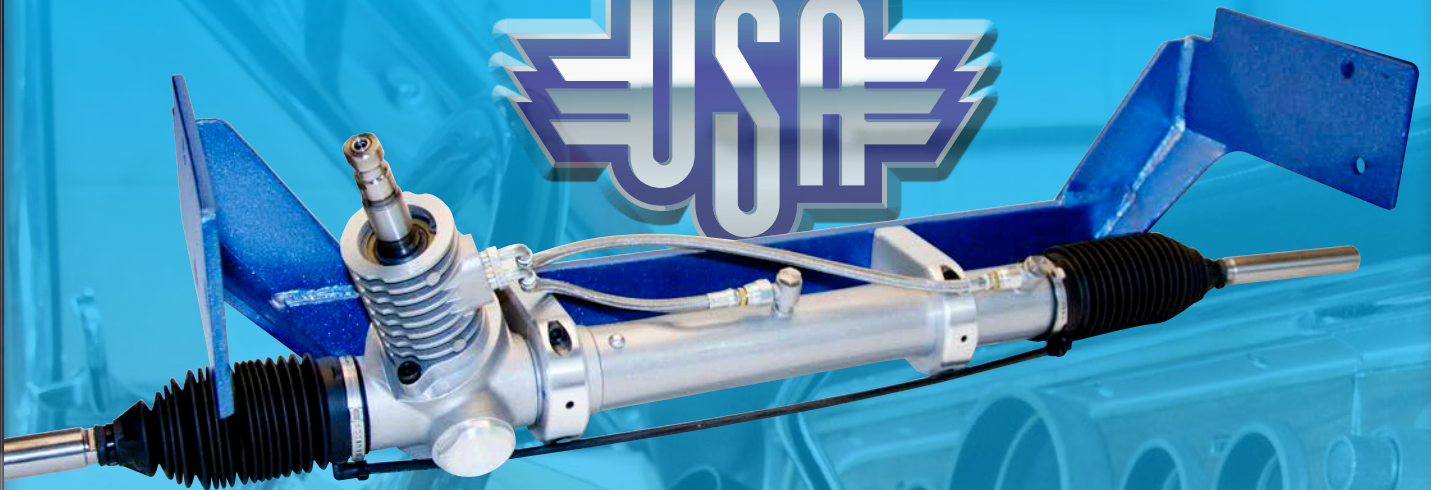




Flaming River Ind.
800 Poertner Dr
Berea, OH 44017
800-648-8022

*60-65 Comet/Falcon
Rack and Pinion
Conversion Kit*



*Comet
Falcon*



For safety, disconnect battery cables and ensure that vehicle is properly supported by jack stands.

NOTE: Power Steering Line Kit (FR1610) is sold separately and is not included in this kit.

Before paint or powder coating of the rack and pinion cradle system we recommend that you pre-fit the system to ensure proper fit.

NOTE: A front end alignment is necessary after installation.

NOTE: Flaming River Recommends that you use synthetic or high grade power steering fluid.

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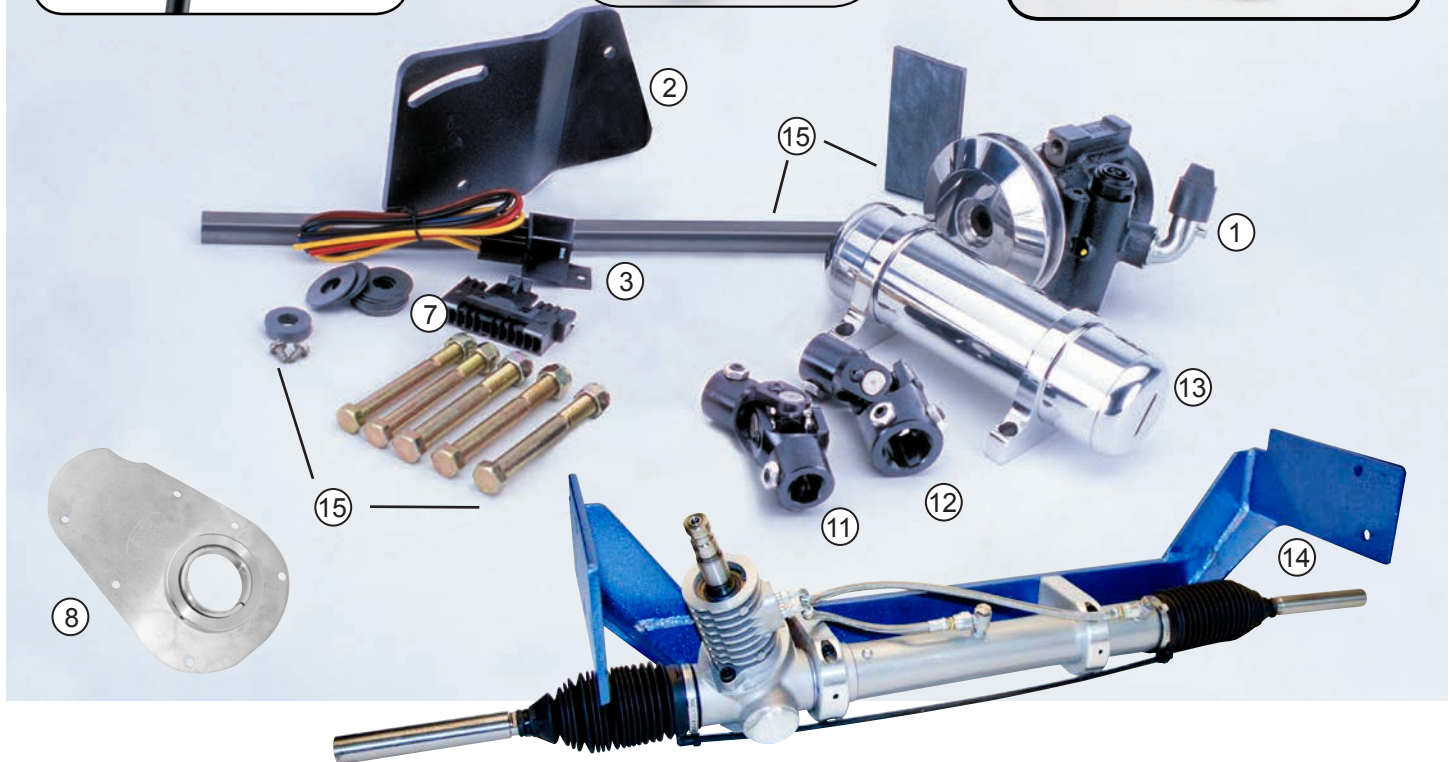
WARRANTY DISCLAIMER: Flaming River's® Limited Warranty

