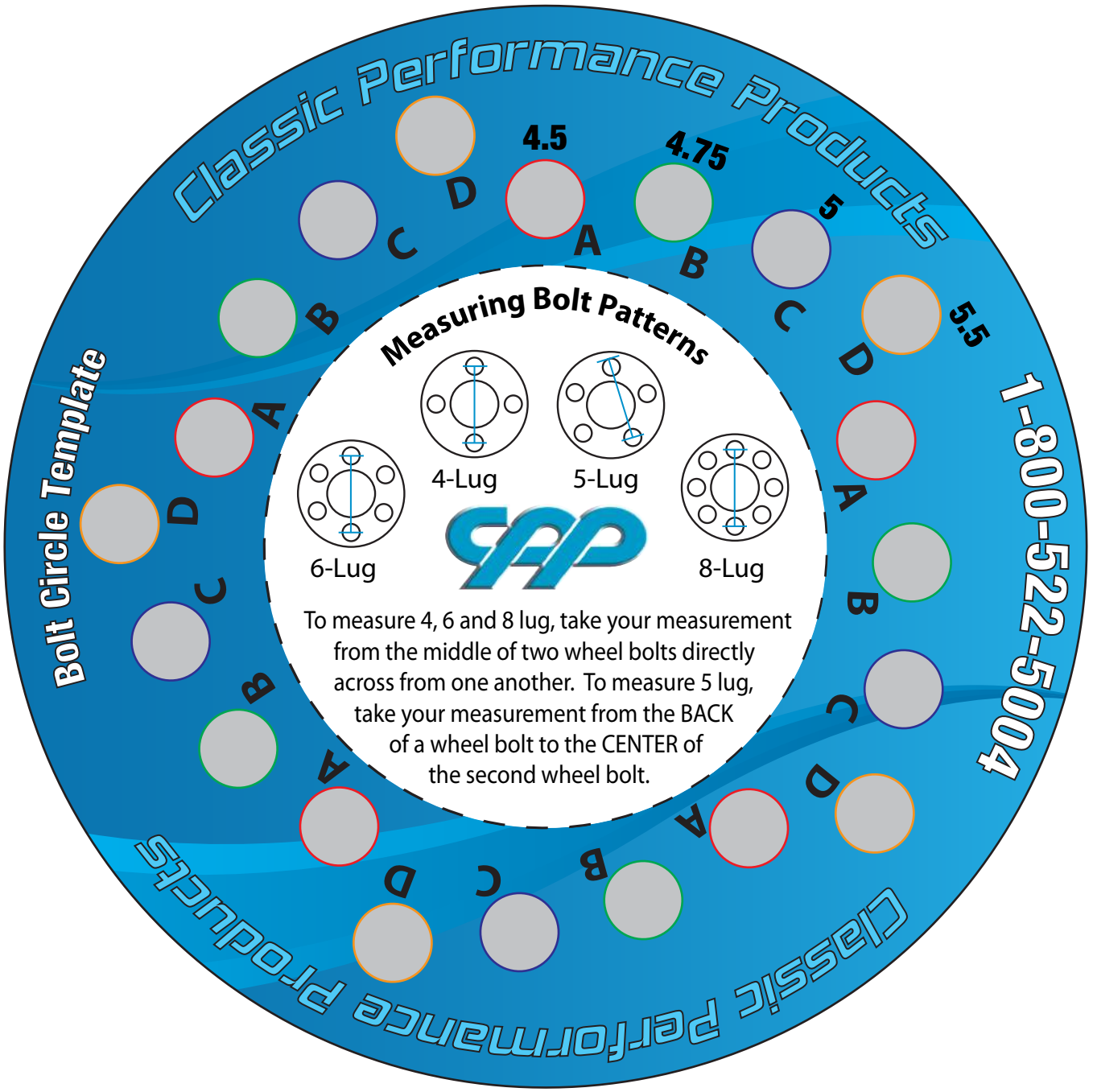
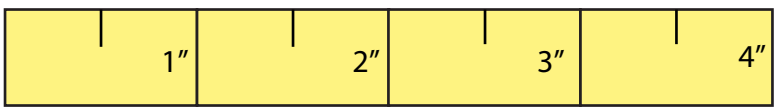
TECHNICAL Information



To use this template: Cut out the center of the template, and place over hub. Line up bolts with the grey "bolt circles". The best fit will be your bolt pattern. For example, a 5 bolt hub that lines up with the 4-3/4" "bolt circles" (B) will be a 5 on 4-3/4" bolt pattern.

In order to print to the correct dimensions, you must ensure that the "Page Scaling" option in the print dialog box is set to "None". Here is a ruler you can measure to make sure you have the right print size.

You can download this template from our website: http://www.classicperform.com/tech_articles/PDF/boltcircletemplate-1.htm



DIY Cast-Iron Master Cylinder "Rust Prevention"

Classic Performance Products' Corvette-style cast-iron master cylinders are shipped to customers with "raw" cylinder bodies—which means left un-prepared, they will start to form rust on the exterior from exposure to the elements, namely brake fluid.

To help prevent this and keep your master cylinder looking good as new*, CPP recommends sealing the bare cast iron, with either a suitable aerosol spray paint or a baked-on coating (do-it-yourself or, preferably, via powdercoating).

Painting the Master Cylinder

While conventional aerosol paint is the easiest method, to our knowledge, no brand of "brake" paint is truly resistant to all chemicals. Over time, you may notice some wear through if any brake fluid comes in contact with the painted surface. That being said, proper preparation—and paint application—is a must.

1. Though highly unlikely it will ever rust completely through, left untreated, a bare cast-iron master cylinder can get pretty ugly pretty quickly. (photo 2) The following steps will help prevent that from occurring.

2. First and foremost is proper pre-paint preparation: use a quality brake cleaner to degrease and ready the surface for paint application. Do not use shop rags, as the porous cast iron will collect cotton lint; use a clean abrasive pad instead. (photo 3)

3. Remove all debris and surface rust; on new masters, thoroughly clean and scuff with abrasive. (photo 4)

4. Plug and mask off any/all areas such as brake line ports and fluid chambers where you do not want paint. (photo 5)

5. Start off by applying a light "dust" coat; allow to tack up before continuing with subsequent light, even coats; do not load up paint in one heavy coat, as that will prevent it from properly curing/adhering. (photo 6)

6. For masters with residual fluid inside, it's best not to flip them over, as that will allow it to leak onto your painted surface. And since masking tape may be difficult to adhere, try using a cut out piece of cardboard or similar to cover reservoirs in the process. (photo 7)

7. Cured, sealed, and ready for service. In the process, we used Eastwood's Brake Gray, as it requires no heat curing. Used out of the can (on properly prepped surface), Eastwood's aerosol holds up to brake fluid contact.

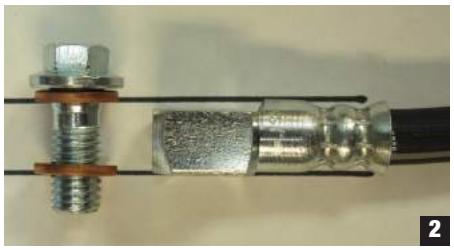
CPP cannot warranty any parts that have been painted, plated, or powdercoated; before doing so, ensure proper fit and, most importantly, functionality of your master cylinder.

TECHNICAL INFO

Brake Hose Installation Tip

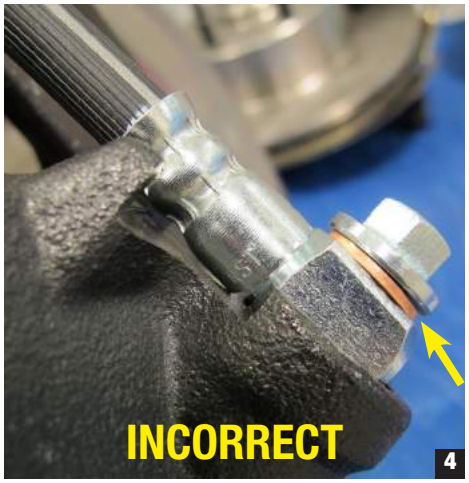
Incorrect (backwards) installation of the caliper brake hose will prevent the banjo fitting from properly sealing, ultimately causing the hose fitting to leak. To ensure a proper seal, the fitting must be installed with the stepped side facing "OUT". Test fit before installing banjo bolt—hose fitting shoulder should not touch caliper.

1. Banjo-style rubber brake hoses with an offset fitting must be installed with the notched side facing outward in order to attain a complete, proper seal. (photo 1)

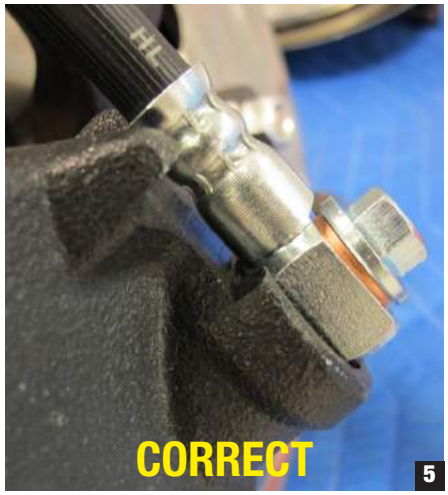


2. The reference marks indicate "top" and "bottom" of the banjo fitting; the stepped side (top) faces outward, allowing the bottom to seal tight onto the caliper without coming in contact with the fitting's crimped shoulder. (photo 2)

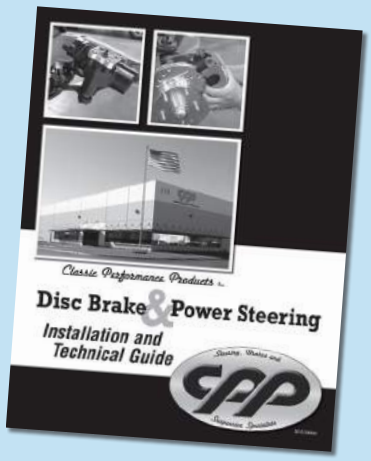
3. Always use copper compression washers on both sides of the banjo fitting. (photo 3)



4. Installed backwards, as shown, the shoulder of the hose fitting will come in contact with the caliper, causing the banjo to crush the compression washer at an angle, ultimately leading to fluid leaks. (photo 4)



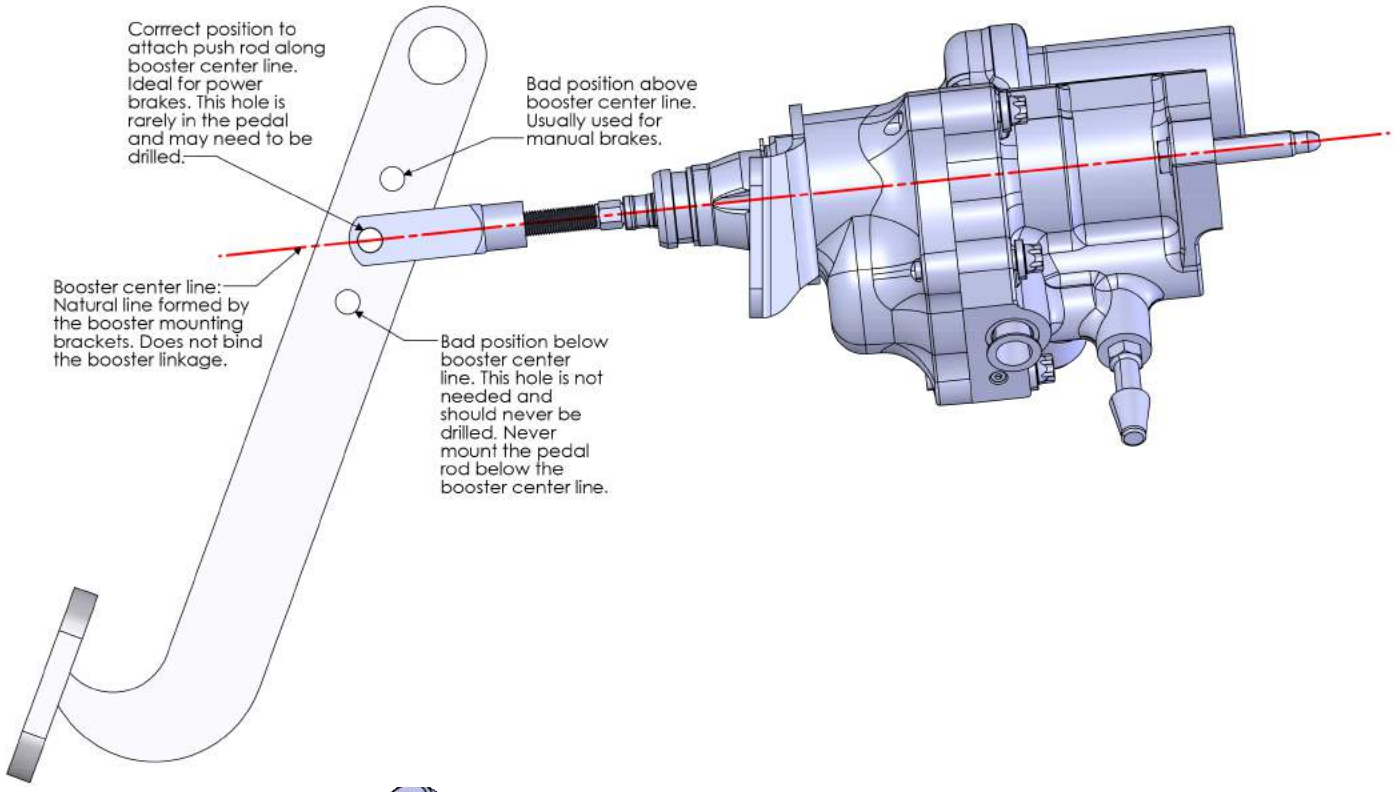
5. Properly installed and tightened, no portion of the brake hose fitting (other than the copper washer) should come in contact with the caliper body, as shown. (photo 5)

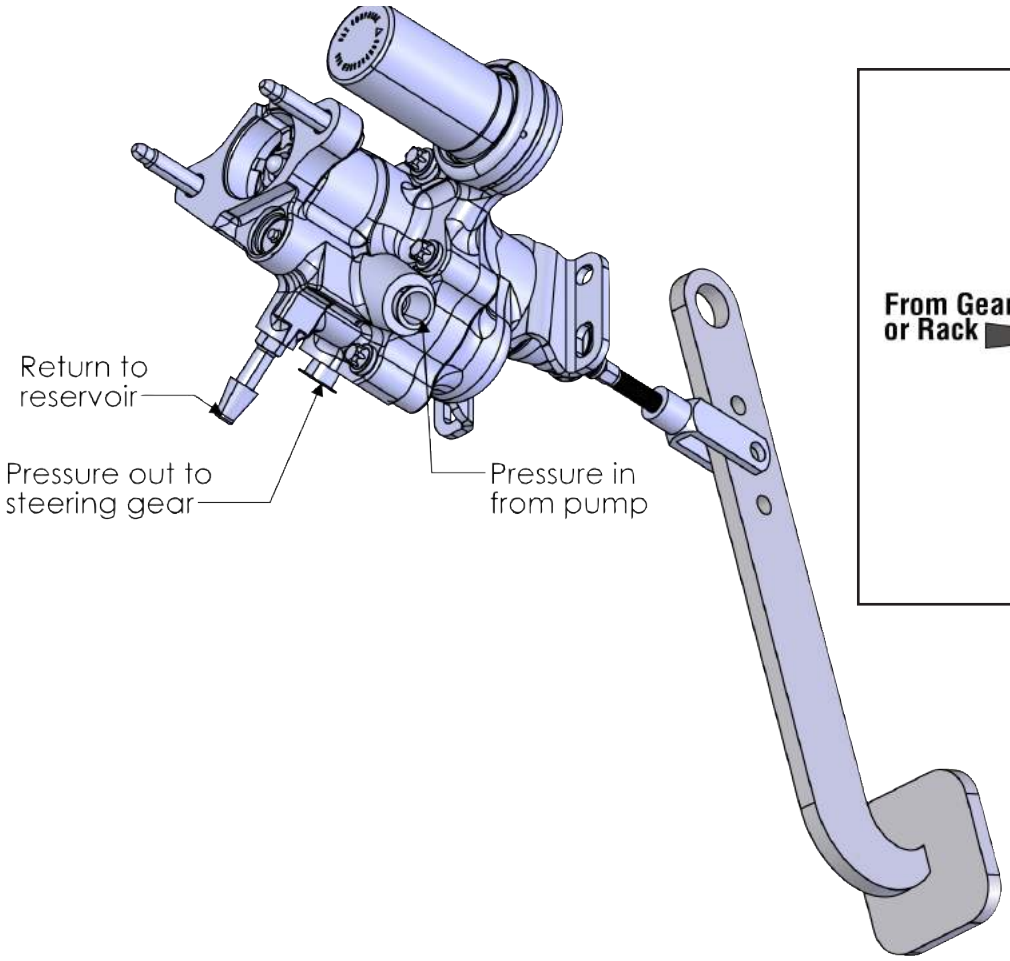


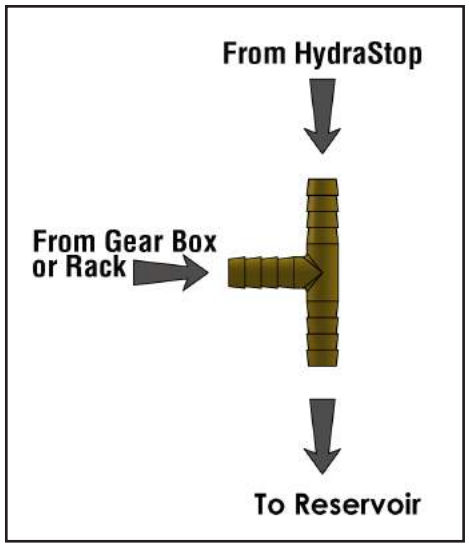
Need More Tech Assistance?

