



### Our goal is to be your complete steering company!

Flaming River was founded in 1987 with a vision to offer quality <u>Steering Systems for street rods</u>, muscle cars, classics and trucks. Our products use all new parts to ensure that we can maintain quality standards, improve the original design, and offer long range product availability as well as lifetime serviceability. Tilt steering columns, power rack and pinions, steering shafts and billet accessories are all made right here at Flaming River by a talented group of people. Our promise to you is: "To provide the best quality products and service possible."



Over the past 25 years, we have designed many awardwinning products, using state-of-the art engineering, technology, and quality control in our manufacturing process. Although this has been exciting, we know the best reward is a satisfied customer.

Steering Columns **73 Steering Wheels** 84 **Column Accessories Universal Joints & Shafts** 92 108 **Rack & Pinion Cradle Kits** 135 **Rack & Pinions** Shocks/Springs 154 **Steering Boxes** 160 Racing, 172

Battery Disconnect Switches, Alternators & Apparel







- Floor Shift Tilt and Column Shift Key Columns are available in a stylish, compact design.
- Through our Custom Column Program, we can build to your specifications. See pg 62
- Easily installs using one of our stylish Billet Mounts for a custom fit.
- Standard output on our columns is 1" DD. We also have a 1"-48 and 3/4"-36 splined style for a direct fit to your existing steering. Early Ford Keyway Columns can be ordered through our Custom Column Program.

### The key features:

- Manufactured from 304 Stainless Steel. Streamlined design with radius slots for wiring.
- Precision laser-cut Floor Shift, Column Shift, "Roadster", and Racing Columns.
- Innovative Quality Manufacturing
- Flaming River focuses on designing products that meet our customers' demands.
- When designing new products, our priority is to include new features and improve upon the original performance and design.

# **LED Indicator**

# FR LED

Update any Column-Shift Column with Flaming River's\* new LED Shift Indicator.



NEW LED SHIFT INDICATOR

LED Indicator	
Part No.	Description
FRLED	Led Indicator
FRIFDOD	LED Indicator with Overdrive Indicator

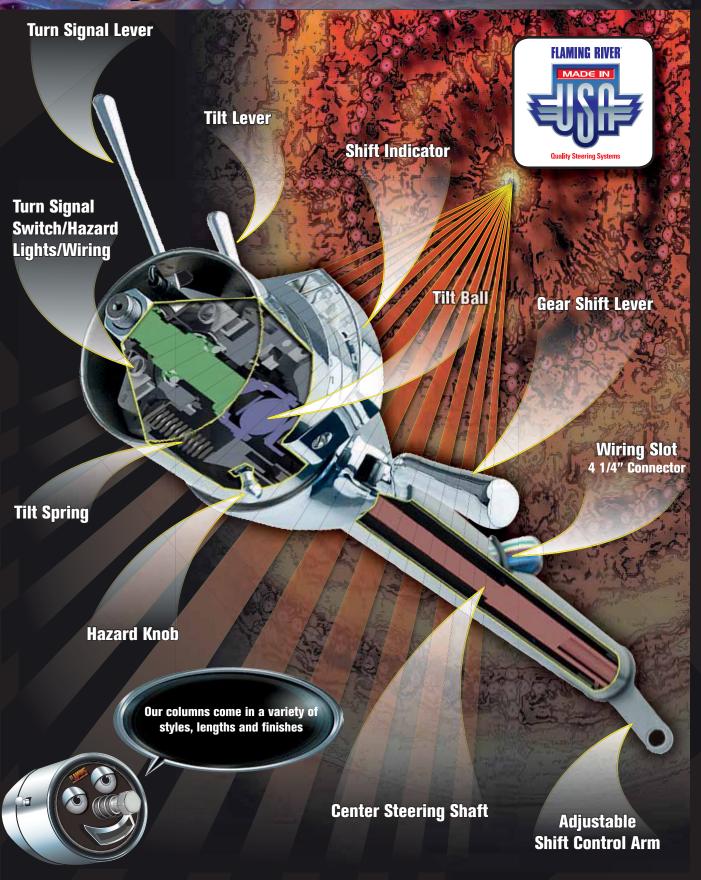
Note: LED Indicator included with Key Column -Not Sold Separately

8022

(Also available as an option with Non-Key Columns)

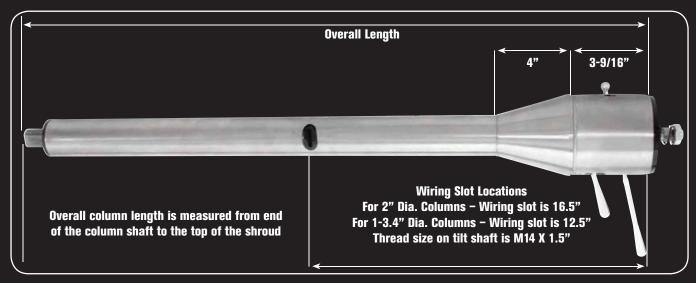
Included with all key columns. Order our new LED Shift Indicator for non-key Column Shift Columns through our Custom Column Program.

# **Anatomy of a Column**



# **Designing Your System**

What makes Flaming River® unique is that we have designed a complete steering system. From the Steering Wheel, to the Steering Column, through the Universal Joints, and down to the Rack and Pinion or Steering Box.



To make your installation as simple as possible, we recommend the following items:

#### **Installation Kits:**

Mustang Long Shaft Column Install Kit - FR200MUKT Mustang Short Shaft Column Install Kit - FR200MUKT2

#### **Column Shift Tilt Columns:**

Optional Overdrive Lens - FR20010LNO

#### **Floor Mounts:**

Polished Floor Mount 1-3/4" Dia. – FR20100 Polished Floor Mount – 2" Dia. – FR20101 Floor Mount Firewall Cover – FR20100CVR

#### Column Mount

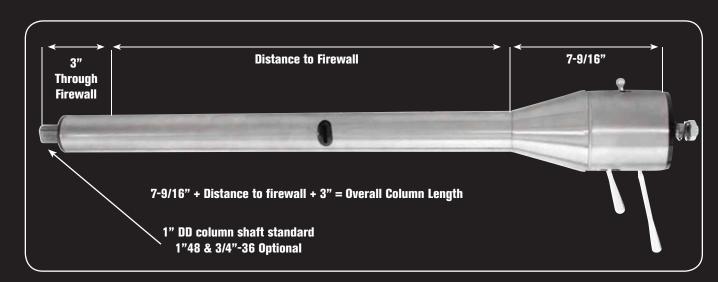
**OEM Factory Style Dash Mount for Classic Columns - FR20114** 

#### **Column Drops:**

For 2" or 1-3/4" tube diameter

### **Steering Wheel Adapters:**

Universal 5 and 6 Bolt Wheel Adapters contain the pattern for both 5 and 6 bolt wheels in a contemporary tapered or bell-style design. These adapters are only 3.90" wide for a seamless fit to our Steering Columns. Also available in larger diameter for GM style.





Cruise Control Kit

This aftermarket cruise control kit, with a GM style lever, can be installed on your Flaming River® Tilt Column. Note: For vehicles with non-computer engines only. Order this when you order your Flaming River column and we will install it for you. Non-returnable.

FR20118-4

**OEM Factory Style Dash Mount - Key Column** Billet Aluminum clamp can be used with virtually all OEM applications to facilitate the installation of a Flaming River Tilt Key Column in to an existing dash. FR20114K See Pg 90

O.D. x Length	Shaft Size	Mill Finish	Black Powder coat	Polished Stainless
2 x 28	1 Inch DD	FR30001-28	FR30001-28BK	FR30001-28SS
2 x 30	1 Inch DD	FR30001-30	FR30001-30BK	FR30001-30SS
2 x 32	1 Inch DD	FR30001-32	FR30001-32BK	FR30001-32SS
2 x 33	1 Inch DD	FR30001	FR30001BK	FR30001SS
2 x 35	1 Inch DD	FR30001-35	FR30001-35BK	FR30001-35SS
O.D. x Length	Shaft Size	Mill Finish	Black Powder coat	Polished Stainless
2 x 28	1 Inch - 48	FR30002-28	FR30002-28BK	FR30002-28SS
2 x 30	1 Inch - 48	FR30002-30	FR30002-30BK	FR30002-30SS
2 x 32	1 Inch - 48	FR30002-32	FR30002-32BK	FR30002-32SS
2 x 33	1 Inch - 48	FR30002	FR30002BK	FR30002SS
2 x 35	1 Inch - 48	FR30002-35	FR30002-35BK	FR30002-35SS



Flaming River® now offers an integrated key column. The key is located at the original three o'clock position just like you would expect from Flaming River®. No welded on attachments or extra relays. Modeled after the popular Muscle Car Columns with Tilt and Ignition Key built into the column yet attractive enough to put into your street rod. Flaming River® manufactures the column complete with a GM coded key assembly, wiring, ignition and neutral safety switch.



Note: LED Indicator is included with all Column Shift Key Columns -Not Sold Separately

O.D. x Length	Shaft Size	Mill Finish	Black Powder coat	Polished Stainless
2 x 28	1 Inch DD	FR30101-28	FR30101-28BK	FR30101-28SS
2 x 30	1 Inch DD	FR30101-30	FR30101-30BK	FR30101-30SS
2 x 32	1 Inch DD	FR30101-32	FR30101-32BK	FR30101-32SS
2 x 33	1 Inch DD	FR30101	FR30101BK	FR30101SS
2 x 35	1 Inch DD	FR30101-35	FR30101-35BK	FR30101-35SS
2 x 28	1 Inch - 48	FR30102-28	FR30102-28BK	FR30102-28SS
2 x 30	1 Inch - 48	FR30102-30	FR30102-30BK	FR30102-30SS
2 x 32	1 Inch - 48	FR30102-32	FR30102-32BK	FR30102-32SS
2 x 33	1 Inch - 48	FR30102	FR30102BK	FR30102SS
2 x 35	1 Inch - 48	FR30102-35	FR30102-35BK	FR30102-35SS

New LED Indicator

Led Indicator

**LED Indicator with** 

**Overdrive Indicator** 



Look for "D'Gino" throughout our catalog for helpful tips and information about our products and some interesting vehicle facts.

### FR20300 Stramp Clamp



Fits the original OEM dash mount with a rubber Isolator for vibration absorption. GM 69 and up. Pat. No. US 7,976,065 B2



### FR20118-5 Key Column Wiring Adapter

Designed to adapt your wiring harness to a Flaming River® Key Column. (Not necessary if replacing a GM style key column.)



This sleek tilt column is designed for use with a floor shifter. With the choice of 1-3/4 inch or 2 inch tube diameter and a compact shroud, you create a unique, new custom look. Each column comes complete with a billet aluminum dress up kit, GM turn signal with hazards, a 4-1/4 inch connector and canceling cam. Standard shaft size is 1 inch DD and you can choose from paintable, polished or black powder coat.

