

Installation

MANUAL

PACBRAKE[®]
ENGINE & EXHAUST BRAKES



PRXB For HINO Trucks

EXHAUST BRAKE

PRXB Application:

HINO TRUCKS

Equipped With:

**J08E-TA/B 6 cylinder & J05D-TA 4 cylinder engines
without an existing air source**

Getting Started

Before starting, be sure you have attained the proper exhaust brake kit for your application. Below is a listing of the Pacbrake kit part numbers and description to determine the correct application.

C40012 - 4 cylinder Hino trucks with standard transmission without an existing air source

C40013 - 6 cylinder Hino trucks with an existing air source

C40014 - 6 cylinder Hino trucks without an existing air source

NOTE: These Pacbrake exhaust brakes are designed for Hino Trucks equipped with J08E-TA/B and J05D-TA diesel engines. The exhaust brakes are preset at Pacbrake to Hino's maximum allowable back pressure. Please verify your engine model number to avoid misapplication.

NOTE: The engine's ECU requires the exhaust brake circuit be enabled by a Hino dealer.

Before starting, check that your kit contains everything shown in the photo.

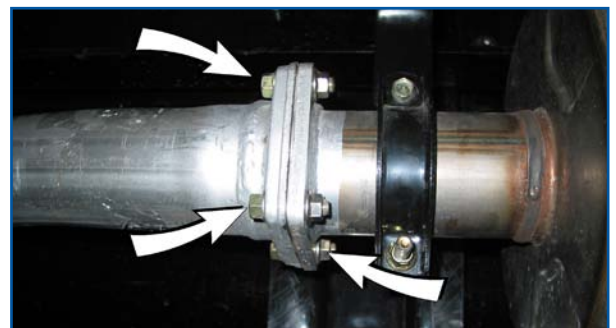
KIT FOR 4 CYLINDER VEHICLES USING PACBRAKE AIR SUPPLY



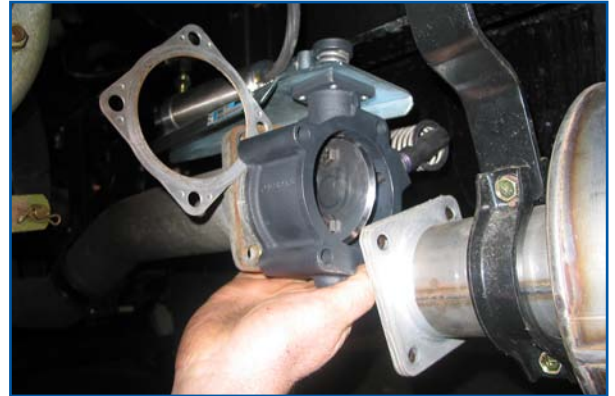
KIT FOR 6 CYLINDER VEHICLES USING PACBRAKE AIR SUPPLY



- 1 Remove the 4 fasteners at the exhaust connection in front of the muffler. Using the offset muffler hangers supplied to replace the factory hangers, relocate the muffler 2.5 inches towards the rear of the vehicle, this will allow for the Pacbrake exhaust brake. Two socket head shoulder bolts are supplied for the replacement muffler hangers.



- 2** Clean the gasket material from both exhaust flanges in order to provide a leak free seal. Install the 90° fitting into the air cylinder using thread sealant. Install the Pacbrake exhaust brake using the new gasket supplied between the header pipe and the exhaust brake housing. Reuse the original gasket between the exhaust brake and the muffler side flange. Using the fasteners supplied, torque fasteners to 38 ± 7 lbs. ft. (51 ± 9 N•m). Please note the position of the installed Pacbrake, the air cylinder is pointed forward.



