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Installation Instructions
For
**#64380 Striker Exhaust Brake/
Torque Converter Module**
1999-2003 Ford Powerstroke 7.3L Diesel

The Striker Exhaust Brake/Torque Converter Control Module features an ease of installation and use design. After a few simple connections the torque converter lock-up speed will be adjustable and an exhaust brake will assist your vehicle when slowing down. Please read these entire instructions before beginning the installation. Make sure the key is off before any connections are made. Please note that some 7.3L trucks will show a check engine light, or possibly flash the overdrive light with use of this module.

Parts List:

- 1- Striker EBTC Module
- 1- Wire Harness
- 20- 7" tie wraps
- 10- 4" tie wraps
- 1- Instruction Sheet
- 1- Multi Decal Sheet
- 2- Inches Velcro
- 1-Parts kit

Tool List:

- Long-nose pliers
- Wire strippers and crimpers
- Heat gun or lighter
- Phillips and flat head screwdrivers
- Drill and Drill bits
- 3/8 Ratchet and Metric sockets



Engine Compartment Installation:

The Striker EBTC Module is shipped with a harness to match your vehicles configuration. Harness alterations are not needed. If difficulties during installation are experienced please contact us via phone at 800-423-9696 or email to tech@painlessperformance.com. One connection will be made in the engine compartment, two at the transmission and several inside the cab under the dash. Make sure to route all wires and connectors away from potential hot spots on the engine. Exhaust and turbo get extremely hot and will burn any wires that come in contact with them. Securely attach the wires using the supplied tie wraps.

Exhaust Brake Connection:

On 1999-2003 7.3L trucks the exhaust backpressure regulator is mounted at the base of the turbo charger. In order to reach the connector you must reach underneath the turbo piping on the driver's side of vehicle and unlatch the connector assurance metal lock. You can then pull the connector from the exhaust backpressure regulator. Unplug the factory exhaust backpressure regulator connector and pull it out of from underneath the intake manifold.





Plug the Striker harness male exhaust brake connector into the exhaust backpressure regulator. Turbo chargers get extremely hot; make sure to route wires away from touching any turbo charger piping or exhaust piping.

