

Installation

MANUAL

PACBRAKE[®]
ENGINE & EXHAUST BRAKES



PRXB For HINO Trucks

EXHAUST BRAKE

PRXB Application:

HINO TRUCKS

Equipped With:

J08E-TA/B 6 cylinder with 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.

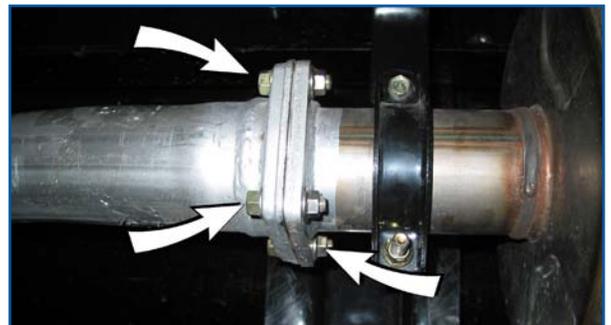
Before starting, check that your kit contains everything shown in the photo.

KIT FOR VEHICLES WITH AN EXISTING AIR SUPPLY

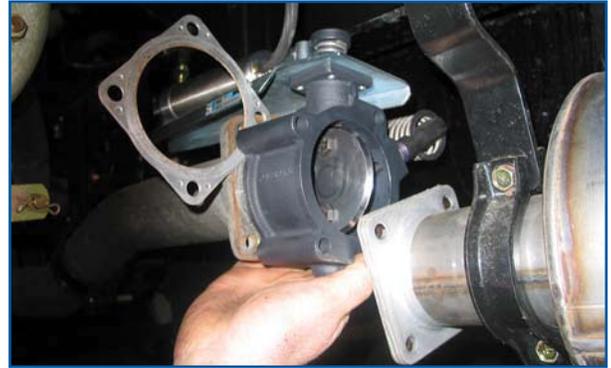


- 1 Remove the 4 fasteners at the exhaust connection in front of the muffler. Using the offset muffler hangers supplied to replace the factory hangers, relocate the muffler 2.5 inches towards the rear of the vehicle, this will allow for the Pacbrake exhaust brake. Two socket head shoulder bolts are supplied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

NOTE: Some vehicles have 3 muffler hangers, for these the factory rear hanger will be reused. At the rear hanger, loosen the two capscrews that clamp the exhaust pipe, slide the pipe towards the rear of the vehicle. Once the exhaust brake is installed, the two forward hangers replaced and the exhaust system adjusted, tighten the two capscrews clamping the exhaust pipe to the rear hanger.



- 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 over tightening 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** Install the fittings provided into the solenoid using thread sealant. Install the air solenoid valve on the firewall in the location shown using an existing stud and flange nut in one side and the self tapping screw and washer provided in the other mounting hole. Connect the solenoid wire with eye terminal to a good ground location. (Under the head of one fastener) The remaining black solenoid wire is connected in step 13 to the Pacbrake harness. Connect the nylon air line originating at the exhaust brake cylinder to the port marked "CYL". Secure hose with tie-straps provided.

NOTE: The solenoid exhaust port must point down as shown.



- 5** Using the remaining piece of nylon line and fittings supplied, source an air supply from the dry tank. The governor has a 1/8" npt port marked RES. remove the pipe plug and install the fitting provided. Some vehicles may have this port in use, if so install the tee fitting provided. An alternate location for an air supply is the regulator for the air seat, install the tee fitting provided on the right side of regulator. Connect the air supply to the solenoid port marked "IN". Secure the nylon air line with tie-straps provided.

NOTE: Use thread sealant on all fittings installed.



- 6 Remove the air filter restriction gauge in the air intake system and install the “TEE” fitting supplied using thread sealant. Connect the air cylinder breather hose installed in step 3 to the barbed leg of the fitting and reinstall the restriction gauge. Secure the breather hose with tie-straps provided.



