proper supply of combustion air, complete combustion may not occur. The result is incomplete combustion which produces carbon monoxide, a poisonous gas that can cause death. Safe operation of indirect-fired gas burning equipment requires a properly operating vent system which vents all the products to the outside atmosphere. Failure to provide proper venting will result in a health hazard which could cause serious personal injury or death.

Always comply with the combustion air requirements in the installation codes and instructions. Combustion air at the burner should be regulated only by manufacturer-provided equipment. NEVER RESTRICT OR OTHERWISE ALTER THE SUPPLY OF COMBUSTION AIR TO ANY HEATER. Indoor units installed in a confined space must be supplied with air for combustion as required by code and in the installation manual. ON INDIRECT-FIRED EQUIPMENT, MAINTAIN THE VENT SYSTEM IN PROPERLY FUNCTIONING CONDITION. Direct-fired and other unvented installations should provide for air changes as required by applicable installation codes.

Instructions for Selecting a Replacement Ignition Controller and/or Valve

Serial No. Codes - Identify the code of the valve or ignition controller needing replacement. Serial No. Codes are defined on pages 3-5. IMPORTANT NOTE: Serial No. and Model No. Codes apply only to original equipment.

IGNITION CONTROLLER - To select the replacement ignition controller, locate the Serial No. safety pilot code in the listing on pages 6-10. Select carefully, reading all applicable notes. If the part is no longer available from the manufacturer, a functional replacement or alternative instructions are listed.

VALVE - To select a replacement valve, locate the Serial No. valve code in the listing on pages 12-19. The valve supplied on the heater is described. If the valve is no longer available from the manufacturer, a functional replacement or alternative instructions may be listed. Select carefully, reading all applicable notes. All valve code notes are on pages 20-22. See pages 23-27 for representative illustrations of valves.

VALVE WIRING TERMINAL IDENTIFICATION/WIRE COLOR				
Valve Manufacturer	**Common**	**Pilot**	**Main or Low Stage**	**High Stage**
Honeywell	TR	TH-TR	TH	
	PV-MV	PV	MV	
	C	PV	MV	H1
White-Rodgers	C	P	M	
	C1-C2	--	W1	W2
	2	4	1	3
Robertshaw	C	P	M	
Original Wire Color (exceptions possible)	White or Brown	Blue	Black	Red

IMPORTANT: The controls identified in this form are the controls factory-installed on units manufactured beginning in 1963. Much of the earlier information provided is for reference only and does not mean that replacing parts is recommended or that replacement parts are available. See date code information on page 4.

IMPORTANT ORDERING REMINDERS

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.

Serial Number and Model Codes

Example of a Rating Plate that applies to most Models showing Model and Serial Numbers

DUCT FURNACE

CATEGORY I
FOR INDUSTRIAL/COMMERCIAL USE ONLY **NRTL**
DESIGN CERTIFIED UNDER ANSI Z83.8a-1998

DUCT FURNACE
MODEL HX100E-8-S **OCT 2004**
SERIAL# EBDJ66W8N12345
115 VOLTS 1PH 60HZ MAXIMUM TOTAL INPUT .5AMPS
TYPE OF GAS NATURAL
ORIFICE SIZE #41 DRILL HAS BEEN FACTORY ADJUSTED
FOR USE AT 0-2000 FEET (0-610 METERS) OF ALTITUDE

	SEA LEVEL	ALT ADJUSTED
NORMAL INPUT	100000	100000 BTU/HR
OUTPUT CAPACITY	80000	80000 BTU/HR
MIN. INPUT (2, M, MB, MV MODELS)	50000	50000 BTU/HR
NORMAL MANIFOLD PRESSURE		3.5 IN. W.C.
MIN. PERMISSIBLE GAS SUPPLY PRESSURE FOR PURPOSE OF INPUT ADJUSTMENT		5.0 IN. W.C.
MAXIMUM THROUGHPUT		3704 CFM
MINIMUM THROUGHPUT		988 CFM

CLEARANCE TO COMBUSTIBLE CONSTRUCTION: TOP - 6"; FLUE CONNECTION - 6"; SERVICE SIDE - WIDTH OF UNIT; OPPOSITE SIDE - 6"; BOTTOM - 3", MAY BE INSTALLED ON NONCOMBUSTIBLE FLOORS.
INSTALL ON THE POSITIVE PRESSURE SIDE OF AIR CIRCULATING BLOWER.
THIS UNIT MAY BE INSTALLED DOWNSTREAM FROM A REFRIGERATION SYSTEM (USE DRAIN OPTION CS1).
FOR ALTERNATE INSTALLATION, USE THE LATEST OF THE APPROPRIATE STANDARDS LISTED BELOW:

FOR AIRCRAFT HANGARS	USE STANDARD ANSI/NFPA 409
FOR PARKING STRUCTURES	USE STANDARD ANSI/NFPA 88A
FOR REPAIR GARAGES	USE STANDARD ANSI/NFPA 88B

Serial No. Decoding

Sample of a Serial No. for Units manufactured from 1963 through 1974:

OA	1	2	N	693	Serial No.
1	2	3	4	5	Element

Sample of a Serial No. for Units manufactured beginning in 1975:

BDJ	66	W8	N	12345	Serial No.
1	2	3	4	5	Element

Element Key:

1 = Month and Year of manufacture; see page 4.
2 = Type of safety pilot or ignition system; see pages 6-10 for Code explanation.
3 = Type of valve; see pages 12-22 for Code explanation and illustrations on pages 23-27. (A dash indicates that the valve was field supplied.)
4 = Type of gas that the heater was originally manufactured to burn
D = Dual fuel, natural and propane; L = Propane; N = Natural
(Check for gas conversion label.)
5 = Consecutive number of heater manufactured. Used for identification purposes only.

In addition to the basic five elements, the serial number may also include **prefix and/or suffix codes**. See page 5 for a listing and explanation of these codes. All codes apply to original equipment only.

Serial No. Decoding - ALL Models AFTER June, 2015
Serial No. Sample: BOF 3060 000000
Element Key: 1 | 2 | 3
1 = Date of Manufacture (See table below.)
2 = Plant of Manufacture (3060 = Mercer; 3062 = Monterrey)
3 = Consecutive number

Example of a MAPS® Unit Rating Plate Showing Model and Serial Numbers

Manufacturer

FOR INDUSTRIAL/COMMERCIAL USE ONLY
SUITABLE FOR OUTDOOR USE
MODEL [A] **[B]**
SERIAL NO. [ ]

ELECTRICAL

[D] VOLTS +/- 10% **[D]** PHASE **[D]** HZ
MINIMUM CIRCUIT AMPACITY (MCA) **[F]** AMPS
MAXIMUM FUSE SIZE/*CKT BREAKER **[G]** AMPS

	QTY	FLA (EA)	HP (EA)
SUPPLY AIR BLOWER MOTOR	1	[E]	[C]
CONDENSER FAN MOTOR (S)	[T]	[U]	[Z]

	QTY	RLA (EA)	LRA (EA)
COMPRESSOR A	[H]	[I]	[J]
COMPRESSOR B	[K]	[L]	[M]
COMPRESSOR C	[N]	[O]	[P]
COMPRESSOR D	[Q]	[R]	[S]
COMPRESSOR E	[GG]	[HH]	[II]

CIRCUITS	A	B	C	D	E
REFRIGERANT - **R-410a** CHARGE - LBS	[V]	[W]	[X]	[Y]	[JJ]

TEST PRESSURES HIGH **600**PSIG LOW **45**PSIG
EQUIPPED FOR OPERATION AT AN AIR FLOW OF **[CC]** SCFM
AGAINST A STATIC PRESSURE OF **[DD]** INCHES WATER COLUMN
DRIVE RPM **[EE]**
WIRE DIAGRAM **[FF]**
REFER TO RATING PLATE IN THE FURNACE SECTION (WHEN USED) FOR ADDITIONAL INFORMATION.
*HACR TYPE REQUIRED PER NEC

Rating Plate Key for MAPS® Model Series RCA, RDA, RCB, RDB, RCC, and RDC (NOTE: To decode a MAPS Serial No., see page 4.)

A = Model
B = Manufacturing Date (Month/Year)
C = Blower Motor HP
D = Volts/Phase/Hertz
E = Full Load Amps (FLA) of Blower Motor
F = Minimum Circuit Ampacity (MCA)
G = Maximum Fuse Size (MOP)
H = Quantity - Compressor A
I = Rated Load Amps of Compressor A
J = Locked Rotor Amps of Compressor A
K = Quantity - Compressor B
L = Rated Load Amps of Compressor B
M = Locked Rotor Amps of Compressor B
N = Quantity - Compressor C
O = Rated Load Amps of Compressor C
P = Locked Rotor Amps of Compressor C
Q = Quantity - Compressor D
R = Rated Load Amps of Compressor D
S = Locked Rotor Amps of Compressor D
T = Quantity Condenser Fan Motors
U = Rated Load Amps of Condenser(s)
V = Refrigerant Charge (lbs) - Circuit A
W = Refrigerant Charge (lbs) - Circuit B
X = Refrigerant Charge (lbs) - Circuit C
Y = Refrigerant Charge (lbs) - Circuit D
Z = Condenser Fan Motor HP
CC = SCFM Airflow
DD = External Static Pressure (“ w.c.)
EE = Drive (Option AM)
FF = Wiring Diagram No.
GG = Quantity - Compressor E
HH = Rated Load Amps of Compressor E
II = Locked Rotor Amps of Compressor E
JJ = Refrigerant Charge (lbs) - Circuit E

Serial Number and Model Codes (cont'd)

Decoding a MAPS® Unit Serial No.

Serial No. Sample: **3 BIJ 789 BK 08 N 96 7D**

Elements of No.: **1| 2 | 3 | 4 | 5 |6| 7 | 8**

Elements 1-5 apply to all MAPS® models.
Elements 6-8 apply to a MAPS® with a gas heat section .

Key:
1 = Phase (1 or 3)
2 = Date CODE (See table below.)
3 = Consecutive number
4 = Drive (See Form P-MAPSII or P-MAPSIII)
5 = Motor HP (See explanation on the right.) ⟶
6 = Type of Gas (N = Natural)
7 = Ignition CODE (See pages 6-10.)
8 = Valve CODE (See pages 12-22.)

Motor HP	Serial No. Code
1/2	03
3/4	04
1	05
1-1/2	06
2	07
3 (3450 rpm)	08
5 (3450 rpm)	09
7-1/2	11
15	12
10	13
20	14
3 (1800rpm)	15
5 (1800rpm)	16

Serial Number Key - Month and Year of Manufacture

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1963	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL
1964	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL
1965	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL
1966	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL
1967	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL
1968	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL
1969	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL
1970	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL
1971	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL
1972	XA	XB	XC	XD	XE	XF	XG	XH	XI	XJ	XK	XL
1973	YA	YB	YC	YD	YE	YF	YG	YH	YI	YJ	YK	YL
1974	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL
1975	AAA	AAB	AAC	AAD	AAE	AAF	AAG	AAH	AAI	AAJ	AAK	AAL
1976	ABA	ABB	ABC	ABD	ABE	ABF	ABG	ABH	ABI	ABJ	ABK	ABL
1977	ACA	ACB	ACC	ACD	ACE	ACF	ACG	ACH	ACI	ACJ	ACK	ACL
1978	ADA	ADB	ADC	ADD	ADE	ADF	ADG	ADH	ADI	ADJ	ADK	ADL
1979	AEA	AEB	AEC	AED	AEE	AEF	AEG	AEH	AEI	AEJ	AEK	AEL
1980	AFA	AFB	AFC	AFD	AFE	AFF	AFG	AFH	AFI	AFJ	AFK	AFL
1981	AGA	AGB	AGC	AGD	AGE	AGF	AGG	AGH	AGI	AGJ	AGK	AGL
1982	AHA	AHB	AHC	AHD	AHE	AHF	AHG	AHH	AHI	AHJ	AHK	AHL
1983	AIA	AIB	AIC	AID	AIE	AIF	AIG	AIH	AII	AIJ	AIK	AIL
1984	AJA	AJB	AJC	AJD	AJE	AJF	AJG	AJH	AJI	AJJ	AJK	AJL
1985	AKA	AKB	AKC	AKD	AKE	AKF	AKG	AKH	AKI	AKJ	AKK	AKL
1986	ALA	ALB	ALC	ALD	ALE	ALF	ALG	ALH	ALI	ALJ	ALK	ALL
1987	AMA	AMB	AMC	AMD	AME	AMF	AMG	AMH	AMI	AMJ	AMK	AML
1988	ANA	ANB	ANC	AND	ANE	ANF	ANG	ANH	ANI	ANJ	ANK	ANL
1989	AOA	AOB	AOC	AOD	AOE	AOE	AOG	AOH	AOI	AOJ	AOK	AOL
1990	APA	APB	APC	APD	APE	APF	APG	APH	API	APJ	APK	APL
1991	AQA	AQB	AQC	AQD	AQE	AQF	AQG	AQH	AQI	AQJ	AQK	AQL
1992	ARA	ARB	ARC	ARD	ARE	ARF	ARG	ARH	ARI	ARJ	ARK	ARL
1993	ASA	ASB	ASC	ASD	ASE	ASF	ASG	ASH	ASI	ASJ	ASK	ASL
1994	ATA	ATB	ATC	ATD	ATE	ATF	ATG	ATH	ATI	ATJ	ATK	ATL
1995	AUA	AUB	AUC	AUD	AUE	AUF	AUG	AUH	AUI	AUJ	AUK	AUL
1996	AVA	AVB	AVC	AVD	AVE	AVF	AVG	AVH	AVI	AVJ	AVK	AVL
1997	AWA	AWB	AWC	AWD	AWE	AWF	AWG	AWH	AWI	AWJ	AWK	AWL
1998	AXA	AXB	AXC	AXD	AXE	AXF	AXG	AXH	AXI	AXJ	AXK	AXL
1999	AYA	AYB	AYC	AYD	AYE	AYF	AYG	AYH	AYI	AYJ	AYK	AYL
2000	AZA	AZB	AZC	AZD	AZE	AZF	AZG	AZH	AZI	AZJ	AZK	AZL
2001	BAA	BAB	BAC	BAD	BAE	BAF	BAG	BAH	BAI	BAJ	BAK	BAL
2002	BBA	BBB	BBC	BBD	BBE	BBF	BBG	BBH	BBI	BBJ	BBK	BBL
2003	BCA	BCB	BCC	BCD	BCE	BCF	BCG	BCH	BCI	BCJ	BCK	BCL
2004	BDA	BDB	BDC	BDD	BDE	BDF	BDG	BDH	BDI	BDJ	BDK	BDL
2005	BEA	BEB	BEC	BED	BEE	BEF	BEG	BEH	BEI	BEJ	BEK	BEL
2006	BFA	BFB	BFC	BFD	BFE	BFF	BFG	BFH	BFI	BFJ	BFK	BFL
2007	BGA	BGB	BGC	BGD	BGE	BGF	BGG	BGH	BGI	BGJ	BGK	BGL
2008	BHA	BHB	BHC	BHD	BHE	BHF	BHG	BHH	BHI	BHJ	BHK	BHL
2009	BIA	BIB	BIC	BID	BIE	BIF	BIG	BIH	BII	BIJ	BIK	BIL
2010	BJA	BJB	BJC	BJD	BJE	BJF	BJG	BJH	BJI	BJJ	BJK	BJL
2011	BKA	BKB	BKC	BKD	BKE	BKF	BKG	BKH	BKI	BKJ	BKK	BKL
2012	BLA	BLB	BLC	BLD	BLE	BLF	BLG	BLH	BLI	BLJ	BLK	BLL
2013	BMA	BMB	BMC	BMD	BME	BMF	BMG	BMH	BMI	BMJ	BMK	BML
2014	BNA	BNB	BNC	BND	BNE	BNF	BNG	BNH	BNI	BNJ	BNK	BNL
2015	BOA	BOB	BOC	BOD	BOE	BOF	BOG	BOH	BOI	BOJ	BOK	BOL
2016	BPA	BPB	BPC	BPD	BPE	BPF	BPG	BPH	BPI	BPJ	BPK	BPL
2017	BQA	BQB	BQC	BQD	BQE	BQF	BQG	BQH	BQI	BQJ	BQK	BQL
2018	BRA	BRB	BRC	BRD	BRE	BRF	BRG	BRH	BRI	BRJ	BRK	BRL

Heater Serial No. PREFIX and SUFFIX Codes

In addition to the five elements found in every serial number, the heater serial number may be coded with prefixes and suffixes that further identify optional equipment or capabilities applicable to that particular unit. All prefix and suffix codes are listed below. See pages 3-4 for explanation of the basic elements of a serial number.

