

# UNIPOWER A5 SERIES OIL

## REPLACEMENT PARTS LIST

First Construction 1976.  
Installation Manual 8449-10 (formerly UA3)

### GENERAL BURNER PARTS

#### **BURNER CHASSIS**

- 7274-01 Burner Tube
- 7275-71 Choke Ring -- A50 only
- 7282-00 Drawer Assembly -- for Models  
A50 - A52 -- without Oil Nozzle
- 7280-00 Drawer Assembly -- for Model A58  
-- without Oil Nozzle
- 7185-00 Cad Cell Mounting Tube
- 7189-00 UV Scanner Mounting Tube

#### **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
- 3247-61 Blower Inlet Wire Guard Set
- 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 A58 -- 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 A58 -- 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 A58 -- 1 HP 208/230/460/3/60

#### **BLOWER WHEELS (5/8" BORE)**

- 7188-00 A50 -- 5 3/4" dia. x 3 1/2" wide
- 3427-50 A52 -- 6 5/16" dia. x 4" wide
- 3627-50 A58 -- 7" dia. x 3 1/2" wide

#### **OIL IGNITION COMPONENTS**

- 7171-50 Spark Rod and Insulator Assembly --  
2 required
- 8451-06 Spark Rod Insulator Sleeve --  
2 required
- 8559-01 Spark Rod Wire, Terminal and Snap  
Connector Assembly, 12" long --  
2 required
- 8408-63 Snap Connector -- straight with Spring  
Terminal -- connects to oil ignition  
transformer
- 8447-02 Oil Ignition Transformer -- 120/1/60;  
12,000 volt secondary

### OIL NOZZLES -- See Note Below

Nozzle Size -- GPH @ 100 PSI  
Maximum Input -- GPH @ 300 PSI

<u>PART NO.</u>	<u>SIZE</u>	<u>MAX. INPUT</u>	<u>PART NO.</u>	<u>SIZE</u>	<u>MAX. INPUT</u>	<u>PART NO.</u>	<u>SIZE</u>	<u>MAX. INPUT</u>
8451-22	1.75	3.00	8451-29	4.00	7.00	8451-14	7.50	13.00
8451-23	2.00	3.50	8451-30	4.50	7.80	8451-15	8.00	14.00
8451-24	2.25	4.00	8451-31	5.00	8.70	8451-16	9.00	15.60
8451-25	2.50	4.40	8451-32	5.50	9.50	8451-17	10.00	17.40
8451-26	2.75	4.80	8451-11	6.00	10.50	8451-18	11.00	19.10
8451-27	3.00	5.25	8451-12	6.50	11.30	8451-19	12.00	20.00
8451-28	3.50	6.00	8451-13	7.00	12.10			

**NOTE:** Select nozzle size for maximum firing rate desired. DO NOT EXCEED maximum permissible firing rate and corresponding nozzle size and pump pressure shown on the burner nameplate.

**MIDCO International Inc.**

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## **SAFETY AND OPERATING CONTROLS -- 120/1/60**

### **FLAME SAFEGUARD**

#### **WIRING BASE**

- 8428-07 Q270 for R4795
- 8428-08 Q520 for R4140
- 8428-42 61-3060 for UVM
- 8428-49 60-1386-2 for 70D10, 20 & 30

#### **CHASSIS -- order plug-in components separately**

- 8428-62 R8184G
- 8428-23 R4795A
- 8428-33 R4795A with Alarm Contacts
- 8428-38 R4795D with Alarm Contacts
- 8428-55 R4140M 42-second purge
- 8428-57 R4140G High Fire Purge
- 8428-58 R4140L High Fire Purge
- 8428-84 UVM2
- 8428-92 UVM3
- 8428-65 UVM 3 H
- 8428-78 70D10 High Fire Purge
- 8428-77 70D20 High Fire Purge
- 8428-76 70D30

#### **PLUG-IN AMPLIFIER**

- 8428-25 R7290A for R4795
- 8428-60 R7249A for R4140
- 8428-82 72DUV1 for 70D series

#### **PLUG-IN PURGE TIMER**

- 8428-26 ST71A for R4795
- 8428-66 MT30 for UVM
- 8428-79 71D80 for 70D30
- 8428-88 71D70 for 70D10 & 20 High Fire Purge

