

# HIPSTER'S TURBO 400 1+2 TRANSBRAKE

P/N: 22748-1

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

## CAUTION

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 transbrake kit should include the following parts:

- (1) Hipsters T400 1+2 Transbrake Valvebody with Separator Plate,
- (1) Hipsters Turbo Transbrake Solenoid,
- (16) Direct Drum Return Springs,
- (1) Pressure Regulator Spring,
- (1) Brake Valve Return Spring (shiny),
- (1) 1-2 Brake Valve,
- (1) Modulator Bore Sleeve & Installation Tool,
- Instructions and Decals.

## 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.

## TO ENGAGE REVERSE

Put shifter in neutral and push brake button or put in reverse. 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.



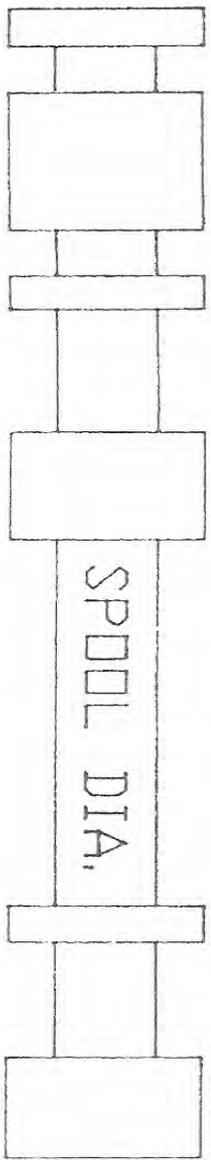
## INSTRUCTIONS FOR INSTALLATION OF HIPSTERS T400 1+2 TRANSBRAKE:

1. Disassemble transmission.
2. Disassemble direct drum.
3. Drill a 1/16" hole in drum as shown in Figure 1.
4. Replace piston lip seals - discard center seal in drum.
5. Install piston in drum. Install 16 new return springs (included), and install new clutches. Clutch pack clearance: .050" to .070".
6. Discard intermediate brake band and apply servo.
7. Check pump and forward drum for wear - replace as needed.
8. Replace stock PR spring with the one provided. Use *no* shims.
9. Reinstall gear train, drums, and pump assembly.
10. Remove low/reverse servo piston and spring.
11. Discard accumulator piston and spring.
12. Use a blunt drift to install stock T400 1/4" steel check ball into accumulator feed passage in case, as shown in Figure 3. **DO NOT install check balls in stock locations in case!**
13. Flat file or wet stone entire channel passage area of case - absolutely no high spots or burrs allowed, especially at areas shown in Figure 4.
14. Install rear servo with new seal and steel gasket - air check to ensure apply.
15. Modify manual valve as shown in drawing.
16. Install modulator bore sleeve into modulator bore using red or green Loctite to secure the sleeve into the case using the included installation tool. There is a small chamfer on one end of the sleeve - install the chamfered end into the case bore. **ENSURE THAT THE SLEEVE BOTTOMS INTO THE MODULATOR BORE!** Failure to do so will result in the transmission locking up at speed! Minimum installed dimension: .890" O-ring boss to sleeve. **See Figure 5.**
17. Using a 1/8" drill bit, drill a hole, as **shown in Figure 6**, into the case and through the sleeve. The drill bit should be as close to the casting wall as possible. *Be sure to only drill through the sleeve on the valve body side of the bore!*
18. Install included brake valve spring on the end of the new brake valve enclosed in the kit. Install the brake valve into the bore, gently using the valve to deburr the sleeve. Ensure that the valve moves freely in the bore before proceeding.
19. Install O-ring on solenoid and install into case.
20. Check valve phasing when solenoid is applied and released. Refer to Figure 2.
21. Install transbrake valvebody. **DO NOT install any gaskets on the case or valvebody!** Start all valvebody bolts before tightening!
22. Omit governor feed tubes and governor.
23. Install new filter - Allison screen type is preferred.
24. Install transmission pan.

