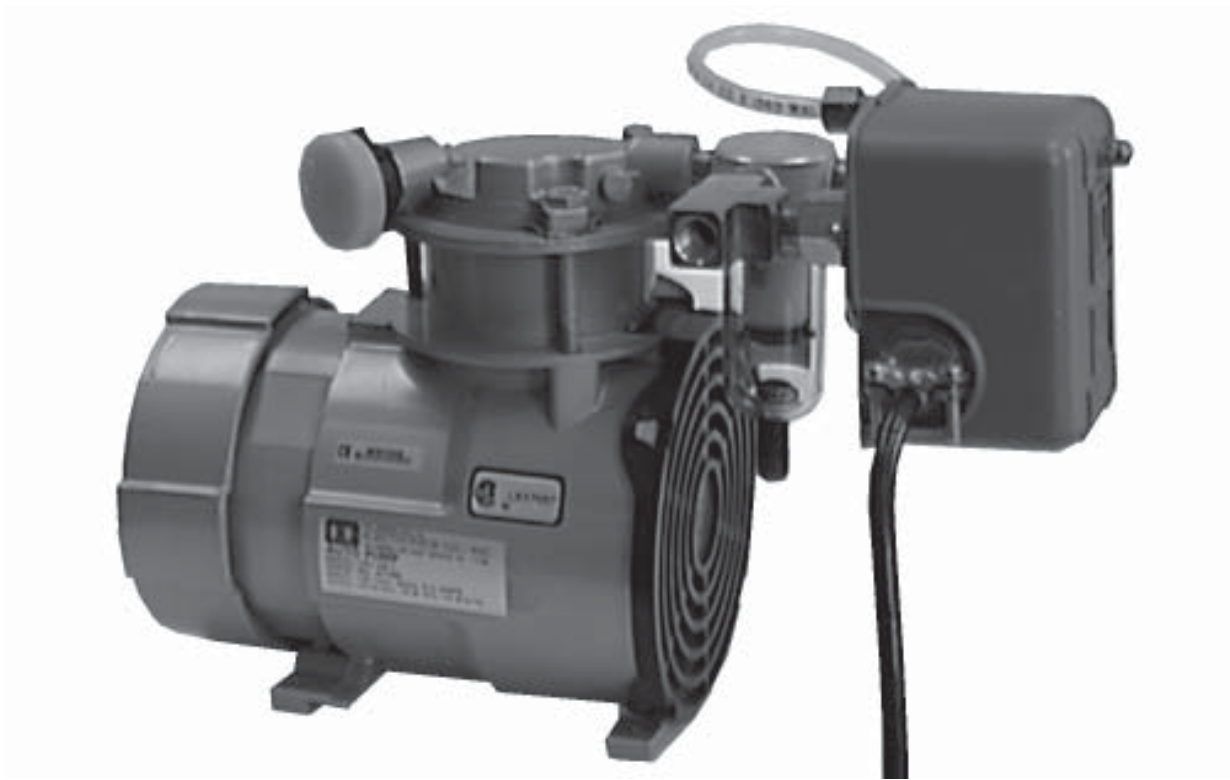


INSTRUCTION MANUAL

AUTO-PUMP[®]

220/240 VAC
AIR COMPRESSOR SYSTEM
MODEL # 091-9B-220



INPUT :220/240 volt, 50/60 Hz, 1.9/2.2 AMPS
OUTPUT: 100 PSI MAXIMUM

1 YEAR WARRANTY



KUSSMAUL ELECTRONICS CO., INC.
170 CHERRY AVE., WEST SAYVILLE, N.Y. 11796

INTRODUCTION

The 091-9B-1 Auto-Pump Air Compressor system is a 220/240 volt 50/60 Hz shaded pole A.C. motor operating a single cylinder air compressor designed specifically for installation on vehicles with air brakes . During long idle periods of the vehicle when even the slightest seepage can cause an air brake system pressure to drop below the brake lockup pressure, the Auto Pump automatically starts to maintain the pressure.