Serial Number PREFIX Codes and Definitions:

Code		Explanation
E	=	E3 (409) stainless steel heat exchanger
S	=	316 or 321 stainless steel heat exchanger

Serial Number SUFFIX Codes and Definitions:

Code		Explanation	
B	=	Baso pilot (indicates Baso pilot in place of General Controls pilot)	
CA	=	Constant air volume	
EE	=	Energy efficient motor	
FD	=	Fan duct furnace (spotter)	
HV	=	High throw fan assembly	
MP1	=	Modulating gas control with 20%-100% firing rate (AG39)	For a list of components of Maxitrol electronic modulation systems used on Model Series X, SC, RX, RPV, RG, RP, and EEDU indirect-fired equipment, see pages 25-27. For list of components of Maxitrol electronic modulation systems used on Model Series ADF, DV, and RDFdirect-fired equipment, see pages 27-28. (Reference NOTE: For PREEVA indirect-fired models, see Form P-PREEVA for modulation control components.)
MP2	=	Modulating gas control with 20%-100% firing rate with signal conditioner for DDC (AG40)	
MP3	=	Modulating gas control 20-100% firing rate on 1st furnace; 2-stage on 2nd (AG41)	
MP4	=	Modulating gas control 20-100% on 1st furnace; 2-stage on 2nd - w/signal conditioner for DDC (AG42)	
MP5	=	1-stage on 1st furnace; 2-stage on 2nd furnace (AG43)	
MP6	=	1-stage on 1st furnace; 2-stage on 2nd furnace - with signal conditioner for DDC (AG44)	
MV1	=	Maxitrol 20AH Electronic Modulation (50-100%) System (AG7 for single furnace)	
MV2	=	Maxitrol 30AH Electronic Modulation (50-100%) System (AG7 for multiple furnaces)	
MV3	=	Maxitrol 21H Electronic Modulation (50-100%) System (AG8 for single furnace)	
MV4	=	Maxitrol 21HR Electronic Modulation (50-100%) System (AG9 for single furnace)	
MV5	=	Maxitrol 31H Electronic Modulation (50-100%) System (AG8 for multiple furnaces)	
MV6	=	Maxitrol 31HR Electronic Modulation (50-100%) System (AG9 for multiple furnaces)	
MV7	=	Maxitrol 14 Electronic Modulation System (AG30 and AG31)	
MV8	=	Maxitrol 14A and 14B Electronic Modulation Systems (AG32 and AG35)	
MV9	=	Maxitrol 44 Electronic Modulation System (AG33)	
MVA	=	Maxitrol Electronic Modulation (50-100%) System w/Signal Conditioner for DDC on Indirect-Fired Equipment (AG21)	
MVB	=	Maxitrol 94 Electronic Modulation System for Paint Booth for Direct-Fired Equipment (AG36)	
MVC	=	Maxitrol Electronic Modulation System with Signal Conditioner for DDC on Direct-Fired Equipment (AG37)	
MVD	=	Maxitrol DFM14E Digital Control System (AG47) (Direct-fired RDF or DV)	
MVE	=	Maxitrol DFM 44E Digital Control System (AG48) (Direct-fired RDF or DV)	
MVF	=	Maxitrol DFM 44E Digital Control System with Remote Sensor (AG51) (RDF or DV)	
RA	=	Recirculation air	
TE	=	Totally enclosed motor	
TS	=	Two speed motor	
VA	=	Variable air volume	
X	=	Manufactured in Mexico	

Model No. Decoding

HX	100	8	S
Model	Size	Series	Suffix

The Model No. may or may not include suffix code(s) that further identify the heater. See the listing in the table for their identification.

*Effective 12/96, Codes J, JR, and Y are no longer used.

Heater Model No. SUFFIX Codes

SUFFIX Code		Explanation
-2	=	Two stage heating/MUA control
-2L	=	Two stage control (heating/MUA) with 33% low fire and constant thermal efficiency (AG60, AG61, AG62)
-C	=	Unit with a C.G.A. rating plate
-CV	=	Common vent
-D2	=	Digital control, space temperature, 2-stage heating/3-stage cooling (DG1)
-D2J	=	Digital control, electronic modulation heating/3-stage cooling (DG2)
-DM	=	Digital control, discharge temperature (makeup air), 2-stage heating/3-stage cooling (DG5)
-DMJ	=	Digital control, discharge temperature (makeup air), electronic modulation heating/3-stage cooling (DG6)
-E	=	Intermittent spark pilot (Applies to Models F, B, X, XE, XL, XLB that have a standard match lit pilot; models that have a standard spark pilot do not have this code.)
-H	=	Orificed for high altitude
-IL	=	Manifold arrangement and remote console for Illinois School Code
* -J	=	Makeup air (code appears on blower cabinet plate only)
* -JR	=	Makeup air with evaporative cooling (code appears on blower cabinet plate only)
-LN	=	Low noise
-M	=	Mechanical modulation
-MB	=	Mechanical modulation with full fire bypass
-MP	=	Electronic modulation (20-100% firing rate)
-MV	=	Electronic modulation (50-100% firing rate)
-R	=	Evaporative cooling
-S	=	Stainless steel heat exchanger
-W	=	Wide heater cabinet on Models RX75 and 100 Series 5 and 6
* -Y	=	High fire lightoff
-Z	=	Equipped with “Z” baffle for 4-foot stack extension

Safety Pilot or Ignition System Originally Supplied, Identified by Serial No. Code -- See Serial No. Decoding on pages 3-4. (N/A = Not available; see other notes below.)

Serial No. Code	Mfr [1]	Description	Replacement P/N [2]
1	J/C	8856-5	[3] N/A
2	J/C	861-4	[3] N/A
3	G/C	A100G741 (3-wire)	[3] N/A
4	J/C	856-A5	[3] N/A
5	J/C	619 Automatic relight system - 115 volt transformer	[3] N/A
6	J/C	619 Automatic relight system - 220 volt transformer	[3] N/A
7	J/C	619 Automatic relight system - 24 volt transformer	[3] N/A
8	J/C	A100G544 (2-wire)	[3] N/A
9	G/C	Safety Pilot is part of B57, B59 valve	[3] N/A
10	T	32T Automatic relight	N/A
01	J/C	Remote push button relighting system non-100% shutoff (includes 861-4, 115 volt push button station)	[3] N/A
02	J/C	Remote push button relighting system non-100% shutoff (includes 861-4, 230 volt push button station)	[3] N/A
03	J/C	Remote push button relighting system 100% shutoff (includes 861-4, 115 volt pilot valve, 115 volt push button station)	[3] N/A
04	J/C	Remote push button relighting system 100% shutoff (includes 861-4, 230 volt pilot valve, 230 volt push button station)	[3] N/A
05	J/C	Remote push button relighting system non-100% shutoff (includes 861-4, 24 volt push button station)	[3] N/A
06	J/C	Remote push button relighting system 100% shutoff (includes 861-4, 24 volt pilot valve, 24 volt push button station)	[3] N/A
07	T	32T Recycling safety pilot switch	[3] N/A
08	J/C	Safety pilot is part of Baso 92D2204A valve	[3] N/A
09	J/C	Safety pilot is part of Baso CS212A-2	[3] N/A
11	J/C	Safety pilot is part of Baso CS222A-1	[3] N/A
12	M/H	Safety pilot is part of M/H Y343B	[3] N/A
13	J/C	G13BG01 spark ignition system	[3] N/A
14	M/H	RA890E protector relay	[3] N/A
15	J/C	Part of G-28 spark ignition, non-100% shutoff	[3] N/A
16	J/C	Part of 67800-2T's master control	[3] N/A
17	J/C	G18MG02 spark ignition system - For replacement, use ignition conversion package	[3] N/A
18	M/H	C591A002 pilotstat	[3] N/A
19	J/C	G19MG02 automatic relight, 100% shutoff - For replacement, use ignition conversion package	[3] N/A
20	W/R	30A48 with 50" lead	[3] N/A
21	W/R	30A46 with 50" lead	[3] N/A
22	J/C	G29BG01 automatic relight, non-100% - For replacement, use ignition conversion package	[3] N/A
23	J/C	G29BG02 automatic relight, 100% shutoff - For replacement, use ignition conversion package	[3] N/A
24	J/C	830 - 1/2 safety pilot valve	[3] N/A
25	J/C	G28MG01, 100% (Model RHD Series)	[3] N/A
26	F	Spark ignition system 05-120103-000 with combination valve, 100% shutoff - See Code 32	[3] N/A
27	J/C	861-4	[3] N/A
28	G/C	A100G741	[3] N/A
29	J/C	G19 Automatic relight system - For replacement, use ignition conversion package	[3] N/A
30	G/C	A100G544	[3] N/A
31		Part of combination valve with standing pilot	
32	F	Spark ignition, non-100%	[3] N/A
33	J/C	G18BG02 spark ignition, non-100%	[3] N/A
34	J/C	G33BAG-1 spark ignition, 100% shutoff - For replacement, use ignition conversion package	[3] N/A
35	F	05-13031-501 spark ignition, 100% shutoff (Model DFT)	[3] N/A
36	F	G13CG-1 spark ignition, 100% shutoff (Model DFT)	[3] N/A
37	M/H	R4795A-1016 spark ignition, 100% shutoff	[3] N/A
	G/C	with K3R11A2N4 pilot line solenoid valve (Model DFT)	[3] N/A
38	W/R	5070A-1 spark ignition, 100% shutoff (Model DFT)	[3] N/A
39	M/H	R4795A-1016 spark ignition, 100% shutoff	[3] N/A
	G/C	with K3R11A2N4 pilot line solenoid valve (Model DFT)	[3] N/A
40	J/C	G60AAG-3 ignition controller (used with 100% recycling pilot)	[3] N/A
41	J/C	G60AAG-3 ignition controller (used with non-100% relight)	[3] N/A
42	J/C	G60AAG-3 ignition controller (used with 100% shutoff and Y79 lockout device)	[3] N/A
43	F	No. 05-142202-005 spark ignition (Model DFT 250, 260, 295, 325)	[3] N/A
44	J/C	G60QBG-7 ignition controller with valve and regulator all in one body -	[3] N/A
45	J/C	G60CPG-1 ignition controller, propane gas with separate lockout	[3] N/A
46	J/C	G60QBG-7 ignition controller, natural gas with lockout, Y79 timing device	[3] N/A
47	J/C	G60PFH ignition controller with lockout all in one body, natural or propane gas	[3] N/A

[1] F = Fenwall; G/C = General Controls; M/H = Minneapolis Honeywell; J/C = Johnson Controls; T = Thermodisc; W/R = White-Rodgers

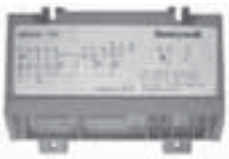
[2] Functional replacement may require field-furnished wiring.

[3] This item is no longer available. Suggest you contact the control manufacturer for replacement or functional replacement.

Safety Pilot or Ignition System Originally Supplied, Identified by Serial No. Code (cont'd) -- See Serial No. Decoding on pages 3-4. (N/A = Not available; see other notes below.)

Serial No. Code	Mfr [1]	Description	P/N	Replacement P/N [2]
48	J/C	G60QRH-1 ignition controller, propane gas valve with regulator and lockout all in one body	N/A	[3] N/A
49	M/H	L626B3	N/A	[3] N/A
50	J/C	G65BCG-1 ignition controller and natural gas valve with regulator all in one body, 1/2"	67983-N/A	[3] N/A
51	J/C	G65DCM-1 ignition controller & propane gas valve w/regulator & lockout, 1 body, 1/2"	68055-N/A	[3] N/A
52	J/C	G65BBG-4 ignition controller and natural gas valve with regulator all in one body, 1/2"	79887-N/A	[3] N/A
53	J/C	G65BKG-2 ignition controller and natural gas valve with regulator all in one body, 3/4"	79888-N/A	[3] N/A
54	J/C	G65BCM-1 ignition controller & natural gas valve w/regulator & lockout, 1 body, 1/2"	79808-N/A	[3] N/A
55	J/C	G65BBM-3 ignition controller & natural gas valve w/regulator & lockout, 1 body, 1/2"	84570-N/A	[3] N/A
56	J/C	G65BKM-2 ignition controller & natural gas valve w/regulator & lockout, 1 body, 3/4"	79900-N/A	[3] N/A
57	J/C	G66BMG-1 ignition controller and natural gas valve with regulator and lockout all in one body, 1/2" - Special for export	N/A	[3] N/A
58	M/H	Solid state flame safeguard, RA890F (flame rectification)	86972	To replace with HSI: New wiring diagram PLUS Kit **P/N 146268**; or kits with 200VA transformer, **P/N 146318** (115V); P/N **146319** (208V, 240, 480, 575V)
		Solid state spark generator, Q624A1006 or Q624A1014	86974	
59	M/H	Solid state flame safeguard, RA890G (ultraviolet)	89409	
		Solid state spark generator, Q624A1006 or Q624A1014	86974	
60	M/H	Solid state flame safeguard, R7795B (flame rectification)	89407	
		Solid state spark generator, Q624A1006 or Q624A1014	86974	
61	M/H	Solid state flame safeguard, R7795A (ultraviolet)	89436	
		Solid state spark generator, Q624A1006 or Q624A1014	86974	

Code	Mfr	Description	P/N	Replaced by
62	J/C	Ignition controller G67BG-2, natural gas or propane on outdoor units only	89314-N/A 	Kit P/N **257472**
63	J/C	Ignition controller G67NG-2, natural gas or propane on outdoor units only	89488-N/A 	Kit P/N **257473**
64	M/H	Safety pilot for Bell Telephone, L62GB	N/A	N/A
65	J/C	Ignition controller G770NGC-4 with lockout, natural gas or propane	97547-N/A 	Kit P/N **257473** except for Model TR, use P/N **216970**
66	J/C	Ignition controller G67BG-5, natural gas or propane on outdoor units only	97782-N/A 	Kit P/N **257472**

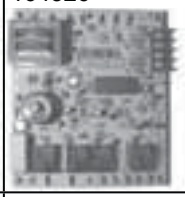
Code	Mfr	Description	P/N	Replaced by
67	RAM	Hot surface ignition module H4MC2	121543 	**204376** (Code 82)
68	M/H	Piezo Ignitor Q635A1010	**125836** 	
69	M/H	Ignition controller GS4S6DD	**134780** 	
70	M/H	Ignition Controller S4560B1055-ML11149	**145714**	
71	RAM	Direct Spark Integrated Control Board 3MC4-03	147102 	Kit P/N **257531**
72	RAM	Hot surface ignition module H4MC2	157953 	**204376** (Code 82)

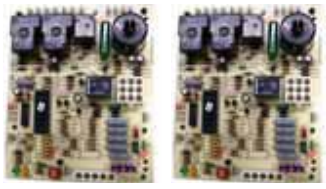
[1] F = Fenwall; G/C = General Controls; J/C = Johnson Controls; M/H = Honeywell; T = Thermodisc; W/R = White-Rodgers

[2] Functional replacement may require field-furnished wiring.

[3] This item is no longer available. Suggest you contact the control manufacturer for replacement or functional replacement.

Safety Pilot or Ignition System Originally Supplied, Identified by Serial No. Code (cont'd) -- See Serial No. Decoding on pages 3-4. (N/A = Not available; see other notes below.)

Code	Mfr	Description	P/N	Replaced by
73	RAM	Direct Spark integrated Control Board 3MC4-04	164326 	Kit P/N **258251**
74	Channel Products 1691-06, Rotary Piezo Electric Ignitor (Used on Model UF for Ambirad.)		**173036** 	
75	J/C	Direct Spark Ignition Module, #G861KCC-5401D	174260 	Kit P/N **257531**
76	RAM	Direct Spark Integrated Control Module 3MC4-06	178453 	Kit P/N **258251**
77	J/C	Direct Spark Ignition Control Board, G822KCC-5401 D	193804 	Kit P/N **258251**
78	UTC	Direct Spark Ignition with Cooling Relay, UTC #1097-211	**195573** 	
79	UTC	Direct Spark Ignition, UTC #1097-210	**195265** 	
80	UTC	Direct Spark Ignition Board, UTC #1016-426	**204955** 	

Code	Mfr	Description	P/N	Replaced by
81	Synetek IH1104C Dual Flame Ignition Module		**204166** 	
82	Synetek IH-11040B-C Single Flame Rod Ignition Module		**204376** 	
83	UTC	Direct Spark Ignition Module with Cooling Relay, #1097-211	**214979** 	
(Same as CODE 78 with DIP switch adjusted for a 45 second blower off delay)				
84	J/C	Intermittent Pilot Ignition Control with lockout and vent damper connections, G770NHC-1	234012-N/A 	Kit P/N **257473**
85	UTC #1097-211, Direct Spark Ignition with Cooling Relay		**(2) 195573** 	
86	Varidigm VB4-H500 Combustion Board (RDCB/ RDDB H500)		223554-N/A 	Contact your local Representative or the factory for replacement information.
87	Varidigm VB4-H600 Combustion Board (RDCB/ RDDB H600)		223555-N/A 	Contact your local Representative or the factory for replacement information.

[1] J/C = Johnson Controls; M/H = Honeywell; RAM = RAM Electronics

[2] Functional replacement may require field-furnished wiring.

Safety Pilot or Ignition System Originally Supplied, Identified by Serial No. Code (cont'd) -- See Serial No. Decoding on pages 3-4.

Code	Description	P/N(s)	Replaced by
88	Varidigm VB4-H700 Combustion Board (RDCB/ RDDB H700)	223556-N/A 	Contact your local Representative or the factory for replacement information.
89	Varidigm VB4-H800 Combustion Board (RDCB/ RDDB H800)	222678 - N/A 	Contact your local Representative or the factory for replacement information.
90	UTC #1097-211 Direct Spark Ignition and Varidigm VB4-H500 Combustion Board (RDCB/ RDDB H10C)	**195573**  223554 - N/A 	P/N 223554 is no longer available. Contact your local Representative or the factory for replacement information.
91	UTC #1097-211 Direct Spark Ignition and Varidigm VB4-H600 Combustion Board (RDCB/ RDDB H12C)	**195573**  223555 - N/A 	P/N 223555 is no longer available. Contact your local Representative or the factory for replacement information.
92	UTC #1097-211 Direct Spark Ignition and Varidigm VB4-H700 Combustion Board (RDCB/ RDDB H14C)	**195573**  223556 - N/A 	P/N 223556 is no longer available. Contact your local Representative or the factory for replacement information.
93	UTC #1097-211 Direct Spark Ignition and Varidigm VB4 Combustion Board (RDCB/ RDDB H16C)	**195573**  222678 - N/A 	P/N 222678 is no longer available. Contact your local Representative or the factory for replacement information.

