SOMMANCE PERFORMANCE

faster

tougher

stronger

DRIVEINE

COMPONENTS

VOL. 7



faster

tougher

stronger

DRIVELINE

ALUMINUM COMPONENTS Pages 1–7

Enhance driveline strength and durability plus improve torque yield with top-quality aluminum components from Sonnax.

TUBING FROM KAISER®

WELD YOKES

FLANGE YOKES

BONDABLE YOKES FOR CARBON FIBER

ADAPTER FLANGE YOKES

SPLINED STUB & SLEEVE KITS

SLIP YOKES Pages 8-10

A Sonnax slip yoke is NEVER the weak link in your driveline. Choose from bushing and roller bearing yokes for dozens of popular applications.

PINION YOKES Page 11

For jaw-dropping performance without the premium cost, optimize your driveline with Sonnax pinion yokes for Ford 9" differentials.

WHERE TO BUY

Driveline components or, more commonly, a driveshaft built with Sonnax components are most readily available from driveshaft shops. If you are a professional installer seeking to buy parts or want to become a distributor, contact Sonnax.

CONTACT SONNAX

8:30 a.m. to 5 p.m. ET (800) 843-2600 TOLL-FREE (802) 463-9722 INTERNATIONAL info@sonnax.com

PERFORMANCE ALUMINUM COMPONENTS

Sonnax is America's #1 source for aluminum aftermarket driveshaft components, every piece made to exacting quality standards you can trust.

- 6061-T6 Aluminum enhances drivetrain strength, performance & durability
- · Uniquely engineered for fast, easy assembly & welding
- Precision-machined to deliver long-lasting, trouble-free performance

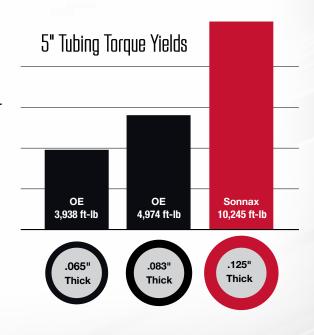
TUBING

- KDS4-T8 Tubing ordered to exacting specifications to ensure consistent straightness & wall thickness
- Surpasses ASTM-B210-04 specification
- .125" Wall thickness improves torque yield

Sonnax tubing from Kaiser® is the best foundation for a driveshaft that's easy to build and balance. It's the ideal way to increase strength and critical speed, whether you're replacing thin wall OE aluminum/steel tubing or converting from a steel two-piece to an aluminum, one-piece driveshaft.

Tubing features a .125" thick wall for torque yields of up to 10,245 ft-lb (5" tubing), almost 2X stronger than thinner OE .083" and .065" thick tubing.

Part No.	Tube Dia.	Tube Length
TK300-125-54	3.0"	54"
TK350-125-54	3.5"	54"
TK350-125-72	3.5"	72"
TK400-125-72	4.0"	72"
TK500-125-80	5.0"	80"



FLANGE YOKES

- Precision machined from billet aluminum
- Unrivaled concentricity for exceptional balance
 & minimal runout
- Significantly reduced weight vs. steel (up to 54%)
- Superior craftsmanship & finish complement a show-quality driveline



Stronger & Lighter than OE Cast Steel Yokes



Part No.	U-Joint Series	Bolt Hole Dia.	Bolt Circle Dia.	Pilot Type	Flange Face to Centerline
T2-2-1309A	1310	.440"	3.20"	М	1.780"
T2-2-949A	1330	.516"	3.50"	F	1.650"
T3-2-119A		.440"	3.75"	М	1.560"
T3-2-1579A	1350	.516"	4.25"	F	1.630"
T3-2-1859A		.516"	4.75"	F	1.750"
T3-2-949A		.516"	3.50"	F	1.550"

See diagram on back cover for help identifying U-joint series.