O.D. x Length	Shaft Size	Mill Finish	Black Powder coat	<b>Polished Stainless</b>
2 x 28	1 Inch DD	FR20005-28	FR20005-28BK	FR20005-28SS
2 x 30	1 Inch DD	FR20005	FR20005BK	FR20005SS
2 x 32	1 Inch DD	FR20006	FR20006BK	FR20006SS
2 x 33	1 Inch DD	FR20004-69	FR20004-69BK	FR20004-69SS
2 x 35	1 Inch DD	FR20007	FR20007BK	FR20007SS
1-3/4 x 28	1 Inch DD	FR20000	FR20000BK	FR20000SS
1-3/4 x 30	1 Inch DD	FR20001	FR20001BK	FR20001SS
1-3/4 x 32	1 Inch DD	FR20002	FR20002BK	FR20002SS
1-3/4 x 35	1 Inch DD	FR20003	FR20003BK	FR20003SS
<b>Custom Sizes</b>				
2 x Custom		FR20000XX	FR20000XXBK	FR20000XXSS
1-3/4 x Custom		FR20000XX	FR20000XXBK	FR20000XXSS



FR20107PL Column Drop See Page 90



FR20101 Swivel Floor Mount See Page 91



O.D. x Length	Shaft Size	Mill Finish	Black Powder Coat	Polished Stainless
2 x 28	1 Inch DD	FR20020	FR20020BK	FR20020PL
2 x 30	1 Inch DD	FR20021	FR20021BK	FR20021PL
2 x 33	1 Inch DD	FR20022	FR20022BK	FR20022PL
2 x 35	1 Inch DD	FR20029	FR20029BK	FR20029PL
<b>Custom Length</b>				
2 x Custom		FR20020XX	FR20020XXBK	FR20020XXSS



A Neutral Safety Switch is recommended and can be added to any Column Shift Column by adding NE to the end of the part number.

Neutral Safety Switch must be ordered with column and is located 21" from the top of the shroud, unless otherwise specified.

See Page 85

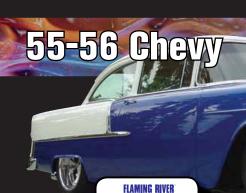
# FR20059 Shift Indicator Adjustment Kit

This sliding linkage arm allows for perfect alignment of your transmission with your steering column indicator. The machined sliding mechanism locks into position at the exact location you need for any transmission.

The precision machined bushing design

The precision machined bushing design can be reversed to increase the range of motion. See Page 88





The '55 Chevy was the first successful Chevrolet with an optional V8 engine since the "Series D" in 1918, which was offered for only a year.



Add a tilt steering column to your classic 55-56 Chevy Bel-Air. We offer a variety of floor shift or column shift style tilt columns. Choose from a variety of accessories to complete your Tri-Five steering column installation.

Note: If you recently purchased a wiring harness, check to see if "flashers" are included with the kit. Otherwise, you may need to purchase the Tri-5 Chevy Hazard Kit (shown on facing page).

Don't Forget the Accessories						
Application	Mill Finish	Black Powdercoat	Polished	Floor Mount	Wiring Adapter	U-Joint
Floor Shift						
55 Chevy	FR20005	FR20005BK	FR20005SS	FR20101-57	FR20115	FR1707DD (Stock Box)
55 Chevy	FR20005	FR20005BK	FR20005SS	FR20101-57	FR20115	FR1949 (Aftermarket Pwr)
56 Chevy	FR20005	FR20005BK	FR20005SS	FR20101-57	FR20116	FR1707DD (Stock Box)
56 Chevy	FR20005	FR20005BK	FR20005SS	FR20101-57	FR20116	FR1949 (Aftermarket Pwr)
Golumn Shfft						
55 Chevy	FR20023	FR20023BK	FR20023SS	FR20101-57	FR20115	FR1707DD (Stock Box)
55 Chevy	FR20023	FR20023BK	FR20023SS	FR20101-57	FR20115	FR1949 (Aftermarket Pwr)
56 Chevy	FR20023	FR20023BK	FR20023SS	FR20101-57	FR20116	FR1707DD (Stock Box)
56 Chevy	FR20023	FR20023BK	FR20023SS	FR20101-57	FR20116	FR1949 (Aftermarket Pwr)

TRI-5 Swivel Floor Mount
Simplify installation of a new Tilt
Column in your classic TRI-5 with
this attractive,

triangular-shaped Swivel Floor Mount. A machined aluminum ball swivels for easy positioning of the column at virtually any angle.

FR20101-57 See pg 91



### **12-Position Shifter Arm**

This 12-position shifter linkage arm makes it easier to align and adjust your transmission linkage. It is also removable to minimize the hole in the floorboard.

Straight Arm included with each Column Shift Column.

FRGSARM Straight Gearshift Arm FRGSARMOF Offset Gearshift Arm



Part No. FR20023SS

#### Shown

The 1955-56 Chevy Column Shift
Tilt Column features a 2" tube
diameter for a direct bolt-in fit with
your existing dash bezel. This column
is made from all-new components for
updated steering technology.
A billet aluminum dress up
kit with tilt and turn signal
levers and hazard knob,
GM wiring

(4-1/4" connector).

and canceling cam are all included. Combination back up and neutral safety switch also included. Output shaft size is 1" DD. Please Note: Wiring Adapter Kit (shown below) required for hazards if your wiring has not been updated.



# 55-56 Chevy Floor Shift Till Column

Part No. FR20005 Shown

The 1955-56 Chevy Floor Shift Tilt Column features a 2" tube diameter for a direct boltin fit with your existing dash bezel. This column is made from all-new components for updated steering technology. A billet aluminum dress up kit with tilt and turn signal levers and hazard knob, GM wiring (4-1/4" connector), and canceling cam are all included. Output shaft size is 1" DD.



Combination back up and neutral safety switch also included. See Page 85



Rag Joint Flexible Couplings

Recommended for use with power steering boxes to absorb vibration and power steering

noise. Flaming River® offers a Rag Joint with a 3/4" DD Male end to bolt inside a 1" DD column.

FR1949 3/4" DD Male X 3/4"-30

(Fits inside Flaming River 1" DD Column)



TRI-5 Chevy Hazard Kit This kit allows you to connect your Flaming River® Tilt Column to

Lifetime Serviceability

the stock electrical wiring in your TRI-5. FR20115 – 1955 Chevy Hazard Kit FR20116 – 1956 Chevy Hazard Kit FR20117 – 1957 Chevy Hazard Kit

71



Flaming River® introduces its all new "Shorty" 57 Chevy Tilt Steering Column—the shortest you can find with a 6-3/8" shroud! These all-new columns feature a 2" tube diameter and bolt directly into the existing dash bezel just like the original. Each column includes a billet aluminum dress up kit (tilt lever, turn signal lever, and hazard knob), as well as GM wiring and a canceling cam. These columns are available in a Floor Shift or Column Shift design with the option of a paintable mill finish or polished stainless finish. Column Shift columns come complete with a neutral safety switch as well as a removable shifter arm with 12 locating positions. Made in the USA and backed with a 3-year warranty and lifetime serviceability.

Note: FR20101-57 Swivel Floor Mount is required for installation.

Don't Forget the Accessories						
Application	Mill Finish	<b>Black Powdercoat</b>	Polished	Floor Mount	Wiring Adapter	U-Joint
57 Chevy (FS)	FR20005-57	FR20005-57BK	FR20005-57SS	FR20101-57	FR20117	FR1707DD (Stock Box)
57 Chevy (FS)	FR20005-57	FR20005-57BK	FR20005-57SS	FR20101-57	FR20117	FR1949 (Aftermarket Pwr)
57 Chevy (GS)	FR20023-57	FR20023-57BK	FR20023-57SS	FR20101-57	FR20117	FR1707DD (Stock Box)
57 Chevy (GS)	FR20023-57	FR20023-57BK	FR20023-57SS	FR20101-57	FR20117	FR1949 (Aftermarket Pwr)

TRI-5 Swivel Floor Mount
Simplify installation of a new Tilt
Column in your classic TRI-5 with
this attractive,

triangular-shaped Swivel Floor Mount. A machined aluminum ball swivels for easy positioning of the column at virtually any angle.

FR20101-57 See pg 91



### **12-Position Shifter Arm**

This 12-position shifter linkage arm makes it easier to align and adjust your transmission linkage. It is also removable to minimize the hole in the floorboard.

Straight Arm included with each Column Shift Column.

FRGSARM Straight Gearshift Arm FRGSARMOF Offset Gearshift Arm

# It's a Direct Fit!

57 Chevy Floor Shift TIR Column

Part No. FR20005-57SS Shown

57 Chevy Column Shift Tilli Column

Part No. FR20023-57SS Shown



Indicator Fits aftermarket dash in 1957 Chevy. These columns are considered custom and therefore, non-returnable.

Available in Paintable or Chrome finish.

FR20023-57SC Spray Chrome Finish

FR20023-57-CU Paintable Finish





Combination back up and neutral safety switch also included. See Page 85



Rag Joint Flexible Couplings Recommended for use with

power steering boxes to absorb vibration and power steering noise. Flaming River® offers a Rag Joint with a 3/4" DD Male end to bolt inside a 1" DD column.

FR1949 3/4" DD Male X 3/4"-30

(Fits inside Flaming River 1" DD Column)



TRI-5 Chevy **Hazard Kit** This kit allows

you to connect your Flaming River® Tilt Column to the stock electrical wiring in your TRI-5.

FR20115 – 1955 Chevy Hazard Kit FR20116 – 1956 Chevy Hazard Kit FR20117 – 1957 Chevy Hazard Kit

# **67-69 Camaro**



**67 Camaro** 

These Street
Machine Tilt Columns
are designed to fit the
original dash mount and
even accept the original rag
joint flange or factory steering shaft. The classic
applications use our 2 inch diameter column
to match the existing mounting holes and can
be built with 1"DD, 3/4"-36 or 1"-48 shaft for a
custom fit.



## **Connecting the Electrical System**

Wiring Circuit	Pin Location	<u>Column Wiring</u>
Brake Light Switch	P	White
Right Rear Turn Signal	N	Dark Green
Left Rear Turn Signal	M	Yellow
Turn Signal Power	L	Purple
Hazard Power	K	Brown
Right Front Turn Signal	J	Dark Blue
Left Front Turn Signal	H	Light Blue
Horn	G	Black

Caution: Before disconnecting your original steering column wiring harness please verify each wire color and function. Some wire colors may vary from year to year.

Hazard Note: Some vehicles did not have hazards from the factory, so no hazard power wire is present but can be added by purchasing part # FR20118-1

	Don't Forget the Accessories				
Application	Column	Dash Mount	Floor Mount	Wiring Adapter	U-Joint
67-68 Camaro	FR21019 1"48	N/A	FR20101FB	FR20118-2	FR1758 Pwr FR1716 Manual
69 Camaro	FR30009	FR20300	FR20101FB	FR20118	FR1758 Pwr FR1716 Manual

### FR20300 Stramp Clamp

Fits the original OEM dash mount with a rubber isolator for vibration absorption. GM 69 and up.

Pat. No. US 7,976,065 B2



69-81 Camaro Key Column Install Kit FRCA110



67-69 Camaro				
Year	Paintable/Mill Finish	Black Powder Coat	Polished	
67-68	FR21019 - 1"48 FR21020 - 1"DD		FR21019PL - 1"48 FR21020PL - 1"DD	
69	FR30009 - 1"48	FR30009BK - 1"48	FR30009SS - 1"48	



FR20118-2
Female Wiring Connector See Page 85



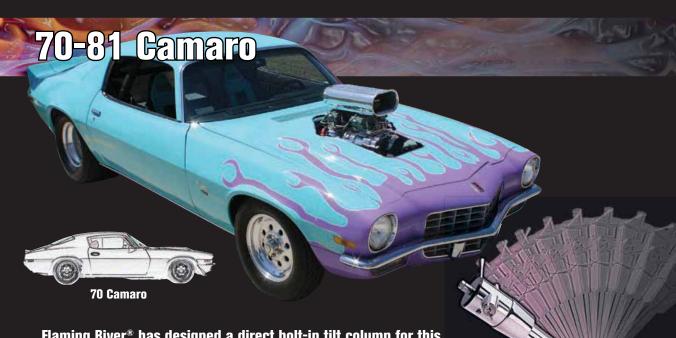
69 Camaro/Firebird Non-Key Column Installation Kit

Manual Steering FRCA105 Power Steering RCA106



67-68 Camaro/Firebird **Column Installation Kit** 

Manual Steering FRCA103 Power Steering RCA104



Flaming River® has designed a direct bolt-in tilt column for this 2nd generation Camaro. Available powdercoated in GM black, mill finish stainless or polished. Featuring licensed GM ignition key (coded), five position tilt, hazards and turn signal. Billet aluminum dress-up kit included. Cruise or dimmer optional.