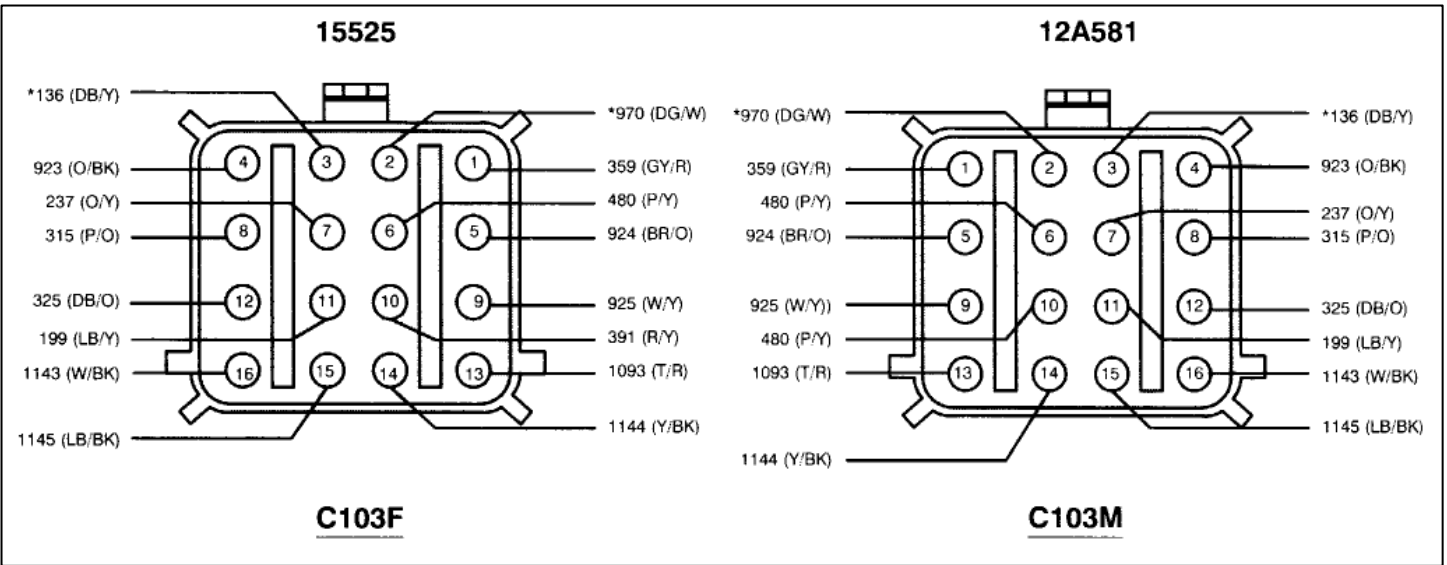


Plug the male connector on the factory harness into the female exhaust brake connector on the Striker harness. Use a tie wrap to ensure these plugs stay together.

Transmission Connections:

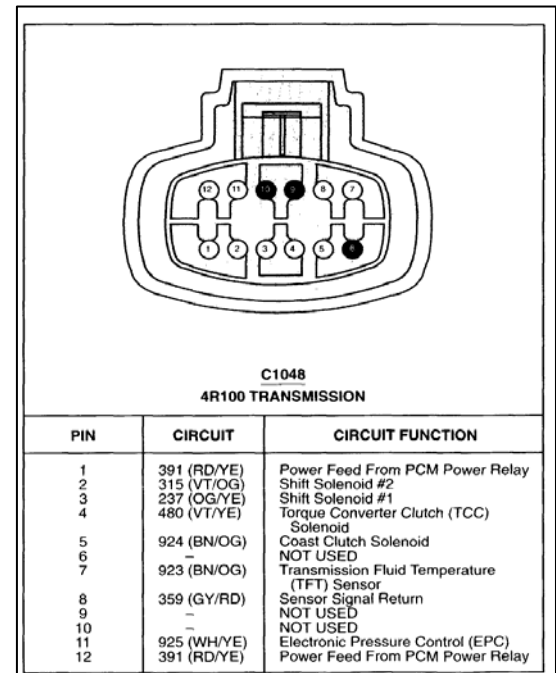
On the Striker EBTC harness there are three wires to be connected to the transmission. You have two options for hooking up the torque converter wires. The first is to connect them at the C103 connector located on the driver side of the engine bay and just below the brake master cylinder. A picture of this connector is shown below. Cut the Violet/Yellow (circuit #480) wire in pin #6 of this C103 connector. **Leave enough length on the wire so you can splice the Striker harness to each side of the wire.** You will notice one bunch of wires come out of the C103 connector and then run down towards the transmission and another bunch of wires run up into the cap of the truck. Splice the blue wire, labeled TC PCM, on the Striker harness onto the Violet/Yellow wire that goes up into the cab and then into the PCM. Splice the yellow wire on the Striker harness, labeled TC TRANS, onto the Violet/Yellow wire that goes down to the transmission.