The Auto Pump motor is directly coupled to the compressor section eliminating all belts and pulleys assuring long life and reliable operation . A heavy duty pressure switch is adjusted to start the compressor when the system pressure drops below 70 psi and stops the compressor when 90 psi is attained . The start up pressure is field adjustable - the pressure differential between start up and stopping is fixed.

A moisture trap is mounted on the Auto Pump. This captures any condensate which results from compressing the air. In addition, the moisture trap in combination with the check valve and the unloader on the pressure switch permits the Auto Pump to start "unloaded". This reduces the load on the motor and permits starting at the higher system pressures.

Please read and follow the installation instructions carefully . The Auto Pump requires no routine maintenance . A careful installation will assure years of trouble free operation.

NOTE

**THIS PUMP REQUIRES A MINAMUM OF 220 VOLTS FOR
OPERATION AT LOWER VOLTAGES THE PUMP WILL NOT START**

CAUTION

**NO CONDENSATE OR
WATER MUST BE ALLOWED
TO ENTER OR ACCUMULATE
IN THE OUTPUT
OF THE AUTO PUMP.
ROUTE OUTPUT PRESSURE
LINE DOWNWARD FROM
AUTO PUMP TO PERMIT
MOISTURE TO DRAIN AWAY.**

**WATER IN THE PUMP
OUTLET WILL INDUCE**

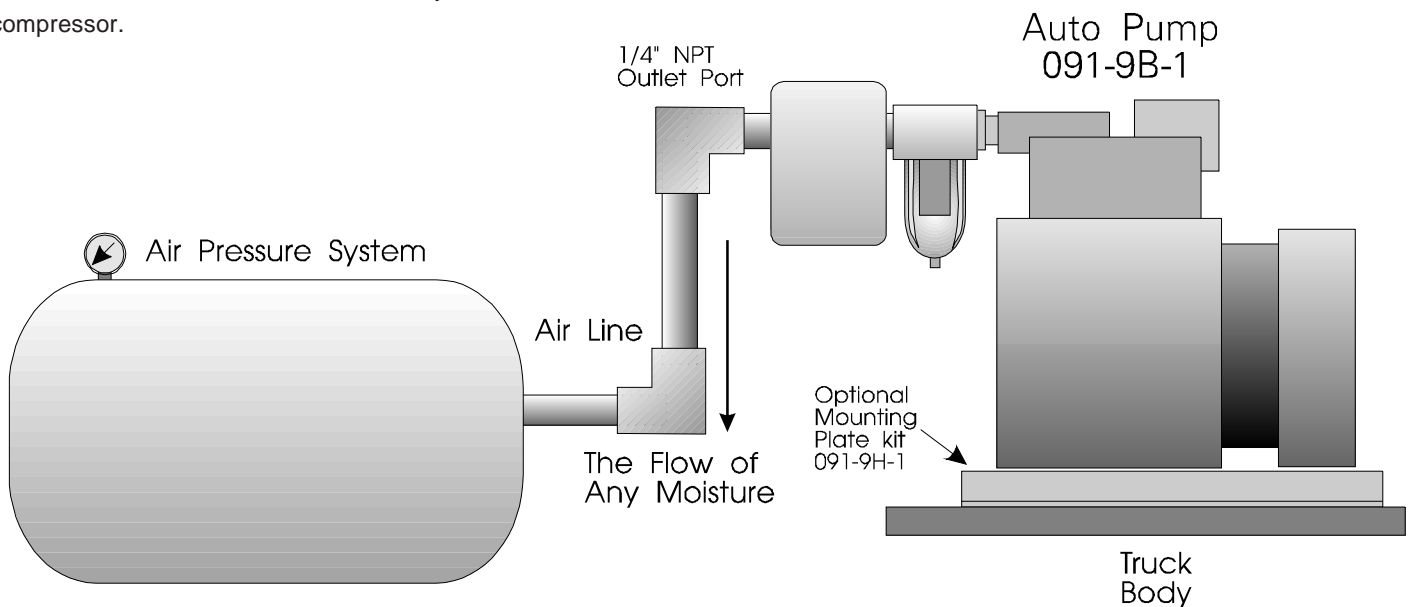
FAILURE !