Keyless Ignition also available See pgs 56-57

> 70-81 Camaro Aluminum Swivel Floor Mount FR20101CA See pg 91



Don't Forget the Accessories					
Application Column Dash Mount Floor Mount Wiring Adapter U-Joint					U-Joint
70-78 Camaro	FR30009	FR20300	FR20101CA	FR20118	N/A
79-81 Camaro	FR30010	FR20300	FR20101CA	N/A	N/A



Fits the original OEM dash mount with a rubber isolator for vibration absorption. GM 69 and up.
Pat. No. US 7,976,065 B2







70-81 Camaro/ Firebird Non-Key Column Installation Kit FRCA107



69-81 Camaro Key Column Install Kit FRCA110



Wiring Harness Adapter for Key Column FR20118-5

# 53-62 Corvette



Although AM radios were offered in earlier models, the '56 Corvette was the first to offer a transistorized AM radio.





# 1953-62 Corvette Steering Column

This all-new column has a 1-3/4" tube diameter, and 2-3/8" upper housing that integrates with the original dash configuration of the early 53-62 Corvettes. This column can also be used in Cobras, Roadsters, and other custom applications that need to be close to the dash. Includes a GM style turn signal and a 3/4"-36 splined shaft for easy connection to your existing steering. Available with or without hazards.

The Corvette dash was completely redesigned in 1958 with the instrument panel directly in front of the driver.





Gemale Wiring Adapter FR20118
Replaces Original Plug Harness and adapts
to Haming River® Column Harness.
Note: Verify color code on original wiring
harness before disassembly



1953-62 Corvette Steering Wheel Adapters

Smooth radius design allows for original or aftermarket steering wheels onto a Flaming River® 53-62 Steering Column

(FR1999VTR style).

FR20156SS - Original Vette FR20157SS - Aftermarket 5/6 Bolt





Part No	Style
Straight Column (	(1-3/4" Dia)
FR1999VTR	Mill Stainless w/o Hazard
FR1999VTRSS	Polished Stainless w/o Hazard
FR1999VTR-H	Mill Stainless with Hazard
FR1999VTRSS-H	Polished Stainless with Hazard
FR1999XX**	Custom Length (XX) and Powder coat Color**
Accessories	
FR20118	Wiring Adapter
FR1941	Steering Coupler

Part No	Finish				
Tilt Column (1	-3/4" Dia)				
FR21021	Mill Stainless				
FR21021PL	Polished Stainless				
FR21021BK	Black Powder coat				
FR21021XX**	Custom Length (XX) and Powder coat Color**				
Accessories	Accessories				
FR20118	Wiring Adapter				
FR1941	Steering Coupler				
**Color from RAL Deck must be specified when ordering Custom colors are non-returnable					



Female Wiring Adapter FR20118 See Page 85



Hazard Kit (4-Way Flashers): Pre-1969 FR20118-1 See Page 85

# 63-68 Corvette



**63 Corvette Stingray** 



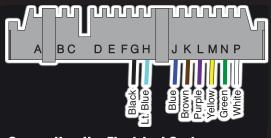
**68 Corvette** 

### 1963-68 Corvette Tilt Steering Column

The design of these Tilt Columns is similar to the styling of the original straight column-right down to the 1-1/2" tube diameter-but now comes with the modern convenience of tilt steering! This allnew column fits into the original dash mount and features a 3/4"-36 spline (1963-66 Vette), or 1"-48 spline (1967-68 Vette) to connect to the existing steering setup. Available in Paintable, Black Powder coat, or Polished finishes.



**F.2001VTSS** 1967-68 Corvette



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# **Connecting the Electrical System**

<u>Wiring Circuit</u>
Brake Light Switch
Right Rear Turn Signal
<b>Left Rear Turn Signal</b>
Turn Signal Power
<b>Hazard Power</b>
<b>Right Front Turn Signal</b>
<b>Left Front Turn Signal</b>
Horn

_	
<u>in Location</u>	<u>Column Wirin</u>
	White

White
Dark Green
Yellow
Purple
Brown
Dark Blue
Light Blue
Black

Caution: Before disconnecting your original steering column wiring harness please verify each wire color and function. Some wire colors may vary from year to year.

1963-66 Corvette

Hazard Note: Some vehicles did not have hazards from the factory, so no hazard power wire is present but can be added by purchasing part # FR20118-1



Female Wiring Adapter FR20118 See Page 85



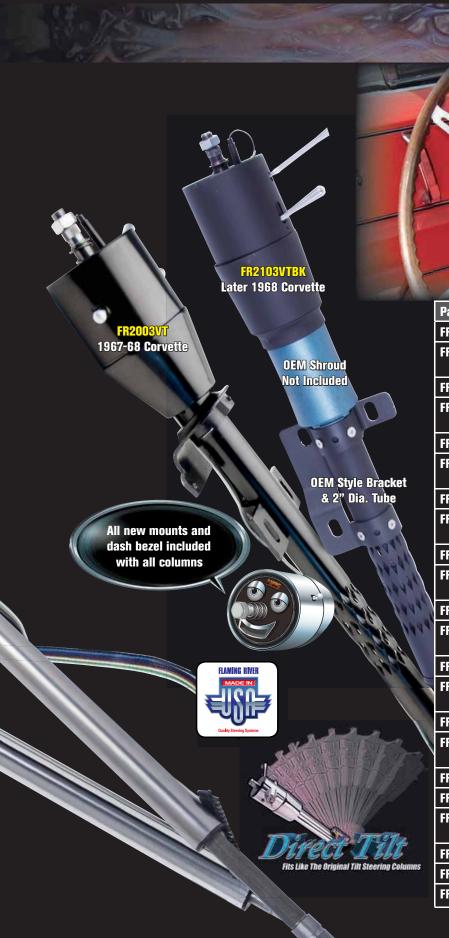
Corvette Wheel Adapter
This custom polished aluminum
adapter is designed to mount
your original Corvette steering
wheel to a Flaming River Tilt
Column.

FR2000VT-AD Polished FR2000VT-ADBK Black Powder coat

See Page 86



Hazard Kit (4-Way Flashers): Pre-1969 FR20118-1 See Page 85



Part No.	Description
FR2000VT	63-66 1-1/2" dia Mill Finish
FR2000VTA	63-66 1-1/2" dia Mill Finish (when using FR Adapter)
FR2000VTBK	63-66 1-1/2" dia Black
FR2000VTBKA	63-66 1-1/2" dia Black Finish (when using FR Adapter)
FR2000VTSS	63-66 1-1/2" dia Polished Finish
FR2000VTSSA	63-66 1-1/2" dia Polished Stainless (when using FR Adapter)
FR2001VT	67-68 1-1/2" dia Mill Finish
FR2001VTA	67-68 1-1/2" dia Mill Finish (when using FR Adapter)
FR2001VTBK	67-68 1-1/2" dia Black Powder Coat
FR2001VTBKA	67-68 1-1/2" dia Black Powdercoat (when using FR Adapter)
FR2001VTSS	67-68 1-1/2" dia Polished Stainless
FR2001VTSSA	67-68 1-1/2" dia Polished Stainless (when using FR Adapter)
FR2003VT	1967-1968 1-1/2" dia Mill Stainless
FR2003VTA	1967-1968 1-1/2" dia Mill Stainless (when using FR Adapter)
FR2003VTBK	1967-1968 1-1/2" dia Black w/CWL
FR2003VTBKA	1967-1968 1-1/2" dia Black w/CWL (when using FR Adapter)
FR2003VTBKTH	Top Hat 67 1-1/2" dia Black Column
FR2003VTSS	1967-1968 1-1/2" dia Pol. Stainless
FR2003VTSSA	1967-1968 1-1/2" dia Pol. Stainless (when using FR Adapter)
FR2103VT	1968 2" dia Mill Stainless
FR2103VTBK	1968 2" dia Black Powder Coat
FR2103VTSS	1968 2" dia Polished Stainless

# 69-82 Corvette

If It Doesn't Say Flaming River...
It Just Isn't Good Enough!







This classic C3 Corvette Tilt Key Column features the ignition switch integrated at the original 3 o'clock location. This column includes a billet aluminum dress up kit with turn signal/tilt levers and a hazard knob, GM wiring, and a canceling cam. Available in Paintable, Black Powder coat, and Polished finishes.

Note: For 1975-1982 Corvettes—this column does not include wiper, cruise control, or dimmer switch controls (Dimmer switch and cruise control available upon request).

FRCA108 Key Column Installation Kit recommended.



69-82 Corvette Swivel Mount FR20101VT See pg 91



1969-82 Corvette Key Column Installation Kit FRCA108

#### Did You Know?

Tilt/Telescopic Steering became standard for the Corvette starting with the 1980 model



### **Electronic Cruise Control**

This aftermarket unit can be installed on your new Flaming River® Tilt Column to add the convenience of Cruise Control. Designed for non-computer engines. GM-style turn signal lever.

FR20118-4 See pg 6





FR30005BK

Black Powder coat

# It's a Direct Fit!

**Column Installation Kit** 



FRCA108

Output Shaft with 1"-48 Spline

Corvette Wheel Adapter
This custom polished aluminum adapter is designed to
mount your original Corvette
steering wheel to a Flaming
River® Tilt Column.
FR2000VT-AD Polished

FR2000VT-ADBK Black Powder coat

See pg 86

5/6 Bolt Bell-Style Wheel Adapter for Flaming River® Column FR20119BA See pg 86



5/6 Bolt Wheel Adapter for Flaming River® Column FR20119TA See pg 86



# 64-72 Chevelle/El Camino



# **Connecting the Electrical System**

**Wiring Circuit Pin Location Column Wiring Brake Light Switch** P White **Right Rear Turn Signal** N **Dark Green Left Rear Turn Signal** М Yellow **Turn Signal Power Purple Hazard Power** Brown **Right Front Turn Signal** J **Dark Blue Left Front Turn Signal** Н **Light Blue** G **Black** Horn

Caution: Before disconnecting your original steering column wiring harness please verify each wire color and function. Some wire colors may vary from year to year.

