

sonnax[®] PERFORMANCE

faster

tougher

stronger

A blue and white go-kart is shown from a side-rear perspective. The background features a large, stylized blue gear. The go-kart has a white body, a blue seat, and a large black tire with a white stripe. The overall scene is lit with a blue hue.

POWERGLIDE

TRANSMISSION PARTS

VOL. 2

sonnax[®] PERFORMANCE POWERGLIDE

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THE ORIGINAL 10-CLUTCH SYSTEM

10-Clutch Drum Kits

Keep Your Clutches Alive All Season Long

The Sonnax 10-clutch system increases lockup surface for significantly more torque capacity than modified OE drums. Sonnax invented this powerhouse upgrade more than a decade ago, and its proven dependability makes it the most popular choice among racers.

Drum, hub and piston kits include the essential components, the Smart-Tech kit delivers 35% more apply and complete kits give you everything for a Sonnax 10-clutch system.

- Patented drum, hub & piston system improves clutch capacity for maximum durability
- High-strength drum with reduced rotating mass improves on-track acceleration
 - 6061 Forged piston will not crack like cast pistons
 - Forged chromoly clutch hub guarantees your power makes it to the wheels

Smart-Tech® 10-Clutch Drum Kit

More Apply Area than Any Drum on the Track

The Smart-Tech kit's 35% larger piston maximizes both engaging and holding capacity of the 10-clutch system. Smart-Tech components give you the option to reduce line pressure for greater efficiency, or drop to seven frictions for less parasitic drag and improved heat dissipation while retaining 10-clutch capacity.



	Drum, Hub & Piston Kits		Complete Kits		Smart-Tech Kit
Part No.	28756-15K	28756-16K	28756-01K	28756-08K	28756-25K
Includes Pump-to-Drum Bearing*	No	Yes	No	Yes	Yes
Hub & Steel Details	No lightening holes in hub	No lightening holes in hub	12-Tooth steels w/out turbulator holes; Lightening holes in hub	24-Tooth steels with turbulator holes; No lightening holes in hub	No lightening holes in hub

*Kits with bearings also include a shim for use in pumps that were previously machined.

Direct Replacement Drum

Machined with 12 additional lugs to reduce rotating mass, this high-quality, direct replacement drum comes with a piston bore and other features identical to OE. The drum is available individually and as part of the Sonnax Contender drum, hub and piston kit that accepts extra frictions for increased torque and holding power.

High Clutch Drum

Part No. 28755

Contender Drum, Hub & Piston Kit

Part No. 28755-14K



BIG SHAFT SYSTEM

Stop worrying about input shaft failure when running the Powerglide in the most extreme applications. Now you can take full advantage of this lightweight and efficient transmission with the big input shaft system from the LEADER in transmission innovation: Sonnax!

The big shaft kit and related components are the best ways to connect huge power to 1.58/1.65 planetaries for great run after run with minimum downtime.

**35%
STRONGER**
THAN
1" SHAFTS

1 ► Big Input Shaft Kit



The CORE of the Big Shaft System

The only way to prevent twist and breakage from massive torque is to increase the input shaft diameter. The Sonnax big shaft strikes the perfect balance between strength and ease of installation with a 1-1/8" diameter and unique, high-strength spline that still fits through the 1.58/1.65 front sun gear.

Big Shaft Features

- Torsional, ringless design
- Heat-treated, 300M steel with advanced processing
- 35 Splines (AOD-style) at converter

Clutch Hub Features

- 1.500" Tall hub for use with 10-clutch setups
- High-strength chromoly steel
- Custom fit for the big shaft

2 ► Big Shaft Stator Tube Kit

- Press-in tube with larger diameter & longer press serrations for max hold
- Tough, heat-treated, stock-size splines
- Includes dual rear support bushings
- Pump requires machining



3 ► Big Shaft Rear Sun Gear Kits

- Prepped to accept big input shaft's fine-tooth rear spline
- Use with new 1.58 or 1.65 planetary assembly kits (system component 4) or to convert existing Sonnax assemblies to the big shaft system
- Custom, PTFE-coated thrust washer replaces the sun gear thrust bearing



Go BIGGER with Sonnax 1.58 & 1.65 Ratios

1	Big Input Shaft Kit	353532-01K
2	Big Shaft Stator Tube Kit	28154S-125
3	Big Shaft Rear Sun Gear Kit	
	1.58 Ratio	15832-RSK
	1.65 Ratio	16532-RSK
4	Extreme Planetary Assembly Kit	
	1.58 Ratio	28158G-NS
	1.65 Ratio	28165G-NS
5	Extreme Strength Output Shaft	
	32-Spline, Long	28924-32L
	27-Spline, Long	28924-27L
	27-Spline, Short	28924-27S

Sonnax offers the **ONLY** big shaft upgrade with custom components designed to work together for reliable performance. A simple change to a 35-spline turbine hub is all that's required to level up with this unique system.

HOW TO SELECT THE RIGHT COMPONENTS

Question 1:

What gear ratio do you want to run, 1.58 or 1.65?

Question 2:

Do you already have a Sonnax 1.58 or 1.65 planetary assembly?

- **If YES:** Upgrade your existing assembly by ordering the big input shaft kit, stator tube kit and a 1.58 or 1.65 rear sun gear kit (components #1, #2 and #3).
- **If NO:** Order all five big shaft system components in the gear ratio of your choice.

4 Extreme Planetary Assembly Kits

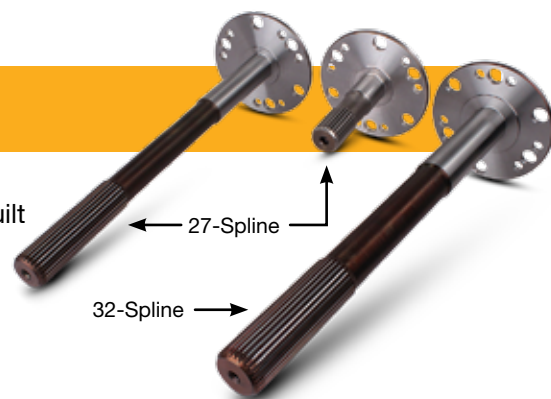
The same parts found in Sonnax 1.58 and 1.65 assemblies (see pages 4 and 5), minus the output shaft, rear sun gear and washer that must be purchased separately when building a Sonnax big shaft system.



5 Extreme Strength Output Shafts

Top-notch engineering and precision manufacturing guarantee unrivaled performance and reliability. These are the same shafts built into complete Sonnax 1.58 and 1.65 planetary assembly kits.

- Heat-treated 300M steel
- Torsional design with 32- or 27-count rolled splines
- Bolt-on shaft allows for easy service
- Exclusively for use with Sonnax 1.58 & 1.65 gear sets



Extreme Strength Input Shafts

Standard Size, 1" Shafts Limit Twisting & Breakage

- Ringed shaft is just as strong as ringless design thanks to unique, shallow seal rings that do not weaken the shaft like common deep-groove designs
- Aerospace alloy with custom heat treatment
- Advanced torsional design, rolled splines & other innovative features

Ringed Shaft Part No. 28751-06K

Shallow seal design, for use with converters with internal turbine support only.



Ringless Shaft Part No. 28751-07

.997" Journal dia. for use with bushings.



PLANETARY ASSEMBLIES

Components and 1.69/1.80 gear sets also are available separately. See page 17.

Optimized Performance Guarantees You Never Overpay or Underspec

Available fully assembled in four ratios and three performance levels, Sonnax planetary assemblies are the #1 choice of racers that demand outstanding performance and reliability.

Sonnax gear sets are a big step up from standard case-hardened and tempered varieties. High-quality materials combined with an advanced heat-treating process results in incredibly tough, wear-resistant gears.

Contender - GOOD

Affordable Upgrade for Budget Builds

- 1.80 Ratio only
- Highest quality gear set available for replacing OE 1.76 ratio
- Track-proven to 1,500 HP

Premium - BETTER

Extra Durability for Demanding Applications

- 1.69 & 1.80 Ratios
- Ideal balance of quality & value
- Track-proven to 2,000 HP

Extreme - BEST

Highest Quality Planetary Assemblies in the World

- 1.58, 1.65, 1.69 & 1.80 Ratios
- Track-proven to 3,000 HP
- Combine 1.58 & 1.65 assemblies with the Sonnax big shaft system to reliably handle the most extreme horsepower

From carrier and output shaft to gears and thrust washers, every Extreme assembly component is refined for maximum durability. The ring gears are even pre-drilled for the Sonnax stabilizer system to prevent vibration and broken Reverse friction plates (see page 7).