Code	Description	P/N	Replacement
94	UTC #1003-638-A Recyclying Ignition Controller	**257009** 	
95	UTC #1003-514 Ignition Controller with Lockout	**257010** 	
96	Varidigm VB1200-5-RZNR-C	**257246** 	**NOTE:** If **CODE 96** board is replaced, the ID plug must either be replaced also or removed and installed on the new board. See page 10 for a list of ID plugs.
97	Varidigm VB1200-5-RZNR-AB	**258319** 	**NOTE:** If **CODE 97** board is replaced, the ID plug must either be replaced also or removed and installed on the new board. See page 10 for a list of ID plugs.
98	Varidigm VB1200-2-RZNR-PVA	**260252** 	**NOTE:** If CODE 98 board is replaced, the ID plug must either be replaced also or removed and installed on the new board. See page 10 for a list of ID plugs.
99	Varidigm VB1200-5-RZNR-SHH	**260917** 	**NOTE:** If CODE 99 board is replaced, the ID plug must either be replaced also or removed and installed on the new board. See page 10 for a list of ID plugs.
A1	Direct Spark Ignition, UTC #1097-218, 7 Sec TFI	**269867** 	

Miscellaneous Information

ID Plugs for Varidigm Deep Modulation Boards, Ignition CODES 96 and 97, on page 9

ID Plug P/N	ID Plug No.	ID Plug Label	Applies to			
			Model	Heat Section	Ignition CODE	Gas
258113	13	MAPS A100NG	Models RDCB, RDDB, RDCC, & RDDC	100	**97**	Natural
258114	14	MAPS A100LP				Propane
258115	15	MAPS A150NG		150		Natural
258116	16	MAPS A150LP				Propane
258117	17	MAPS A200NG		200		Natural
258118	18	MAPS A200LP				Propane
258129	29	MAPS B250NG	Models RDCB, RDDB, RDCC, & RDDC	250		Natural
258130	30	MAPS B250LP				Propane
258131	31	MAPS B300NG		300		Natural
258132	32	MAPS B300LP				Propane
258133	33	MAPS C400NG	Models RDCB, RDDB, RDCC, & RDDC	400	**96**	Natural
258134	34	MAPS C500NG		500		Natural
258135	35	MAPS C600NG		600		Natural
258140	40	MAPS C700NG		700		Natural
258141	41	MAPS D500NG	Models RDCB & RDDB	500 &1000		Natural
258142	42	MAPS D600NG		600 & 1200		Natural
258143	43	MAPS D700NG		700 & 1400		Natural
258144	44	MAPS D800NG		800 & 1600		Natural

ID Plugs for Varidigm Deep Modulation Board, Ignition CODE 98, on page 9

ID Plug P/N	ID Plug Label	Applies to Model RDH with Ignition CODE 98	
		Heat Section	Gas
258081	PREEVA 175NG	**175**	Natural
258082	PREEVA 175LP		Propane
258083	PREEVA 200NG	**200**	Natural
258084	PREEVA 200LP		Propane
258085	PREEVA 225NG	**225**	Natural
258086	PREEVA 225LP		Propane
258087	PREEVA 250NG	**250**	Natural
258088	PREEVA 250LP		Propane
258089	PREEVA 300NG	**300**	Natural
258090	PREEVA 300LP		Propane
258091	PREEVA 350NG	**350**	Natural
258092	PREEVA 350LP		Propane
258093	PREEVA 400NG	**400**	Natural
258094	PREEVA 400LP		Propane

ID Plugs for Varidigm Deep Modulation Board, Ignition CODE 99, on page 9

ID Plug P/N	ID Plug Label	Applies to Model RHH and Model SHH with Ignition CODE 99	
		Heat Section	Gas
258101	SHH 130NG	**130**	Natural
258102	SHH 130LP		Propane
258103	SHH 180NG	**180**	Natural
258104	SHH 180LP		Propane
258105	SHH 260NG	**260**	Natural
258106	SHH 260LP		Propane
258107	SHH 350NG	**350**	Natural
258108	SHH 350LP		Propane

Ignition Conversion Kits to Convert from Match-Lit Pilot to Spark Pilot for Models F and B

Model F or B	Gas	Kit Description	Kit P/N	Instructions
F/B 25-165	Natural	Spark-ignited, intermittent safety pilot without lockout (UTEC Model 1003-638A, **P/N 257009**)	**100525**	Form CP-F/B IGN, P/N 100550
F/B 200-250			**100526**	
F 300-400, B 300			**100527**	
B 400			**102348**	
F/B 25-165		Spark-ignited, intermittent safety pilot with lockout (UTEC Model 1003-514, **P/N 2570010**)	**100528**	
F/B 200-250			**100529**	
F 300-400, B 300			**100530**	
B 400			**102349**	
F/B 25-200	Propane	**(NOTE:** Controller includes terminal for connecting vent damper.)	**100531**	
F 250-400, B 250-300			**100532**	
B 400			**102350**	

Ignition Conversion Kits to Convert Pilot Systems to Updated Spark Pilot, Hot Surface, or Direct Spark Ignition System for Models listed

Ignition System being Replaced	Gas	Conversion Kit P/N (Type of Ignition Controller in the Kit)	Instructions (in the Kit)		Applies to Models
			Form	P/N	
Replaces Pilot Codes 62, 63, 65, 66, 84	Natural or Propane	**257473** (Ignition Controller 257010) **257472** (Ignition Controller 257009)	CP-IGN CNTRL	134704	Indirect-fired models with Pilot Code 62, 63, 65, 66, or 84
Replaces Pilot Code 71 or 75		**257531** (Ignition Controller 195265)	CP-DSI CNTRL	265905	FT, SFT, TRP
Spark - flame rectification or ultraviolet		**146268, 146318, 146319** (HSI P/N 204376)	CP-RDF-HSI	146321	RDF with Pilot Code 58, 59, 60, or 61
Model CAUA with Pilot Code 76 or 77		**258251** (Ignition Controller 195573)	CP-CAUA-IGN CNTRL	178435	CAUA with Pilot Code 76 or 77
Model TR with Spark Pilot Code 65 or 66		**216970** (DSI P/N 204955)	CP-TR-IGN CNV	215975	TR/TR-H with Pilot code 65 or 66

Type of Valve Originally Supplied -- See Serial No. Decoding on pages 3-4.

A dash (-) in the serial number means that no electric valve was furnished. All valves are 24 volt unless noted otherwise.

See ALL notes on pages 19-22. N/A = Not Available. See illustrations on pages 23-27.

Serial No. Code	Original Valve on Heater	Valve Mfr [1]	Pipe Size	P/N	[2] Functional Replacement	
					Code	P/N
1	[5] GF21G18 or 91F21G18	J/C	3/8	N/A	[10]	**88242**
2	[5] GA4G18 or 91A4G18	J/C	1/2 (sm)	N/A	[10]	**88242**
3	[5] GD4G18 or 91D4G18	J/C	1/2 (lg)	N/A	[10]	**88242**
4	[5] GS5G18	J/C	3/4	N/A	[10]	**88242**
5	[5] 2509-206	W/R	3/4	N/A	[10]	**88242**
6	[5] 2509-207	W/R	3/4	N/A	[10]	**88242**
7	[5] 2509-208	W/R	1	N/A	[5]	**112922**
8	[5] V-80	M/H	1/2	N/A	[10]	**88242**
9	[5] V-80	M/H	3/4	N/A	[10]	**88242**
01	[5] NC1013-2T	M/N	1/2	N/A	[10]	**88242**
02	[5] NC1014-2T	M/N	3/4	N/A	[10]	**88242**
03	[5] NC1030-2E or NC1058-2T	M/N	1	N/A	[5]	**112922**
04	[5] VA84A1004	M/H	1-1/4	N/A	[5]	**112922**
05	[5] VA84A1012	M/H	1-1/2	N/A	[5]	**112922**
06	[6] K3J41A102, 2 stage	G/C	1/2	N/A	**X2**	[11] **177396**
07	[6] K3J51A102, 2 stage	G/C	3/4	N/A	**X3**	[11] **177397**
08	[6] K3J61A102	G/C	1	N/A	[3]	
09	[5] VA835	M/H	1/2	N/A	[10]	**88242**
10	[5] VA835	M/H	3/4	N/A	[10]	**88242**
12	[5] VA84	M/H	1	N/A	[5]	**112922**
13	[5] 91S5G18	J/C	3/4	N/A	[10]	**88242**
14	[5] 2509-204	W/R	1/2	N/A	[10]	**88242**
15	[5] K3A	G/C	1-1/4	N/A	[3]	
16	[5] V81A1060	M/H	1/2(sm)	N/A	[10]	**88242**
17	[5] V81A1078	M/H	3/4(sm)	N/A	[10]	**88242**
18	[5] 91A4G3	J/C	1/2(sm)	N/A	[10]	**88242**
19	[5] 91D4G3 or H91EG-3	J/C	1/2(lg)	N/A	[10]	**88242**
20	[7] B57 (Natural), single stage	G/C	1/2	N/A	**K6** [12]	**96300**
21	[8] B57 (Propane), single stage	G/C	1/2	N/A	**K9** [12]	**96303**
22	[5] V81D262	M/H	1	N/A	[5]	**112922**
23	[5] 3601-228	W/R	1/2	N/A	[10]	**88242**
24	[5] 3606-228 (Propane)	W/R	1/2	N/A	[10]	**88242**
25	[5] NC1054-2E	M/N	3/4	N/A	[5]	**112922**
26	[5] 1200AER	R	3/8x1/2	N/A	[3]	
27	[9] 92D2204-A-1, 100% shutoff, 115V	J/C	1/2	N/A	[3]	
28	[9] CS212-A2, 100% shutoff, 115V	J/C	1/2	N/A	[3]	
29	[9] CS222A-1, 100% shutoff, 115V	J/C	1/2	N/A	[3]	
30	Direct Spark, 115V, V4225B100, Propane	M/H	1/2	N/A	[3]	
31	Direct Spark, 115V, V4224A1077, Natural	M/H	1/2	N/A	[3]	
33	[7] B59R02-Natural or B59R109, single stage	G/C	1/2	N/A	**K6** [12]	**96300**
34	[7] B59R06-Natural or B59R111, single stage	G/C	3/4	N/A	**K7** [12]	**96301**
35	[8] B59A01-Propane or B59A15, single stage	G/C	1/2	N/A	**K9** [12]	**96303**
36	[8] B59A05-Propane or B59A110, single stage	G/C	1/2	N/A	**K9** [12]	**96303**
37	[5] V8257-A1244	M/H	1/2	N/A	[10]	**88242**
38	[5] V829A-1001	M/H	1/2	N/A	[10]	**88242**
39	[5] V81A-1359	M/H	3/4	N/A	[5]	**112922**
40	[5] V88A-1345	M/H	1-1/2	N/A	[3]	
41	[5] V81A-1086	M/H	1	N/A	[5]	**112922**
42	[5] V8292A-1001	M/H	3/4	N/A	[10]	**88242**
43	[5] V8146A102	M/H	3/4	N/A	[5]	**112922**
44	[5] V8146B-1023	M/H	3/4	N/A	[5]	**112922**
45	[5] V88A13372	M/H	1	N/A	[5]	**112922**
46	[13] NC1014-1E	M/N	3/4	N/A	[3]	
47	[13] 92D4004A1	J/C	1/2	N/A	[3]	
48	[5] V8202A	M/H	3/4	N/A	[3]	
49	[5] 25A15-226 with plug for electric ignition	W/R	3/8	N/A	[3]	
50	[5] 25046-404	W/R	1/2	N/A	[3]	
51	[5] 92D4004G3	J/C	1/2	N/A	[3]	
52	[5] K3A	G/C	1/2	N/A	[5]	**112922**
53	[5] K3A	G/C	3/4	N/A	[5]	**112922**
54	[5] K3A	G/C	1	N/A	[5]	**112922**
55	[5] 25G10-204	W/R	1/2	N/A	[10]	**88242**
56	V48A2144 Diaphragm Type	M/H	1	N/A	[3]	
57	[5] K40AC251	G/C	3/4	N/A	[3]	

(continued)

Type of Valve Originally Supplied (cont'd) -- See Serial No. Decoding on pages 3-4.

A dash (-) in the serial number means that no electric valve was furnished. All valves are 24 volt unless noted otherwise.

See ALL notes on pages 19-22. N/A = Not Available. See illustrations on pages 23-27.

Serial No. Code	Original Valve on Heater	Valve Mfr [1]	Pipe Size	P/N	[2] Functional Replacement	
					Code	P/N
58	[14] G52BAG-12 (Natural)	J/C	3/4	N/A	[4]	
59	[14] G52DAG-13 (Natural) 2-stage (lg)	J/C	1/2	N/A	[4]	
60	[5] K40AC361	G/C	1	N/A	[3]	
61	[14] 96AGT-9	J/C	1/2	N/A	[4]	
62	963006-G	J/C	3/4	N/A	[3]	
63	[14] G52BLG-12 (Propane)	J/C	3/4	N/A	[4]	
64	[14] G52AAG-12 (Natural)	J/C	1	N/A	[4]	
65	[15] G52AAY-1; DFT 250,260,290,325; Natural	J/C	1	N/A	[3]	
66	[5] 2509-207	W/R	3/4	N/A	[5]	**112922**
67	[5] 2509-208	W/R	1	N/A	[5]	**112922**
68	[5] 2509-206 (Small)	W/R	3/4	N/A	[10]	**88242**
69	[7] B590RA44 - Natural	G/C	3/4	N/A	**K7** [12]	**96301**
70	[18] B590AA45 - Propane	G/C	3/4	N/A	[4]	
71	[19] B59RJ155 - Natural	G/C	1/2	N/A	[4]	
72	[19] B59RJ157 - Propane	G/C	3/4	N/A	[4]	
73	[18] B59AJ156 - Propane	G/C	1/2	N/A	[4]	
74	[18] B59RJ158 - Propane	G/C	3/4	N/A	[4]	
75	[5] H91DG-3 Natural and Propane	J/C	1/2	N/A	[10]	**88242**
76	[5] H91DG-3 Natural; H91DG-2 Propane	J/C	1/2	N/A	[10]	**88242**
77	[5] NC1014-2T Natural	M/N	3/4	N/A	[5]	**112922**
	H91DG-2 Propane	M/N	1/2	N/A	[10]	**88242**
78	[5] NC1014-2T Natural	M/N	3/4	N/A	[5]	**112922**
	H91EG-3 Propane	M/N	1/2	N/A	[10]	**88242**
79	[5] NC1054-2T Natural	M/N	3/4	N/A	[5]	**112922**
	H91EG-2 Propane	M/N	1/2	N/A	[10]	**88242**
80	[5] NC1054-2T	M/N	3/4	N/A	[5]	**112922**
	H91LG-1	M/N	3/4	N/A	[10]	**88242**
81	[5] G95AGL-1 Natural - Model RHD	J/C	1/2	N/A	[3]	
82	[5] G95GL-1 W/Kit Y71AA-4 Propane - Model RHD	J/C	1/2	N/A	[3]	
83	[16] K72R13 Natural - side entrance 90° outlet valve, single stage	G/C	1/2	39298-N/A	**K6** [12]	**96300**
84	[17] K72A14 Propane - side entrance 90° outlet valve, single stage	G/C	1/2	39299-N/A	**G9**	**82396**
85	[18] G50AAY-1 Natural, 1-stage - DFT250 (includes built-in regulator)	J/C	1	N/A	[3]	
86	[6] G52BLY-1, 2-stage, Propane, DFT 250, 260, 290, 325	J/C	3/4	N/A	[3]	
87	[5] G50BLY-1, 1-stage, Propane, DFT250	J/C	3/4	N/A	[3]	
88	[13] 1014-1E Natural, High Stage, DFT 300,400	M/N	3/4	N/A	[3]	
	[13] 1013-1E Natural, Low Stage, DFT 300,400	M/N	1/2	N/A	[3]	
89	[13] 1054-1E Natural, High Stage, DFT 500	M/N	3/4	N/A	[3]	
	[13] 1013-1E Natural, Low Stage, DFT 500	M/N	1/2	N/A	[3]	
90	[13] V48H-100-1, Natural, High Stage, DFT 600	M/N	3/4	N/A	[3]	
	[13] 1013-1E Natural, Low Stage, DFT 600	M/N	1/2	N/A	[3]	
91	[14] G52BAG-6, 2-stage, Natural, DFT 220	J/C	3/4	N/A	[3]	
92	[14] G52AAG-6, 2-stage, Natural, DFT 285,340,395	J/C	1	N/A	[3]	
93	[23] G52BLG-10, 2-stage, Propane, DFT 285,340,395	J/C	3/4	N/A	[3]	
94	8215B30	J/C	3/4	N/A	[3]	
95	[5] H91LG-1 91D4G-3	J/C	3/4	47537-N/A	[10]	**88242**
96	[22] B59SJK171 Natural, 2 stage	G/C	1/2	N/A	**X2** [24]	**177396**
97	[22] B59BJK172 Propane, 2 stage	G/C	1/2	N/A	**X1** [24]	**177395**
98	[22] B59SJK163 Natural, 2 stage	G/C	3/4	N/A	**X3** [24]	**177397**
99	[22] B59BJK164 Propane, 2 stage	G/C	3/4	N/A	**X1** [24]	**177395**
A1	[22] B590SAK50 Natural, 2 stage	G/C	3/4	N/A	**X3** [24]	**177397**
A2	[22] B590BAK51 Propane, 2 stage	G/C	3/4	N/A	**X1** [24]	**177395**
A3	[13] SNC1054-1	M/N	3/4	N/A	[3]	
A4	[7] 7000ERHC 455-501-501 Natural, single stage	R	3/4x1	N/A	**K7** [12]	**96301**
A5	[21] 242NS 242-111121-1101 Natural, single stage	E	1/2	47380-N/A	**Q2** [25]	**121598**
A6	[21] 242NS 242-131121-1101 Natural, single stage	E	3/4	47381-N/A	**9A**	**221525**
A7	[21] 242NSU 242-111120-2101 Propane, single stage	E	1/2	N/A	**Q4** [25]	**121600** [36]
A8	[21] 242NSU 242-131120-2101 Propane, single stage	E	3/4	N/A	**Q4** [25]	**121600** [36]
A9	[17] 7000GVER-HC Natural, single stage	R	3/4x1	N/A	**9A**	**221525**
B1	[5] K3A441	G/C	1/2	N/A	[10]	**88242**
B2	[5] K3A451	G/C	3/4	N/A	[5]	**112922**
B3	[5] K3A461	G/C	1	N/A	[5]	**112922**
B4	G60QBG-7 with Controller - Natural	J/C	1/2	50448-N/A	[3]	
B5	H91MG Natural	J/C	1	47538-N/A	[5]	**112922**
B6	[38, 7] 7000BER Natural 300-501-502, single stage	R	1/2	48577-N/A	**K6** [12]	**96300**
B7	[7] 7000BER Natural 302-501-502A, single stage	R	3/4	N/A	**K7** [12]	**96301**

Type of Valve Originally Supplied (cont'd) -- See Serial No. Decoding on pages 3-4.