Flaming River® warrants its products to be free from defects in material and workmanship for a period of one (1) year after the date of purchase, except that: All steering columns are warranted for a period of three (3) years from the date of purchase. The Big Switch (part number FR1005) is warranted for a period of three (3) years from the date of purchase, provided that it is not mounted with a steel bracket and provided further that it is adequately protected from environmental conditions. All electrical products other than the Big Switch are warranted for a period of ninety (90) days from the date of purchase. Flaming River's® warranty liability is limited to the replacement of defective products. Flaming River® is not liable for any labor costs associated with any warranty claim, or for any incidental or consequential damages. Improper installation, abuse, racing, and/or modification of the products voids this warranty. No warranty of merchantability or fitness for a particular purpose is made by Flaming River® with respect to any of its products. Warnings and Recommendations It is the customer's responsibility to determine the suitability of a given Flaming River® product for the customer's uses. Likewise, it is the customer's responsibility to install a Flaming River® product. Contact the vehicle manufacturer whenever installing a switch to confirm the appropriateness of using such a switch and the recommended placement of the switch on the vehicle. Use qualified chassis specialists for the installation of all steering related components. Be aware that the installation of certain Flaming River® products may adversely impact a manufacturer's warranty with respect to certain vehicles and other manufactured goods. Flaming River will repair or replace any product found to be defective in material or workmanship. Improper installation, abuse, racing and/or modification VOID WARRANTY. Flaming River® is not responsible for any labor costs associated with any warranty.

Item No.	Part No.	Description	Qty	Notes
1	FRPMP5B-V	Power Steering Pump w/ V-Belt Pulley	1	
2	FRMBPW1	Power Steering Pump Bracket	1	
3	FRHRN2	Horn Relay	1	
4	FR21017	Tilt Column Shift Steering Column	1	Column Shift Kit Only
5	FR21018	Tilt Floor Shift Steering Column	1	Floor Shift kit Only
6	FR20118	Hazard Kit	1	
7	FR20118-1	Female Connector Kit	1	
8	FR20097	60-65 Comet/Falcon Floor Mount	1	
9	FR20059	Adjustable Shift Arm	1	Column Shift Kit Only
10	FR20010RK	Billet Aluminum Shift Linkage	1	Column Shift Kit Only
11	FR1969	3/4" DD x FR Power Universal Joint	1	
12	FR1934	1" DD x 3/4" DD Universal Joint	1	
13	FR1614	Remote Power Steering Fluid Reservoir	1	
14	100956	Power Rack & Pinion Cradle Assembly	1	
15	100954	Mounting Hardware Kit	1	

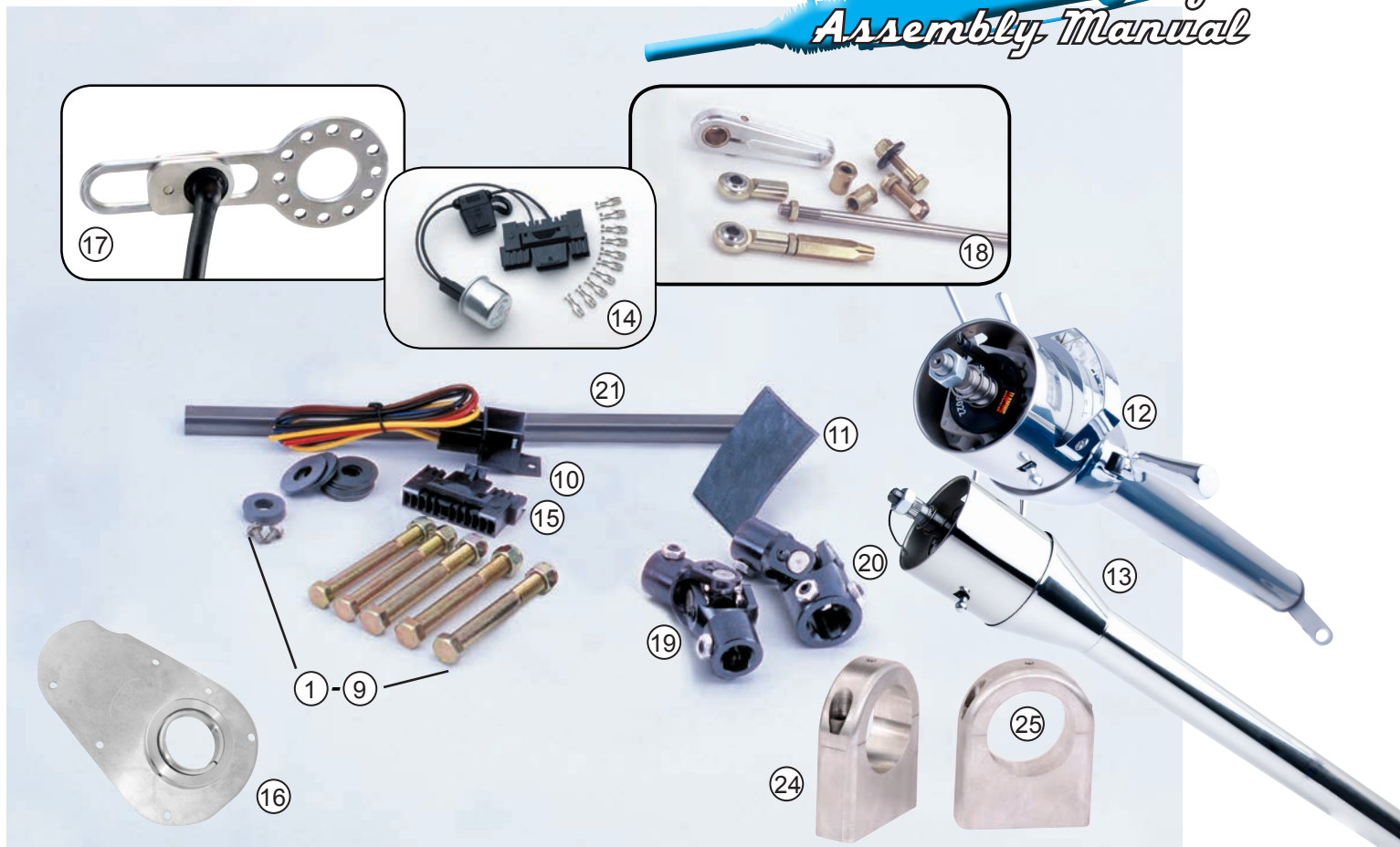
- Column Mounting Bushing and 3/4" DD x 18" Shaft Included in Hardware Kit

