

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

HIPSTER'S ALUMINUM POWERGLIDE TRANSBRAKE (P/N: 12748A)

CAUTION

Please read all of these instructions in their entirety 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, personal injury and/or death.

Your 12748A transbrake kit includes the following parts:

- (1) Hipster's Aluminum Powerglide Transbrake Valve body w/ Brake Valve & Spring,
- (1) Pressure Regulator Cartridge,
- (1) Filter,
- (1) Hipster's Powerglide Transbrake Solenoid,
- (1) Hardware Kit (2 Bolts, 1 Socket Head Shoulder Screw, 3 Filter Screws, 6 Washers),
- Instructions & Decals.

SHIFT PATTERN

This transbrake employs forward shift pattern: **Park - Safety Reverse - Neutral - 2 - 1.**

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.

SAFETY REVERSE

Transbrake button must be depressed to engage reverse allowing the driver to safely neutral the car in the traps.

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. Automatic Transmission Design, Inc. parts are sold "as is" and acceptance of delivery of said parts manufactured by Automatic Transmission Design, Inc. hereby release said Automatic Transmission Design, Inc. of all liability of any type whatsoever from accidents and/or injuries. Our products are sold as finished products and proper installation and operation are purchaser's sole responsibility and Automatic Transmission Design, Inc. assumes no responsibility for the installation of said products.

INSTALLATION INSTRUCTIONS FOR HIPSTER'S ALUMINUM POWERGLIDE TRANSBRAKE

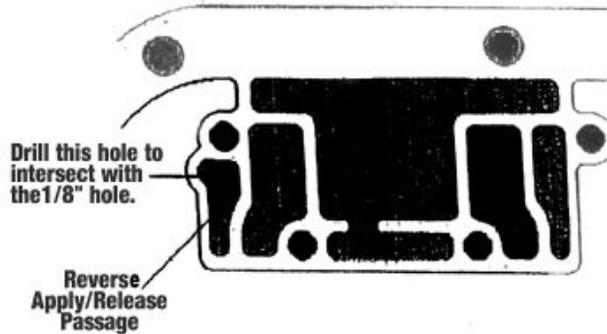
1. Carefully remove the valve body; **do not damage the low servo apply tube.**
2. Modify the transmission case and set the clearances; see below.

TRANSMISSION MODIFICATION INSTRUCTIONS

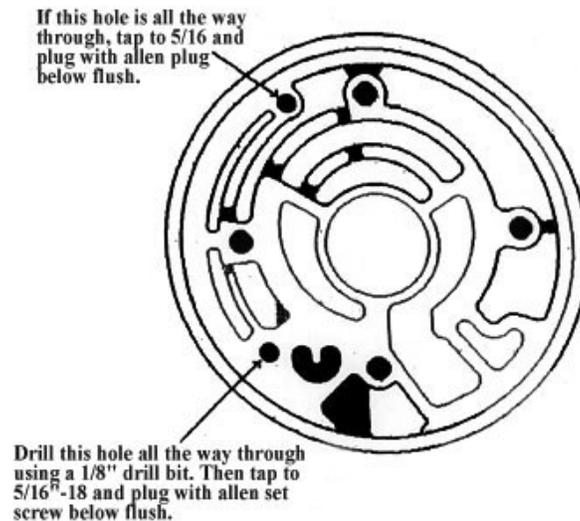
When using this valve body on transmissions already set up for transbrake use, we have found a slight improvement in reaction time by increasing the reverse apply/release case passage to 3/8 inch for suspended chassis cars. Dragsters and unsuspended altered should only need a 5/16 inch hole.

HOW TO DRILL THE STOCK CASE

Do not modify any aftermarket cases (Reid, JW, etc.). **REVERSE PISTON MUST BE REMOVED FROM CASE!** With the transmission disassembled, locate the reverse apply/release passage in the case. Refer to the figure below. Using a 5/16 inch or 3/8 inch drill bit, drill from the valve body side of the case up to the intersection of the hole in back of the reverse piston area. Then locate the 1/8" hole from the piston side of the case, using the same bit drill to enlarge the hole until you intersect the drilled passage from the bottom. Do not drill through the back of the case or you will ruin the transmission case.



If you have an early model case (rear pump style) with the hole at the top of the piston area, follow these case modification details. Refer to the figure below. If the hole at the top of the case is drilled through the case, tap the hole 5/16-18 and install set screw below flush. Refer to the bottom of the figure below. Drill this hole all the way through using a 1/8" drill bit to create a pilot drill hole. Tap and plug hole with 5/16-18 set screw below flush.



REVERSE CLUTCH CLEARANCE

To insure quick set-up and release, clearance reverse clutches between .050 and .065. Use of five clutches works best for most applications. Use only stock reverse springs.