A dash (-) in the serial number means that no electric valve was furnished. All valves are 24 volt unless noted otherwise.

See ALL notes on pages19-22. N/A = Not Available. See illustrations on pages 23-27.

Serial No. Code	Original Valve on Heater	Valve Mfr [1]	Pipe Size	P/N	[2] Functional Replacement	
					Code	P/N
B8	[8] 7000BE Propane 300-505-501, single stage	R	1/2	N/A	**K9** [12]	**96303**
B9	[8] 7000BE Propane 302-505-501, single stage	R	3/4	N/A	**K9** [12]	**96303**
C1	[17] 7000BGVER Natural 312-501-503	R	1/2	N/A	[3]	
C2	[17] 7000BGVER Natural 307-501-503	R	3/4	N/A	[3]	
C3	[28] 7000BGVE Propane 312-505-526	R	1/2	N/A	[3]	
C4	[28] 7000BGVE Propane 307-505-501	R	3/4	N/A	[3]	
C5	[38, 7] V800A1039 Natural, single stage	M/H	3/4	51299-N/A	**K7** [12]	**96301**
C6	[8] G50DAG-1 Natural, single stage	J/C	3/4	N/A	[12]	
		Replacement for Standing Pilot			**K7**	**96301**
		Replacement for Spark Pilot			**9A**	**221525**
C7	[22] V852A1097 Natural, 2-Stage	M/H	1/2	51357-N/A	**X2** [12, 24]	**177396**
C8	[22] V852A1071 Natural, 2-Stage	M/H	3/4	51358-N/A	**X3** [12, 24]	**177397**
C9	[22] V852A1105 Propane, 2-Stage	M/H	1/2	51359-N/A	**X1** [12, 24]	**177395**
D1	[22] V852A1089 Propane, 2-Stage	M/H	3/4	51360-N/A	**X1** [12, 24]	**177395**
D2	[26] G60CPG-1 Propane w/separate lockout device	J/C	1/2	N/A	[3]	
	Y79 Lockout Device only, Y70BBA	J/C		46869-N/A		
D3	[26] G60QBG-7 Natural	J/C	1/2	N/A	[3]	
	Y79 Lockout Device only, Y70BBA	J/C		46869-N/A		
D4	[27] V850A1133 Natural, 2-Stage	M/H	3/4	52886-N/A	**P8** [20]	**115351**
D5	[27] V850A117 Natural, 2-Stage	M/H	3/4	N/A	[4]	
D6	[14] G52AAG-16 DFT units	J/C	1	N/A	[3]	
D7	[38, 7] 242 N-1 (Natural) 242-131131-1181, single stage	E	3/4	59341-N/A	**K7** [12]	**96301**
D8	[28] H91EG	J/C	1/2	N/A	[3]	
D9	[31] H91EG	J/C	1/2	N/A	[3]	
E1	[30] B79B77RK34 Natural, 2-Stage	G/C	1/2	60609-N/A	**X2** [12]	**177396**
E2	[30] B79B77WK35 Natural, 2-Stage	G/C	3/4	60610-N/A	**X3** [12]	**177397**
E3	[30] B79B77WK36, Propane, 2-Stage	G/C	1/2	60611-N/A	**X1** [12]	**177395**
E4	[21] SX242 242-131121-1214 Natural, single stage	E	3/4	61098-N/A	**9A**	**221525**
E5	[21] SX242LS 242-111122-1215 Propane, single stg (also could be used on natural gas units equipped with Maxitrol controls)	E	1/2	61099-N/A	**Q4** [25]	**121600** [36]
E6	[32] V4036B1019, 115V	M/H	1/2	N/A	[3]	
E7	[32] V4036B1084, 240V	M/H	3/4	N/A	[3]	
E8	[38, 7] RS7000BER 300-502-719 Propane, single stg (also could be used on natural gas units equipped with Maxitrol controls)	R	1/2	62969-N/A	**K9** [12]	**96303**
E9	[15] K72S32 Side Entrance Propane, single stage	G/C	1/2	64420-N/A	**G9**	**82396**
F1	[30] V850A1166 2-Stage, Natural	M/H	1/2	62966-N/A	**P8**	**115351**
F2	[30] V850A1158 2-Stage, Propane	M/H	1/2	62967-N/A	**P9**	**115352**
F3	VR852A1068 2-Stage, Propane	M/H	1/2	62946-N/A	**X1** [12]	**177395**
F4	G60QRH-1 Propane	J/C	1/2	56826-N/A	[3]	
F5	SX242LSH 242-131122-1248 Propane, single stg (also could be used on natural gas units equipped with Maxitrol controls)	E	3/4	63282-N/A	**1B**	**221526**
F6	[23] 36D05-201 Natural	W/R	1/2	62972-NA	[3]	
F7	[23] 36D05-401 Natural	W/R	3/4	62973-N/A	[3]	
F8	[23] 36D05-202 Propane	W/R	1/2	62974-NA	[3]	
F9 and G1	[29] G65BC Natural - **Code F9**	Valve Codes F9 and G1 indicate G65 ignition (Codes 50-56) and gas valve.			[3]	
	[29] G65DCM-1 Propane - **Code G1**				[3]	
G2	[15] 7000BER 379-501-502 Side Entrance Natural	R	1/2	N/A	**K6** [12]	**96300**
G3	[16] 7000BE 379-501-501 Side Entrance Propane	R	1/2	N/A	**G9**	**82396**
G4	[7] 7000BER 403-501-729 Nat, single stage (no ECO cnntr)	R	1/2	82196-N/A	**K6** [12]	**96300**
G5	[7] 7000BER 403-502-719 Propane, single stg (also could be used on natural gas units equipped with Maxitrol system)	R	1/2	82197-N/A		**221634**
G6	[7] 7000BER 408-501-502 Nat, single stg (with ECO cnntr)	R	1/2	82198-N/A	**K6** [12]	**96300**
G7	[7] 7000BER 408-502-719 Propane, Side Entrance, single stage (with ECO connector)	R	1/2	82199-N/A	**G9**	**82396**
G8	[37, 7] 36C03270 Natural, Side Entrance, single stg, w/ECO	W/R	1/2	82395-N/A	**K6** [12]	**96300**
G9	[37, 7] 36C03-433 Natural & Propane, Side Entrance, single stage, w/ECO	W/R	1/2	**82396**		
H1	[38, 7] V800A7028 Natural, single stage, w/ECO terminal	M/H	3/4	82398-N/A	**K7** [12]	**96301**
H2	[38, 7] 36C03-258 Natural, single stage, w/ECO terminal	W/R	1/2	82397-N/A	**K6** [12]	**96300**
H3	[38, 7] 700BER 403-501-832 Nat, single stg, w/ECO terminal	R	1/2	82624-N/A	**K6** [12]	**96300**
H4	[7] 700BER 403-502-835 Pro, single stg, w/ECO terminal	R	1/2	82669-N/A	**K9** [12]	**96303**
H5	[30] 36D13-208 Natural, 2-Stage	W/R	1/2	87430	**X2** [12, 39]	**177396**
H6	[30] 36D13-405 Natural, 2-Stage	W/R	3/4	87432	**X3** [12, 39]	**177397**
H7	[30] 36D13-209 Propane, 2-Stage	W/R	1/2	87431	**X1** [12, 39]	**177395**

(continued)

Type of Valve Originally Supplied (cont'd) -- See Serial No. Decoding on pages 3-4.

A dash (-) in the serial number means that no electric valve was furnished. All valves are 24 volt unless noted otherwise.

See ALL notes on pages 19-22. N/A = Not Available. See illustrations on pages 23-27.

Serial No. Code	Original Valve on Heater	Valve Mfr [1]	Pipe Size	P/N	[2] Functional Replacement	
					Code	P/N
H8	36D05-403 Propane	W/R	1/2x3/4	88243-N/A	[3]	
H9	VR8440C3031 Propane, single stage	M/H	1/2x3/4	93386-N/A	**Q4**	**121600** [36]
J1 (Two Valves)	[5] (2) K3A562S, T, or U, or 2LB27BB6127, 115V	G/C, ASCO, or Skinner	1	**86966** (2 required)		
J2	V5055A1004 Fluid Power, 115V	M/H	1	**86992**	**W1 (alternate for J2; both Codes are approved)**	
	V4055A1007 Actuator	M/H		**86993**		
J3 (Two Valves)	(2) V5055A1004 Fluid Power, 115V	M/H	1	**86992** (2 required)	**W1 (alternate for J2; both Codes are approved)**	
	(2) V4055A1007 Actuator	M/H		**86993** (2 required)		
J4 (Three Valves)	V5055A1004 Fluid Power, 115V	M/H	1	**86992**		
	V4055A1007 Actuator	M/H		**86993**		
	[5] (2) K3A562S, T, or U, or 2LB27BB6127, 115V	G/C, ASCO, or Skinner		**86966** (2 required)		
J5	[17] DER7100 71P11A-000 Natural, single stage	R	1/2	89461-N/A	**M4**	**96307**
J6	[17] DER7100 71P11C-013 Propane, single stage	R	1/2	89462-N/A	**M7**	**96310**
J7	[17] VR8440A2092B Natural, single stage	M/H	1/2	89370-N/A	**Q2**	**121598**
J8	[17] 36C68-441 Natural, single stage	W/R	3/4	89397-N/A	**9A**	**221525**
J9	[17] VR8440A2100B Propane, single stage	M/H	1/2	89371-N/A	**Q4**	**121600** [36]
K1	[17] 36C68-442 Pro, single stage (also could be used on natural gas units equipped with Maxitrol controls)	W/R	3/4	89398-N/A	**1B**	**221526**
K2	V50551012 Fluid Power, 115V	M/H	1-1/4	**89356**	**W3 (alternate for K2; both Codes are approved)**	
	V4055A1007 Actuator	M/H		**86993**		
K3	FT8215C20, 115V (for Bell Telephone)	ASCO	1/2	N/A		
K4	V50551038 Fluid Power, 115V	M/H	2	**91079**	**W4 (alternate for K4; both Codes are approved)**	
	V4055A1007 Actuator	M/H		**86993**		
K5	V8200M7003, Natural, single stage	M/H	1/2	96299	**9B**	**208920**
K6	36C03-211 Natural, single stage	W/R	1/2	**96300**		
K7	V800M7009 Natural, single stage	M/H	3/4	**96301**		
K8	V8200M7011 Propane, single stage	M/H	1/2	96302	**1C**	**209412**
K9	V800M7017 Propane, single stage	M/H	3/4x3/4	**96303**		
M1	V850E7003 Natural, 2-stage	M/H	1/2	96304-N/A	**P8** [40]	**115351**
M2	V850E7029 Natural, 2-stage	M/H	3/4	96305-N/A	**P8** [40]	**115351**
M3	V850E7011 Propane, 2-stage	M/H	1/2x3/4	96306-N/A	**P9** [40]	**115352**
M4	VR8204M1000 Natural, single stage	M/H	1/2	**96307**		
M5	VR8440A2159 Natural, single stage	M/H	1/2	96308-N/A	**Q3**	**121599**
M6	36C68-452 Natural, single stage	W/R	3/4	96309-N/A	**Kit P/N 222037**	
M7	VR8204M1018 Propane, single stage	M/H	1/2	**96310**		
M8	36C68-325 Pro, single stage (also could be used on natural gas units equipped with Maxitrol controls)	W/R	1/2x3/4	96311-NA	**Kit P/N 221634**	
M9	36D13-304 Propane, 2-stage	W/R	1/2x3/4	96312	**X4** [12, 39]	**177398**
N1	36D19-402 Natural, 50-90°F	W/R	3/4x3/4	100321-N/A	[34]	
N2	36D19-403 Natural 90-130°F	W/R	3/4x3/4	100322-N/A	[3]	
N3	36D19-405 Propane, 50-90°F	W/R	3/4x3/4	100323-N/A	[34]	
N4	36D19-406 Propane 90-130°F	W/R	3/4x3/4	100324-N/A	[3]	
N5 (Two Valves)	**Mechanical modulation 50-90°F, Code N3, with bypass, Code M7, for Sizes 75-200**					
	36D19-405 Propane	W/R	3/4x3/4	100323(N3)-N/A	[34]	
	VR8204M1018 Propane, single stage	M/H	1/2	**96310**(M7)		
N6 (Two Valves)	**Mechanical modulation 50-90°F, Code N3, with bypass, Code M8, for Sizes 225-400**					
	36D19-405 Propane	W/R	3/4x3/4	100323(N3)-N/A	[34]	
	36C68-325 Propane, single stage	W.R	1/2x3/4	96311(M8)-N/A	**Kit P/N 221634**	
N7 (Two Valves)	**AG13 Mechanical modulation 50-90°F, Code N1, with bypass, Code M4, for Sizes 75-150**					
	36D19-402 Natural	W/R	3/4x3/4	1003213(N1)-N/A	[34]	
	VR8204M1000 Natural, single stage	M/H	1/2	**96307**(M4)		
N8 (Two Valves)	**AG13 Mechanical modulation 50-90°F, Code N1, with bypass, Code M5, for Sizes 175-250**					
	36D19-402 Natural	W/R	3/4x3/4	1003213(N1)-N/A	[34]	
	VR8440A2159 Natural, single stage	M/H	1/2	96308-N/A	**Q3**	**121599**
N9 (Two Valves)	**AG13 Mechanical modulation 50-90°F, Code N1, w/bypass, Code M6, Sizes 300-400 and ADF/ADFH Nat & LP**					
	36D19-402 Natural	W/R	3/4x3/4	100321(N1)-N/A	[34]	
	36C68-452 Natural, single stage	W/R	3/4	96309-N/A	**Kit P/N 222037**	
O1&P1 [33] (Two Valves)	**AG14 Mechanical modulation 90-130°F, Code N2, with bypass, Code M4, for Sizes 75-150**					
	36D19-403 Natural	W/R	3/4x3/4	100322-N/A	[3]	
	VR8204M1000 Natural, single stage	M/H	1/2	**96307** (M4)		
O2&P2 [33] (Two Valves)	**AG14 Mechanical modulation 90-130°F, Code N2, with bypass, Code M5, for Sizes 175-250**					
	36D19-403 Natural	W/R	3/4x3/4	100322-N/A	[3]	
	VR8440A2159 Natural, single stage	M/H	1/2	96308-N/A	**Q3**	**125199**

Type of Valve Originally Supplied (cont'd) -- See Serial No. Decoding on pages 3-4.

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See ALL notes on pages 19-22. N/A = Not Available. See illustrations on pages 23-27.

