

SUBJECT

**OPTIONAL - ECM By-pass
Mechanical Wiring**

PART NUMBER

C14033

APPLICATION

**2003 /2004 Dodge Trucks
(Built before Jan. 1st 2004)
Automatic Transmission**



The engine's ECM has a built-in delay for exhaust brake application. This mechanical kit was developed to reduce the delay and speed up the application time of the exhaust brake. Pacbrake also offers an optional air tank kit (C11941) to speed up the application of the exhaust brake.

Installation Procedure

- 1** Locate the Black wire in the Pacbrake harness to be connected to pin 42 of the engine ECU, cut off the terminal. If the exhaust brake was previously installed and this wire is connected to the engine ECU, cut the wire 6" from the ECU and apply electrical tape to the ECU side of the wire. Route this wire through the firewall boot to the accelerator pedal.
- 2** Locate the white wire in the Pacbrake harness to be connected to pin 39 of the engine ECU, cut off the terminal. If the exhaust brake was previously installed and this wire is connected to the engine ECU, cut the wire 6" from the ECU and apply electrical tape to the ECU side of the wire. Route this wire to the accelerator pedal.
- 3** When mounting the throttle switch, use the switch as a template. Hold the microswitch on the accelerator bracket as shown in the photo. Position the switch so the accelerator pedal applies enough pressure to activate, (switch clicks).
- 4** Using a drill and a 9/64" drill bit, insert the drill bit into the upper hole and drill enough to make a reference, remove the switch, at the reference mark drill through the bracket.
- 5** Install the micro switch using the screw, washer and nut on the upper hole, do not tighten fully at this time. Align the micro switch again as in step 4, insert the 9/64 drill bit into the lower hole and drill enough to make a reference. Rotate the switch to drill the lower hole at the reference mark and drill through.
- 6** Align the switch with the hole and install the lower screw, washer and nut. Tighten the two screws.

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7 Check the position of the micro switch by applying pressure to the accelerator pedal, the switch should click within the first $\frac{1}{4}$ " of accelerator pedal travel, if not, loosen the mounting screws and readjust the switch. If travel is limited because of the position of the two $\frac{9}{64}$ " holes and the correct adjustment can not be achieved it maybe necessary to enlarge one of the two $\frac{9}{64}$ " holes.

Do not enlarge the two holes in the micro switch, switch failure will result.

8 At the throttle switch cut the Black wire from the compressor assembly to length. Connect it to one of the two terminals of the throttle switch.

9 At the throttle switch cut the white wire from the switch harness to length. Connect it to the remaining terminal of the throttle switch.

10 At the compressor relay, locate the 16 gage red with white trace wire connected to terminal 30. Cut this wire and apply electrical tape to the harness end. Then connect the fused harness supplied with the heat shrinkable butt connector to the pressure switch side, crimp and heat the connector to provide a sealed connection.

2003 Model Year Vehicles

Locate the 14 pin connector on the passengers side firewall, pin 13 will be a dark blue wire which should be a 12 volt positive ignition power source.

2004 Model Year Vehicles

Locate the two 24 pin connectors on the driver's side of the firewall. One connector is gray and the other is black, in the black connector pin B4 will be a PINK wire with GRAY tracer. This wire should be 12 volts positive ignition power source.

Check this circuit with a test light for ignition power prior to attaching the "T" tap. Do not separate the connector as a fault code will be logged in the ECM. If you need to separate the 14 pin connector, disconnect both battery leads. This will prevent the logging of a fault code in the ECM. Using the Blue "T" tap supplied, attach it to the blue wire or ignition power source, then connect to the fuse harness.