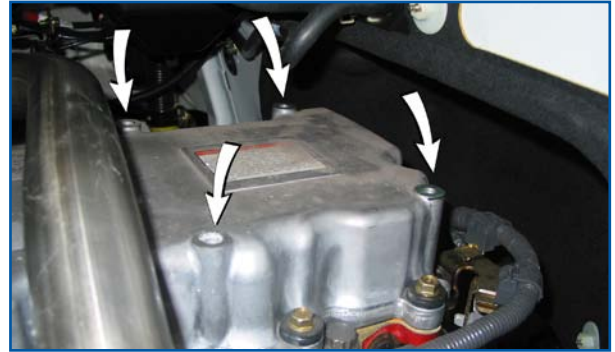
- 3** A length of nylon airline is supplied to connect the air cylinder to the solenoid. Connect one end of the nylon hose to the 90° fitting and route the other end to the engine compartment. The pneumatic cylinder requires a remote breather, supplied in the kit is a length of rubber breather hose. Connect this line to the barbed fitting on the rod end of the cylinder, secure using a tie-strap. Route the hose to the engine compartment, avoid overtightening the tie-straps and sharp bends in the line which could restrict air flow.



NOTE: When routing the hoses care must be taken to keep hoses a minimum of 8" from the exhaust system.

4 Cylinder Vehicles Using Pacbrake Compressor Assembly

- 4** Locate the 4 threaded bosses on the top rear portion of the valve cover.

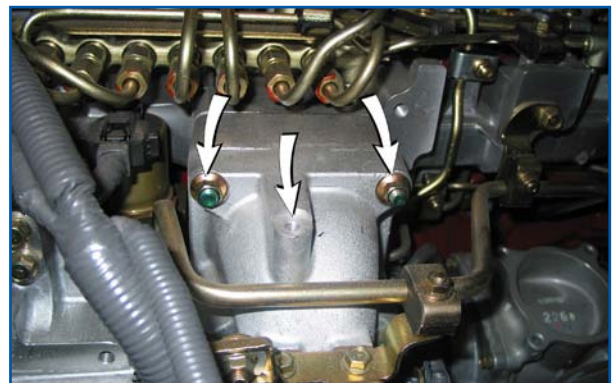


- 5** Using the 4 spacers provided, place one spacer on each of the 4 bosses. Install the 4 capscrews provided into the compressor bracket and place it over the spacers. Tighten the 4 capscrews to 15 lbs. ft. Connect the black compressor wire with the eye terminal to a good chassis ground, **DO NOT** attach it to the valve cover. A good ground location is the stud with nut on the firewall.



6 Cylinder Vehicles Using Pacbrake Compressor Assembly

- 6** For compressor mounting, locate the two nuts at the top of the air intake pipe on the drivers side and remove. Set the spacer provided on the threaded boss shown. Install two of the four washers supplied on each stud. Then, install the compressor bracket on the studs using the original nuts. Install capscrew protruding from compressor assembly through the spacer into the threaded boss. Tighten the nuts and then the capscrew.



- 7** The compressor ground wire should be attached to a good engine ground location. A good ground location is the stud with nut on the firewall.



All Vehicles Using Pacbrake Compressor Assembly

- 8** Locate the end of the nylon airline installed in step 3 from the air cylinder. Connect to the port on the solenoid marked "CYL". Locate the end of the rubber air cylinder breather line installed in step 3. Route it to the Pacbrake air compressor. The compressor assembly has an exposed barbed leg on the tee fitting to accept the breather hose, install the hose and secure with the tie-straps provided. Do not overtighten tie-straps.



Electrical Installation, All Vehicles

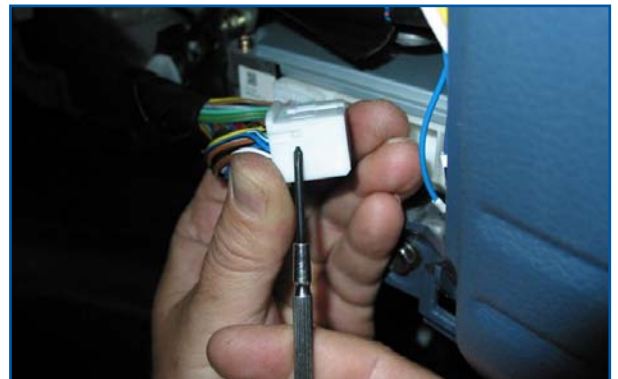
NOTE: Disconnect the batteries before removing the connectors from the ECU.

LOCATE THE WIRING SCHEMATIC ON PAGE 8 .