EXTREME GEARS FOR EXTREME PERFORMANCE

To greatly improve the life of Extreme gear sets, the sun and pinion gear undergo the same advanced processing as assemblies developed for Formula 1™, NASCAR® and other high-end professional racing circuits:

- **Cryogenic tempering** for an even denser, more uniform gear with a tough and wear-resistant structure.
- **Shot peening** increases gear resistance to fatigue failure, cracking or galling.
- **Super-finish** reduces friction, vibration, noise and wear on the gear, potentially tripling the life of the part.
- **Coated sun gears** for improved scuff resistance.



The Sonnax website makes it easy to dial in options and select the perfect Powerglide planetary assembly or gear set.

		Contender Track-Proven to 1,500 HP	Premium Track-Proven to 2,000 HP	Extreme Track-Proven to 3,000 HP
Sonnax Warranty		1 Year (Gears Only)	2 Years (Gears Only)	2 Years (Gears & Shaft)
Gear Material		9310 Suns 8620 Pinions	9310 Suns 9310 Pinions	9310 Suns 9310 Pinions
Gear Process		Premium	Premium	Advanced
Shaft Material		Long Shaft = 4340 Short Shaft = HY-Tuf	Long Shaft = 4340 Short Shaft = HY-Tuf	300M
Shaft Splines		Cut Spline	Cut Spline	Rolled Spline
Thrust Washers		OE	Steel-Backed PTFE	Steel-Backed PTFE
Ring Gear		Standard	Standard	Maximum Duty
Ratio	Shaft Length	Contender Part No.	Premium Part No.	Extreme Part No.
1.80 Ratio	Long (OE) Shaft	12-Tooth 28180F-01	12-Tooth 28180G-01 24-Tooth 28180G-04	12-Tooth 28180G-03 24-Tooth 28180G-06
	Short Shaft	12-Tooth 28180F-01S	12-Tooth 28180G-01S 24-Tooth 28180G-04S	12-Tooth 28180G-03S 24-Tooth 28180G-06SP
1.69 Ratio	Long (OE) Shaft		12-Tooth 28169G-01 24-Tooth 28169G-04	12-Tooth 28169G-03 24-Tooth 28169G-06
	Short Shaft		12-Tooth 28169G-01S 24-Tooth 28169G-04S	12-Tooth 28169G-03S 24-Tooth 28169G-06SP
1.65 Ratio	Long (OE) Shaft			24-Tooth 28165G-06
	Short Shaft			24-Tooth 28165G-06SP
1.58 Ratio SONNAX EXCLUSIVE	Big Input Shaft			See page 2
	Long (OE) Shaft			24-Tooth 28158G-06
	Short Shaft			24-Tooth 28158G-06SP
	Big Input Shaft			See page 2

See next page for details on this revolutionary gear set!

Note: A 32-spline output shaft is available upon request.



**JOIN THE
POWERGLIDE
REVOLUTION**

1.58 Planetary Assembly Kits

Control You Can Count On – Even at Extreme Horsepower

The Sonnax 1.58 delivers tunable control for Powerglides right at the start, when traction can make or break a race. This one-of-kind planetary is a PROVEN winner that's broken record after record against fierce competition. Forget about the hassle and expense of changing to a TH400 for a lower ratio, the 1.58 in an efficient, lightweight Powerglide delivers the very best in performance and durability.

The 1.58 has given us the ability to keep the front end on the ground, consistent A-B passes. The confidence we have gained with the reliability and consistency of the gear set is priceless. — Carmine Pechie • Pechie Racing

Push the Limits

While Going Faster Than Ever

- Apply more power at the launch
- Stay in 1st Gear longer
- Less RPM drop on the shift
- Keep the front end down
- Reduce rear tire shake & pedaling
- Increase trans brake holding capacity

Unrivaled Quality & Durability

- Advanced process 9310 sun & pinion gears
- 300M Rolled spline output shaft
- Maximum duty ring gear pre-drilled for Sonnax stabilizer kit
- Steel-backed, PTFE-coated thrust washers
- Scuff-resistant coating on sun gears

Fully Assembled & Easy to Install

- Direct replacement, requires no special assembly or case mods
- Bolt-together carrier for ease of service
- Compatible with Sonnax big shaft system (see page 2)

EACH 1.58 KIT INCLUDES:

- Complete 1.58 ratio carrier with ring gear, sun gear & 24-tooth flange
- Reverse apply piston
- Complete reverse clutch pack with frictions & steels, plus apply & backing plates
- Output shaft (long or short). Big input shaft also available, see page 2.

1.58 Kit with OE (Long) Length Shaft

Part No. 28158G-06



1.58 Kit with Short Shaft

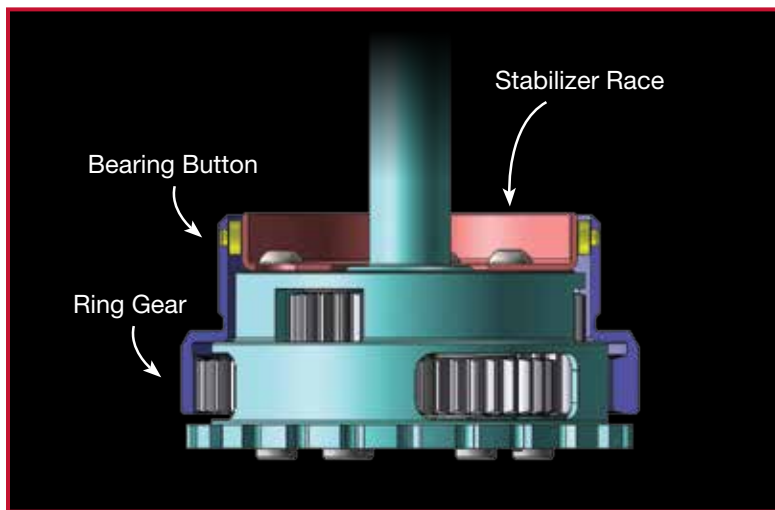
Part No. 28158G-06SP



Ring Gear Stabilizer Kits

Reduce Vibration & Stop Clutch Breakage

- Reduce high-speed vibration & drag
- Protect against broken reverse friction plates
- Prevent stress on short pinion gear teeth
- Ring gear in all Sonnax Extreme planetary assemblies comes pre-drilled to accept a stabilizer kit



Vibration at high speeds and broken Reverse friction plates occur in Powerglides when the poorly supported planetary ring gear moves off the transmission center line, oscillating out of control.

Ring gear stabilizer kits install easily on Sonnax bolt-together carriers and stock 1.82 carriers. With proper support, the ring gear stays on-center, significantly reducing vibration and drag while preventing wear and short pinion gear stress.