Our FREE Disc Brake & Power Steering Installation and Tech Guide is available online at www.classicperform.com.

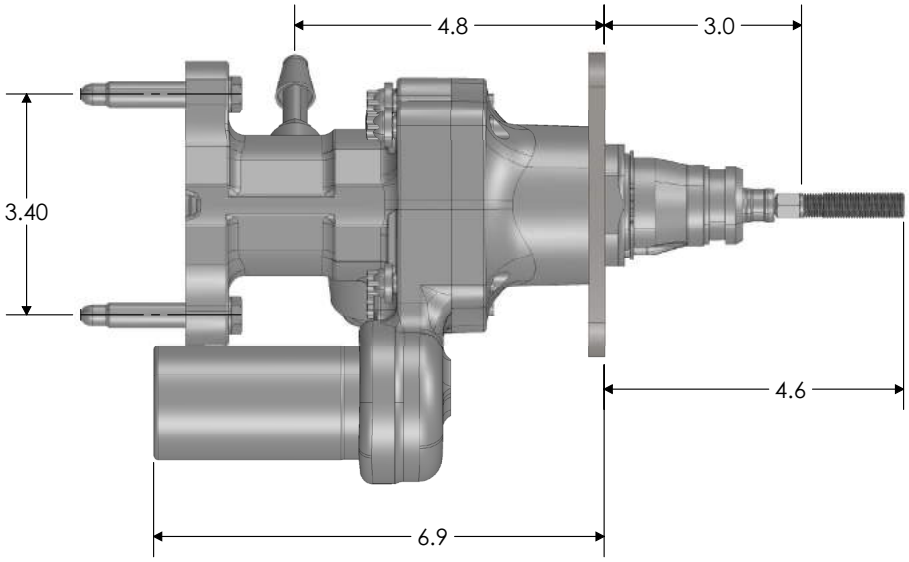
HYDRASTOP™ PEDAL RATIO ASSEMBLY

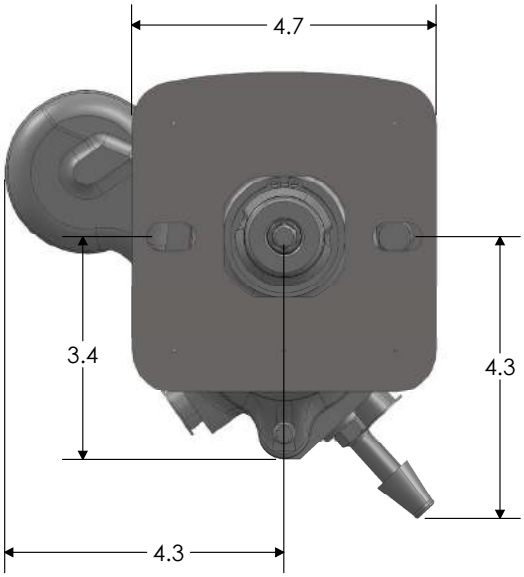


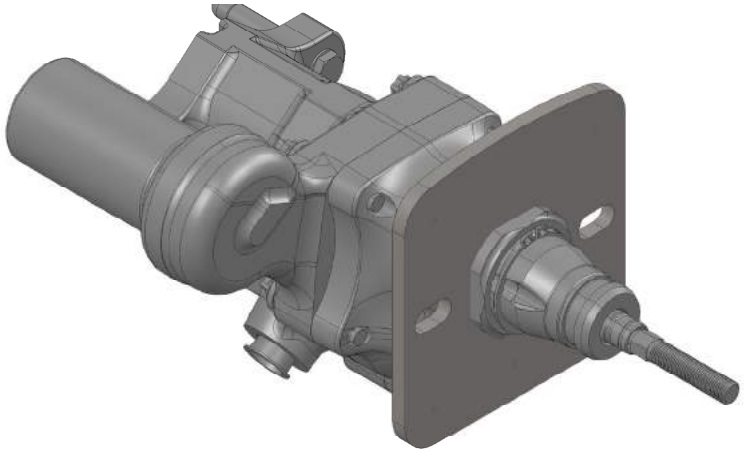


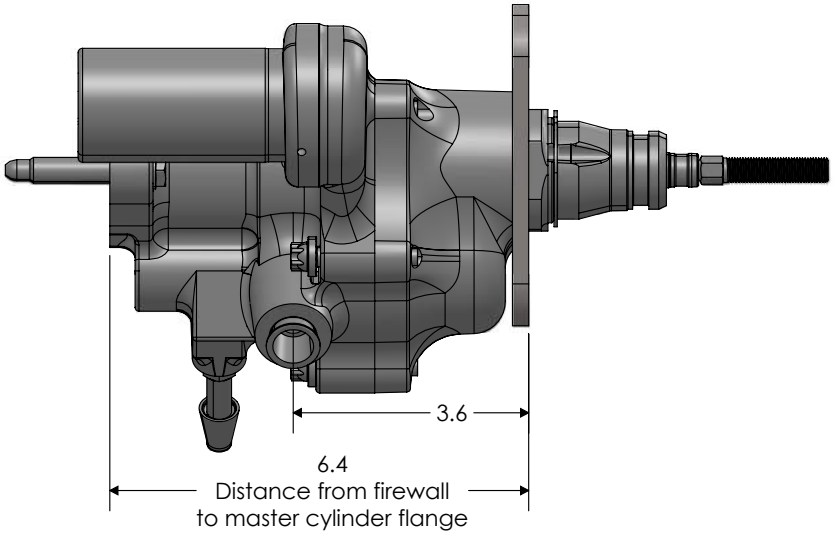


CPP UNIVERSAL HYDRASTOP MEASUREMENTS

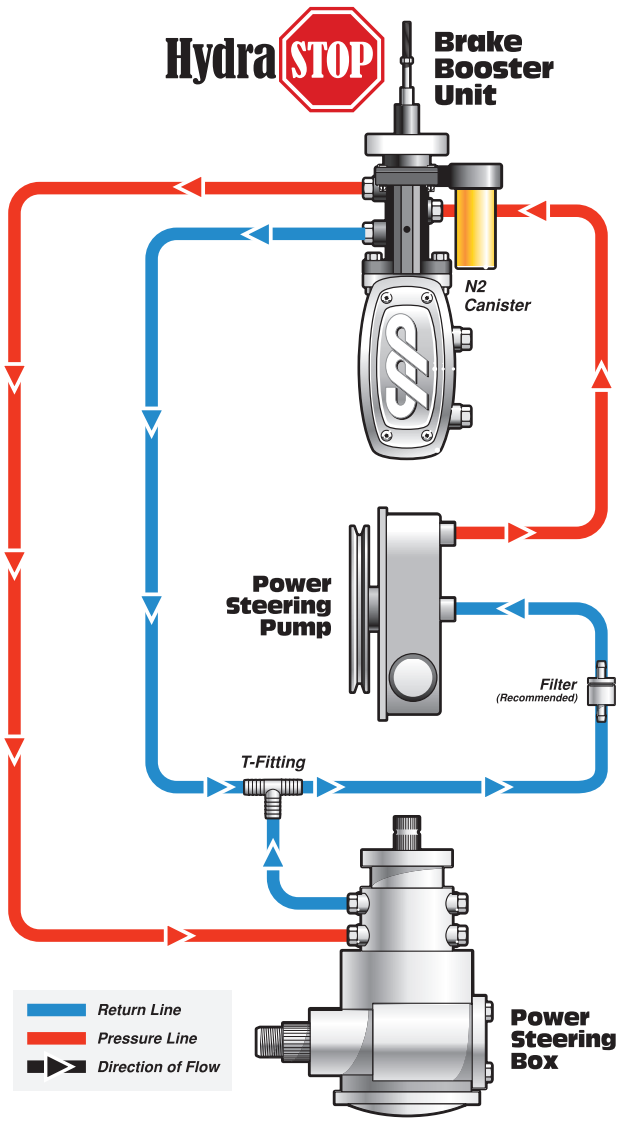


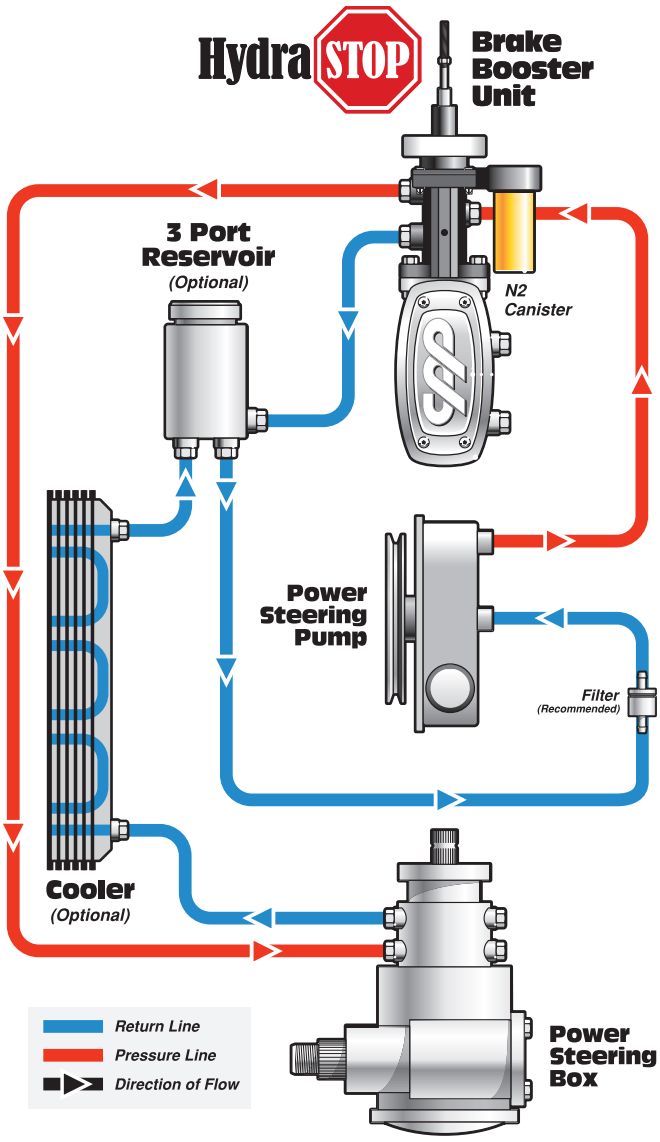






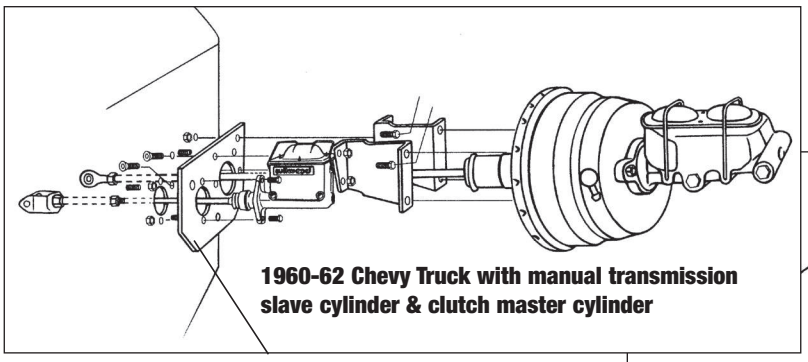
HYDRASTOP™ PLUMBING DIAGRAM



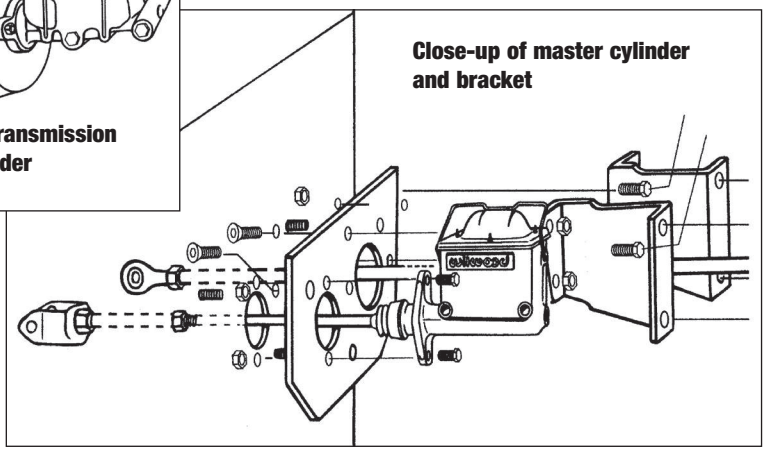


TECHNICAL INFO

BRAKE BOOSTER ASSEMBLY WITH SLAVE CYLINDER

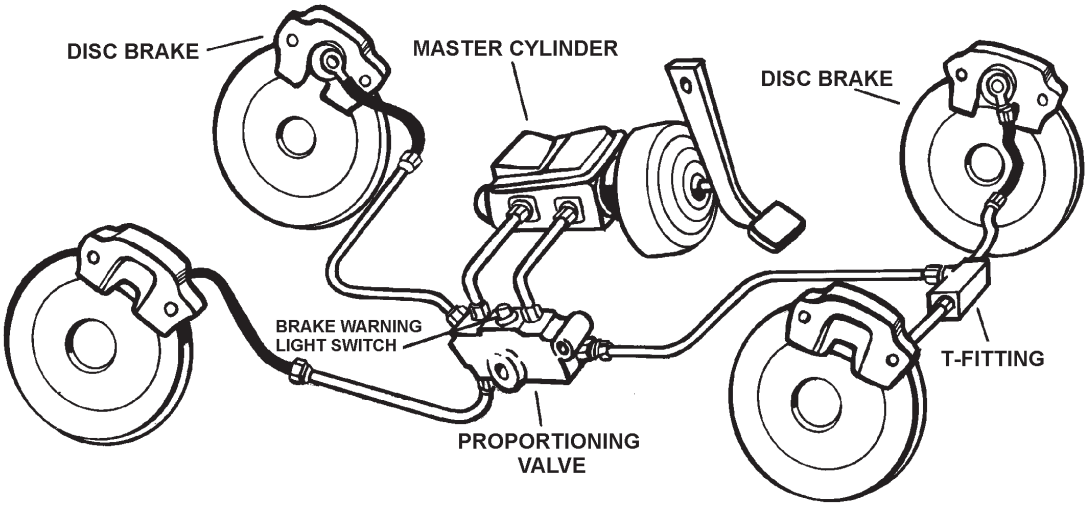


1960-62 Chevy Truck with manual transmission slave cylinder & clutch master cylinder