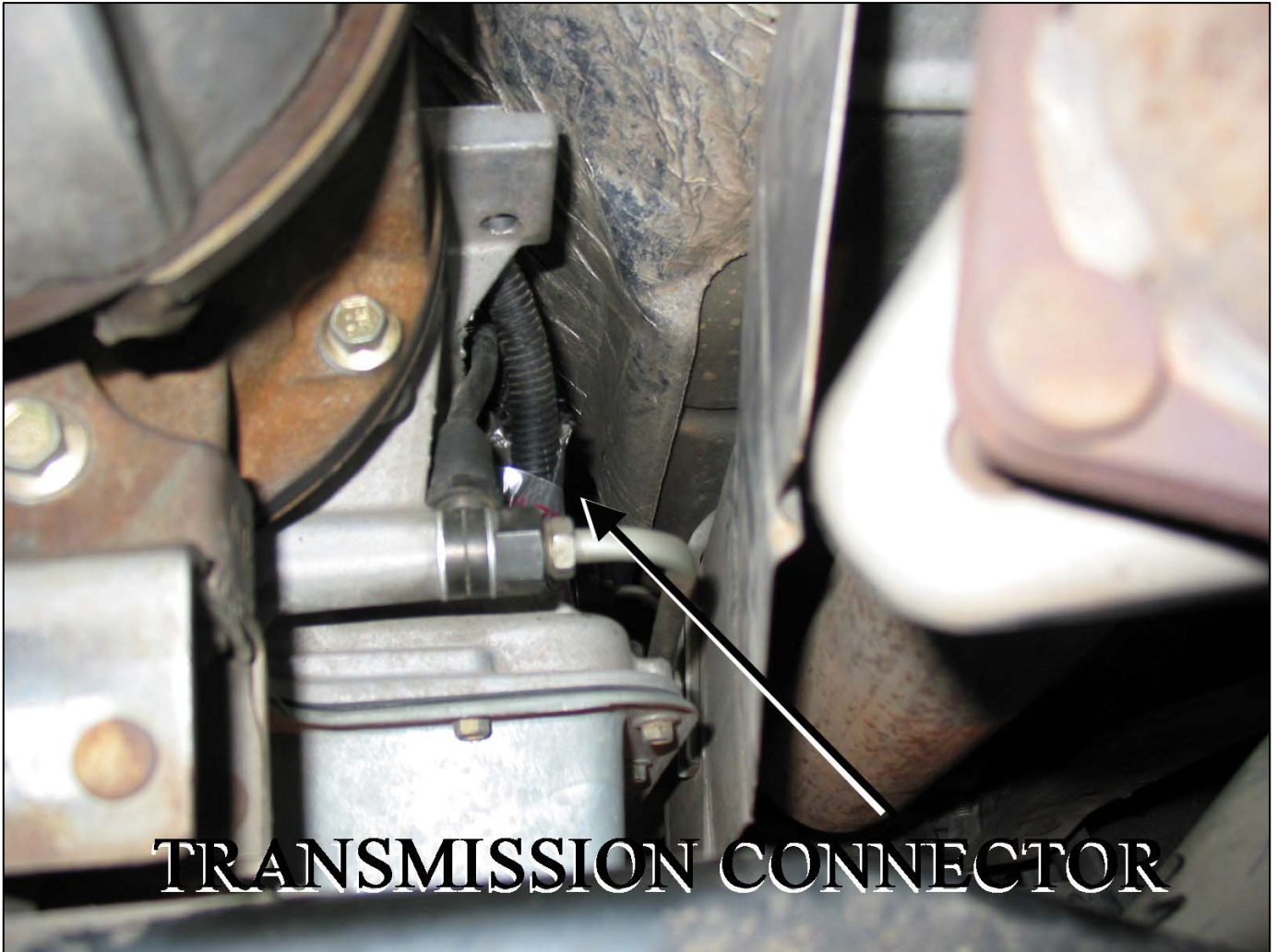
The output shaft speed sensor wire is also located in the C103 connector. Pin 3 of this connector is circuit #136 with a wire color of Dark Blue/Yellow. Using the supplied Posi-tap connector, tap the green wire in the Striker harness, labeled OSS, onto this Dark Blue/Yellow wire.



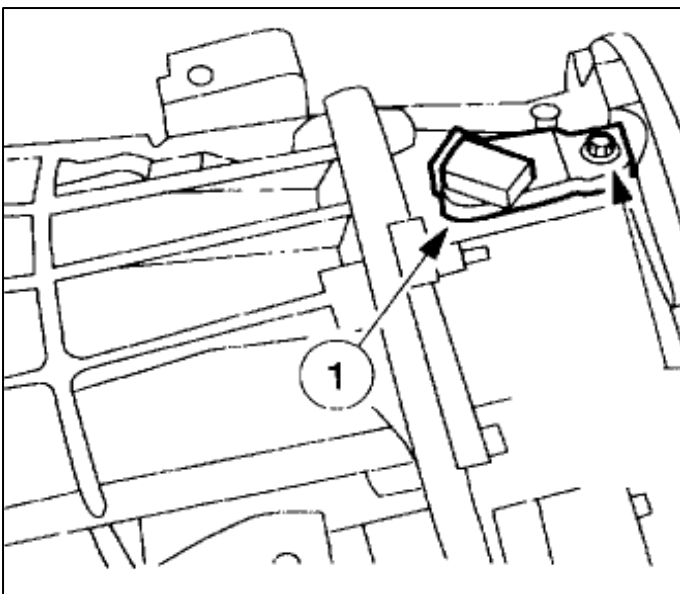
Here is the second option for connecting these wires.