For Sonnax
1.80 & 1.69 Carriers

Part No. 28510-S2



For Sonnax
1.65 & 1.58 Carriers

Part No. 28510-S3



For 1.82 Carriers
(Circle Track)

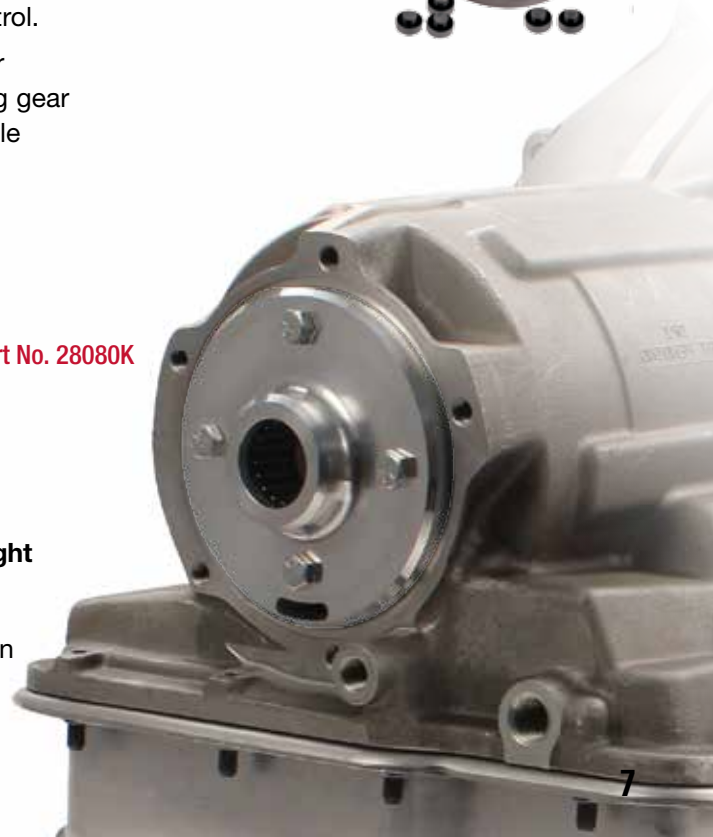
Part No. 28510-S1

Output Shaft Support Kit Part No. 28080K

Extra Support for the Planetary

- High-quality roller bearing for low friction & longer life
- Strong, 6061 billet aluminum dramatically reduces weight
- Essential upgrade for any level of racing transmission

An output shaft support kit is ideal for upgrading OE cast-iron supports and essential when building a unit from scratch. The durable, roller-bearing-style support in this Sonnax kit helps keep the planetary on-center, preventing wear.



COMPLETE SERVO KITS

Engineered from the Ground Up to Solve Old-School Problems

- All-in-one kits make it easy to install a state-of-the-art servo system
- Precision components work together for predictable, reliable performance
- Improved sealing throughout reduces fluid loss & is optimized for low friction movement
- Low-profile designs ensure adequate clearance
- 6061 Anodized billet aluminum covers

OVERCOME THE SERVO PIN BIAS EFFECT

“Pin bias” refers to flaws in the outdated Powerglide servo design that are responsible for otherwise unexplained band failures, input shaft failures and staging issues.

Overcoming the pin bias effect is **CRITICAL** for improving the reliability of this capable transmission.

Learn more about the pin bias effect and how to reliably extend performance with the Smart-Tech ratio-style servo on page 10.



Smart-Tech[®] Ratio-Style Servo Kit Part No. 28821-10K

The **ULTIMATE** Servo for Even the Most Extreme Applications

With the innovative Smart-Tech servo, racers are finally freed from OE design flaws that cause band failure, broken shafts and staging issues. Its patent-pending design completely eliminates the pin bias effect with an apply area equal to the original Powerglide, but a **LARGER** release area just like modern servos.

- Supported servo design eliminates piston binding
- Significantly lighter spring prevents staging issues & backing up when trans brake is applied
- Delivers more total net apply force than any stock-sized servo
- Allows greater tuning of high clutch apply to prevent tire spin & pedaling after the shift
- Prevents input shaft failure due to tie-up on shift
- Eliminates need to calibrate servo return spring to line pressure or varying case depth

Supported Servo Master Kit

Best All-Around Servo for Budget Builds **Part No. 28821-20K**

- OE apply area
- Unique cover design eliminates piston binding that causes unexplained band failure
- Spring calibrated to counteract pin bias effect up to 275 psi



Super Hold Servo Kit **Part No. 28821-09K**

Reduce Line Pressure & Free Up Horsepower

- 30% More apply area than OE servo
- Reduces line pressure by 20–30% for a competitive edge in class racing
- Spring calibrated to counteract pin bias effect up to 275 psi



I have an extreme application, when would I choose the Smart-Tech servo over the Sonnax super hold?

Both are track-proven in today's high-power vehicles. With its ratio-style release and supported pin design, the Smart-Tech is the best all-around upgrade that eliminates EVERY problem associated with the OE servo. Racers looking to reduce line pressure for greater efficiency will most benefit from the super hold servo's 30% more apply area.

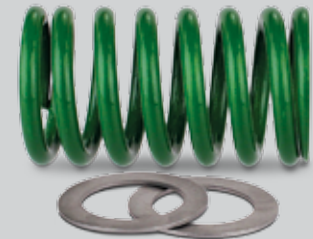
SERVO COMPONENTS

Race-Calibrated Servo Return Spring Kit

Part No. 28133-HD

Designed to compensate for the pin bias effect, the race-calibrated spring ensures optimum servo function in high gear for longer band life, cooler transmission and tunability of shift.

- Specifically designed to work with line pressures from 200–275 psi
- Includes two .050" shims to aid in tuning at higher line pressures
- Spring is included in Sonnax supported servo master kit



Servos, Piston & Cover Kits See parts listing on page 19 for details.

- High-strength aluminum pistons feature a rounded profile for better stress distribution
- Choose from dual PTFE or O-ring seal styles
- Anodized or non-anodized cover options



OVERCOME THE POWERGLIDE SERVO PIN BIAS EFFECT

PIN BIAS refers to flaws in the outdated Powerglide servo design that are responsible for otherwise unexplained band failures, input shaft failures and staging issues. Overcoming the pin bias effect is **CRITICAL** for improving the reliability of this capable transmission. Only the Sonnax Smart-Tech servo can do it, making this “ratio-style” servo the ultimate choice for running Powerglides in ever more extreme applications.

Burnt bands, broken parts and inconsistent operation have plagued the Powerglide for years, leading many to give up on this transmission and seek other options.

If the servo release spring is too light in a racing Powerglide, the band doesn't release properly and drags on the drum. When band drag occurs, it robs power and slows the car, while burning the band and overheating the transmission. A dragging band also will cause a tie-up on the shift as the high clutch applies before the band is fully released, resulting in shafts that break or twist during the shift to high gear.

Changing to a stronger servo spring to improve servo release only aggravates staging issues. A stronger spring causes the servo to momentarily release as the trans brake is applied, resulting in unintended Reverse.

The root of the problem is the primitive Powerglide servo design with an equal seal diameter for both apply and release sides. The release area excludes the .3 sq. in. area of the pin bore diameter, which means the apply area is larger and the release area is smaller, exactly the **OPPOSITE** of modern servos that are **NOT** susceptible to pin bias issues.

Not only does the Powerglide servo have zero hydraulic release force, but due to the pin bias effect, there is **ALWAYS** some apply force for the spring to overcome. This residual pin bias/servo apply force varies with line pressure, therefore any change in pressure affects the spring action and servo release. If the spring is too weak, the band drags, if it's too strong, net apply force is reduced and — while staging — the servo can release. Modern servo designs with their larger release area benefit from a hydraulically powered release where spring action is not as critical.

The pin bias-related issues have persisted for decades and only become worse as line pressure and power levels have increased. Converting the Powerglide servo from an improper apply/release ratio to a modern proper apply/release ratio was never thought possible.

Sonnax is the first to fully understand and overcome the pin bias by developing an innovative new “ratio-style” servo for the aftermarket. This unique, dual-piston servo features an apply area equal to the original Powerglide design, but a **LARGER** release area just like modern servos with hydraulically powered release.

Stop struggling with the old Powerglide servo design!

The Sonnax Smart-Tech servo advances the Powerglide transmission to new levels that back up extreme horsepower with never-before-seen reliability. If you've upgraded other components and are still struggling with servo-related problems, the Smart-Tech servo is a key piece to solving this puzzle. See page 8 for part details.

OE POWERGLIDE SERVO

Inherently flawed, spring-powered design suffers from an improper apply/release ratio and crippling pin bias issues.

MODERN SERVO

(C4, C6, 4L60)

Efficient hydraulic design with proper apply/release ratio avoids all pin bias problems.

