"C-Clip" Axle Shaft Ordering Defined

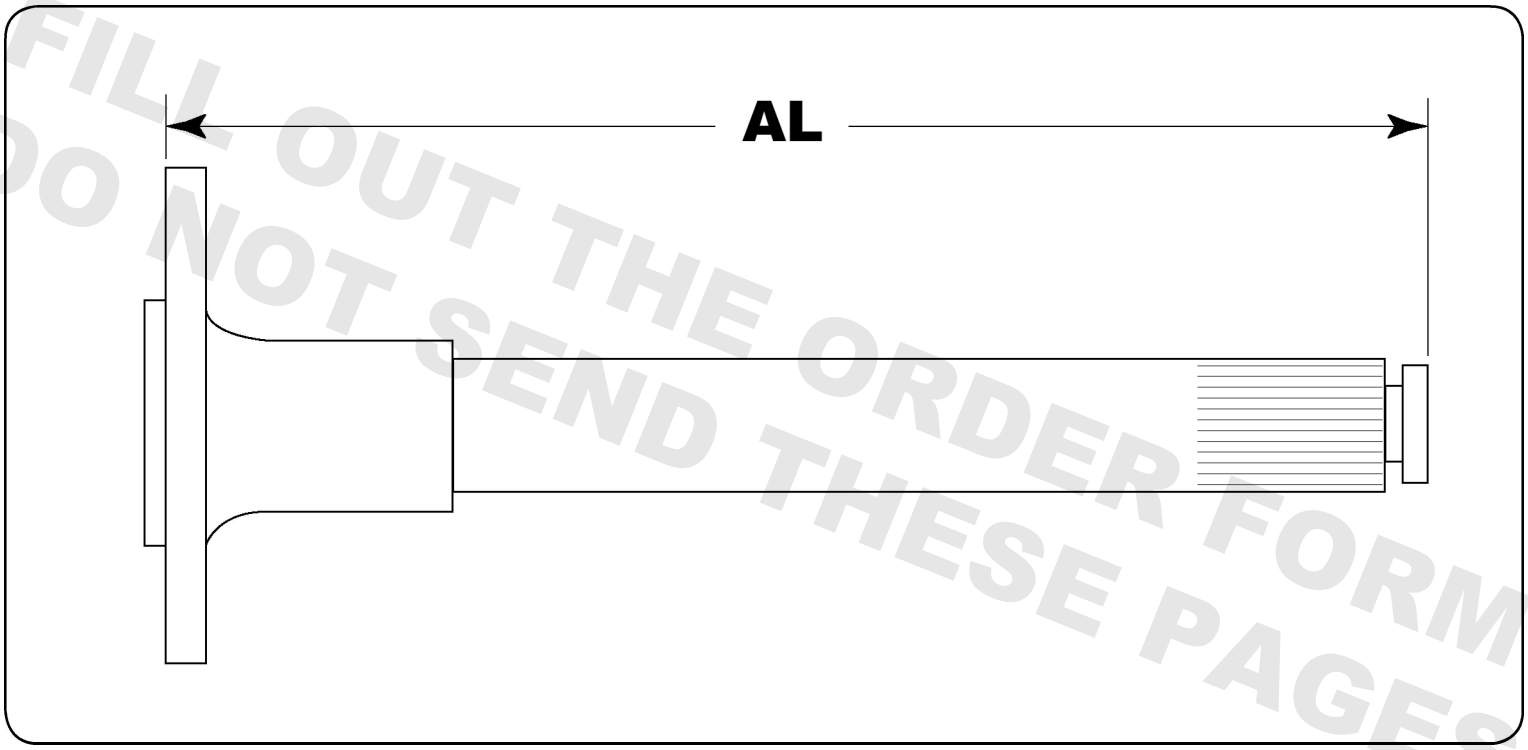
1250 E. Piper Ct. Meridian, Idaho 83642 Phone: 503.257.6604 Fax 503.253.6564

Rear end type

This is simply the make and model of the rear end you are working on.
Examples of this are Ford 7.5, 8.8; GM 10 & 12 bolts; Mopar 7 1/4, 8 1/4, 9 1/4 etc...

