

UNIPOWER A5 SERIES GAS/OIL

REPLACEMENT PARTS LIST

First Construction 1976.

Installation Manual 8449-09 (formerly UA2)

Important: Availability of parts as well as specifications are subject to change without notice.

Please consult factory for item availability.

GENERAL BURNER PARTS

BURNER CHASSIS

- 7201-90 Box Assembly with Flange, Nozzle and Gas Manifold
- 7254-51 Nozzle
- 7270-00 Mounting Flange
- 7275-71 Choke Ring -- A50 only
- 7281-00 Drawer Assembly -- for Models A50 - A52; without oil nozzle
- 7280-00 Drawer Assembly -- for Models A55 - A58; without oil nozzle

BLOWER HOUSING

- 7275-90 Air Shutter -- A50 only
- 3429-30 Air Shutter -- Models A52 - A58
- 3152-01 Quadrant -- for Air Shutter adjustment
- 3155-50 Air Shutter Shaft
- 3197-50 Motor Mounting Plate
- 7100-90 Oil Pump Mounting Bridge

BLOWER MOTORS 1-Phase, 56C Frame

(3450 RPM, 5/8" Shaft)

OPEN DRIPPROOF

- 8437-31 A50 -- 1/3 HP 115/1/60
- 8437-15 A52 -- 1/2 HP 115/230/1/60
- 8437-19 A55 - 58 -- 1 HP 115/230/1/60

TEFC (Totally Enclosed, Fan Cooled)

- 8437-36 A50 -- 1/3 HP 115/230/1/60
- 8437-40 A52 -- 1/2 HP 115/230/1/60
- 8437-38 A55 - 58 -- 1 HP 115/230/1/60

BLOWER MOTORS 3-Phase, 56C Frame

(3450 RPM, 5/8" Shaft)

TEFC (Totally Enclosed, Fan Cooled)

- 8440-19 A52 -- 1/2 208/230/460/3/60
- 8440-21 A55 - A58 -- 1 HP 208/230/460/3/60

BLOWER WHEELS

- 7188-00 A50 -- 53/4" dia. x 31/2" wide
- 3427-50 A52 -- 65/16" dia. x 4" wide
- 3627-50 A55 - A58 -- 7" dia. x 3 1/2" wide

GAS PILOT AND OIL IGNITION COMPONENTS

- 7171-50 Oil Spark Rod and Insulator Assembly -- 2 required
- 7105-50 Gas Spark Rod and Insulator Assembly
- 8451-06 Oil Spark Rod Insulator Sleeve -- 2 required
- 3175-40 Gas Spark Rod Gland Nut
- 8559-02 Oil Spark Rod Wire, Terminal and Snap Connector Assembly, 17" long -- 2 required

NOTE: Effective production date code 486 (January 20, 1986), the pilot pressure tap was moved from the "B" cock assembly to the pilot assembly. To accomplish this change, the early ell orifice was modified to a tee orifice to incorporate a pressure tap. Each replacement orifice kit contains enough fittings to adapt to all early pilots. Effective production date code 4586 (first week of November, 1986), the drill size on the tee orifice was reduced for NATURAL gas and increased for PROPANE. These changes resulted when field experience indicated that the alterations improved flame signal response. All replacement assemblies will be supplied with new orifice sizes.

MIDCO International Inc.

- 8529-05 Gas Spark Rod Wire and Terminal Assembly, without Snap Connector -- 42" long
- 8484-06 Gas Spark Rod Wire without Terminals -- sold per foot
- 8408-63 Snap Connector -- straight with Spring Terminal -- connects to oil ignition transformer
- 8408-07 Snap Connector -- right angle with Spring Terminal -- connects to gas spark rod
- 7151-70 Flame Detector Mounting Tube with Orifice -- A50 only
- 7151-50 Flame Detector Mounting Tube without Orifice insert -- A52 - A58
- 7150-90 Pilot Assembly with NATURAL Gas Orifice -- order Air Orifice separately
- 7150-91 Pilot Assembly with PROPANE Gas Orifice -- order Air Orifice separately
- 7161-50 Gas Orifice Tee Kit -- NATURAL -- #47 Drill (.078) -- See Note at left
- 7161-51 Gas Orifice Tee Kit -- PROPANE -- #50 Drill (.070) -- See Note at left
- 7162-02 Air Orifice Ell -- A50 -- 5/16" Drill
- 7162-01 Air Orifice Ell -- A52 - A58 -- 9/32" Drill
- 8402-40 Gas Safety Shut-Off Valve -- 1/8" NPT; 120/1/60
- 8400-10 1/4 NPT Gas Pressure Regulator -- 1/2 PSI maximum inlet pressure
- 8416-32 3/8 NPT Gas Pressure Regulator -- 10 PSI maximum inlet pressure
- 8447-11 Gas Ignition Transformer -- 120/1/60; 6,000 volt secondary
- 8447-02 Oil Ignition Transformer -- 120/1/60; 12,000 volt secondary