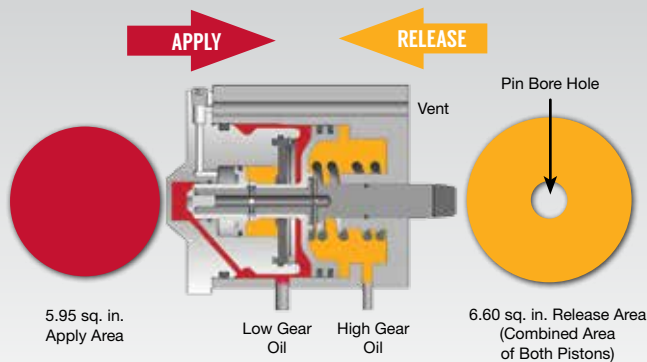
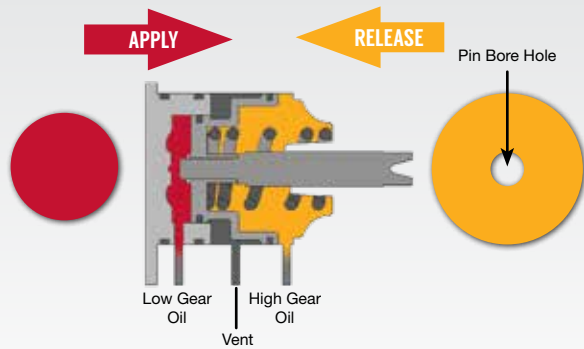
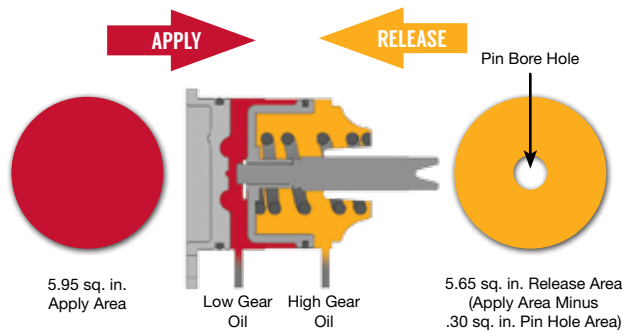


SMART-TECH[®] SERVO

Unique hydraulic design converts the Powerglide servo to the proper apply/release ratio, eliminating the pin bias effect. See page 8 for details.

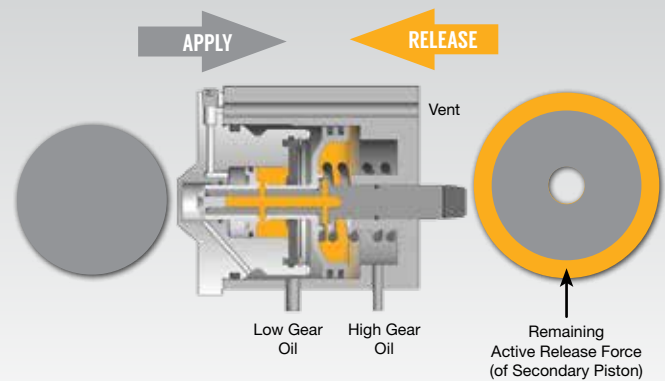
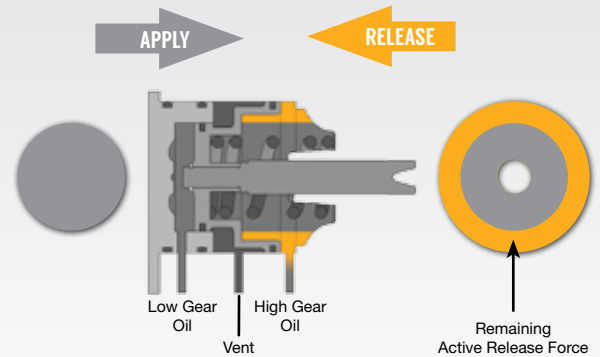
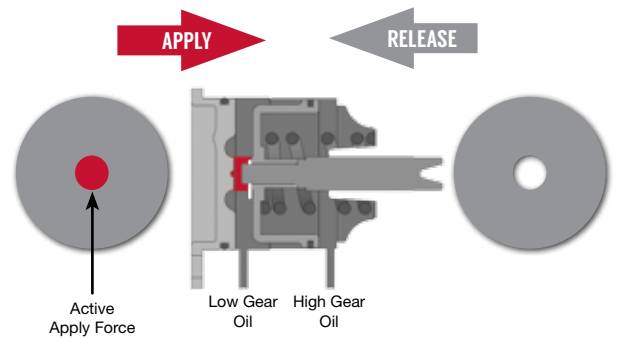
Proper servo function is critical for many areas of the Powerglide transmission, especially at high pressures. Band failure, broken shafts and staging issues can be traced directly back to flaws in the OE servo design. The diagrams below illustrate why the OE servo is incapable of full release in high gear and a more modern servo like the Sonnax Smart-Tech is the only way to fully avoid that crippling limitation.

FULL REACTION AREAS



REMAINING REACTION AREAS

AFTER APPLY & RELEASE AREAS CANCEL ONE ANOTHER OUT



Oil Pan Kit

Lightest Pan on the Track

- Integrated baffle & reinforced pan rail
- Two quarts extra fluid capacity
- Wedge-shaped design for more ground clearance
- Includes drain plug & additional bung for temperature sensor
- Leak-free, seamless construction



Part No. 28801-S

- Oil pan (.125" thick aluminum)
- 1/2" NPT male to 1/8" NPT female reducing bushing
- 1/8" NPT pipe plug
- 1/2"-20 Magnetic drain plug
- Nylon sealing washer



Powerglide Filter to Powerglide Valve Body

Part No. 28801-S09K



Chrysler Filter to Hipster Valve Body

Part No. 28801-S11K

Filter Extension Kits

To ensure fluid is picked up under hard acceleration, a special extension must be used with Sonnax oil pan kit 28801-S to position the filter rearward under the baffle and deeper into the oil.

Each extension kit includes all the necessary mounting hardware and gaskets.

LINKAGE

Band Adjustment Screw Kit Part No. 28612-01K

Stands Up to High Pressure

- Tougher, hardened alloy steel will not bend or break
- For use with OE or aftermarket cases

Shift Lever Kits

- O-Ring on shaft added to prevent leakage
- Sturdy, solid steel construction

Bolt-Together Kit Part No. 28431-05K

Works with ALL common competition shifters.

One-Piece Kit Part No. 28431-06

Position up or down. Works with MOST common competition shifters.



See page 2 if you need a stator support that fits the Sonnax big input shaft system.

Stator Support Shafts

Optimized for Extreme Racing Applications

Sonnax offers two styles of stator tube upgrades, both with race-ready features such as roller-burnished seal bores, induction-hardened splines and knurls, and an improved knurl design for a tighter press fit.

Designed exclusively for .997" ringless shafts, Sonnax 28154S-07K takes stator support to the next level with a larger tube diameter for increased strength, a larger diameter knurl to prevent spinout and longer serrations for greater holding power.



Stator Support Shaft Kit Part No. 28154S-07K

For .997" dia. ringless shafts. Includes two bushings and requires the pump to be machined.

Stator Support Shaft Part No. 28154S

Upgrade for the stock stator shaft, accepts front bushing if required.

Pump Gear Sets

Standard Gear Set Part No. 28201

Direct replacement set meets OE pump gear specifications.

Oversized Gear Set Part No. 28201-OSK

Outer gear O.D. is .030" larger and the gear set is .015" thicker than OE.



Pump Bushing

Part No. 34034T-01

Long-Lasting Pump Performance

Highly wear-resistant PTFE lining prevents bushing wear and the resulting pump damage.



OE Replacement Valves

Sonnax is the ONLY supplier of OE-quality replacement valves for Powerglide valve bodies. Each component is heat treated and precision ground for exceptional durability and fitment, an ideal way to salvage rusty cores with worn-out parts.

Pressure Regulator Valve Part No. 28999-03

Boost Valve Kit Part No. 28999-01K

Replaces largest OE ratio (.489") valves.

Manual Valve Part No. 28999-04

Wide-spool design replaces narrow or wide OE valves.