1960-65 Comet/Falcon Cradle and Shaft Assembly Power

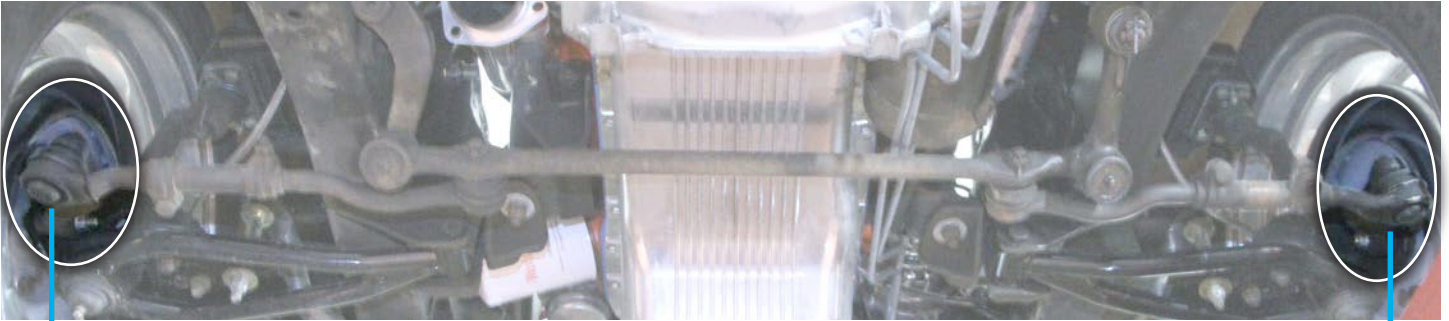


Item No.	Part No.	Description	Qty	Notes
1	WASH-7/16"	7/16" Flat Washer Grade 8 EQU	6	
2	WASH-3/8"	3/8" Flat Washer Grade 8 EQU	8	
3	NUT-7/16-14	7/16"-14 Nylock Lock Nut	3	
4	NUT-3/8-16	3/8"-16 Nylock Lock Nut	2	
5	NUT-11/16-18	11/16"-18 Jam Nut	2	
6	LOCKWASH-3/8"	3/8" Lock Split Washer	4	
7	BOLT-7/16-14X3.5	7/16"-14 x 3.5" Grade 8 Bolt	3	
8	BOLT-3/8-16X3.5	3/8"-16 x 3.5" Grade 8 Bolt	2	
9	BOLT-3/8-16X1.25	3/8"-16 X 1.25" Hex Head Screw	4	
10	FRHRN2	Horn Relay	1	
11	FRBSH-1	Column Mount Bushing	1	
12	FR21017	Tilt Column Shift Steering Column	1	Column Shift Kit Only
13	FR21018	Tilt Floor Shift Steering Column	1	Floor Shift kit Only
14	FR20118-1	Hazard Kit	1	
15	FR20118	Female Connector Kit	1	
16	FR20097	60-65 Comet/Falcon Floor Mount	1	
17	FR20059	Adjustable Shift Arm	1	Column Shift Kit Only
18	FR20010RK	Billet Aluminum Shift Linkage	1	Column Shift Kit Only
19	FR1934	1"DD x 3/4" DD Universal Joint	1	
20	FR1924	9/16"-26 x 3/4" DD Universal Joint	1	
21	FR1850	3/4" DD x 18" Shaft	1	
22	FR1507-3Q-3	Small Block Header Rack	1	
23	100950	1960-65 Comet Black Cradle	1	
24	100301	1.68" Pillow Block Rack Mount	1	
25	100300	1.47" Pillow Block Rack Mount	1	

1960-65 Comet/Falcon Cradle and Shaft Assembly Manual



Factory Steering Removal

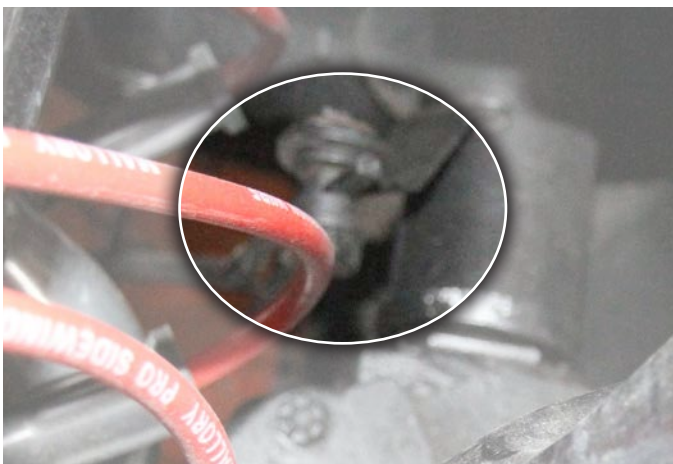


Before beginning you must first measure the width of your front end from LEFT outer tie rod end zerk to the RIGHT outer tie rod end zerk to determine the overall width of your front end. Write dimension here for further reference _____

Color Verification To Be Completed Before Disassembly

Before disconnecting the turn signal connector, verify the factory wiring colors and turn signal operation. The use of a wiring diagram is recommended. This will be used when connecting the new Flaming River Steering Column.

- Brake Light Switch _____
- Right Rear Turn Signal _____
- Left Rear Turn Signal _____
- Turn Signal Power _____
- Hazard Power _____
- Right Front Turn Signal _____
- Left Front Turn Signal _____
- Horn _____

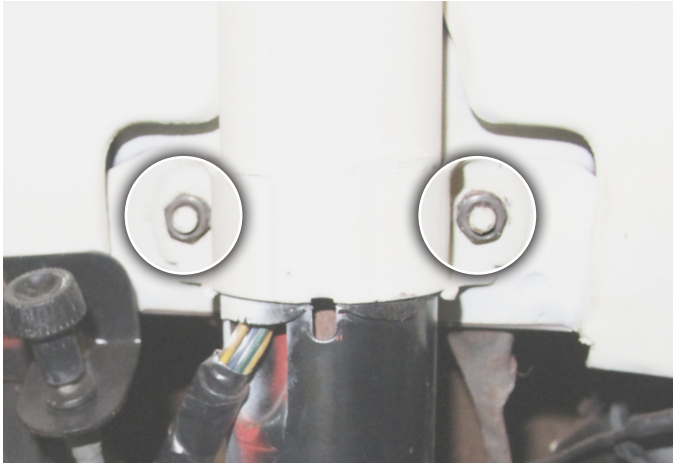


1) If your vehicle has a column shift style steering column, disconnect the transmission shift linkage from the steering column.

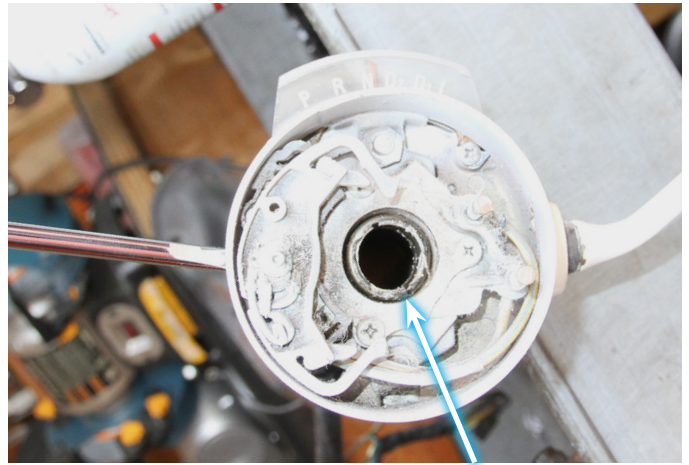


2) Remove the horn button by pushing down on the horn button and turning counter clockwise. Next remove the steering wheel retaining nut and then using a wheel puller remove the steering wheel from column.

