

Installation, Maintenance and Inspection

General

The Haldex CONSEP, Figure #1, is designed to condense, separate and expel the majority of the oil and water before reaching the air dryer. The contaminants accumulate in the sump area of the CONSEP. An integral part of the CONSEP unit is the Haldex Automatic Drain Valve; Figure #2. The contaminants are automatically drained upon each brake application.

Installation

The CONSEP must be mounted in the air line between the compressor and the air dryer. It must be mounted as close as possible to the air dryer; if equipped. The CONSEP inlet temperature should not exceed 150°F. This can normally be achieved with at 12' compressor discharge line. For severe service it may be necessary to add a portion of metal piping to achieve the 150°F inlet.

1. Block tires to prevent vehicle from rolling. Release all air from the air system.
2. Using the "H" mounting bracket as a template, mark the mounting hole locations on a suitable plate or frame member and drill 3/8" dia. holes for 5/16" bolts. Assemble the "H" mounting bracket and bolts, (see Figure #4) then mount CONSEP with the enclosed lock nuts and torque to 20 ft. lbs. Damage will occur if over torqued.
3. The compressor discharge line is connected to the side inlet port of the CONSEP (1/2" - 14 NPTF). The top outlet port is connected to the air dryer; Figure #1.
4. Electrical Connections. See Figure #4. Mount the relay in a water protected area. With spade connectors and 14-16 gauge wire, connect terminal #86 on the relay to a chassis ground. Connect terminal #30 to an ignition switched circuit. Locate the existing brake light switch. Determine which terminal on the switch is "hot" when the brakes are applied and connect to terminal #85. From terminal #87a (heated mode) route a wire to the automatic drain valve. If vehicle is operating in an area where air system freezing is not a concern, use terminal #87 (unheated).
5. The pigtail connector at the drain valve is equipped with either a "Packard Weather-Pack", "Metri-Pack" or sealed butt connector; see Figure #4.

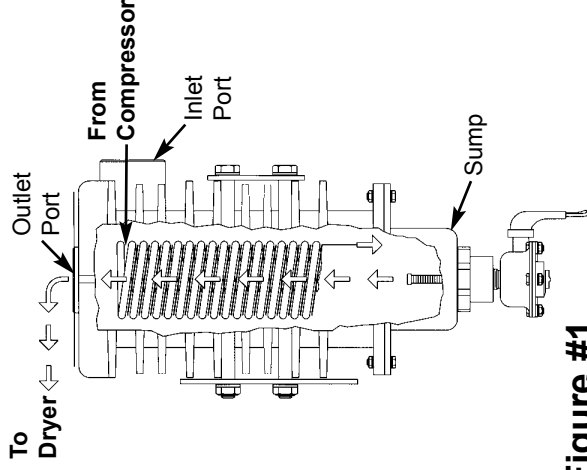


Figure #1

Maintenance

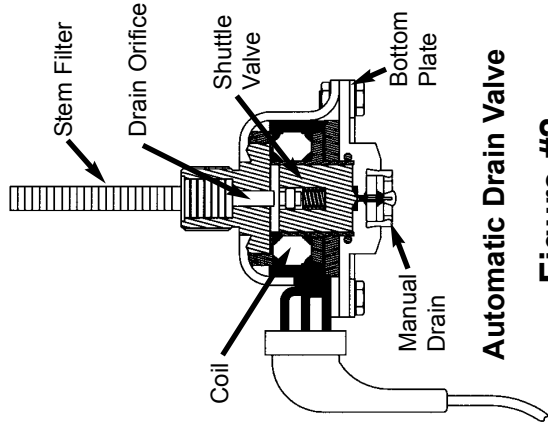
The CONSEP must be inspected periodically for proper operation. The interval between inspections is determined by the type of service. High compressor duty cycles and high temperatures can cause a buildup of carbon in the condenser, drain valve and filter. This contamination must be removed for proper operation.

Recommended Service Intervals

24 months....Light Duty, Over-The-Road Tractor Trailer Operation
12 months....Medium Duty, City Delivery
6 months.....Heavy Duty, Refuse Service, City Transit

Inspection

1. Check connections at CONSEP for air leaks during the compressor loading cycle by applying soap solution around pipe fittings. Check bottom of drain valve for air leaks around manual drain port. (see Figure #2)
2. With ignition switch on and compressor pumping, apply brakes and release. After each brake application and release, an audible "click" will be heard at the drain valve and a slight puff of air will be expelled. If valve does not operate, check electrical wiring for correct voltage (brakes applied). Insure that the voltage matches the voltage mentioned on the drain valve label. If there is no current, check the electrical circuit at Haldex relay and brake light switch. If electrical circuit is OK and the valve does not discharge, the unit must be serviced.



Automatic Drain Valve

Figure #2

Servicing the Unit

1. Disconnect the electrical connection; Figure #4.
2. Unbolt the sump area from condenser and remove internal separator from inside condenser body.
3. Unbolt the bottom plate of drain valve and remove shuttle valve; Figure #3.
4. Clean and inspect all parts for damage, contamination and corrosion. Clean automatic drain valve filter and blow dry with compressed air; do not remove filter from sump area. If any parts are found to be worn or damaged the unit can be rebuilt with the repair kits listed below.
5. If no damage is found, reassemble the unit and re-test.

Part Numbers & Repair Kits

CONSEP Assemblies:

"Packard Weather-Pack" Connector . . .12 volt	#412-10025
"Packard Weather-Pack" Connector . . .24 volt	#412-10028
Sealed Butt Connector12 volt	#412-10026
Sealed Butt Connector24 volt	#412-10029
"Metri-Pack" Connector12 volt	#412-10027
"Metri-Pack" Connector24 volt	#412-10030

CONSEP Repair Kits (See Fig. #3)

Kit 1 - Contains Plastic Insert and "O" rings . . .	#412-77322
Kit 2 - Contains: Shuttle, "O" rings, mounting bolts and filter.	#412-90364