**WATER DAMAGE WILL
VOID WARRANTY**

VEHICLE TUBING INSTALLATION

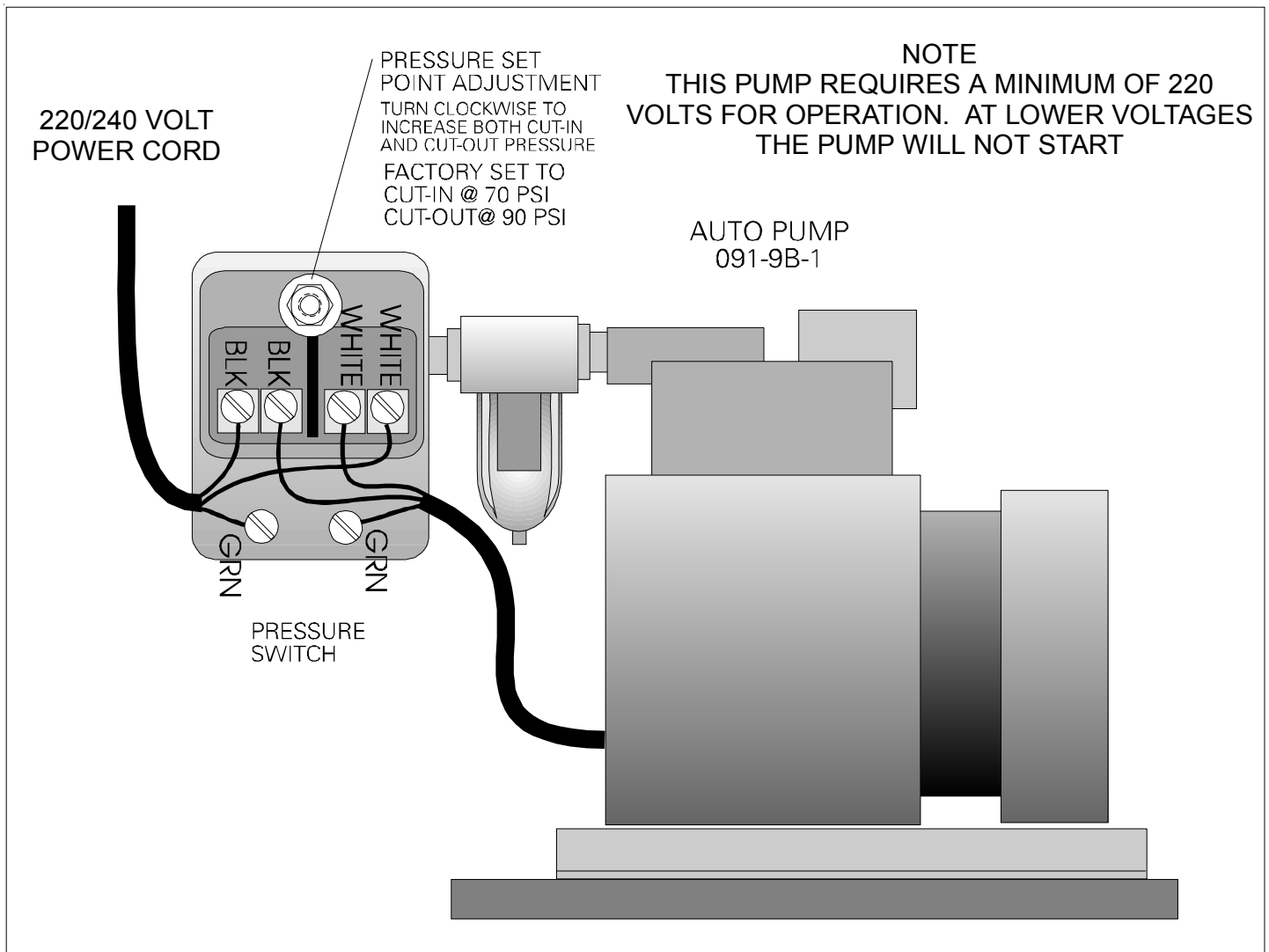
1. Mount all components in a suitable location, preferably in a high area above the air system . Do not mount in engine compartment or near any source of heat or dirt . The system may be connected to any point in the vehicle's air system .
2. Mount air compressor in a vertical position as shown.
3. **CAUTION** no condensate or water must be allowed to enter or accumulate in the output of the Auto Pump . Route output pressure line downward from Auto Pump to permit moisture to drain away . **Water in the pump outlet will induce failure .**
4. All connection for air lines are 1/4" NPT . Use Teflon tape, or equivalent on all connections to insure no leakage of air.
5. The recommended installation of the Auto Pump air compressor system is shown below.
6. Note that an external check valve is located beteen the compressor and the pressure switch. no additional check valve is required.
7. Mount the air compressor. Connect a suitable piece of flexible tubing from the outlet port of compressor to the air tank . (Tubing and connectors are not supplied .)
8. An optional Mounting Plate 091-9H-1 is available to reduce any vibration and noise from Auto Pump and to simplify pump mounting.

NOTE: Compressor must be mounted above air tank to assure that moisture will flow away from compressor.



VEHICLE WIRING INSTALLATION

1. The Auto Pump is supplied with a 220/240 volt A.C. line cord and is ready to operate. The line cord may be plugged into an available outlet or the cord may be cut and permanently wired to the 220/240 volt A.C. system in the vehicle.
2. The compressor is calibrated to cut-in at 70 PSI and cut-out at 90 PSI . For higher cut-in and cut-out, turn the range nut clockwise . To lower cut-in turn range nut counterclockwise . Do not exceed 100 PSI .



COMPRESSOR OUTPUT IS 100 PSI MAXIMUM. DO NOT EXCEED 100 PSI OR YOU WILL VOID WARRANTY.

SPECIFICATION & OUTLINE AUTO PUMP

Input : 220/240 volts A.C. 50/60 Hz, 1.9/2.2 amps

Weight: 13 lbs

Motor Horsepower: 1/8 HP

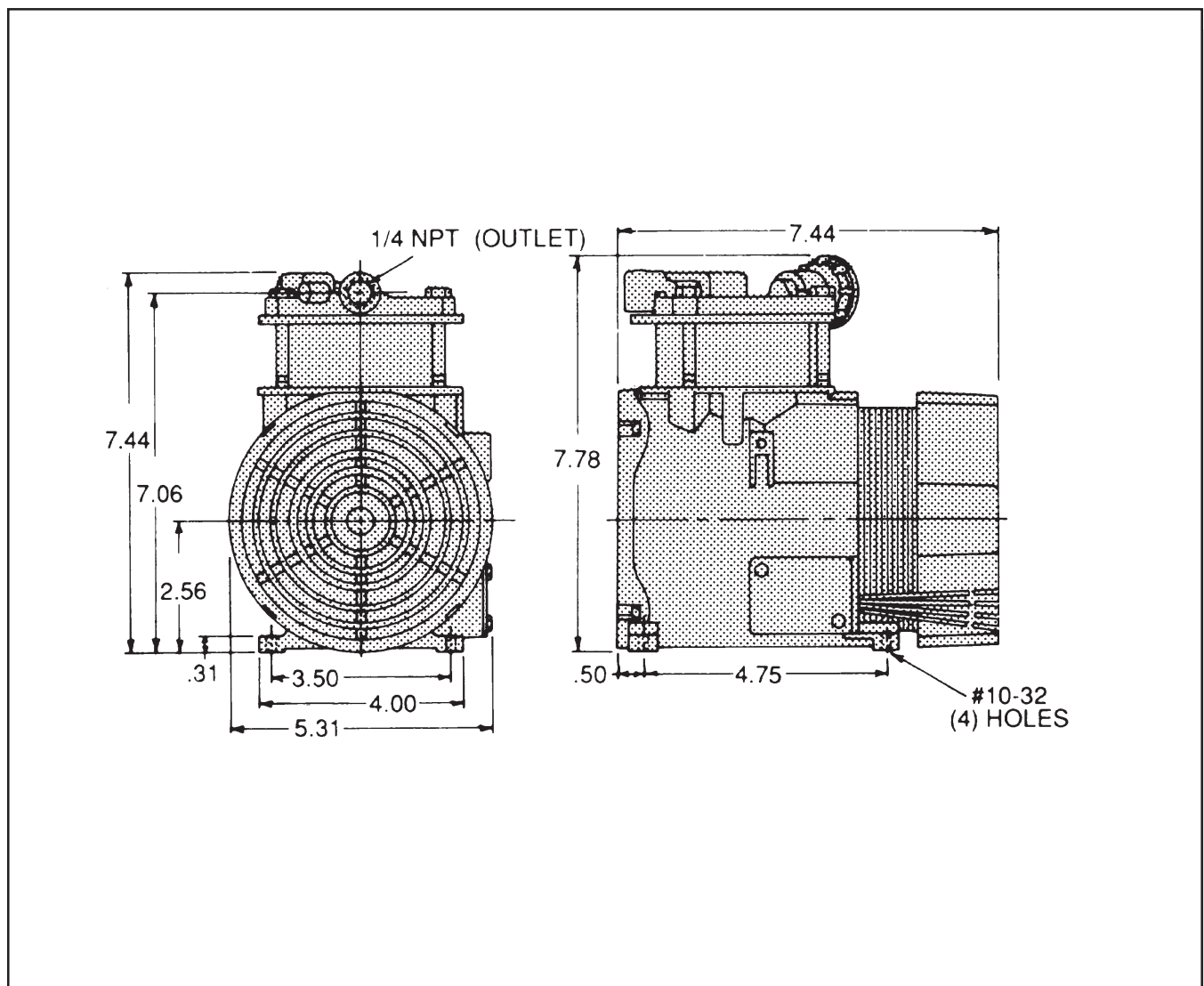
Motor Type: Shaded pole A.C.

Compressor Output: 0.76 CFM Open Flow, 100 PSI Maximum.

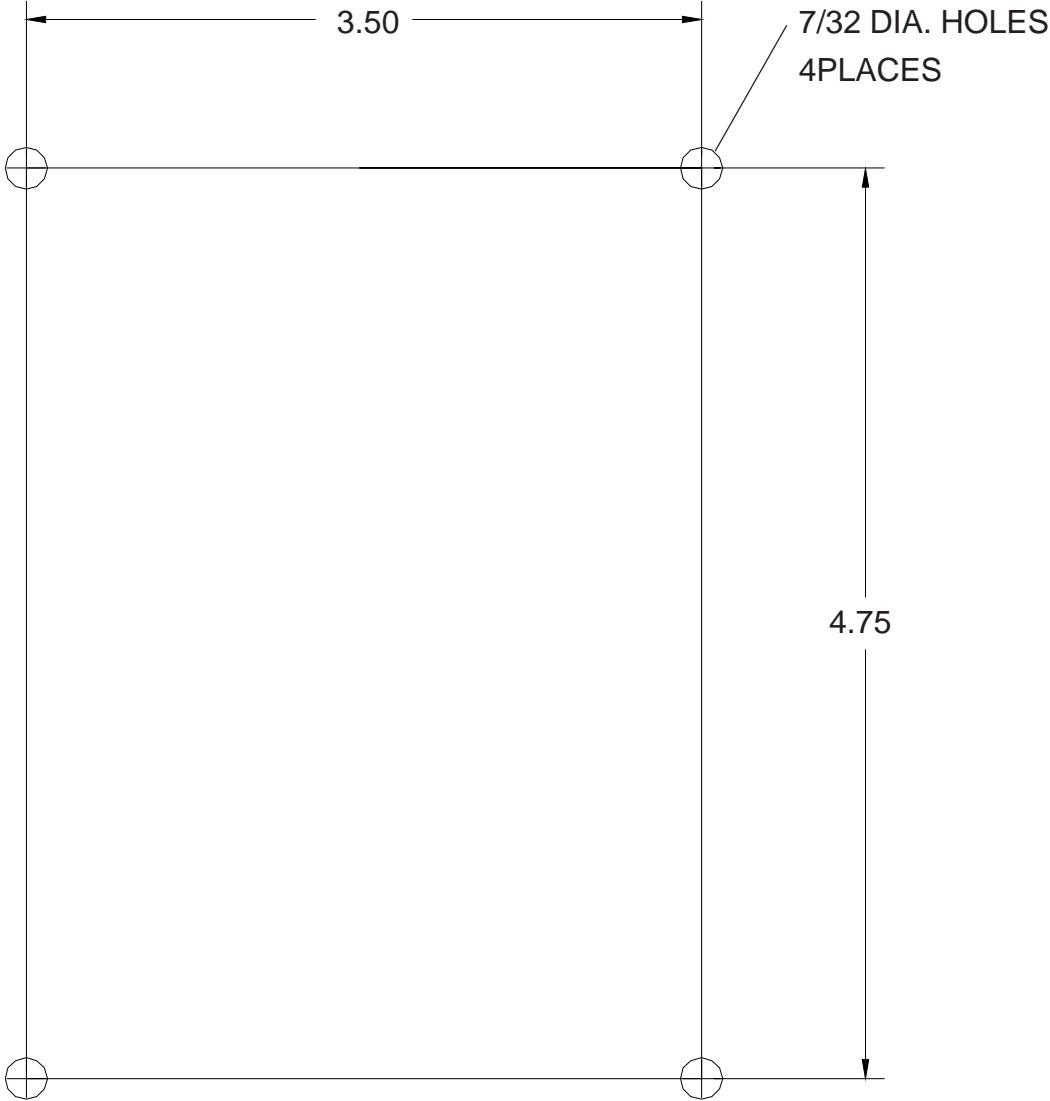
Pressure Switch: Adjustable Set Point-Factory
set to 70 PSI Cut-in, 90 PSI Cut-out