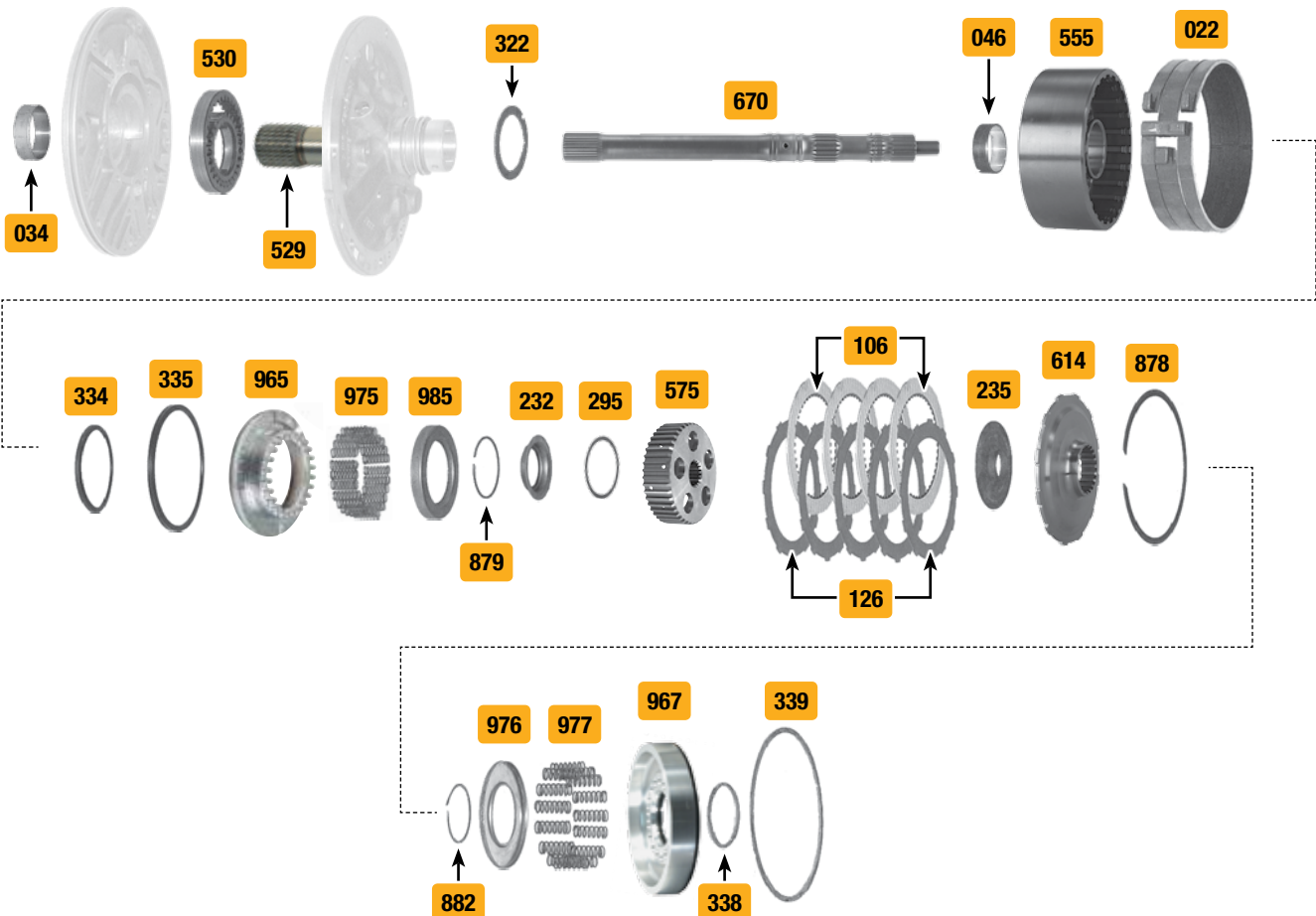




TRANSMISSION COMPONENTS

Installing Sonnax parts designed to work together is the BEST and SAFEST way to build a transmission. From rare components to high-end upgrades, the parts on pages 14–19 will help you get racing units into top condition.

Part Type	ID No.	Part	Part No.	Details
Pump/Stator		Front Stator Support Bushing	35007A	Front, thin wall, 1.004" I.D.
	034	Pump Bushing	34034T-01	Drop-in replacement, precision fit, PTFE lined
		Front Pump Bolt	28136	7/Bag
		Front Pump Stud Kit	28711-03K	7/Bag
	530	Pump Gear Set	28201	OE replacement gears
		Oversized Pump Gear Set	28201-OSK	Oversized gear set allows pump to be machined
	529	Stator Support Shaft	28154S	Upgrade for the stock stator shaft, accepts front bushing if required
		Ringless Stator Support Shaft Kit	28154S-07K	For .997" dia. ringless shafts, includes two bushings, requires machining
	670	Extreme Strength Input Shaft	28751-06K	Shallow seal design, for use with converters with internal turbine support only
		Extreme Strength Ringless Input Shaft	28751-07	Use with pumps prepped for ringless function & .997" shaft journals