Find the blue, green and yellow wires with open ends on them and route these wires down to the transmission. You may have to add wire length to these wires to splice them where they go. This will all depend on where you splice onto the factory harness. Get on a creeper and underneath the vehicle. On the passenger side of the transmission you will find the 12 pin connector. Unplug this connector and pull the heat insulation away from the wires. You may have to pull the wire bundle up over the transmission to the driver's side in order to have enough room to do this splicing. Looking at the diagram to the right, identify the Violet/Yellow wire in pin #4 of the connector. Splice the blue wire, labeled TC PCM, on the Striker harness onto the Violet/Yellow wire that goes up into the cab and then into the PCM. Splice the yellow wire on the Striker harness, labeled TC TRANS, onto the Violet/Yellow wire that goes down to the transmission. Use the heat shrinkable butt splices included in the parts kit to make these connections. Reinstall the heat shield around the wires and plug in the connector to the transmission.





On top of the transmission and towards the back of it is the output shaft speed sensor. Use one of supplied the Posi-Tap connector to attach the green wire, labeled OSS, in the Striker harness to the Dark Blue/Yellow wire in the output shaft speed sensor. See diagrams below. Posi-Tap instructions on page 7.



 <p>C136 OUTPUT SHAFT SPEED (OSS) SENSOR</p>		
PIN	CIRCUIT	CIRCUIT FUNCTION
1	136 (DB/YE)	Output Shaft Speed (OSS) Sensor Signal to PCM
2	359 (GY/RD)	Signal Return

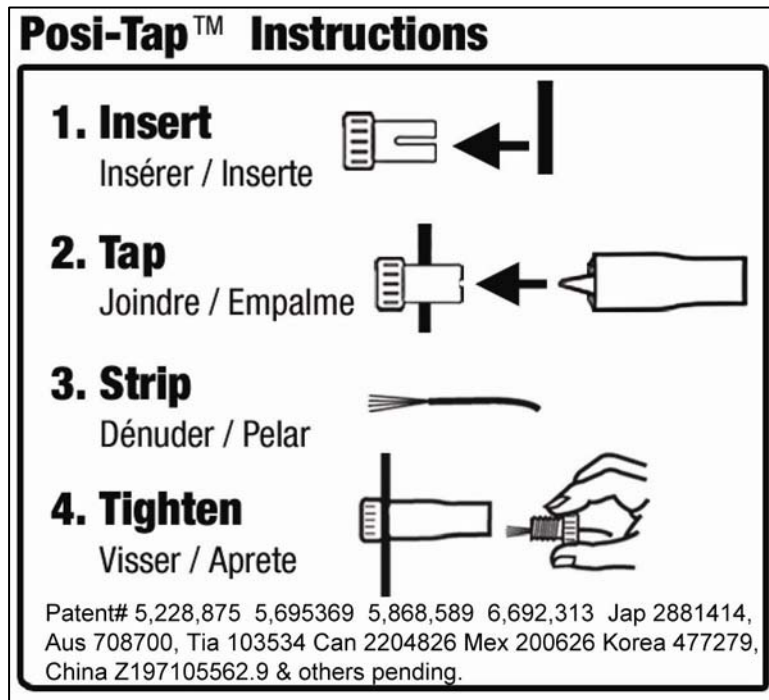
Securely attach the Striker harness to the frame using the supplied tie wraps. Make sure to leave some slack in the harness for movement of the body and transmission.