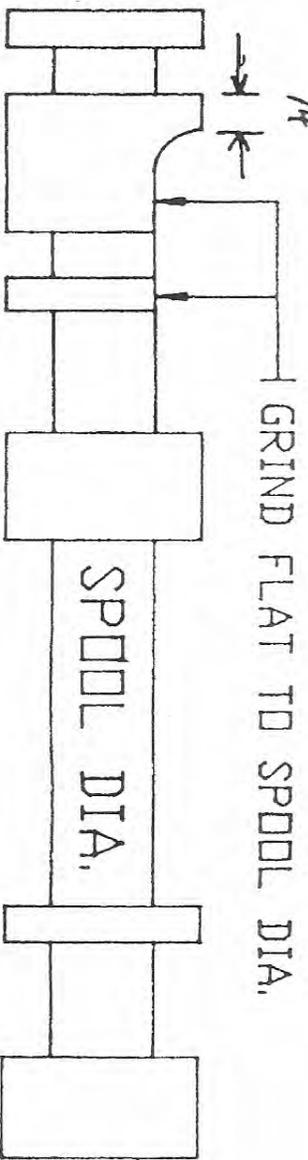
### \*\*\* NOTES\*\*\*

- Ensure solenoid plunger bottoms on solenoid back when stroked; shims on bracket bolt may be needed when there is a shim on the solenoid.
- Check brake valve phasing before valve body installation:
  - Brake On: Lands 3 & 4 are connected, Brake off: Lands 2 & 3 are connected.
  - Refer to Figure 2 to determine land locations.
- Use Teflon sealing rings on pump and center support.
- Have a T400 shop manual handy during installation steps.
- This transbrake employs reverse shift pattern: P R N 1 2 3
- **DO NOT NEUTRAL THIS OR ANY 3 SPEED TRANS.....THEY WILL EXPLODE!!**
- Release time: .028
- Solenoid draw: 8 amps

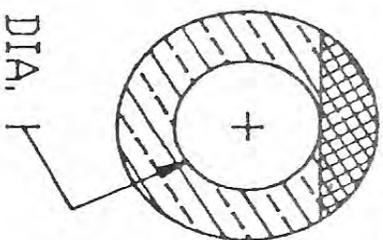
MANUAL VALVE 400 TURBO  
(NORMAL)



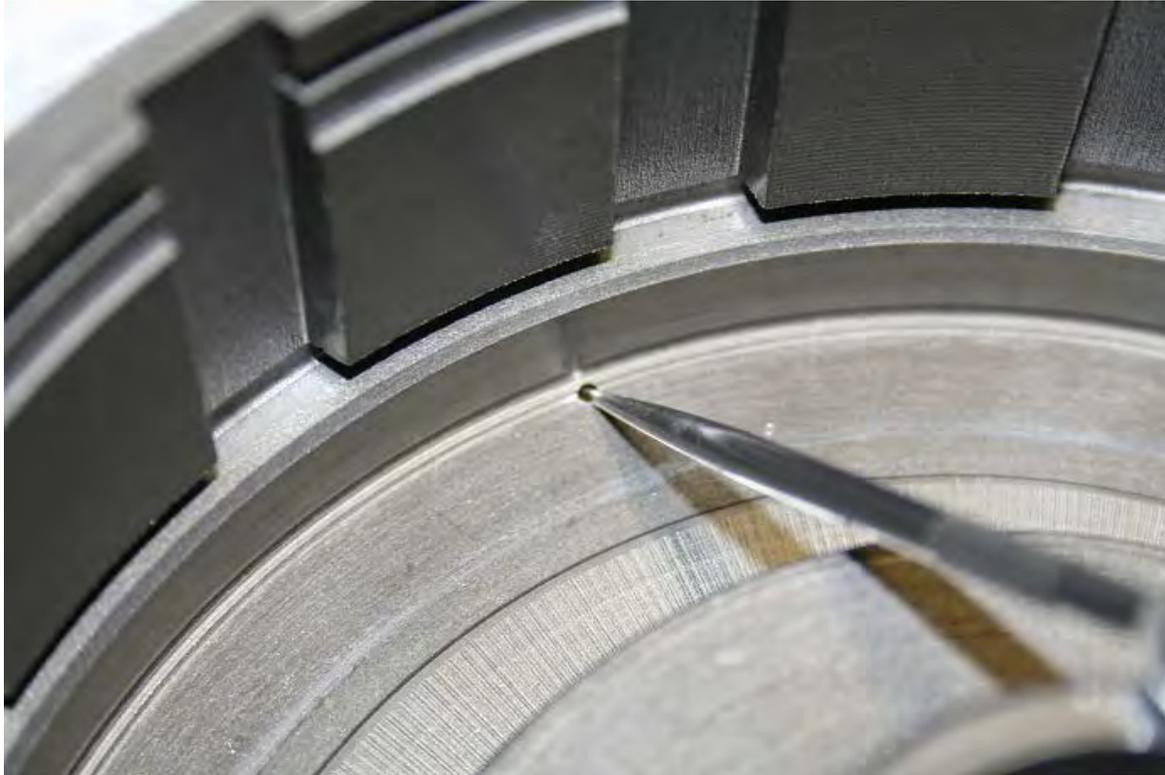
MANUAL VALVE 400 TURBO  
(MODIFIED)