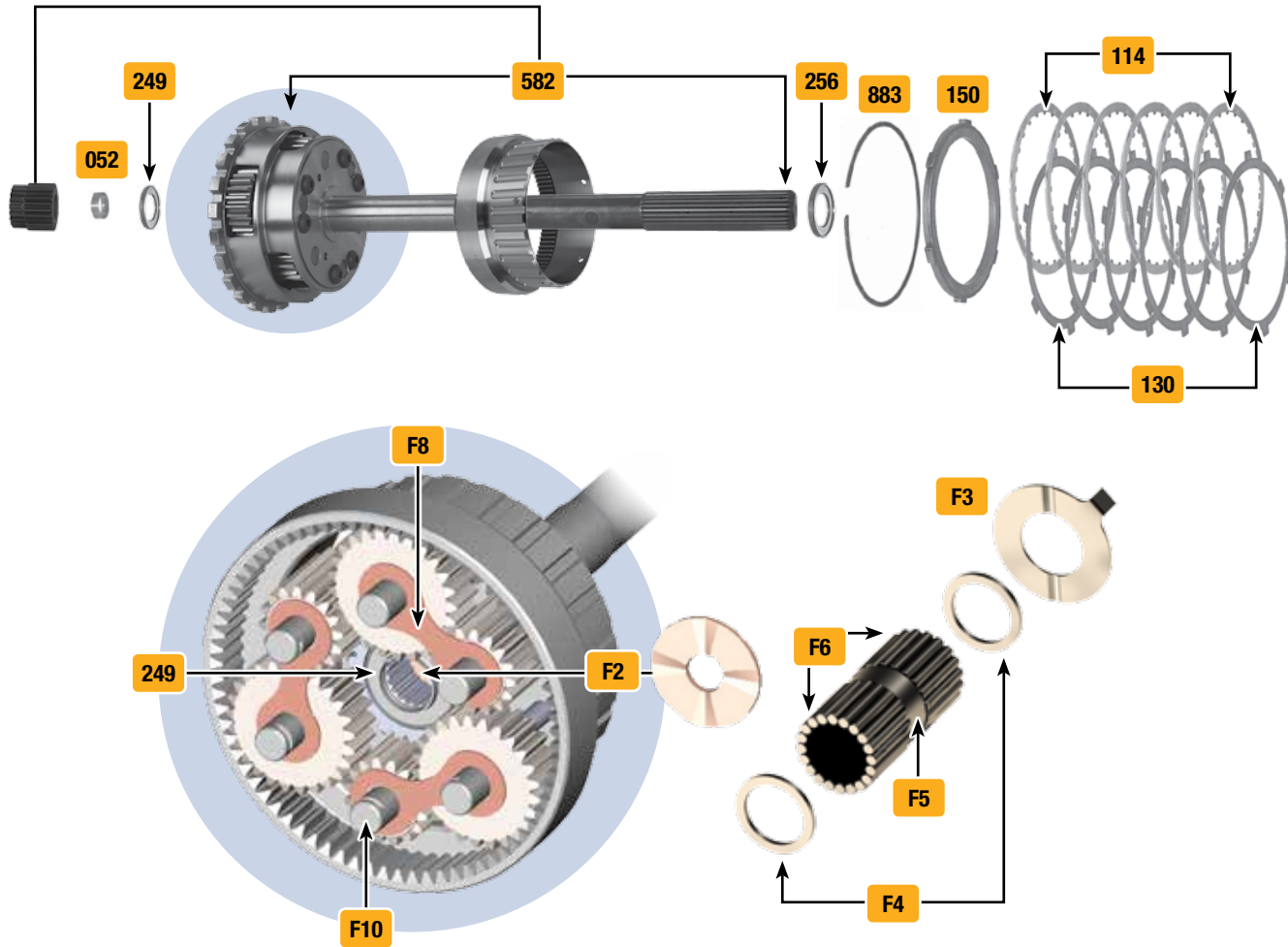
Part Type	ID No.	Part	Part No.	Details
High Clutch	322	Clutch Drum Thrust Washer	28406B	.061" Thick
		Clutch Drum Thrust Washer	28406C	.078" Thick
		Thrust Bearing	56241	.106" Thick
	046	Clutch Drum Bushing	28005	Replacement bushing
		Clutch Drum Bushing	28005X	Finish-in-place bushing
		Clutch Drum Bushing	77005T	PTFE coated
	555	10-Clutch Drum	28756-01	Holds 10 frictions
		10-Clutch Drum with Bearing	28756-08	Holds 10 frictions
		High Clutch Drum	28755	Replaces OE part no. 3844252, accepts 12- or 24-lug steel plates
		Smart-Tech® 10-Clutch Drum Kit	28756-25K	Complete kit with all related parts, holds 10 frictions
		10-Clutch Drum Kit	28756-01K	Complete kit with all related parts, holds 10 frictions
		10-Clutch Drum Kit with Bearing	28756-08K	Complete kit with all related parts, holds 10 frictions
		10-Clutch Drum, Hub & Piston Kit	28756-15K	Holds 10 frictions
		10-Clutch Drum, Hub & Piston Kit with Bearing	28756-16K	Holds 10 frictions
		Contender Clutch Drum, Hub & Piston Kit	28755-14K	Holds 7 or 8 frictions, high strength drum, forged aluminum piston, chromoly clutch hub
		Drum Small Parts Kit	28755-SPK	Includes #046, 334, 335, 975, 985, 879, 235 & 878
	334	Clutch Drum Small Lip Seal	28755-07	
	335	Clutch Drum Piston Large Lip Seal	28765-02	
	965	10-Clutch Piston	28765-05	Forged, for 10-clutch drum
		Clutch Drum Piston	28765-09	Prepped for 8 or 9 frictions
	975	Clutch Return Spring	28320	24/Bag
	985	Clutch Drum Spring Retainer	28755-02	
	879	Clutch Drum Retaining Ring	28755-03	Small, 5/bag
	232	Clutch Drum Plate	28755-06	Small, 5/bag
	235	Clutch Drum Wear Plate	28755-05	Large, 5/bag
	575	Clutch Hub	28304	With lightening holes, for standard drum
		Clutch Hub	28304-SP	Without lightening holes, for standard drum
		Clutch Hub	28304-01	With lightening holes, for 10-friction drum
		Clutch Hub	28304-02	Without lightening holes, for 10-friction drum
	295	Clutch Hub Shim	28304-30	Fits between the high clutch hub & small wear plate
	614	Drum Flange	28712-12	12-Tooth flange for 1.80 & 1.65 ratio
		Drum Flange	28712-24	24-Tooth flange for Sonnax 24-lug drums, 1.80 & 1.65 ratio
Drum Flange		28714-12	12-Tooth flange for 1.69 & 1.58 ratios	
Drum Flange		28714-24	24-Tooth flange for Sonnax 24-lug drums, 1.69 & 1.58 ratios	
878	Clutch Drum Retaining Ring	28755-04	Large, 5/bag	
Frictions/Steels	106	High Clutch Frictions	S019740	.098" Thick, red material
		High Clutch Frictions	S019740A	.061" Thick, red material
	126	High Clutch Kolene® Steels	S019701AK	.060" Thick, without turbulator holes
		High Clutch Kolene® Steels	S019701K	.070" Thick, without turbulator holes
		High Clutch Steels	S019715HK-150	24-Tooth, .060" thick, with turbulator holes
Band	022	Extra Wide Band	S019961	Red material
		Extra Wide Band	S019961K	Kevlar® material
Reverse Clutch	882	Reverse Piston Hub Retaining Ring	28123	
	976	Reverse Clutch Spring Retainer	28709	No-flex design
	977	Reverse Clutch Return Spring	28320A	17/Bag
	967	Reverse Clutch Piston	28761-01K	
	338/339	Reverse Clutch Piston Seal Kit	28761-01SK	

Chart continued on next page.

TRANSMISSION PARTS LISTING

Chart continued from previous page.

Part Type	ID No.	Part	Part No.	Details
Reverse Clutch	883	Reverse Clutch Pack Retaining Ring	28124	
	150	Reverse Clutch Pack Pressure Plate	28131	
		Replacement Pressure Plate	28131-1PP	For Sonnax 1.58 ratio planetaries only, will not fit OE
		Replacement Apply Plate	28131-2AP	For Sonnax 1.58 ratio planetaries only, will not fit OE
	114	Reverse Frictions	S032744	.098" Thick, red material
		Replacement Friction Kit	28131-FRK	For Sonnax 1.58 ratio planetaries only, will not fit OE
	130	Reverse Steels	S019703K	.070" Thick
		Replacement Steel Kit	28131-STK	For Sonnax 1.58 ratio planetaries only, will not fit OE
		Ring Gear Anti-Wear Washer Kit	28510-AW	Prevents metal-to-metal contact between ring gear & reverse clutch pack pressure plate
		Ring Gear Stabilizer Kit	28510-S1	For 1.82 carriers (circle track)
	Ring Gear Stabilizer Kit	28510-S2	For Sonnax 1.69 & 1.80 ratio bolt-together carriers	
	Ring Gear Stabilizer Kit	28510-S3	For Sonnax 1.58 & 1.65 ratio bolt-together carriers	



BUILD YOUR IDEAL PLANETARY ASSEMBLY ONLINE

With so many options, it can be hard to find the right gear set.