Ford Super Duty Flanges

Reduce Driveshaft Rotating Weight Without Sacrificing Strength

These yokes designed for '05-'16 Ford F-250, F-350, F-450 and F-550 Super Duty are custom parts and may fit other vehicles.

Part No.	U-Joint Series	Bolt Hole Dia.	Bolt Circle Dia.	Pilot Type	Flange Face to Centerline
T3-2-1719 FORD SUPER DUTY (FRONT), OE PART NO. F81Z-4865-DA	1480	.472"	4.25"	F	2.000"
T3-2-1869 Ford Super Duty (REAR), OE PART NO. 3C3Z-4865-CA	1460	.512"	4.75"	F	2.000"

See diagram on back cover for help identifying U-joint series.

Measure bolt circle diameter as well as pinion and output flange bolt hole diameters in to determine if these yokes will fit your build.

ADAPTER FLANGE YOKES

The custom design of Sonnax adapter flanges make it easy to convert a two-piece driveline to a one-piece, U-joint style driveline. Combined with Sonnax tubing and weld yokes, these unique flanges dramatically increase strength and durability while reducing future maintenance costs.

- Eliminates the troublesome giubo or CV joint(s)
- Ideal upgrade for variety of performance vehicles
- Perfect for drivetrain swaps & retrofits in custom street rod/hot rod applications



3-Bolt Adapter Flange

- Manufactured from high-strength 6061-T6 aluminum
- Spacer included for 8L90 & 10L80 transmissions





6- & 8-Bolt Adapter Flanges

- Mates to output & pinion flanges in Mustang, Hellcat & similar high-power applications
- Manufactured from high-strength aluminum:
 95mm & 93mm yokes = 6061-T6*
 94mm & 88mm yokes = 7075-T6

*95mm and 93mm yokes come with bolts and washers for installation.

Part No.	Bolt Circle Dia.	Bolts	Bolt Hole Dia.	Flange Face to Centerline	Pilot Type	U-Joint Series	Common Applications Yokes may fit other models.
T35-GMFD-01K	110mm	3	.500"	3.000"	F	1350	6L80, 6L90, 8L90, 10L80; TR6060, TR3160 Manual; '05-'06 Pontiac GTO (Diff. Side)
T35-ALFY-10	93mm	6	.438"	3.440"	М	1350	Mustang w/ 93mm Bolt Circle Dia. Pinion Flange (Automatic '15-'19)
T35-ALFY-09	95mm	6	.438"	3.440"	М	1350	Mustang w/ 95mm Bolt Circle Dia. Pinion Flange
T33-ALFY-04	95mm	6	.438"	3.440"	М	1330	(Automatic '05-'14, Manual '05-'19)
T35-ALFY-07	94mm	6	.425"	3.440"	М	1350	'15-Later Dodge Hellcat; '13-Later Dodge SRT 392; Scat Pack Challenger, TR6060, Chrysler 300; BMW 210mm w/ 94mm Bolt Circle Dia. Pinion Flange; '09-'15 Cadillac CTS-V Sedan Coupe & Wagon w/ 6L90; ZF8HP90
T35-ALFY-08	88mm	8	.425"	3.440"	М	1350	'15-Later Dodge Hellcat; '13-Later Dodge SRT 392; Scat Pack Challenger, Chrysler 300

See diagram on back cover for help identifying U-joint series.

WELD YOKES

- Precision machined from billet aluminum to be stronger than OE cast yokes
- Unrivaled concentricity for exceptional balance & minimal runout
- Extra-thick pilot weld wall for consistent welds



