

**1 PIECE SUPERGLIDE TRANSMISSION CASE**

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This replacement Powerglide transmission case is **SFI 30.1 & 4.1** certified. It requires **NO** internal liner and **NO** external shields, blankets, oil pans, or oil pan straps of any kind. The SFI certification is good for 5 years from the date of manufacture and can be recertified every 5 years by returning the case to Reid Racing, Inc. for inspection and recertification.

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These instructions point out specific features of the Reid Racing case and how to use these features. For detailed information on how to assemble a powerglide, use of a factory repair manual is recommended.

All factory Powerglide parts bolt into the Reid Racing Superglide case with the exception of rear oil pumps. When swapping cases, clean and inspect all components so that any worn parts can be replaced. Assemble the transmission according to the factory manual using a torque wrench to tighten all fasteners. A torque specification sheet is included with these instructions.

### **REAR OIL PUMP**

The Superglide case has simplified oil passages and additional material added for strength in the rear area of the case making it **not** possible to run a rear oil pump.

### **BUSHING VS. BEARING HUB**

It is recommended that the bushing or bearing in the governor support housing match the bushing or bearing in the transmission hub. If a PG1500 with a bushing in the rear hub of the transmission is used, use a governor support housing that uses a bushing also. If a PG1500R with a roller bearing hub is used, a governor support housing with a roller bearing should be used. This is important because both bushings/bearings are lubricated from the same port. If a bushing/bearing combination is used, the oil will have a tendency to flow easier through the roller bearing, possibly starving the bushing.

### **VALVE BODY**

Every valve body is different so it is important to check the port matching between the transbrake feed (reverse piston) hole in the valve body / separator plate / gasket and feed hole in the transmission case. The hole in the valve body / separator plate & gasket should be equal to or larger in size than the hole in the case for proper transbrake release.

### **SERVO SPRING**

It is recommended that you use a stock low gear servo piston spring or a Reid Racing replacement spring p/n PG133 instead of a heavy duty spring. With the stiffened case and precisely machined servo bore, a heavy spring is not needed like stock cases. The heavy spring requires higher oil pressure to lock the low gear band. When the transbrake is applied, the reverse piston takes a big gulp of oil which causes a pressure drop in the system. If the oil pump is weak or the idle speed is low the pressure may drop low enough to let the servo spring release the band momentarily allowing the car to rock or roll backwards. The stock or Reid Racing spring allows more pressure drop without the band releasing. If a rocking situation appears even with a stock spring, either rebuild the stock oil pump, raise the idle speed or upgrade to a Reid Racing super pump p/n PGP1 for increased oil flow. You may also install a dual ring servo piston (Reid Racing p/n PG100).

## 1 PIECE SUPERGLIDE TRANSMISSION CASE CONTINUED

### TRANSBRAKE ADJUSTMENT BOLT

Lubricate the adjustment bolt o-ring with ATF before installing. The adjustment bolt's purpose is to soften the shock on the tires when the transbrake is released. As the bolt is turned in (clockwise) it simply restricts the dump passage for the reverse piston. Slowing the fluid flow by restricting this passage during transbrake release "slips" the reverse clutches for a fraction of a second softening the transbrake release and slowing the reaction time.

There are a total of 7 complete turns worth of adjustment. If you bottom out the bolt & locknut and back it out 7 complete turns you will be at the wide open position (hardest release, quickest reaction time). This is where most racers run the adjustment. If you wish to try and soften the hit, start by turning the bolt in one complete revolution at a time until you get close, then fine tune from there. The "sweet spot" for the adjustment bolt when being used to soften the hit is generally 4 to 6 turns in from wide open (1 to 3 turns out from fully closed). Up to .03 in reaction time can be changed from wide open to fully closed.

### PG1500 TORQUE SPECIFICATIONS

Transmission to engine.....	25 to 30 ft. lbs.
Oil pan to case.....	7 to 9 ft. lbs.
Oil pan drain plug.....	15 to 20 ft. lbs.
Tailhousing to case.....	20 to 30 ft. lbs.
Servo cover to case.....	15 to 20 ft. lbs.
Front pump to case.....	13 to 17 ft. lbs.
Governor support to case.....	8 to 11 ft. lbs.
Valve body to case.....	13 to 15 ft. lbs.
Valve body suction screen.....	2 to 3 ft. lbs.
Parking pawl bracket to case.....	8 to 11 ft. lbs.
Pressure test plugs.....	5 to 7 ft. lbs.
Low Band adjustment locknut.....	13 to 17 ft. lbs.
Shift shaft inner lever nut.....	2 to 3 ft. lbs.

### TYPICAL CLEARANCES AND ADJUSTMENTS

Reverse clutch pack clearance is .050 to .075 in.

Input / output shaft endplay is .030 to .054 in. as recommended by Chevrolet, .005 to .015 in. if a roller thrust bearing is used between the pump and the high gear drum.

Band adjustment is set by rotating the input and output shafts and tightening the band adjusting screw to 40 in. lbs. (3 1/3 ft. lbs.) then backing the screw off 4 complete turns.

### LIMITED 90 DAY WARRANTY

Reid Racing, Inc. products are warranted directly by Reid Racing against defective material or workmanship under normal use and service for a period of 90 (ninety) days after purchase. Reid Racing will repair or replace the defective unit, at Reid Racing option, free of charge. This warranty does not cover any damage to the product caused by abuse, mishandling, alteration, failure to follow installation/operating instructions, maintenance, storage and environmental conditions, or repair attempts made by anyone other than a Reid Racing authorized service facility.

OTHER THAN THE LIABILITY STATED ABOVE, REID RACING, INC. SHALL NOT BE LIABLE FOR INJURY, CONSEQUENTIAL, OR OTHER TYPE DAMAGES RESULTING FROM THE USE OF ITS PRODUCTS.

This warranty is in lieu of all other warranties of merchantability or fitness of use. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.