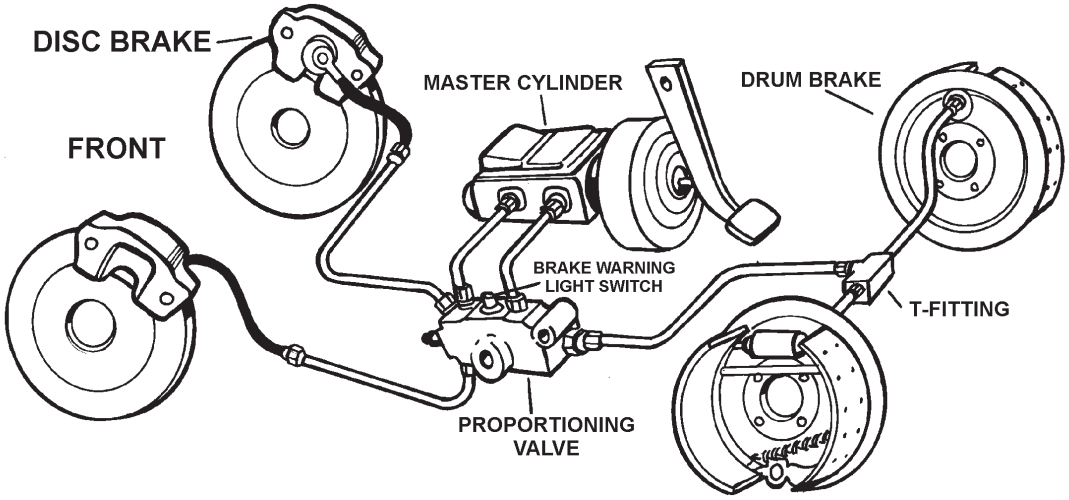


Close-up of master cylinder and bracket

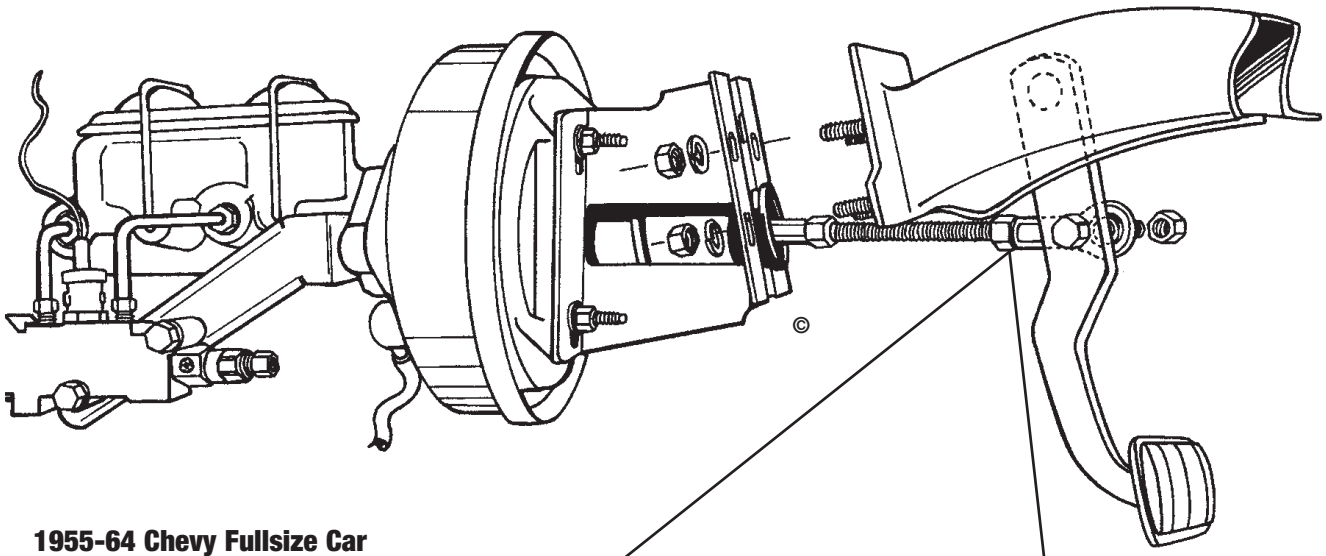
FOUR WHEEL DISC BRAKES PLUMBING DIAGRAM



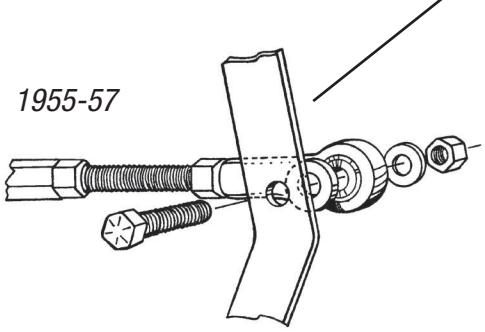
DISC/DRUM BRAKES PLUMBING DIAGRAM

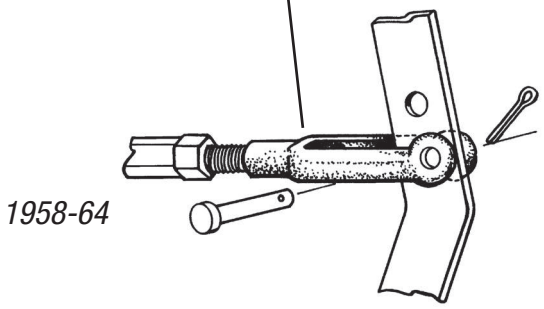


BRAKE BOOSTER DETAILS



1955-64 Chevy Fullsize Car
Booster to Brake Pedal Diagram



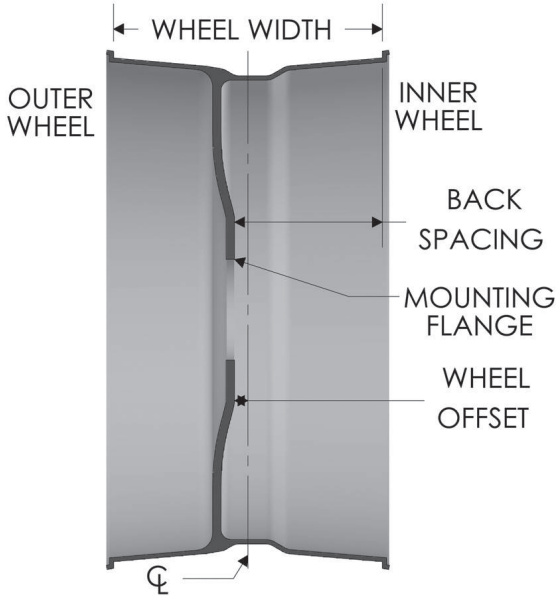


WHEEL BACKSPACING & OFFSET

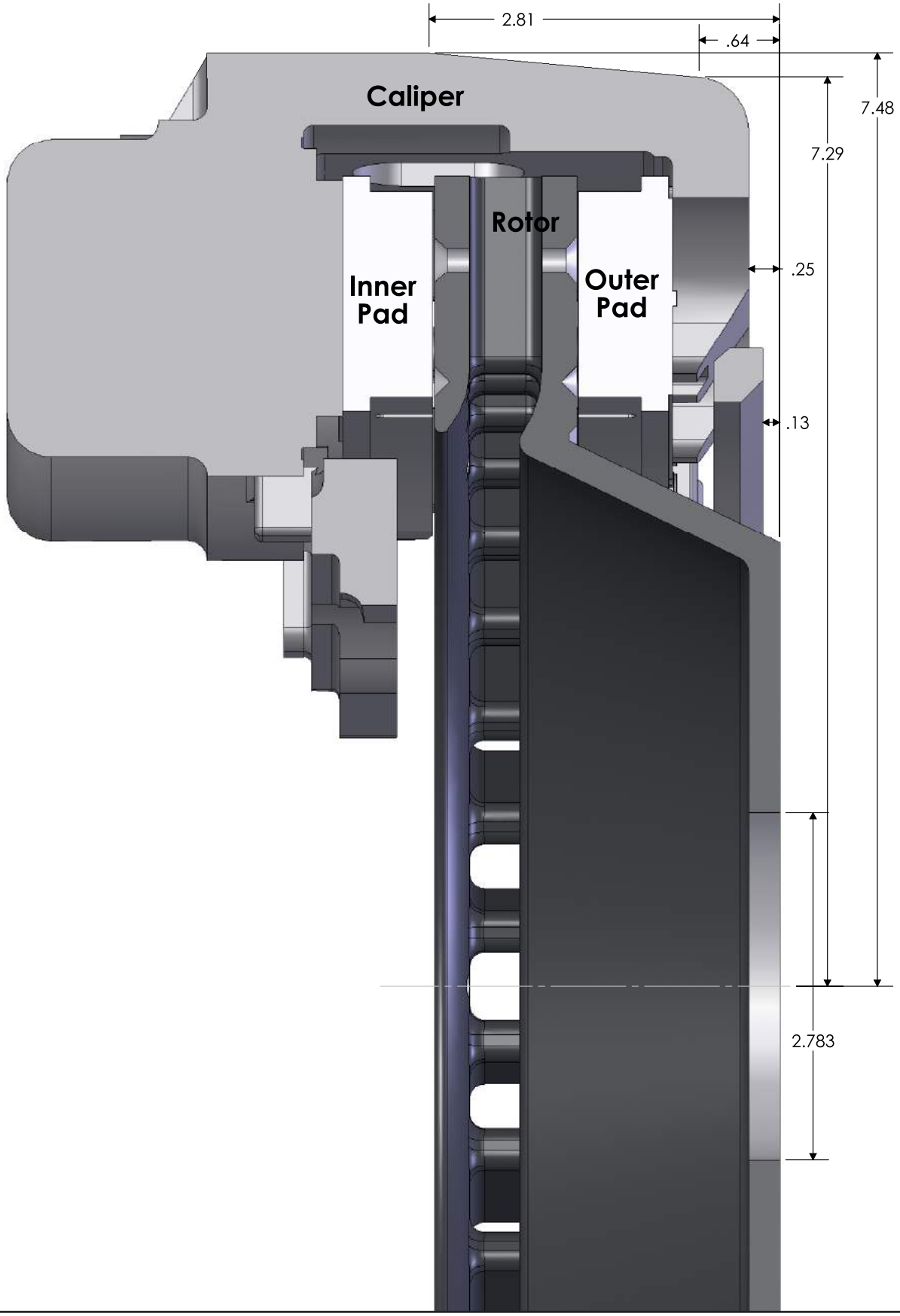
BACKSPACING
This is the distance from the inner edge of the rim down to the hub-mounting surface. To measure this, lay a straight-edge across the backside of the rim and drop a ruler or tape measure down to the hub-mounting surface. This measurement is useful for determining clearances for our disc conversion kits, as well as the clearance for springs and other suspension components.

OFFSET
This is the distance between the centerline of the rim and the hub-mounting surface. An offset of ZERO would have the mounting surface exactly in the middle of the rim's width, centered between the rim edges and tire-bead. Positive offset wheels have a wider inner measurement than on the outer side. The diagram is of a ZERO offset wheel.

Note: Using improperly spaced wheels may require the use of wheel spacers between the hub or rotor and the wheel mounting surface for proper clearance. Longer wheel studs may be required. Also many of our disc kits require larger diameter wheels than stock to clear the calipers.



BIG BRAKE TEMPLATE



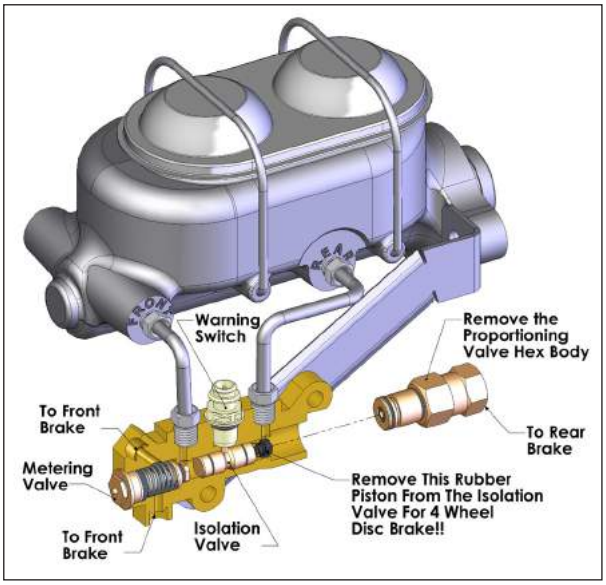
APPLICATION	PART NUMBER	SPINDLE	ROTOR	ROTOR SIZE	CHANGE FROM DRUM
1955-1957 Fullsize Car	5564WBK-S	OE	AR8200	11.0	Wide 7/8"
	5557SWBK-D12	5557DS-12	AR9003	12.0	Wide 5/8"
	5557SWBK-D13	CP30102	proprietary	13.0	Wide 1/2"
	5564WBK-0P13	OE	proprietary	13.0	Wide 7/16"
	5564SWBK-S0	OE	proprietary	10.8	Wide 7/16"
	CPP5557SWBK-D	CP30102	AR8215	10.5	Narrow 3/16"
	5558WBK-SO	OE	proprietary	11.0	ZERO
1958-1964 Fullsize Car	5870SWBK-D	CP30101	AR8200	11.0	Wide 1-1/16"
	5564WBK-S	OE	AR8200	11.0	Wide 1-1/16"
	5564WBK-OP13	OE	proprietary	13.0	Wide 5/8"
	5870SWBK-D13	CP30101	proprietary	13.0	Wide 5/8"
	5564SWBK-S0	OE	proprietary	10.8	Wide 5/8"
	5864SWBK-D12	5864DS-12	AR9003	12.0	Wide 3/8"
	5964WBK-SO	OE	proprietary	11.0	ZERO
1965-1968 Fullsize Car	5870SWBK-D	CP30101	AR8200	11.0	Wide 11/16"
	5870SWBK-D13	CP30101	proprietary	13.0	Wide 1/4"
	6568WBK-S	OE	AR8200	11.0	Wide 11/16"
	6568WBK-P13	OE	proprietary	13.0	Wide 1/4"
1969-1970 Fullsize Car	5870SWBK-D	CP30101	AR8200	11.0	Wide 11/16"
	5870SWBK-D13	CP30101	proprietary	13.0	Wide 1/4"
1962-1967 Chevy II Nova	6267SWBK-D13	CP30103	proprietary	13.0	ZERO
	6267WBK-P13	OE	proprietary	13.0	ZERO
	CPP6267SWBK-D	CP30103	proprietary	10.8	ZERO
	6467WBK-S	OE	proprietary	10.8	ZERO
1968-1974 Nova	6472SWBK-D13	CP30100	proprietary	13.0	Wide 7/16"
	6472WBK-P13	OE	proprietary	13.0	Wide 7/16"
	6474SWBK-D	CP30100	AR8200	11.0	Wide 7/16"
	6472WBK-S	OE	AR8200	11.0	Wide 7/16"
	6769SWBK-D12	6774DS-12	AR9003	12.0	Wide 3/16"
	6474SWBK-D13	CP30100	proprietary	13.0	ZERO
	6267WBK-P13	OE	proprietary	13.0	ZERO
	6474SWBK-D0	CP30100	proprietary	10.8	ZERO
	6467WBK-S	OE	proprietary	10.8	ZERO
1964-1972 Chevelle	6472SWBK-D13	CP30100	proprietary	13.0	ZERO
	6472WBK-P13	OE	proprietary	13.0	ZERO
	6474SWBK-D	CP30100	AR8200	11.0	Wide 7/16"
	6472WBK-S	OE	AR8200	11.0	Wide 7/16"
	6472SWBK-S12	6472SS-12	AR9003	12.0	Wide 1/8"
	6472SWBK-D12	6472DS-12	AR9003	12.0	Wide 1/16"
	6474SWBK-D13	CP30100	proprietary	13.0	ZERO
	6267WBK-P13	OE	proprietary	13.0	ZERO
	6474SWBK-D0	CP30100	proprietary	10.8	ZERO
	6467WBK-S	OE	proprietary	10.8	ZERO
1967-1969 Camaro	6472SWBK-D13	CP30100	proprietary	13.0	ZERO
	6472WBK-P13	OE	proprietary	13.0	ZERO
	6474SWBK-D	CP30100	AR8200	11.0	Wide 7/16"
	6472WBK-S	OE	AR8200	11.0	Wide 7/16"

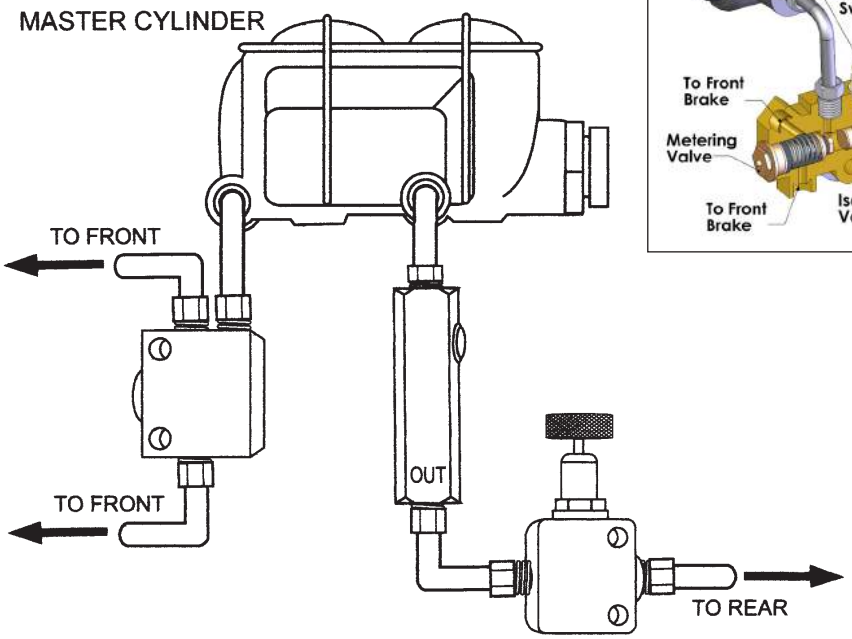
APPLICATION	PART NUMBER	SPINDLE	ROTOR	ROTOR SIZE	CHANGE FROM DRUM
1967-1969 Camaro *(Continued)*	6769SWBK-D12	6774DS-12	AR9003	12.0	Wide 3/16"
	6474SWBK-D13	CP30100	proprietary	13.0	ZERO
	6267WBK-P13	OE	proprietary	13.0	ZERO
	6474SWBK-D0	CP30100	proprietary	10.8	ZERO
	6467WBK-S	OE	proprietary	10.8	ZERO
1960-1962 C10	6062WBK-5	OE	AR8200	11.0	Wide 1-1/4
	6062SWBK-5OE	CP4S1	AR8600	12.0	Wide 1/16"
	6062SWBK-5OE-S	CP4S8	AR8600	12.0	Wide 1/16"
	6062SWBK-6OE	CP4S1	AR8600SB	12.0	Wide 1/16"
	6062SWBK-6OE-S	CP4S8	AR8600SB	12.0	Wide 1/16"
	6062SWBK-55213	CP30106-1	proprietary	13.0	Narrow 1/4"
	6062SWBK-65213	CP30106-1	proprietary	13.0	Narrow 1/4"
	6062SWBK-5	CP30106-1	AR8600	12.0	Narrow 1/4"
	6062SWBK-6	CP30106-1	AR8600SB	12.0	Narrow 1/4"
1963-1970 C10	6370WBK-5	OE	AR8200	11.0	Wide 1-1/4
	6370SWBK-5OE	CP4S2	AR8600	12.0	Wide 1/16"
	6370SWBK-5OE-S	CP4S9	AR8600	12.0	Wide 1/16"
	6370SWBK-6OE	CP4S2	AR8600SB	12.0	Wide 1/16"
	6370SWBK-6OE-S	CP4S9	AR8600SB	12.0	Wide 1/16"
	6370SWBK-55213	CP30106-2	proprietary	13.0	Narrow 1/4"
	6370SWBK-65213	CP30106-2	proprietary	13.0	Narrow 1/4"
	6370SWBK-5	CP30106-2	AR8600	12.0	Narrow 1/4"
	6370SWBK-6	CP30106-2	AR8600SB	12.0	Narrow 1/4"

