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6R140 Pressure Controller

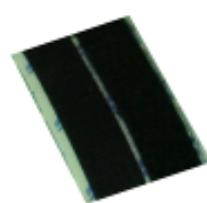
Transmission Line Pressure Booster

1031320 2011-2018 Ford 6.7L Diesel

BD Engine Brake Inc.

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Kit Contents

1607276	1607275	1800060	1300131
			
Control Module Qty: 1	Wire Harness Qty: 1	Velcro Qty: 2 pcs	Tie Wrap Qty: 6

Introduction

Ford TorqShift 6R140 transmission uses variable transmission line pressure to trim back line pressure depending on engine load to improve fuel economy and reduce unnecessary work. Unfortunately, it does not supply full line pressure even during wide open throttle operation. Stock transmission line pressure is between 70-170psi depending on load.

This pressure controller kit addresses this by overriding the pressure control solenoid during high engine load operation and delivers full 300psi line pressure to the clutches. This prevents clutch slippage, particularly in high horse power applications.

Operation

The BD control module will automatically activate before 15psi turbo boost at which time it will go to full line pressure. When boost pressure drops back below 10psi it will go back to stock control.

The benefit of this control strategy over a modified solenoid or valve body plug is that the transmission will still run its base pressure at idle and lower load operation. This reduces unnecessary loss in fuel economy and reduces stress on the transmission pump during low load periods but still delivers maximum pressure when its needed.

Installation

Disconnect both vehicle batteries before installation for safety.
Chock tires or position vehicle on a lift for safety before proceeding.

Locate the transmission connector on the supplied BD wiring harness. Feed this connector down from the engine bay towards the transmission.



Under the truck, locate the transmission connector. Rotate the lock ring counter clockwise to release it.



Route the supplied BD harness to the transmission and connect it inline.

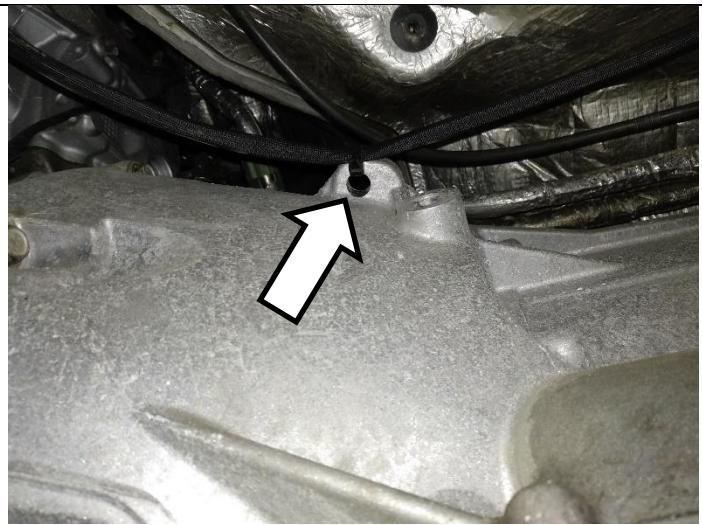


Install supplied zip-ties to support the wiring harness between the engine bay and transmission.

IMPORTANT Ensure the harness is well clear of the driveshafts and other moving parts like the shift cable.

Locate the factory MAP sensor on the top of the intake manifold. Unplug the sensor connector.

Plug the supplied wiring harness MAP sensor connector inline.



Install supplied zip-ties to support the wiring harness.



Plug the module into the wiring harness and tie up extra wire slack.



Use the supplied Velcro or use zip-ties to mount the module in the desired location.

Shown here adhered to the fuse box with Velcro.



Pressure Verification (Optional)

To verify operation, you may install a pressure gauge into the transmission. There is a pressure test port on the driver side of the transmission. It is a M10 o-ring boss seal.