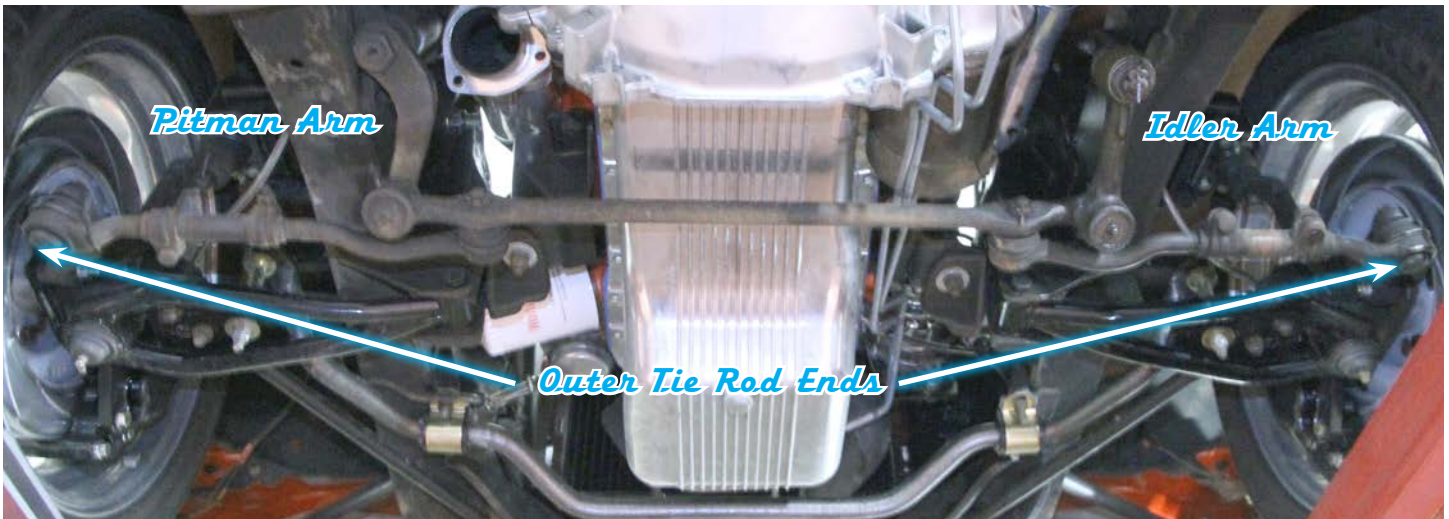
Factory Steering Removal (Continued)



3) Remove the two nuts from the column support bracket from under the dash. Next unplug the electrical connector that connects the steering column to the vehicle harness.

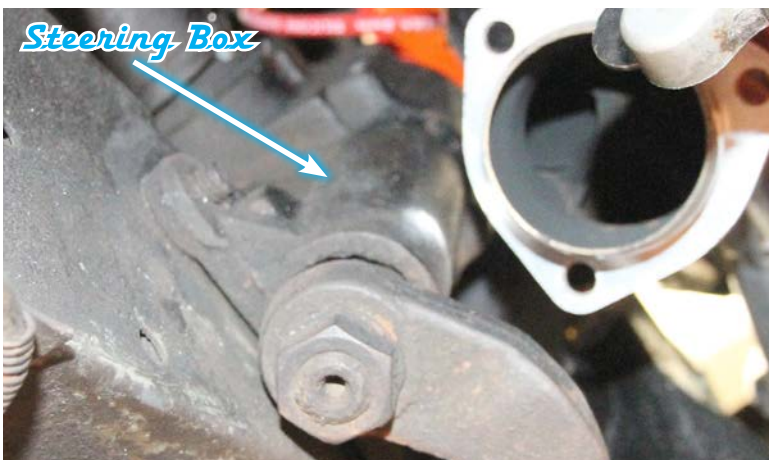


4) Remove the upper alignment bushing that is located at the center of the turn signal switch. Next remove the column tube by sliding it off of the column shaft.



5) Remove the pitman arm from the steering box using a pitman arm puller.

Note: If the vehicle is equipped with power steering remove any power steering lines connected to valve and drain the system.

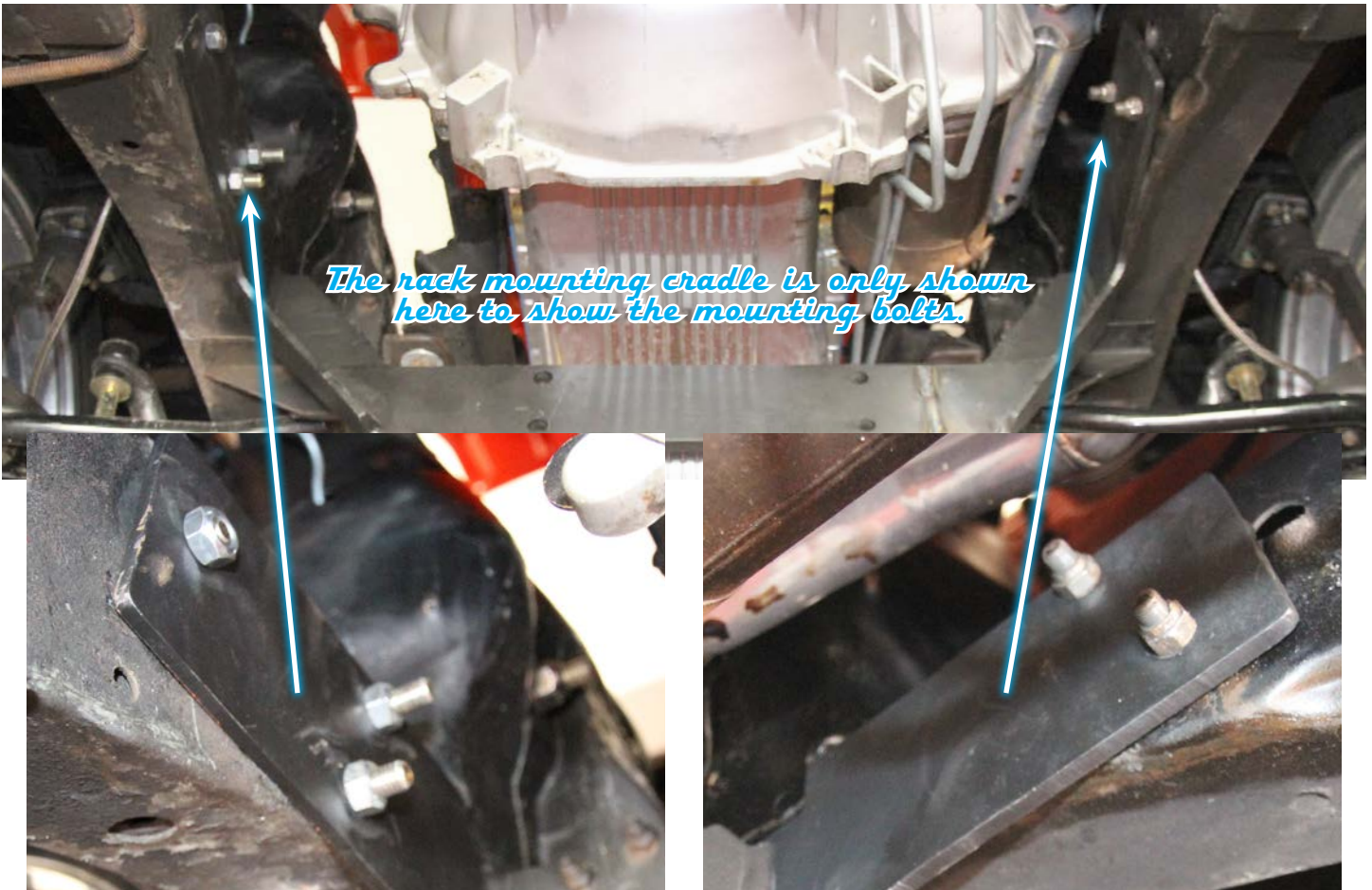


6) Remove the two (2) bolts that retain the idler arm to chassis.