Part No.	Centerline to Weld	Tube Dia.	U-Joint Used
T3R-28-3512	2.50"	3.5"	3R
T31-28-4008*	2.48"	4.0"	
T31-28-3512	2.38"	3.5"	1310
T31-28-3012	1.63"	3.0"	
T33-28-3512L	2.50"	3.5"	
T33-28-5012	2.88"	5.0"	
T33-28-3012	2.50"	3.0"	1330
T33-28-3512	1.75"	3.5"	
T33-28-4012	1.75"	4.0"	
T35-28-3512L	2.50"	3.5"	
T35-28-3012	2.50"	3.0"	
T35-28-4012	1.75"	4.0"	1350
T35-28-5012	2.88"	5.0"	
T35-28-3512	1.75"	3.5"	
T41-28-4012	2.88"	4.0"	1.410
T41-28-5012	2.88"	5.0"	1410
T48-28-5012	2.88"	5.0"	1480
T485-28-5012	2.88"	5.0"	1485
T55-28-5012	2.76"	5.0"	1550/1555

^{*}T31-28-4008 fits .083" wall tubing.

See diagram on back cover for help identifying U-joint series.



Part No.	Pilot Dia.	U-Joint Series
T31-28-20012C	1.99"	1310
T35-28-30012C	2.99"	– 1350
T35-28-35012C	3.49"	1330

See diagram on back cover for help identifying U-joint series.

Exclusively for Carbon Fiber Driveshafts

Carbon fiber is the next evolution of driveshaft power transfer technology. When you're ready to go to the next level, Sonnax bondable yokes are the best foundation for the ultimate carbon fiber driveshaft.

Sonnax offers aluminum end yokes in several sizes ideal for many applications, from street to strip, dirt oval track, circle track and everything in-between.

- Unique design supports a strong, reliable carbon fiber tubing bond
- Proven in applications beyond 1,000HP

SPLINED STUB & SLEEVE KITS

Easily Build, Balance & Service a Rugged Performance Driveshaft

- Perfectly matched 6061-T6 aluminum stub & sleeve components guarantee superior strength & unrivaled fitment
- Easy to assemble, weld & balance with .125" wall thickness tubing, no machining required
- Ideal for upgrading muscle cars
 & heavy-duty trucks or adapting
 powertrains to custom street/strip vehicles



A few unique features guarantee hassle-free assembly while dramatically raising driveshaft torque capacity AND delivering a far smoother ride than other aftermarket slip and stubs.

More spline teeth than similar aftermarket slip and stubs.

Every yoke/stub shaft and splined sleeve is carefully machined and matched during manufacturing to deliver the most precise and uniform spline fit available.

GET THE DRIVESHAFT YOU WANT WITH PERFORMANCE-RATED COMPONENTS FROM END TO END

You can overcome many driveshaft problems by converting to a one-piece aluminum build outfitted with a Sonnax slip and stub.

As shown here, the yoke/stub shaft uses a conventional U-joint, and the sleeve welds easily onto the end of an aluminum or carbon fiber tube customizable to almost any length.



Aluminum Build

Carbon Fiber Build

- Increase driveshaft strength & responsiveness
- Eliminate high-wear items like guibos (rag joints) CV-joints & carrier bearings found in two-piece car/truck/SUV driveshafts
- Adapt powertrains & customize shaft length in a wide range of performance vehicles
- Reduce rotating weight, noise/vibration/harshness (NVH)

See page 12 for examples of how some popular performance builds come together with Sonnax components.

Unless otherwise noted, Sonnax splined stub and sleeve kits are designed for installation in aluminum tubing.

3.5" & 4" Kits

Solve All Your Modern Driveshaft Problems

Whether you want to increase strength and durability or easily adapt a modern powertrain into any custom build, Sonnax splined stub and sleeve kits do it all.

It's the best way to the best way to reliably drive power from the engine and transmission to the diff in modern muscle cars and custom street rod/hot rod vehicles.



3.5"	Part No.	U-Joint Series
	T33-125-350-KIT	1330
	T35-125-350-KIT	1350



3.5"	Part No.	U-Joint Series
	T35-28-350CFK FOR CARBON FIBER BUILD	1350



4 ''	Part No.	U-Joint Series
	T35-125-400-KIT	1350

5" Kits

Eliminate the Weak Link in HD Drivelines

Heavy-duty trucks often suffer driveline failure at the carrier bearing where their two-piece driveshafts connect.

