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Hughes Performance HP1218 Trans-brake Valve Body^{10/18/16}

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.

! WARNING: This valve body is intended for use in a competition application only never to be used on public streets or highways. This valve body is not intended for use in a street-driven application.

! 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)

To reduce risks: work with gloves, safety glasses, wash hands before eating, and dispose of any fluids properly.

! 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.

HP1218 – Chrysler 727/904 Transbrake Valvebody

Installation and use instructions.

For best results, follow the instructions; please read fully before starting. Do not overlook any steps.

1. After transmission is removed from car, remove pan, valve body, front pump, front and rear clutch drums, install rear servo spacer and spring (see figure 2). (IF TRANSMISSION IS NEW OR FRESH, YOU SHOULD REMOVE REVERSE BAND, INSPECT AND REPLACE IF NECESSARY)
2. **NOTICE** Disassemble direct (front drum) and clean. Drill a .050" hole in direct drum piston 7/8" (727) or 3/4" (904) from I.D. bore of piston. Re-seal and assemble with a minimum of 12 (727) return springs. Must use 4 clutch pack, set clearance at .075" - .090".
3. Forward (rear drum) clutch clearance is .030"
4. **NOTICE** Drill a 7/16" hole in rear of case below cooler line fitting above flange, use template (figure 3) and tap hole to 1/4" NPT.
5. Inspect and clean all parts and assemble transmission except for valve body.

6. **NOTICE** Change kick down apply band apply lever to a 3.8, 4.2, 5.0 lever. To change lever, look at front pump in bell housing at seven o' clock, there is a plug. After locating plug, remove and change lever. Install plug using pipe thread sealer.
7. **NOTICE** Adjust front and rear band as follows: tighten to 72 inch lbs. And back off front band 1 $\frac{3}{4}$ turns on 5.0 lever only, 2 turns on 3.8 or 4.2 lever, rear band back off 2 $\frac{1}{2}$ turns, 904 with double wrap rear band, back off 4 turns and tighten jam nuts.
8. **NOTICE** Remove park rod and clip from original valve body, re-install park rod and clip on new valve body. Remove and discard accumulator spring. Check for restrictor plug in front clutch apply hole in case, (see figure 1), remove restrictor if there is one. Re-install new valve body, torque mounting bolts (ten each) to 100 inch lbs. Install the electrical connector in $\frac{1}{4}$ " NPT hole. Connect solenoid wire to connector wire, install filter and pan.

This valve body has important features:

1. LOW REVERSE BAND is applied and the way through low gear too prevent sprag failure.
2. TRANSD-BRAKE will ONLY apply in first gear, not second or high gear.
3. REVERSE: the only way for reverse to work is to put the shifter in REVERSE and push the trans-brake button, the car will then back up.
4. Valve body shift pattern is P-R-N-1-2-3. The transmission will not free wheel in any gear. DO NOT DOWN SHIFT TRANSMISSION OR SHIFT TO NEUTRAL AT SPEEDS ABOVE 10 MPH.

! WARNING: Do not shift the transmission into neutral under load or with vehicle or drive shaft in motion. Do not turn off engine under load or with vehicle or drive shaft in motion. Doing so will cause an over speed condition of the direct drum within the transmission, increasing risk of direct drum failure, explosion, and injury.

! 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.

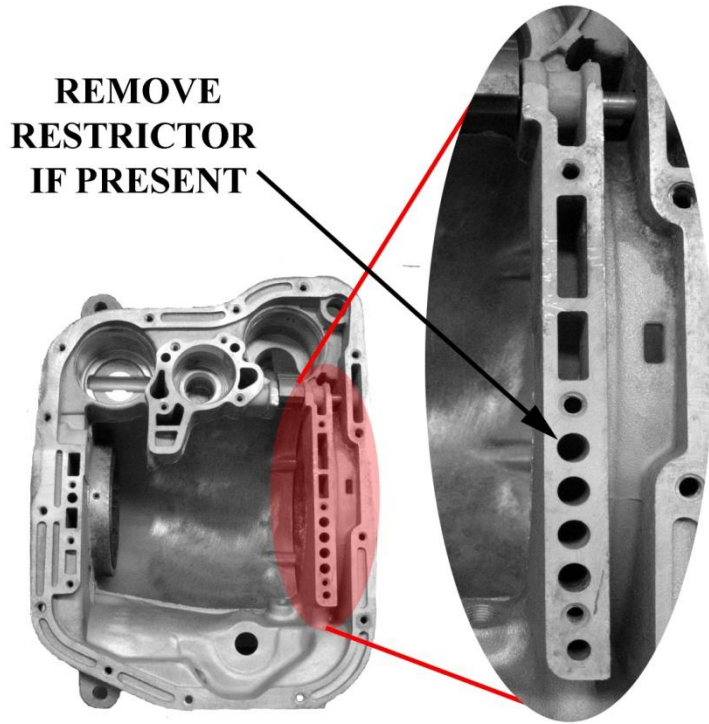


Figure 1

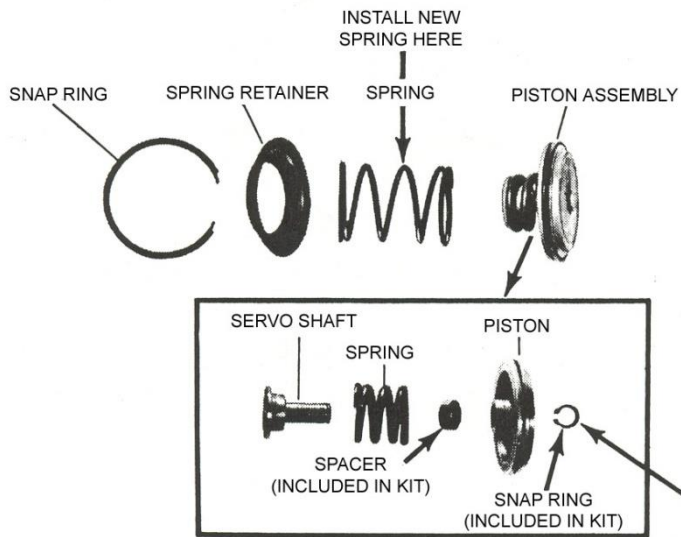
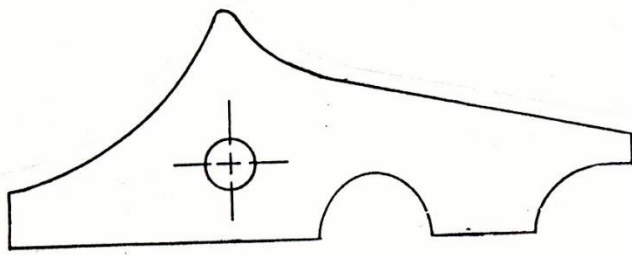
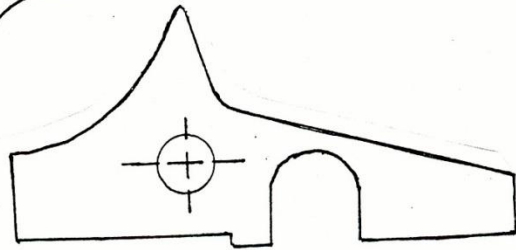


Figure 2

NOTE: The small Snap Ring is nearly impossible to install without the recommended Snap Ring Pliers.



(727)



(904)

Figure 3