Hazard Note: Some vehicles did not have hazards from the factory, so no hazard power wire is present but can be added by purchasing part # FR20118-1



Don't Forget the Accessories					
Application	Column	Dash Mount	Floor Mount	Wiring Adapter	U-Joint
64-66 Chevelle w/Shaft Upgrade	FR20005	N/A	FR20101CH	FR20118-1	FR1717DD FR1856 FR1758 (Power) FR1717DD FR1856 FR1714DD (Manual)
64-66 Chevelle	FR20005	N/A	FR20101CH	FR20118-1	FR1707DD (Modify Stock Shaft)
67-68 Chevelle 1"48	FR21019	N/A	FR20101CH	FR20118-1	N/A
67-68 Chevelle 1"DD	FR21020	N/A	FR20101CH	FR20118-1	FR1949T
69-72 Chevelle	FR30009	FR20300	FR20101AB	FR20118	N/A

**Utilize the original factory** dash mount or use our patented Stramp Clamp

### FR20300 **Stramp Clamp**

Fits the original OEM dash mount with a rubber isolator for vibration absorption. GM 69 and up. Pat. No. US 7,976,065 B2





Rag Joint Bowtie FR1949T Sold Separately



64-66 Chevelle/ El Camino Column <u>Install</u> Kit FRCA100



67-68 Chevelle/ El Camino Column Install Kit FRCA101



69-72 Chevelle/ El Camino Non-Key Column Install Kit FRGA102



69-72 Chevelle/ El Camino Key Column Install Kit FRCA110



Female Wiring Adapter FR20118 See pg 85

25



Don't Forget the Accessories					
Application	Column	Dash Mount	Floor Mount	Wiring Adapter	U-Joint
62-66 Nova/Chevy II	FR20005	N/A	N/A	FR20118	FR1707DD (Stock Box)
67 Nova	FR21010	N/A	N/A	FR20118	N/A
69-74 Nova	FR30009	FR20300	FR20101FB	FR20118	FR1758 (Pwr) FR1716 (Manual)





Fits the original OEM dash mount with a rubber isolator for vibration absorption. GM 69 and up.
Pat. No. US 7,976,065 B2



62-66 Nova Column Install Kit FRCA100

68 Nova/Chevy II
Column Install Kit
(Manual Steering) FRCA103
Column Install Kit
(Power Steering) FRCA104

1962-66 Nova Column Install Kit FRCA100





69-74 Nova Key Column Install Kit FRCA110

# 58-69 Impala/Caprice

**Utilize Original Factory** 

Dash Mounts



58 Impala



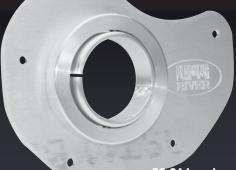
69 Caprice



Impala Tilt Steering Columns
Floor Shift and Column Shift style Tilt Columns are now
available as a direct fit bolt-in to replace the
original column. Each column comes complete with
a billet dress up kit with turn signal lever, hazards,
horn and canceling cam. With a 3/4"-36 output
shaft, you can connect to your original steering
setup and also use a 1969 and up GM steering
wheel. Made of 304 Stainless Steel and available in
Paintable or Polished finishes.



Don't Forget the Accessories						
Application	Column	Dash Mount	Floor Mount	Wiring Adapter	U-Joint	
Floor Shift						
58-60 Impala (FS)	FR21011	N/A	FR20098	FR20118-1	N/A	
61-62 Impala (FS)	FR21013	N/A	FR20098	FR20118-1	N/A	
63-64 Impala (FS)	FR21015	N/A	FR20098	FR20118-1	N/A	
65-68 Impala (FS)	FR21023	N/A	N/A	FR20118	N/A	
Column Shift						
58-60 Impala (GS)	FR21012	N/A	FR20098	FR20118-1	N/A	
61-62 Impala (GS)	FR21014	N/A	FR20098	FR20118-1	N/A	
63-64 Impala (GS)	FR21016	N/A	FR20098	FR20118-1	N/A	
65-68 Impala (GS)	FR21024	N/A	N/A	FR20118	N/A	
69-70 Impala (GS)	FR30104	N/A	N/A	FR20118	N/A	



58-64 Impala Swivel Floor Mount FR20098 See pg 91



Female Wiring Adapter FR20118 See pg 85



Hazard Kit (4-Way Flashers): Pre-1969 FR20118-1 See pg 85

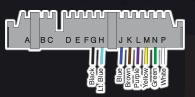








Fits Like The Original Tilt Steering Columns



Application	70=72 Monte Carlo	78 Monte Carlo	78-77 Monte Carlo
	Floor Shift	Floor Shift	Column Shift
Mill Stainless	FR20006-48	FR30001	FR30101
Black Powder coat	FR20006-48BK	FR30001BK	FR30101BK
Polished Stainless	FR20006-48SS	FR30001SS	FR30101SS

### **Connecting the Electrical System**

Wiring Circuit	Pin Location	<u>Column Wiring</u>
Brake Light Switch	P	White
Right Rear Turn Signal	N	Dark Green
Left Rear Turn Signal	M	Yellow
Turn Signal Power	L	Purple
Hazard Power	K	Brown
Right Front Turn Signal	J	Dark Blue
Left Front Turn Signal	Н	Light Blue
Horn	G	Black

Caution: Before disconnecting your original steering column wiring harness please verify each wire color and function. Some wire colors may vary from year to year.

Hazard Note: Some vehicles did not have hazards from the factory, so no hazard power wire is present but can be added by purchasing part # FR20118-1



#### FR20300

Stramp Clamp

Fits the original OEM dash mount with a rubber isolator for vibration absorption. GM 69 and up. Pat. No. US 7,976,065 B2



Also Available with Programmable Keyless Ignition (See Pgs 56-57)

**Electronic Cruise Control** 

This aftermarket unit can be installed on your new Flaming River® Tilt Column to add the convenience of Cruise Control. Designed for non-computer engines. GM-style turn signal lever.

FR20118-4 See pg 6





Don't Forget the Accessories						
Application	Column	Dash Mount	Dash Mount (3 1/2" Drop)	Floor Mount	Wiring Adapter	U-Joint
48-55 Chevy Truck (FS)	FR20005	FR20114	FR20108PL	FR20101	FR20118-1	N/A
48-55 Chevy Truck (FS)	FR20005	FR20114	FR20108PL	FR20101	FR20118-1	N/A
55-56 Chevy Truck (GS)	FR20021NE		FR20108PL	FR20101	FR20118-1	N/A



Column Drop FR20108PL See Page 90



Floor Mount Firewall Cover FR20100CVR See Page 90



Swivel Floor Mount FR20101 See Page 90



Chevy/GMC C/K 10 - C/K 20 19	Recommended Accessories:				
Finish	Floor Shift	Column Shift	FR20114 – OEM Factory Style		
Mill Stainless - Manual	FR21000M	FR21100M	Dash Mount (2" Dia.)		
Mill Stainless - Early Power	FR21000P1	FR21100P1	FR20119TA – 5/6 Bolt Steering Wheel Adapter		
Mill Stainless - Late Power	FR21000P2	FR21100P2	Trilogi Adaptoi		
Polished - Manual	FR21000MSS	FR21100MSS	Note: Early Power Box (Original		
Polished - Early Power	FR21000P1SS	FR21100P1SS	GM) uses a 13/16"-36 spline. Late Power Box (Late model GM truck		
Polished - Late Power	FR21000P2SS	FR21100P2SS	box) uses a 3/4"-30 spline. Plea		
Custom Color	FR21000M-CLR	FR21100M-CLR	verify before ordering.		

Black Powder coat available through our custom column program.

Color from RAL Deck must be specified when ordering

Custom colors are non-returnable

# 67-72 GM C-Series Trucks





Shown with optional LED Indicator



Chevy/GMC C/K 10 - C/K 20 1967-72					
Finish	Floor Shift	Column Shift			
Mill Stainless	FR20007-36	FR20030			
		FR20030-F			
<b>Polished Stainless</b>	FR20007-36SS	FR20030PL			
		FR20030PL-F			

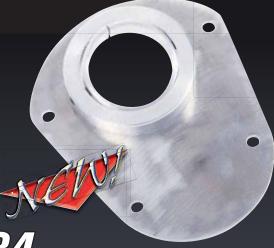


### NOTE:

FR20030/ FR20030PL NSS is measured 17th up from the shift arm FR20030-F / FR20030PL-F NSS is measured 10th up from the shift arm

Order our new LED Shift Indicator for Non-Key Column Shift Columns through our Custom Column Program.

**New LED Indicator** 



No mount necessary. Bolt into your original Dash Mount. Verify Neutral Safety Switch location before ordering

67-72 C-10 Truck Swivel Floor Mount FR20101C10 See pg 91





### 73-87 GM C-Series Trucks



**75 GMC Truck** 



85 Chevy S-10 Truck



87 GMC Truck

# It's a Direct Fit!

Dimmer Available.
Wiper Switch not available for 85 and later.



#### Did You Know?

Unofficially dubbed the "Square Body", the 3rd Generation GM Truck was actually known as the "Rounded-Line". If you want to upgrade your steering system, Flaming River® also offers bolt-in rack and pinion cradle kits for the 1973-87 C-10 truck. (See Pg. 124)





Install the upper portion of the new Flaming River® Mounting Clamp into the stock location.





Slide the new steering column through the opening in the original floor mount, and then slide the column through the opening in the firewall.



### 65-70 Mustang





**65 Mustang Convertible** 



**65 Mustang Fastback** 

This all-new Tilt Steering Column looks great with an aftermarket steering wheel, or you use your original wheel with our Ford-spline style column (Some modification to your original wheel may be necessary). Our Tilt Columns are available in paintable mill or polished stainless finishes. We also offer steering wheel adapters, and convenient Column Installation Kits for mounting.

- Bend tabs inward on new floor bracket and slide over column tube.
- Use your original dash support (Fig 1) to hold the column under the dash and tighten the two support nuts. (Fig 2) (Note: you must first place a shim that is included in your installation kit between the support and the column to ensure a tight fit),
- Make sure that the column is straight before securing column.
- Mark the location of the tabs on the column using a center punch or scribe (Fig 3), then remove the column from the car and drill a small pilot hole for each screw (Fig 4).
- Fasten the new floor mount to the column by using the screws provided with the hardware kit then reinstall the steering column into the car.

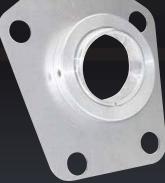












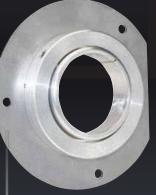
67-70 Mustang Swivel Floor Mount FR20101M7 See pg 91



**Long Shaft FR200MUKT** 



Short Shaft FR200MUKT2



65-66 Mustang Swivel Floor Mount FR20101M5 See pg 91



FR200MUKT2NO

67-70 Installation Kit with No Universal Joint

### 32 Ford



**32 Ford Coupe** 



**32 Ford Roadster** 

**304 Stainless Nostalgia Non-Tilt Steering Column** This nostalgia column is ideal for Roadsters, Cobras, and other custom applications that require a sleek and compact column. An attractive bell-style column with a 1-3/4" tube diameter, 30" overall length, and 3/4"-36

splined shaft. A billet dress up kit is included with GM turn signal

lever, hazard knob, and horn.