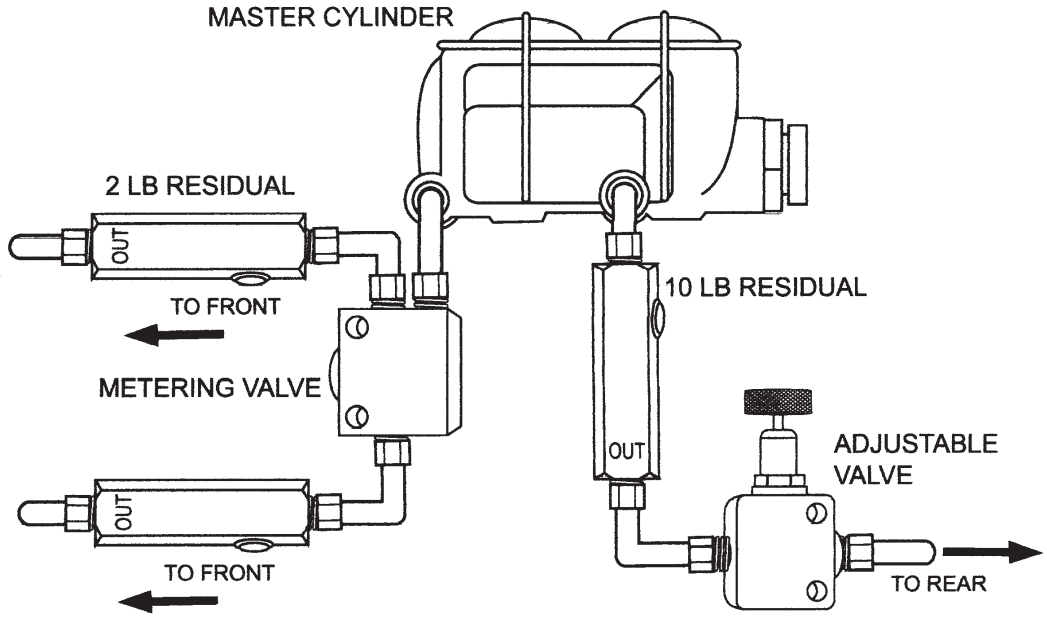
THE FOLLOWING KITS OFFSET IS CHANGED FROM FACTORY DISC BRAKES

APPLICATION	PART NUMBER	SPINDLE	ROTOR	ROTOR SIZE	CHANGE FROM DISC
1971-1972 C10	7172SWBK-5OE	CP4S3	AR8600	12.0	Narrow 7/16"
	7172SWBK-5OE-S	CP4S10	AR8600	12.0	Narrow 7/16"
	7172SWBK-55213	CP30106-3	proprietary	13.0	Narrow 3/4"
	7172SWBK-5	CP30106-3	AR8600	12.0	Narrow 3/4"
1973-1987 C10	7387SWBK-5D	CP4S4	AR8600	12.0	Narrow 7/16"
	7387SWBK-5S	CP4S5	AR8600	12.0	Narrow 7/16"
	7387SWBK-55213	CP30106-4	proprietary	13.0	Narrow 3/4"
	7387SWBK-5	CP30106-4	AR8600	12.0	Narrow 3/4"

VALVE INSTALLATION







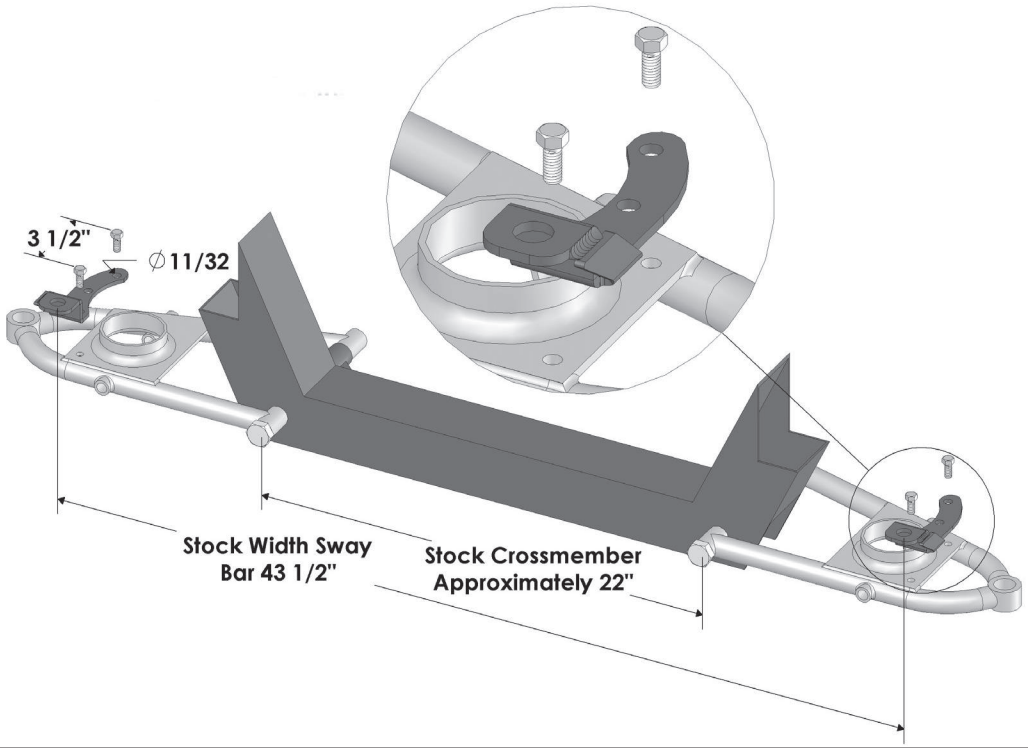
Spring Rate Reference Chart:

LIGHTER — HEAVIER

Most Small Block Vehicles			*Most Big Block Vehicles*		
Cruise	Sport Handling	Autocross	Cruise	Sport Handling	Autocross
1701-1800 lbs. Front End Weight	1801-1900 lbs. Front End Weight	1901-2000 lbs. Front End Weight	1901-2000 lbs. Front End Weight	2001-2100 lbs. Front End Weight	2101-2300 lbs. Front End Weight
350	400	450	450	500	550

**These recommendations are general guidelines only. The weight of the vehicle, personal ride preference, etc. need to be taken into account when selecting spring rates.*

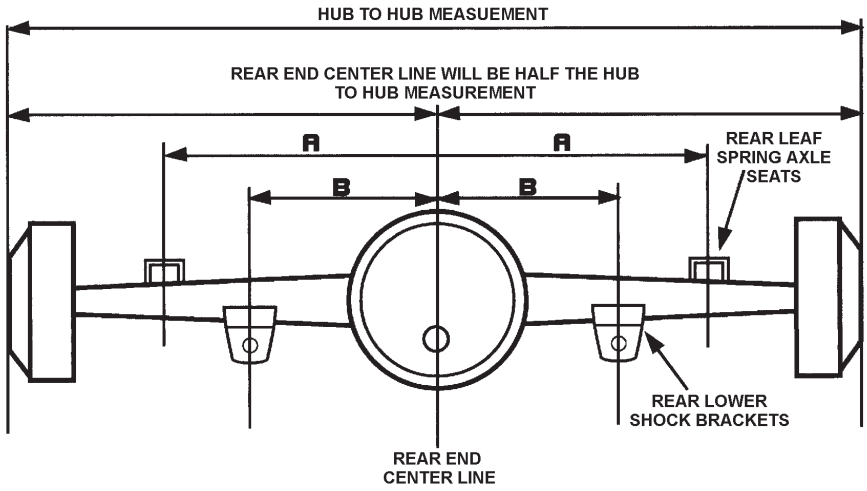
MUSTANG II SWAY BAR INFO



FINDING THE REAR CENTERLINE

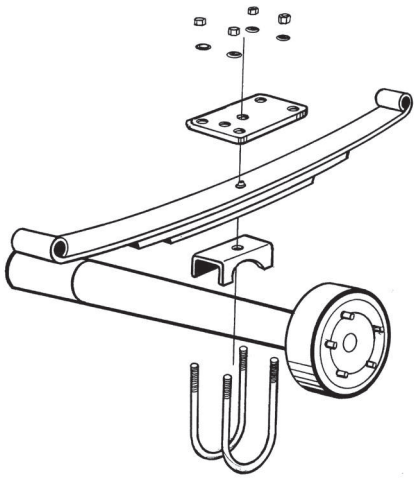
When swapping out the rear end in your classic truck to a newer unit, the axle centerline must be found in order insure the correct placement of the shock mounts and leaf spring seats.

Before any measurements are taken, make sure that the rear end is centered between the frame rails. With the rear end centered, measure the width of the rear end from hub to hub and divide that number by 2. The result will be the distance from one hub to the axle centerline. Remember, if the measurement is correct, then the distance from either hub to the centerline will be the same no matter what rear end is being used.



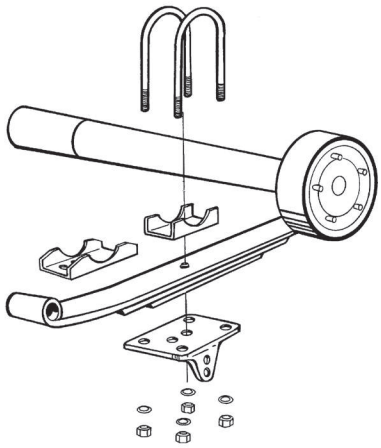
Now that the centerline has been found it will be easy to place the spring axle seats and shock mounts. The location of each spring seat (A) should be the same distance from the centerline. Likewise, the location of each shock bracket (B) should be the same distance from the centerline.

1955-59 CHEVY TRUCK REAR AXLE CONVERSION KIT



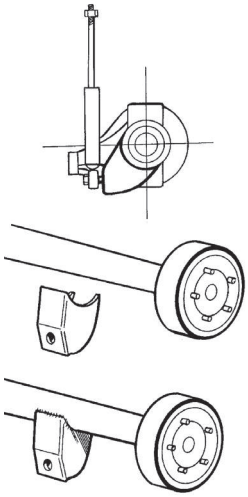
The rear axle in an original 1955-59 truck is attached to the bottom of the rear leaf springs. This configuration supports the trucks stock ride height. "Flipping" the rear axle or attaching the rear axle above the rear leaf springs will lower the vehicle from 4-5 inches. Our 1955-59 Rear Axle Conversion Kit can be used either way. Simply weld the spring pad on top of the axle housing and attach it to the underside of the springs to retain the factory ride height (shown), or weld the spring pad on the bottom of the axle housing and attach it to the top of the springs to lower the vehicle.

1947-53 CHEVY TRUCK REAR AXLE RELOCATION KIT



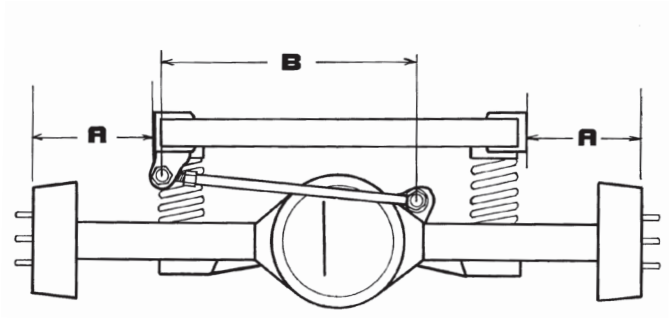
Converting the 1947-53 Chevy trucks from an enclosed drive shaft rear end to the modern open drive shaft rear end always posed the problem of the rear end not being centered in the wheel well. This would happen because the spring center bolt was located 1.5" forward of where it should be. The axle seats that are included in our rear axle conversion kits address this problem by offering to indexing holes. One hole is centered to work with the 1954-55 Chevy trucks and the other hole is located 1.5" forward of the center. This will center the rear axle in the 1947-53 wheel opening.

1955-59 CHEVY TRUCK LOWER SHOCK MOUNT BRACKETS



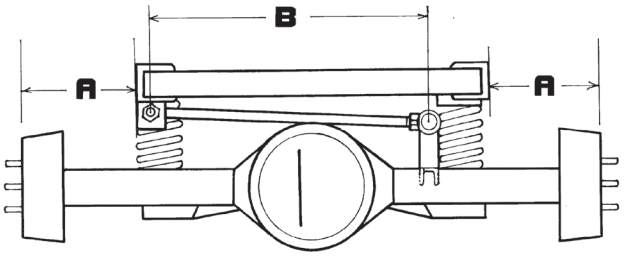
When installing the lower shock mount brackets they should be positioned so that the shocks are parallel with the axle centerline and parallel to each other (straight up and down). If the truck is lowered the mount may be positioned outward from the axle centerline, but doing so would limit shock. Instead of doing this we recommend using a shortened shock so they can be kept as close to parallel as possible.

Check out more Chevy Truck Suspension Parts and Accessories on pages 20-47



1960-72 CHEVY TRUCK ADJUSTABLE REAR TRAC BAR

Unlike leaf springs, rear coil springs do not offer any lateral control. For that reason a Trac Bar is needed to keep the body of the vehicle centered over the rear axle. With the rear suspension weighted, adjust the Trac Bar so that measurement A is the same on the passenger side and driver side. Tighten the jam nut and both mounting bolts to complete the installation.



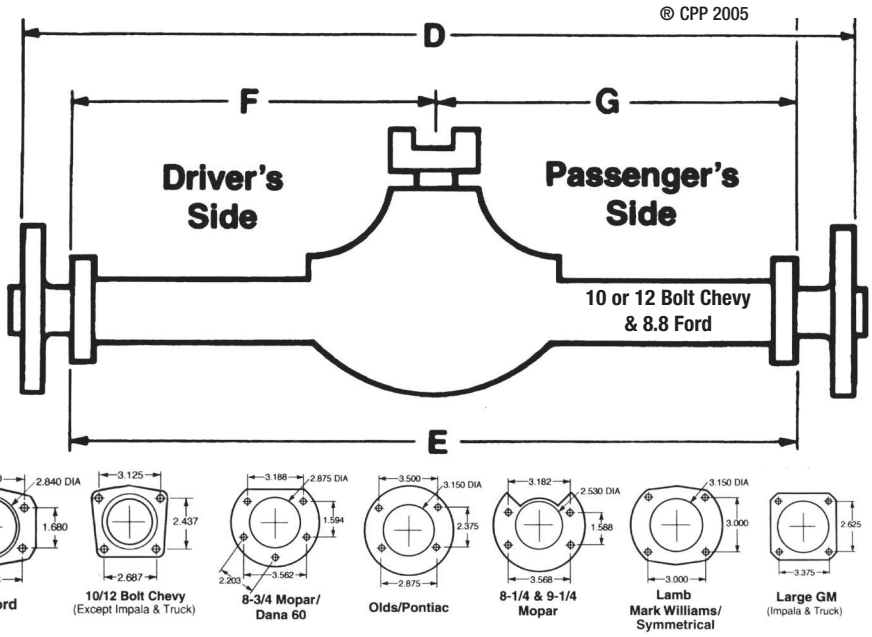
1960-72 CHEVY TRUCK WELD-ON REAR TRAC BAR

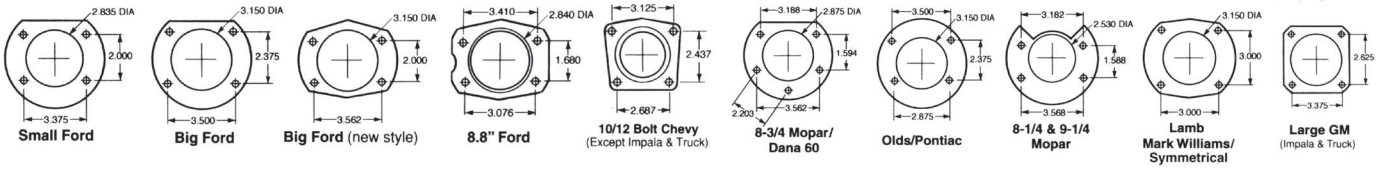
When combining a non-coil spring rear end with a coil spring suspension, a trac bar mount will need to be welded on. To accurately locate the trac bar anchor point, place the vehicle on jack stands with the suspension weighted. Make sure the axle is centered under the vehicle. The measurement from the hub to frame rail (A) should be the same on either side. Adjust the threaded end of the trac bar so that half of the total thread length is exposed above the lock nut. Attach the bar to the frame and the bracket, and then weld the bracket to the appropriate spot on the axle tube. Tighten the anchor bolts and jam nut to finish off the installation.

