

W140N10145 Fond Du Lac Ave.  
Germantown, WI 53022  
Phone: (262) 251-7777  
Email: info@autotransdesign.com  
www.AutoTransDesign.com

## **HIPSTER'S BILLET T400 TRANSBRAKE W/ ENGINE BRAKING (P/N: 22748A-EB)**

### CAUTION

*Please read all of these instructions before proceeding with installation.*

*This or any transbrake should only be installed by a qualified race transmission technician. If you are unfamiliar with any of the operations or terms, take your transmission to a qualified race transmission shop. Improper installation may cause property damage and/or death.*

Your 22748A-EB transbrake kit includes the following parts:

- (1) Hipster's T400 Billet Transbrake Valvebody w/ Manual Valve,
- (1) Check Ball,
- (1) Separator Plate,
- (16) Heavy Direct Drum Return Springs,
- (1) Pressure Regulator Spring,
- (1) Brake Valve Return Spring,
- (1) Hipster's Turbo Transbrake Solenoid,
- (1) T400 Intermediate Kevlar Band,
- Instructions & Decals.

### **SHIFT PATTERN**

This transbrake employs modified reverse shift pattern: **P - R - N - 1 - 2 - 3**.  
The brake applies/launches from first gear.

### **SOLENOID WIRING**

Wiring to solenoid should be 12 or 14 gauge wire. Use a switch that you are comfortable with and that has 20 amp 12 volt DC capacity. Install a 10-15 amp fuse in power line to switch or use fusible link of sufficient capacity at solenoid. Solenoid draw: 8 amps.

### **TO ENGAGE REVERSE**

Put shifter in reverse and push brake button. There is no line pressure drop - solid reverse.

### **WARRANTY**

This product is warranted for 12 months from date of purchase against defects in material and workmanship. During this period such defects will be repaired or replaced at manufacturer's option. Return any defective products to your supplier. This warranty does not cover damage caused by misuse, alteration, or negligence. All implied warranties, including but not limited to implied warranties of fitness and merchantability are limited in duration. Under no circumstances will manufacturer be responsible for special, incidental, or consequential damages or costs arising from or in conjunction with the installation or use of any product of the manufacturer.

## INSTALLATION INSTRUCTIONS FOR HIPSTER'S BILLET T400 TRANSBRAKE W/ ENGINE BRAKING

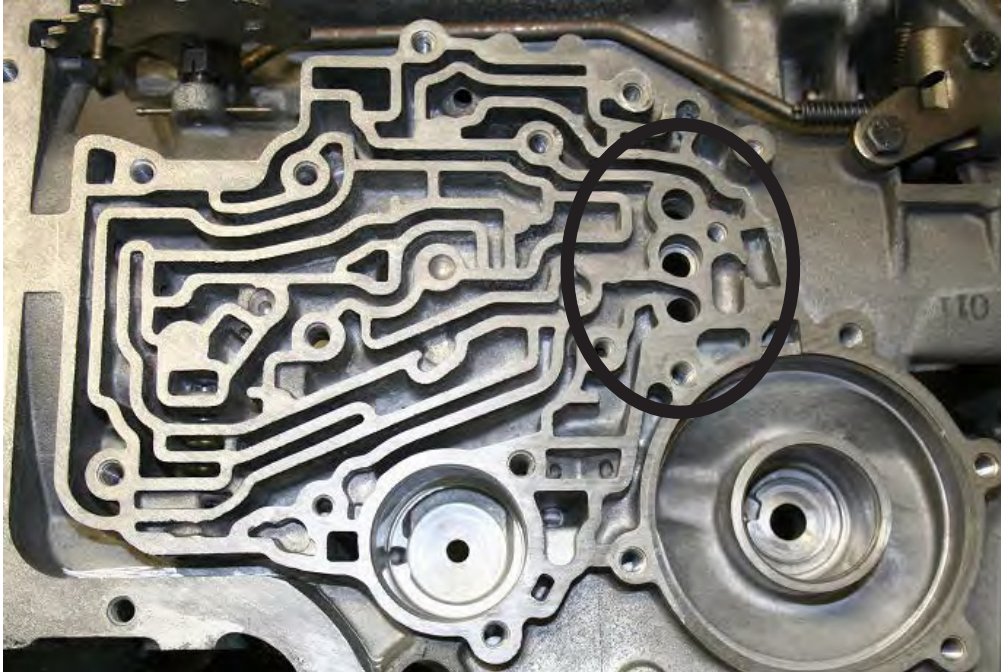
1. Disassemble transmission.
2. Disassemble direct drum. Drill 1/16" hole in direct drum at 45 degree angle as shown below.