Serial No. Code	Original Valve on Heater	Valve Mfr [1]	Pipe Size	P/N	[2] Functional Replacement Code	P/N
O3&P3 [33] (Two Valves)	**AG14 Mechanical modulation 90-130°F, Code N2, w/bypass, Code M6, Sizes 300-400 and ADF/ADFH Nat & LP**					
	36D19-403 Natural	W/R	3/4x3/4	100322-N/A	[34]	
	36C68-452 Natural, single stage	W/R	3/4	96309(M6)-N/A	**Kit P/N 222037**	
O4&P4 [33] (Two Valves)	**AG14 Mechanical modulation 90-130°F, Code N4, with bypass, Code M7, for Sizes 75-200**					
	36D19-406 Propane	W/R	3/4x3/4	100324-N/A	[3]	
	VR8204M1018 Propane, single stage	M/H	1/2	**96310**(M7)		
O5&P5 [33] (Two Valves)	**AG14 Mechanical modulation 90-130°F, Code N4, with bypass, Code M8, for Sizes 225-400**					
	36D19-406 Propane	W/R	3/4x3/4	100324-N/A	[3]	
	36C68-325 Propane, single stage	W/R	1/2x3/4	96311(M8)-N/A	**Kit P/N 221634**	
P6 (Two Valves)	**Mechanical modulation 50-90°F, Code N1, with bypass, Code Q3, for Sizes 175-250**					
	36D19-402 Natural	W/R	3/4x3/4	100321(N1)-N/A	[34]	
	VR8304M2816 Natural, single stage	M/H	1/2	**121599**(Q3)		
P7 (Two Valves)	**Mechanical modulation 90-130°F, Code N2, with bypass, Code Q3, for Sizes 175-250**					
	36D19-403 Natural	W/R	3/4x3/4	100322-N/A	[3]	
	VR8304M2816 Natural, single stage	M/H	1/2	**121599**(Q3)		
P8	36C40-408 2-Stage, Natural (std pilot)	W/R	3/4	**115351**		
P9	36C41-408 2-Stage, Propane (std pilot)	W/R	3/4	**115352**		
Q2	VR8304M2808 Natural, single stage	M/H	1/2	**121598**		
Q3	VR8304M2816 Natural, single stage	M/H	1/2	**121599**		
Q4	VR8304H3802 Propane, single stage	M/H	1/2x3/4	**121600**		
Q5 (Two Valves)	**Mechanical modulation 50-90°F, Code N1, with bypass, Code J8, for Sizes 300-400**					
	36D19-402 Natural	W/R	3/4x3/4	100321(N1)-N/A	[34]	
	36C68-441 Natural, single stage	W/R	3/4	89397(J8)-N/A	**9A**	**221525**
Q6 (Two Valves)	**Mechanical modulation 90-130°F, Code N2, with bypass, Code J8, for Sizes 300-400**					
	36D19-403 Natural	W/R	3/4x3/4	100322-N/A	[3]	
	36C68-441 Natural, single stage	W/R	3/4	89397(J8)-N/A	**9A**	**221526**
Q7 (Two Valves)	**Mechanical modulation 50-90°F, Code N1, with bypass, Code Q2, for Sizes 75-250**					
	36D19-402 Natural	W/R	3/4x3/4	100321(N1)-N/A	[34]	
	VR8304M2808 Natural, single stage	M/H	1/2	**121598** (Q2)		
Q8 (Two Valves)	**Mechanical modulation 90-130°F, Code N2, with bypass, Code Q2, for Sizes 75-250**					
	36D19-403 Natural	W/R	3/4x3/4	100322-N/A	[3]	
	VR8304M2808 Natural, single stage	M/H	1/2	**121598** (Q2)		
Q9 (Two Valves)	**Mechanical modulation 50-90°F, Code N3, with bypass, Code Q4, for Sizes 75-200**					
	36D19-405 Propane	W/R	3/4x3/4	100323(N3)-N/A	[34]	
	VR8304H3802 Propane, single stage	M/H	1/2x3/4	**121600**(Q4)		
R1 (Two Valves)	**Mechanical modulation 90-130°F, Code N4, with bypass, Code Q4, for Sizes 225-400**					
	36D19-406 Propane	W/R	3/4x3/4	100324-N/A	[3]	
	VR8304H3802 Propane, single stage	M/H	1/2x3/4	**121600**(Q4)		
R2	[5] K3A651SF Natural & Propane	G/C	3/4	**123604**		
R3	[5] K3A561-U Natural & Propane	ASCO	1	**123603**		
R4	[5] K3A671SF Natural & Propane	G/C	1-1/4	**123605**		
R5	V4600A1023 Nat or V4600A1031 Nat/Pro	M/H	1/2	**113766**		
R6	V4400A10093	M/H	1/2	**113767**		
[35] **R7**	3B0-341-A04 or 3F1241A04 Natural, 50-100°F, Mod	R	3/4	**131453**		
[35] **R8**	5N7-341-A04 or 5R9241A04 Natural, 50-100°F, Mod	R	1	**131455**		
[35] **R9**	3B0-342-A05 or 3F1242A05 Propane, 50-100°F, Mod	R	3/4	**131454**		
[35] **S1**	5N7-342-A05 or 5R9242A05 Propane, 50-100°F, Mod	R	1	**131456**		
S2 (Two Valves)	3B0-341-A04 or 3F1241A04 Natural, 50-100°F, Mod	R	3/4	**131453**(R7)		
	36C68-325, Propane, single stage	W/R	1/2X3/4	96311(M8)-N/A	**Kit P/N 221634**	
S3 (Two Valves)	5N7-341-A04 or 5R9241A04 Natural, 50-100°F, Mod	R	1	**131455**(R8)		
	36C68-442, Propane, single stage	W/R	3/4	89398(K1)-N/A	**1B**	**221526**
S4 (Two Valves)	3B0-342-A05 or 3F1242A05 Propane, 50-100°F, Mod	**R**	**3/4**	**131454**(R9)		
	36C68-325, Propane, single stage	W/R	1/2x3/4	96311(M8)-N/A	**Kit P/N 221634**	
S5 (Two Valves)	5N7-342-A05 or 5R9242A05 Propane, 50-100°F, Mod	R	1	**131456**(S1)		
	36C68-442 Propane, single stage	W/R	3/4	89398(K1)-N/A	**1B**	**221526**
S6 (Three Valves)	**Mechanical modulation 50-100°F, with bypass, Code Q2, for Sizes 75-225**					
	3B0-341-A04 or 3F1241A04 Natural, 50-100°F	R	3/4	**131453**(R7)		
	36C68-325, Pro, single stage	W/R	1/2x3/4	96311(M8)-N/A	**Kit P/N 221634**	
	VR8304M2808 Natural, single stage	M/H	1/2	**121598(**Q2)		
S7 (Three Valves)	**Mechanical modulation 50-100°F, with bypass, Code J8, for Sizes 250-350**					
	3B0-341-A04 or 3F1241A04 Natural, 50-100°F	R	3/4	**131453**(R7)		
	36C68-442, Pro, single stage	W/R	3/4	89398(K1)-N/A	**1B**	**221526**
	36C68-441 Natural, single stage	W/R	3/4	89397(J8)-N/A	**9A**	**221525**

(continued)

Type of Valve Originally Supplied (cont'd) -- See Serial No. Decoding on pages 3-4.

A dash (-) in the serial number means that no electric valve was furnished. All valves are 24 volt unless noted otherwise.

See ALL notes on pages 19-22. N/A = Not Available. See illustrations on pages 23-27.

Serial No. Code	Original Valve on Heater	Valve Mfr [1]	Pipe Size	P/N	[2] Functional Replacement	
					Code	P/N
	Mechanical modulation 50-100°F, with bypass, Code Q4, for Sizes 75-225					
S8 (Three Valves)	3B0-342-A05 or 3F1242A05 Propane, 50-100°F	R	3/4	**131454** (R9)		
	36C68-325 Propane, single stage	W/R	1/2x3/4	96311 (M8) - N/A	**Kit P/N 221634**	
	VR8304H3802 Propane, single stage	M/H	1/2x3/4	**121600** (Q4)		
	Mechanical modulation 50-100°F, with bypass, Code K1, for Sizes 250-400					
S9 (Three Valves)	3B0-342-A05 or 3F1242A05 Propane, 50-100°F	R	3/4	**131454** (R9)		
	36C68-442, propane, single stage	W/R	3/4	89398 (K1) - N/A	**1B**	**221526**
	36C68-442, propane, single stage	W/R	3/4	89398 (K1) - N/A	**1B**	**221526**
	Mechanical modulation 50-100°F, with bypass, Code M6, for ADF/ADFH Natural or Propane					
T1 (Three Valves)	5N7-341-A04 or 5R9241A04	R	1	**131455** (R8)		
	36C68-442, propane, single stage	W/R	3/4	89398 (K1) - N/A	**1B**	**221526**
	36C68-452, natural, single stage	W/R	3/4	96309 (M6) - N/A	**Kit P/N 222037**	
T2	VR8304M4911 Natural	M/H	1/2	**134358**		
T3	VR8304M2824 Natural, single stage	M/H	1/2	**136193**		
T4	VR4601AA1010 Nat or VR4601AA1044B Nat/Pro	M/H	1/2	134778 - N/A	[3]	
T5	VR4601AB1000 Nat or VR4601AB1026 Nat/Pro	M/H	3/4	134779 - N/A	[3]	
T6	Maclaren GM7542-3043 Natural	J/C	1/2	**142664**		
T7	Modify Valve P/N 113766	M/H	1/2	**144276**		
T8	K3A661-T	G/C	1	**146472**		
T9	7222DER Natural, single stage	R	1/2	147133 - N/A	**7E**	**260604**
U1	7222DERLP Propane, single stage	R	1/2	147134 - N/A	**8E**	**260606**
U2	VR8205M1130 Natural, single stage	M/H	1/2	147830 - N/A	**7E**	**260604**
U3	VR8205M1148 Propane, single stage	M/H	1/2	147560 - N/A	**8E**	**260606**
U4	L821480 Natural	Asco	2	**163136**		
U5	L821440 Natural	Asco	3	**163137**		
U6	VR8305M4009, Natural, single stage	M/H	3/4	**150839**		
U7	VR8305M4017, Propane, single stage	M/H	3/4	**150840**		
U8	36C68-334, Propane, single stage	W/R	1/2x3/4	157167 - N/A	**Kit P/N 221634**	
U9	36C68-480, Propane, single stage	W/R	3/4x3/4	157168 - N/A	**Kit P/N 221634**	
V1	VR8405M5228, Natural & Propane, single stage	M/H	1	**159743**		
V2 (Two Valves)	(2) K3A651SF Natural & Propane	G/C	3/4	**123604** (R2)		
V3 (Two Valves)	(2) K3A661-T Natural & Propane	ASCO	1	**146472** (T8)		
V4 (Two Valves)	(2) K3A6715F Natural & Propane	ASCO	1-1/4	**123605** (R4)		
V5 (Two Valves)	(2) L821480, 24V, Natural & Propane	ASCO	2	**159736**		
V6 (Two Valves)	(2) L82146OC Natural & Propane	ASCO	1-1/4	**159731**		
V7 (Two Valves)	(2) L821480C Natural & Propane	ASCO	2	**159841**		
V8 (Two Valves)	(2) L821440 Natural	ASCO	3	**163137**		
V9	#VR8305N4917 Propane, DSI, 2-stage	M/H	3/4x3/4	**195737**		
W1	Fluid Power Valve, V710FAS	ASCO	1x1	**172667**	**J2 (W1 alternate for J2; both Codes are approved.)**	
	Actuator, 120V, AH2B112A			**172680**		
W2 (Two Valves	(2) Fluid Power Valve, V710FAS	ASCO	1x1	**172667**	**J3 (W2 alternate for J3; both Codes are approved.)**	
	(2) Actuator, 120V, AH2B112A			**172680**		
W3	Fluid Power Valve, V710GAS	ASCO	1-1/4x1-1/4	**172678**	**K2 (alternate for W3; both codes are approved.)**	
	Actuator, 120V, AH2B112A			**172680**		
W4	Fluid Power Valve, V710JAS	ASCO	2x2	**172679**	**K4 (alternate for W4; both codes are approved.)**	
	Actuator, 120V, AH2B112A			**172680**		
W5	VR8105M2817 Natural, single stage	M/H	1/2x1/2	172552 - N/A	**7E**	**260604**
W6	VR8105M2825 Propane, single stage	M/H	1/2x1/2	172553 - N/A	**8E**	**260606**
W7	VR8104M2505, Natural, single stage	M/H	1/2x1/2	**170609**		
W8	VR8204M1901, Natural, single stage	M/H	1/2x1/2	**176680**		
W9	VR8204H1907, Propane, single stage	M/H	1/2x1/2	176681 - N/A	**Kit P/N 221093**	
X1	VR8204Q2400, 2-Stage Propane	M/H	1/2	**177395**		
X2	VR8204Q2418, 2-Stage Natural	M/H	1/2	**177396**		
X3	VR8304Q4404, 2-Stage Natural	M/H	3/4	**177397**		
X4	VR8304Q4412, 2-Stage Propane	M/H	1/2x3/4	**177398**		
X5	VR8305Q4925, 2-Stage, Natural	M/H	3/4	**195739**		
X6	VR8300M3127, Natural, single stage	M/H	1/2x3/4	**195740**		
X7orZ3	VR8105K2942, Natural, single stage	M/H	1/2	196848 - N/A	**6E**	**260603**

Type of Valve Originally Supplied (cont'd) -- See Serial No. Decoding on pages 3-4.

A dash (-) in the serial number means that no electric valve was furnished. All valves are 24 volt unless noted otherwise.

See ALL notes on pages 19-22. N/A = Not Available. See illustrations on pages 23-27.

Serial No. Code	Original Valve on Heater	Valve Mfr [1]	Pipe Size	P/N	[2] Functional Replacement	
					Code	P/N
X8orZ4	VR8105N2949, Nat, 2-stage	M/H	1/2	196849 - N/A	**Y8or4A**	**197066**
X9orZ5	VR8105K2959, LP, single stage	M/H	1/2	196850 - N/A	**9E**	**263999**
Y1orZ6	VR8105N2931, LP, 2-stage	M/H	1/2	196851 - N/A	**2A**	**197064**
Y2orZ7	VR8205K2957, Natural, single stage	M/H	1/2	196980 - N/A	**6E**	[44] **260603**
Y3orZ8	VR8305K4241, Natural, single stage	M/H	3/4	**196981**		
Y4orZ9	VR8205K2965, LP, single stage	M/H	1/2	196982 - N/A	**9E**	[44] **263999**
Y5or1A	VR8305K4258, LP, single stage	M/H	3/4	**196983**		
Y6or2A	VR8205N2913, LP, 2-stage	M/H	1/2	**197064**		
Y7or3A	VR8305N4289, LP, 2-stage	M/H	3/4	**197065**		
Y8or4A	VR8205N2921, Natural, 2-stage	M/H	1/2	**197066**		
Y9or5A	VR8305N4297, Natural, 2-stage	M/H	3/4	**197067**		
Z1	2-STG VLV, LP, VR8205N2939	M/H	1/2	**195736**		
Z2	2-STG VLV, NAT, VR8205N2947	M/H	1/2	**195738**		
6A	VR8205M2955, Nalural, single stage	M/H	1/2	**204301**		
7A	V8295A1031, 2PSI Natural & Propane	M/H	1	**203860**		
8A	V8295A1049, N & P	M/H	1-1/4	**203861**		
9A	36H32-441 Natural, single stage	W/R	3/4	**221525**		
1B	36H32-442 Propane, single stage	W/R	3/4	**221526**		
2B	V8944N-1053, 2-Stage, Natural	M/H	1	**203866**		
3B	V5155B-2548, Mech Mod Vlv 40-160°	M/H	1	203868-N/A	[3]	
4B	V5155A Mech Mod Vlv 40-120°	M/H	1	**203869**		
5B (Two Valves)	[41] **AG55, 3:1 Turndown with two 1-stage valves, natural gas, RDCA/RDDA w/Heat Section 200, 250, 300**					
	VR8105K2942, Nat, single stage (Code X7 or Z3)	M/H	1/2	196848 (X7orZ3) - N/A	**6E**	**260603**
	VR8205K8905, Nat, single stage (Code Y2 or Z7)	M/H	1/2	196980 (Y2orZ7) - N/A	**6E**	**260603**
6B (Three Valves)	[42] **AG57, 6:1 Turndown w/two 1-stage valves & a modulating valve, nat gas, RDCA/RDDA w/Heat Section 100, 150**					
	VR8105K2942, Nat, single stage (Code X7 or Z3)	M/H	1/2	(2)196848 (X7orZ3) - N/A	**6E**	**(2) 260603**
	MR410-1, Maxitrol Modulating Valve	Maxitrol	1/2	**205582**		
7B (Three Valves)	[42] **AG57, 6:1 Turndown w/two 1-stage valves & a modulating valve, nat gas, RDCA/RDDA with Heat Section 200**					
	VR8105K2942, Nat, single stage (Code X7 or Z3)	M/H	1/2	196848 (X7orZ3) - N/A	**6E**	**260603**
	VR8205K8905, Nat, single stage (Code Y2 or Z7)	M/H	1/2	196980 (Y2orZ7) - N/A	**6E**	**260603**
	MR410-1, Maxitrol Modulating Valve	Maxitrol	1/2	**205581**		
8B (Three Valves)	[2] **AG57, 6:1 Turndown w/two 1-stage valves & a modulating valve, nat gas, RDCA/RDDA w/Heat Section 250, 300**					
	VR8105K2942, Nat, single stage (Code X7 or Z3)	M/H	1/2	96848 (X7orZ3) - N/A	**6E**	**260603**
	VR8205K8905, Nat, single stage (Code Y2 or Z7)	M/H	1/2	196980 (Y2orZ7) - N/A	**6E**	**260603**
	MR510, Maxitrol Modulating Valve	Maxitrol	1/2	**205580**		
9B	VR8200M7005 , Natural, single stage, w/stnd pilot	M/H	1/2	**208920**		
1C	VR8200M7013, LP, single stage, w/stnd pilot	M/H	1/2	**209412**		
2C (Two Valves)	[41] **AG55, 3:1 Turndown with two 1-stage valves, natural gas, RDCA/RDDA with Heat Section 100, 150**					
	VR8105K2942, Nat, single stage (Code X7 or Z3)	M/H	1/2	196848 (X7orZ3) - N/A	**6E**	**260603**
	VR8105K2942, Nat, single stage (Code X7 or Z3)	M/H	1/2	196848 (X7orZ3) - N/A	**6E**	**260603**
3C (Three Valves)	[41] **AG55, 3:1 Turndown w/three 1-stage valves, nat gas, RDCA/RDDA w/Heat Section 450, 500, 550, 600, 650, 700**					
	(2) VR8305K4241, Nat, single stg (Code Y3 or Z8)	M/H	3/4	(2)**196981** (Y3orZ8)		
	VR8205K8905, Nat, single stage (Code Y2 or Z7)	M/H	1/2	(1)196980 (Y2orZ7) - N/A	**6E**	**260603**
4C (Two Valves)	[41] **AG55, 3:1 Turndown w/two 1-stage valves, propane gas, RDCA/RDDA w/Heat Section 100, 150, 200, 250, 300**					
	VR8105K2959, Pro, single stage (Code X9 or Z5)	M/H	1/2	196850 (X9orZ5) - N/A	**9E**	**263999**
	VR8105K2959, Pro, single stage (Code X9 or Z5)	M/H	1/2	196850 (X9orZ5) - N/A	**9E**	**263999**
5C (Two Valves)	[41] **AG55, 3:1 Turndown with two 1-stage valves, propane gas, RDCA/RDDA with Heat Section 350, 400**					
	VR8105K2959, Pro, single stage (Code X9 or Z5)	M/H	1/2	196850 (X9orZ5) - N/A	**9E**	**263999**
	VR8305K4258, Pro, single stage (Y5 or 1A)	M/H	3/4	**196983** (Y5or1A)		
6C (Three Valves)	[41] **AG55, 3:1 Turndown w/three 1-stage valves, propane gas, RDCA/RDDA w/Heat Sctn 450, 500, 550, 600, 650, 700**					
	VR8105K2959, Pro, single stage (Code X9 or Z5)	M/H	1/2	196850 (X9orZ5) - N/A	**9E**	**263999**
	(2) VR8305K4258, Pro, single stg (Code Y5 or 1A)	M/H	3/4	(2)196983 (Y5or1A)		
7C (Three Valves)	[2] **AG57, 6:1 Turndown w/two 1-stage valves & a modulating valve, nat gas, RDCA/RDDA w/Heat Section 350, 400**					
	VR8305K4241, Nat, single stage (Code Y3 or Z8)	M/H	3/4	**196981** (Y3orZ8)		
	VR8205K8905, Nat, single stage (Code Y2 or Z7)	M/H	1/2	196980 (Y2orZ7) - N/A	**6E**	**260603**
	MR610-1-66, Modulating Valve	Maxitrol	3/4	**208370**		
8C (Three Valves)	[42] **AG57, 6:1 Turndown w/3 1-stg valves & a modulating valve, nat gas, RDCA/RDDA w/Heat Sctn 450, 500, 550, 600, 650, 700**					
	(2) VR8305K4241, Nat, single stg (Code Y3 or Z8)	M/H	3/4	(2)**196981** (Y3orZ8)		
	VR8205K8905, Nat, single stage (Code Y2 or Z7)	M/H	1/2	196980 (Y2orZ7) - N/A	**6E**	**260603**
	MR610-1-88, Modulating Valve	Maxitrol	1	**208371**		
9C (Three Valves)	[41] **AG55, 3:1 Turndown with two 1-stage valves, natural gas, RDCA/RDDA with Heat Section 350, 400**					
	VR8305K4241, Nat, single stage (Code Y3 or Z8)	M/H	3/4	**196981** (Y3orZ8)		
	VR8205K8905, Nat, single stage (Code Y2 or Z7)	M/H	1/2	**196980** (Y2orZ7) - N/A	**6E**	**260603**