REAR END MEASUREMENTS

Measuring for Rear End Width

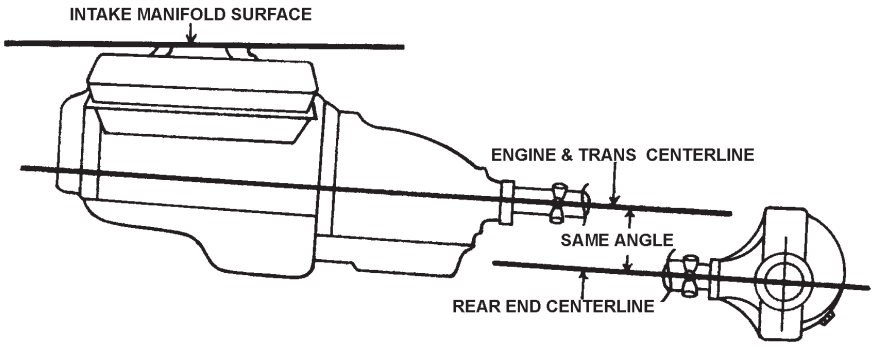
D Wheel to wheel width
E Housing flange to housing flange
F Driver side housing flange to pinion center
G Passenger side housing flange to pinion center





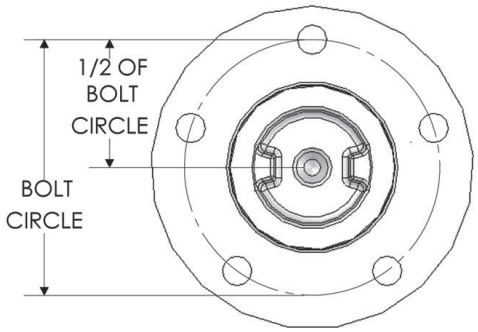
SETTING THE REAR PINION ANGLE

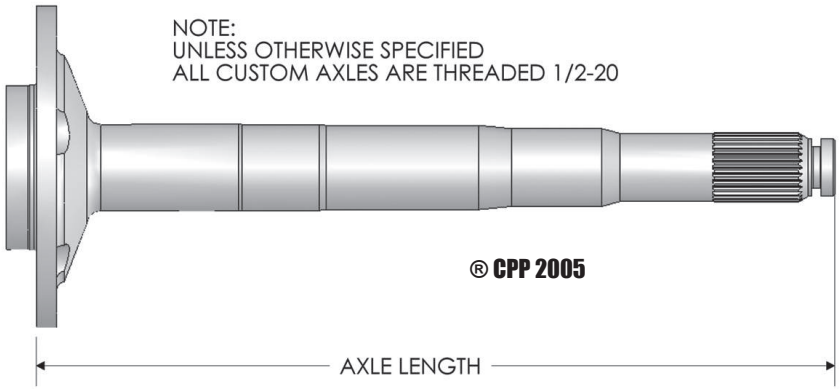
The centerline of the transmission output shaft and the centerline of the rear axle pinion shaft should be parallel when the vehicle is under load. A leaf spring suspension will accommodate a reasonable amount of axle twist when torque is applied to the pinion shaft, i.e. the axle has a tendency to rotate upward when under load. The leaf springs will allow the pinion shaft to angle upward from 1 to 2 degrees when the vehicle is moving forward. For that reason, set the downward angle of the transmission output shaft to 4 degrees so the carburetor mounting flange will be level with the ground, then adjust the upward angle of the pinion angle from 2-3 degrees when the vehicle is static.

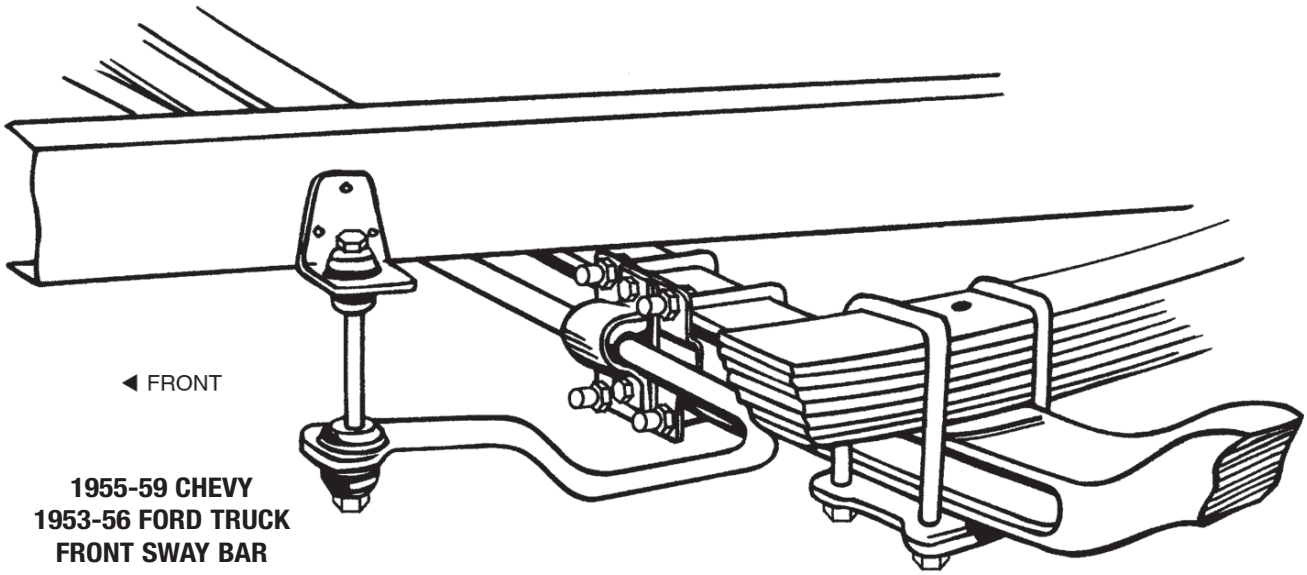


When the vehicle is under power, deflection will allow the pinion to rotate from 1-2 degrees upward, aligning it with the transmission output shaft. All adjustments should be made with the suspension weighted.

AXLE MEASUREMENTS

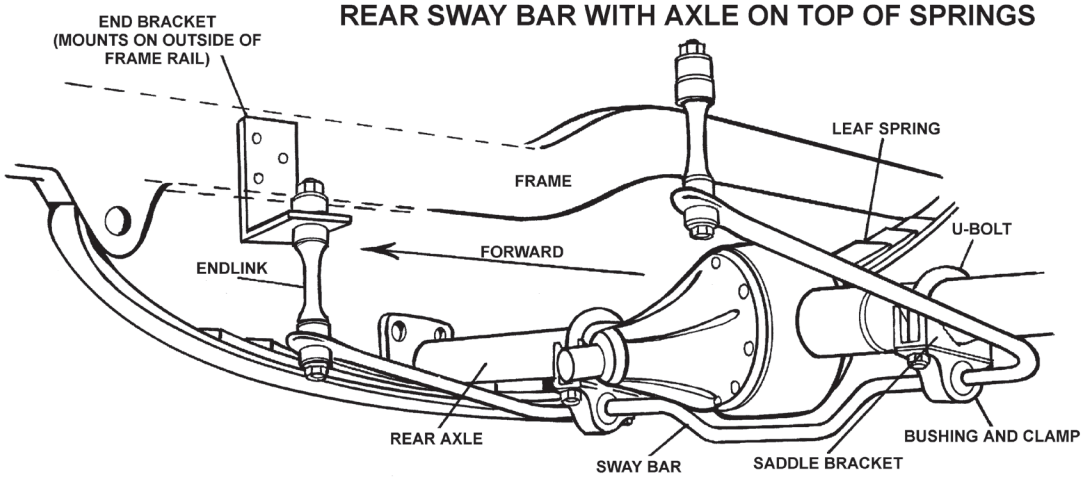




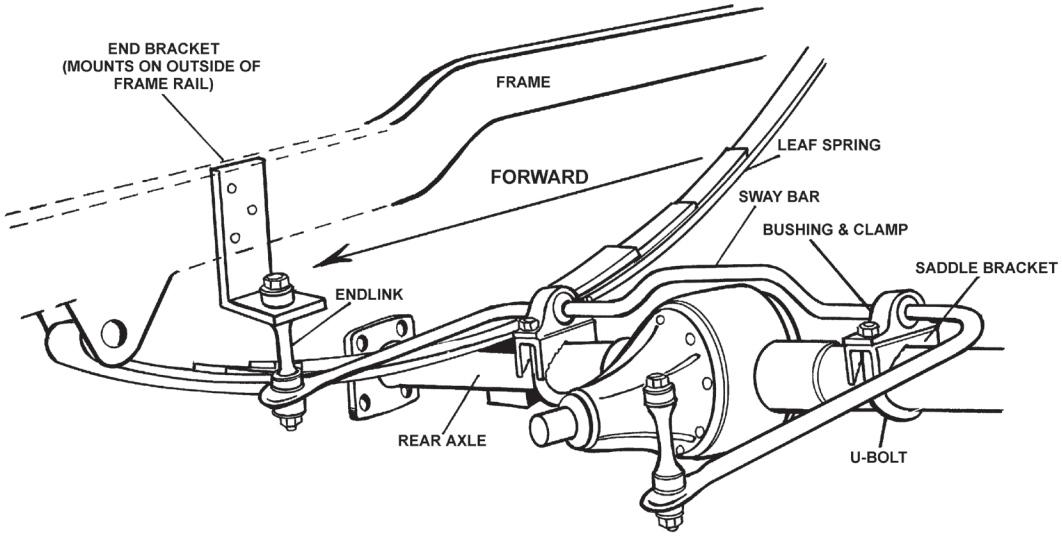


1955-59 CHEVY
1953-56 FORD TRUCK
FRONT SWAY BAR

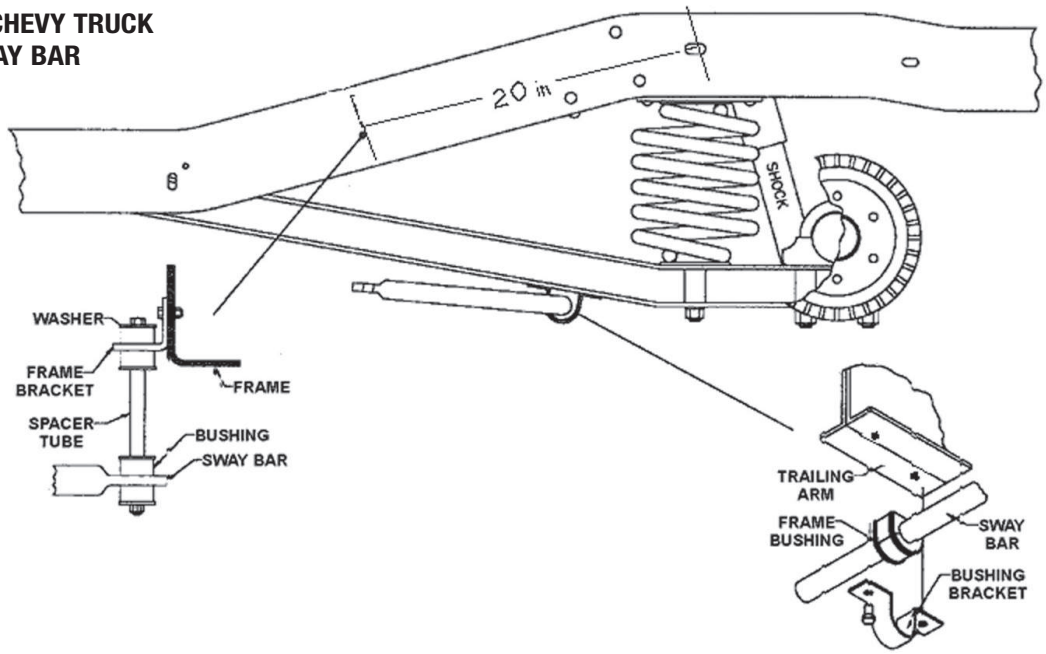
1955-59 CHEVY TRUCK
1953-56 FORD TRUCK
REAR SWAY BAR WITH AXLE ON TOP OF SPRINGS



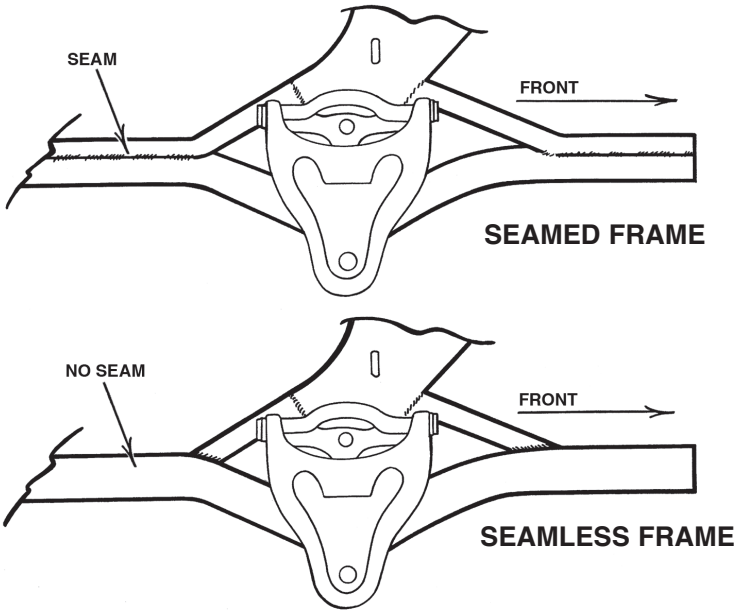
1955-59 CHEVY TRUCK
1953-56 FORD TRUCK
REAR SWAY BAR WITH AXLE IN THE STOCK LOCATION



1963-72 CHEVY TRUCK REAR SWAY BAR



1955-57 CHEVY PASSENGER CAR IDENTIFYING SEAMED & SEAMLESS FRAMES



GAS TANK SENDING UNIT TECHNICAL INFORMATION

Aftermarket (VDO Etc.) 240-33 Ohm

GM Early 1966-down use 0-30 ohm. (depending on vehicle 1966 cut-of is different)

GM Late 1967-up use 0-90 ohm (depending on vehicle 1967 cut-of is different)

Ford 1955-down (6V systems) use 140 (E) -14 (F) sender

Ford 1956-up (12V systems) use 73 (E)-10 (F) sender

Late Ford use 16-158 sender

VW (Beetle Type I) use 73-10 sender (not the same as Ford)

Nitrogen Gas Shock Dimensions

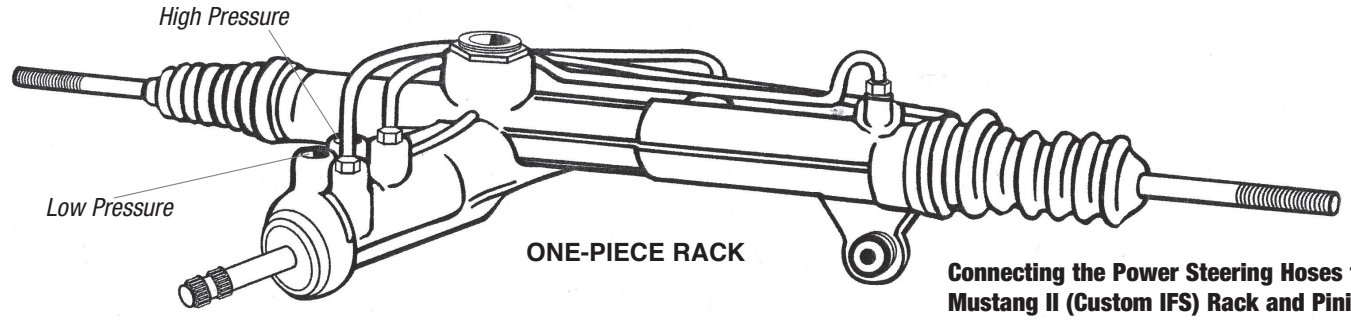
Year	Description	Mounting	Part Number	Extended	Collapse
1949-54 Chevy Truck	Front Mono	S/S	DT-4039GSS	14"	8-1/2"
1949-54 Chevy Truck	Front Stock	S/S	DT-4078GSS	15-1/2"	10-1/2"
1949-54 Chevy Truck	Rear Lowered	S/L	CPP-4078G	14-1/2"	9-1/4"
1949-54 Chevy Truck	Rear Stock	S/L	CPP-4248	22-1/4"	13-1/8"
1955-59 Chevy Truck	Front Mono	L/L	CPP-4809	13-1/2"	9"
1955-59 Chevy Truck	Front Stock	L/L	CPP-4052G	15-1/2"	10"
1955-59 Chevy Truck	Rear Mono	L/L	CPP-4163G	20-1/2"	12-3/4"
1955-59 Chevy Truck	Rear Stock	L/L	CPP-4231G	22-1/2"	13-3/4"
1960-62 Chevy Truck	Front Lowered	L/L	CPP-M1200GLL	12-1/2"	8-1/2"
1960-62 Chevy Truck	Front Stock	L/L	CPP-4809G	13-1/2"	9"
1960-62 Chevy Truck	Rear Lowered	L/L	CPP-4163G	20-1/2"	12-3/4"
1960-62 Chevy Truck	Rear Stock	L/L	CPP-4231G	22-1/2"	13-3/4"
1963-72 Chevy Truck	Front Lowered 1" - 2"	L/L	CPP-4809G	13-1/2"	9"
1963-72 Chevy Truck	Front Lowered 3"	L/L	CPP-M1200GLL	12-1/2"	8-1/2"
1963-72 Chevy Truck	Front Stock	L/L	CPP-4052G	15-1/2"	10"
1963-72 Chevy Truck	Rear Lowered 2" - 4"	L/L	CPP-4095G	18-1/2"	11-3/4"
1963-72 Chevy Truck	Rear Lowered 5-1/2"	L/L	CPP-4052G	15-1/2"	10"
1963-72 Chevy Truck	Rear Stock	L/L	CPP-4163G	20-1/2"	12-3/4"
1948-52 Ford Truck	Front Stock	L/L	CPP-4095G	18-1/2"	11-3/4"
1948-52 Ford Truck	Front Lowered 3" - 4-1/2"	L/L	CPP-4052G	15-1/2"	10"
1948-55 Ford Truck	Rear Stock	L/L	CPP-4163G	20-1/2"	12-3/4"
1948-55 Ford Truck	Rear Lowered 3" - 4-1/2"	L/L	CPP-4095G	18-1/2"	11-3/4"
1953-55 Ford Truck	Front Stock	L/L	CPP-4052G	15-1/2"	10"
1953-55 Ford Truck	Front Lowered 3" - 4-1/2"	L/L	CPP-4809G	13-1/2"	9"
1956-60 Ford Truck	Front Stock	S/S	DT-4078GSS	15-1/2"	10-1/2"
1956-60 Ford Truck	Front Lowered 3" - 4-1/2"	S/S	DT-4039GSS	14"	9-3/4"
1956-60 Ford Truck	Rear Stock	S/L	CPP-4180G	20-1/2"	12-3/4"
1956-60 Ford Truck	Rear Lowered 3" - 4-1/2"	S/L	CPP-4112G	18-1/2"	12"
1961-64 Ford Truck	Front Stock	S/L	CPP-4078G	14-1/2"	9-1/4"
1961-64 Ford Truck	Rear Stock	L/L	CPP-4163G	20-1/2"	12-3/4"
1961-64 Ford Stock	Rear Lowered 3" - 4-1/2"	L/L	CPP-4095G	18-1/2"	11-3/4"
Misc.	Front or Rear	S/S	CPP-4007GSS	12"	8-1/4"
Misc.	Front or Rear	S/S	DT-4293G	23-1/2"	14-1/4"