3. Replace piston lip seals and discard center seal in drum. Be sure to install both seals on the piston, and none in the drum.
4. Install piston in drum using 16 new included return springs, and install new clutches. Clutch pack clearance: .050" to .070".
5. Replace intermediate brake band with the included kevlar band, and ensure apply servo is installed.
6. Check pump for wear and replace as needed.
7. Replace stock PR spring with the one provided. Use no shims.
8. Reinstall gear train, drums, and pump assembly.
9. Remove low/reverse servo piston and spring.
10. Discard accumulator piston and spring from low servo assembly.
11. Use blunt drift to install stock T400 1/4" steel check ball into accumulator feed passage in case, as shown below. DO NOT install checkballs in stock locations in case.

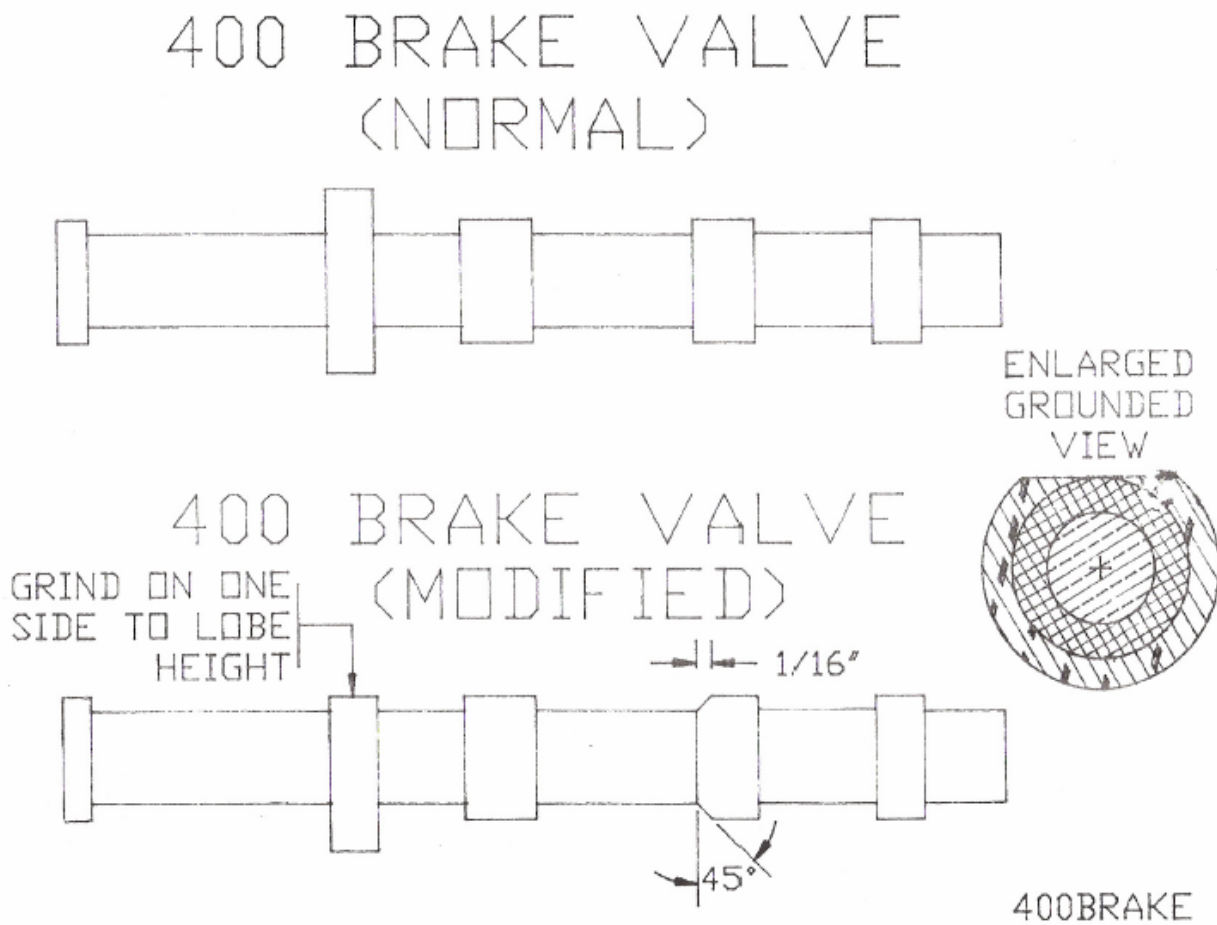


12. Flat file or wet stone entire channel passage area of case - absolutely no high spots or burrs allowed especially at area shown below.

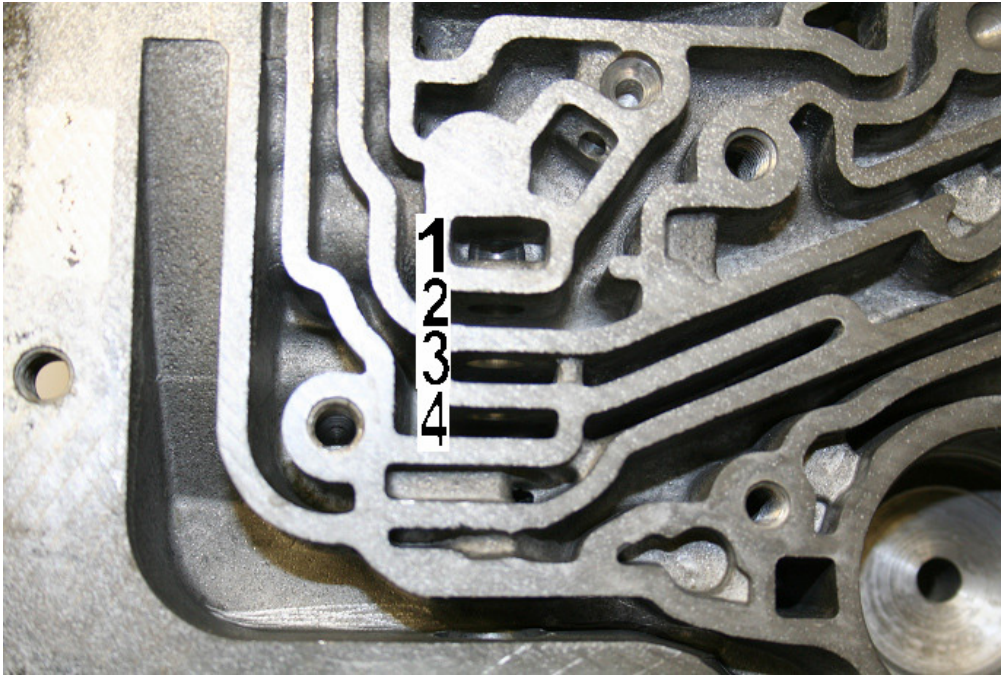


13. Install rear servo with new seal and steel gasket; air check to ensure apply.

14. Modify modulator valve as shown below.



15. Install small brake release spring on modulator valve and install valve into case.
16. Install O-ring on solenoid and install into case.  
Check valve phasing when solenoid is applied and released. Refer to the figure below.



Brake On: Lands 3 & 4 are connected. Brake Off: Lands 2 & 3 are connected.  
Ensure solenoid plunger bottoms on solenoid back when stroked. Shims on bracket bolt may be needed when there is a shim on the solenoid.

17. If not installed, install manual valve into bore and checkball in between the inserts.



18. DO NOT install any gaskets on the case or valvebody! Install transbrake valve body. Start all valve body bolts before tightening!
19. Omit governor feed tubes and governor.
20. Install new filter - Allison screen type is preferred.
21. Install pan.
22. Smoke the competition.

#### NOTES

Use Teflon sealing rings on pump and center support. Have a T400 shop manual handy during installation steps.