7) Remove the cotter pins and the castle nuts from the outer tie rod ends, using a pickle fork remove the tie rod ends from the spindle arms and then remove the steering linkage from the vehicle.

8) Remove the three (3) bolts that hold the steering box to the chassis and remove the steering box from the car.

Flaming River Rack and Pinion Cradle Installation



Driver Side

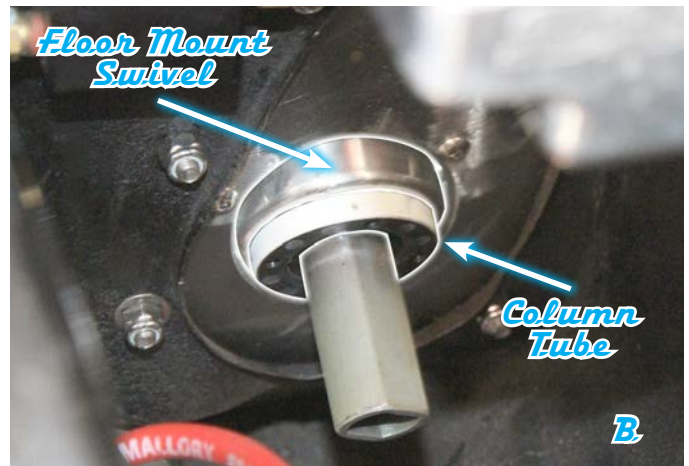
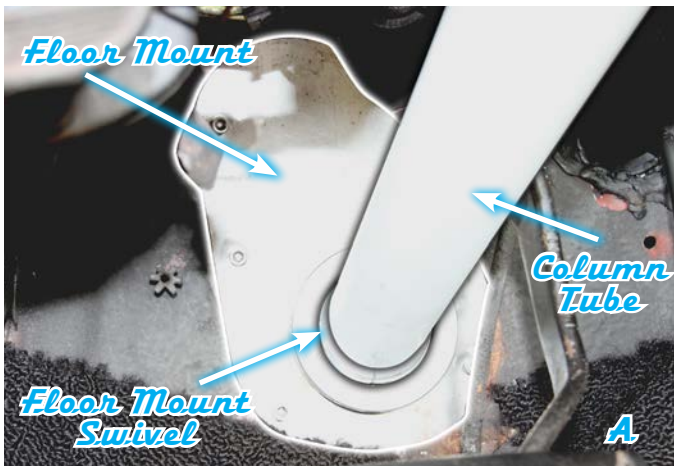
Passenger Side

- 1) Install the rack and pinion cradle by sliding it into place between the frame rails. Using the new hardware, install the three (3) 7/16" bolts on the drivers side using the original holes from the steering gear box. On the passenger side use the two (2) 3/8" bolts were the idler arm was mounted. Tighten the 7/16" bolts and nuts to 50-65 ft lbs. and the 3/8" bolts and nuts to 40-45 ft lbs..
- 2) Install the jam nuts and outer tie rod ends onto the rack and pinion assembly.
- 3) To install the outer tie rod ends in the spindle arms, you must load the front suspension. (Securely placing jack stands under the lower control arms and lowering the car onto the jack stands accomplishes this.) Install the outer tie rod ends into the spindle and adjust until the original zerk to zerk measurement taken before disassembly is obtained. Tighten the castle nuts to 30-40 ft lbs. Make sure to install cotter pins into the castle nut and tie rod end and bend the tabs over for security.

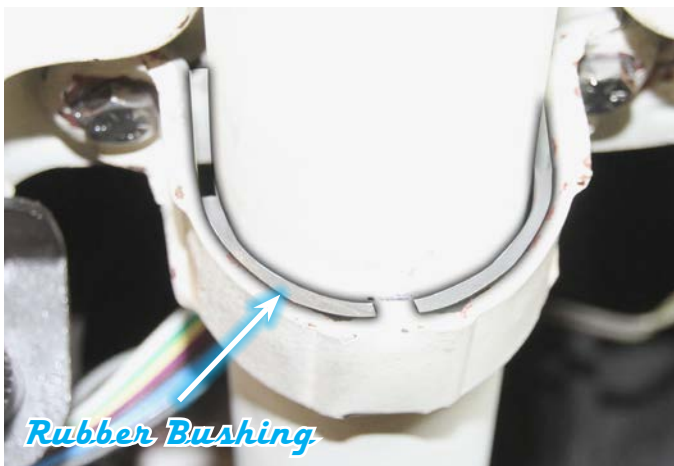


Rack & Cradle Shown Installed.

Flaming River Column Installation



1) Slide new swivel floor mount over the column tube (Picture A) so the swivel portion of the floor mount is at the end of the column tube (Picture B). Next place the column through the firewall and loosely mount the floor mount to hold the column in place.



2. Place the rubber bushing into the factory under dash mount and trim away excess. Next, making sure the column is straight, fit the under dash mount to the new Flaming River steering column and then mount the steering column in the factory original position.