A Sonnax 5" splined stub and sleeve, tubing and yokes pair perfectly to replace troublesome two-piece driveshafts with a one-piece shaft for enhanced strength, durability and improved torque yields.

The 1350 and 1480 series kits listed here are ideal for upgrading Ford F-150 and Super Duty trucks.



5"	Part No.	U-Joint Series
	T35-125-500-KIT	1350
	T48-125-500-KIT	1480

PERFORMANCE SLIP YOKES

A Sonnax slip yoke is NEVER the weak link in your driveline. Choose from bushing and roller bearing yokes for dozens of popular applications, every one optimized to drive power smoothly and reliably from transmission to driveshaft.

- Bushing- & roller bearing-style yokes cover all levels of performance
- Fully machined from billet steel for enhanced strength & durability
- · Leak-free plug tested to 40 psi
- 1330 & 1350 Series yokes are chromoly steel



Increase Strength & Durability Without the Premium Cost

Jaw-Dropping Performance Builds

Setting the industry standard for incredible performance AND value, Sonnax yokes deliver a winning combination you won't find anywhere else. It's the best way to optimize the driveline in high horsepower and torque capacity vehicles running on the street, drag strip or dirt oval track.

Extra Security for Everyday Drivers

Installing Sonnax yokes in routine transmission builds helps prevent comeback complaints like:

- · Leaking from the back of the transmission
- Noise, vibration and harshness (NVH)
- Clunking and shudder



	Spline Count	Journal Dia.	Centerline to End Length		U-Joint Series			Common Output Shaft Applications		
Part No.	A	В	C	Spline Type	3R	1310	1330	1350	Common Output Shaft Applications Yokes may fit other models.	
T2-3-4911HP	27	1.503"	4.88"	Full		✓				
T2-3-6081HP	27	1.503"	5.47"	Full		✓				
T2-3-12081HP 4140 CHROMOLY	27	1.503"	5.47"	Full			✓		Powerglide, 200-4R, TH350, 4L60 (700-R4), 4L60-E; Muncie	
T2-3-12051HP 4140 CHROMOLY	27	1.503"	6.76"	Counterbore			✓		M20, M21 & M22 with 27-tooth spline; Saginaw 3- & 4-speed	
T3-3-6081HP 4140 CHROMOLY	27	1.503"	5.47"	Full				✓	opinio, oaginawo a ropoda	
T3-3-4281HP 4140 CHROMOLY	27	1.503"	6.94"	Counterbore				✓		
T2-3-6081HP8XL	27	1.503"	8.00"	Full		✓			Powerglide, 200-4R, 4L60 (700-R4), 4L60-E, TH350, Muncie & Brinn	
T3R-3-9161HP	32	1.886"	7.50"	Full	✓					
T2-3-13131HP	32	1.886"	4.88"	Full		✓				
T2-3-10431HP	32	1.886"	5.50"	Full		✓				
T2-3-2431CBHP 4140 CHROMOLY	32	1.886"	5.50"	Counterbore			✓			
T2-3-10831HP 4140 CHROMOLY	32	1.886"	6.76"	Full			✓		TH400, 4L80-E, Muncie M20,	
T3-3-2431HP 4140 CHROMOLY	32	1.886"	5.50"	Full				✓	21 & 22, BorgWarner T10	
T3-3-2431CBHP 4140 CHROMOLY	32	1.886"	5.50"	Counterbore				✓		
T3-3-5571HP 4140 CHROMOLY	32	1.886"	6.94"	Full				✓		
T3-3-5551HP 4140 CHROMOLY	32	1.886"	7.94"	Counterbore				✓		
T2-3-6041HP 4140 CHROMOLY	31	1.685"	6.00"	Full			✓		C6, FMX, Toploader 4-speed,	
T3-3-2491HP 4140 CHROMOLY	31	1.685"	6.44"	Full				✓	ZF 5-speed, Tremec	
T3-3-2491S 4140 CHROMOLY	31	1.685"	5.47"	Full				✓	Tremec Magnum-F	
T3-3-5431HP 4140 CHROMOLY	31	1.886"	7.31"	Full				✓	31-Spline BorgWarner transfer cases	
T2-3-4871HP	28	1.499"	6.00"	Full		✓				
T2-3-8251HP	28	1.499"	6.50"	Full		✓			C4, AOD, Tremec T5,	
T2-3-5981HP 4140 CHROMOLY	28	1.499"	5.91"	Full			✓		Toploader	
T3-3-8251HP 4140 CHROMOLY	28	1.499"	6.50"	Full				✓	C4, AOD, Tremec T5, BorgWarner T10	
T2-3-14061HP 4140 CHROMOLY	28	1.598"	6.63"	Full			✓		4R70W	
T3-3-14061HP 4140 CHROMOLY	28	1.598"	6.63"	Full				✓	407,000	
T3-3-3931HP 4140 CHROMOLY	30	1.680"	6.63"	Full				✓	A727, A833; Tremec T56 with 30-tooth spline	