Route the main body of the harness to the driver's side of the firewall. Just behind the brake booster and to the right of it there is a plastic cover. This cover is easily removed by releasing the tree type keepers and pushing on it from the inside of the cab. You will need to remove the plastic cover under the steering column and may have to remove a foam insulated cover on the inside of the firewall in order to reach this plastic cover. Once removed, drill a hole large enough to feed the main body of the Striker harness through it. Re-install the plastic cover and feed the harness through it into the cab.



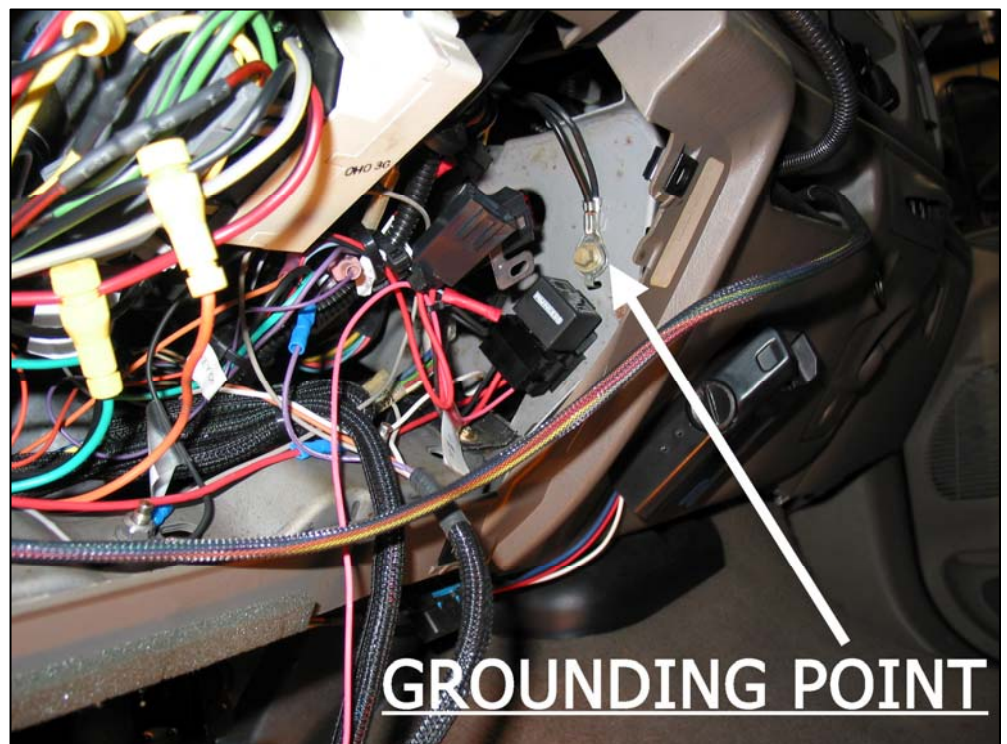
Passenger Compartment Installation:

There are several wires to be connected underneath the dash. Route the wires away from moving parts on the steering column and pedals. Use the supplied Posi-Tap connectors according to the instructions below.

