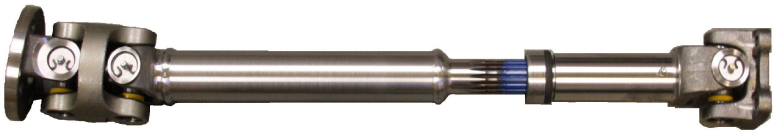
COMPLETE MEASURING GUIDE

Step 1a:

Select The Type Of Drive Shaft.

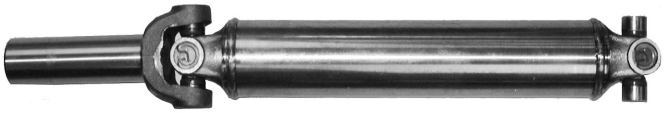
***Modified vehicle may require a different type than original.**

Type A Double Cardan (C.V.) "May have flange or yoke attachment at either end."



Type B Standard Slip - 2 Joint "May have flange or yoke attachment at either end."

Type C Reverse Slip - 2 Joint " May have flange attachment at differential end."



Step 1b:

Select TheTube Diameter.

***Modified vehicles may require a different tube size than original.**

You must consider the length of the drive shaft, expected speed in RPM (revolutions per minute) and obstructions that may limit tube diameter.

Most Stock Applications:
The original equipment diameter will be sufficient.

Non-Stock Applications:
Here are our general guidelines for the minimum tube diameter based on drive shaft length, center of joint to center of joint installed at an expected maximum operating speed of 3000 RPM (revolutions per minute) or less. Larger tubes will allow for higher speed and in most cases greater strength, but may create clearance problems.

Tube Diameter	Drive Shaft Maximum Length
1.250"	35"
2.000"	45"
2.500"	50"
2.750"	55"
3.000"	60"
3.500"	70"

STEP 1c:

Select The Spline Type For A & B Only.

***Modified vehicles may require a different spline than original.**

Splines are available for a variety of specialty purposes.

(S) Standard Spline:

Used on most original equipment applications and will generally allow for a useable stroke of 3" can be used in all tube diameters, and is the lowest priced. “Grease fitting located in the dust cap”

(XB & XC) Extended Life Spline:

Advantages is a longer stroke than the (S) Standard Spline. The splines are cut for the full length of the stub. This yields more contact area between the slip yoke & spline stub that will net a longer life. Usable stroke is 4.5" we allow 2" for compression and 2.5" for extension. The XC comes with a dust cap “Grease fitting in barrel of slip yoke” and the XB comes with a boot “No Grease Fitting sealed unit”.

The XC can be used on 1.25" & 2" diameter tubes. We do now have an option to run XC on 2.5",3", & 3.5" tubes for 1350 or 1410 series u-joints.

The XB can be used only on 2" diameter tubes.

(U1 & U2) Ultimate Travel Splines:

Specifically designed for applications such as shackle reversals and in conjunction with revolver shackles or buggy springs. The U1 has a useable stroke of 8" and the U2 has a useable stroke up to 19". ***Not Recommended for high-speed use.*** This is typically build for part time front drive shafts and is most suitable for 2" diameter tubes.

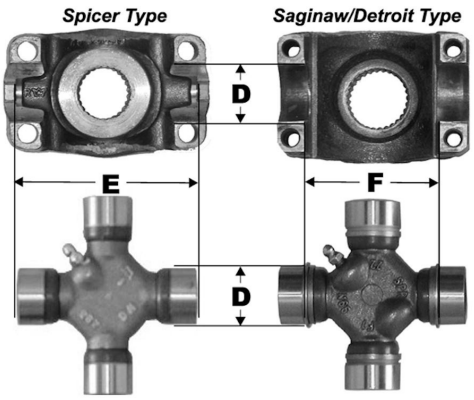
Step 2:

***Note: For the most accurate measurements please use a caliper.**

Determine The Attachment For Each End.