Length	Paintable	Black Chrome Powder coat	Black Powder coat	Polished	Custom Color / Length
28"	FR21022-28	FR21022-28BC	FR21022-28BK	FR21022-28PL	FR21022XX**
30"	FR21022-30	FR21022-30BC	FR21022-30BK	FR21022-30PL	FR21022XX**
32"	FR21022-32	FR21022-32BC	FR21022-32BK	FR21022-32PL	FR21022XX**

\*\*Color from RAL Deck must be specified when ordering Custom colors are non-returnable



**Column Drop** FR20107PL See Page 90



Floor Mount Firewall Cover FR20100CVR See Page 90



**Swivel Floor Mount** FR20101 See Page 90



Also Available in 1 3/4"
Diameter

FR20001SS

Dash Mount pg 90
8 Degree Mounting Angle

Length	Paintable	Black Powder coat	Polished	Custom Color		
2" Diame	ter					
28"	FR20005-28	FR20005-28BK	FR20005-28SS	FR20005**		
30"	FR20005	FR20005BK	FR20005SS	FR20005**		
Custom	FR20000XX	FR20000XX	FR20000XX	FRFR20000XX**		
1 3/4" Dia	1 3/4" Diameter					
28"	FR20000	FR20000BK	FR20000SS	FR20000**		
30"	FR20001	FR20001BK	FR20001SS	FR20001**		
Custom	FR20000XX	FR20000XX	FR20000XX	FR20000XX**		
**O-lea from DAI Deale models and afficient and advantage						

\*\*Color from RAL Deck must be specified when ordering
Custom colors are non-returnable

 Length
 Paintable
 Polished
 Custom Color

 28"
 FR20020NE
 FR20020NE-PL
 FR20020NE\*\*

 30"
 FR20021NE
 FR20021NE-PL
 FR20021NE\*\*

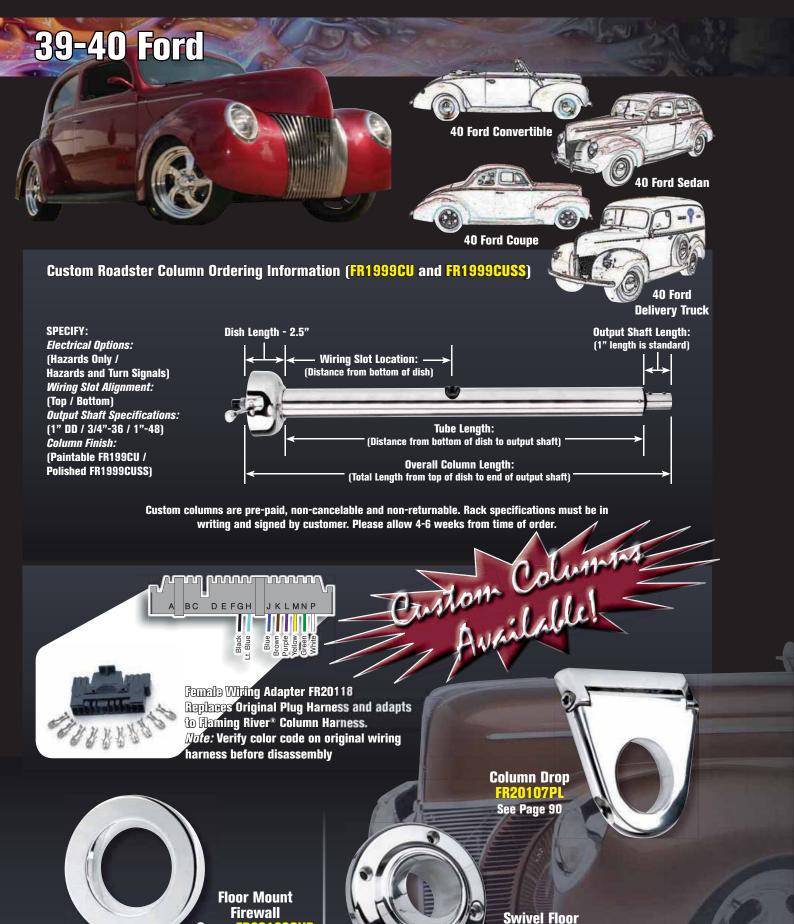
\*\*Color from RAL Deck must be specified when ordering

**Custom colors are non-returnable** 





EPOND 1DI



Mount

FR20101 See Page 90

**Cover FR20100CVR** 

See Page 90



Length	Paintable	Black Chrome Powder coat	Black Powder coat	Polished	Custom Color / Length
30"	FR20005	FR20005BC	FR20005BK	FR20005PL	FR20000XX**
32"	FR20006	FR20006BC	FR20006BK	FR20006PL	FR20000XX**
30"	FR20021NE	FR20021BC	FR20021NEBK	FR20021NE-PL	FR20021XX**
28"	FR21022-28	FR21022-28BC	FR21022-28BK	FR21022-28PL	FR21022XX**
30"	FR21022-30	FR21022-30BC	FR21022-30BK	FR21022-30PL	FR21022XX**
32"	FR21022-32	FR21022-32BC	FR21022-32BK	FR21022-32PL	FR21022XX**

\*\*Color from RAL Deck must be specified when ordering

Custom colors are non-returnable

Part No	Finish	
FR1999RO-30	Mill Stainless	
FR1999ROSS-30	Polished Stainless	
FR1999RO-30BK	Black Powder coat	
FR1999ROSS-30LC	Polished Laser Cut Collapsible	
FR1999CU	Custom - Mill Stainless	
FR1999CUSS	Custom - Polished Stainless	
Custom Columns Are Non-Returnable		





FR20118-4 See pg 6

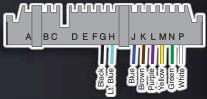
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#### **Connecting the Electrical System**





**Column Wiring** 

<u>Wiring</u>	Circuit

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

#### Vehicle Wiring

Green
Orange/Blue
Green/Orange
Blue
Not Available
White/Blue
Green/White
Yellow/Green

#### Pin Location

P White
N Dark Green
M Yellow
L Purple
K Brown
J Dark Blue
H Light Blue
G Black



Install the original dash bezel and column mounting bracket over the new split ring spacer onto the new Flaming River® Tilt Column.



Column Includes steering box shaft adapter for easy installation to the original steering box.



### 60-65 Comet/Falcon



**65 Falcon** 

in paintable mill finish OR polished to a high luster. They will never rust and are chemically clean and can be painted to match or highlight an interior with only minor preparation.

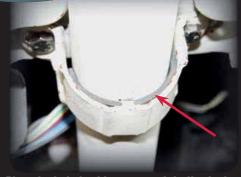


60-65 Comet/Falcon

**Swivel Floor Mount** FR20097 See pg 91



narket



Place included rubber spacer into the factory under dash mount and trim away excess.

1		
	se with Steering See pgs	Whe

60-65 Comet/Falcon (For use with Aftermarket Steering Wheel)			
Floor Shift			
Mill Stainless FR21018			
Polished Finish FR21018PL			
Column Shift			
Mill Stainless FR21017			
Polished Finish FR21017PL			



**Shift Indicator** Adjustment Kit FR20059 See pg 88



#### It's a Direct Fit!

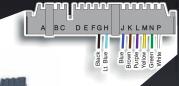


Utilize your original dash support (Note: you must first place the shim that is included in your installation kit between the support and the column to ensure a tight fit)





60-64 Galaxie (For use with Aftermarket Steering Wheel)		
Mill Stainless FR20005		
Polished Finish	FR20005SS	
Black Powdercoat Finish	FR20005BK	



Female Wiring Adapter FR20118
Replaces Original Plug Harness and adapts to Flaming River® Column Harness.

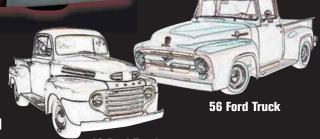
Note: Verify color code on original wiring harness before disassembly



### 48-56 Ford F100 Trucks



Flaming River offers a full selection of floor shift and column shift tilt steering columns for classic Ford trucks. We also offer a full line of steering column accessories like column mounts and column drops to complete the steering column installation in your Ford Truck.



48 Ford Truck

In addition to the Floor Shift Columns, Flaming River® now manufactures an all new column shift style of tilt column. Featuring a sleek, compact design, the column shift is ideal for Hotrods, Pick Up Trucks, Classics and infinite other applications. All new components have been engineered by Flaming River to incorporate state-of-the-art technology in this nostalgic design. Each column comes complete with gearshift knob, billet dress up kit (tilt, turn signal levers and hazard knob), illuminated gearshift indicator and GM wiring (4-1/4 in. connector) and removable 12-position linkage arm. Shaft size is 1 in. DD. 2" tube diameter. Combination Neutral Safety Switch/Back up light available, must be ordered with column.

Have an Overdrive transmission? No problem, order the optional Overdrive lens, part number FR20010LNO.

Don't Forget the Accessories				
Application	Column	Dash Mount	Floor Mount	Wiring Adapter
48-52 Ford Truck (FS)	FR20005	FR20108PL	N/A	FR20118-1
48-52 Ford Truck (GS)	FR20021NE	FR20108PL	N/A	FR20118-1
53-56 Ford Truck (FS)	FR20005	FR20108PL	FR20101F1	FR20118-1
53-56 Ford Truck (GS)	FR20021NE	FR20108PL	FR20101F1	FR20118-1

53-56 Ford F100 Truck
Floor Mount This new floor
mount features knock-outs to
accommodate original
brake and clutch
pedals
FR20101F1

See pg 91



#### FR20108PL

3-1/2" Polished Column Drop for easy column mounting See pg 90





Ford F-1/F100 1948	-56 Tilt Colum	n	Recommended Accessories:	
Mill Stainless FR20005 FR20021NE FR21022-30				easy column mounting (2" Diameter)
Polished Stainless FR20005SS FR20021NE-PL FR21022-30SS			• FR20108PL - 3-1/2" Polished Column Drop for easy column mounting (1 3/4" Diameter)	
Black Powdercoat FR20005BK			FR21022-30BK	
			• FR20119TA – 5/6 Bolt Steering Wheel Adapter	



Truck Slip Shaft Kits

Track on policities		
Dodge Truck		
FR1517-76P	1976-78 Power	
FR1517-76M	1976-78 Manual	
FR1517-79P/M	1979-82 Power/Manual	
FR1517-83S	1983-90 Straight Column	
FR1517-83T	1983-90 Tilt Column	
FR1517-79P/M	1991-93	
FR1517-94V	1994 w/ Vibration Upgrade	
FR1517-96V	1995-98 w/ Vibration Upgrade	
FR1517-94	1994	
FR1517-96	1995-98	
Ford F150 / F250 /	F350	
FR1518-36	1974-79	
FR1518-1DD	1984-94	

1997-2000 Jeep TJ Steering Slip Shaft Kit
This new slip and collapsible steering shaft kit
is designed to eliminate any play in the factory
system and to accommodate lift applications. It
features three inches of slip and collapsibility. Includes two sealed needle bearing universal joints,
protective bellow and slip-shaft. Ideal for off-road
use or for daily drivers.

FR1519-97

Jeep Slip Shaft Kits			
Jeep CJ-5 / CJ-6 / C	Jeep CJ-5 / CJ-6 / CJ-7 / CJ-8		
FR1519-76P	1972-86 Power Steering		
FR1519-76M	1972-86 Manual Steering		
FR1519-PTLT	72-86 Power Steering w/ FR Column		
FR1519-MTLT	72-86 Manual Steering w/ FR Column		
Jeep Wrangler			
FR1519-87P/M	1987-95		
1997-2000 Jeep TJ			
FR1519-97	1997-2000		





Each column comes with a slip shaft extension for an overall length of 45". The slip shaft extension allows for 1-1/2" of slip movement, and includes a Universal Joint for direct connection to the steering box. These Tilt Steering Columns are made from 304 steel, use all-new parts and come in three different finishes: Paintable Mill, Black Powder coat, and Polished Stainless. Each Tilt Column includes billet dress-up kit with tilt lever, turn signal/hazard switch, and female plug kit for connecting to original wiring harness. Horn relay, hazard kit, and steering wheel adapters may be required and are sold separately.