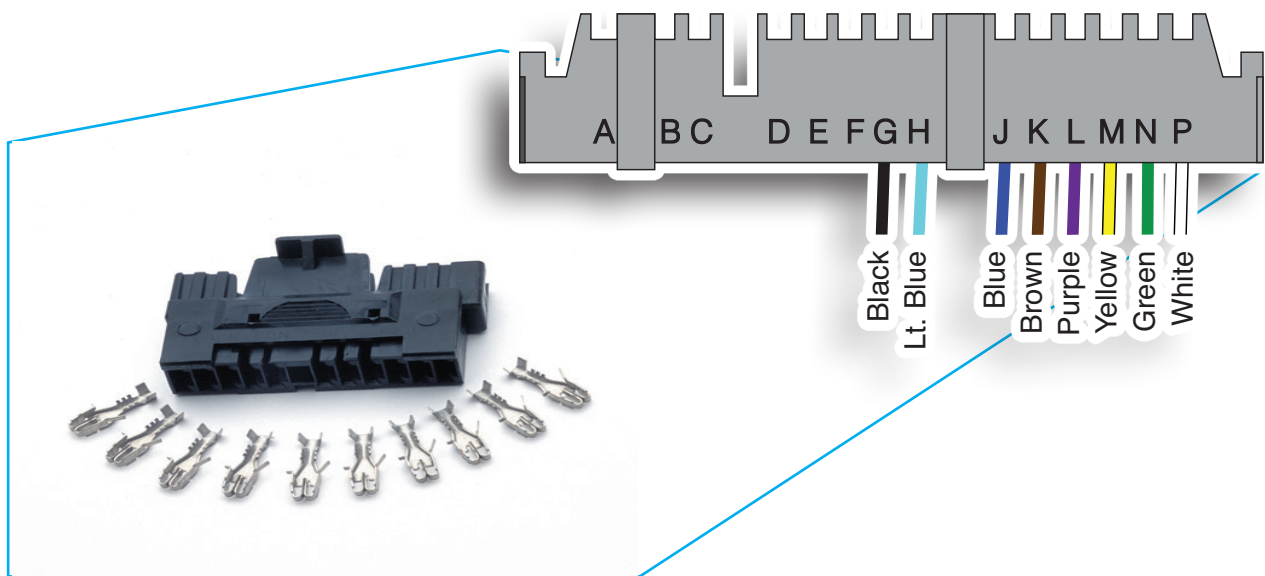


New Flaming River steering column installed.
(Column is manufactured with a GM style 11/16"-36 top shaft and you will need to use an aftermarket wheel)

Connecting the Electric System

<u>Function</u>	<u>FR Column</u>	<u>Location</u>	<u>Vehicle Wiring</u>
Horn	Black	G	Brown (Horn Relay)
Lt Front Turn Signal	Light Blue	H	Green/White
Rt Front Turn Signal	Blue	J	White/Black
Hazard	Brown	K	See Note
Turn Signal - Power	Purple	L	Blue
Lt Rear Turn Signal	Yellow	M	Green/Orange
Rt Rear Turn Signal	Green	N	Orange/Blue
Brake Light	White	P	Green

Note: The hazard power wire goes to a 12v power source from the vehicle's fuse panel. This feature will add 4-Way Emergency flasher to the car.

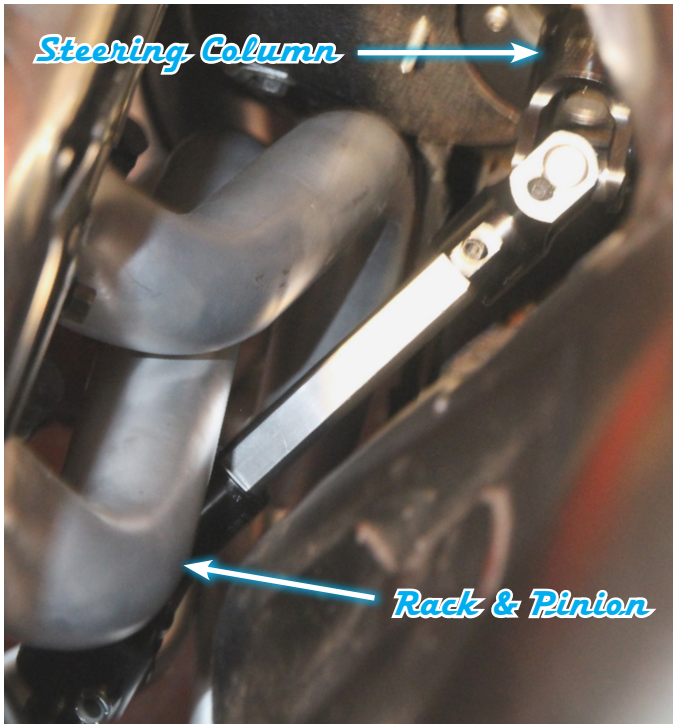


Horn Relay

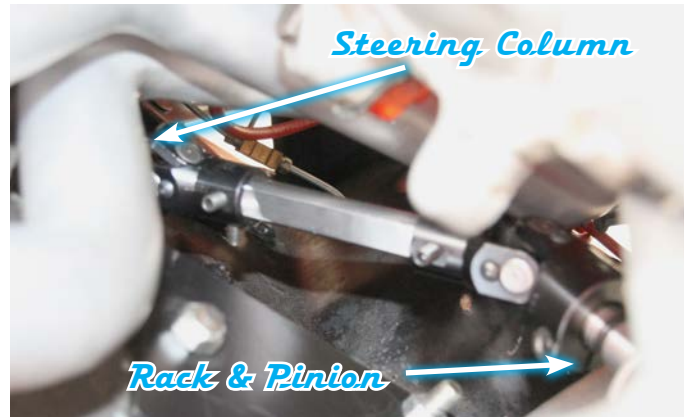
1. Connect the **Yellow** and **Blue** wires on the horn relay to the **Yellow** wire on the vehicle harness.
2. The **Red** wire on the horn relay connects to the **Yellow** wire with a stripe on the vehicle harness.
3. The **Brown** wire on the horn relay connects to the Black wire on the steering column harness terminal G.

Note: The Black wire on the horn relay is not used.

Rack & Pinion Universal Joint System



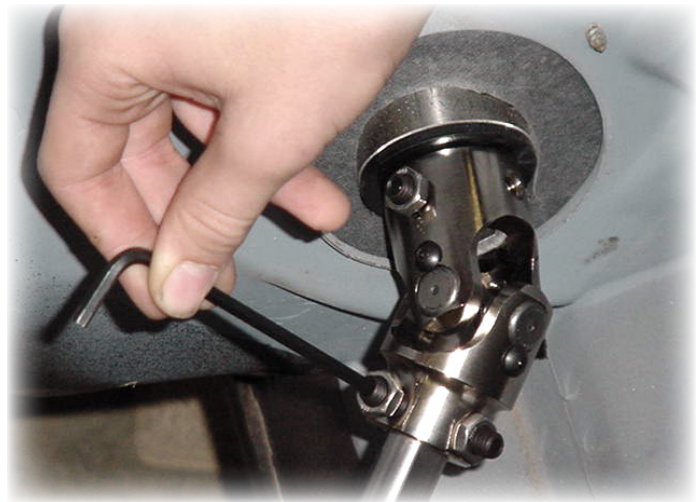
View From Top



View From Bottom

1. Using a 3/4" wooden dowel rod, mock up the steering shaft to obtain the correct shaft lengths and u-joint angle.

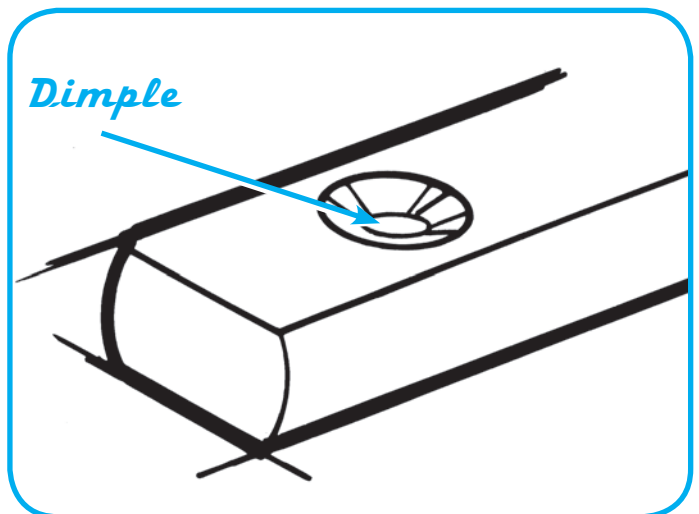
2. Once the correct shaft lengths are obtained, install shafts and u-joints snugging down each set screw so that it leaves a mark in the shaft.