Choice #1 - End Yoke / U-Joint:

End Yokes & Universal Joints



D= Bearing cap diameter
E= Width of joint or tab to tab on yoke (inside)
F= Inside span of yoke or snap grove to snap groove on universal joint
Note; Spicer type has centering lugs on yoke Saginaw & Detroit types do not

How to Measure:

Measure the attaching yoke or U-Joint. Note the differences between yokes. Spicer has centering lugs. Saginaw or Detroit are broached flat on the inside surface. Yoke dimensions **D**, **E** or **F** match **D**, **E** or **F** on U-Joint. With Spicer yokes/joints dimension E equals the distance between centering lugs or the width across the U-Joint. On Saginaw or Detroit style Yokes/Joints dimension F equals the inside span of the yoke or the distance between the snap rings outside edge.

Universal Joint Selection:

Universal joints are categorized by their method of retention (inside or outside snap rings) and their physical dimensions. These different sizes are generally referred to as their **SERIES** name. It will almos alway be necessary to confirm the universal joint series in order to properly build your drive shaft. In many custom applications there may be a possibility of increasing the univeral joint size for greater strength. Each series will also have a strength and life expectancy rating. The expected life rating will be assuming proper mainenance, a constant load and constant speed operating angle. Given all of these variables, life expectancy can be impossible to determine in any but the broadest range. **We suggest keeping the stock universal joint series on all but highly modified vehicles.** On Modified Vehicles it is best to select universal joint size for strength based on ultimate expected torque and the universal joints. Strength ratings for the following universal joints are shown in pound feet torque at a minimum elastic limit.

Series Strength LB/FT

1310----------1600
1330----------1800
1350----------2200
1410----------2800

If horsepower and drive shaft speed in RPM are know, torque can be calculated as follows: **HP X 5252 / RPM = TORQUE (FT/LB)**

EXAMPLE: 100 HP X 5252 / 1500 R.P.M. = 350 FT/LB torque.

SPICER U-JOINT SERIES	E: DIMENSION	D: DIMENSION
1210 SERIES	2.4375"	1.0625"
1310 SERIES	3.2188"	1.0625"
1310 SERIES LARGE CAP *(LIMITED APPLICATIONS)*	3.2188"	1.0625" *(2 CAPS FITTING IN DRIVE SHAFT)* 1.125" *(2 CAPS FITTING IN DIFFERENTIAL YOKE)*
1330 SERIES	3.625"	1.0625"
1330 SERIES LARGE CAP *(LIMITED APPLICATIONS)*	3.625"	1.0625" *(2 CAPS FITTING IN DRIVE SHAFT)* 1.125" *(2 CAPS FITTING IN DIFFERENTIAL OR T-CASE YOKE)*
1350 SERIES	3.625"	1.188"
1410 SERIES	4.188"	1.188"

DETROIT/SAGINAW U-JOINT SERIES	F: DIMENSION	D: DIMENSION
7260 SERIES (DETROIT)	2.125"	1.078" (DODGE APPLICATIONS)
7290 SERIES (DETROIT)	2.625"	1.125" (DODGE APPLICATIONS)
3R SERIES (SAGINAW)	2.5625"	1.125" (CHEVROLET & GMC APPLICATIONS)

