

## 1.58 Ratio Extreme Planetary Assembly Kit

Part No.

**28158G-NS**

- Carrier Assembly
- Front Sun Gear & Drum Flange  
24-Tooth
- Ring Gear
- Reverse Clutch Piston with Seals  
2 Seals
- Reverse Clutch Piston Plate
- Reverse Clutch Pressure Plate
- Reverse Clutch Frictions (7)
- Reverse Clutch Steels (8)
- Bolts (6)
- Rear Sun Gear Thrust Washer  
PTFE Coated

Patent No. 8,998,768

#### NOTE:

- This kit is one of the essential components of the Sonnax Powerglide big shaft system. Using this system requires changing to a 35-spline turbine hub.
- This kit does not include the output shaft or rear sun gear.
- The 24-tooth drum flange is designed to work exclusively with a Sonnax clutch drum.

Visit [www.sonnax.com/powerglide](http://www.sonnax.com/powerglide) for details on the Sonnax Powerglide big shaft system.



**NOTE:** Install rear sun gear, thrust washer and output shaft following instructions in the rear sun gear kit **15832-RSK**.



**WARNING:** To maintain warranty see note on page 2.

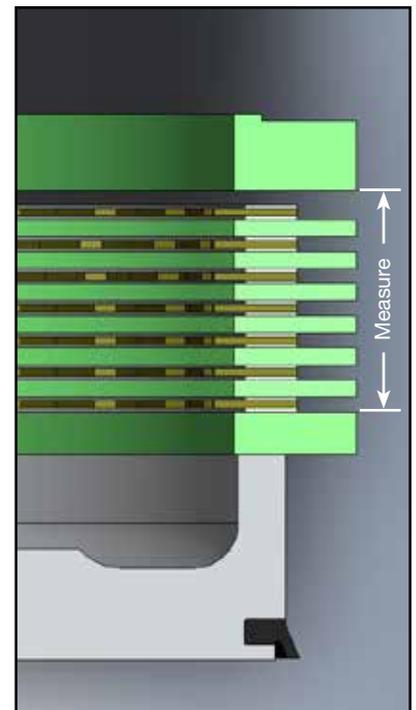


## GM Powerglide

### Set Reverse Clutch Clearance

The Sonnax 1.58 ratio extreme planetary assembly kit includes seven frictions and eight steels as well as a pressure plate, piston plate and piston. Pressure plate and piston plate can both be used as a reaction surface for the frictions.

- Install Sonnax reverse clutch piston, piston plate and pressure plate in transmission case.
- Measure the distance between the bottom of the pressure plate to the top of the piston plate. This is your available space for clutch stack-up and clearance as shown.
- If using all seven frictions and six steels, the piston face will need to be machined to achieve the desired clearance. Sonnax has included two extra steels with this kit to fill space when reducing the number of frictions from the maximum of seven down to four, five or six. The piston face may be machined as needed to adjust the total clearance. Recommended clearance is typically .009" to .013" per friction.



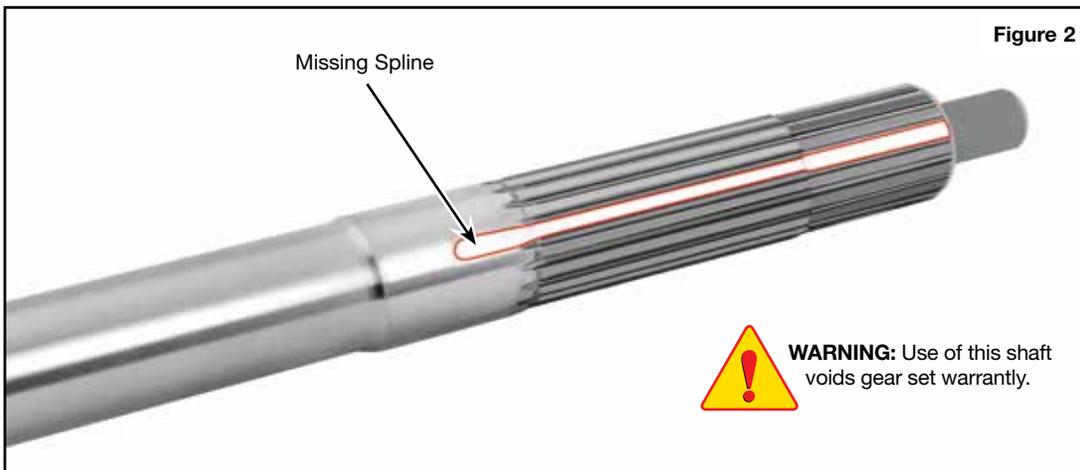


#### **WARNING: To maintain warranty, proper input shaft is required.**

Pinion speeds with a 1.58 ratio spin faster than higher numerical ratios and require continuous oil flow to prevent damage. This gear set has unique features in the carrier and output shaft to guide oil to the pinions, but it is critical that the input shaft gets the oil to the gear set area, not all input shafts are able to do this.

#### **Input Shaft:**

To maintain gear set warranty the input shaft must have a lube hole down center of shaft from the stator area rearward to the output shaft pilot. Shafts without a full length center lube hole that rely on missing spline (Figure 2) to direct oil rearward to planet will void gear set warranty.



#### **Use Premium Oil**

For maximum gear longevity, a premium oil is required. Avoid non-synthetic Type F and low-cost Dex/Merc fluids as these oils are not suitable for the high loads in a racing gearset. Consider partial or fully synthetic THF (tractor hydraulic fluid) used in wet-clutch gear box applications or other premium fluids.

#### **Shut Down at End of Run**

Some racers like to shut end off at end of run and coast down with engine off. This practice cuts off critical lubrication oil flow to transmission that is still spinning at high speed. If end of run shut down is practiced, an Accusump style oil accumulator must be connected to cooler line / lubrication circuit of the transmission to provide continuous lubrication to spinning gear set when engine is off.

#### **Do Not Use Case as an Electrical Ground**

Electrical arcing has been found in racing Powerglide gearsets. 16 Volt systems draw 25% more amperage through all electrical devices. To prevent electrical arcing within the gearset inside the transmission, do NOT use the transmission case as an electrical ground. All solenoids and electrical devices should have dedicated ground wires, of suitable gauge, run to a ground stud that is grounded by wire directly to the battery.



#### **Pre-Drilled Ring Gear**

Ring gear has been pre-drilled to accept Sonnax ring gear stabilizer kit **28510-S3**.