68 Chrysler

"B" Body

74 Challenger

- 45" Overall Length
- Built-in Slip & Collapsible Shaft with 1-1/2" of Movement
- Billet U-Joint for Direct Connection to the Steering Box
- Shaft Adjustable Tilt Column can be used from many applications
- Includes Female Turn Signal Wiring Adapter & Ignition Plug Harness
- Compact Shroud Design (only 8 inches) allows for driver positioning comfort
- All Stainless Steel (304) mill finish, polished or black powdercoat

Made in the USA!

**Must Use Aftermarket Wheel** 

Steering You in the Right Direction®



It's a Direct Fit!





## OPAR

Part No. Description

65-69 Tilt Columns

FR21025M Manual Steering - Paintable Tilt Column

FR21025MBK Manual Steering - Black Powdercoat Tilt Column

FR21025MSS Manual Steering - Polished Tilt Column

FR21025P Power Steering - Paintable Tilt Column

FR21025PBK Power Steering - Black Powdercoat Tilt Column

FR21025PSS Power Steering - Polished Tilt Column

FR21025SS

Universal Joint Included for Direct Connection to the <u>Steering Box</u>.

EDRON1 1 CC

Collapsible Slip Shaft

Wiring Harness to connect your Mopar wiring to Flaming River Column

Part No.	Description
70-76 Mopar Tilt	t Key Columns
FR30011CM	Manual Steering - Paintable Tilt Key Column
FR30011CMBK	Manual Steering - Black Powdercoat Tilt Key Column
FR30011CMSS	Manual Steering - Polished Tilt Key Column
FR30011CP	Power Steering - Paintable Tilt Key Column
FR30011CPBK	Power Steering - Black Powdercoat Tilt Key Column
FR30011CPSS	Power Steering - Polished Tilt Key Column

Designed for use with Aftermarket Wheel

### **Programmable Keyless Ignition System**



Part No.	Description
FR60004	Programmable Keyless Ignition System - Dash mount
FR60005	Programmable Keyless Ignition System - Floor Shift Column Paintable
FR60006	Programmable Keyless Ignition System - Column Shift Column Paintable

Add: BK for Black Powder coat CLR for Custom Powder coat Color SS for Polished Stainless

Note: Columns are built to order. Customer must specify length, tube diameter and output shaft size.

\*NON-RETURNABLE\*

### Start Your Car With The Simple Push of a Button!

- Comes with 2 key fobs and 5 programmable channels.
- Four channels are user programmable for Keyless Entry, Shaved Door "Pop", Trunk Release, and Automatic Window Roll Up.
- A 5<sup>th</sup> "proximity Channel" activates automatically as you approach your vehicle.
- 22mm brushed stainless start button with LED emulates all functionality of a traditional Key Switch.
- Emergency bypass Card with unique PIN# assures you can always start your vehicle.
- Advanced System Control Module has 60 Amp Ignition and 2 Accessory Circuits.
- Features Programmable Starter Delay and built in MSD™ Ignition filtering system.
- 100% American Made!





Part No.	Description
	Programmable Keyless Ignition System - Street Machine Style Column Paintable - FR21019,FR21020 Style Steering Columns (See page 22)
FR60008	Programmable Keyless Ignition System - Street Machine Style Column Paintable - FR30009 Style Steering Columns (See page 23)

Add: BK for Black Powder coat CLR for Custom Powder coat Color SS for Polished Stainless

Description

Part No.

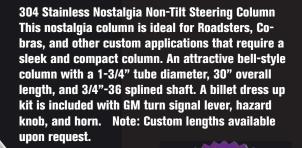
Note: Columns are built to order. Customer must specify length, tube diameter and output shaft size.

\*NON-RETURNABLE\*

	White Ignition Push Button	
FR60004-RED-PB	Red Ignition Push Button	
FR60004-GREEN-PB	<b>Green Ignition Push Button</b>	
	A / ( ) / H	
		-57
	* * * * * * * * * * * * * * * * * * * *	

### **Non-Tilt Roadster**





Part No	Finish	
FR1999RO-30	30" Mill Stainless	
FR1999ROSS-30	30" Polished Stainless	
FR1999R0BK-30	30" Black Powder coat	
FR1999ROSS-30LC	30" Polished Laser Cut Collapsible	
FR1999RO-32	32" Mill Stainless	
FR1999RO-32PL	32" Polished Stainless	
FR1999CU	Custom - Mill Stainless	
FR1999CUSS	Custom - Polished Stainless	
Custom Columns Are Non-Returnable		

Part No	Finish
FR3304	Polished
FR3304BK	Black

3 Bolt Wheel Adapter
Designed to mount any
traditional 3 Bolt
Steering Wheel to a
Flaming River column for
a seamless and streamlined appearance.

Roadster Column 3 to 5/6 Bolt
Steering Wheel Adapter - FR20119
This billet steering wheel adapter allows mounting of a 5 or 6 bolt steering wheel on our 3-bolt Roadster Column (FR3301). This new pattern combination enables the use of most

(F18801). This new pattern combination enables the use of most aftermarket steering wheels. Note: Horn button will not be functional. WaterFall Adapter for Stainless Nostalgia Column
This wheel adapter is designed to combine the
modern, billet elegance of our WaterFall Steering Wheel with our Stainless Nostalgia Column
(FR1999R0-30 series).
FR20150R0





### Tru Telescopic®



Memory circuit included with all power units.

- Memory control for Driver 1 or Driver 2 positioning
- Unique design telescopes from the tube for driver comfort
- Smooth linear activating device with stainless cable positions the column
- Stainless steel piston and sleeve CNC machined for smooth action
- 2 inch range of linear movement

Telescopic Roadster Column - FR1990TEPL The ultimate in adjustability!

A nostalgic look with a sleek telescoping tube that makes driving your Roadster much more comfortable. Available in Polished Stainless with a 2" tube diameter and 30" length. Note: Custom Column Drop required and sold separately.



**Telescopic Column Drops** 

A machined knob locks the column in position when used in conjunction with our Manual Telescopic Steering Columns. Available in 2" diameter, our polished column drops are available from 2-1/2" to 6-1/2" in length. Add TS to part no. of column drop when ordering.



Power		
Part No	Length	Finish
FR20011	30-32 Inch	Mill Stainless
FR20011PL	30-32 Inch	<b>Polished Stainless</b>
FR20012	32-34 Inch	Mill Stainless
FR20012PL	32-34 Inch	Polished Stainless

Manual		
Part No	Length	Finish
FR20005TS	30-32 Inch	Mill Stainless
FR20005TSPL	30-32 Inch	<b>Polished Stainless</b>
FR20006TS	32-34 Inch	Mill Stainless
FR20006TSPL	32-34 Inch	<b>Polished Stainless</b>



- Spring-loaded design utilizes a billet lever for easy adjustment
- Available in 30" or 32" lengths, or other lengths through custom manufacturing program
- Made in the USA

#### Ranafite:

- Smooth telescoping movement away from or towards the driver's seat
- 3 Year/36,000 mile warranty

Part No.	Description
FR30007	30" Mill Finish "Top Hat Tele"
FR30007BK	30" Black Powder coat "Top Hat Tele"
FR30007SS	30" Polished "Top Hat Tele"
FR30008	32" Mill Finish "Top Hat Tele"
FR30008BK	32" Black Powder coat "Top Hat Tele"
FR30008SS	32" Polished "Top Hat Tele"
Other sizes available through our custom program.	

#### **Custom Columns**

Chances are good that we have a column to fit your steering needs. Visit our website or contact Flaming River's One of our friendly Sales reps can recommend a column for your specific vehicle, or help you build a perfect fit through our Custom Column Manufacturing Program. We can custom build a Non-Tilt Roadster Column, Floor Shift Tilt Column. Column Shift Tilt Column. or Tilt Kev **Column to your exact specifications!** 

If you're interested in building a Custom Column, please review the appropriate custom column order forms on our website and then contact one of our Sales Reps. They'll take down your information, make sure they understand what you're looking for, and then we'll take care of the rest.

Fill In The Blanks...We'll make it your way through our **Custom Program!** Call or visit us on the web for a design worksheet.

> **Forms Available** Online

B.	
Wiring Slot Locations	
2" Dia Floor Shift	16.5"
1-3/4" Dia Floor Shift	12.25"
Column Shift (with or without Neutral Safety Switch)	16"

#### 16" Floor Shift or Column Shift Key Columns **Column Specifications:** Wiring Slot **Amount of Shaft** Location Through Firewall (See Chart Above) (3" Recommended)

**Output Shaft** (1" DD. 1"-48 or 3/4"-36)

**Tube Diameter** (1 3/4" or 2")

Column Style (Floor Shift, Column Shift or Roadster)

Distance from Firewall to Bottom of Cone

**Overall Column Length** (End of Column Shaft to Top of Shroud)

Steering Wheel Type: Aftermarket, GM 69-93 or Ford 65-70

Finish: Mill Finish (Paintable), Black Powder Coat, Polished (Stainless) or Custom Powdercoat from RAL Deck

### Micro / Dash Mount

#### **Overall Length 17 inches**



#### **Micro Tilt Steering Columns**

Available in Floor Shift and Column Shift designs, our Micro Columns are ideal for a variety of vehicle applications. At only 17" in length – these columns add tilt functionality, reduce universal joint angles, and remove the tube from the engine compartment for added clearance and safety. Available in Paintable, Black Powder coat and Polished finishes.

Floor Shift		
Part No.	Finish	
FR2000MC	Mill Stainless	
FR2000MCSS	Polish Stainless	
FR2000MCBK	Black Powder coat	
Column Shift		
Part No.	Finish	
FR20020MC	Mill Stainless	
FR20020MCSS	Polish Stainless	
FR20020MCBK	Black Powder coat	



#### **Dash Mount Tilt Steering Columns**

Our 7-1/2" Dash Mount Tilt Columns eliminate pedal interference by taking the column tube out of the engine compartment. This column offers all of the features of our standard Tilt Columns, but gives you maximum design flexibility. No need for a mounting bracket, as this column includes a face plate for mounting. Output shaft is 3/4" DD. Available in Paintable, Black Powder coat and Polished finishes.

Part No.	Finish
FR20020DM	Mill Stainless
FR20020DMSS	Polish Stainless
FR20020DMBK	Black Powder coat







Lifetime Serviceability



**Un-Collapsed** 

Collapsed

Flaming River pioneered the Laser Cut Stainless Tilt Steering Column using all-new parts. Continued investment and growth in our manufacturing processes, including our laser technology, allows us to manufacture precision parts with maximum flexibility. A bellowed diamond pattern is laser cut into our Collapsible Columns for both style and safety. Our Collapsible Columns also include a collapsible center shaft and are available as Tilt Columns, "Roadster" nostalgia columns and our Trim line Race Columns-voted Best New Safety Product by NSRA.