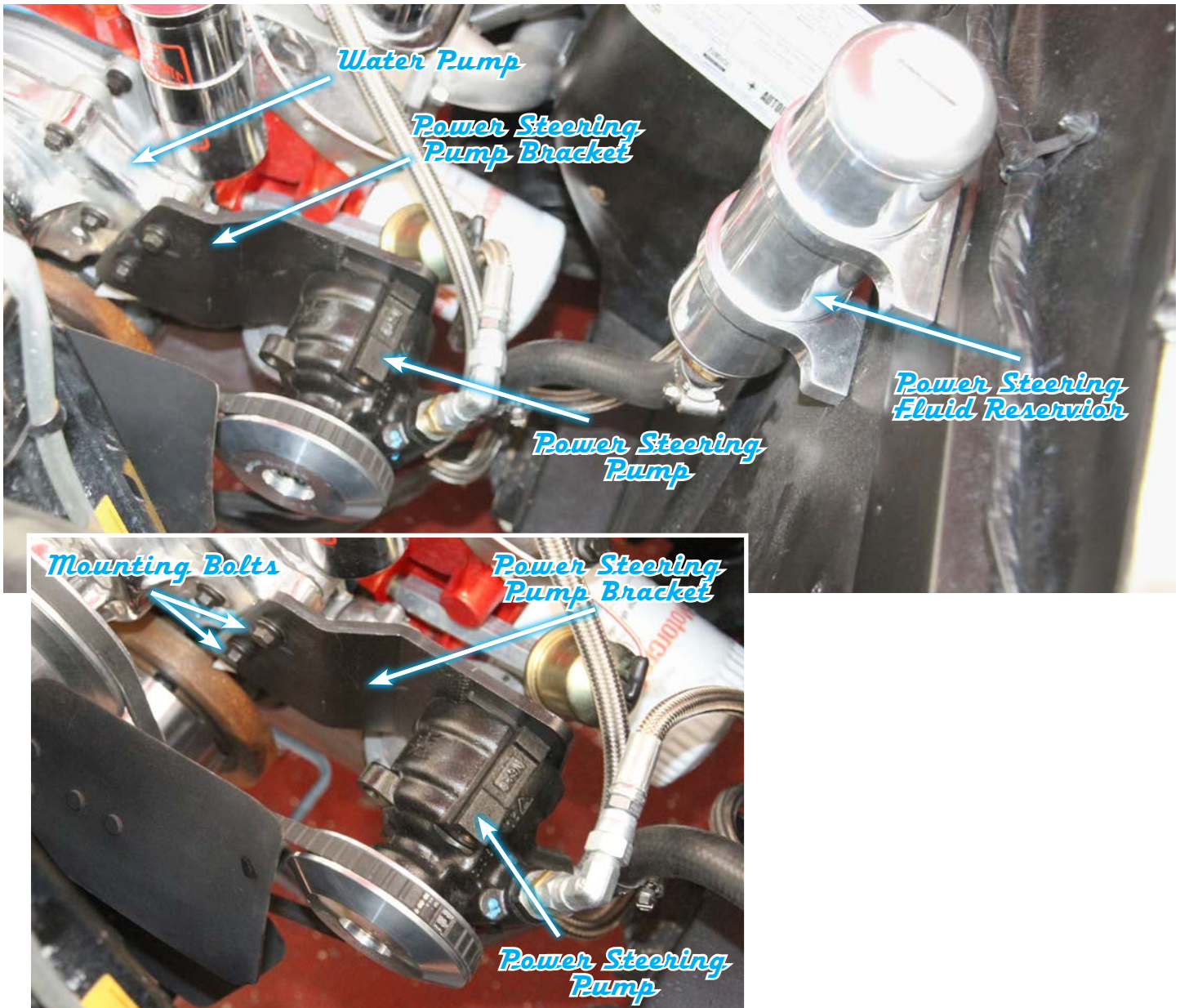
3. Remove the shafts and using a 1/4" drill bit, dimple each mark left by the set screws.

4. Re-install the shafts and u-joints using a red thread locker on the set screw threads. Tighten each set screw to 25 ft lbs. and then tighten all jam nuts securely.

** We recommend that you regularly inspect the u-joint set screws for tightness.**



Installation of Power Steering Pump

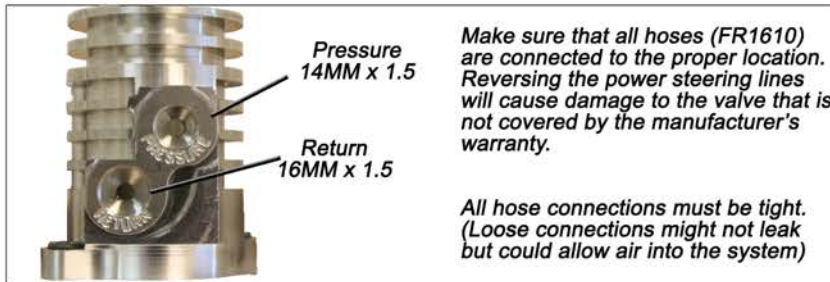


- 1) Install the power steering pump bracket to the water pump as shown in the picture.
- 2) Mount the power steering pump to the bracket. Only snug the mounting bolts, the mounting bolts will be tightened once the belt is installed and the pulley is adjusted.
- 3) Install the power steering fluid reservoir, the reservoir must be mounted higher than the pump for correct fluid flow to the pump.



Instruction Bulletin #1021

Correct Bleeding Procedure for Flaming River Power Rack & Pinion Systems.



Make sure that all hoses (FR1610) are connected to the proper location. Reversing the power steering lines will cause damage to the valve that is not covered by the manufacturer's warranty.

All hose connections must be tight. (Loose connections might not leak but could allow air into the system)

Important

***** Power Steering Fluid*****
Use clean, new power steering fluid only.

- 1) Turn Ignition Off
- 2) Raise front wheels off the ground.
- 3) Turn the steering wheel full left.
- 4) Fill fluid level to "Full Cold" level or if using remote reservoir 1" over inner tube.
- 5) With assistant checking fluid level and condition, turn steering wheel lock to lock at least 20 times.
- 6) While turning wheels check fluid level constantly.
- 7) Start engine. With engine idling, maintain fluid level. Reinstall cap.
- 8) Return wheels to center. Lower front wheels to the ground.
- 9) Keep engine running for two (2) minutes.
- 10) Turn steering wheel in both directions.
- 11) If all proper conditions apply, bleeding is complete.
- 12) If any problem remains see "Special Conditions".