STEP 2

Choice 2 - Flanges

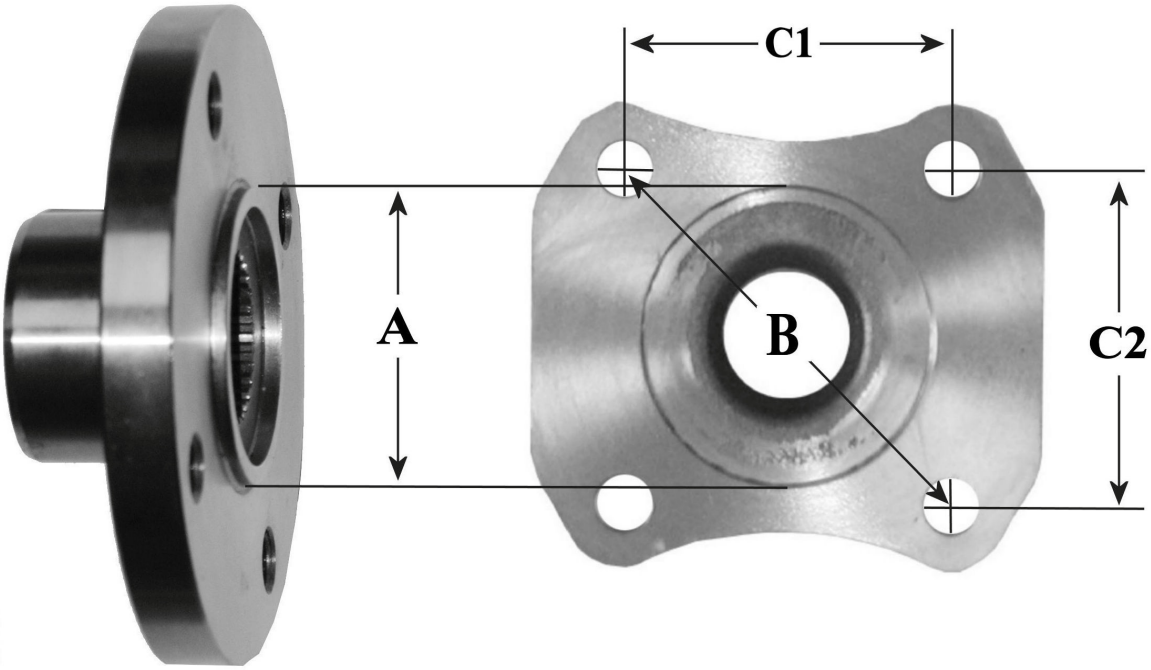


Figure 12 ***Spline Bore Flange pictured on the left has a Male Pilot, the Flange yoke on the right has the corresponding female pilot to center the flanges together.***

How To Measure:

(A) Measure the pilot Diameter Dimension, please make sure to note whether your flange uses a Male or Female Pilot.

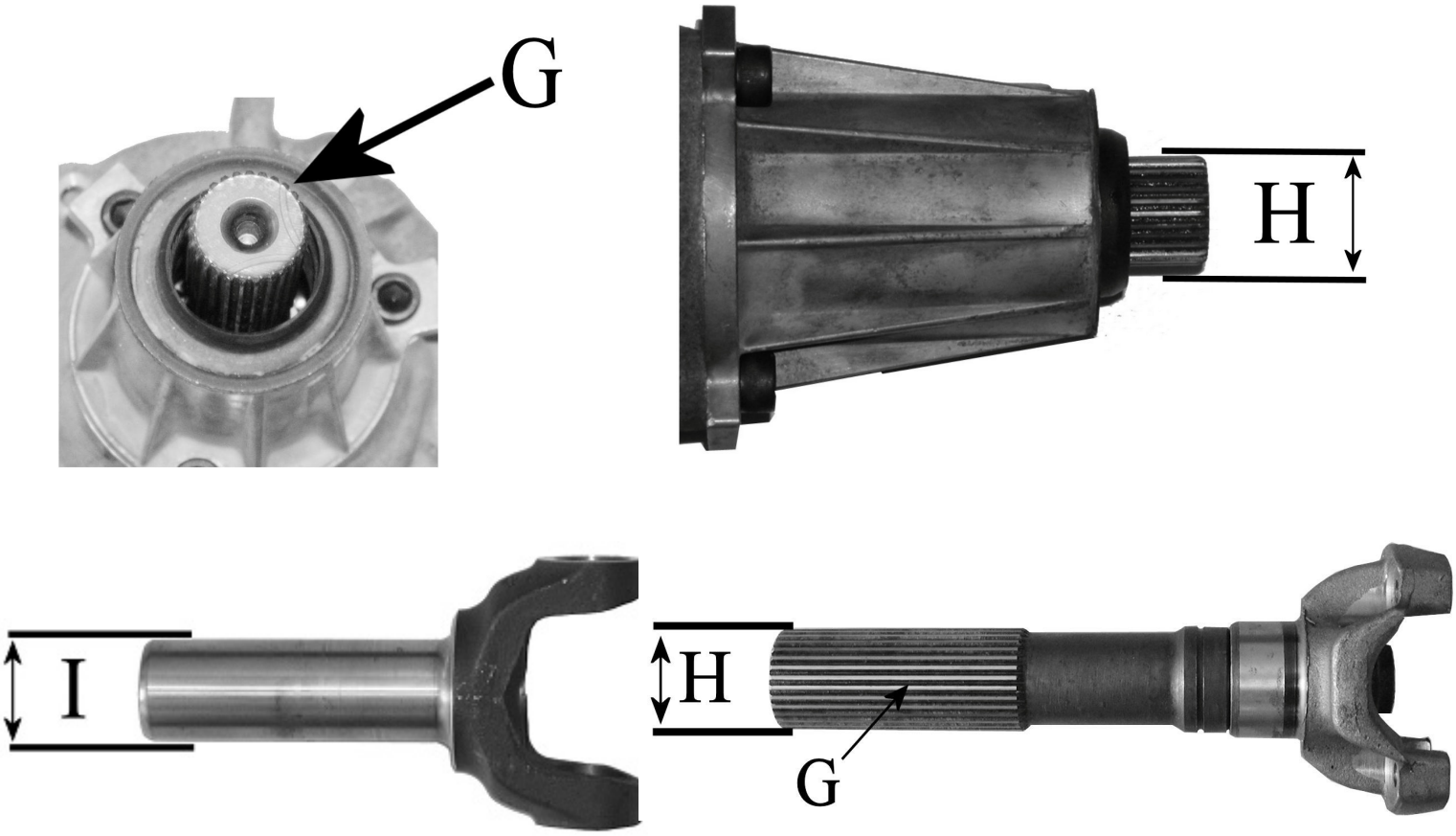
(B) Measure Bolt Circle Diameter. This measurement is from center of bolt hole to center of bolt hole diagonally across the face of the flange.