ENLARGED  
CUT VIEW



400MNUU



**Figure 1**  
DRILL DRUM AT 45° (degree) ANGLE



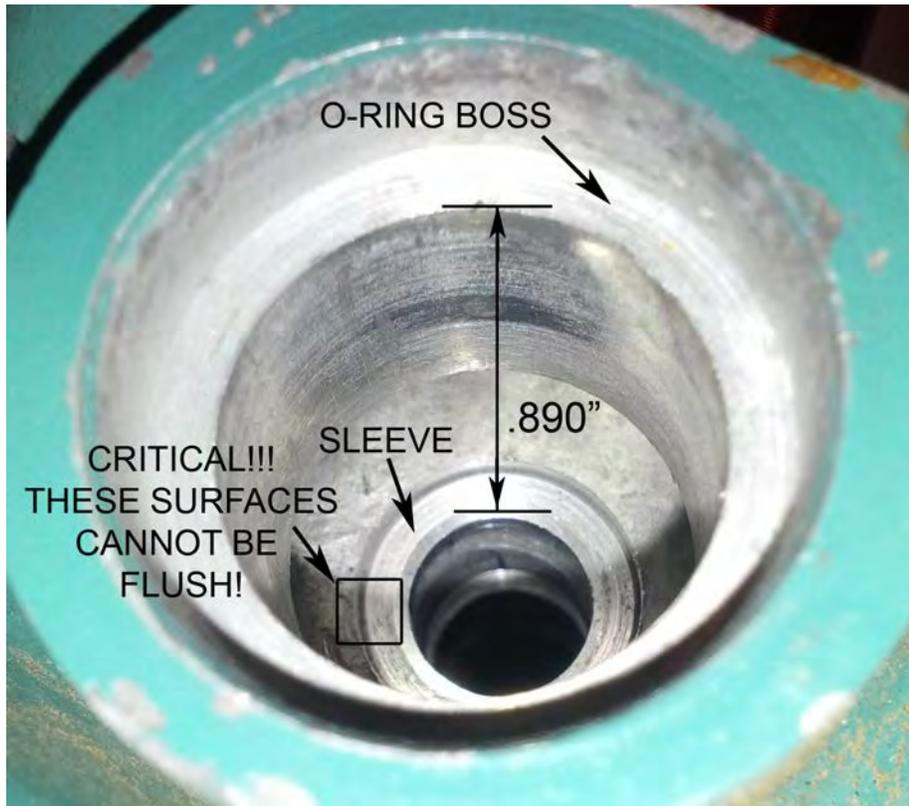
**Figure 2**  
VALVE PHASE LOCATIONS



**Figure 3**  
INSTALL ¼" STEEL CHECKBALL HERE



**Figure 4**  
FILE CASE AREA FLAT!  
NO UNEVEN SPOTS ALLOWED!



**Figure 5**  
INSTALLATION OF MODULATOR BORE SLEEVE.  
**THE SLEEVE MUST COMPLETELY BOTTOM OUT IN THE BORE!**



**Figure 6**  
DRILLED HOLE THROUGH CASE & SLEEVE  
**DO NOT DRILL THROUGH BOTH SIDES OF THE SLEEVE!**