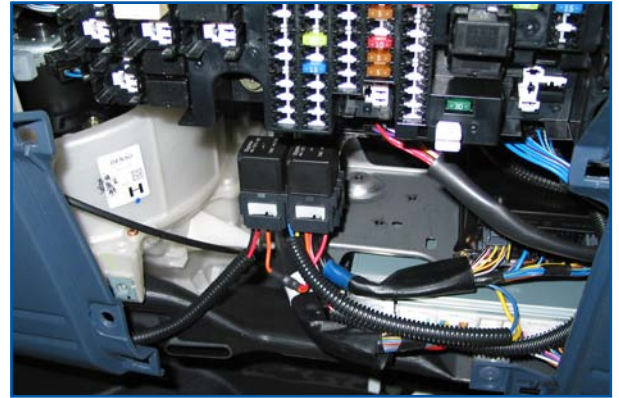
- 9** Remove the fuse panel cover on the passenger side of the dash. The engine ECU is the lower unit, the ABS ECU is above the engine ECU. Dash switch installation, choose a spare location that is convenient for the driver to access, remove the blank plate. Locate the dash switch harness supplied in the kit, connect the wires as shown in the wiring schematic and install the switch. Locate a chassis ground stud for the BLACK wire, this is for the light in the switch. Route the harness across the dash to the fuse panel. Provided is a decal to identify the switch, peel the paper off the back of the decal and apply above or below the switch.



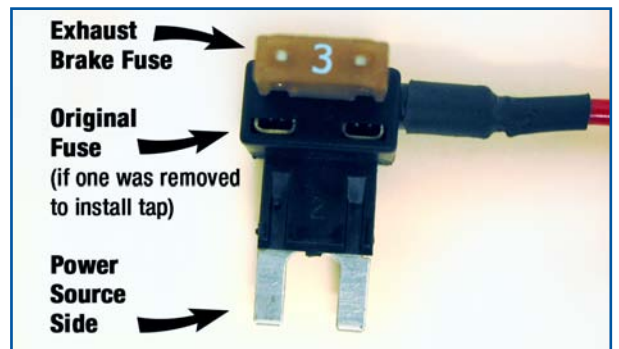
- 10** At the engine ECU, locate the connector shown in the electrical schematic. Remove the connector from the ECU. The connector locking device needs to be released before the Pacbrake terminals can be installed. A square hole exists in each side of the connector, insert a small screwdriver into the hole pushing against the tab, repeat on the opposite side, the terminal locking device should raise by 1 to 2mm but is not removable, this will allow the terminals to be installed. Insert the Green Pacbrake wire into port B15, the Black wire into Port B24 and the Blue wire into port B2. Once all three Pacbrake wires are installed, push the locking device down to lock the terminals in place. An audible click should be heard to ensure the locking device is locked. Install the connector back into the ECU.



11 Mount the relay receptacles to one of the ECU mounting bracket capscrews, a replacement capscrew is provided. All vehicles require two relays, one for throttle control and the other is for ABS (Anti-lock Brake System). A third relay is required for vehicles using Pacbrake remote air compressor.



12 At the fuse panel, locate the air dryer fuse location, it should be an ignition source and available to accept the fuse tap provided. The fuse tap must be installed in a certain manner for the fuse to protect the system. Using a test light, determine which terminal in the fuse panel is the ignition power input. The fuse tap terminal opposite the wiring harness side must be installed into the power source terminal for the fuse to be effective. If no empty ignition power locations are available in the fuse panel, choose an existing ignition circuit, remove the existing fuse, install the fuse tap, **install the original fuse in the lower position of the fuse tap.**



13 The ABS ECU has a Pacbrake disable circuit to turn the exhaust brake off in the event of wheel lock-up, therefore we must connect to the ABS ECU. Locate the ABS ECU in the ECU rack. Remove the 15 pin connector from the ABS ECU, pull the purple lock tab out allowing the terminal on the yellow wire to be installed in port 12 of the connector, then push the purple lock tab in to secure the terminal. Install the connector back into the ABS ECU.



Consult the electrical schematic on page 8 for the ABS connector numbering sequence.