3. The use of a new style double ring servo is strongly recommended. **Do not use a kevlar band.** Relined race bands (red linings) are best. Two ring servos and red bands are available from ATD.
4. Use only stock reverse springs.
5. For maximum performance, pump clearance should not exceed 0.0015 inches.
6. Small feed hole pump stator is preferred. To use a larger feed hole pump stator, cooler feed must be restricted to .110". This can be achieved by tapping the cooler feed hole in the stator and installing a 5/16" set screw with a .110" hole drilled in it. See addendum for pump identification.
7. Install your low servo tube and your stock shift valve (or the enclosed shift valve, if included) into the new valve body.
8. Be sure mating surfaces of the transmission case are perfectly flat as this valve body uses no gasket at the case area. Flat file or stone the case.
9. Install your detent lever on the socket head shoulder screw provided and attach to the side of the new aluminum brake.
10. Install the valve body and torque the bolts to 15 ft/lbs. Please note on aftermarket cases: ensure that the aluminum valve body clears the reverse feed passage area. Minor case grinding may be necessary. Use the two 5/16-18 x 1 1/2 bolts supplied to bolt the valve body to the case in the area under the new filter location. Replace the short valve body bolt at top center with a stock length longer bolt. The six flat washers supplied should be used under the valve body to case bolts except at guide plate location.
11. Install the manual shift valve guide plate, ensuring the valve to shift lever engagement. Install the detent spring and detent tab. Check clearance of detent plate under new PR sleeve.
12. Install the brake valve and solenoid.
13. Install filter and pan.
14. Fill the trans with fluid and raise the car on jack stands.
15. Run the trans through all the gear ranges. Test the transbrake a few times. To engage reverse, put shifter in reverse and press the brake button.
16. Smoke the competition.

NOTES

Replacement filters are available from ATD or any parts supplier. Ask for Chrysler 66-97 TF-8 large Dacron 1 hole filter.

PRESSURE ADJUSTMENT

Line pressure changes are achieved by adjusting the pressure regulator cartridge. Follow these steps carefully:

1. Remove the end cap from the pressure regulator sleeve using a 1/4" allen wrench.
2. Note the current position of the adjuster screw.
3. Turn the inside adjuster screw with 1/4" allen wrench in/clockwise to increase pressure, out/counterclockwise to decrease pressure.

A half turn changes the pressure approximately 30 psi.

PR is preset to 190-200 psi which works for most applications. Do not increase pressure unless you experience holding problems. Increase is needed only for 950HP or higher.

Do not exceed 220 psi at 1000 rpm, or 240 psi above 4000 rpm.

Do not disassemble the pressure cartridge.

4. Replace the end cap and tighten by hand.

BAND ADJUSTMENT

Tighten to 72 inch lbs, back off 3 1/2 turns, and then tighten the jam nut.

TROUBLESHOOTING

Install a pressure gauge in the low servo cover. With trans in low gear at 2000 RPM you should have 190-210 psi. Depress the brake button, pressure should instantly drop to about 50 psi and then instantly return to within 5 % of the original reading.

FOR TECHNICAL HELP CALL: (262) 251-7777, Monday-Friday 9am - 5pm CST.

IF YOU PURCHASED YOUR TRANSBRAKE FROM A RETAILER (e.g. JEGS), DO NOT RETURN THIS PRODUCT TO THEM. PLEASE CONTACT US FIRST TO RESOLVE ANY ISSUES.

ALUMINUM VALVE BODY PRESSURE REGULATOR SUPPLEMENT

The pressure regulator assembly for the Hipster Aluminum Brake has been carefully adjusted to 200 PSI prior to shipping. This adjustment is performed on a fluid dyno. It is NOT a measured adjustment from the end of the cartridge sleeve. To make any changes REQUIRES a pressure gauge.

THERE ARE NO USER SERVICEABLE PARTS INSIDE - DO NOT DISASSEMBLE THIS CARTRIDGE!!!

If you run any debris through the transmission that contaminates the valve body, cleaning is performed by removing the brake valve, manual valve and cartridge assembly from the casting. **Separating the valve body is not required.** Solvent flush the oil delivery holes, manual bore and brake valve bore areas of the valve body to remove the debris and allow the solvent to drain. Use a center punch (1/4" diameter) or Phillips screwdriver to depress the pressure regulator valve pintle (needle) into the cartridge body and flush any debris through the regulator body holes. If the contamination of the cartridge is too extreme, the cartridge assembly should be returned to our shop for thorough cleaning. Disassembly of the cartridge will result in excessive line pressure and corresponding transmission problems. Repeated disassembly of the valve body will cause the bolt holes to strip.

REMEMBER - When the valves and regulator assembly are removed from the valve body it becomes nothing more than a hydraulic manifold, hence disassembly is unnecessary!

