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## HP5215 – C4 Transbrake Valvebody Complete Kit<sup>9/24/16</sup>

For over 45 years our goal has been to provide racers and enthusiasts with reliably engineered, U.S. manufactured, torque converters and drive train components for your high performance application. *Before you start your build, please take a few moments to review the important Product Safety Information and installation steps set out within this instruction manual.* If you still have questions; Hughes Performance® technical team is here to help: (1-800-274-RACE).

### **Important Product Safety Information**

Throughout these instructions important safety information is generally preceded by one of three signal words indicating the relative risk of injury. The signal words mean:

**! WARNING** a hazardous situation which if not avoided could result in death or serious injury. **You CAN be Killed or Seriously Injured if you do not follow instructions.**

**! CAUTION** a hazardous situation which if not avoided could result in minor or moderate injury. **You CAN be moderately INJURED and also may suffer property damage if you don't follow instructions.**

**NOTICE** careful attention is required to follow this installation instruction or operation but does generally not relate to personal injury. Damage to your product or other property may result if you do not follow instructions.

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**! WARNING:** Improper selection of Hughes Performance® products, failure to follow installation instructions and/or misuse increases the risk of injury or accident. For your safety and the safety of others:

- Assure the Hughes Performance® product selected is intended for your application with an additional safety margin above your expected horsepower, torque, and intended usage of product and vehicle.
- These instructions are not intended to address all risks related to modification of your vehicle or use. Remember: *you are the builder and chief safety engineer for your modified vehicle.* Consult and follow all OEM warnings and operating limitations.

(For Calif. Residents-Prop. 65):

## **! WARNING**

This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

(for more information on Prop. 65 see [www.P65Warnings.ca.gov/product](http://www.P65Warnings.ca.gov/product))

**! WARNING:** Use protective eyewear and gloves. If dusty, use face mask, wet and wipe clean working surfaces. Transmission fluids and cleaning products are highly flammable! Avoid open flame, welding sparks, smoking, or other sources of ignition. Flexplate, torque converter, and transmission assembly involves heavy parts and pinch points. Use support jacks and review installation steps before attempting.

**! WARNING:** Cooler fittings should never be plugged. If a cooler is not used, connect lines together with a loop of hard line or appropriate flexible hose that is compatible with automatic transmission fluid and that carries a minimum 500 PSI rating.

# HP5215 – C4 Transbrake Valvebody Complete Kit

## Installation Instructions

**! WARNING** Read instructions completely before attempting installation. Only a qualified transmission technician should install this transbrake. If you are unfamiliar with any of the operations or terms found in these instructions, you should take your transmission to a qualified race transmission shop. Improper installation may result in property damage, personal injury or death.

1. Drain transmission by removing the oil pan bolts and work towards the front slowly (if dipstick is attached to the pan, dipstick removal will allow most oil to drain.)
2. Remove the eight (8) valve body attaching bolts and remove valve body by pulling straight down.
3. Hughes Performance is now supplying a new case connector. This new connector is installed where the vacuum modulator valve, pin, and modulator valve are located. Remove these three items from the transmission case. They are located on the passenger's side. Feed the short jumper wire from inside the case to the area where the modulator valve was and connect it to the terminal. Crimp and install onto black connector using a high quality, high temperature silicon sealer (red or black). Place a bead of silicone around the connector and push it into the modulator valve hole. Feed the excess wire back through the slot in the case and

proceed with the transbrake installation. (Fig 1)

4. **NOTICE** Install transbrake valve body into transmission carefully. You must engage selector lever into manual valve (Fig. 1). Note that transmission will now become fully manual and kickdown lever is now unused.
5. Tighten valve body finger tight, remembering that the longer bolt attaches the filter to the valve body. Check for free operation of shifter linkage and if acceptable, tighten valve body bolts to 80-120 in-lbs.
6. Remove excess gasket material from pan mounting area of the case as well as from the pan itself. Connect the wire from the solenoid on the valve body to the jumper wire from step 3.
7. Place gasket on pan and hold assembly below transmission case.
8. Tighten pan bolts to 12 ft-lbs.
9. **NOTICE** At this point, the bands should be checked and adjusted. To adjust the front band; loosen outer jam nut with a  $\frac{3}{4}$ " wrench, tighten band adjusting screw to 120 in-lbs and back off 1 turn, then hold the band adjusting screw in this position and tighten jam nut securely. The same procedure is used on the rear band, only back off the adjusting screw 2 turns instead of 1.
10. Now the shifter adjustment must be checked.  
**NOTICE :DO NOT SKIP THIS STEP!**  
**SHIFTER MUST NOT BE ALLOWED TO PULL TRANSMISSION SHIFT LINKAGE PAST THE DETENT FOR (3<sup>RD</sup>) HIGH GEAR. THIS IS CRITICAL AND MUST BE CAREFULLY ADJUSTED. SHIFT ARM ON TRANSMISSION MUST NOT TRAVEL PAST THE LAST FULL DETENT.**
11. With the rear wheels off the ground, add three quarts Type-F transmission oil into the transmission filler tube. Start the engine and put the shifter in neutral. Check the fluid level and add fluid until it is at the "add" mark found on the dipstick. Shift the transmission through all gear positions five (5) times. With the rear wheels stopped, test transbrake with wheels in the air.
12. Lower car to the ground and run through the gears about five or six times. Check the fluid level again and bring to the "full" line.

**! CAUTION** \*Remember the transbrake must not be engaged while the vehicle is in motion!

Figure 1