- Intricate laser cut pattern which enables the tube to fold upon impact with up to 4 inches of collapsibility.
- Added safety yet maintains an attractive appearance
- Meets Australian Collapsibility Requirements

O.D. x Length	Shaft Size	Mill Finish	Black Powder coat	Polished Stainless		
Tilt Column Shift (No Key)						
2 x 30	1 Inch DD	FR20021LC	FR20021BKLC	FR20021SSLC		
2 x 33	1 Inch DD	FR20022LC	FR20022BKLC	FR20022SSLC		
2 x 35	1 Inch DD	FR20029LC	FR20029BKLC	FR20029SSLC		
Tillt Key Column Shift (Neutral Safety Switch Included)						
2 x 30	1 Inch DD	FR30101-30LC	FR30101-30BKLC	FR30101-30SSLC		
2 x 33	1 Inch DD	FR30101LC	FR30101BKLC	FR30101SSLC		
2 x 35	1 Inch DD	FR30101-35LC	FR30101-35BKLC	FR30101-35SSLC		

#### Did You Know?

Any Flaming River® Column can be manufactured as a Collapsible Column

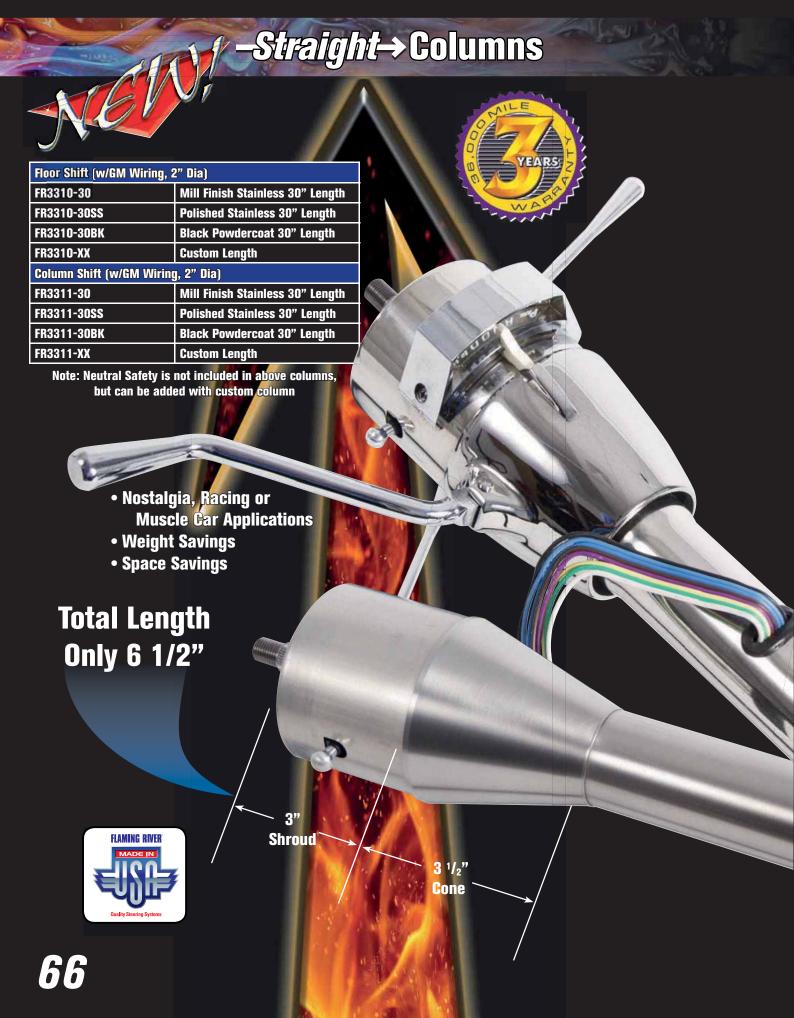


#### FR20107PL Column Drop See Page 52



FR20101 Swivel Floor Mount See Page 52







#### Recreational

Flaming River Tilt Steering Columns - Add Comfort and Style to Your "Other" Ride! Perfect for boats, golf carts, pit carts, and other custom carts.

All stainless...Same as original column with 1-3/4" tube diameter 5 position tilt for driving comfort Built-in turn signal, hazards, and horn relay. Easy mounting using existing universal joint. Accepts aftermarket adapter for use with any steering wheel.

Tilt Steering Columns		
Part No.	Description	
FR20011GOSS	01-UP EZ GO (4 Bolt)	
FR20010GOSS	96-01 EZ GO (3 Bolt)	
FR20012GOSS	92-03 Club Car	

Installation Accessories		
Part No.	Description	
FR1978	3/4"DD x 16.5MM-36 Chrome Moly U-Joint	
FR1934	1"DD x 3/4"DD Chrome Moly U-Joint	
FR1850	18" DD Steering Shaft	

**EZ Go Column Dress Up Kit** 

This golf cart dress up kit includes a 5/6 bolt wheel adapter and polished stainless tube with bushings. It provides your existing straight column a streamlined appearance with the addition of any popular 5 or 6 bolt aftermarket steering wheels. Steering wheel not included.

Golf Cart Dress Up Kit		
Part No.	Description	
FR400KT	Dress Up Kit	
FR20014AD	5/6 Bolt Adapter	

Slip Fit Tilt Steering
Column Conversions
Designed to slide over the existing
steering column tube and add tilt
steering to any Club Car or utility cart.
Steering wheel not included.



### **Steering Column Manufacturing**













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FLAMING RIVER  MADE IN  USGE  TO THE PROPERTY OF THE PROPERTY			
Quality Steering Systems	022		
70			

## **Steering Wheels**







Style	Color
Banjo 15" Steer	ing Wheel
FR20128BJBK	Black - FR Column
FR20128BJLG	Light Gray - FR Column
FR20128BJLTN	Light Tan - FR Column
FR20128GMBK	Black - GM Column
FR20128GMLG	Light Grey - GM Column
FR20113LHN	Large Horn Button for 9 Bolt Wheel - Included with Wheel

FR20113LHN Shown Installed In FR20128BJLT



FR20128BJBK Banjo Black Leather





## Nostalgia

1953-62 Corvette Steering Wheel Adapters Smooth radius design allows for original or aftermarket steering wheels onto a Flaming River 53-62 Steering Column (FR1999VTR style).

FR20156SS Std. Corvette

FR20157SS 6 Bolt

Part No.	Description
Nostalgia / Cor	rvette Steerling Wheels Molded
FR20151HRN	Steering Column Access: Horn Button Assembly
FR20171BK	"Leather Like" Molded Black with OE "Vette" Bolt Pattern Center
FR20172BK	"Leather Like" Molded Black with FR 6 Bolt Pattern Center
FR20173BK	"Leather Like" Molded Black with FR 6 Bolt Pattern Powder Coat Black Center

Part No.	Description		
Nostalgia / Co leather	Nostalgia / Corvette Steering Wheels Italian leather		
FR20152BK	Vette 6 Bolt Laser Chrome15" (Black Leather)		
FR20152LG	Vette 6 Bolt Laser Chrome15" (Light Grey Leather)		
FR20152RE	Vette 6 Bolt Laser Chrome15" (Red Leather)		
53-62 Corvette Steering wheel adapters			
FR20156SS	Wheel Adapter: Vette "Bell" Vette bolt pattern		
FR20157SS	Wheel Adapter: Vette "Bell" 6 bolt pattern		



### **Tuff Wheels for Mopar**

The popular Mopar "Tuff" Wheel is becoming more and more popular in muscle cars. Our Tuff Wheel is Made in the USA and features a molded comfort grip with a similar feel to the original, but is much more durable. This wheel also comes complete with polished stainless spokes, a horn button, and cover. 14" diameter.

Part No.	Description
FR20161	14" Tuff Wheel Chrome
FR20161S	14" Tuff Wheel Satin Sheen Powder Coat
FR20161AD	Wheel Adapter: For Tuff Wheel to FR Tilt column
FR20161CAP	Steering Wheel Access: Mopar "Tuff" Horn Cap

Tuff Wheel Horn Cover - included with Wheel FR20161CAP





Tuff Wheel & Adapter mounted onto a Flaming River Mopar Tilt Column





The popular "Tuff" Wheel is becoming more and more popular in muscle cars. Our Muscle Tuff Wheel is Made in the USA and features a molded comfort grip with a similar feel to the original, but is much more durable. This wheel also comes complete with chrome spokes, a horn button, and cover. 14" diameter. Includes billet polished aluminum Horn Button Assembly.

Part No.	Description
FR20174KT	14" Muscle Tuff Wheel with 9 Bolt Adapter and Polished Horn Button
FR20113	9 Bolt Wheel Adapter



- 14" Diameter
- Includes 9 Bolt Wheel Adapter
- Includes Polished Horn Button
- Chrome Spokes
- Molded Comfort Grip



f I t Doesn't Say Flaming River...
I t Just I sn't Good Enough!



#### Cascade



FR20160TN

Tan 13.8" Dia.







A modular pattern leather grip is highlighted with a flowing spoke design, in billet aluminum, for a modern spin on a classic style. Made with Premium Italian Leather. Adds a unique touch to any ride! Cascade Steering Wheel

FR20160DG **Slate Grey** 13.8" Dia.

FR20160

Black

13.8" Dia.



**Cascade Wheel Adapter** 

**Our Cascade Steering Wheels require a custom** adapter to mount on a Flaming River Tilt Columns or stock columns.

FR20160AD FR20160ADOE

Hand Stitched Lalian Leathar







### **Accessories**

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### **Electrical Accessories**

Cruise Control Kit
This aftermarket cruise control
kit, with a GM style lever, can be
installed on your Flaming River Tilt
Column. Note: For vehicles with
non-computer engines only. Order
this when you order your Flaming
River column and we will install it
for you. Non-returnable.

FR20118-4







Dimmer Switch Kit
Turn signal lever can be ordered
with a discreet micro switch. A
relay master unit is included for
high beam/low beam operation.
Note: Installed on column only.
Order this when you order your
Flaming River column and we will
install it for you. Non-returnable.
FR20118-3







Cancelling Cam / Horn Contact
Spring-loaded horn wire and cancelling cam are included with every
Flaming River Tilt Column
FR20120HN
FR20024SC

Hazard Kit (4-Way Flashers)
Designed for pre-1969 vehicles, this
Flasher Kit is available for vehicles that
were not originally equipped with 4-Way
Flashers. Includes flasher, female adapter,
and terminals.
FR20118-1

Female Wiring Connector Kit (4-1/4")
Female plug for Flaming River Tilt
Columns. Supplied with terminals
and can be used to adapt any existing wiring harness to mare with
Flaming River 4-1/4" connector.
FR20118



Neutral Safety Switch
A Neutral Safety Switch is recommended for all Column Shift style columns. Add "NE" to end of part number when ordering. Must be ordered with column.

Female Wiring Connector Kit (67-68 Camaro)
Horseshoe-shaped connector used in 1967-68 Camaro. (FR20118 Plug Adapter could be used in place of this adapter).
FR20118-2



# Wheel Adapters



Polished Horn Button fits appearance."

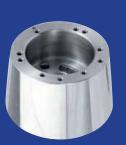
9 Bolt Wheel Adapter

Polished Aluminum Wheel Adapters with a 2-1/2" total height, fits perfectly with Flaming River Tilt Columns and Steering Wheels. This adapter actually fits on the column shroud for a "seamless appearance."