12 Volt Relay	#411-76282
24 Volt Relay	#411-76281

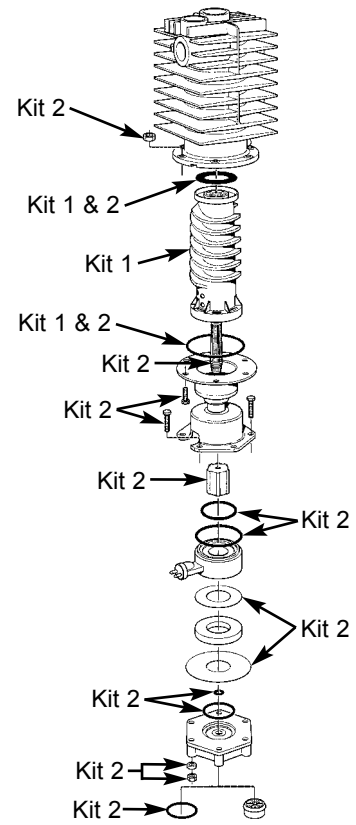


Figure #3

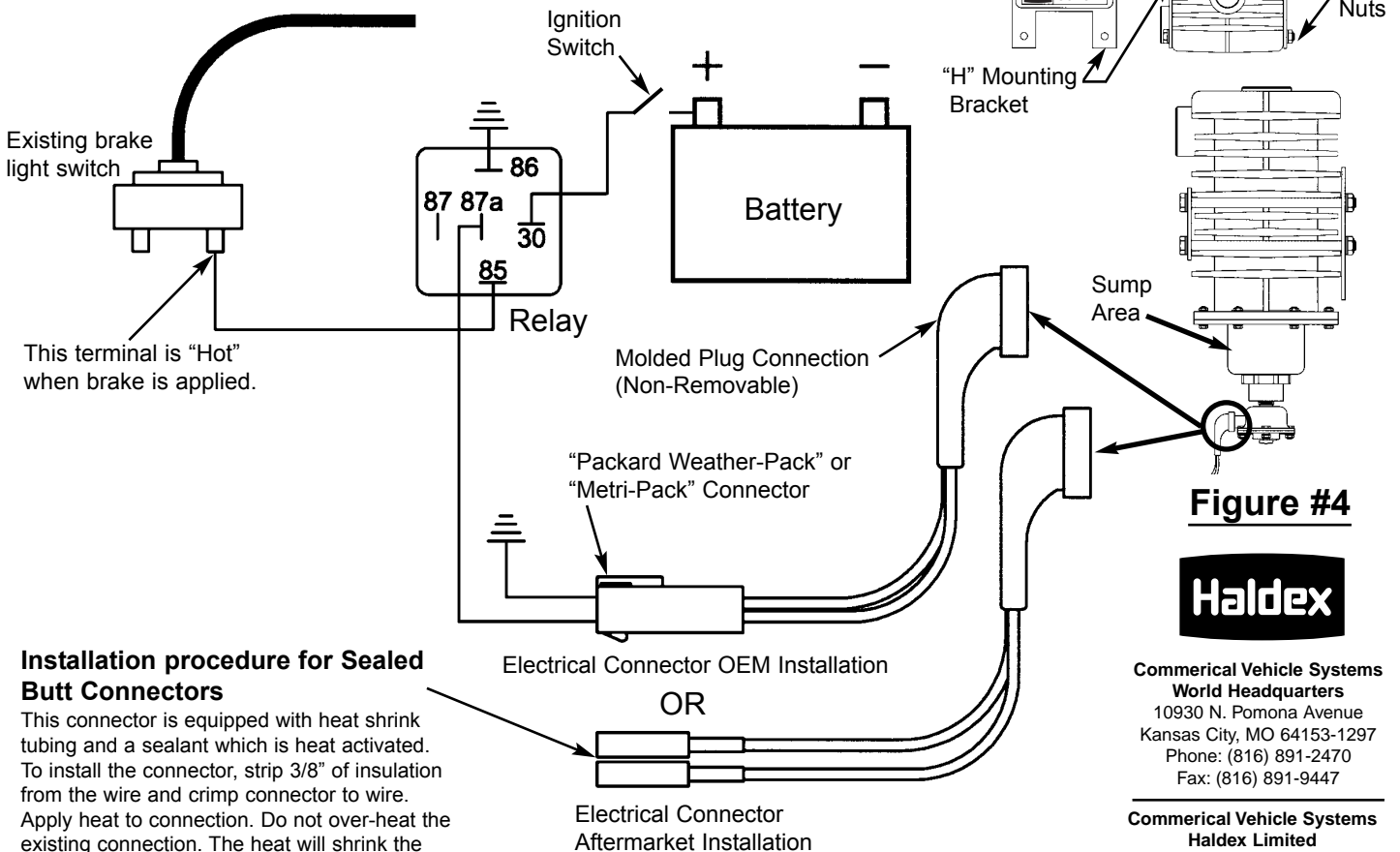


Figure #4

Installation procedure for Sealed Butt Connectors

This connector is equipped with heat shrink tubing and a sealant which is heat activated. To install the connector, strip 3/8" of insulation from the wire and crimp connector to wire. Apply heat to connection. Do not over-heat the existing connection. The heat will shrink the tubing and melt the sealant.



Commerical Vehicle Systems
World Headquarters
 10930 N. Pomona Avenue
 Kansas City, MO 64153-1297
 Phone: (816) 891-2470
 Fax: (816) 891-9447

Commerical Vehicle Systems
Haldex Limited
 525 Southgate Drive, Unit 1
 Guelph, Ontario CANADA N1G 3W6
 Phone: (519) 826-7723
 Fax: (519) 826-9497

www.hbsna.com