SAFETY AND OPERATING CONTROLS -- 120/1/60 FLAME SAFEGUARD

WIRING BASE

- 8428-07 Q270 for R4795
- 8428-42 61-3060 for UVM

INCINERATOR CONTROLS -- See Note 8

- 8414-22 Q723OA 4-20 mA Control Module for use with M9484
- 8425-18 Thermal Switch (Therm-O-Disc, 6OT-13-203125)

OTHER CONTROLS

- 8423-31 Gas-Off-Oil Fuel Selector Switch -- Arrow-Hart -- See Note 1
- 8423-03 On-Off Toggle Switch (CH 7500K14)
- 8425-19 Blower Air Switch (Chgo. Safety Prod. #SMP; Tridelta #FP4039)
- 7160-95 High-Low Gas Pressure Switch -- See Note 2
- 8425-03 Low Gas Pressure Switch (MH C645A; Fireye PSM L) -- See Note 3
- 8425-04 High Gas Pressure Switch (MH C645B; Fireye PSM H) -- See Note 3
- 8406-39 R4222B SPDT Switching Relay
- 8406-38 R4222D DPDT Switching Relay

- 8415-31 Three Phase Contactor -- order Adaptor Kit and Thermal Overload Relays separately (SQ-D 8502-PD2.10E) -- See Note 7
- 8415-44 Adaptor Kit to join Three Phase Contactor PD2.10E to TD Series Overload Relays (SQ-D Class 9999 Type T2C) -- See Note 7
- 8415-xx Thermal Overload Relays for Three Phase Contactor -- specify motor HP and voltage (SQ-D TD Series) -- See Note 7

OIL FUEL HANDLING COMPONENTS

- 8450-56 Pump Coupling with flexible insert
- 8451-34 Coupling Flexible Insert only
- 8451-04 Oil Pressure Gauge -- 600 PSI
- 8401-11 Gauge Shut-Off Valve -- 1/4"

MAIN GAS TRAIN COMPONENTS

V48 DIAPHRAGM VALVES

- 8418-21 1"
- 8418-22 1 1/4" -- See Note 6
- 8418-23 1 1/2" -- See Note 6
- 8418-20 2"

MOTORIZED VALVES

V5055A Body Without "Proof of Closure" Switch

- 8418-32 1"
- 8418-33 1 1/4"
- 8418-34 1 1/2"
- 8418-35 2"
- 8418-36 2 1/2"

V5055C Body With "Proof of Closure" Switch

- 8418-90 1"
- 8418-91 1 1/4"
- 8418-92 1 1/2"
- 8418-93 2"
- 8418-94 2 1/2"

Valve Actuators Without "Proof of Closure" Switch

- 8418-31 V4055A On-Off
- 8418-79 V4062A Low-High-Low-Off

Valve Actuators With "Proof of Closure" Switch

- 8418-88 V4055D On-Off
- 8418-97 V4026D Low-High-Low-Off

SOLENOID VALVES

Safety Valves -- Normally Closed

- 8402-05 1"
- 8402-06 1 1/4"
- 8402-07 1 1/2"
- 8402-18 2"
- 8402-19 2 1/2"

Vent Valves -- Normally Open

- 8402-30 3/4"

- 8402-31 1"
- 8402-34 2"

PRESSURE REGULATORS -- MAXITROL RV SERIES

- 8416-33 1" RV61
- 8416-02 1 1/4" RV61
- 8416-05 1 1/2" RV81
- 8416-08 2" RV91
- 8416-11 2 1/2" RV111

FIRING RATE CONTROL

BF VALVES (Butterfly Valves)

- 2933-50 1" 2933-53 2"
- 2933-51 1 1/4" 2933-54 2 1/2"
- 2933-52 1 1/2" 2933-55 3"

MBF VALVES (Motorized Butterfly Valves)

Contains Modutrol Motor Mounting Plate, Overrunning Linkage and Stop Arm.