3-Way Adjustable Shocks

1967-69 Camaro	Front	S/L	CPP-1000	14-3/4"	9-3/4"
1968-79 Nova	Front	S/L	CPP-1000	14-3/4"	9-3/4"
1964-83 Chevelle	Front	S/L	CPP-1000	14-3/4"	9-3/4"
1970-81 Camaro	Front	S/L	CPP-1001	15-3/4"	10-1/4"
1955-70 Fullsize	Front	S/L	CPP-1001	15-3/4"	10-1/4"
1963-82 Corvette	Front	S/L	CPP-1001	15-3/4"	10-1/4"
1962-1967 Nova	Front	S/Plate	CPP-1004	14"	9-1/2"
1965-70 Mustang	Front	S/Plate	CPP-1004	14"	9-1/2"
1967-69 Camaro	Rear	S/L	CPP-1105	20-1/2"	13"
1955-57 Fullsize	Rear	S/L	CPP-1105	20-1/2"	13"
1970-81 Camaro	Rear	L/S	DT-1106	23-1/4"	13-3/4"
1964-72 Chevelle	Rear	L/L	CPP-1107	20-1/2"	13-1/2"
1968-74 Nova	Rear	L/L	CPP-1107	20-1/2"	13-1/2"
1958-70 Fullsize	Rear	L/L	CPP-1107	20-1/2"	13-1/2"

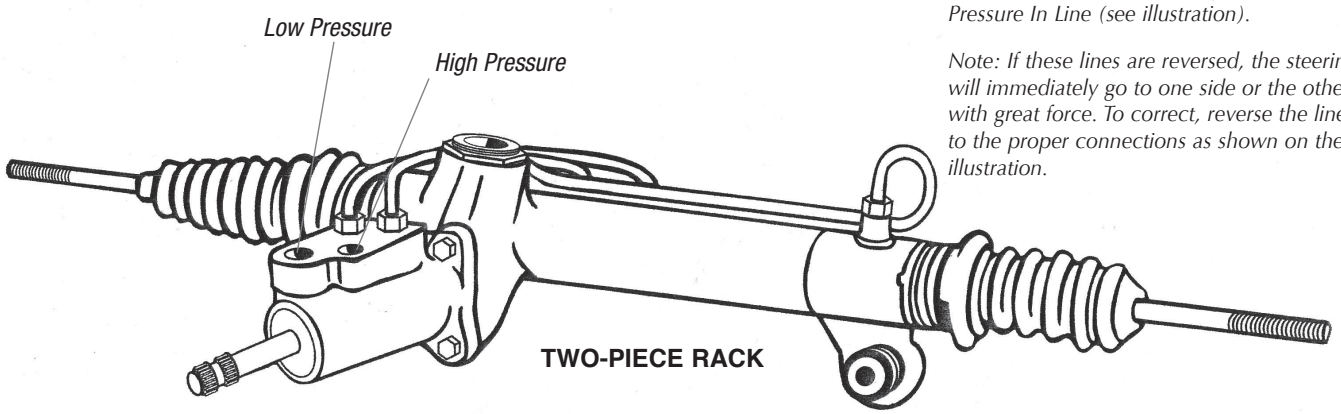
Front shock valving ratios are: 90/10, 80/20, and 60/40; rear shock valving ratios are: 70/30, 50/50, and 40/60

POWER STEERING RACK



Connecting the Power Steering Hoses for Mustang II (Custom IFS) Rack and Pinion:
The large fitting is the Low Pressure Return Line (see illustration). The small fitting is the High Pressure In Line (see illustration).

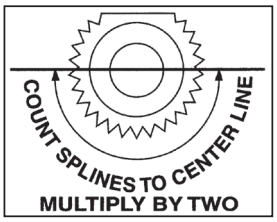
Note: If these lines are reversed, the steering will immediately go to one side or the other with great force. To correct, reverse the lines to the proper connections as shown on the illustration.



UNIVERSAL JOINTS - FINDING THE RIGHT SIZE

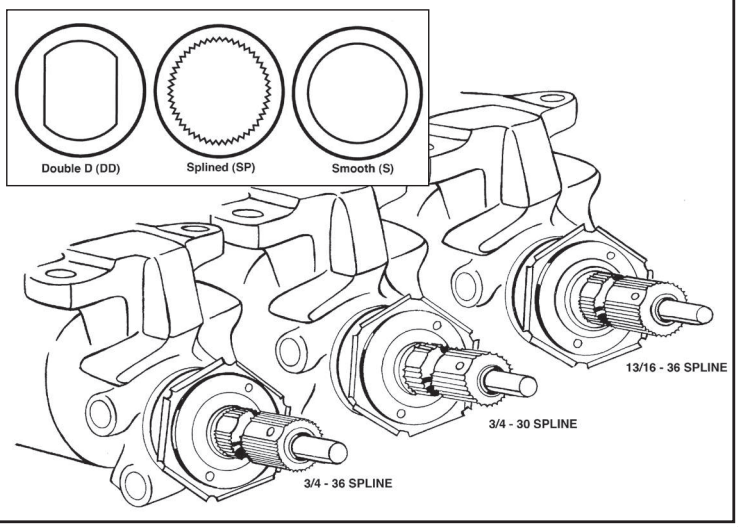
BILLET STEERING UNIVERSAL JOINTS

CPP-UJ0	3/4" S, each	$49.00
CPP-UJ1	9/16-26 x 3/4" DD, each	$49.00
CPP-UJ2	1-48 3/4" DD, each	$49.00
CPP-UJ3	3/4" - 30 x 3/4" DD, each	$49.00
CPP-UJ5	3/4" - 36 x 3/4" DD, each	$49.00
CPP-UJ6	3/4" DD x 3/4" DD, each	$49.00
CPP-UJ7	1" DD x 3/4" DD, each	$49.00
CPP-UJ8	5/8" - 36 x 3/4" DD, each	$49.00
CPP-UJ9	13/16" - 36 x 3/4" DD, each	$49.00
CPP-UJ10	11/16" - 36 x 3/4" DD, each	$55.00
CPP-UJ11	11/16" - 36 x 1" DD, each	$55.00
CPP1700-12	3/4" - 30 x 3/4" SP, each	$72.00
CPP1700-13	3/4" - 48 x 3/4" DD, each	$72.00
CPP1700-14	9/16" - 26 x 3/4" - 36, each	$72.00
CPP-UJ15	1" DD x 3/4" SP, each	$55.00
CPP-UJ16	3/4" DD x 3/4" SP, each	$49.00
CPP-UJ17	11/16" - 36 x 3/4" SP, each	$55.00
CPP-UJ18	3/4" -36 x 1" DD, each	$55.00
CPP-UJ19	11/16" - 36 x 3/4" - 36, each	$55.00
CPP1700-20	1" - 48 x 3/4" - 30, each	$72.00



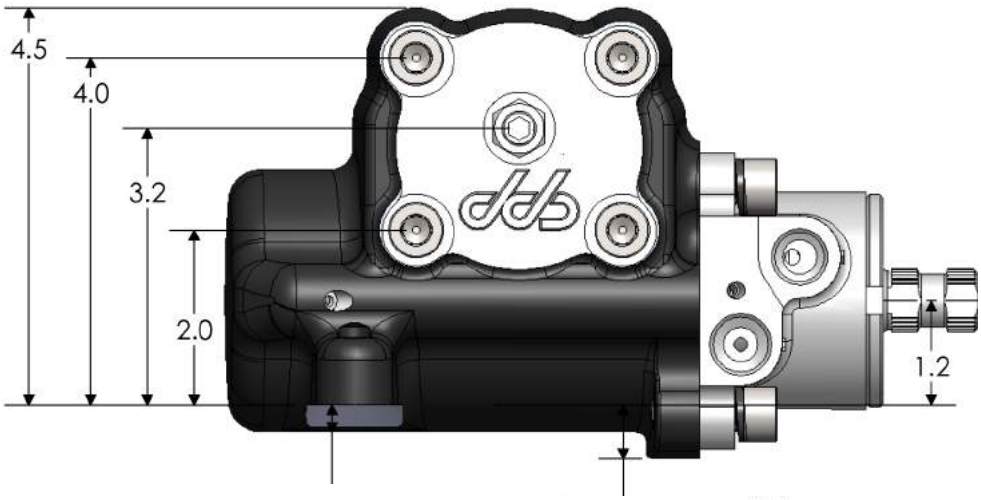
To determine the spline size of a component (rack and pinion, steering column and steering box), measure the outside diameter and count the number of splines. If there is a flat spot on the shaft and some of the splines are missing, count halfway around where there are splines and double that number. We need to know how many teeth are in a theoretical full circle.

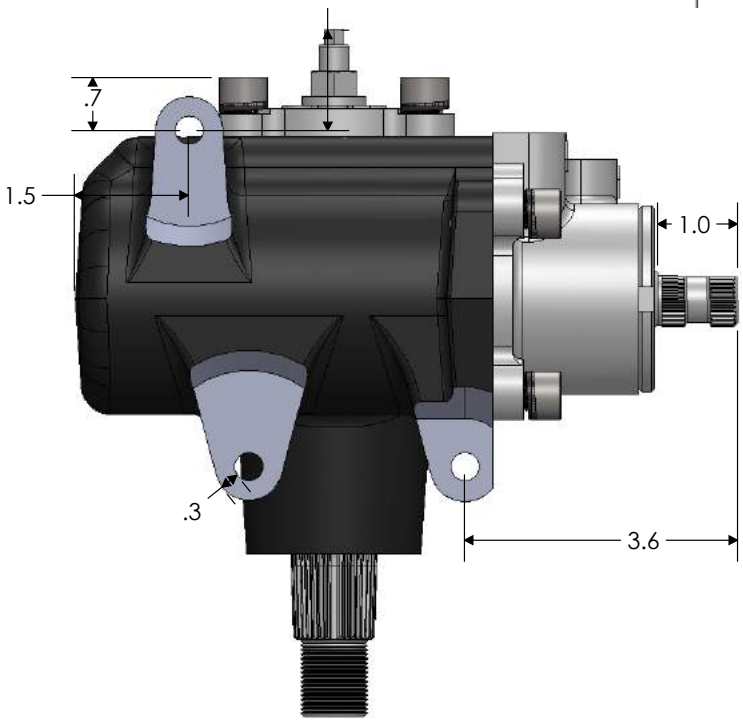
Available U-joint Combinations are: A) Smooth Bore on both ends; B) Smooth Bore and Spline or Double D; C) Spline and/or Double D on each end.

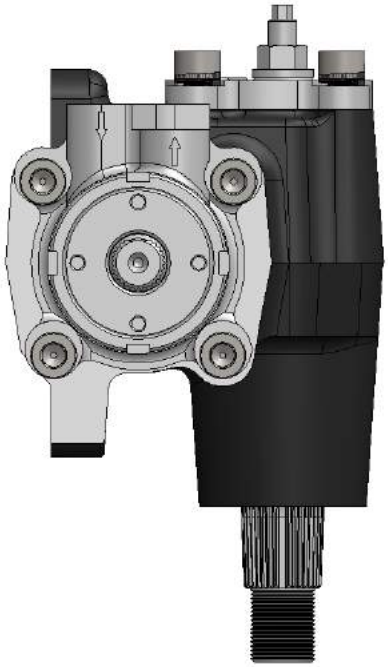


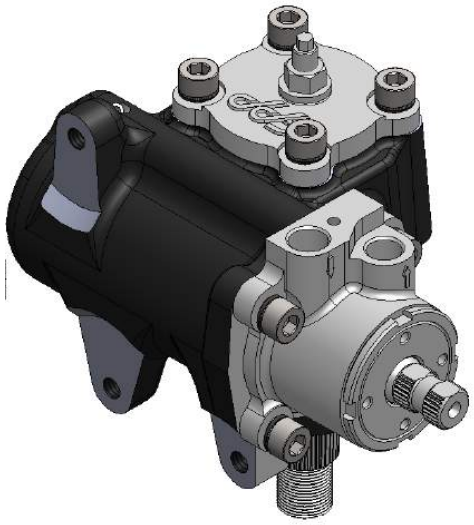
CPP POWER VEGA BOX DIMENSIONS

Due to casting variations these dimensions are approximate values. The actual part will be slightly different.