(continued)

Type of Valve Originally Supplied (cont'd) -- See Serial No. Decoding on pages 3-4.

A dash (-) in the serial number means that no electric valve was furnished. All valves are 24 volt unless noted otherwise.

See ALL notes on pages 19-22. N/A = Not Available. See illustrations on pages 23-27.

Serial No. Code	Original Valve on Heater	Valve Mfr [1]	Pipe Size	P/N	[2] Functional Replacement Code	P/N
1D	V5097C1000, Natural or Propane	M/H	3/4x2	**203862**		
2D	36H32-423, Natural, single stage	W/R	3/4x3/4	**221633**		
3D (Two Valves)	**AG70, 8:1 Turndown w/dual 1-stg valve & actuated ball valve (nat gas only), RDCB/RDDB/RDCC/RDDC w/Ht Sctn 400, 500, 600, 700, 800**					
	VR8405M5228 Natural, dual 1-stg (Code V1)	M/H	1	**159743 (V1)**		
	[43] ABV-1.0NN Ball Valve	RTC		**222861**		
4D (Three Valves)	**AG70, 16:1 Turndown w/dual 1-stg valve & actuated ball valve (nat gas only), RDCB/RDDB w/Ht Sctn 1000, 1200, 1400, 1600**					
	(2) VR8405M5228 Natural, dual 1-stg (Code V1)	M/H	1	**159743 (V1)**		
	[43] ABV-1.0NN Ball Valve	RTC		**222861**		
5D (Two Valves)	**AG69, 2-stg gas control, RDCB/RDDB with Heat Section 500, 600, 700, 800**					
	VR8405M5228 Natural, dual 1-stg (Code V1)	M/H	1	**159743 (V1)**		
	V8944N-1053, 2-Stage, Natural (Code 2B)	M/H	1	**203866 (2B)**		
6D (Four Valves)	**AG69, 2-stg gas control,, RDCB/RDDB with Heat Section 1000, 1200, 1400, 1600**					
	(2) VR8405M5228 Natural, dual 1-stg (Code V1)	M/H	1	**159743 (V1)**		
	(2) V8944N-1053, 2-Stage, Natural (Code 2B)	M/H	1	**203866 (2B)**		
7D (Two Valves)	**AG70, 8:1 Turndown with 1-stg valve & actuated ball valve (natural gas), RDCB/RDDB with Ht Sctn 250, 300**					
	AG58 & D12G, 8:1 Turndown with 1-stg valve & actuated ball valve (natural gas), RDH Sizes 225, 225, 250, 300, 350, 400A; and SHH & RHH Sizes 260 & 350					
	VR8305K4241, Nat, single stage (Code Y3 or Z8)	M/H	3/4	**196981**	[45] RDCB/RDDB replace w/**150839 (U6)**	
	[43] ABV-3.4NN Ball Valve	RTC		**258321**		
8D (Two Valves)	**AG70, 8:1 Turndown with 1-stg valve & actuated ball valve (propane), RDCB/RDDBC with Ht Sctn 250, 300**					
	AG58 & D12G, 6:1 Turndown with 1-stg valve & actuated ball valve (propane), RDH Sizes 225, 225, 250, 300, 350, 400A; and SHH & RHH Sizes 260 & 350					
	VR8305K4258, LP, single stage(Code Y5 or 1A)	M/H	3/4	**196983**	[45] RDCB/RDDB replace w/**150840 (U7)**	
	[43] ABV-3.4NN Ball Valve	RTC		**258321**		
9D (Two Valves)	**AG70, 8:1 Turndown w/1-stg valve & actuated ball valve (natural gas), RDCB/RDDB w/Ht Sctn 100, 150, 200**					
	AG58 & D12G, 8:1 Turndown w/1-stg valve & actuated ball valve (natural gas), RDH 175 & 200; and SHH & RHH 130 & 180					
	VR8205K8905, Nat, single stage (Code Y2 or Z7)	M/H	1/2	196980 - N/A	[45] RDCB/RDDB replace w/**260604 (7E)** [44] RDH replace w/**260603 (6E)**	
	[43] ABV-1.2NN Ball Valve	RTC		**255786**		
1E (Two Valves)	**AG70, 8:1 Turndown w/1-stg valve & actuated ball valve (propane), RDCB/RDDB w/Ht Sctn 100, 150, 200**					
	AG58 & D12G, 6:1 Turndown with 1-stg valve & actuated ball valve (propane), RDH 175 & 200; and SHH & RHH 130 & 180					
	VR8205K2965, LP, single stage (Y4orZ9)	M/H	1/2	196982 - N/A	[45] RDCB/RDDB replace w/**260606 (8E)** [44] RDH replace w/**263999 (9E)**	
	[43] ABV-1.2NN Ball Valve	RTC		**255786**		
2E (Two Valves)	**AG70, 8:1 Turndown with 1-stg valve & actuated ball valve (natural gas), RDCB/RDDB/RDCC/RDDC with Ht Sctn 250, 300**					
	VR8305M4009, Natural, single stage (U6)	M/H	3/4	**150839 (U6)**		
	[43] ABV-3.4NN Ball Valve	RTC		**258321**		
3E (Two Valves)	**AG70, 8:1 Turndown with 1-stg valve & actuated ball valve (propane), RDCB/RDDB/RDCC/RDDC with Ht Sctn 250, 300**					
	VR8305M4017, Propane, single stage (U7)	M/H	3/4	**150840 (U7)**		
	[43] ABV-3.4NN Ball Valve	RTC		**258321**		
4E (Two Valves)	**AG70, 8:1 Turndown w/1-stg valve & actuated ball valve (natural gas), RDCB/RDDB/RDCC/RDDC w/Ht Sctn 100, 150, 200**					
	VR8205M1130 Natural, single stage (U2)	M/H	1/2	147830 - N/A	**7E**	**260604**
	[43] ABV-1.2NN Ball Valve	RTC		**255786**		
5E (Two Valves)	**AG70, 8:1 Turndown w/1-stg valve & actuated ball valve (propane), RDCB/RDDB/RDCC/RDDC w/Ht Sctn 100, 150, 200**					
	VR8205M1148 Propane, single stage (U3)	M/H	1/2	147560 - N/A	**8E**	**260606**
	[43] ABV-1.2NN Ball Valve	RTC		**255786**		
6E	VR8215T1239, Natural, single stage (slow opening)	MH	1/2	**260603**		
7E	VR8215S1263, Natural, single stage (std opening)	MH	1/2	**260604**		
8E	VR8215S5215, Propane, single stage (std opening)	MH	1/2	**260606**		
9E	VR8215T5214, Propane, single stage (slow opening)	MH	1/2	**263999**		

NOTES for pages 11-18, "Type of Valve Originally Supplied"

[1] G/C = General Controls; J/C = Johnson Controls; M/H = Minneapolis Honeywell; M/N = McQuay- Norris; R = Robertshaw; W/R = White-Rodgers

[2] Functional replacement may require field-furnished reducers and/or nipples. Replacement valves subject to change without notice.

[3] This item is no longer available. Suggest you contact the control manufacturer for replacement or functional replacement.

[4] Original no longer available. Contact your local representative to determine availability of functional replacement. Provide complete Model No., type of gas, and type of pilot.

[5] Single-stage solenoid valve.

[6] Two-stage solenoid valve.

[7] Combination valve consisting of automatic gas valve, pilot line filter, pressure regulator, pilot shutoff, manual shutoff, and safety pilot, all in one body.

[8] Combination valve consisting of automatic gas valve, manual shutoff, pilot shutoff, and safety pilot, all in one body.

[9] Same as [8] except 115 volts and less manual shutoff.

[10] J/C #H91LG-8, 3/4", may require field supplied 3/4 x 1/2 bushings.

[11] When used as a functional replacement, this valve replaces valve and pressure regulator on unit and safety pilot.

[12] Requires male compression nut, **P/N 9664** (Baso #43283-2), for 1/4" pilot tubing connection (remove pilot tubing fitting supplied with valve). Some replacement applications require field-supplied 3/4x1/2 bushing and/or pipe nipple. If installed on Model (C)XL(B), (C)EEXL(B), or EEDU, a new bracket for assembling the valve and ignition controller is required; order **P/N 124019**.

[13] Single-stage solenoid valve, 115 volt

[14] Combination two-stage valve consisting of solenoid and regulator, all in one body.

[15] Same as Note [14], except 115 volt

[16] Combination side entrance valve consisting of automatic gas valve, pilot line filter, pressure regulator, pilot shutoff, manual shutoff, safety pilot, all in one body.

[17] Same as Note [16] except less regulator.

[18] Combination valve consisting of automatic gas valve and manual shutoff, all in one body.

[19] Combination valve consisting of automatic gas valve, pilot line filter, pressure regulator, pilot shutoff, and manual shutoff, all in one body, **less safety pilot.**

[20] For replacement of ECO adapter only on original valve, see page 26. The ECO adapter on the replacement valve is not field replaceable.

[21] Combination valve consisting of automatic gas valve, pilot solenoid, pilot line filter, pressure regulator, pilot shutoff, manual shutoff, all in one body, less safety pilot.

[22] Combination two-stage valve consisting of solenoid, regulator, pilot line filter, and manual shutoff, all in one body.

[23] Modulating redundant valve consisting of solenoid, regulator, and manual shutoff, all in one body, less safety pilot.

[24] Pilot line solenoid valve on original unit must be removed.

[25] If installed on a Model (C)XL(B), (C)EEXL(B), or EEDU, a new bracket for assembling the valve and ignition controller is required; order **P/N 124019**.

[26] Combination valve consisting of automatic gas valve, regulator, safety pilot or ignition controller, all in one body.

[27] Combination two-stage valve consisting of solenoid, regulator, pilot shutoff, manual shutoff, and safety pilot, all in one body.

[28] Special 1/2" H91EG drilled #42 used as low stage on XL30; also used as standard 1/2" H91EG as high stage.

[29] Combination valve consisting of automatic gas valve, regulator, safety pilot or ignition controller with lockout, all in one body.

[30] Combination two-stage valve consisting of solenoid, regulator, pilot valve, manual shutoff, all in one body.

(continued)

NOTES (cont'd) for pages 11-18, "Type of Valve Originally Supplied"

[31] Special 1/2" H91EG valve drilled 1/8", used as low stage valve on Model XL60, also used a standard 1/2" H91EG as high stage.

[32] Special valve furnished by Bell Telephone.

[33] Serial No. Codes O1, O2, O3, O4, and O5 apply to units manufactured from 5/90 to 12/90. Beginning with 1/91, these codes were changed to P1, P2, P3, P4 and P5.

[34] When the current inventory of this valve is depleted, a SINGLE mechanical modulation replacement valve WILL NO LONGER BE AVAILABLE.

WARNING: Do not replace an existing mechanical modulation valve with mechanical modulation valve Code R7, R8, R9, or S1 ONLY. To do so will result in an unsafe condition.

Replacement requires dual functional valves. A mechanical modulation valve plus either a solenoid valve or a single-stage valve depending on the application are required.

Field-furnished pipe nipples will be required to adapt the manifold for the two replacement valves. Install valves in series with single-stage or solenoid valve first and mechanical modulation valve second in the gas stream.

The chart below lists dual functional replacement valves by model/size/gas type combinations. Valves are available for most sizes. When functional replacement valves are not available from the manufacturer, contact valve manufacturer concerning availability of a functional replacement.

*Model Series	Sizes	Gas	Original Valve Code (see Serial No. on Furnace Rating Plate)	P/N's (and Codes) of Valves that can be used as Functional Replacements for the Mechanical Modulation Valve (two replacement valves are always required)
X/RX	75-350**	Natural	N1	P/N 131453 (R7) and solenoid valve, P/N 88242 (J/C #H91LG-8)
X/RX	400	Natural	N1	Replacement is not available.
X/RX	75-400	Propane	N3	P/N 131454 (R9) and solenoid valve, P/N 88242 (J/C #H91LG-8)
RG/RP/SSC	75-225	Natural	N1, N7, N8, P6, Q7	P/N 131453 (R7) and Replacement Kit P/N 221634
RG/RP/SSC	250-400	Natural	N1	P/N 131455 (R8) and Replacement Kit P/N 221526
RG/RP/SSC	250-350**	Natural	N8, N9, P6, Q5	P/N 131453 (R7) and Replacement Kit P/N 221526
RG/RP/SSC	400	Natural	N9, Q5	Replacement is not available.
RG/RP/SSC	75-225	Propane	N3, N5, N6, Q9	P/N 131454 (R9) and Replacement Kit P/N 221634
RG/RP/SSC	250-400	Propane	N3	P/N 131456 (S1) and Replacement Kit P/N 221526
RG/RP/SSC	250-400	Propane	N6	P/N 131454 (R9) and Replacement Kit P/N 221526
ADF/ADFH	300-1200	Natural or Propane	N1, N9	P/N 131455 (R8) and Replacement Kit P/N 221526

*Only duct furnace model identification of indirect-fired units appears here and on the rating plate. If the duct furnace is part of a Model XE, RGB, RPB, PAK, PGBL, RGBL, RPBL or SSCBL packaged furnace/blower system, valve replacement requirements are the same as for the component duct furnaces.

**On duct furnace Sizes 300 and 350, dual functional replacement valves require a minimum gas supply pressure of 7" w.c.

[35] Manifold arrangement also includes a single-stage solenoid valve, **P/N 88242**, J/C #H91LG-8.

[36] (H)(C)X(E) and (H)(C)RX(E) units mfgd prior to 11/86 must add lighter tube carryover kit.

[37] Original valve includes an ECO adapter that is not field replaceable.

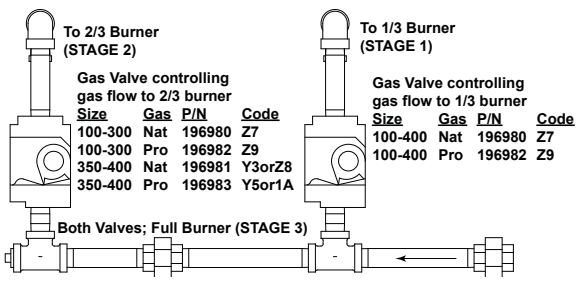
[38] For replacement of ECO adapter only, see page 26.

[39] Do not use replacement valve on units with G29 or G33 ignition controls

[40] ECO adapter on replacement valve is not field replaceable.