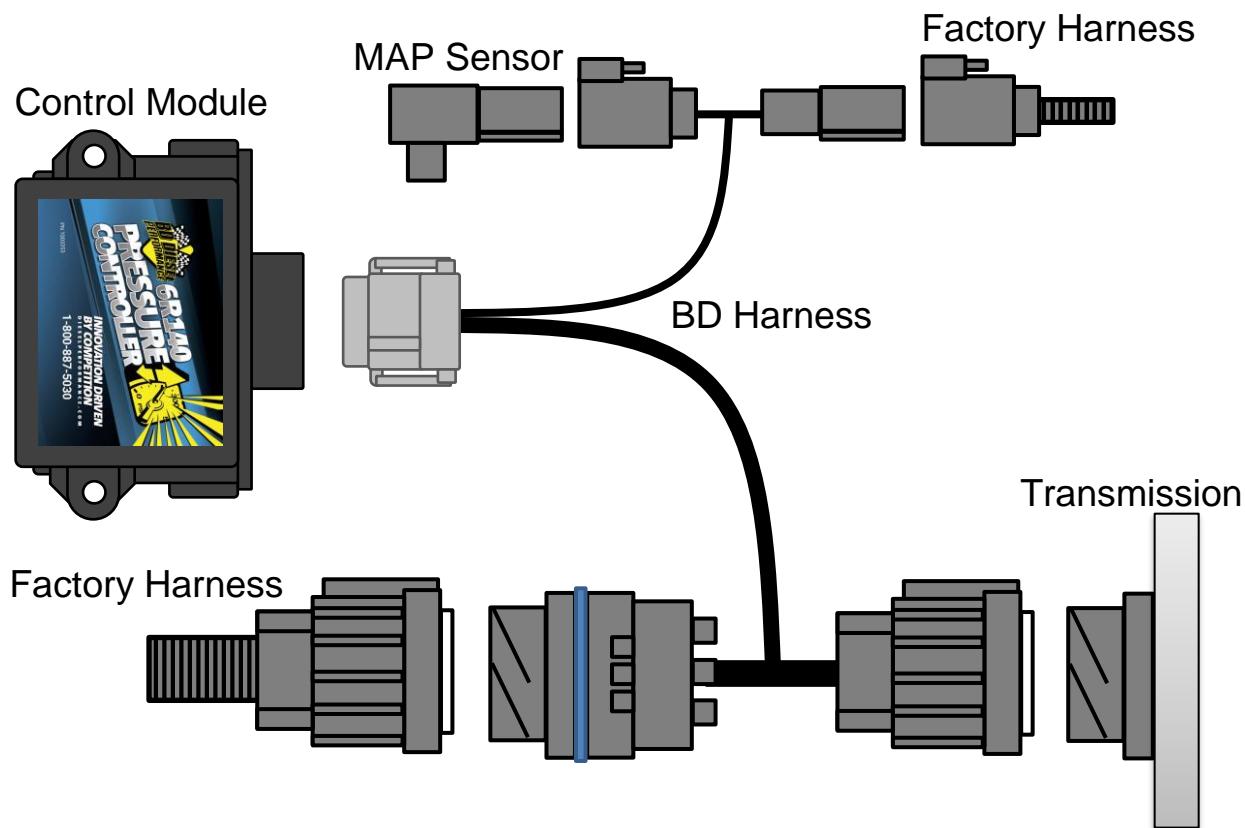


Stock pressure will range between approx. 70-170psi. With the BD kit installed the pressure is boosted up to 300 psi at higher engine load (15 psi+ turbo boost).

Troubleshooting

TCM Fault Code	Check for pushed out/bent pins at transmission connector. Module must be plugged in to harness otherwise fault codes will be set.
MAP sensor fault code	Check for pushed out/bent pins at MAP sensor connector of BD harness.
Pressure only operating in stock range	No MAP sensor signal to module. Open module, check the ACTIVE LED is illuminating when over 15psi boost. Confirm MAP sensor wire from BD harness has been plugged into the MAP sensor.
Pressure is always at maximum	Open module, check if the ACTIVE LED is lit. If the LED Is lit all the time check for a short to power on the green MAP sensor wire. Confirm pinout of MAP sensor connector.

Wiring Layout



Pressure Indicator LED

An indicator LED (not supplied) can also be added to show when line pressure boosting is active. This will light up whenever the PCS solenoid is being controlled.



Gray Plug
 10 – 12V for Pressure Light
 11 – Ground for Pressure Light