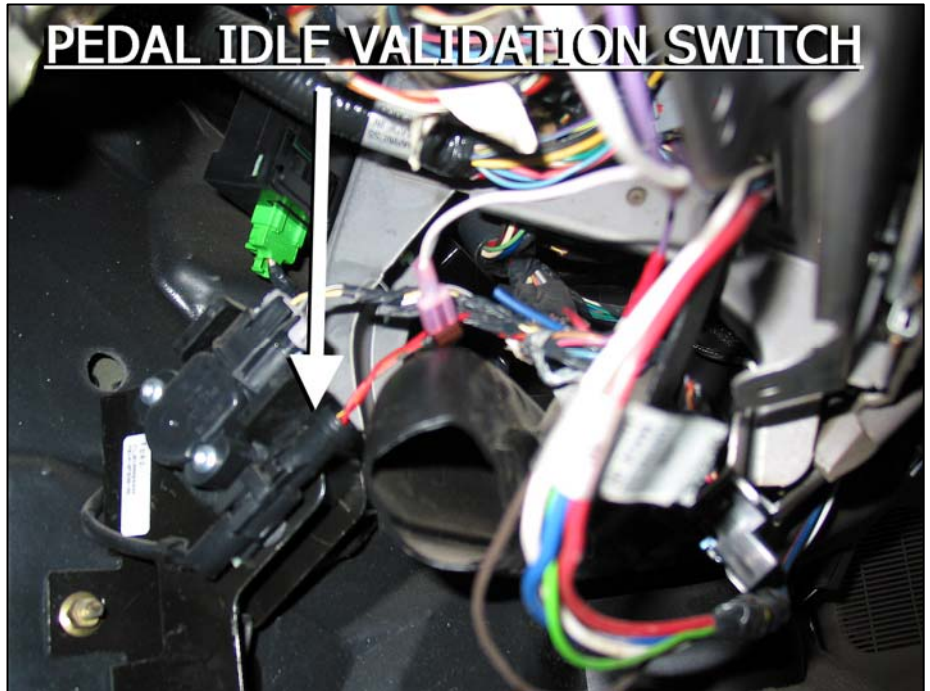


Switched 12V (Key On) Wire- This purple wire labeled 12V should be connected to a fused, key on source. Use a volt meter to make sure you have the correct wire from the ignition switch. Under the steering column there is a group of wires that lead to the ignition switch. There is a small Red/Black wire in this group of wires. Connect the purple wire labeled (Key On) from the Striker harness to this small Red/Black wire on the vehicle. Use one of the supplied Posi-tap wire taps to make this connection.

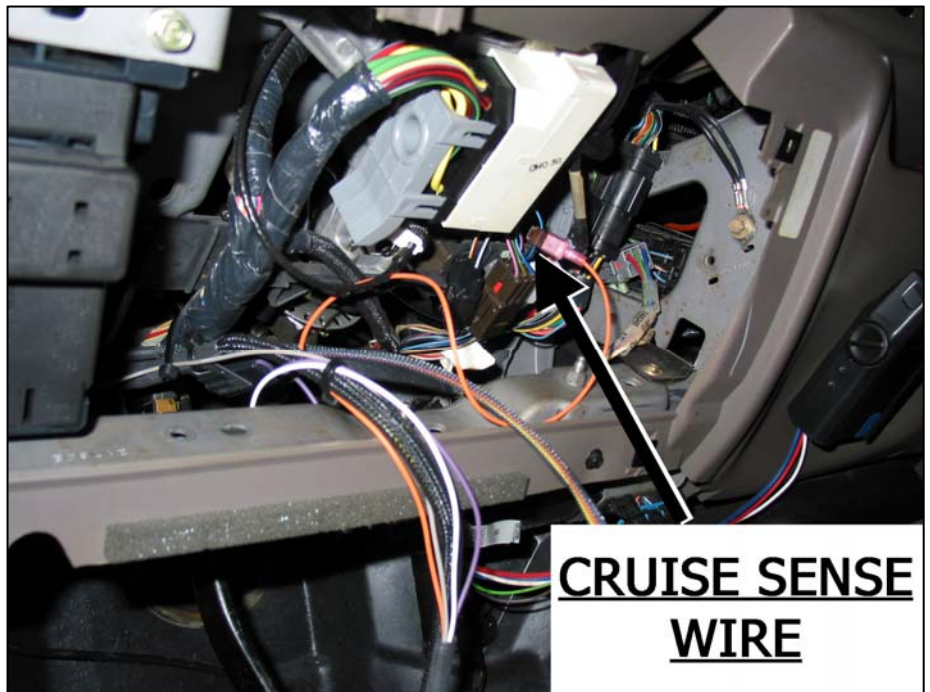
Ground Wire- This grey wire labeled GROUND should be connected to a good grounding point. There are several bolts underneath the steering column along the metal support bracket for the dash that this wire can be grounded with.