^{*}T2-3-6081HP8XL: Ensure transmission output shaft has enough spline length to compensate for the extra yoke travel. Output shaft modification may be necessary to prevent bottom-out.

See diagrams on back cover for help measuring slip yokes and identifying U-joint series.

ROLLER BEARING STYLE YOKES

Rock-Solid Reliability for Extreme Racing

Proven INDESTRUCTIBLE in track and street runs plus torture testing in the lab, Sonnax roller bearing slip yokes guarantee you the titanic strength and durability to run even the most extreme horsepower.

- Forged 4340 chromoly
- Through-hardened, tempered barrel
- Unique Sonnax design increases strength in critical areas
- Use with single- or double-roller bearings

Why go with a roller bearing slip yoke?

Slip yokes found in many common applications run on a bushing inside the transmission tail housing. High-horsepower builds often use a roller bearing instead, so upgrading to a roller bearing yoke is a must — not only for proper fitment, but to guarantee the barrel is hard enough to avoid damage from the bearings.

Plus, once you've reached that power level, you want a rugged yoke designed to handle it, not a bushing-style yoke that becomes a weak link in your driveline.



	Spline Count	Journal Dia.	Centerline to End Length		U-Joint Series	
Part No.	A	В	C	Spline Type	1350	Output Shaft Applications
T3-3-2431CBH	32	1.888"	5.50"	Counterbore	✓	TH400, 4L80-E; Powerglide with 32-tooth spline; G-Force GSR manual transmission
T3-3-6081H	27	1.500"	5.81"	Full	✓	Powerglide; TH350, TH350C; Muncie M20, M21 & M22 with 27-tooth spline; Saginaw 3- & 4-speed

PERFORMANCE PINION YOKES For jaw-dropping performance without the premium cost, optimize your driveline with Sonnax pinion yokes. Rigorous design detail and expert machining deliver a high-strength, precision yoke with a perfect U-joint cradle that won't stress the joint and cause premature failure. FORD 9" PINION YOKES

A Winning Combination of Performance & Value

- Compatible with all OE & aftermarket 28-spline, 9" diffs
- Fits both standard (small bearing) & Daytona (large bearing) carriers with 28-spline pinion shaft
- Compatible with commonly available aftermarket speed pickup reluctors
- Complete half-moon U-joint ears & billet construction provide unmatched strength & support

Note: The included Sonnax spacer is used only in standard (small) bearing carriers. If you have a big bearing OE, or a Daytona carrier, do not use Sonnax spacer.