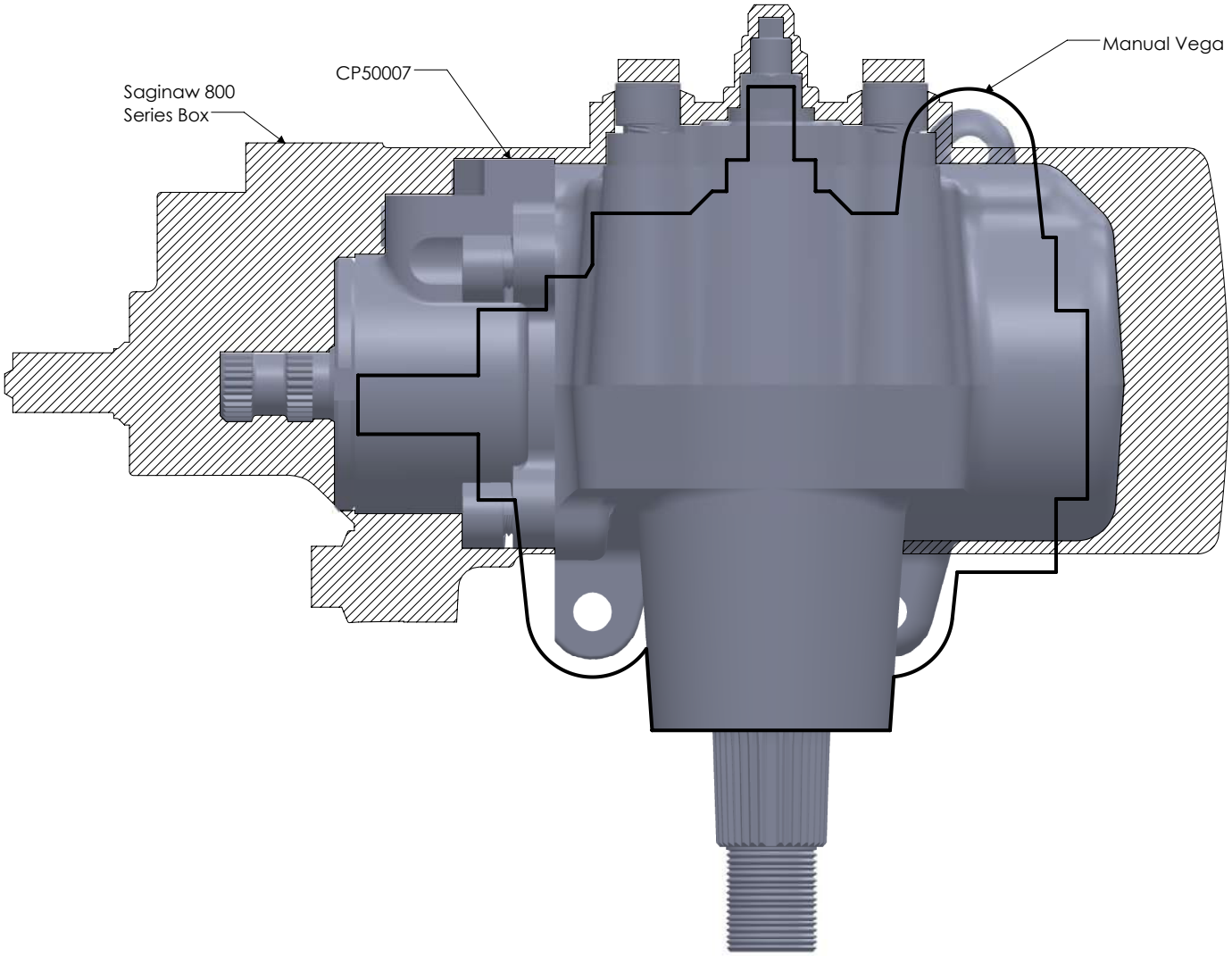




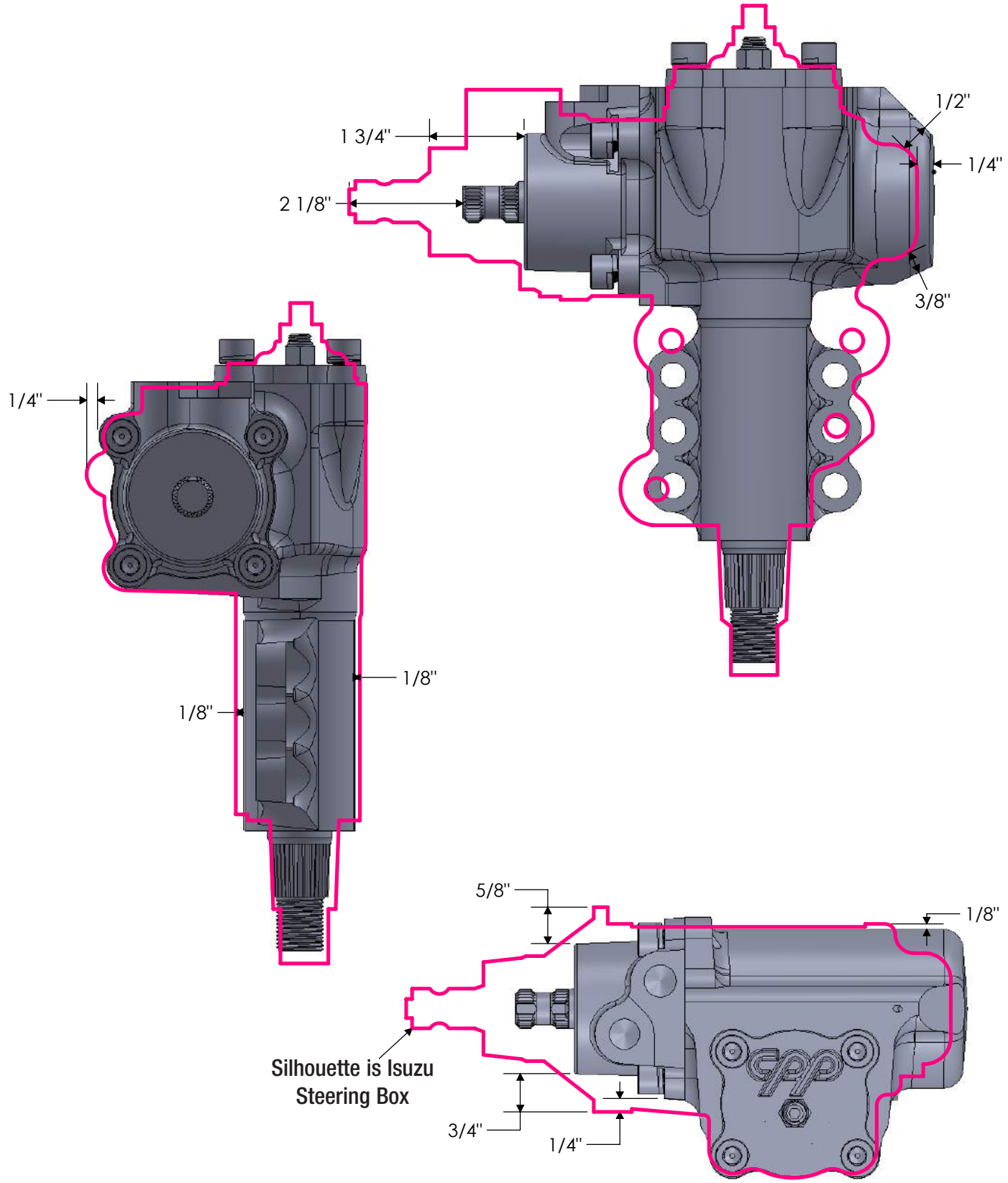




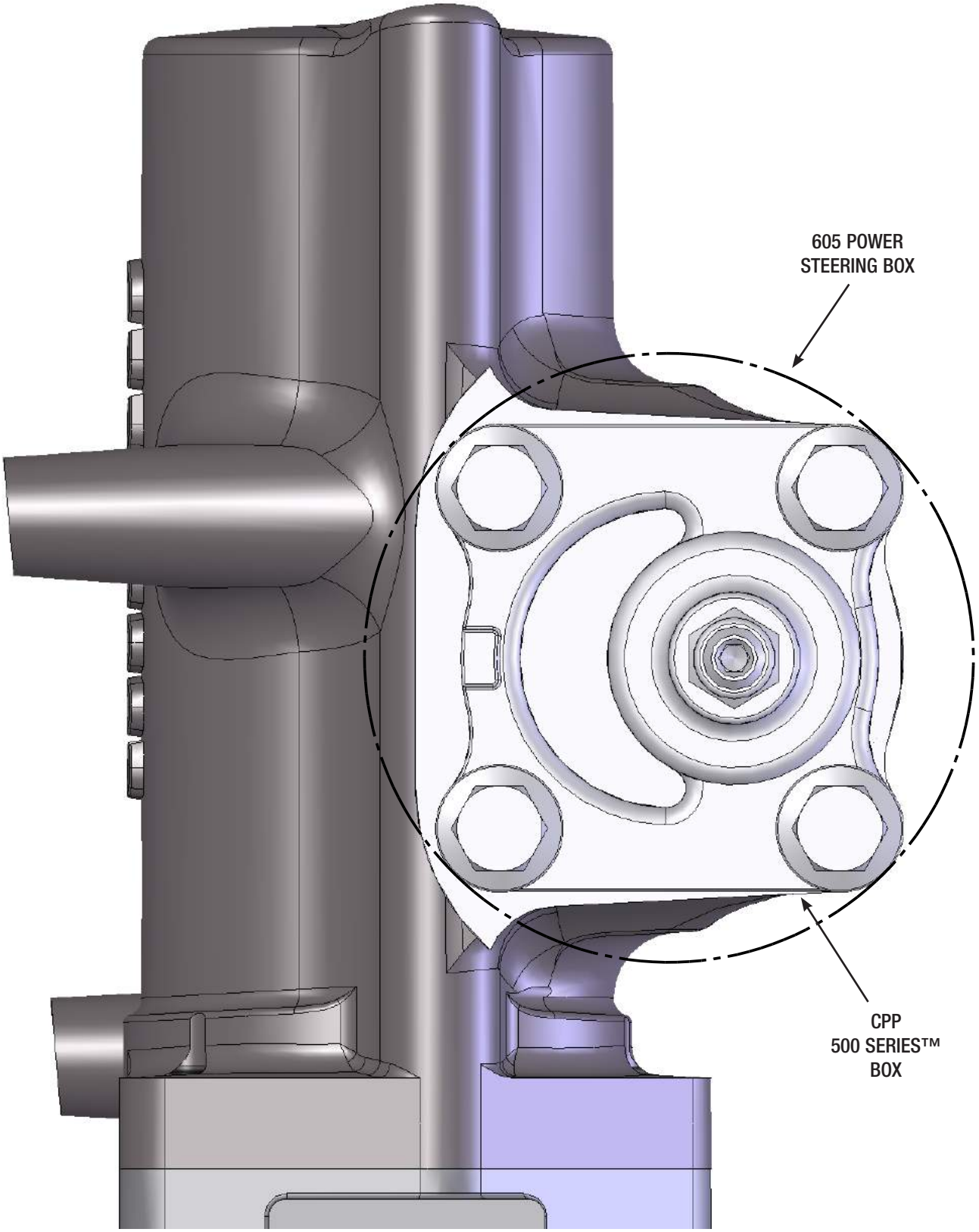
VEGA POWER STEERING & MANUAL BOX COMPARISON



#CP50005 (NOVA, MUSTANG) CLEARANCE COMPARISON TO ISUZU-STYLE BOX

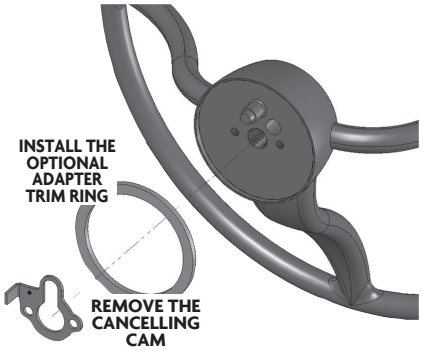


CPP 500™ CLEARANCE COMPARED TO ORIGINAL 605 BOX ON 1955-64 FULLSIZE CHEVY



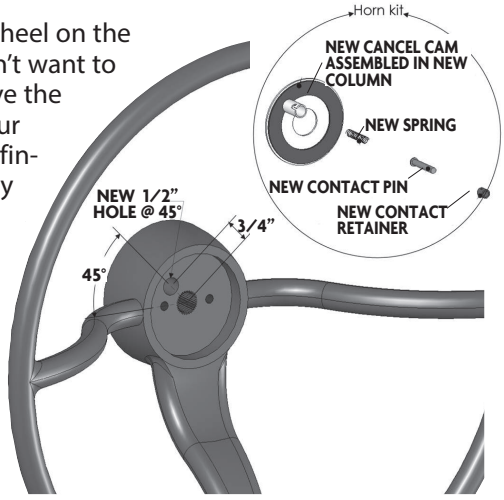
Steering wheel modifications for 1955-56-57 Chevys with Stock Steering Wheel mounted on Steering Column

The spline in your stock steering wheel is the same as the one on the new column, so no modifications are needed here.



Turn the wheel over and find two screws that hold a metal tap to the wheel. This tab is what is used to cancel your turn signals. Remove the two screws and the tab as you will not be using them with your new column.

You will have to drill a 1/2" diameter hole in the wheel 3/4" from the center of the splined hole in the center of the steering wheel at 45° (looking at the front of the wheel). If this can't be done because of screw holes for a puller, try to get the hole as close as possible on either side. Do not drill out puller holes, you may need them later to pull the wheel. Install horn kit, if purchased. If the horn kit with ring is purchased, the ring is to be siliconed onto the steering wheel. If it doesn't fit on exactly right, use a file or die grinder to trim inside. (If it's way off, call us and we may have something that will fit or we can make you something that will fit.)

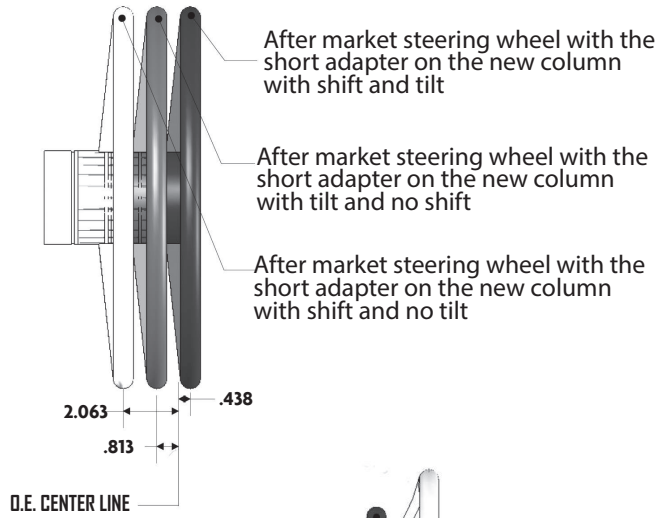


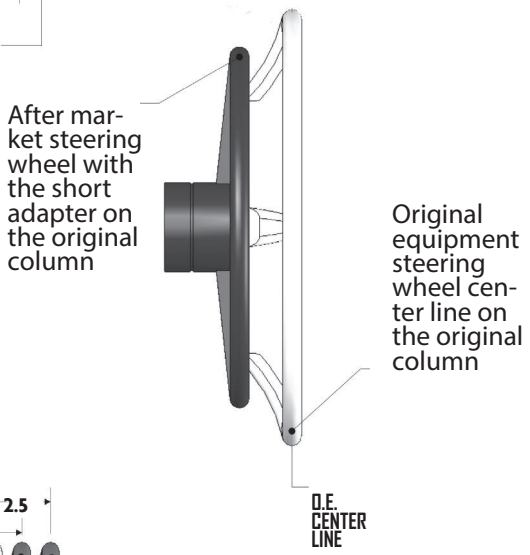
Next, install the wheel on the column. If it doesn't want to go on at first, move the horn cam with your thumb and index finger a little one way or the other until the wheel drops down fully. This horn cam is what cancels the turn signals, so with this horn cam at 10:30, the steering box half way between full left and right, and the road wheels pointed straight ahead, the turn signals will cancel at the right time.

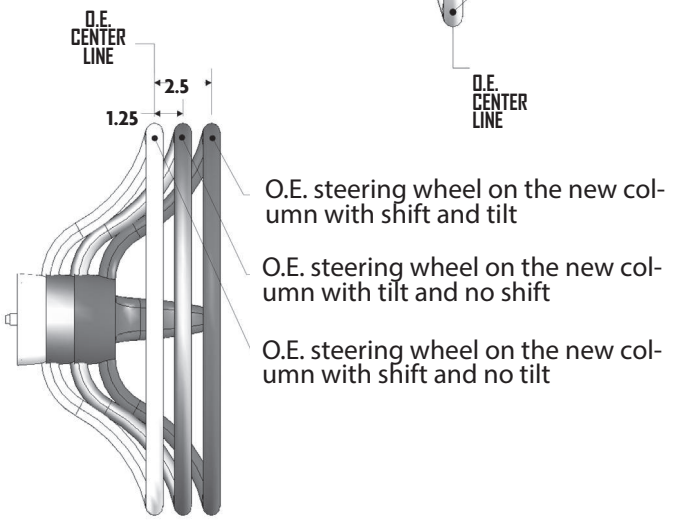
These are the parts that will correspond to the particular installation that you are doing. This will speed up the ordering process when the time comes.

#BORC7DDX1DD	**3/4" DD x 1" DD Coupler**
#BORC736XC7DD	**3/4" 36 Spline x 3/4" DD Coupler**
#RJC-1DD730	**1" DD x 3/4" 30 Spline Rag Joint**
#RJC-736730	**3/4" 36 Spline x 3/4" 30 Spline Rag Joint**
#16200	**'55-57 Horn Kit**
#16200R	**'55-57 Horn Kit with Ring**

Steering Column and Wheel Adapter Comparisons







Wiring for Steering Column Neutral Safety Switch

The two tabs on the left side of the neutral safety switch control the actual starting of the engine. Hook the solenoid wire from the ignition switch to the top tab on the left side of the neutral safety switch. Connect a wire from the bottom tab to the starter solenoid marked with the letter "S". The neutral safety switch has been pre-adjusted. If you remove the switch to paint the column, you may have to adjust it so it will only start in park and neutral again.

The other two tabs are for reverse and back-up lights. The tab on the left goes to a fuse that is hot all the time. The tab on the right goes to the back-up lights. If no back-up lights are to be used, disregard these directions and hook no wires to either tab. NOTE: Use 14 gauge wire when hooking up this neutral safety switch.

INSTALLATION AND ADJUSTMENT OF PARK SAFETY SWITCH

Note:

For this switch to work correctly, the shift linkage must be properly adjusted to the detents in the transmission.

Instructions:

1. Remove park safety switch from column by removing the two retaining screws.
2. While holding the back of the neutral position in the switch. Place a pin (straightened paper clip) in the hole to retain this position. (See Figure A)
3. Place the gearshift indicator in the neutral position.
4. Place the park safety switch onto the column and attach the switch with the screws that were removed in Step 1. Snug the screws against the housing.
5. Reattach the wiring ensuring that the neutral safety wires are on the two flat terminals and the reverse lights are the two offset terminals. (See Figure B)
6. Move the gear shifter through the range of gears. The engine should only start in park.

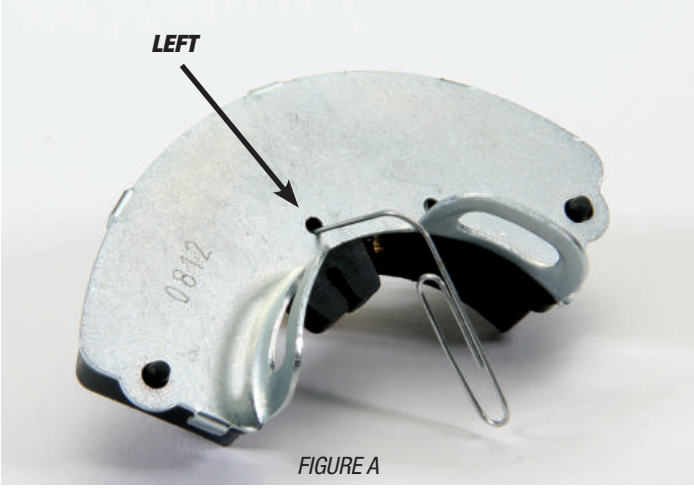


FIGURE A

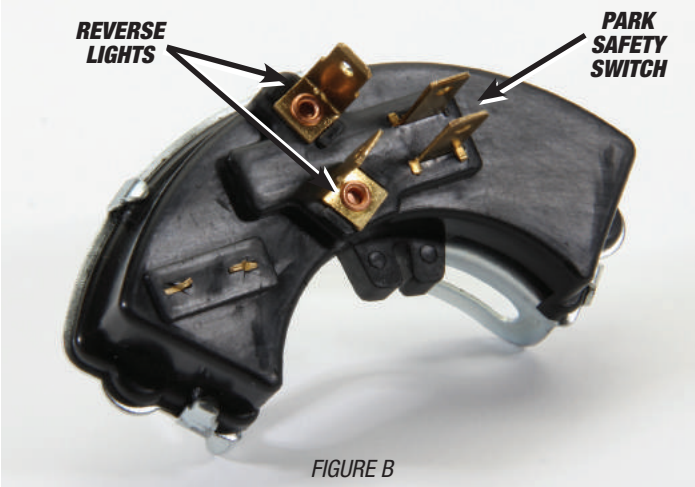
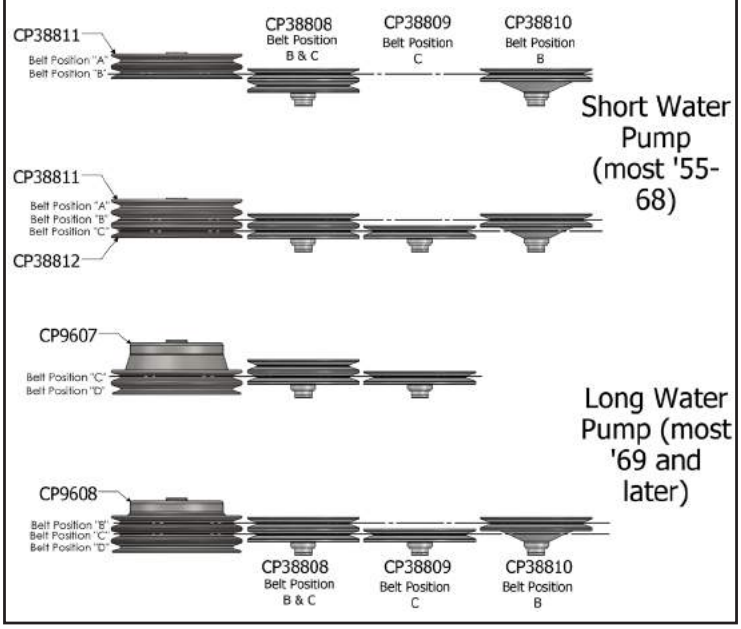


FIGURE B

Power Steering Pump Pulley Chart for GM Small Block:



Tilt Steering Column Assembly Instructions

The end of the column is a 1" DD hollow shaft. Use a 1" DD U-joint for the column end and the correct end for your steering box or rack and pinion (please refer to our catalog or website for correct u-joint size).