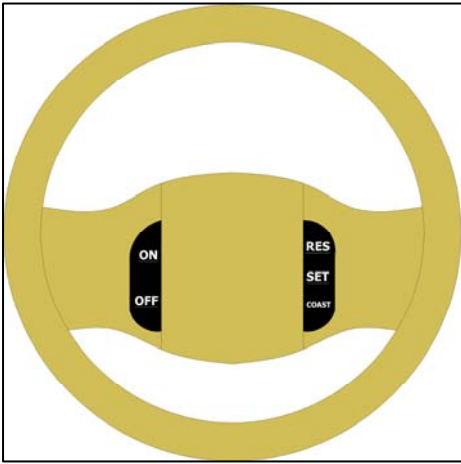
Pedal Idle Validation Switch (IVS) – This white wire labeled ACCEL connects to the Red/Green wire from the two wire switch located on the accelerator pedal bracket. See picture to the right for location. Use one of the supplied Posi-Taps to make this connection. On 2001 and up models the IVS sense wire is in pin 7 of a ten way connector. The wire is still Red/Green.



Cruise Sense Wire- This orange wire labeled CRUISE connects to the Medium Blue/Black sense wire that comes from the cruise control buttons in the steering column. See picture to the right for location. Use one of the supplied Posi-Taps to make this connection.



Route and secure the harness up to where the EBTC controller will be mounted. Plug in the EBTC module to the harness.



EBTC Operation:

To program and control the Striker Exhaust Brake/Torque Converter controller you will be utilizing the cruise control buttons on the steering wheel.

Cruise Control Buttons:

On- On will enable the cruise control to be used, disengage the exhaust brake and disable any programming changes to the controller.

Off- A short push of the off button will disable the cruise control. A 2 second push of the off button will enable the exhaust brake. Once the brake is enabled, it will default to on each time the truck is keyed on.

Coast- Cancel lock/unlock set points (Clears memory).

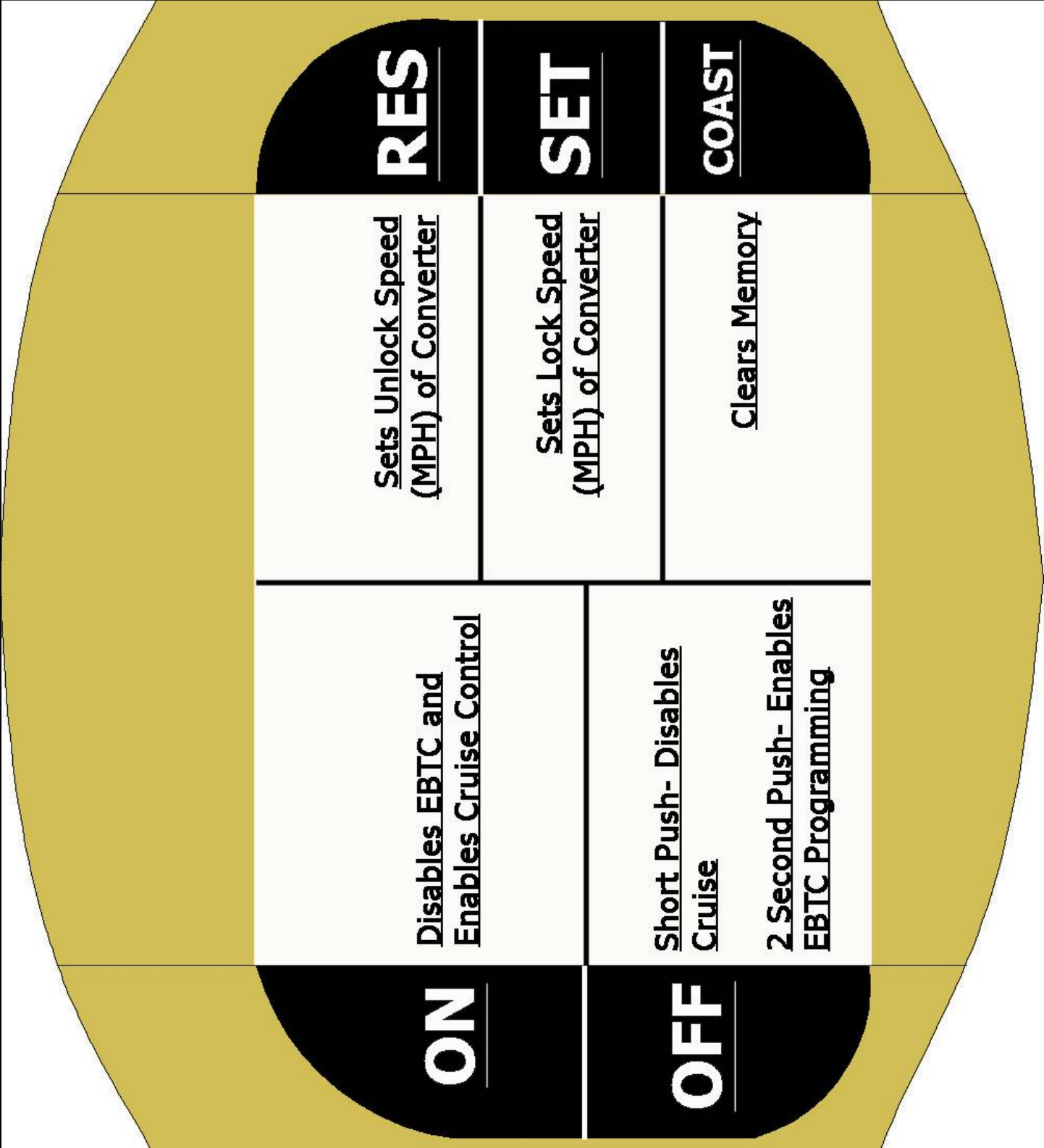
Set- Sets the lock up speed (MPH) of the converter. Accelerate to the speed you wish the converter to lock up and press the set button.
NOTE: You cannot set the torque converter to lock below 25 MPH.