Electrical Installation, All Vehicles

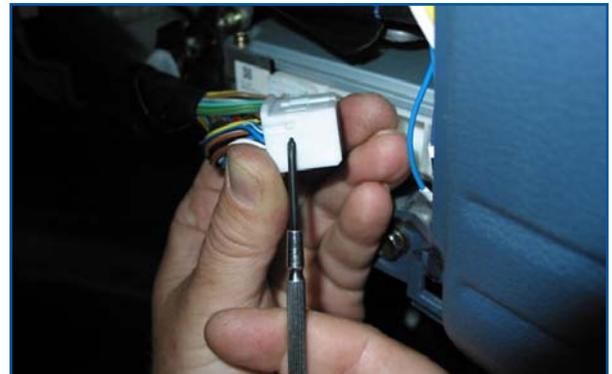
NOTE: Disconnect the batteries before removing the connectors from the ECU.

LOCATE THE WIRING SCHEMATIC ON PAGE 7

- 7 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.



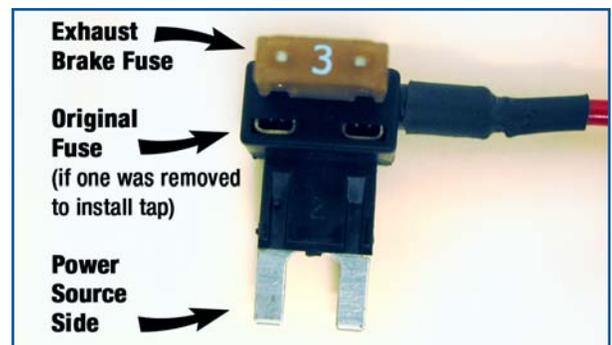
- 8 At the engine ECU, locate the connector shown in the electrical schematic on page 7. Remove the connector from the ECU. The connector locking device needs to be released before the Pacbrake terminals can be installed. A square hole exists in each side of the connector, insert a small screwdriver into the hole pushing against the tab, repeat on the opposite side, the terminal locking device should raise by 1 to 2 mm 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.



9 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).



10 At the fuse panel, locate the hydraulic brake 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.**



11 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 14 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 7 for the ABS connector numbering sequence.



12 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.



- 13** Route the GREEN wire of the Pacbrake harness to the solenoid valve BLACK wire and connect. The terminal is filled with dielectric compound to prevent corrosion, cover the connector with electrical tape. Using the loom and tie-straps provided, protect and secure the harness.

Congratulations, you have completed the Pacbrake installation.

Reminder...The exhaust brake circuit in the engine ECU will require it to be enabled by an authorized Hino Dealer only.



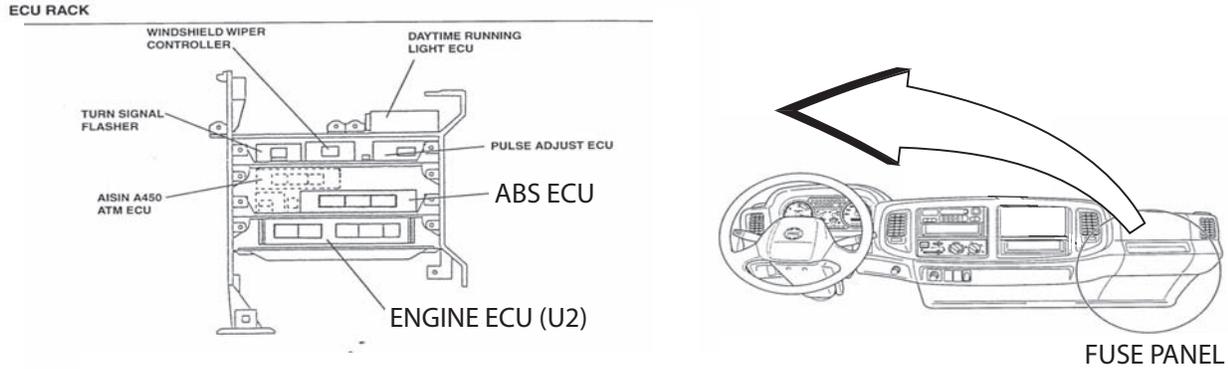
Road Testing

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.