14 Feed all the unconnected wires through the firewall boot in the upper passengers side of the firewall into the engine compartment. Some model trucks have firewall grommet near the accelerator pedal under the floor mat that can be used. Tape the firewall grommet to provide a water tight seal. Using the tie-straps provided secure the wiring harness and reinstall the dash panel.



- 15** Route the GRAY, GREEN and the 2 RED wires of the Pacbrake harness to the compressor assembly. The longer RED wire goes to the batteries on the drivers side. Connect the GRAY wire to the pressure switch, the GREEN wire to the solenoid and the short RED to the compressor. The terminals are filled with dielectric compound to prevent corrosion, cover the connectors with electrical tape. Using the loom and tie-straps provided protect and secure the harness.



- 16** Route the 10 ft. 14 gage RED wire from the firewall boot to the battery box on the drivers side. Supplied in the kit is an inline 30 amp fuse, connect the inline fuse to the RED wire. The terminal is filled with dielectric compound to prevent corrosion, cover the connector with electrical tape. Connect the eye terminal to the positive battery lead, the eye terminal should be placed under the larger terminal, torque nut to 10.6 +/- 2.2 lbs.ft. Cover the entire RED wire with loom and secure with tie-straps.



Congratulations, you have completed the Pacbrake installation.

Reminder....The exhaust brake circuit in the engine ECU will require it to be enabled.

Road Testing

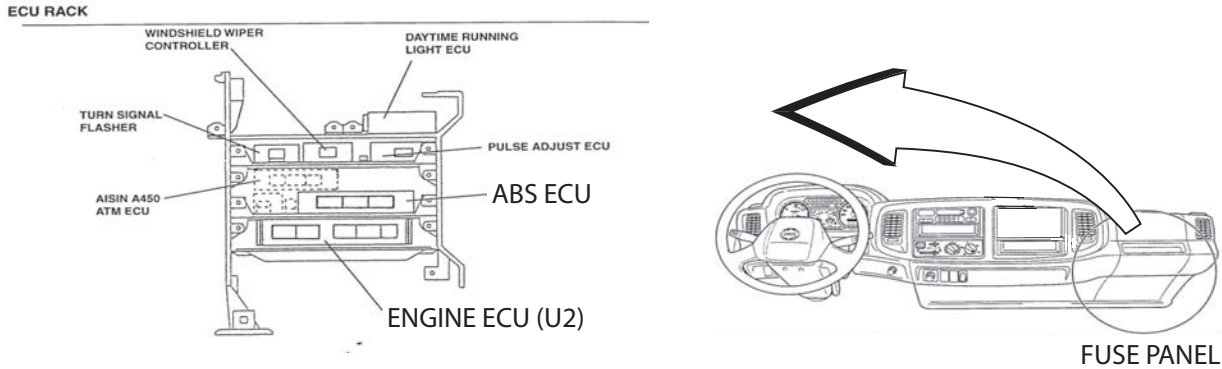
A road test should be performed to check the operation of the Pacbrake exhaust brake. Warm the engine to operating temperature, turn the Pacbrake dash switch to "ON". Attain road speed and release the throttle, the exhaust brake should apply slowing the vehicle. The ABS relay should disengage the Pacbrake if wheel skid occurs.

Vehicles equipped with Allison transmissions should automatically downshift to a lower gear when the Pacbrake is applied.