Verify:
Smooth power assist
Noiseless operation
Proper fluid level
No system leaks
Proper fluid condition
No bubbles, no foam,
no discoloration.

Note: On systems with long return lines or fluid coolers, turn steering wheel lock to lock at least 40 times.

Trapped air may cause fluid to overflow. Thoroughly clean spilled fluid to allow for leak check.

Note: No bubbles are allowed.

For any sign of bubbles, recheck connections then repeat step 5.

Special Conditions:



- Foam or bubbles in fluid
- Fluid must be completely free of bubbles. In step 5, be alert to periodic bubbles that could indicate a loose connection or leaky O-Ring seal in either the return hose or pressure hose.
- Discolored fluid (milky, opaque, or light tan color)

Switch ignition off. Wait two (2) minutes. Recheck hose connections. Repeat steps 7-10. If condition still exists, replace and check a possible cause:

- Return hose clamps
- Return hose o-ring
- Pressure hose o-ring
- Gear cylinder line o-rings

Fill system and repeat bleed procedure for each possible cause. Repeat steps 7-10 to verify whether noise has been eliminated.



- Pump whine or groan
- With engine running, recheck hoses for possible contact with frame body or engine. If no contact is found, follow either method below to cool down fluid and re-pressurize system.

Method 1:
Normal Cool Down

Switch engine off.
Wait for system to cool.
Install reservoir cap.

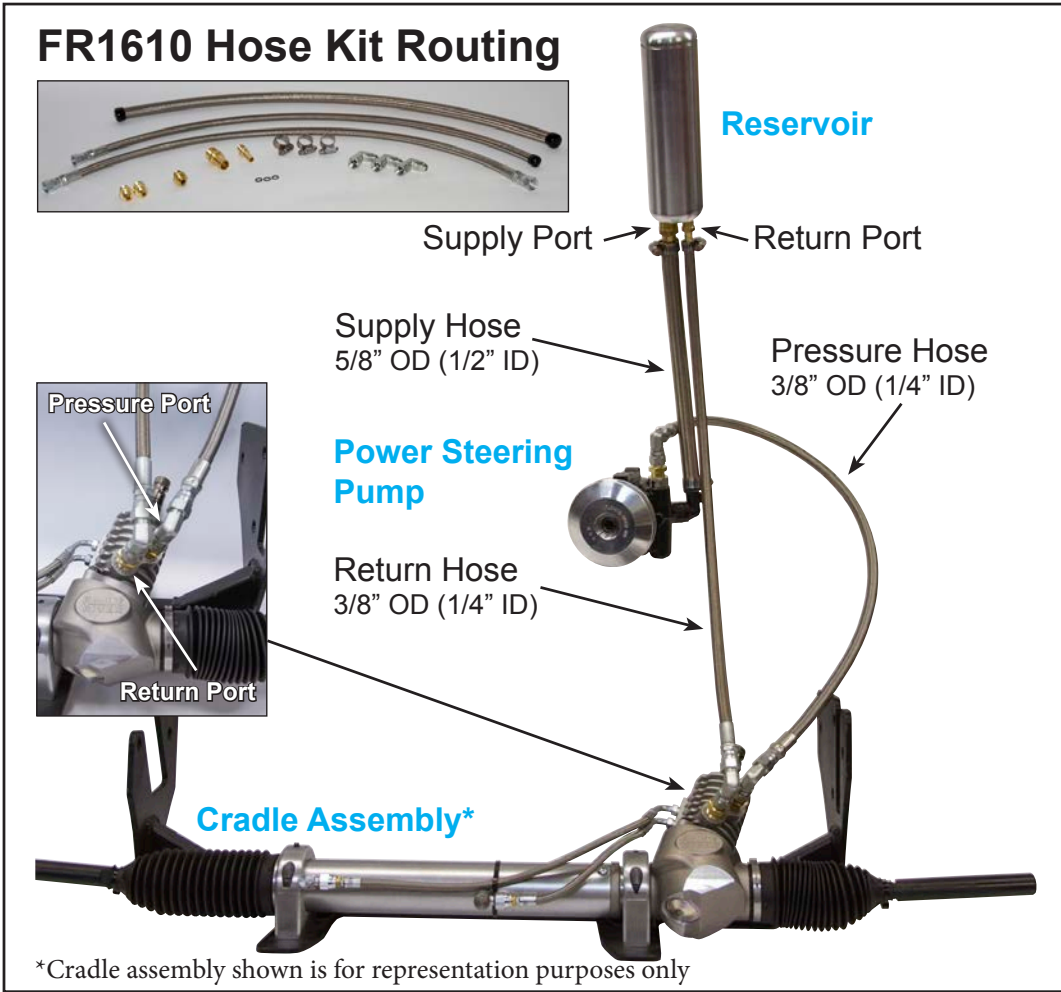
Method 2:
Partial Fluid Replacement


Switch engine off. Use a Suction device to remove fluid from the reservoir. Refill with cool, clean fluid. Install Reservoir cap.

After either method of cooling, start engine and allow engine to reach normal operating temperature. If noise persists, remove and replace power steering pump. Repeat bleed procedure following pump replacement.

WARRANTY DISCLAIMER:

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 If not using our hose kit, we recommend purchasing the FR1632 Pressure and Return fittings kit. If you have any questions regarding connecting alternate hose kit to Flaming River Cradle Assembly, please call 1-800-648-8022.

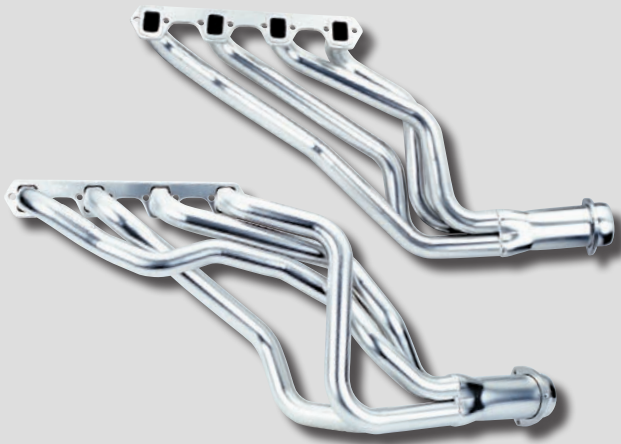
Additional Installation Products

STEERING WHEELS



FR20123
Woody's III Style
(Shown Installed)

ULTRA ANGLE HEADERS FR50003C





In order to ensure the best customer experience possible, we've created a Customer Satisfaction Survey to gather important feedback about different facets of our business. We would appreciate it if you could please take a couple of minutes to fill out this survey about your experience.

The results of the survey will be used to improve and gather feedback about customer service, technical and sales support, order processing and fulfillment, manufacturing, and new product development.

Upon completing the survey, you will be issued a discount coupon code to be used on your next online purchase at www.flamingriver.com/survey.



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