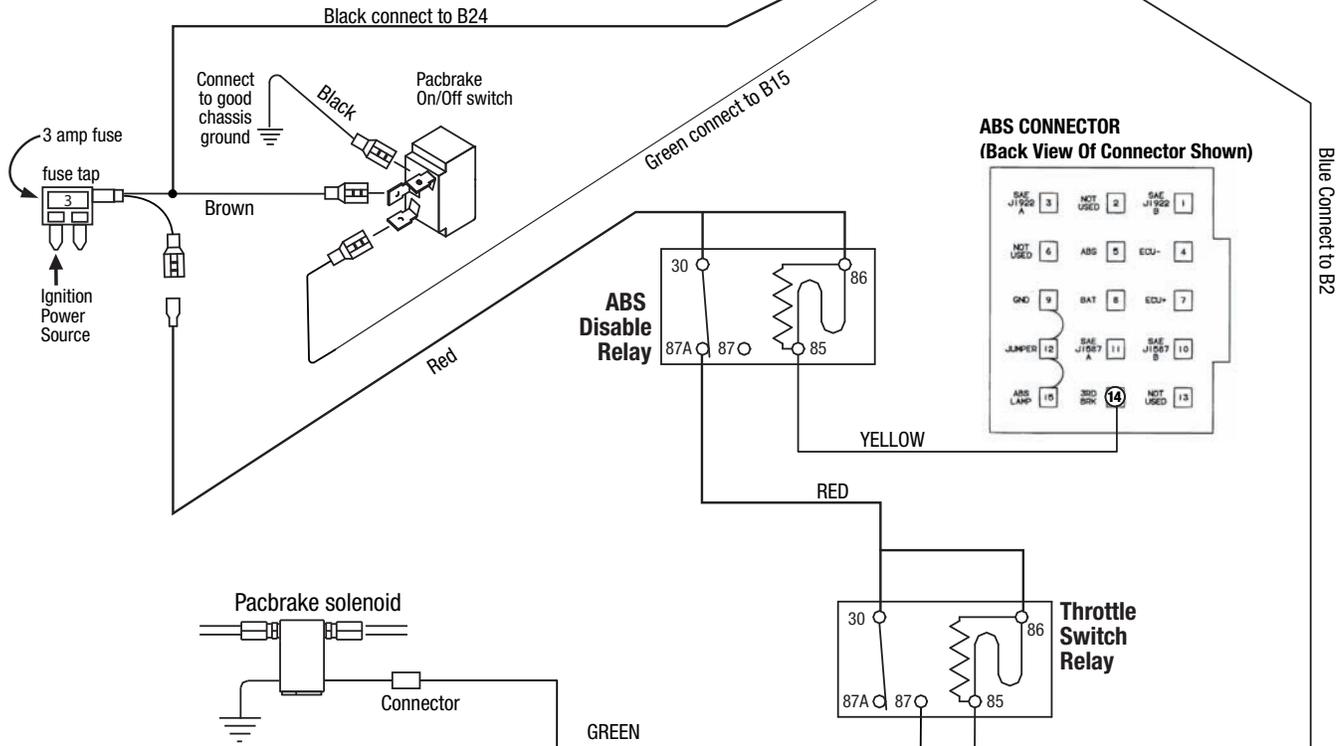
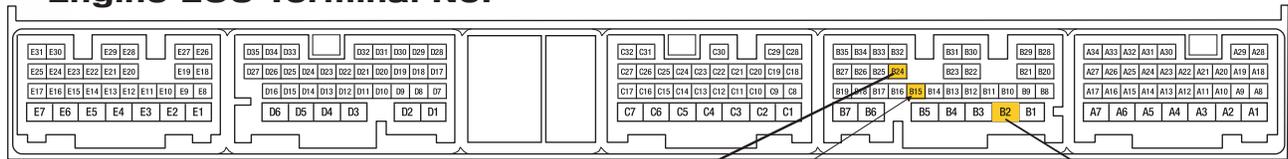
Vehicles equipped with Allison transmissions should automatically downshift to a lower gear when the Pacbrake is applied.

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

Hino Electrical Schematic Vehicles With An Existing Air System



Engine ECU Terminal No.





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