Part No.	Spline Count	Spline Type	Height
T9-28-1330FD	28	Counterbore	4.100"



Part No.	Spline Count	Spline Type	Height
T9-28-1350FD	28	Counterbore	4.100"

Sonnax

DRIVELINE PERFORMANCE BUILD EXAMPLES

POPULAR STREET ROD/HOT ROD					
Powerglide 3" Driveshaft	Slip Yoke	Weld Yoke	Tube	Weld Yoke	Flange Yoke
	T2-3-6081HP	T31-28-3012	TK300-125-54	T31-28-3012	-
4L60	_				
3.5" Driveshaft	Slip Yoke	Weld Yoke	Tube	Weld Yoke or Bond Yoke*	Flange Yoke
	T3-3-4281HP	T35-28-3512 T35-28-35012C*	TK350-125-54	T35-28-3512 T35-28-35012C*	T3-2-1579A
3.5" Driveshaft with Ford 9" Differential	Slip Yoke	Weld Yoke	Tube	Weld Yoke or Bond Yoke*	Pinion Yoke
	T3-3-4281HP	T35-28-3512 T35-28-35012C*	TK350-125-54	T35-28-3512 T35-28-35012C*	T9-28-1350FD
6L80 Swap with LS V8	Adapter Flange Yoke	Splined Stub & Sleeve Kit	Tube	Weld Yoke or Bond Yoke*	Pinion Yoke
	T35-GMFD-01K	T35-125-350-KIT T35-28-350CFK*	TK350-125-54	T35-28-3512 T35-28-35012C*	T9-28-1350FD
T56 Magnum 6-Speed	Slip Yoke	Weld Yoke	Tube	Weld Yoke	Flange Yoke
	T3-3-2491HP	T35-28-3512	TK350-125-54	T35-28-3512	-

^{*}Carbon fiber components. These builds use bondable components in place of welded components assembled to either end of a carbon fiber tube.

HEAVY-DUTY DIESEL TRUCK					
	Flange Yoke	Splined Stub & Sleeve Kit or Weld Yoke	Tube	Weld Yoke	Flange Yoke
Ford Super Duty '05-'16	T3-2-1719	T48-125-500-KIT	TK500-125-80	T48-28-5012	T3-2-1869
Chevy Duramax	-	T55-28-5012	TK500-125-80	T55-28-5012	-
Dodge Cummins	_	T485-28-5012	TK500-125-80	T485-28-5012	-

Sonnax offers a range of top-quality components for assembling a one-piece driveshaft.

Below are examples of how some popular performance builds come together.

ADAPTER FLANGE YOKES | SPLINED STUB & SLEEVE KITS | SLIP YOKES TUBING | BONDABLE YOKES | WELD YOKES | FLANGE YOKES | PINION YOKES

