

# INSTALLATION INFORMATION



**FOR A-2000, A-7000 SINGLE STAGE AND B-8000 TWO-STAGE FUEL UNITS  
1725 RPM, BLACK LABEL      3450 RPM, WHITE LABEL**

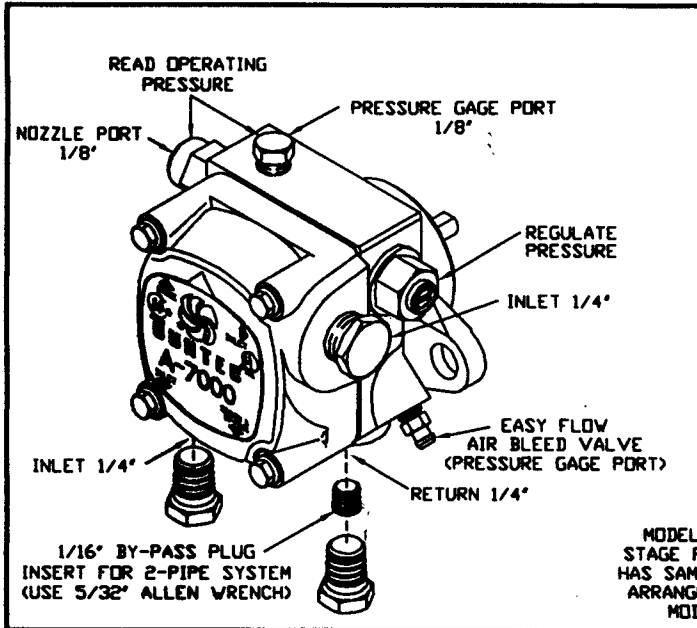


FIGURE 1

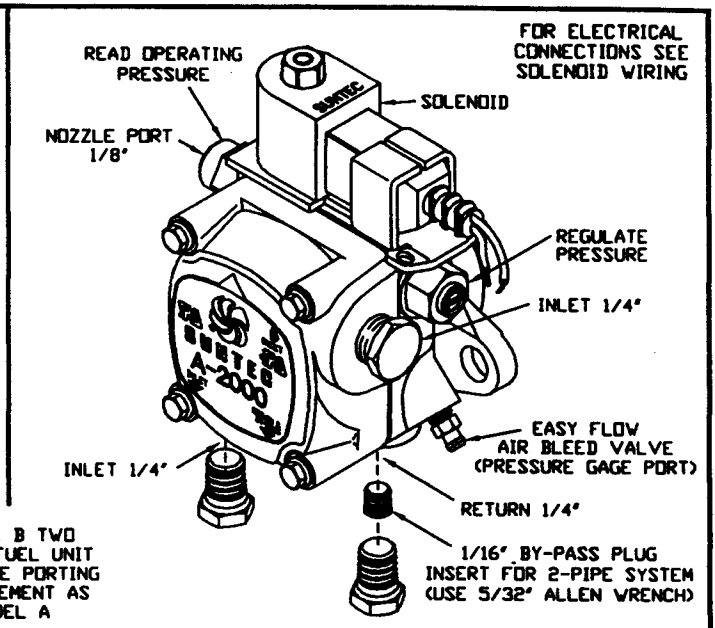


FIGURE 2

## ONE-PIPE SYSTEM • FIGURE 4

**DO NOT INSTALL BY-PASS PLUG!** Connect inlet line to pump inlet. Start burner. Arrange primary burner control for continuous operation during purging. Open easy flow bleed valve 1 turn CCW. Bleed unit until all air bubbles disappear— **HURRIED BLEEDING WILL IMPAIR EFFICIENT OPERATION OF UNIT.** Tighten Easy Flow Bleed Valve securely. (Figure 4)

## TWO-PIPE SYSTEM • FIGURE 5

**REMOVE 1/16\" BY-PASS PLUG FROM PLASTIC BAG ATTACHED TO UNIT.** Remove 1/4\" plug from return port. Insert by-pass plug (See figure 1 or 2). Attach return and inlet lines. Start burner—Air bleeding is automatic. Opening Easy Flow Air Bleed Valve will allow a faster bleed if desired. Return line must terminate 3-4\" above supply line inlet (see Figure 5). Failure to do this may introduce air into the system and could result in the loss of prime.