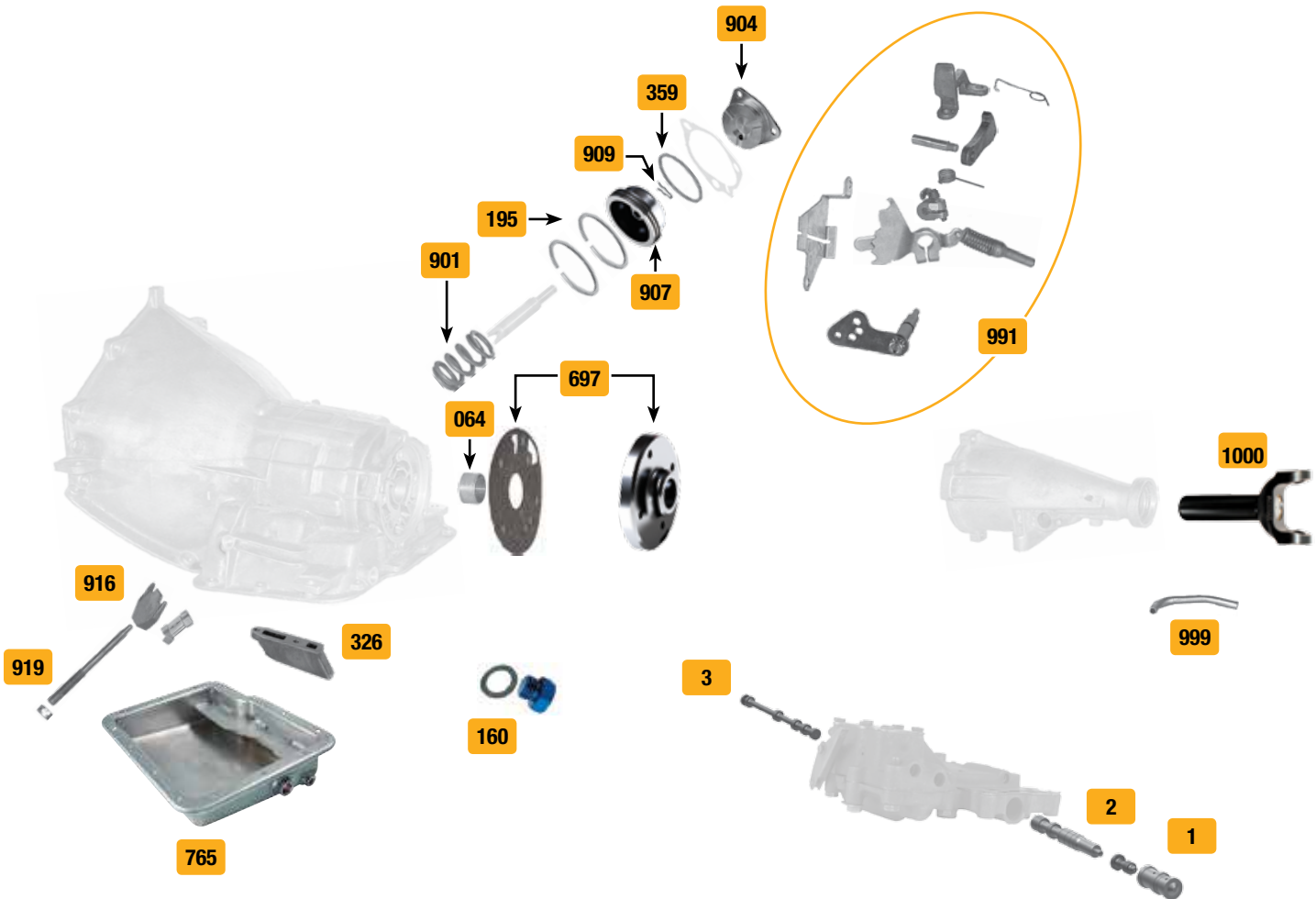
Part Type	ID No.	Part	Part No.	Details
Planetary Parts	249	Sun Gear Thrust Bearing	28321	
	256	Carrier-to-Case Thrust Bearing	28438-01K	
		Heavy Duty Planetary Rebuild Kit	28922-01HDK	Complete rebuild kit for 1.76 ratio pinion spacing
		Planetary Carrier Assembly Bolt	28922-11K	Button head, 3/8-16 x 1.00", 6/bag
		Complete Rebuild Kit	28922-01K	For 1.76:1 ratio carrier
	052	Sun Gear Bushing	8436	Wedding band
	F2	Rear Sun Gear Thrust Washer	38208-03	PTFE coated
		Rear Sun Gear Thrust Washer	38208	Bronze
		Rear Sun Gear to Output Shaft Bearing	38208-01K	
	F3	HD Planetary Thrust Washer Kit	8415BK-HD	For 1.76:1 ratio carrier, PTFE lined
		HD Rear Tab Thrust Washer	8415B-HD	For 1.76:1 ratio carrier, PTFE lined
		Rear Thrust Washer	8415B	For 1.76:1 ratio carrier
		Thrust Washer Kit	8415BK	For 1.76:1 ratio carrier
	F4	Roller Spacer Kit	K28414	For 1.76:1 ratio carrier
	F5	Thick Roller Spacer	28414	For 1.76:1 ratio carrier
	F6	Needle Roller Bearing	28413	For 1.76:1 ratio carrier, 185/bag
	F8	Heavy Duty Figure-8 Thrust Washer	8415-HD	For 1.76:1 ratio carrier, PTFE lined
Figure-8 Thrust Washer		8415	For 1.76:1 ratio carrier	
Front Thrust Washer		8415A	For 1.82:1 ratio carrier	
F8	Figure-8 Thrust Washer	8415AK	For 1.82 ratio carrier	
F10	Pinion Pin Kit	28435-01K	Includes 6 pins & retainer, for 1.76 ratio carrier	
1.58 Ratio Planetary	582	Extreme Planetary Assembly Kit	28158G-06	24-Tooth, OE length 300M rolled spline shaft
		Extreme Planetary Assembly Kit	28158G-06SP	24-Tooth, short length 300M rolled spline shaft
1.65 Ratio Planetary	582	Extreme Planetary Assembly Kit	28165G-06	24-Tooth, OE length 300M rolled spline shaft
		Extreme Planetary Assembly Kit	28165G-06SP	24-Tooth, short length 300M rolled spline shaft
1.69 Ratio Planetary	582	Premium Planetary Assembly Kit	28169G-01	12-Tooth, OE length 4340 cut spline shaft
		Premium Planetary Assembly Kit	28169G-01S	12-Tooth, short length HY-Tuf cut spline shaft
		Premium Planetary Assembly Kit	28169G-04	24-Tooth, OE length 4340 cut spline shaft
		Premium Planetary Assembly Kit	28169G-04S	24-Tooth, short length HY-Tuf cut spline shaft
		Extreme Planetary Assembly Kit	28169G-03	12-Tooth, OE length 300M rolled spline shaft
		Extreme Planetary Assembly Kit	28169G-03S	12-Tooth, short length 300M rolled spline shaft
		Extreme Planetary Assembly Kit	28169G-06	24-Tooth, OE length 300M rolled spline shaft
		Extreme Planetary Assembly Kit	28169G-06SP	24-Tooth, short length 300M rolled spline shaft
	Premium Gear Set	169S-K	12-Tooth drum flange	
	Extreme Gear Set	169S3-K	12-Tooth drum flange	
Extreme Gear Set	169S3-24K	24-Tooth drum flange		
1.80 Ratio Planetary	582	Contender Planetary Assembly Kit	28180F-01	12-Tooth, OE length 4340 cut spline shaft
		Contender Planetary Assembly Kit	28180F-01S	12-Tooth, short length HY-Tuf cut spline shaft
		Premium Planetary Assembly Kit	28180G-01	12-Tooth, OE length 4340 cut spline shaft
		Premium Planetary Assembly Kit	28180G-01S	12-Tooth, short length HY-Tuf cut spline shaft
		Premium Planetary Assembly Kit	28180G-04	24-Tooth, OE length 4340 cut spline shaft
		Premium Planetary Assembly Kit	28180G-04S	24-Tooth, short length HY-Tuf cut spline shaft
		Extreme Planetary Assembly Kit	28180G-03	12-Tooth, OE length 300M rolled spline shaft
		Extreme Planetary Assembly Kit	28180G-03S	12-Tooth, short length 300M rolled spline shaft
		Extreme Planetary Assembly Kit	28180G-06	24-Tooth, OE length 300M rolled spline shaft
		Extreme Planetary Assembly Kit	28180G-06SP	24-Tooth, short length 300M rolled spline shaft
	Contender Gear Set	180S-1K	1.80 Ratio, 12-tooth drum flange	
	Premium Gear Set	180S-K	1.80 Ratio, 12-tooth drum flange	
	Premium Gear Set	180S-24K	1.80 Ratio, 24-tooth drum flange	
	Extreme Gear Set	180S3-K	1.80 Ratio, 12-tooth drum flange	
Extreme Gear Set	180S3-24K	1.80 Ratio, 24-tooth drum flange		

Chart continued on next page.

TRANSMISSION PARTS LISTING

Chart continued from previous page.

Part Type	ID No.	Part	Part No.	Details
Valve Body	1	Boost Valve Kit	28999-01K	.489" Dia.
	2	Pressure Regulator Valve	28999-03	
	3	Manual Valve	28999-04	Wide spool design, replaces wide or narrow OE spool
Pan & Filter	765	Oil Pan	28801-S	Stamped aluminum w/ wedge profile, requires filter extension kit
	326	Filter Extension Kit	28801-S09K	For standard Powerglide valve body & filter
		Filter Extension Kit	28801-S11K	Allows use of Chrysler TorqueFlite® filter on Hipster valve body
		Oil Pan Stud Kit	28711-01K	14 Nuts & studs



SONNAX PERFORMANCE GOES BEYOND THE TRANSMISSION

Optimize transmission upgrades and guard against comebacks with the aftermarket's finest driveline and converter components!