AL: (Right or left shaft length, axle flange to end of c-clip button)

This should be done with a tape measure by hooking the outside of the axle flange (wheel side-where the wheel studs are) and pulling back to the end of the c-clip button. If you put a ruler or straight edge at the end of the shaft, this measurement will be accurate.
Note: Measuring at an angle will give you a longer measurement.
Depending on the length of the axle and the diameter of the flange, this will be approximately 1/16" - 1/8" longer. It's best to measure straight across using a straight edge.



A word about the "Alternate Measurements" section:
Alternate Measurements - IF AL lengths are not known.

This section of the order form is only necessary if you do not have "correct length" old axles to measure and should ONLY be used if you DON'T know your "AL" axle lengths.

If you are narrowing the rear end, it's best to determine how much you are going to narrow the rear end first and take exactly that dimension out of both the housing and the axle shaft; it makes the math easier. Optionally, you can narrow the housing to fit the axles after we make them. If you're filling out the alternate measurement section, use one method that fits your situation the best (NOT both). Be careful to measure according to our instructions and diagrams, as the axle length on c-clip type axles is critical.

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HF: (Housing length, housing flange to housing flange)

This should be done with a tape measure; with a helper and a straight edge or ruler on the housing flange (where your brake backing plate or caliper mount goes), taking care to keep the tape straight, so your measurement is accurate. Avoid measuring at an angle or bending the tape measure over the ring gear, rear cover or suspension brackets, making the length longer than what it should be.

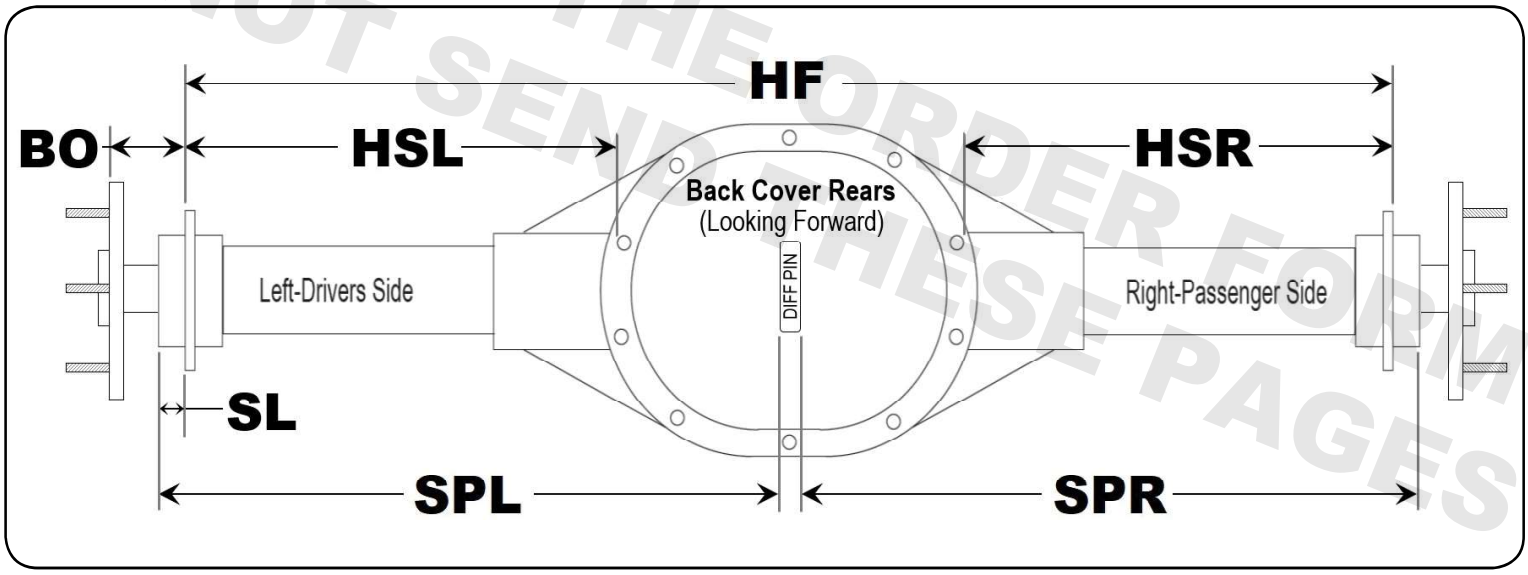
HSR / HSL: (Right and Left alternate length, housing flange to outside bolt hole)