(C1) Measure chord length. Center of bolt hole to center of bolt hole across the top (from left to right).

(C2) Measure chord length. Center of bolt hole to center of bolt hole down the side(from top to bottom).

Finally determine if the bolt holes on the flange attached to the drive shaft are threaded or non-threaded.

Choice #3 - Reverse Slip



How To Measure:

On female slip yoke applications, count the number of teeth on the spline **(G)**. Measure the spline Diameter **(H)** and the seal surface diameter **(I)**.

On Male slip yoke applications count the number of teeth on the spline **(G)** and measure the spline Diameter **(H)**.

Step 3:

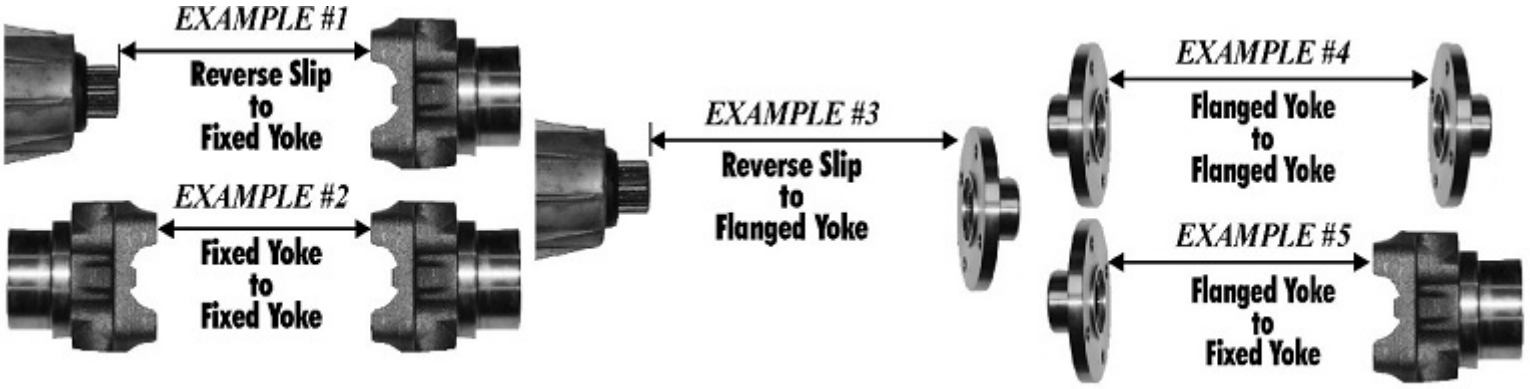
Determine The Proper Working Length.

*Pick a drawing the best fits your application.

Standard Applications:

Measure with weight on the suspension.

Reverse Shackle, Revolver Shackle and Buggy Spring Applications:
Measure Fully Compressed, Fully Extended and Static Ride.



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