#### **FLAME DETECTORS**

- 8428-63 C554A Cad Cell Scanner -- for R8184G
- 8428-05 C7027A UV Scanner -- Honeywell
- 8428-68 UV-1A-3 UV Scanner -- Fireye

#### **INCINERATOR CONTROLS— See Note 3**

- 8414-22 Q7230A 4-20 mA Control Module for use with M9484
- 8425-18 Thermal Switch (Therm-O-Disc, 6OT-13-203125)

### **OTHER CONTROLS**

- 7102-20<sup>1</sup> 3-second Time Delay Relay -- SPST normally open (Syracuse #SBS7B133; Air-O-Tronics #TBC103SC)
- 7102-50<sup>1</sup> 5-second Time Delay Relay -- SPST normally closed (Syracuse #SDS7B135; Air-O-Tronics #TBL105SC)
- 8423-03 On-Off Toggle Switch (CH 7500K14)
- 8425-19 Blower Air Switch (Chgo. Safety Prod. #SMP; Tridelta #FP4039)
- 8425-31 Low Oil Pressure Switch (Mercoïd DAF-31-3-9, DAF7031-153-9)
- 8406-39 R4222B SPDT Switching Relay
- 8406-38 R4222D DPDT Switching Relay
- 8415-20 Single Phase Motor Contactor; 3PST (A-H ACC-230-UM20)
- 8415-31<sup>2</sup> Three Phase Contactor -- order Adaptor Kit and Thermal Overload Relays separately (SQ-D 8502-PD2.10E)
- 8415-44<sup>2</sup> Adaptor Kit to join Three Phase Contactor PD2.10E to TD Series Overload Relays (SQ-D Class 9999 Type T2C)
- 8415-xx<sup>2</sup> Thermal Overload Relays for Three Phase Contactor -- specify motor HP and voltage (SQ-D TD Series)

### **OIL FUEL HANDLING COMPONENTS**

- 8451-07 Oil Pump -- 14 GPH -- A50 - A52 (specify make)
- 8450-86 Oil Pump -- 21 GPH -- A58 (specify make)
- 8450-56 Pump Coupling with Flexible Insert
- 8451-34 Coupling Flexible Insert only
- 8450-34 1/8" Safety or Bypass Valve; UL listed -- Webster
- 8450-93 1/8" Safety Valve; UL and FM approved -- ASCO
- 8451-05 Oil Pressure Regulator
- 8451-04 Oil Pressure Gauge -- 600 PSI
- 8401-11 Gauge Shut-Off Valve -- 1/4"

## FIRING RATE CONTROL

### **MODUTROL MOTORS -- order 24V transformer separately**

8414-00	M644 Low-High-Low (2-step)
8414-01	M941A Full Modulating
8414-02	M941C Full Modulating with End Switch
8414-04	M941D Full Modulating with Two End Switches
8447-13	24V Transformer and Motor Cover Assembly
8451-02	Modulating Oil Bypass Valve
8451-03	Hydraulic Cylinder -- High-Low shutter operation

### **LINKAGE FOR FIRING RATE CONTROL**

8414-03	Crank Arm -- Mod Motor
8450-94	Crank Arm -- Air Shutter and Modulating Oil Bypass Valve Shafts
7180-20	Connecting Rod -- Air Shutter to Mod Motor or Modulating Oil Bypass Valve Shafts
8450-18	Connecting Rod Ball Joint
7108-50	Connecting Rod -- Hydraulic Cylinder to Air Shutter Shaft
8450-69	Hydraulic Cylinder Clevis and Pin Assembly

<sup>1</sup>Our original vendor on the Time Delay Relays ceased to manufacture early 1992. we have found suitable replacements, but they are not totally field interchangeable. This may cause some field replacement confusion, and for this reason we will supply replacement relays in kit form which will include SERVICE BULLETIN 8470-66 detailing the variations.

<sup>2</sup>Three phase Arrow-Hart (A-H) Motor Starters and accessories no longer available from MIDCO. Obtain locally or substitute the listed SQ-D equipment. 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.

<sup>3</sup>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 M984 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.