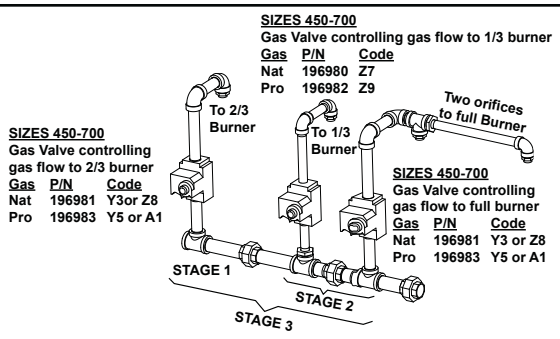
[41] AG55, 3:1 gas control manifold illustrations identifying valves by their location.

Manifold Arrangement for Gas Control AG55 on Gas Heat Section Sizes 100-400 in MAPS®II Models RDCA/RDDA



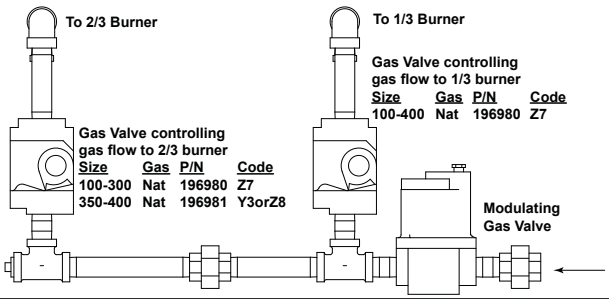
NOTES (cont'd) for pages 11-18, "Type of Valve Originally Supplied"

Manifold Arrangement for Gas Control AG55 on Gas Heat Section Sizes 450-700 in MAPS®II Models RDCA/RDDA

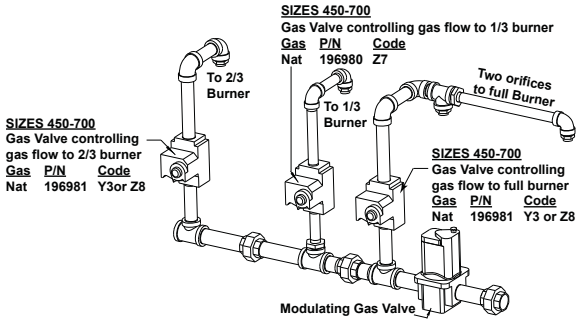


[42] AG57, 6:1 modulating gas control manifold, illustrations identifying valves by their location.

Manifold Arrangement for Gas Control AG57 on Gas Heat Section Sizes 100-400 in MAPS®II Models RDCA/ RDDA



Manifold Arrangement for Gas Control AG57 on Gas Heat Section Sizes 450-700 in MAPS®II Models RDCA/ RDDA

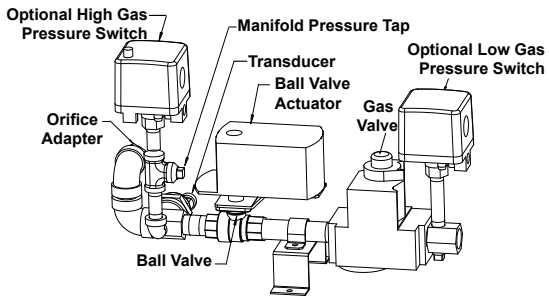


[43] Ball valve and actuator in deep modulation Gas Control Options AG70, AG58, and D12G.

See manifold illustrations and notes below.

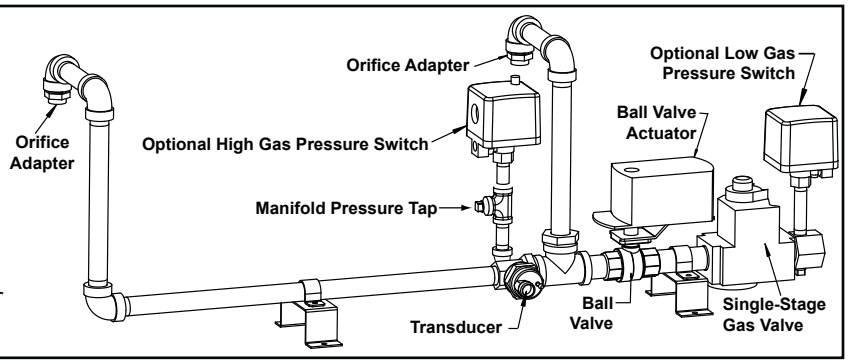
AG70 Manifold in MAPS®III Models RDCB/ RDDB & MAPS®IV Models RDCC/RDDC with Heat Section Sizes 100, 150, and 200

NOTE: P/N 255786 is ball valve only; actuator is **P/N 222862**.



AG70 Manifold in MAPS®III Models RDCB/ RDDB & MAPS®IV Models RDCC/RDDC with Heat Section Sizes 250 and 300

NOTE: P/N 258321 is ball valve only; actuator is **P/N 222862**.

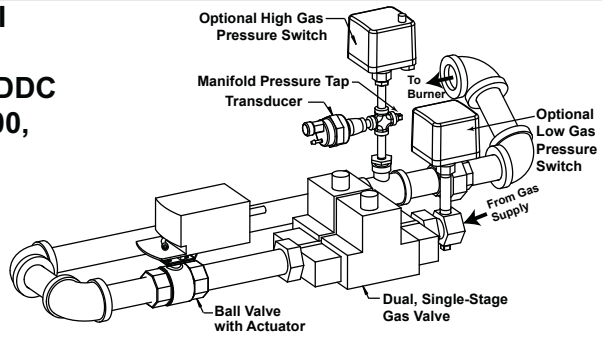


NOTES (cont'd) for pages 11-18, "Type of Valve Originally Supplied"

[43] NOTE 43 (cont'd) Ball valve and actuator in Gas Control Option AG70, AG58, and D12G.

AG70 Manifold in MAPS®III Models RDCB/RDDB & MAPS®IV Models RDCC/RDDC with Heat Section Sizes 400, 500, 600, 700

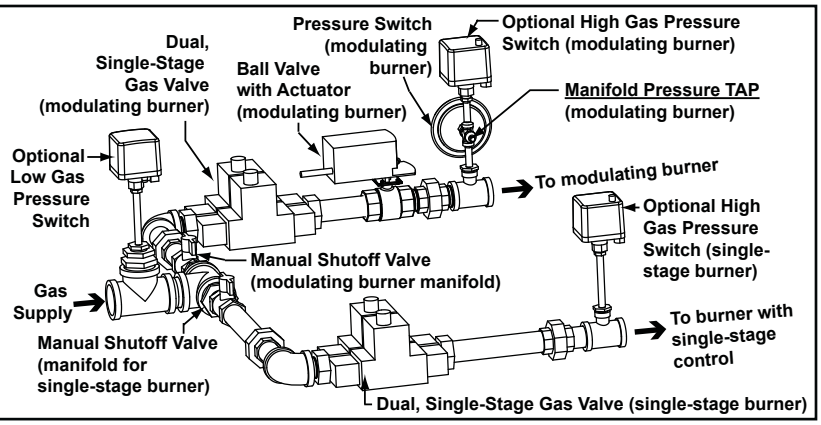
NOTE: P/N 222861 is the ball valve only; actuator is **P/N 222862**.



AG70 Manifold in MAPS®III D Cabinet Models RDCB/RDDB with Heat Section Sizes 500, 600, 700, 800, 1000, 1200, 1400, and 1600

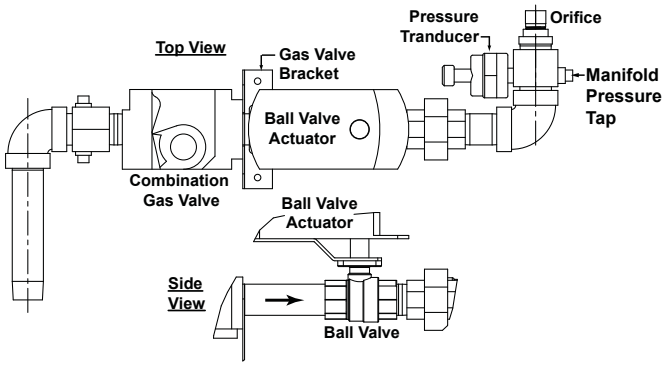
NOTE: Manifold for single-stage burner applies only to Sizes 1000, 1200, 1400 and 1600. Sizes 500, 600, 700, and 800 have only the manifold for the modulating burner.

NOTE: P/N 222861 is the ball valve only; actuator is **P/N 222862**.



Manifold in Models RDH, SHH, and RHH with AG58 or D12G Gas Control

RDH Size	SHH and RHH Size	Gas	Ball Valve	Ball Valve Actuator
175 & 200	130 & 180	Nat	**255786**	**222862**
		Pro	**255786**	**222862**
225, 250, 300, 350, & 400	250 & 350	Nat	**258321**	**222862**
		Pro	**258321**	**222862**



[44] NOTE 44: When installing this valve as a replacement for a valve with a different Serial No. Valve Code on a Model PDH, SDH, RDH, SHH, or RHH, a new valve bracket is required.

- **For PDH, SDH, and RDH Sizes 75, 100, 125, and 150, order bracket P/N 261650.**
- **For PDH, SDH, and RDH Sizes 175 and 200, order bracket P/N 261249**
- **For SHH and RHH Size 130, order bracket P/N 261650.**
- **For SHH and RHH Size 180, order bracket P/N 261249.**

[45] NOTE 45: As a result of continued product improvement, the valve that is factory installed on these Model RDCB/RDDB heat section sizes was changed from slow opening to standard opening effective 8/09. When replacing, the valve listed here is the appropriate functional replacement.

Replacement Valves (cont'd) - Identified by Third Element of the Serial No. (see pages 11-22). Valves showing "Replaced by P/N's" are no longer available from the manufacturer.

Replacement single-stage Valve P/N 96300

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
83	1/2	N	**39298**	12	K6	**96300**	14
E9	1/2	P	**64420**	13	G9	**82396**	13

Replacement Valve P/N 121598

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
A5	1/2	N	**47380**	12	Q2	**121598**	15
A6	3/4	N	**47381**	12	9A	**221525**	17
E4	3/4	N	**61098**	13	9A	**221525**	17
E5	1/2	P	**61099**	13	Q4	**121600**	15
F5	3/4	P	**63282**	13	1B	**221526**	17
2D	3/4	N	**221633**	18			

For replacement of ECO adapter only, see page 26.

Replacement Valve P/N 96301

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
C5	3/4	N	**51299**	13	K7	***96301**	14
D7	3/4	N	**59341**	13	K7	***96301**	14
H1	3/4	N	**82398**	13	K7	***96301**	14

*Replacement requires 1/4" pilot tubing connection, P/N **9664**.

P/N 25787

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:	
					P/N	Page
95	3/4	N or P	**47537**	12	**88242**	19, Note [10]
B5	1	N or P	**47538**	12	**112922**	19, Note [5]
Pilot Line Valve	1/4	N or P	**25787**			

Replacement Valve P/N 96300

For replacement of ECO adapter only, see page 26.

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
B6	1/2	N	**48577**	12	K6	***96300**	14
E8	1/2	P	**62969**	13	K9	***96303**	14
H3	1/2	N	**82624**	13	K6	***96300**	14
H4	1/2	P	**82669**	13	K9	***96303**	14

*Replacement requires 1/4" pilot tubing connection, P/N **9664**.

For replacement of ECO adapter only for original valves, see page 26. The ECO adapter on the replacement valves is not field replaceable.

Replacement Valve P/N 115351

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
D4	3/4	N	**52886**	13	P8	**115351**	15
F1	1/2	N	**62966**	13	P8	**115351**	15
F2	1/2	P	**62967**	13	P9	**115352**	15

Replacement Valve P/N 177396

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
E1	1/2	N	**60609**	13	X2	**177396***	16
E2	3/4	N	**60610**	13	X3	**177397***	16
E3	1/2	P	**60611**	13	X1	**177395***	16
F3	1/2	P	**62946**	13	X1	**177395***	16

*Replacement requires 1/4" pilot tubing connection, P/N **9664**.

Replacement Valve P/N 96300

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
G8	1/2	N	**82395**	13	K6	**96300**	14
G9	1/2	P	**82396**	13			

Original valves include an ECO adapter that is not field replaceable.

Replacement Valves (cont'd) - Identified by Third Element of the Serial No. (see pages 11-22). Valves showing "Replaced by P/N's" are no longer available from the manufacturer.

Replacement Valve P/N 177396

NOTE: Do not use on units with G29 or G33 ignition controls; order ignition kit **P/N 49491.**

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
H5	1/2	N	**87430**	13	X2	**177396***	16
H6	3/4	N	**87432**	13	X3	**177397***	16
H7	1/2	P	**87431**	13	X1	**177395***	16
M9	1/2x3/4	P	**96312**	14	X4	**177398***	16
*Replacement requires 1/4" pilot tubing connection, P/N **9664**.							

P/N 86966 may be a valve manufactured by either General Controls or Skinner (Skinner valve illustrated.)

See Serial No. Code	Size	Gas	P/N	Page
J1	1	N or P	**(2) 86966**	14

Fluid Power Valve

P/N 86993 Actuator (M/H V4055A1077) - Part of Serial No. Codes J2, J3, J4, K2, and K4

See Serial No. Code	Size	Gas	P/N	Page
J2, J3, J4	1	N or P	**86992** (M/H #V5055A1004)	14
K2	1-1/4	N or P	**89356** (M/H #V5055A1012)	14
K4	2	N or P	**91079** (M/H #V5055A1038)	14
M/H fluid power valves above used with actuator, **P/N 86993**				
W1, W2	1	N or P	**172667** (ASCO V710FAS)	16
W3	1-1/4	N or P	**172678** (ASCO V710GAS)	16
W4	2	N or P	**179679** (ASCO V710JAS)	16
ASCO fluid power valves above used with actuator, **P/N 172680**				

Replacement Valve P/N 96310

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
J5	1/2	N	**89461**	14	M4	**96307**	14
J6	1/2	P	**89462**	14	M7	**96310**	14

Original valves include an ECO adapter that is not field replaceable.

Replacement Valve P/N 96300

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
H2	1/2	N	**82397**	13	K6	***96300**	14
K6	1/2	N	**96300**	14			
*Replacement requires 1/4" pilot tubing connection, P/N **9664**.							

Replacement Valve P/N 121599

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
H9	3/4x1/2	P	**93386**	14	Q4	**121600**	15
J7	1/2	N	**89370**	14	Q2	**121598**	15
J9	3/4	P	**89371**	14	Q4	**121600**	15
M5	1/2	N	**96308**	14	Q3	**121599**	15

Replacement Valve P/N 221525

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
J8	3/4	N	**89397**	14	9A	**221525**	17
K1	3/4	P	**89398**	14	1B	**221526**	17
M6	3/4	N	**96309**	14	Kit P/N **222037**		
M8	1/2x3/4	P	**96311**	14	Kit P/N **221634**		
U8	1/2x3/4	P	**157167**	16	Kit P/N **221634**		
U9	3/4x3/4	P	**157168**	16	Kit P/N **221634**		

Replacement Valve P/N 208920

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
K5	1/2	N	**96299**	14	9B	**208920**	17
K8	1/2	P	**96302**	14	1C	**209412**	17

Replacement Valves (cont'd) - Identified by Third Element of the Serial No. (see pages 11-22). Valves showing "Replaced by P/N's" are no longer available from the manufacturer.

P/N 96301

See Serial No. Code	Size	Gas	P/N	Page
K7	3/4	N	**96301**	14
K9	1/2x3/4	P	**96303**	14

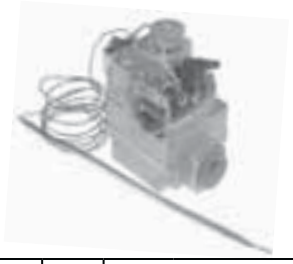
Replacement Valve P/N 115351

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
M1	1/2	N	**96304**	14	P8	**115351**	15
M2	3/4	P	**96305**	14	P8	**115351**	15
M3	1/2x3/4	P	**96306**	14	P9	**115352**	15
(ECO adapter on replacement valves is not replaceable.)							

P/N 96310

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
M4	1/2	N	**96307**	14			
M7	1/2	P	**96310**	14			
W8	1/2	N	**176680**	16			
W9	1/2	P	**176681**	16	Kit P/N **221093**		

Mechanical Modulation Valve P/N 100321 - no longer available; for replacement instructions, see Note [34] on page 20.



See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
N1	3/4 x 3/4	N	**100321**	14	See Note [34] on page 20.		
N2	3/4 x 3/4	N	**100322**	14	Not availabler		
N3	3/4 x 3/4	P	**100323**	14	See Note [34] on page 20.		
N4	3/4 x 3/4	P	**100324**	14	Not available		

P/N 115351

See Serial No. Code	Size	Gas	P/N	Page
P8	3/4	N	**115351**	15
P9	3/4	P	**115352**	15

P/N 121599

See Serial No. Code	Size	Gas	P/N	Page
Q2	1/2	N	**121598**	15
Q3	1/2	N	**121599**	15
Q4	1/2x3/4	P	**121600**	15
T2	1/2	N	**134358**	16
T3	1/2	N	**136193**	16

P/N 123604

See Serial No. Code	Size	Gas	P/N	Page
R2 / V2	3/4	N & P	**123604**	15/16
R3	1	N & P	**123603**	15
R4 / V4	1-1/4	N & P	**123605**	15/16
T8 / V3	1	N & P	**146472**	16/16

P/N 113766

See Serial No. Code	Size	Gas	P/N	Page
R5	1/2	N	**113766**	15
Q3	1/2	N	**113767**	15
T7	1/2	N	**144276**	16

P/N 131453

See Serial No. Code	Size	Gas	P/N	Page
R7	3/4	N	**131453**	15
R8	1	N	**131455**	15
R9	3/4	P	**131454**	15
S1	1	P	**131456**	15

Manifold arrangement always includes either a solenoid valve or a single-stage redundant valve in series with these mechanical modulation (50-100°F) valves.