This should be done with a tape measure and only if you cannot provide axle lengths. You must also provide the total brake offset (BO) with these measurements. Please refer to the diagram for a visual representation of the OUTSIDE of the stud/bolt hole to housing flange measurement.

NOTE: HSR & HSL measurements are <u>ONLY</u> available for the following rear ends...
GM - 10B car | 10B S10 truck | 12B car | 9.5 14B
Ford - 8.8 car | 8.8 truck

BO: (Brake offset)

This should be done with a tape measure and a straight edge/ruler on the face of the housing flange (where your brake backing plate or caliper mount goes). Hook the tape measure over the face of the axle flange (where your drum or rotor would mount) and measure to the straight edge laid across the face of the housing end. If you are using aftermarket disc brakes, often times this information can be found from the installation paperwork or manufacturers website. This measurement is required.



SPL / SPR: (Right and Left alternate length, bearing snout to carrier center pin)

This measurement should be made with a tape measure but can also be done with a broomstick or dowel. Make sure the bearings and seals are already removed from the housing. Stick the tape or dowel down the tube and butt it up against the center pin that goes through your posi and measure to the end of the bearing snout. Do this for both sides.

SL: (Bearing snout length)

This measurement is required if you are providing the SPL/SPR (bearing snout to carrier center pin). It should be made with a tape measure. Make sure the bearings and seals are removed from the housing. Measure from the face of the housing flange where the backing plate or caliper mount would go to the end of the bearing snout.

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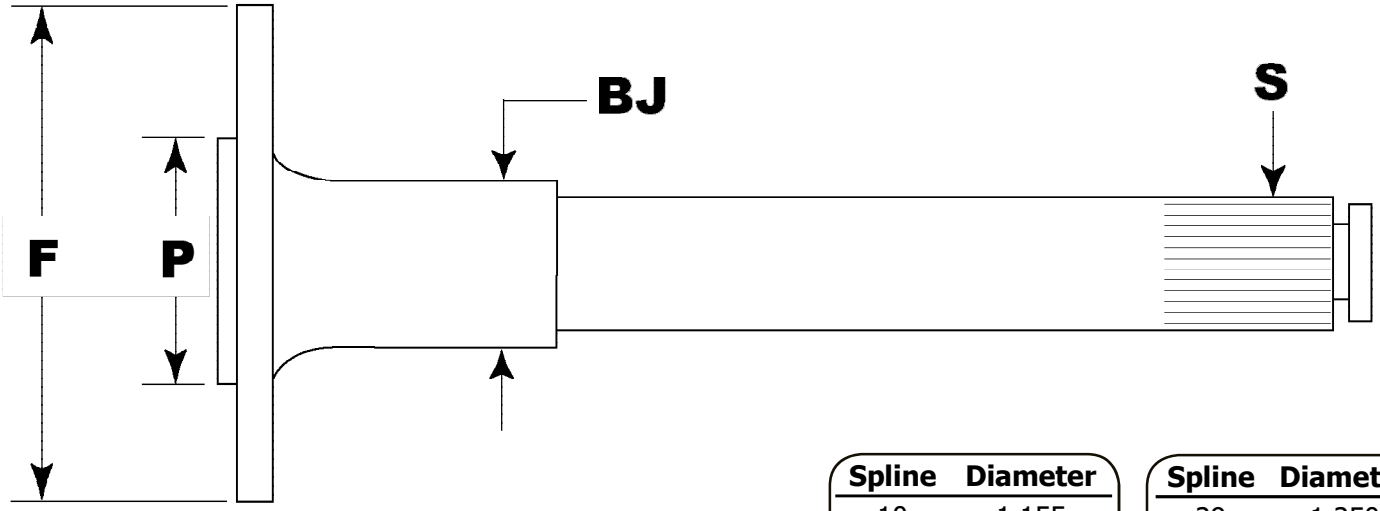