Resume- Sets the unlock speed (MPH) of the converter. Decelerate to the speed you wish the converter to unlock at and press the resume button.

LEDs left to right on controller

1. Power LED (Green)- Lit when truck is keyed on or running
2. EBV Solenoid LED (Red)- Lit when Exhaust Brake is active
3. IVS LED (Yellow)- Lit when accelerator is not depressed
4. TCC Status (Red)- Lit when torque converter is locked up

The button on the module temporarily locks the converter as long as it is held depressed. Don't press this button while in gear and not moving very fast or at a stop. The truck may stall.



TIPS

Key the vehicle on. The first LED should light up green. If not, check your connections to ground and the key on power source wire. Press the OFF button for two seconds. The second LED should light up red. Accelerate the truck to the MPH you want the torque converter to lock up and press the SET button. Decelerate the truck to the MPH you want the torque convert to unlock and press the Resume button.

The controller should be programmed now. Drive the truck around and check to make sure the torque converter is locking and unlocking at the correct speeds. Also, notice after the torque converter locks and you begin to decelerate the truck by letting off the accelerator, a hissing sound will come from the engine compartment. This is the exhaust brake engaging. The truck will decelerate faster and warm up faster with the exhaust brake engaged.

The exhaust brake engages when the accelerator pedal is in the idle position (pedal not depressed). It will be difficult to notice the exhaust brake engaged unless the torque converter is locked up at the same time.

PAINLESS WIRING OFFERS A TECHNICAL ASSISTANCE LINE TO ANSWER ANY QUESTIONS YOU MAY HAVE. THE NUMBER IS (800) 423-9696. PHONES ARE ANSWERED MONDAY THROUGH FRIDAY FROM 8 AM TO 5 PM CENTRAL TIME, NOT INCLUDING HOLIDAYS. PLEASE LEAVE A MESSAGE IF YOU ARE UNABLE TO REACH US AND WE WILL RETURN YOU'RE CALL AS SOON AS POSSIBLE.

Painless Performance Limited Warranty and Return Policy

Chassis harnesses and fuel injection harnesses are covered under a lifetime warranty. All other products manufactured and/or sold by Painless Performance are warranted to the original purchaser to be free from defects in material and workmanship under normal use. Painless Performance will repair or replace defective products without charge during the first 12 months from the purchase date. No products will be considered for warranty without a copy of the purchase receipt showing the sellers name, address, and date of purchase. You must return the product to the dealer you purchased it from to initiate warranty procedures.

NOTES: