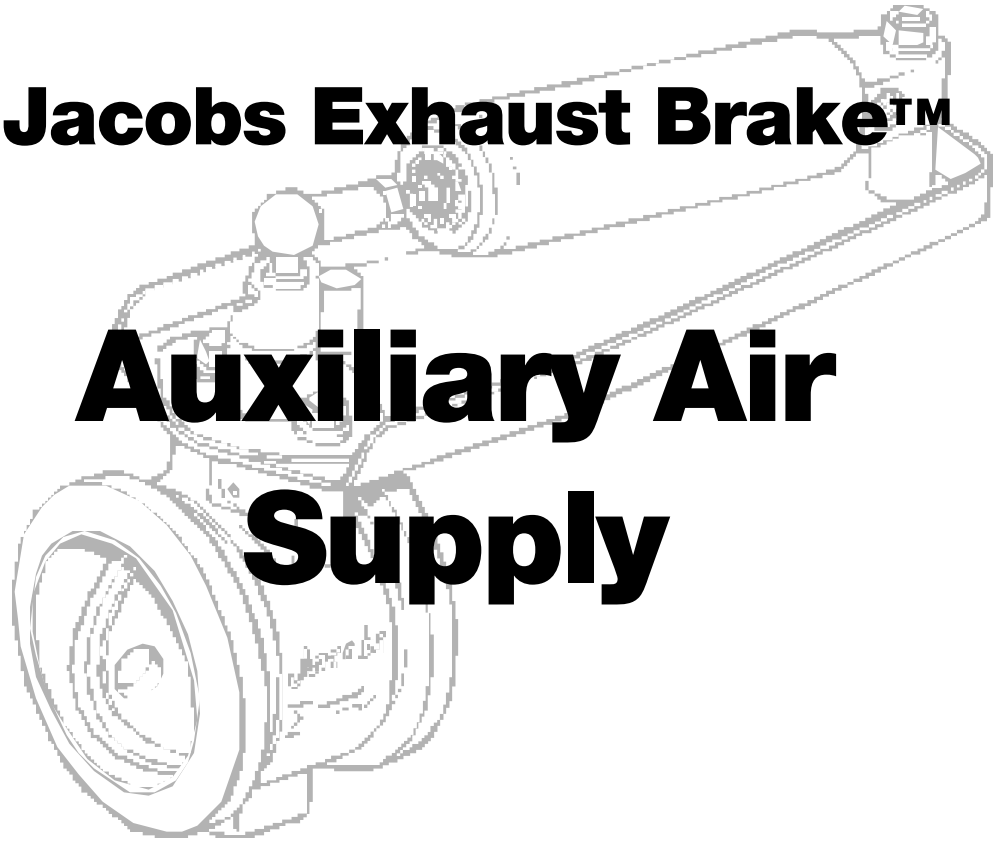
Jacobs Vehicle Systems™

PARTS/INSTALLATION

Jacobs Exhaust Brake™



Auxiliary Air Supply

P/N 019479F

Rev. 9/98

Installation Instructions

CAUTION MOUNT THE AIR COMPRESSOR AND RESERVOIR IN A SHELTERED LOCATION HIGH IN THE ENGINE COMPARTMENT WHERE THE COMPONENTS WILL BE PROTECTED FROM CONTAMINATION FROM CORROSIVE MATERIALS SUCH AS BATTERY ACID AND ESPECIALLY **ROAD SALT**. EXPOSURE TO THESE MATERIALS WILL RESULT IN PREMATURE FAILURE OF THE COMPRESSOR.

NOTE:

USE THE PNEUMATIC SCHEMATIC SHOWN IN FIG. A INSTEAD OF THE FIGURE SHOWN IN THE JACOBS EXHAUST BRAKE™ INSTALLATION MANUAL.

USE THE WIRING SCHEMATIC SHOWN IN FIG. B TO ELECTRICALLY CONNECT THE AIR COMPRESSOR AND ITS CONTROL COMPONENTS. THE EXHAUST BRAKE WIRING WILL BE THE SAME AS SHOWN IN THE JACOBS EXHAUST BRAKE INSTALLATION MANUAL.

USE A PIPE SEALING COMPOUND OR TEFLON TAPE ON ALL PIPE FITTINGS.

1. The Air Compressor, Jacobs P/N 019423, should be installed in a sheltered location in the engine compartment. Avoid excessive heat from the engine and exhaust system. Refer to Fig. C for the compressor mounting dimensions. Attach the compressor with suitable fasteners; #10 or M5 are recommended.
2. Mount the Air Reservoir, Jacobs P/N 019230, in a sheltered location. Use the attached bracket to bolt down securely. This bracket must be drilled to suit mounting location. Attach with suitable fasteners; 5/16 or M8 are recommended.
3. Install the Check Valve, Jacobs P/N 019486; Drain Valve, Jacobs P/N 019484; and Pressure Relief Valve, Jacobs P/N 019485, into the reservoir as shown in Fig. A. Ensure that the drain valve is positioned at the lowest level on the reservoir.

IMPORTANT!

TAKE CARE THAT THE CHECK VALVE, JACOBS P/N 019486, IS INSTALLED IN THE CORRECT DIRECTION. VERIFY THE POSITION BY LOCATING THE ARROW ON THE CENTER OF THE CHECK VALVE.

4. Now install the Pressure Switch, Jacobs P/N 019588, into the reservoir.
5. Make the remaining connections utilizing the fittings, air tubing and air hose supplied. Refer to the Jacobs Exhaust Brake Installation Manual for important guidelines and fitting assembly instructions.
6. Use the harness and relay supplied and wire the air compressor and pressure switch following the Wiring Schematic, Fig. B. The connections to the vehicle's 10-amp circuit breaker shown both in the Installation Manual and Fig. B may be connected to the same circuit breaker.

NOTE:

EXCEPT FOR THE CONNECTION DISCUSSED ABOVE, THE EXHAUST BRAKE WIRING AND AIR COMPRESSOR/PRESSURE SWITCH WIRING ARE SEPARATE AND INDEPENDENT.

NOTE:

THE AIR COMPRESSOR +12 VOLT SUPPLY IS OBTAINED FROM A DIRECT CONNECTION VIA A 25-AMP FUSE, JACOBS P/N 019940, TO THE VEHICLE'S 12-VOLT POWER BUS BAR OR THE ALTERNATOR'S (+VE) TERMINAL.

IMPORTANT!

These instructions are to be used together with the Installation Manual supplied with the Jacobs Exhaust Brake when installing the Pneumatic Group, P/N 019682, and Electrical Harness Group, P/N 019517.

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www.jakebrake.com

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Operational Test

NOTE:

THE AIR COMPRESSOR WILL OPERATE AS SOON AS THE VEHICLE IGNITION SWITCH IS TURNED ON AND PUMP THE RESERVOIR UP TO AN OPERATIONAL PRESSURE OF 80 TO 110 PSI (5.5 TO 7.6 BAR).

Turn on the ignition switch. The air compressor will start to operate and continue for approximately 30 to 40 seconds, after which it will turn off. The system is now at operating pressure. Actuate the exhaust brake several times; note that the air compressor comes on for a short period of time, approximately 3 to 5 seconds, in order to maintain the system operating pressure.

This system is automatic and will always maintain the exhaust brake supply air pressure at a level that provides for rapid actuation of the exhaust brake when needed.

NOTE:

CHECK THE PNEUMATIC SYSTEM FOR LEAKS. ANY AIR LEAKS IN THE SYSTEM WILL CAUSE EXCESSIVE CYCLING OF THE AIR COMPRESSOR.

System Maintenance

IMPORTANT!

OPEN THE DRAIN VALVE ONCE A WEEK OR EVERY 1500 MILES (2400 KM), WHICHEVER OCCURS FIRST, TO DRAIN OFF ACCUMULATED MOISTURE.

Pneumatic Group

P/N 019482

Ill. No.	Part Number	Description	Quan.
1	019230	Air reservoir	1
2	019423	Air compressor	1
	020457	**Pneumatic Subgroup**	**1**
3	019304	• Solenoid valve assy.	1
4	018910	• Air brake tube	1
5	018916	• Air brake hose	1
	020456	• **Air Supply Subgroup**	**1**
6	019484	- Drain valve	1
7	019485	- Pressure relief valve	1
8	019486	- Check valve	1
9	019588	- Pressure switch	1
	019514	• **Fittings Subgroup**	**1**
10	018909	- Compression fitting	2
11	018912	- Compression fitting	2
12	018914	- 45° flared elbow 1/8 NPT	1
13	018915	- Hose fitting assy.	2
14	019149	- 45° flared elbow 1/4 NPT	1
15	019150	- Adapter	1
16	019515	- Coupling	1
17	019516	- Bushing	1
	018969	• **Clamp Subgroup**	**1**
NI	018604	- Support clamp	5
NI	018920	- 1/4 - 20 x 1 hex nut	5
NI	018921	- 1/4 - 20 nut	5
NI	018922	- Plain washer	5
NI	018923	- Lock washer	5
18	Various	Exhaust brake assembly**	--

Fig. B
Wiring Schematic

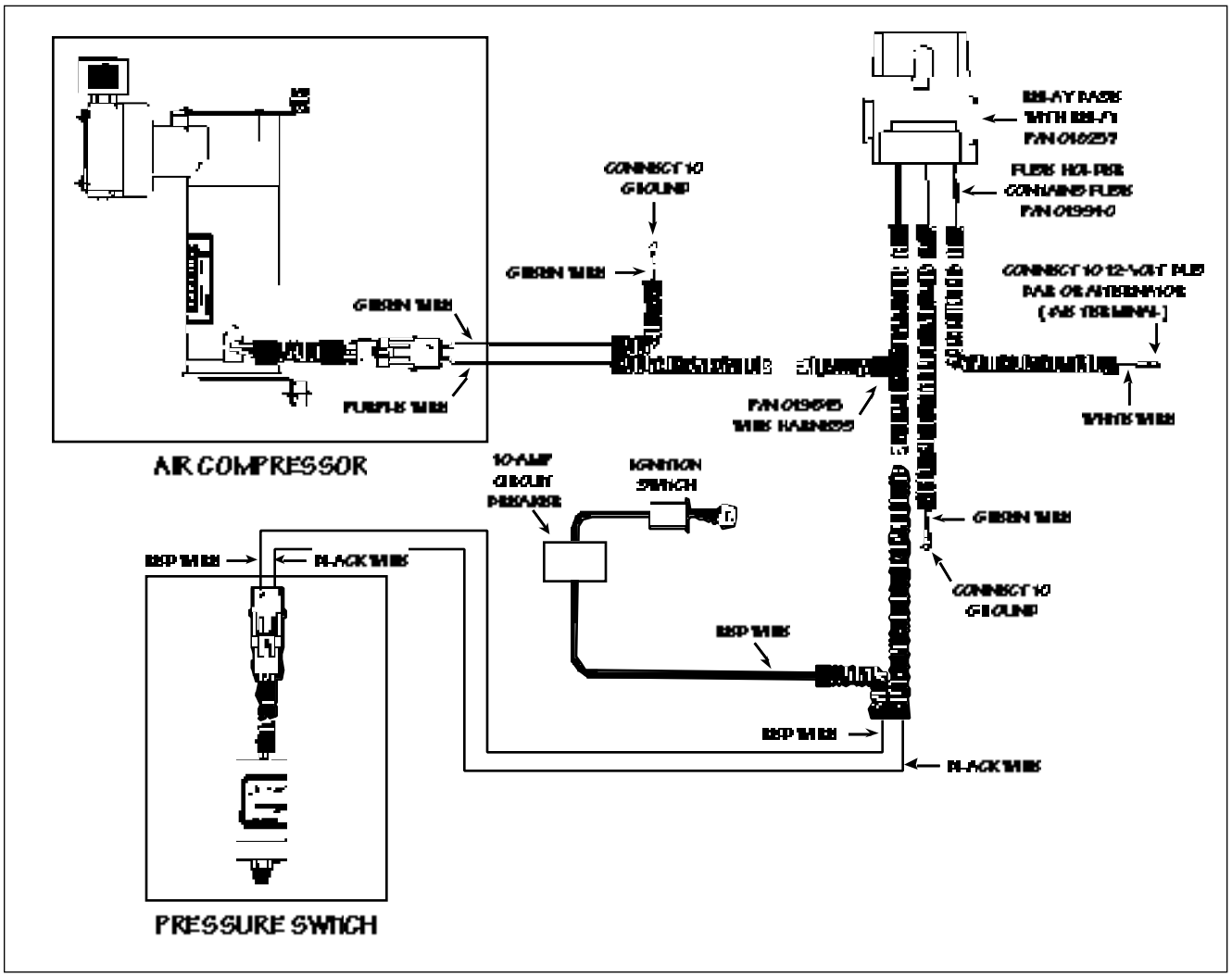
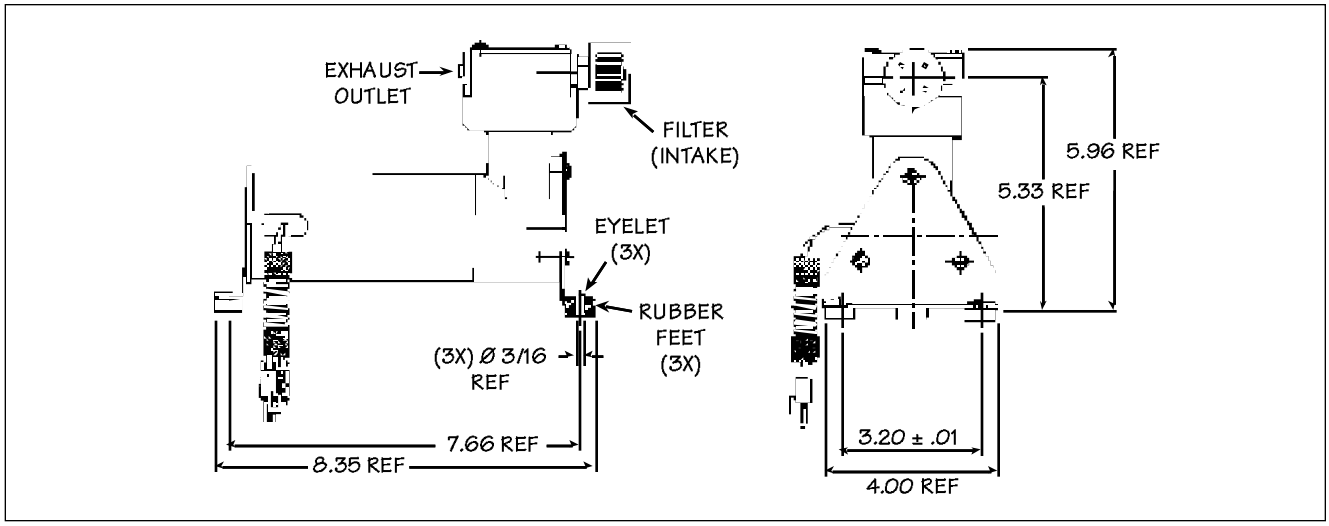


Fig. C
Compressor Mounting Dimensions



Electrical Harness Group

P/N 019517

Part Number	Description	Quan.
019645	Exhaust brake comp. harness	1
NSS	Wire harness group	1
018257	Relay, 12 VDC	1
006833	Tie clamp	10

NOTE:

THE PNEUMATIC GROUP, P/N 019482, AND THE ELECTRICAL HARNESS GROUP, P/N 019517, ARE SOLD SEPARATELY. PLEASE USE BOTH PART NUMBERS WHEN PLACING YOUR ORDER.

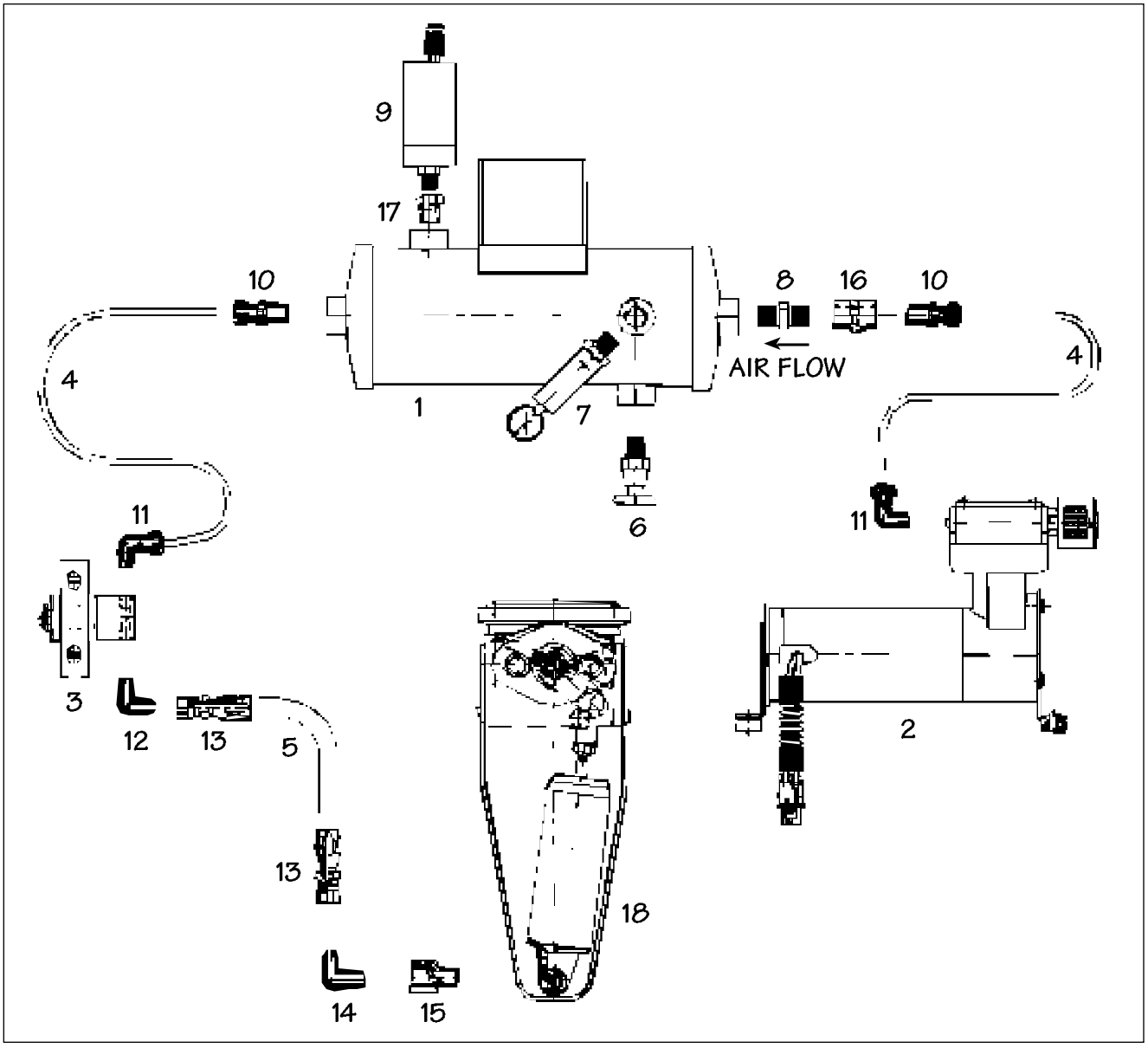


Fig. A
Pneumatic Schematic

NSS = NOT SOLD SEPARATELY