Spline	Diameter
10	1.155
10	1.225
17	1.282
25	1.080
26	1.125
27	1.167
28	1.205

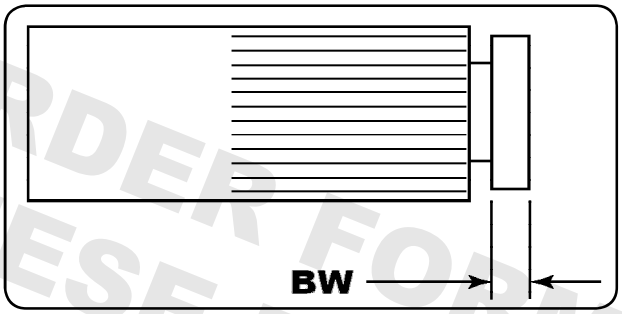
Spline	Diameter
29	1.250
30	1.290
31	1.330
33	1.415
34	1.375
35	1.500

S: (Spline count)

This is the number of splines the axle has. Either count the teeth or measure the diameter of the splines with a dial caliper or micrometer. Use the reference chart of some common splines to identify your spline count.

Also list the type & manufacturer of differential or spool you will be using (as some use different pressure angles for their splines).

An example of this could be: Eaton Tru Track or Strange Spool, etc...



BW: (C-Clip Button Width)

This can be measured with a vernier caliper, dial caliper or tape measure [IF you're good with one]. Refer to our reference chart for common application, spline and button width combinations (to confirm what you have).

F: (Axle flange diameter)

This can be done with a tape measure and is the maximum diameter for the axle flange (where the wheel studs stick out) that will fit inside your brake drum or rotor.

If you are using aftermarket brakes, there's a good chance the diameter needed to fit the drum or rotor is a different size than the original axle flange size. In this case, skip measuring your axle and ONLY measure the drum or rotor to determine the maximum flange diameter allowed for the kit you are using.

P: (Drum or Rotor pilot diameter)

This can be done with a micrometer or dial caliper on the axle. Note: Some factory axles have a tall stepped pilot, so be sure to measure the larger diameter that is closest to the flange [NOT the outer smaller diameter]. If you are using aftermarket brakes, there is a good chance the center hole in the drum or rotor is a different size than the original axle pilot size. In this case, skip measuring the axle and ONLY measure the drum or rotor center hole of the kit you're using. Note: our axles have a 1/4" tall pilot to catch the drum or rotor only, NO step. Tall or stepped pilots carry a surcharge.

BJ: (Bearing Journal)

This should be measured with a micrometer, vernier or dial caliper. At this time, we make axles for these popular bearing journal sizes; 1.400 (up to 31 spline); 1.620 (up to 33 spline); 1.705 (up to 35 spline); 1.875 (up to 31 spline)

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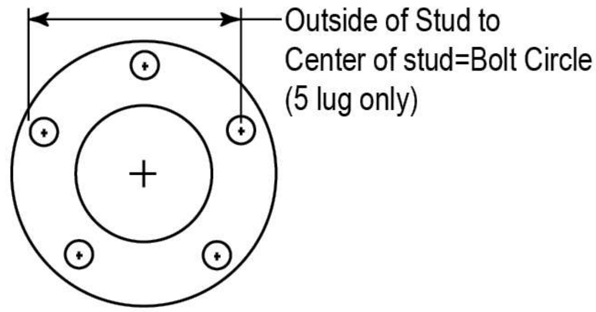
BO: (Brake offset)

The brake offset is the measurement between the axle flange (where the drum or rotor mounts) and the housing flange (where the backing plate or caliper bracket mounts).