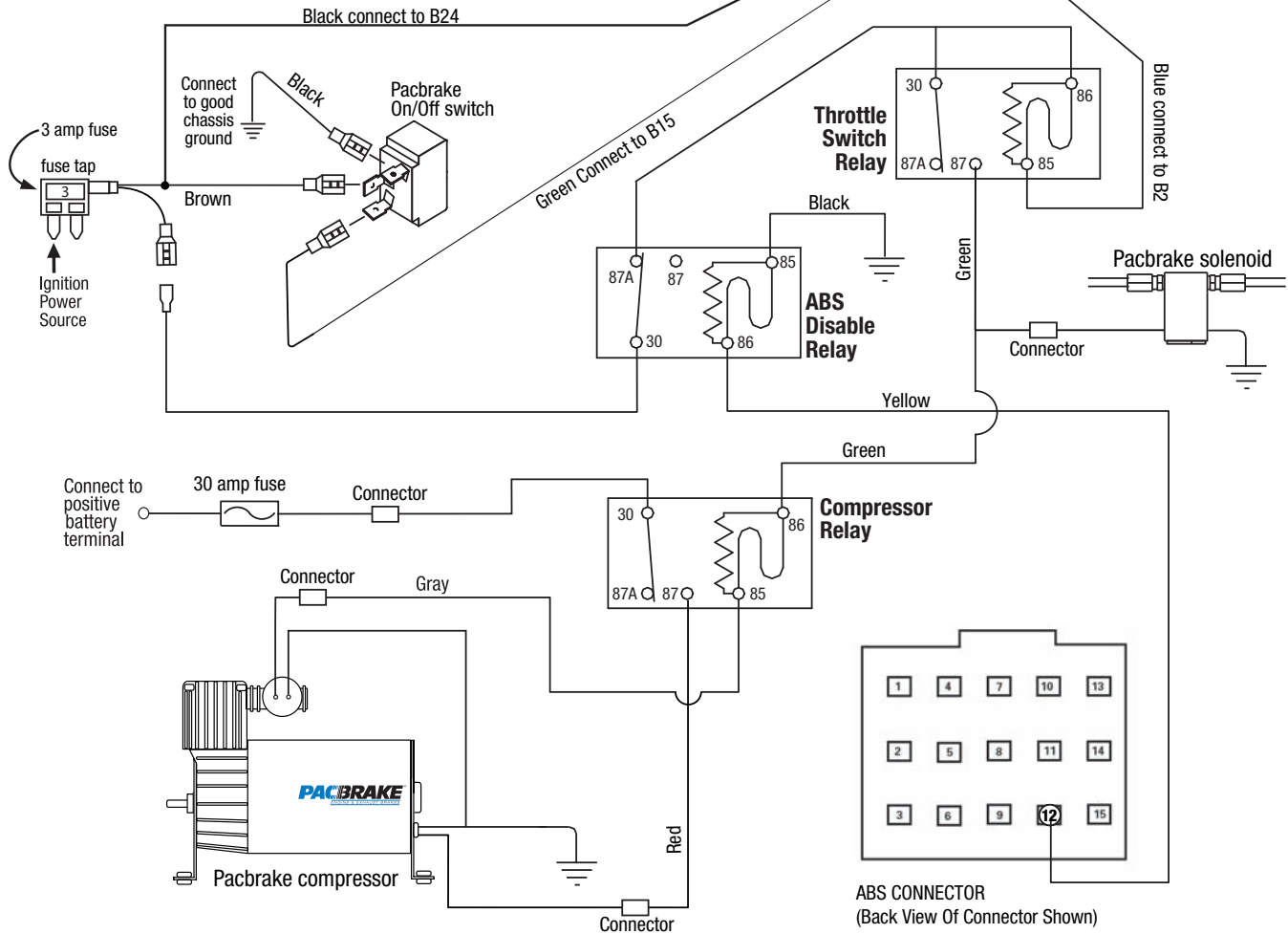
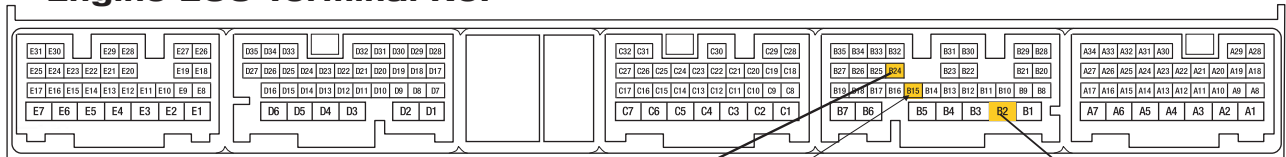
For technical assistance or customer service, please call toll free 1-800-663-0096.

Hino Electrical Schematic

Vehicles Using Pacbrake Auxiliary Compressor



Engine ECU Terminal No.





Pacbrake Company

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