Part Type	ID No.	Part	Part No.	Details	
Servo	195	Servo Piston Sealing Ring	18608T	PTFE	
	195	Sealing Ring & Gasket Kit	28821-TK		
	901	Race-Calibrated Servo Return Spring Kit	28133-HD		
		Servo Piston Return Spring	28133	For low-pressure applications	
	907	Servo Piston	28821-02	PTFE sealing ring type	
		Servo Piston Kit	28821-02K	PTFE sealing ring type	
		Servo Piston Kit	28821-01K	O-Ring type	
	909	Servo Pin Clip	28132		
	999	Servo Apply Line	28117		
	904/907	Smart-Tech® Ratio-Style Servo Kit	28821-10K	Eliminates pin bias effect, band dragging & staging issues	
		Supported Servo Master Kit	28821-20K	Additional support prevents piston binding, includes race-calibrated spring	
		Super Hold Servo Kit	28821-09K	30% More apply area	
		Replacement Seal Kit	28821-09SK	For 28821-09K	
		Supported Servo Pin & Cover Kit	28821-19K	Eliminates piston binding that causes unexplained band failure, low-drag O-ring prevents bore leaks	
		Servo Piston & Cover Kit	28821-05K	PTFE sealing ring type, anodized	
	359	Servo Piston & Cover Kit	28821-08K	PTFE sealing ring type, non-anodized	
		O-Ring & Gasket Kit	28821-0K		
	904	Servo Cover Kit	28821-03K	Anodized	
		Servo Cover Kit	28821-06K	Non-anodized	
	916	Band Anchor Strut	28108		
Band Apply Strut		28107			
919	Band Adjusting Screw Jam Nut	28127			
	Band Adjustment Screw Kit	28612-01K	Includes jam nut		
Case	160	Modulator Plug Kit	28738-01K		
		Modulator Plug Gasket	3543L-5	For 28738-01K, 5/bag	
	064	Case Bushing	28002		
Support	697	Output Shaft Support	28080K	Includes roller bearing	
Lever/Linkage	991	Shift Lever	28431-05K	Bolt-together, anti-leak	
		Shift Lever	28431-06	One-piece, anti-leak	
Park Mechanism	991	Detent Lever	28119		
		Detent Spring	28861-03		
		Park & Gear Selector Lever Guide Plate	28130		
		Park/Lock Actuator Assembly	28111		
		Park/Lock Actuator Retaining Clip	28121	E-Clip for 3/16" shaft, 5/bag	
		Park/Lock Actuator Retaining Clip	28122	E-Clip for 5/16" shaft, 5/bag	
		Park/Lock Reaction Bracket	28110		
		Parking Pawl	28109		
		Parking Pawl Pin	28115		
		Parking Pawl Retaining Clip	28120	C-Clip for 5/16" shaft, 5/bag	
		Parking Pawl Torsion Spring	28113		
		Rooster Comb Park & Gear Selector Lever	28862		
		Park & Gear Selector Lever Spring Retainer	28116		
Driveshaft	1000	Slip Yoke*	T3-3-6081HP	Bushing tailshaft style, 1350 U-joint series, 27-spline	
		Slip Yoke	T3-3-6081H	Roller bearing style, 1350 U-joint series, 27-spline	

*Sonnax offers many bushing tailshaft-style slip yokes for Powerglide applications.

LEVEL UP WITH SONNAX

5 KEY TRANSMISSION AREAS TO UPGRADE IN THE POWERGLIDE

The options for taking a Powerglide transmission to the next tier of performance can be overwhelming for the average builder. The charts below identify the five major part groups for which Sonnax offers upgrade options. Strong, durable components for every build level — Contender, Premium and Extreme — guarantee racers never underspec or overpay for unmatched transmission performance.

Input Shaft

The input shaft is one of the most highly stressed parts of the transmission. Delivering modern power levels through the transmission is no easy task. Having the right shaft for your power level is the key to avoiding spline twist and shaft breakage at the track.

Stator Support

The stator support is commonly changed when upgrading the Powerglide input shaft. From a basic upgrade to fully optimized extreme build, the heat-treated splines and tough steel construction of Sonnax stator support tubes have the strength to stay in place.

Servo

A servo that applies and releases as expected is the key to a reliable transmission. Old-school servos fall far short leading to frustrating problems like band failures, broken shafts and staging issues. Complete servo kits from Sonnax use innovative engineering to solve these longstanding problems.

Drum

Mixing parts from various sources can lead to hidden apply problems. A Sonnax drum kit is the best way to make sure the drum, piston and hub work together for trouble-free operation.

Planetary



Stock planetary gears are time bombs waiting to fail in a racing transmission. When picking a replacement, “one size fits all” is a recipe for disappointment. With four ratios across three performance levels, Sonnax planetary assemblies are the #1 choice for outstanding performance and reliability.

MORE CRITICAL SONNAX COMPONENTS TO EXTEND DURABILITY

You’ve got the big upgrades spec’ed out, now it’s time to ensure other key components are in top shape to help the transmission run efficiently all season long. These Sonnax performance parts are highly recommended in every Powerglide build.

Part	Part No.	Details
Pump Bushing	34034T-01	Highly wear-resistant PTFE lining for maximum durability & tight tolerance for improved fit
Oil Pan Kit	28801-S	Lightest pan on the track features seamless construction with 2 qts. extra fluid capacity, requires filter extension kit
Filter Extension Kit	28801-S09K	For standard Powerglide valve body & filter, Chrysler filter to Hipster kit also available
Band Adjustment Screw Kit	28612-01K	
Shift Lever Kit	28431-05K	Bolt-together kit works with all common competition shifters; see page 12 for one-piece kit

The three builds shown here are examples only. Sonnax offers multiple options in each part category so that you can tailor builds to your customers' needs. See pages 14–19 for complete part listings.

	Contender	Premium	Extreme
Cost	Budget Builds	Improved Durability, Reasonable Cost	Max Durability, Cost is a Secondary Concern
Usage	Quarter Mile	Quarter/Eighth Mile, Mud	Quarter/Eighth Mile, Mud, Monster
Power	Up to 1,500 HP	Up to 2,000 HP	Up to 3,000 HP
	Extreme Strength Input Shaft, Ringed 28751-06K	Extreme Strength Input Shaft, Ringless 28751-07	Big Input Shaft Kit 353532-01K
	Stator Support Shaft Tube 28154S	Ringless Stator Support Shaft Tube 28154S-07K	Big Input Shaft Stator Tube 28154S-12S
	Supported Servo Master Kit 28821-20K	Smart-Tech® Ratio-Style Servo 28821-10K	Smart-Tech® Ratio-Style Servo 28821-10K
	Contender Clutch Drum, Hub & Piston Kit 28755-14K	10-Clutch Drum, Hub & Piston Kit w/ Bearing 28756-16K	Smart-Tech® 10-Clutch Drum Kit 28756-25K
	1.80 Contender Planetary Carrier 28180F-01	1.69 Premium Planetary Carrier 28169G-01	1.58 Planetary Assembly Kit 28158G-NS Ring Gear Stabilizer Kit 28510-S3

Part	Part No.	Details
Output Shaft Support Kit	28080K	
Drum Small Parts Kit	28755-SPK	Spring retainer, springs, retaining rings, wear plates, lip seals & PTFE bushing
.061" Friction - Red Material	S019740A	Other options available, see page 15
12-Tooth, .060" Kolene® Steel	S019701AK	Other options available, see page 15
Extra Wide Band - Red Material	S019961	Kevlar® lining also available, see page 15
Reverse Springs	28320A	
Reverse Spring Retainer	28709	
Slip Yoke	T3-3-6081H	Roller bearing style, 1350 U-joint series, 27-spline

SONNAX PERFORMANCE GOES BEYOND THE TRANSMISSION

DRIVELINE

Get the power down to the ground with the industry's most affordable, high-quality performance steel slip yokes, a winning combination you won't find anywhere else!

Chromoly Slip Yokes for Roller Bearing & Bushing-Style Tailshafts

Choose from 27- or 32-Spline Yokes for Powerglide Builds

- Fully machined from billet steel for enhanced strength & durability in high horsepower & torque capacity
- Leak-free plug tested to 40 psi for optimum sealing
- Clean-cut splines deliver superior fit & function
- Black oxide finish guarantees excellent corrosion protection



Where to Buy

Sonnax slip yokes are available from driveline shops & performance parts distributors.

CONVERTER

On the road and on the track, Sonnax is the world's #1 full-line supplier of the quality converter components essential for long-lasting, trouble-free performance.

8" & 10" Performance Converter Kits

Engineered to Deliver Builds that Last

- Improve acceleration & durability with confidence
- Increases fluid flow to keep converters running cooler
- Designed for ease of assembly

Mechanical Diodes Highest Quality on the Market!

- High strength greatly increases reliability, especially in applications with high torque, vibration or high overrunning speeds
- Unlike other aftermarket diodes, Sonnax diodes always fully engage, eliminating torsional windup, minimizing engagement impact & prolonging component life

Where to Buy

Talk to your local converter shop or performance specialist about rebuilding with Sonnax components.



Learn more about performance transmission parts we have.