Bolt Pattern(s): (Wheel pattern)

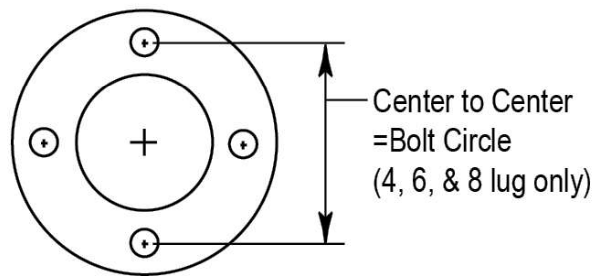
This should be done with a tape measure; 4, 6 and 8 lug bolt patterns are center to center, but 5 & 7 lug bolt patterns need to be <u>OUTSIDE</u> of one to the center of the 2nd one across (see illustrations).

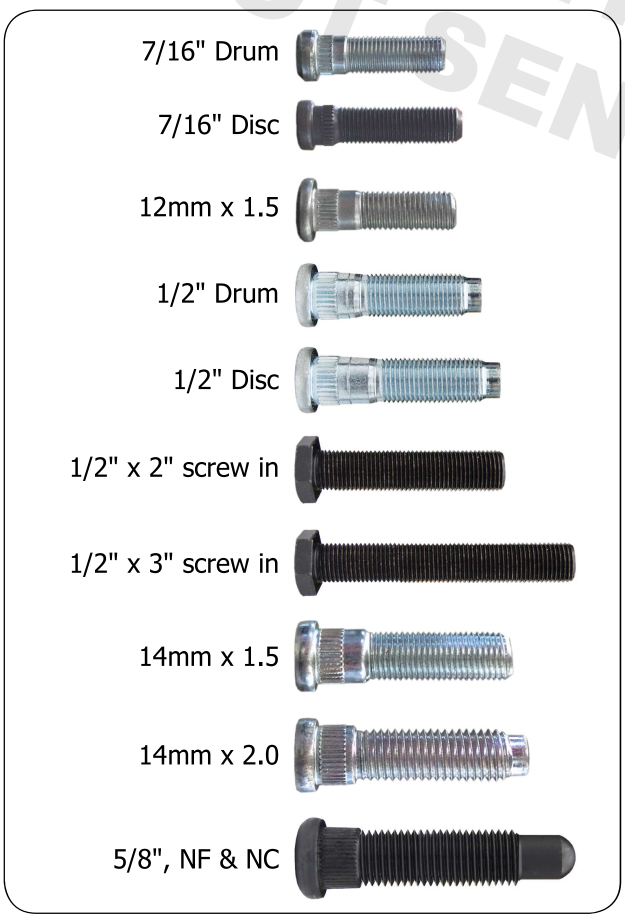
Contrary to what you may have been told this is the industry standard method of measuring.



Brake kit info:

If you are supplying your own brake kit, check with us to see if we have the specs on file. If we do, there is no need to provide dimensions; "F, P, BO, BS or BE as we have the brake kit build specifications on file (List the brake kit you're using in the notes). If we don't, we will need the brand, part # if known, housing end it's designed to fit (see our reference chart), the brake offset, flange OD & the pilot size.
An example of this info would be: Wilwood, #140-7140, Big bearing new style ends, 2.5 BO, 6 3/8 flange, 3.062 pilot.