- 2010200 1" 2010500 2"
- 2010300 1 1/4" 2010600 2 1/2"
- 2010400 1 1/2" 2010700 3"

MODUTROL MOTORS -- See Note 8

- 8414-21 M9484D Full Modulating (no End Switch)
- 8414-20 M9484E Full Modulating with End Switch
- 8414-19 M9484F Full Modulating with Two End Switches
- 8414-24 MH 198162EA 24V Transformer for use with M9484
- 8451-03 Hydraulic Cylinder -- Oil Side High-Low shutter operator

MISCELLANEOUS REPLACEMENT PARTS FOR FIRING RATE CONTROL

**MBF Valve -- (Motorized Butterfly Valve)
SRBF Valve -- (Spring Return Butterfly Valve -- Valve Actuator Operated)**

- 2926-50 Overrunning Spring and Rod Assembly 1" through 1 1/2" MBF Valve
- 2926-55 Overrunning Spring and Rod Assembly 2" through 3" MBF Valve
- 2926-00 MBF Overrunning Spring
- 7180-30 SRBF Return Spring
- 2919-02 Stop Arm for MBF Valve
- 8414-03 Crank Arm -- Mod Motor or Valve Actuator Shaft
- 8450-94 Crank Arm -- Air Shutter and MBF Valve Shafts
- 7180-20 Connecting Rod -- MBF Valve to Air Shutter or Valve Actuator
- 8450-18 Connecting Rod Ball Joint
- 7180-50 Overrunning Link and Stud Assembly -- Hydraulic cylinder to Air Shutter Shaft (order Cylinder Clevis separately)
- 8432-02 3/8" dia. O-Ring for BF and MBF Valves

NOTES

1. Two sizes of Gas-Off-Oil fuel selector switches have been used. Select replacement as follows:
8423-28 Cutler-Hammer requires a 15/32" mounting hole. Used through September 22, 1980 (burner date code 3980).
8423-31 Arrow-Hart requires a 3/4" mounting hole.
2. The Chicago Safety Products single body High-Low gas pressure switch, Model HLGP, used through June 22, 1981 (date code 2681) has been superseded by an assembly of individual high and low pressure switches mounted on a junction box. For replacement of the single body, High-Low switch, order Kit No. 7160-95, which includes 8449-88 Installation Bulletin.
3. Replacement individual high or low gas pressure switches may be a different make and have a different physical configuration than that previously supplied, but the mounting and wiring will be the same. Request Bulletin 8449-88 for terminal identification.
4. 30-second minimum pre-ignition purge used with On-Off burners having the blower air shutter locked in a "fixed" firing rate position. Where the air shutter position is automatically controlled, a 90 second minimum purge, or a purge with the air shutter driven to the high fire position, is required.
5. Because of the difficulty in maintaining a stock of the 1 1/4" V48 Diaphragm Valves, some burners have been built utilizing a "bushed down" 1 1/2" Valve as a substitute. If the replacement valve size is determined from the burner model or bill of material number as being 1 1/4", that size will be furnished when available, through a bushed 1 1/2" valve may be substituted if necessary.
6. Three phase Arrow-Hart (A-H) Motor Starters and accessories no longer available from MIDCO. Obtain locally or substitute the listed SQ-D equipment. NOTE: The SQ-D equipment is not identical to the A-H equipment. Mounting and wiring modifications will be necessary. If substituting SQ-D for A-H, request wiring diagram 7501-50.
7. Honeywell discontinued manufacturing their M941 series Modulating Motors mid 1992. MIDCO stock ran out late 1992 when MIDCO switched to Honeywell M9484 Series Motors. The newer M9484 Motors are physically shorter and require an Adaptor Bracket to mount to MIDCO MBF valves. The replacement Mod Motors shown in listing include the necessary Adaptor Bracket. The accessory items used on the newer M9484 Motors and the 24V Transformers are NOT interchangeable with the older M941 Motors. If exact replacements are required for the M941 Motor, consult your local Honeywell distributor for available Tradeline replacement. When ordering 4-20 mA Control Module, Honeywell Q7230A, request MIDCO Blue Print 7503-07 which details revised terminal call outs.