Install the tilt lever into the lower hole on the left side of the column. Install the turn signal lever into the upper hole in the left side of the column with the screw provided.

Install the 4-way flasher knob into the hole on the right side of the column.

Gear Shift Arm Installation - *Applies to Column Shift Only*

Note: The shift arm should be completed before the column is installed in the vehicle.

1. Grease spring and insert into the casting hole. Using a screwdriver or needle nose pliers may help.

2. Position shift arm into casting so the pin hole in the arm is lined up with the pin hole in the shift collar. It may be necessary to grind some of the excess chrome off the tip of the arm to properly seat into the casting.

3. Using a hammer and punch, gently tap the pin in until it is flush.

4. Install the rubber grommet (supplied) into the shift lever arm at the bottom of the column. Then insert the steel bushing.

5. If you are using an overdrive transmission, the 3-speed shift indicator lens can be removed and the overdrive lens installed (supplied).

6. The shift lever at the bottom of the column can be unbolted and repositioned to your needs. (i.e. headers, engine block, etc.)

Important Safety Note: *You MUST install a neutral safety switch on all automatic transmissions. Your vehicle will start in gear without it.*

Installing the Steering Wheel

1. The spline on the CPP column is a GM spline designed for 1969-94 steering wheels without airbags.

2. Install the compression spring under the canceling cam. Position the canceling cam as shown in Figure A between 10 o'clock and 11 o'clock. The spacer is placed on top of the canceling cam and under steering wheel and/or adapter as shown.

3. Install steering wheel or steering wheel adapter on steering column spline shaft, screw nut on column shaft and begin tightening. Tighten wheel or adapter to the desired gap. (Do not over-torque)

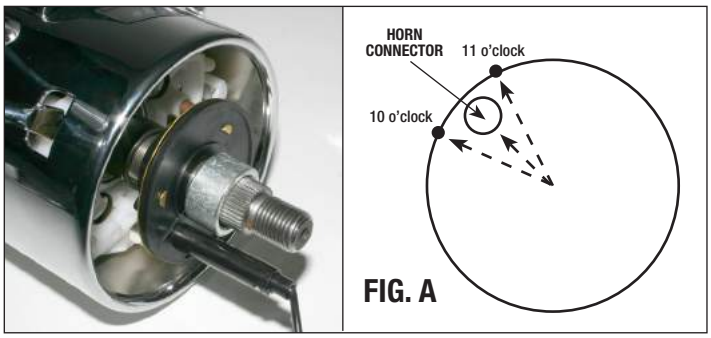
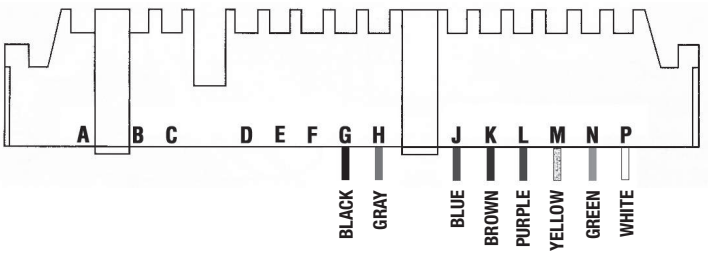


FIG. A

Wiring Diagram

The wiring included with your CPP column is GM 4-1/4" connector. The standard GM wiring diagram for this plug is:



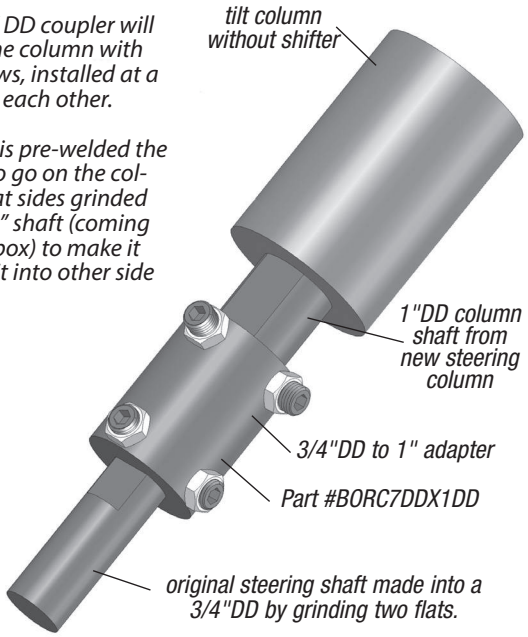
LETTER	WIRE COLOR	FUNCTION
G	Black	Horn
H	Gray	Left Front Turn Signal
J	Blue	Right Front Turn Signal
K	Brown	Hazard
L	Purple	Turn Signal- Power (main)
M	Yellow	Left Rear Turn Signal
N	Green	Right Rear Turn Signal
P	White	Brake Light
--	Black	Column Shift only- Illuminated gearshift indicator is connected to dash lights

**Shift column indicator replacement bulbs are Wagner #35*

Instructions for the 1955-56-57 Chevy - Tilt Steering without Column Shifter, Using Stock Gear Box

3/4" DD x 1" DD coupler will be held to the column with two set screws, installed at a 90° angle to each other.

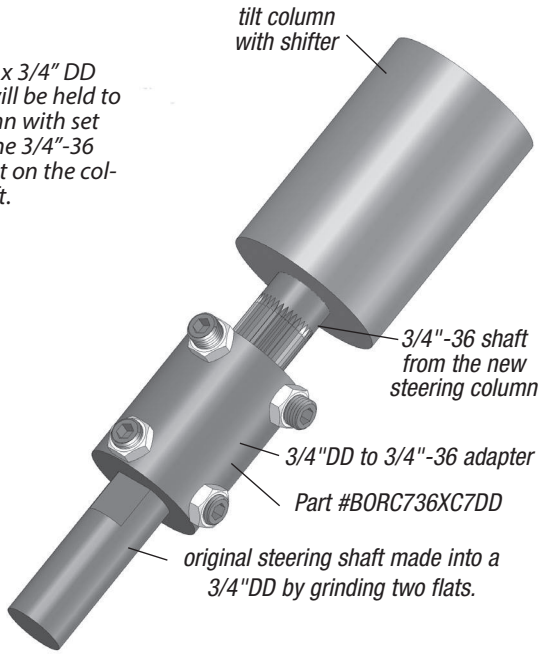
The coupler is pre-welded the 1" DD side to go on the column, two flat sides grinded on stock 3/4" shaft (coming out of gear box) to make it 3/4" DD to fit into other side of coupler



Cut approximately 6" up from the box and work your way down until the column is properly positioned in your dash.

Instructions for the 1955-56-57 Chevy - Tilt Steering with Column Shifter, Using Stock Gear Box

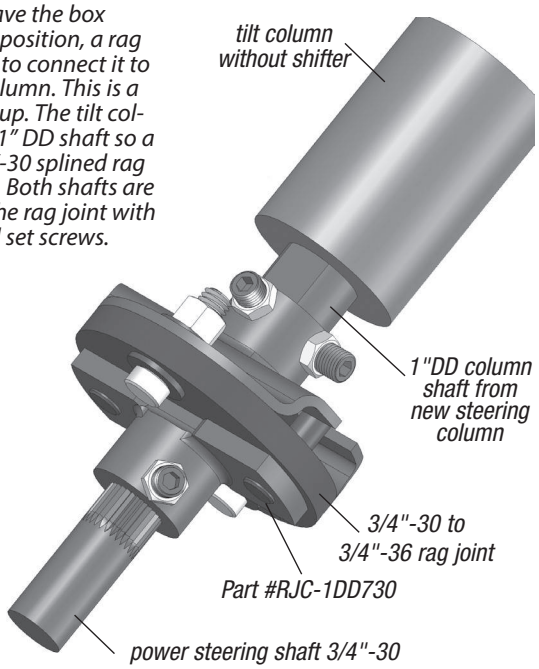
A 3/4"-36 x 3/4" DD coupler will be held to the column with set screws. The 3/4"-36 end will fit on the column shaft.



The other end of the coupler will fit over the stock shaft, after you grind two flat spots in shaft to make the stock shaft into a 3/4" DD shaft.

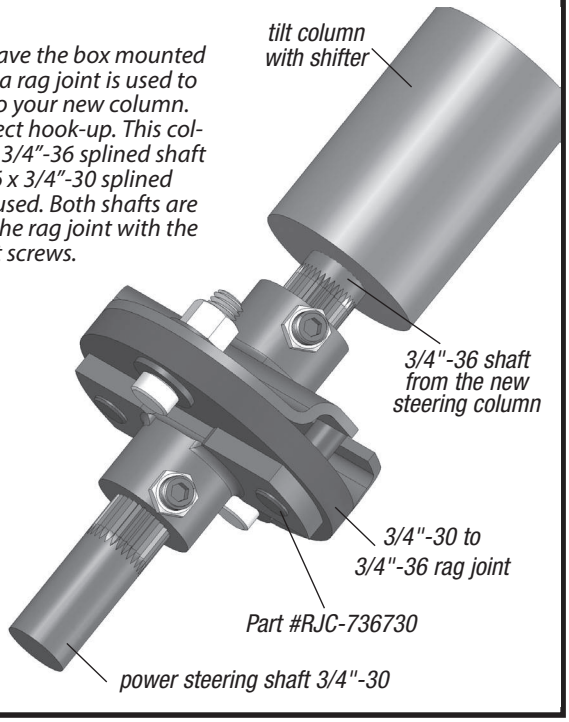
Instructions for the 1955-56-57 Chevy - Tilt Column to the Power Steering Box

Once you have the box mounted in position, a rag joint is used to connect it to your new column. This is a direct hook-up. The tilt column uses a 1" DD shaft so a 1" DD x 3/4"-30 splined rag joint is used. Both shafts are secured to the rag joint with the supplied set screws.



Instructions for the 1955-56-57 Chevy - Tilt Steering with Column Shifter to the Power Steering Box

Once you have the box mounted in position, a rag joint is used to connect it to your new column. This is a direct hook-up. This column uses a 3/4"-36 splined shaft so a 3/4"-36 x 3/4"-30 splined rag joint is used. Both shafts are secured to the rag joint with the supplied set screws.



IDIDIT COLUMN QUICK REFERENCE

	Tilt Floor Shift Steering Columns				Tilt Column Shift Steering Columns			
	PAINTABLE STEEL	CHROME	BRUSHED ALUM.	POLISHED ALUM.	PAINTABLE STEEL	CHROME	BRUSHED ALUM.	POLISHED ALUM.
Chevelle/El Camino								
1964-65	1120640010	1120640020	1070640030	1070640040	1140640010	1140640020	1150640030	1150640040
1966	1120610010	1120610020	1070610030	1070610040	1140610010	1140610020	1150610030	1150610040
1967-68	1120680010	1120680020	1070680030	1070680040	1140680010	1140680020	1150680030	1150680040
Bel Air/Biscayne/Impala								
1956	1120550010	1120550020	1070550030	1070550040	1140550010	1140550020	1150550030	1150550040
1957	1120570010	1120570020	1070570030	1070570040	1140570010	1140570020	1150570030	1150570040
1958	1120580010	1120580020	1070580030	1070580040	1140580010	1140580020	1150580030	1150580040
1959-60	1120600010	1120600020	1070600030	1070600040	1140600010	1140600020	1150600030	1150600040
1961-62	1120620010	1120620020	1070620030	1070620040	1140620010	1140620020	1150620030	1150620040
1963-64	1120670010	1120670020	1070670030	1070670040	1140670010	1140670020	1150670030	1150670040
1965-66	1120660010	1120660020	1070660030	1070660040	1140660010	1140660020	1150660030	1150660040
1967	1120780010	1120780020	1070780030	1070780040	1140780010	1140780020	1150780030	1150780040
Camaro/Firebird								
1969 - with ign.	1530790010	1530790020	-NA-	-NA-	1540790010	1540790020	-NA-	-NA-
Chevy II/Nova								
1966	1120640010	1120640020	1070640030	1070640040	1140640010	1140640020	1150640030	1150640040
1967	1120630010	1120630020	1070630030	1070640040	1140630010	1140630020	1150630030	1150640040
1968-70	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-
1971-72 - with ign.	15300730010	1530730020	-NA-	-NA-	15400730010	1540730020	-NA-	-NA-
Corvette								
1956	Non-Tilt Available				-NA-	-NA-	-NA-	-NA-
1957-58	Non-Tilt Available				-NA-	-NA-	-NA-	-NA-
1959-62	Non-Tilt Available				-NA-	-NA-	-NA-	-NA-
1963-66	1120770010	1130770020	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-
1968	1120700010	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-
Ford Mustang								
1966-69	1120690010	1120690020	1070690030	1070690040	-NA-	-NA-	-NA-	-NA-
Chevy Truck								
1963-66	1120650010	1120650020	1070650030	1070650040	1140650010	1140650020	1150650030	1150650040
1967-72	1120657010	1120657020	1070657030	1070657040	1140657010	1140657020	1150657030	1150657040
Ford Truck								
1957-66	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-
1967-72 - Manual	1120730010	1120730020	1070730030	1070730040	1140730010	1140730020	1150730030	1150730040
1967-72 - Power	1120740010	1120740020	1070740030	1070740040	1140740010	1140740020	1150740030	1150740040
1973-79	1120750010	1120750020	1070750030	1070750040	1140750010	1140750020	1150750030	1150750040

IDIDIT QUICK REFERENCE

	Column Specifications		
	OUTPUT SHAFT	4-WAY KIT NEEDED	DASH MOUNT
Chevelle/El Camino			
1964-65	3/4" 36"	3100037542	Original
1966	DD	3100037542	Original
1967-68	1" 48"	-NA-	Original
Bel Air/Biscayne/Impala			
1956		3100035780	Original
1957		3100035785	Original
1958	3/4" 36"	3100035785	Original
1959-60	3/4" 36"	3100037616	Original
1961-62	3/4" 36"	3100037616	Original
1963-64	3/4" 36"	3100037618	Original
1965-66	3/4" 36"	3100037618	Original
1967	3/4" 36"	Included	Original
Camaro/Firebird			
1969 - with ign.	3/4" 36"	-NA-	Original
Chevy II/Nova			
1966	3/4" 36"	3100037542	Original
1967	3/4" 36"	Included	Original
1968-70	-NA-	-NA-	-NA-
1971-72 - with ign.	3/4" 36"	-NA-	Original
Corvette			
1956	3/4" 36"	31000035780	Original
1957-58	3/4" 36"	31000035785	Original
1959-62	3/4" 36"	3100037616	Original
1963-66	3/4" 36"	3100037618	Original
1968	1" 48"	Included	Included
Ford Mustang			
1966-69	3/4" 36"	Included	Original
Chevy Truck			
1963-66	3/4" 36"	3100037618	Original
1967-72	3/4" 36"	Included	Original
Ford Truck			
1957-66	-NA-	-NA-	-NA-
1967-72 - Manual	3/4" 36"	Included	Included
1967-72 - Power	3/4" 36"	Included	Included
1973-79 - 2WD	3/4" 36"	Included	Included

Synchronizing your Column

In order to ensure proper functioning, this steering column must be installed in sync with the rest of the steering system. Signal cancellation and wheel position, as well as smooth steering operation depends on it. Although not all of them may need adjustment, the complete list of steps required for full synchronization is as follows:

1. The front wheels must be pointing straight forward with steering toe set reasonably close.

2. Rotate the steering box input shaft from lock to lock and **set the box exactly half way between**. For example, if the shaft rotates 3 full turns from lock to lock, the center will be at 1-1/2 turns from either locked position.

3. Install steering arm and drag link and **adjust tie rod ends to get the drag link to fit without moving either the box or the front wheels**. Rotating each tie rod end the same number of turns will preserve adjustment.

4. With the column mounted in position and both U-joints installed, measure between the U-joints to determine the proper shaft length. Install the U-joints on the shaft so that the bearing cups of both joints will lay flat on a level surface and the angle of the U-joints are equal.

5. Install the shaft on the steering box. Leave the upper part of the shaft unconnected for the time being.

6. Position the column housing so that **the signal switch arm is level.**

7. Rotate the steering column shaft so that **the horn connection is at approximately 45° from the signal switch arm**.

8. Without rotating the connecting shaft, column housing, or steering shaft (except very slightly to catch the nearest spline location) lift the column and slide the upper u-joint onto the lower column shaft.

9. If proper synchronization has been achieved, the finished column installation should look like the diagram below. If this is the case, tighten all fasteners and verify that the signal switch is cancelling properly. You're done!