Studs: (Wheel studs)

7/16", 1/2", 5/8", 12mm & 14mm press-in style studs have knurls under the head and press in from the back side of the axle flange. These are just like what the OEM axle shafts used.
1/2" by 2" or 3" long screw-in style studs are threaded the entire length of the stud (under the head) and screw in from the back side of the axle shaft. The 3" long version is typically used on drag cars that require the threads showing past the lug nuts. (Note: Using an impact wrench on the thread in studs should be avoided, as this can back the stud out of the axle flange).

Note: some aftermarket disc kit rotors will need to be clearance drilled for press in and/or larger studs.

Hardware items

Installing the axle hardware [Studs and/or c-clip eliminators] depends on wether you have a press and want to assemble the axles "after the fact".

NOTE: Do not reuse studs! The knurls have been mashed out and wont press tight enough on the new shaft. Also, you never know what kind of abuse they've been put through. Better to be safe then sorry, just get new ones.

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Common Factory Buttons & Splines

Make	Button Width	Spline Count	Spline Diameter
Mopar 7.25	.250	25	1.080
(GM 10B) (Buick/Olds)	.205	26	1.125
(Mopar 8.25 Car/Trk) (Jeep)	.250	27	1.167
(Jeep)	.255	29	1.250
(GM 10B, 90-99 Camaro/Trans AM)	.205	28	1.205
(GM 8.2, 10B Car/Trk) (Buick/Olds) (Ford 7.5/8.8 Car/Trk) (Mazda 94-99 Trk)	.250	28	1.205
(GM Late 8.5, 10B Trk/Imp)	.250	30	1.290
(GM Early 8.5, 10B) (GM 8.875, 12B Car/Trk)	.315	30	1.290
(Jeep)	.290	30	1.290
(Mopar 9.25 Car/Trk)	.370	31	1.330
(Ford 8.8 Car/SVO Trk)	.250	31	1.330
(Ford 8.8 SVO Car/Trk)	.305	31	1.330
(GMC 9.5 14B Trk)	.345	33	1.415
(Ford 9.75, 97 & up, 1/2T, Superduty Trk)	.305	34	1.375
(Ford 10.25, 3/4T, Trk/Van)	.305	35	1.500

Common Pilot & Flange Diameters

Make	*Pilot Diameter	Flange Diameter
Ford Cars & Trucks 7.5 & 8.8	2.432	6 1/8
	2.531	6" (SVO Disc); 6 1/8 (Ranger Drum)
	2.777	6 1/8
	3.062	6 1/2 (5 on 5 BP)
Ford Trucks 7.5, 8.8 & 9.75	2.510	6 1/8 (Early model van)
	2.800	6 3/4 (Drum); 6 1/8 (SVO Disc, 6.437 max)
	2.875	6 3/4 (early model PU)
	3.440	6 3/4 (late model PU, metric BP)
	3.450	6 3/4 (late model van E150)
GM Cars & Trucks / Buick, Olds & Pontiac Cars	2.780	6 1/8 (late model cars); (S10 Trk Drum & Disc)
	2.810	6 1/8 (early model cars)
	3.062	6 1/2 (Drum); 6 1/4 (Disc); 6 5/8 (9.5 Trk, 6 lug)
GM Trucks & Vans	3.086	6 3/4 (5 lug)
	3.093	6 3/4 (Early model PU - 5 lug)
	3.562	6 3/4 (Early model PU - 6 lug)
	3.872	6 3/4 (6 lug)
	3.980	6 3/4 (6 lug)
Mopar Cars	2.308	5 1/2 (A-Body only)
	2.830	6 1/4
Mopar & Jeep Trucks	2.830	6 3/4 (Drum); 6" Disc (6.437 max)
	3.080	6 3/4 (Disc)
	3.090	6 3/4 (Disc)
	3.562	6 3/4 (Drum)

*PILOT MEASUREMENTS LISTED ARE FROM THE AXLE, NOT THE DRUM