## SOLENOID WIRING

**DISCONNECT POWER SUPPLY BEFORE WIRING TO PREVENT ELECTRICAL SHOCK OR EQUIPMENT DAMAGE.** Lead wires on these devices are long enough to reach the junction box on most burner installations. Note: check the burner manufacturer's installation sheets for correct solenoid wiring. For all other applications, wire solenoid in parallel with burner motor. (see Figure 3). All electrical work should be done according to local and national codes. (Solenoid 115V, 0.1A, 60 Hz)

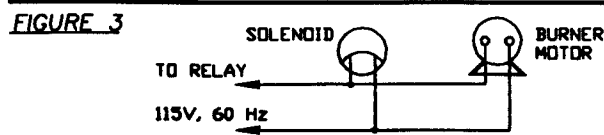


FIGURE 3

## GENERAL INFORMATION • ALL SYSTEMS

**IMPORTANT INFORMATION** Long or oversized inlet lines may require the pump to operate dry during initial bleeding period. In such cases, the priming may be assisted by injecting fuel oil into the pump georset. Under lift conditions, lines and fittings must be air tight. To assure this, "Pipe Dope" may be applied to both the used and unused inlet and both return fittings. **DO NOT USE TEFLON TAPE!! DO NOT USED COMPRESSION FITTINGS!!**

**MOUNTING POSITION** Model "A" Single Stage Fuel Unit may be mounted in any position. Model "B" Two Stage Fuel Unit may be mounted in any position except upside down (1/8\" ports pointed down).

**VACUUM CHECK** A Vacuum Gage may be installed in either of the 1/4\" inlet ports or in the 1/8\" return port (on single pipe installations), whichever is most convenient. The Model "A" pump should be used where the vacuum does not exceed 6\" hg. single pipe and 12\" hg. two pipe. The Model "B" should be used where vacuum does not exceed 17\" hg. Remember, running vacuum is the total of all pressure drops ( $\Delta P$ ) in the system from tank to inlet of pump.

**PRESSURE CHECK** If a pressure check is made use GAGE PORT OR NOZZLE PORT. **DO NOT USE EASY FLOW BLEED VALVE PORT FOR THE 7000 SERIES.** The Easy Flow Bleed Valve Port contains pressure higher than operating pressure. Setting pump pressure with gage in the Easy Flow Bleed Valve Port results in **WRONG** operating pressure. The 2000 series and 7400 series are exceptions (See Figure 2).

**CUTOFF PRESSURE** Average cutoff pressure for A and B fuel units is 80 psig. To check cutoff pressure, install pressure gage in nozzle port. Run burner for short period of time. Shut burner off. Gage shows cutoff pressure.

**CAUTION**  
Pressurized or gravity feed installations must not exceed 10 P.S.I. on inlet line or return line at the pump. A pressure greater than 10 P.S.I. may cause damage to the shaft seal.

**ONE-PIPE SYSTEM • MODEL A**

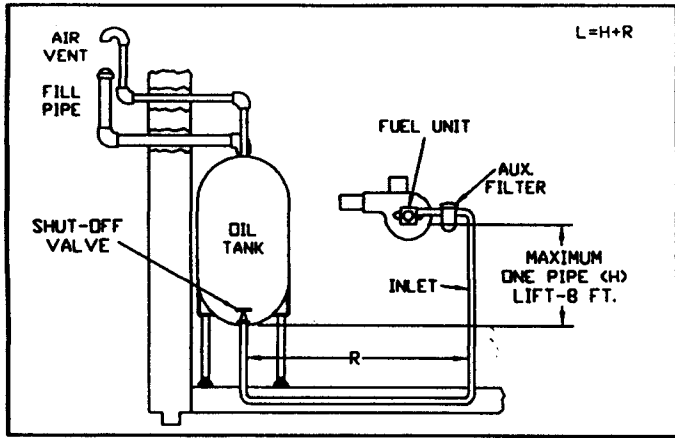


FIGURE 4

The SUNTEC MODEL "A" FUEL UNIT may be installed ONE-PIPE with Gravity Feed or Lift.

The maximum allowable lift is 8 ft.—See Figure 4.

**IMPORTANT:** One-pipe installations must be absolutely air tight or leaks or loss of prime may result. Bleed line and fuel unit completely. Bleed for 15 seconds after last air is seen from easy flow to be certain lines are air free.

L = Line Length in Feet H = Head in feet Q = Firing rate in GPH

3/8" line  $L = \frac{6 - .75H}{.0086 Q}$       1/2" line  $L = \frac{6 - .75H}{.00218 Q}$

If tank is above pump, change - to +. Fittings, valves, and filters will reduce total length allowed.