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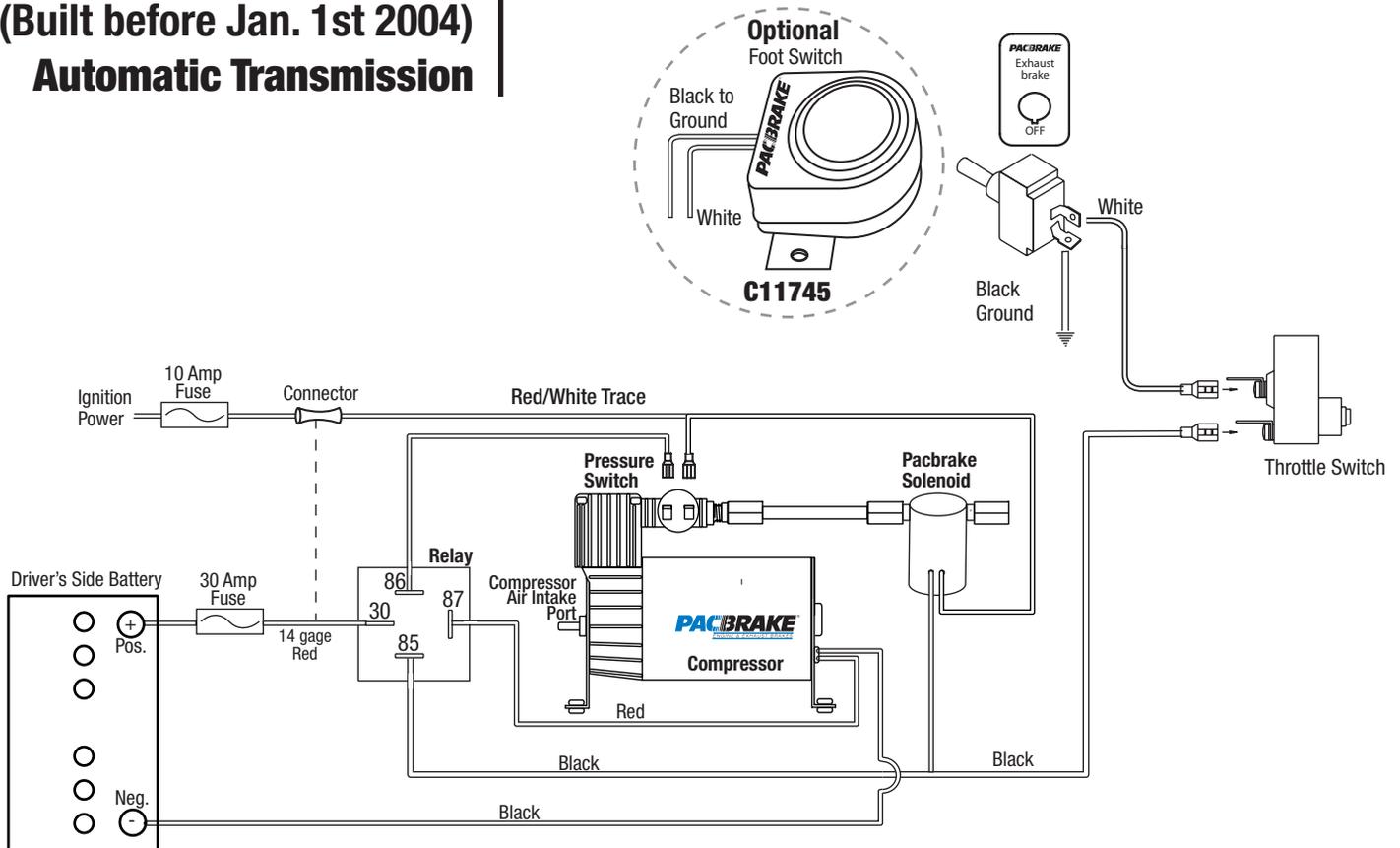
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Testing The System

Start the vehicle and allow to idle. Turn the switch to on, you should hear the compressor start to pump, the exhaust brake should activate. (cylinder rod extend). Lightly depress the accelerator and the exhaust brake should release.

Road test the vehicle and with the exhaust brake switch in the on position then set the cruise control. Accelerate the cruise control to confirm the exhaust brake is released by the throttle switch being deactivated.

Congratulations , you have completed the installation.



NOTE: Compressor assemblies built prior to January 1 2005 are wired differently than shown in this schematic. Please visit our website to view previous schematic: www.pacbrake.com.