

Installation

PROCEDURES

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SUBJECT

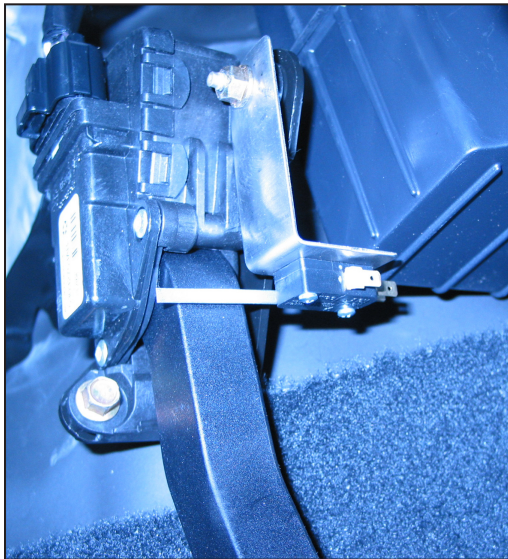
ECM By-pass Mechanical Wiring

PART NUMBER

C20141

APPLICATION

2005-2006 Dodge
Both Automatic and Manual
Transmission Equipped Vehicles
(Mandatory on 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. (Note: 11941 is included in later production kits).

Installation Procedure

NOTE: When this mechanical wiring system is installed a cruise by-pass relay must be installed. (supplied in kit) This is to prevent the cruise control from being activated when the exhaust brake switch is in the ON position.

- 1 If the exhaust brake was previously installed, locate the engine ECM and the black wire originating at the compressor relay harness going to pin 42. Cut this wire 6" from the engine ECM and tape the ECM side to protect it. Route the black wire of the compressor relay harness through the firewall boot into the cab, then to the accelerator pedal. If this is a new installation, route the black wire of the compressor harness to the accelerator pedal and cut off the special terminal.
- 2 If the exhaust brake was previously installed, at the engine ECM locate the white wire originating at the dash switch going to pin 39. Cut this wire 6" from the engine ECM and tape the ECM side to protect it. Route the white wire to the accelerator pedal. If this is a new installation, route the white wire to the accelerator pedal and cut off the special terminal.
- 3 Remove the nut shown in the photo, install the Pacbrake throttle switch bracket on the stud and loosely install the nut. Rotate the bracket on the stud until the switch arm contacts the accelerator lever, then rotate the switch a slight bit more until the throttle switch clicks, then tighten the nut.
- 4 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 nut and re-adjust the switch bracket.

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- 5** Using one of the two narrow push on terminals supplied, connect the black wire from the compressor assembly to the terminal marked N.O. (Normally Open) of the throttle switch. See schematic.

A cruise control disable relay must be installed.

(to prevent the exhaust brake from being activated under acceleration)

- a)** At the brake lamp switch, locate the 6 pin connector. On 2005 model year vehicles pin 3 will be a VIOLET with WHITE tracer or GREEN WITH WHITE tracer.

Cut this wire in a convenient location to attach the 2 blue wires supplied using the heat shrinkable butt connectors. Route the 2 blue wires to the relay supplied and connect either one to terminal #30 and the other to terminal #87a.

- b)** Cut the white wire from the on/off switch to the accelerator pedal to length. Using the piece cut off, connect one end to terminal #85 at the cruise relay. Using the other narrow push on terminal, connect the white wire from the cruise relay with the white wire from the on/off switch to the common terminal at micro switch installed on the accelerator pedal.

See Schematic.

- c)** Connect the fuse harness supplied to terminal #86 and the other end to an ignition power supply.

NOTE: Omit step 6 if the Pacbrake air compressor harness has two relays, follow step 6 if the compressor harness has only one relay

- 6** At the compressor relay, locate the 16 gage red with white tracer wire connected to terminal 30, cut this wire and apply electrical tape to protect the harness end. In one of the two electrical connectors on the driver's side of the firewall, locate a 12-volt ignition power source. Check the 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 at the ECM. If you want to separate the connector, disconnect both battery leads, this will prevent a code from being logged. Using the "T" tap provided connect the fused harness to the ignition power source and to the red wire originating at terminal 30 of the compressor relay using the heat shrinkable butt connector.

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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 off position set the cruise control. Turn the exhaust brake switch to on, the exhaust brake should apply and cruise control should automatically go into coast mode. Turn the exhaust brake switch to off and press cruise resume and the cruise should resume to the previous speed.

Congratulations you have completed the installation.