Replacement Valves (cont'd) - Identified by Third Element of the Serial No. (see pages 11-22). Valves showing "Replaced by P/N's" are no longer available from the manufacturer.

P/N 142664

See Serial No. Code	Size	Gas	P/N	Page
T6	1/2	N	**142664**	16

P/N 147133

Replacement requires field-supplied piping.

Replacement Valve, P/N 260604

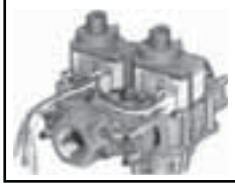
See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
T9	1/2	N	**147133**	16	7E	**260604**	18
U1	1/2	P	**147134**	16	8E	**260606**	18

Replacement Valve P/N 260603

See Serial No. Code	Size	Gas	P/N	Pg	Replaced by:		
					Code	P/N	Pg
U2	1/2	N	147830	16	**7E**	**260604**	18
U3	1/2	P	**147560**	16			
Y2orZ7	1/2	N	196980	17	6E	**260603**	18
Y4orZ9	1/2	P	196982	17	9E	**263999**	18
Y6or2A	1/2	P	**197064**	17			
Y8or4A	1/2	N	**197066**	17			
Z1	1/2	P	**197536**	17			
Z2	1/2	N	**197538**	17			
6A	1/2	N	**204301**	17			

P/N 150839

See Serial No. Code	Size	Gas	P/N	Pg
U6	3/4	N	**150839**	16
U7	3/4	P	**150840**	16
V9	3/4	P	**195737**	16
X5	3/4	N	**195739**	16
Y3orZ8	3/4	N	**196981**	17
Y5or1A	3/4	P	196983	17
Y7or3A	3/4	P	197065	17
Y9or5A	3/4	N	**197067**	17



P/N 159743

See Serial No. Code	Size	Gas	P/N	Pg
V1	1	N & P	**159743**	16

P/N 159736

See Serial No. Code	Size	Gas	P/N	Pg
V5	2	N&P	**159736**	16
V6	1-1/4	N&P	**159731**	16
V7	2	N&P	**159841**	16
V8	3	N&P	**163137**	16

Replacement Valve P/N 260603

See Serial No. Code	Size	Gas	P/N	Pg	Replaced by:		
					Code	P/N	Pg
W5	1/2	N	172552	16	7E	**260604**	18
W6	1/2	P	172553	16	8E	**260606**	18
W7	1/2	N	**170609**	16			
X7orZ3	1/2	N	196848	16	6E	**260603**	18
X8orZ4	1/2	N	196849	17	Y8or4A	**197066**	17
X9orZ5	1/2	P	196848	17	9E	**263999**	18
Y1orZ6	1/2	P	196851	17	Y6or2A	**197064**	17

P/N 177396

See Serial No. Code	Size	Gas	P/N	Pg
X1	1/2	P	**177395**	16
X2	1/2	N	**177396**	16
X3	3/4	N	**177397**	16
X4	1/2x3/4	P	**177398**	16

P/N 195740

See Serial No. Code	Size	Gas	P/N	Pg
X6	1/2x3/4	N	**195740**	16

P/N 203860

See Serial No. Code	Size	Gas	P/N	Pg
7A	1	N&P	**203860**	17
8A	1-1/4	N&P	**203861**	17

Replacement Valves (cont'd) - Identified by Third Element of the Serial No. (see pages 11-22). Valves showing "Replaced by P/N's" are no longer available from the manufacturer.

P/N 203866

See Serial No. Code	Size	Gas	P/N	Pg
2B	1	N	**203866**	17

P/N 203869

See Serial No. Code	Size	Gas	P/N	Page	Replaced by:		
					Code	P/N	Page
3B	1	N&P	**203868**	17	No longer avaialble		
4B	1	N&P	**203869**	17			

P/N 208920

See Serial No. Code	Size	Gas	P/N	Page
9B	1/2	N	**208920**	17
1C	1/2	P	**209412**	17

P/N 203862

See Serial No. Code	Size	Gas	P/N	Page
1D	3/4x2	N or P	**209412**	18

P/N 221525

See Serial No. Code	Size	Gas	P/N	Page
9A	3/4	N	**221525**	17
1B	3/4	P	**221526**	17
2D	3/4	N	**221633**	18

P/N 260603

See Serial No. Code	Size	Gas	P/N	Page
6E	1/2	N	**260603**	18
7E	1/2	N	**260604**	18
8E	1/2	P	**260606**	18
9E	1/2	P	**263999**	18

Replacement ECO Adapters - The replacement adapters apply **only** to the valves listed; adapters **do not apply** to replacement valves.

P/N 82698,
M/H #39240-1

Valve P/N	Serial No. Code	Valve P/N	Serial No. Code	Valve P/N	Serial No. Code
52886	D4	**96304**	M1	**82398**	H1
62967	F2	**96306**	M3	**96303**	F9
96301	K7	**62996**	F1	**96305**	M2

P/N 82699,
R#21608

Valve P/N	Serial No. Code
82624	H3
82669	H4

P/N 113149,
M/H #39200-20

Valve P/N	Serial No. Code
96299	K5
96302	K8

Maxitrol Components for Electronic Modulation - Indirect-Fired Equipment Model Series X, SC, RG, RP, RX, RPV, and EEDU with Options AG7, AG8, AG9, AG21, AG39, AG40, AG41, or AG42

(**References:** For modulation control components for PREEVA Models PDH, SDH, and RDH, see replacement parts Form P-PREEVA. For MAPSII, see replacement parts Form P-MAPSII.)

Maxitrol Temperature Selectors/Thermostats, Temperature Sensors, and Amplifiers

Maxitrol System		20AH	30AH	21H	31H	21HR	31HR	Series 92	
Serial No. Suffix Code		MV-1	MV-2	MV-3	MV-5	MV-4	MV-6	MP-1	MP-3
		Model Series X, SC, RX, RPV, RG, RP, EEDU INDIRECT-Fired Furnaces with Option							
Components by Option		AG7		AG8		AG9		AG39	AG41
Number of Furances		Single Furnace	Multiple Furnaces	Single Furnace	Multiple Furnaces	Single Furnace	Multiple Furnaces	Single Furnace	Multiple Furnaces (Maxitrol components on 1st furnace only)
Temperature Selector	P/N	--	--	On the Amplifier		**48042**	**48042**	**174849**	**174849**
	Maxitrol #					TD-121	TD-121	TD92-0509	TD92-0509
Selectrastat	P/N	**48033**	**48033**	--	--	--	--	--	--
	Maxitrol #	T120	T120						
Optional Override Thermostat	P/N	--	--	**24857**	**24857**	**24857**	**24857**	--	--
	Maxitrol #			T-115	T-115	T-115	T-115		
Sensor (P/N 48041 includes mixing tube)	P/N	--	--	**48041**	**48041**	**48041**	**48041**	**133228**	**133228**
	Maxitrol #			TS-121	TS-121	TS-121	TS-121	TS194	TS194
Mixing Tube Only	P/N	--	--	**90323**	**90323**	**90323**	**90323**	**90323**	**90323**
	Maxitrol #			MTI-12	MTI-12	MTI-12	MTI-12	MTI-12	MTI-12
Amplifier	P/N	**260863**	**260863**	**260864**	**260864**	**260863**	**260863**	**174848**	**174848**
	Maxitrol #	A1010U	A1010U	AD1010U	AD1010U	A1010U	A1010U	A1092	A1092

P/N 48042, TD121 remotely located Temperature Selector used in Maxitrol 21HR and 31HR Systems, Option AG9 (box not included)

Selector with box, P/N 158465

Other Replacement Maxitrol Temperature Selectors (selector only; no box) - match selector with sensor:
#TD121A, **P/N 194258**
#TD121B, **P/N 194259**
#TD121F, **P/N 194260**

P/N 174849, Maxitrol TD92-0509, remotely located Temperature Selector used in Options AG39 & AG41

P/N 48033, T120 Thermostat used in Maxitrol 20AH and 30AH Systems, Option AG7

P/N 24857, T115 Overriding Thermostat used in Options AG8 and AG9

(Also used on Direct-Fired with Option AG31; see page 30.)

P/N 48041, TS12MT2-12 Duct Sensor used in Maxitrol 21H, 21HR, 31H and 31HR Systems, Option AG8 and AG9

(changed from 4x4 box to 2x4 box effective 5/89)

P/N 133228, Duct Sensor, Maxitrol TS194, used in Option AG39 and Option AG41

Other Replacement Maxitrol Discharge Air Sensors (sensor only, no box) - match with selector:
#TS121A, **P/N 194261**
#TS121B, **P/N 194262**
#TS121F, **P/N 194263**

Kit P/N 262320 replaces A1010B Amplifier, P/N 48035, used in Maxitrol 21HR (Option AG9) and 20AH (Option AG7) Systems and 1011F Amplifier, P/N 48036, in Maxitrol 30AH (Option AG7) and 31HR (Option AG9) Systems

Amplifier, Maxitrol A1010U, P/N 260863, in Replacement Kit P/N 262320

Kit P/N 262321 replaces A1010F Amplifier, P/N 48037, used in Maxitrol 21H (Option AG8) Systems and A1011F Amplifier, P/N 48038, used in Maxitrol 31H (Option AG8) Systems

Amplifier, Maxitrol AD1010U, P/N 260864, in Replacement Kit P/N 262321

P/N 174848, Maxitrol 1092 Amplifier used in Option AG39 and Option AG41 (Support Bracket, P/N **104155**)

Regulator used on **INDIRECT-FIRED** Model Series X, SC, RG, RP, RX, RPV, and EEDU and gas heat sections in Models RDCA/RDDA equipped with Optional Electronic Modulation Options AG7, AG8, AG9, AG21, AG39, AG40, AG41, AG42, AG57

P/N	Maxitrol	Size	Thermocore Model Size	with Opt AG	Gas
42278	MR410	1/2"	75-125	7, 8, 9, 21	Natural
42279	MR510	1/2"	150-200	7, 8, 9, 21	Natural
42280	MR510	3/4"	225-400	7, 8, 9, 21	Natural
156462	MR410H-1	1/2"	75-125	7, 8, 9, 21	Propane
156463	MR510H-1	1/2"	150-200	7, 8, 9, 21	Propane
156464	MR510-H	3/4"	225-400	7, 8, 9, 21	Propane
174815	M420R, 20.0 MBH @3.8" w.c. inlet	1/2"	100	39, 40	Natural
174816	M420R, 25.0 MBH @3.9" w.c. inlet	1/2"	125	39, 40	Natural
174838	M520R, 40.3 MBH @ 3.7" w.c. inlet	1/2"	150-175	39, 40	Natural
174839	M520R, 51.8 MBH @ 3.9" w.c. inlet	1/2"	200-225	39, 40	Natural
174840	M520R, 69.0 MBH @ 4.0" w.c. inlet	3/4"	250-300	39, 40, 41, 42	Natural
174841	M520R, 100 MBH @ 4.4" w.c. inlet	3/4"	400	39, 40, 41, 42	Natural
P/N	**Maxitrol**	**Size**	**RDCA/RDDA**	**with Opt AG**	**Gas**
205582	MR410@120cfh	1/2"	100, 150	57	Natural
205581	MR410-1	1/2"	200	57	Natural
205580	MR510	1/2"	250, 300	57	Natural
208370	MR610-166	3/4"	350, 400	57	Natural
208371	MR610-1-88	1"	450, 500, 550	57	Natural

Maxitrol Signal Conditioner used on *Both* Indirect Fired Equipment *and* Direct Fired Equipment

P/N 134170, Maxitrol Signal Conditioner used in

Indirect Fired Gas Control

Option AG21 (Serial No. Suffix Code MVA)
Option AG40 (Serial No. Suffix Code MP2)
Option AG42 (Serial No. Suffix Code MP4)
Option AG44 (Serial No. Suffix Code MP6)
Option AG57
Option DG2
Option DG6

Direct Fired Gas Control

Option AG37 (Serial No. Suffix Code MVC)

When used in Options AG 21, 37, 40, 42, and 44, the signal conditioner (either Maxitrol A200 or Maxitrol Model SC10C-B6S1 or SC11-A, depending on date of manufacture) is activated by a customer-supplied input signal (either 4-20 milliamps or 0-10 volt).

Maxitrol Components for Electronic Modulation - Direct-Fired Equipment Model Series ADF, DV, and RDF with Options AG30, AG31, AG32, AG35, AG33, AG36, AG37, AG47, AG48, AG51

Maxitrol System		**14**	**14**	**14A**	**14B**
Serial No. Suffix Code		**MV-7**	**MV-7**	**MV-8**	**MV-8**
		Model Series ADF, DV, and RDF DIRECT-Fired Furnaces with Option			
Components by Option		**AG30**	**AG31**	**AG32**	**AG35**
Temperature Selector	P/N	**86988**	U.S. - **86988**; Canada - **101165**	**87107**	**123943,** 140°F Stop **159285**, 160°F Stop
	Maxitrol #	TD114	TD114	TD114A	TD114B
Override Thermostat (illustrated on page 23)	P/N	--	**24857**	--	--
	Maxitrol #	--	T-115	--	--
Sensor	P/N	**90324**	**90324**	**87106**	**123944**
	Maxitrol #	TS-114	TS-114	TS-114A	TS-114B
Mixing Tube	P/N	**90323**	**90323**	**90323**	**90323**
	Maxitrol #	MTI-12	MTI-12	MTI-12	MTI-12
Amplifier	P/N	**148590***	**148590***	**148590***	**148590***
	Maxitrol #	A1014R	A1014R	A1014R	A1014R

Maxitrol System		**44**		**94**	
Serial No. Suffix Code		**MV-9**		**MV-B**	
		Model Series ADF, DV, and RDF DIRECT-Fired Furnaces with Option			
Components by Option		**AG33**		**AG36**	
Temperature Selector	P/N	**86990**		**133230**, 120°F	**159287**, 160°F
	Maxitrol #	T244, Selectrastat		TD294E-609-0818	
Sensor	P/N	**119617** (max 120°F)	**194160** (max 140°F)	**133228**	
	Maxitrol #	TS-144E	TS-144C	TS194	
Remote Sensor	P/N	--	--	--	--
	Maxitrol #	--	--	--	--
Mixing Tube	P/N	**90323**		**90323**	
	Maxitrol #	MTI-12		MTI-12	
Amplifier	P/N	**268274****	**268274****	**133229**	
	Maxitrol #	A1044U	A1044U	A1494	

Maxitrol Amplifiers used on Direct-Fired Model Series ADF, DV, and RDF

P/N 148590, Model A1014R Amplifier used in Options AG 30, 31, 32, 35

* To replace P/N 148590, Model A1014L or A1014U or P/N 86976, **order Replacement Kit P/N 268301.**

P/N 268274, Model A1044U, used in Option AG33

** To replace P/N 194159 (A1044CL); P/N 157915 (A1044EL); P/N 119616 (A1044E) and P/N 86989 (A1044), order **Replacement Kit P/N 268302**.

NOTE: Shown with cover removed.

P/N 204454, ADFM14 Amplifier

P/N 133229, A1494 Amplifier, for Paint Booth Application, Option AG36

Maxitrol Components for Electronic Modulation - Direct-Fired Equipment Model Series ADF, DV, and RDF with Options AG30, AG31, AG32, AG35, AG33, AG36, AG37, AG47, AG48, AG51 (cont'd)

Regulators used on **DIRECT FIRED** Units are determined by BM Option and Manifold Size

P/N 123916, M611-R66, 3/4";
P/N 87001, M611-R88, 1"

P/N 89351, MR212D, 1-1/4";
P/N 91071, MR212E, 2";
P/N 163143, MR212G, 3"

Temperature Selectors (see table, page 30, for option application)

P/N 86988, TD114 U.S. Models, Range 55-90°F (selector with box, **P/N 156085**);
P/N 101165, TD114, Canadian Models, Range 50-75°F;
P/N 87107, TD114A, Range 80-130°F;
P/N 123943, TD114B, Range 120-140°F
P/N 159285, TD114B, Range 120-160°F
P/N 204455, TD DFM14
P/N 204451, TD DFM44

P/N 133230, #TD294E-609-0818**,** Dual Temperature Selector for Paint Booth Application, Option AG36

P/N 86990, T244 Selectrastat, Option AG33

Temperature Sensor (see table, page 30, for option application)**:**

P/N 90324, TS114, Range 55-90°F;
P/N 87106, TS114-A, Range 80-130°F;
P/N 123944, TS114B, Range 80-140°F;
P/N 204452, TS394-2B-4;
P/N 204453, TS194Q;
P/N 119617, TS144E, Range 20-60°F and 60-120°F;
P/N 194160, TS144C, Range 20-60°F and 80-140°F;
P/N 87041, TS144, Range 40-80°F and 80-140°F;
P/N 133228 TS194 for Paint Booth Application

IMPORTANT NOTES: When replacing a temperature sensor on a Maxitrol MV-9 system (Option AG33), check the Model No. on the sensor. P/N 119617 or 194160 is used on units manufactured beginning 2/92; P/N 87041 is used on units manufactured prior to 2/92.
Sensors are not interchangeable; the sensor must match the amplifier shown on page 30.

Mixing Tube for temperature sensors, **P/N 90323,** MTI-12

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