MODERN MUSCLE CAR					
Camaro '10-Later V8	Adapter Flange Yoke	Splined Stub & Sleeve Kit	Tube	Weld Yoke or Bond Yoke*	Adapter Flange Yoke
,	T35-GMFD-01K	T35-125-350-KIT T35-28-350CFK*	TK350-125-54	T35-28-3512 T35-28-35012C*	T35-GMFD-01K
Mustang					
'79–'95	Slip Yoke	Weld Yoke	Tube	Weld Yoke	Flange Yoke
	T2-3-5981HP	T33-28-3512	TK350-125-54	T33-28-3512	T2-2-949A
'96-'04 Excludes GT500	Adapter Flange Yoke	Splined Stub & Sleeve Kit	Tube	Weld Yoke or Bond Yoke*	Adapter Flange Yoke
	T35-ALFY-09	T35-125-350-KIT T35-28-350CFK*	TK350-125-54	T35-28-3512 T35-28-35012C*	T3-2-949A
'05'14 Auto & '05'19 Manual Excludes GT500	Flange Yoke	Splined Stub & Sleeve Kit	Tube	Weld Yoke or Bond Yoke*	Adapter Flange Yoke
	T3-2-1579A	T35-125-350-KIT T35-28-350CFK*	TK350-125-54	T35-28-3512 T35-28-35012C*	T35-ALFY-09
10R80					
'18-'20 4-Cylinder	Adapter Flange Yoke	Splined Stub & Sleeve Kit	Tube	Weld Yoke or Bond Yoke*	Adapter Flange Yoke
	T35-GMFD-01K	T35-125-350-KIT T35-28-350CFK*	TK350-125-54	T35-28-3512 T35-28-35012C*	T35-ALFY-10
'18–'20 5.0L	Flange Yoke	Splined Stub & Sleeve Kit	Tube	Weld Yoke or Bond Yoke*	Adapter Flange Yoke
	T3-2-1579A	T35-125-350-KIT T35-28-350CFK*	TK350-125-54	T35-28-3512 T35-28-35012C*	T35-ALFY-10
Hellcat '15-Later & SRT-8 with Scat Pack	Adapter Flange Yoke	Splined Stub & Sleeve Kit	Tube	Weld Yoke or Bond Yoke*	Adapter Flange Yoke
	T35-ALFY-07	T35-125-400-KIT T35-28-350CFK*	TK400-125-72	T35-28-4012 T35-28-35012C*	T35-ALFY-08
6L80 '09-'15 CTS-V	Adapter	Splined Stub		Weld Yoke or	Adapter
	Flange Yoke T35-ALFY-07	& Sleeve Kit T35-125-350-KIT T35-28-350CFK*	Tube TK350-125-54	Bond Yoke* T35-28-3512 T35-28-35012C*	Flange Yoke T35-ALFY-07

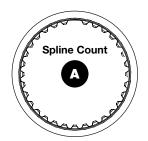
^{*}For carbon fiber builds. These builds use bondable components in place of welded components assembled to either end of a carbon fiber tube.



How to Choose the Right Slip Yoke

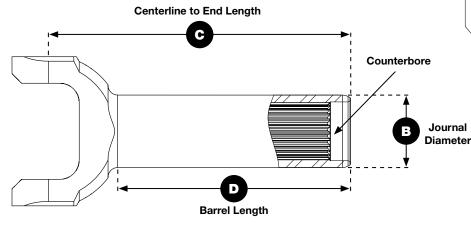
Measure OE slip yoke with a precision tool to determine which Sonnax yoke you need. Centerline to end length, journal size and U-joint are critical dimensions requiring accurate measurements.

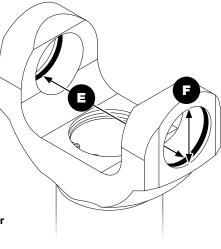
Doing an engine swap? Many modern muscle cars with CV/giubo-style transmission output cannot run a slip yoke. A Sonnax adapter flange yoke and splined stub and sleeve kit is a great alternative.



Some slip yokes have missing splines. Include missing spline in your count <u>or</u> count the splines on transmission output shaft.

A ${\bf counterbore}$ is a short lead without spline in the end of some yokes.

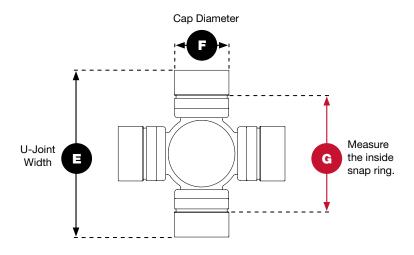




U-Joint Series E = U-Joint Width F = U-Joint Cap Diameter

U-joint measurements will be APPROXIMATE. U-joint bores in yoke will be slightly larger than the actual dimensions given in the chart below.

Identifying U-Joint Series



U-Joint Series	E	F
3R	G 2.562"	1.125"
1310	3.219"	1.062"
1330	3.622"	1.062"
1350	3.622"	1.188"
1410	4.188"	1.188"
1480	4.188"	1.375"
1485	4.178"	1.375"
1550/1555	4.964"	1.375"