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ATD BILLET T400 REVERSE MANUAL VALVEBODY W/ SELECTABLE ENGINE BRAKING (P/N: 22148A-v2)

CAUTION

Please read all of these instructions before proceeding with installation.

This or any valvebody 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 22148A-v2 Reverse Manual Valvebody kit includes the following parts:

- (1) ATD T400 Billet Reverse Manual v2 Valvebody w/ Modified Manual Valve,
- (3) 1/4" Torlon Check Balls,
- (1) Separator Plate,
- (1) Heavy Duty Pressure Regulator Spring,
- (16) Heavy Duty Drum Springs,
- (1) Modulator Plug,
- Instructions & Decals.

SHIFT PATTERN

This valvebody employs a reverse shift pattern: **Park - Reverse - Neutral - 1- 2 - 3.**

This valvebody is designed to allow for engine braking when configured properly.

Do not neutral this or any three speed transmission at speed or the transmission may explode!

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. Do NOT return any defective products to your supplier; contact ATD directly. 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 ATD BILLET T400 REVERSE MANUAL VALVEBODY

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



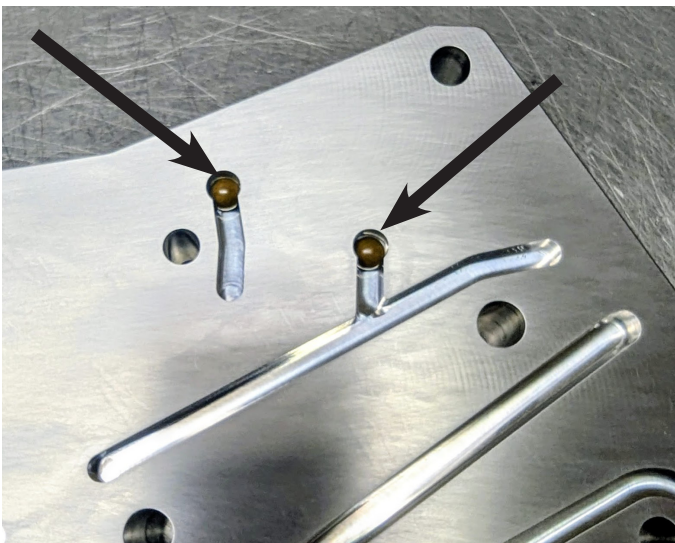
3. Replace direct clutch apply piston lip seals and discard the center seal in the drum.
Be sure to install both seals on the piston, and none in the drum.
4. Install apply piston in direct drum using the 16 new included heavy return springs, and install new clutches. Clutch pack clearance: .050" to .070".
5. Check pump for wear and replace as needed.
6. Replace stock PR spring with the new PR spring provided. *Use no horseshoe shims.*
7. Reinstall gear train, drums, intermediate band (if needed), and pump assembly.
8. At this point you must configure the transmission for engine braking, or no engine braking.

FOR ENGINE BRAKING:

This valvebody requires the intermediate band and the apply servo to be installed for engine braking functionality. We recommend using a HD Kevlar lined band (not included, but are available for purchase). No additional configuration changes are required in the valvebody.

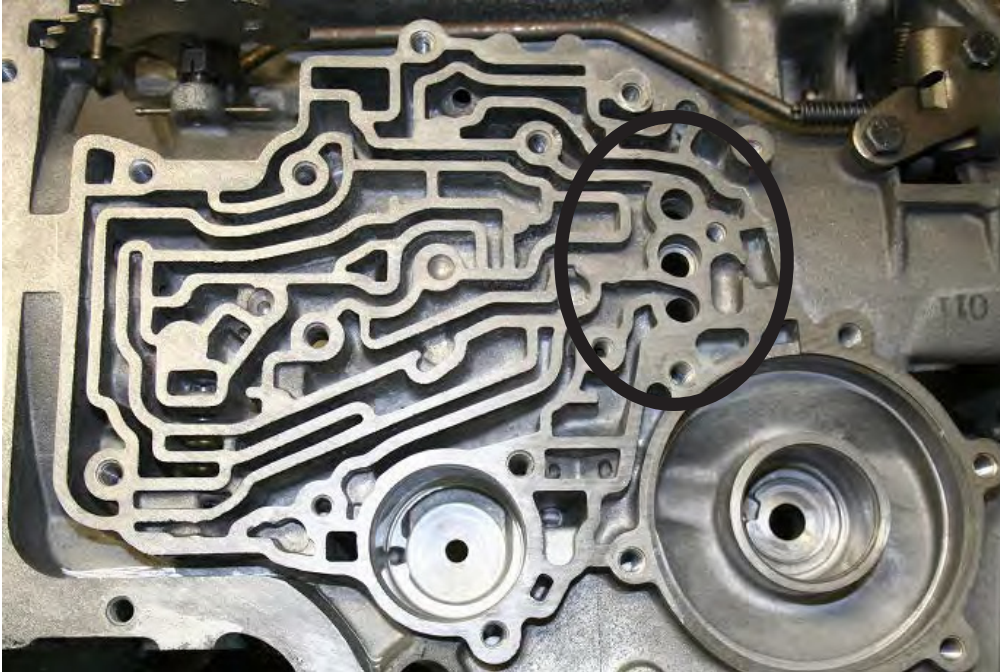
FOR NO ENGINE BRAKING:

To block the engine braking feature, do not install the intermediate band or apply servo, and install two (2) checkballs in the following locations:



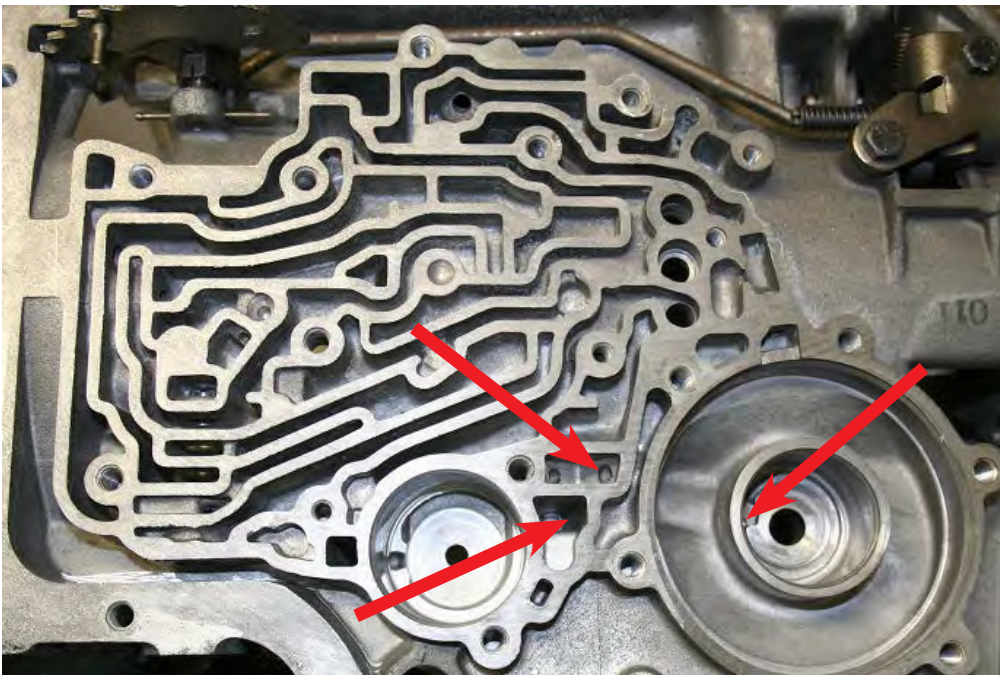
**FAILURE TO INSTALL THESE
CHECKBALLS WILL RESULT IN A
PRESSURE LEAK IN 2ND & 3RD
GEARS IN A NON-ENGINE BRAKING
APPLICATION!**

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



10. Install 1-2 accumulator with new rings and factory spring, and low/reverse band servo with new seal and steel gasket. Air check to ensure apply.

This valvebody requires the 1-2 accumulator case passages to flow freely - there must be NO checkballs or plugs in the locations below.



11. If not installed, install the included modified manual valve into bore and ensure 1/4" checkball is in the proper location noted below. One of the provided checkballs should be preinstalled in the valvebody, greased in place.



12. *DO NOT install checkballs in any stock locations in case. There should be one (or three) ball(s) in the valvebody, and none in the case.*
13. Install valvebody with included separator plate.
DO NOT install any gaskets on the case or valvebody!
Start all bolts by hand before tightening! Torque 5/16" bolts to 15 lb-ft and 1/4" bolts to 10 lb-ft.
14. Omit governor feed tubes and governor.
15. Install stock, unmodified modulator valve into the case, and install a fresh o-ring on the included blocker plug.
16. Install new filter (Allison screen type is preferred - Transtar #A34010B) and pan.
17. Smoke the competition.

NOTES

- Use Teflon sealing rings on pump and center support.
- This valvebody is dual feed design - it supplies direct clutch oil to both sides of the center support with no additional modifications. You can install all center support rings, or omit the second ring - there is no difference in function with this valvebody.