**TWO-PIPE SYSTEM • MODEL A AND B**

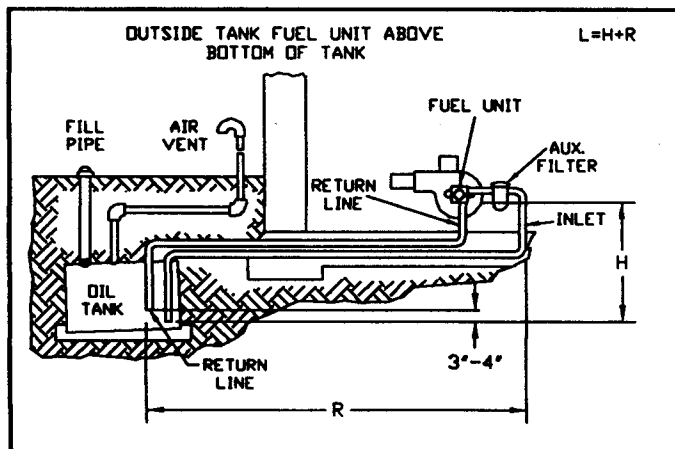


FIGURE 5

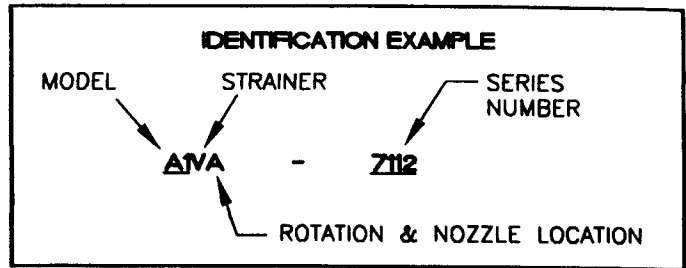
Always terminate return line as shown in Figure 5. Line lengths include both vertical and horizontal lengths.



2210 Harrison Avenue  
P.O. Box 7010  
Rockford, Illinois 61125-7010  
(815)226-3700

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**PUMP USAGE IDENTIFICATION**



A		
MODEL	MAX. NOZZLE CAPACITY (GPH) AT 100 PSI	RPM
A2V-2000	3	3450
A1V-7100	3	1725
A2V-7100	3	3450
A2V-7400	3	3450
A1Y-7900	7	1725
A2Y-7900	7	3450

B		
MODEL	MAX. NOZZLE CAPACITY (GPH) AT 100 PSI	RPM
B1V-8200	3	1725
B2V-8200	3	3450
B1Y-8900	7	1725
B1Y-8900	7	3450

STRAINER TYPE	U.L. Strainer Rating (GPH)* #2 Fuel Oil
V	3
Y	7
T	23
G	34

DESIGNATOR	Rotation/Nozzle Location
A	RH/RH
B	RH/LH
C	LH/LH
D	LH/RH

\*Max. firing rate not to exceed max. nozzle capacity or strainer rating whichever is LESS. A greater firing rate requires a suitable external strainer.

ALL INSTALLATIONS SHOULD BE MADE WITH LOCAL AND NATIONAL CODES.

**A. SINGLE-STAGE • TWO-PIPE MAXIMUM LINE LENGTH (H + R)**

LIFT "H" Figure 5	1725 RPM		3450 RPM			
	3/8" OD Tubing	1/2" OD Tubing	3/8" OD Tubing		1/2" OD Tubing	
	3 GPH	3 GPH	3 GPH	7 GPH	3 GPH	7 GPH
0'	86'	100'	84'	71'	100'	100'
1'	80'	100'	78'	66'	100'	100'
2'	75'	100'	73'	62'	100'	100'
3'	70'	100'	68'	57'	100'	100'
4'	64'	100'	63'	53'	100'	100'
5'	59'	100'	57'	48'	100'	100'
6'	54'	100'	52'	44'	100'	100'
7'	49'	100'	47'	39'	100'	100'
8'	43'	100'	42'	35'	100'	100'
9'	37'	100'	36'	31'	100'	100'
10'	32'	100'	31'	27'	100'	100'
11'	26'	100'	26'	22'	100'	87'
12'	21'	85'	21'	18'	83'	70'
13'	-	63'	-	-	62'	52'
14'	-	42'	-	-	41'	35'

**B. TWO-STAGE • TWO-PIPE MAXIMUM LINE LENGTH (H + R)**

LIFT "H" Figure 5	1725 RPM				3450 RPM			
	3/8" OD Tubing		1/2" OD Tubing		3/8" OD Tubing		1/2" OD Tubing	
	3 GPH	7 GPH	3 GPH	7 GPH	3 GPH	7 GPH	3 GPH	7 GPH
0'	100'	91'	100'	100'	93'	80'	100'	100'
2'	100'	83'	100'	100'	85'	73'	100'	100'
4'	89'	75'	100'	100'	77'	66'	100'	100'
6'	80'	67'	100'	100'	69'	59'	100'	100'
8'	70'	59'	100'	100'	60'	52'	100'	100'
10'	61'	51'	100'	100'	52'	45'	100'	100'
12'	51'	43'	100'	100'	44'	38'	100'	100'
14'	41'	35'	100'	100'	36'	31'	100'	100'
16'	32'	27'	100'	100'	27'	24'	100'	100'
18'	22'	-	88'	74'	-	-	76'	65'