Switch Differential: 20 PSI Nominal

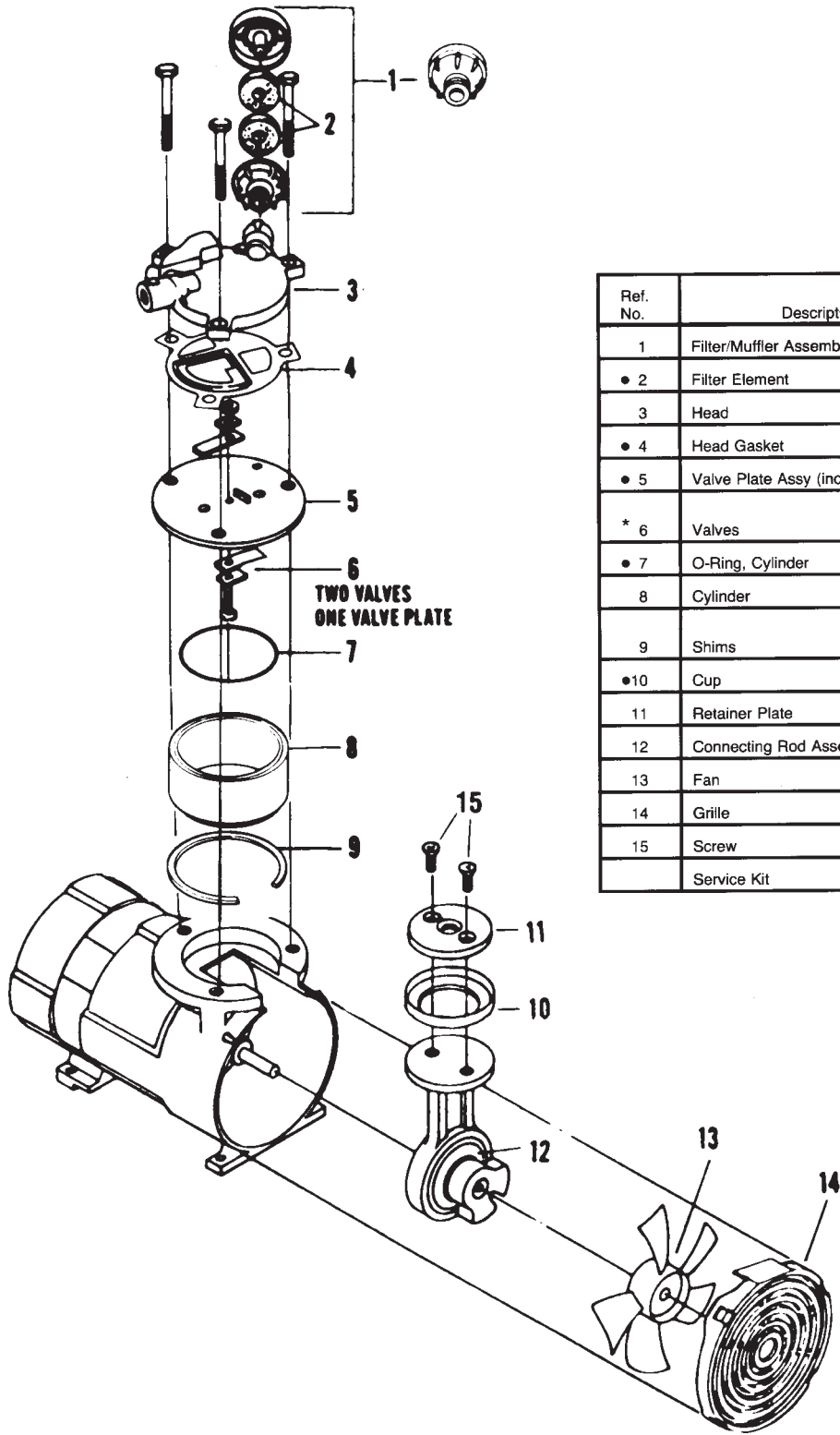
Outlet Connection: 1/4 NPT, Female



TEMPLATE AUTO PUMP

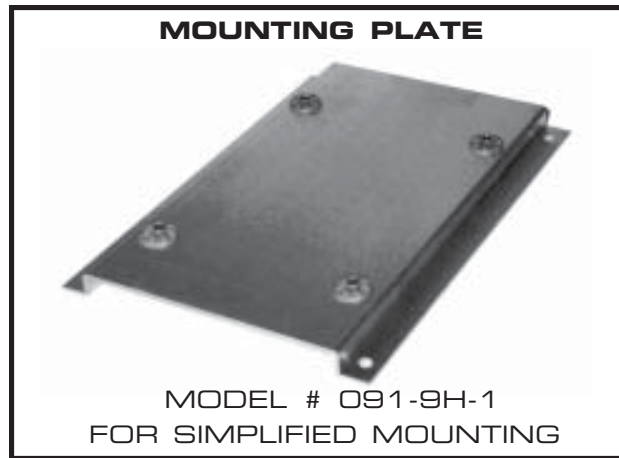


SPARE PARTS LAYOUT AUTO PUMP



Ref. No.	Description	Part Qty	Part #
1	Filter/Muffler Assembly	1	AH190
● 2	Filter Element	2	AA929
3	Head	1	AH722
● 4	Head Gasket	1	AH656
● 5	Valve Plate Assy (includes valves)	1	AH180
* 6	Valves	2	AF817
● 7	O-Ring, Cylinder	1	AH179
8	Cylinder	1	AJ342
9	Shims	As Req	AJ345
● 10	Cup	1	AH175
11	Retainer Plate	1	AH177
12	Connecting Rod Assembly	1	AH173
13	Fan	1	AF533
14	Grille	1	AH185
15	Screw	2	BB557
	Service Kit	1	K354

ACCESSORIES



AUTO PUMP REBUILDING KIT 091-9E IS AVAILABLE .

WARRANTY

All Auto Pumps of Kussmaul Electronics Company Inc. are warranted to be free of defects of material or workmanship. Liability is limited to repairing or replacing at our factory, without charge, any material or defects which become apparent in normal use within 1 year from the date the equipment was shipped. Equipment is to be returned, shipping charges prepaid and will be returned, after repair, shipping charges paid.

Kussmaul Electronics Company, Inc. shall have no liability for damages of any kind to associated equipment arising from the installation and /or use of the Kussmaul Electronics Company, Inc. products. The purchaser, by the acceptance of the equipment, assumes all liability for any damages which may result from its installation, use or misuse, by the purchaser, his or its employees or others.

CAUTION: WATER IN THE PUMP OUTLET
WILL INDUCE FAILURE

**WATER DAMAGE OR OPERATING AUTO
PUMP OVER 100 PSI WILL VOID WARRANTY**