9 Bolt Pattern - 2-1/2" Tall	
FR20113	FR Column
FR20113FD	FR Ford Columns
FR201130E	GM Column
FR20145	Billet Specialties Wheel to FR Tilt Column



Tapered Style 5/6 Bolt Pattern - 2-1/2" Tall  FR20119TA FR Column  FR20119OE GM Column  FR20119TA-BK FR Column Black Powder coat  FR20119TA-CLR FR Column Clear Powder coat  FR20119TAS FR Column Satin Finish  FR20119FD FR Ford Column  FR20143 67 & Prior GM Columns  FR201440E-M Motolita Wheel To GM Column		
FR201190E GM Column  FR20119TA-BK FR Column Black Powder coat  FR20119TA-CLR FR Column Clear Powder coat  FR20119TAS FR Column Satin Finish  FR20119FD FR Ford Column  FR20143 67 & Prior GM Columns  FR201440E-M Motolita Wheel To	• •	
FR20119TA-BK FR Column Black Powder coat  FR20119TA-CLR FR Column Clear Powder coat  FR20119TAS FR Column Satin Finish  FR20119FD FR Ford Column  FR20143 67 & Prior GM Columns  FR201440E-M Motolita Wheel To	FR20119TA	FR Column
Powder coat  FR20119TA-CLR FR Column Clear Powder coat  FR20119TAS FR Column Satin Finish  FR20119FD FR Ford Column  FR20143 67 & Prior GM Columns  FR201440E-M Motolita Wheel To	FR201190E	GM Column
FR20119TAS FR Column Satin Finish FR20119FD FR Ford Column FR20143 67 & Prior GM Columns FR201440E-M Motolita Wheel To	FR20119TA-BK	
Satin Finish FR20119FD FR Ford Column FR20143 67 & Prior GM Columns FR201440E-M Motolita Wheel To	FR20119TA-CLR	
FR20143 67 & Prior GM Columns FR201440E-M Motolita Wheel To	FR20119TAS	
Columns FR201440E-M Motolita Wheel To	FR20119FD	FR Ford Column
	FR20143	
	FR201440E-M	



	GW Column
WaterFall Steering Wheel Adapter - 2-1/2" Tall	
FR20150HGAD	FR Column
FR201500E	GM Column
FR20150M69	Dodge 1966-69
FR20150M70	Dodge 1970-75
FR20150GM	67 & Prior GM Columns
FR20150FD	FR Ford Column
Corvette Wheel Adapter to a Flaming River Tilt - 2-1/2" Tall	
FR2000VT-AD	Polished
FR2000VT-ADBI	K Black Powder coat



Billet Roadster Column Steering Wheel Adapter	
FR20119	3 to 5/6 Bolt Adapter



Bell Style 5/6 Bolt Pattern 2-1/2" Tall		
FR20119BA	FR Column	



Adapter - 2-1/2" Tall	
FR3302	FR Column
FR33020E	GM Column
FR3302FD	FR Ford Column
FR3304	Roadster Column
FR3304BK	Roadster Column - Black Powder coat

3 Bolt Steering Wheel



1953-62 Corvette Steering Wheel Adapters for Flaming River FR1999VTR Columns 1-13/16" Tall

FR20156SS	Original Vette
FR20157SS	Aftermarket 5/6 Bolt

## **Wheel Adapters**



Tuff Wheel Adapter 1-13/16" Tall

FR20161AD Flaming River Tilt Column

Cascade Wheel Adapter 2-1/2" Tall

FR20160AD FR Tilt Column

FR20160ADOE GM Column

Delta D Wheel Adapter 2-3/8" Tall

FR20167AD Flaming River
Tilt Column





FR20180 5/6 Bolt

1970-74 Mopar "E" Body

5/6 Bolt

Patterns WaterFall

Wheel

Steering Columns.

FR20119D0

FR20119D02



1970-75 Mopar - 3-1/4" Tall

FR20181 5/6 Bolt

The 5/6 Bolt Tapered Wheel Adapter will work for both Flaming River® and GM Columns



FR20119TA 5/6 Bolt Tapered Wheel Adapter installed on a Flaming River Tilt Key Column



FR20143 67 & Prior Wheel Adapter installed on a 66 Chevelle Steering Column.

### Column Accessories

**Billet Dress Up Kit** Patent #D615.466

Sleek one-piece design now included with all Tilt Steering Columns. Kit includes turn signal lever, tilt lever, and hazard knob. Available in Mill, Polished, and Black Powder coat finishes.

FR20112AL FR20112APL FR20112BK





Lokar Billet Aluminum Linkage Kit This adjustable kit connects and aligns a gearshift arm to a GM automatic transmission. Includes adjustable billet aluminum arm, two adjustable Heim-style connectors, a shift rod, and all mounting hardware.

FR20010RK2 6 Speed Transmission FR20010RK 3/4 Speed Transmission



Lokar Cable Shift Linkage kit Lokar Cable Shift Linkage is the ultimate answer to clearance issues. The cable allows you to route around transmissions, exhaust, cross members and brake pedals. Can be used on either side of the column. The cable has a Teflon-lined black housing with stainless inner-wire, measuring 5 ft. in length. Ready-to-install hardware and brackets included in kit - no cutting or measuring. FR20010CBL



**Kugel Components Stainless** Steel Linkage Kit This linkage kit connects the column or floor shifter to almost any GM transmission and allows for easy gear pointer alignment.

FR20010LK FR20010LK-S



**Shift Indicator Adjustment Kit** 

This sliding linkage arm allows for perfect alignment of your transmission with your steering column indicator. The machined sliding mechanism locks into position at the exact location you need for any transmission. The range of motion.

innovation AWARD Solo minue precision machined bushing design can be reversed to increase the

HOTRODA

Indicator housing, lens and pointer included with each column at no additional charge.



Part No.	Description
FR20010-KITC	Chrome Indicator housing, Pointer and Lens
FR20010-0VKITC	Chrome Indicator housing, Pointer and Overdrive Lens
FR20010LN0	Overdrive Lens
FR20010P0	Pointer

#### **Ignition Switch with Column Mount**

A new billet aluminum column mount with ignition key provides a stylish way to mount your column and key. The reversible design can mount the key on either the left or right side of the column.

FR20114KYPL

#### **Billet Dash Mount with Ignition Key**

Relocate your ignition switch to underneath the dash with this stylish billet aluminum mount. It easily bolts to the stock dash for convenient mounting in Jeeps, Camaros, Chevelles, Street Rods, and limitless other applications. Ignition switch and boot included.

FR20114KY-2PL (Shown with Shim FR20114SH-2)

Part No.	Description
FR20114KYPL	Column Mount with Ignition
FR20114KY-2PL	Column Mount with Ignition & 12V Acc.
FR20114SH-1	Shim to drop 3/4"
FR20114SH-2	Shim to drop 1-1/4"
FR20114SH-3	Shim to drop 2"





#### **Dual Column Mount with 12V Accessory**

This mount not only provides a convenient mount for your ignition but also includes a 12 Volt Adapter to keep your cell phone or other vehicle accessory charged while you're on the road. Can also be used to mount headlight switch in place of 12 Volt outlet. A protective rubber boot for the ignition switch is included.



Part No.	Description
FRIGN4-1	Dual Mount Mill Finish - Billet Mount Only
FRIGN4	Dual Mount Mill Finish
FRIGN4-1PL	Dual Mount Polished - Billet Mount Only
FRIGN4PL	Dual Mount Polished
FRIGN3-1	Single Mount Mill Finish - Billet Mount Only
FRIGN3	Single Mount Mill Finish - with Key
FRIGN3-1PL	Single Mount Polished - Billet Mount Only
FRIGN3PL	Single Mount Polished - with Key

Polished Open Column Drop
Machined from billet aluminum with a smooth
radius edge. Measure from top of hinge to center of
column opening to determine what length you need

Size Drop	Diameter	Part No.
5-1/2"	1-3/4"	FR20105-COPL
6-1/2"	1-3/4"	FR20106-COPL



**Slanted Dash Mount** 

8 Degree Mounting Angle

Fits vehicles with a slanted dash, including the 1932 Ford Roadster.

Part No.	Description
	2 in. Dia. 4-1/2 in. length 8 Degree Mounting Angle Polished
	2 in. Dia. 5-1/2 in. length 8 Degree Mounting Angle Polished

### **Column Drops**

Column Drops

Flaming River's Column Drops feature a sleek, hinged design. These are machined from billet aluminum with a smooth radius edge and are available in a satin or polished finish. Choose 1-3/4" or 2" diameter to fit all Flaming River columns.

Size Drop	1-3/4" Dia	2" Dia	Key Column
2-1/2"	FR20102	FR20107	FR20107K
3-1/2"	FR20103	FR20108	FR20108K
4-1/2"	FR20104	FR20109	FR20109K
5-1/2"	FR20105	FR20110	FR20110K
6-1/2"	FR20106	FR20111	FR20111K
Add PL for Polished			



Slanted Dash Mounte

**For Your Slanted Dash** 

**8 Degree Mounting Angle** 



**Mounting Clamps** (Under OEM Dash)

These billet aluminum clamps can be used with virtually all OEM applications to facilitate installation of a Flaming River Tilt Column into a vehicle's existing dash.



**Polished Floor Mount** 

**Billet Aluminum Swivel Design Floor** 

Mount with a ball and collar design, simplifies column installation by allowing up to 60° angle. Available in both 1-3/4" and 2" diameter to fit all Flaming River column styles. Polished finish. For a finishing touch, add our Floor Mount Firewall Cover (FR20100CVR).

Floor Mount Firewall Cover

Polished aluminum cover to finish the engine side of the floor mount. Conceals the screws for a finishing touch.

Part No.	Description
FR20100	1-3/4" Floor Mount
FR20101	2" Floor mount
FR20100CVR	Floor Mount Cover





Part No.	Description
FR20114	2" Dash Mount
FR20114K	Key Column Dash Mount
FR20114-2	1-3/4" Dash Mount
FR20114-3	G-Body Dash Mount
FR20114-4	67-68 Camaro Column Mount
FR20114-5	69-82 Corvette Key Column Mount

# Floor Mount Replacement Systems



#### Polished Aluminum Swivel Floor Mounts With Satin Back Plates.



# **Universal Joints**



	8		
Application	Size	Spline Dia.	Spline
Ford Rack			
Mustang II & Pinto Manual	9/16"-26	.563	26
Mustang II & Pinto Power	3/4"-36	.750	36
Ford Box			
Manual & Power	3/4"-36	.750	36
GM Box Manual			
Vega	5/8"-36	.625	36
Corvair	5/8"-36	.625	36
Corvette (63-68)	3/4"-36	.750	36
Corvette (69-82)	3/4"-30	.750	30
Model 122 (65-85)	3/4"-30	.750	30
	3/4"-36	.750	36
Model 525 (86 - Present)	3/4"-30	.750	30
GM Power Box			
Model 605 (78-84)	3/4"-30	.750	30
Model 800 (77-Prior)	13/16"-36	.813	36
Model 800 (78-Present)	3/4"-30	.750	30
GM Rack			
79-Present	5/8"-36	.625	36
Variations	3/4"-30	.750	30
Corvette (84-Present)	17MM DD	.670	.570
Fiero	17MM DD	.670	.570
Chrysler Box or Rack			
Omni Manual	9/16"-26	.563	26
Omni Power	9/16"-36	.563	36
Power Box	5/8"-36C		36
Manual Box	3/4"-36	.750	36
Misc.			
Jaguar & MGB	3/4"-48	.750	48
VW Rabbit - Diesel	3/4"-36	.750	36
BMW	17MM-54	.670	54



Application	Size	Spline Dia.	Spline
GM Column			
Small Spline	3/4"-36	.750	36
Large Spline	1"-48	1.00	48
Small DD	3/4"-DD	.750	DD
Large DD	1"-DD	1.00	DD
Ford Column			
Small Spline	3/4"-36	.750	36
Small DD	3/4"-DD	.750	DD
Large DD	1"-DD	1.00	DD

Six Simple Steps for Ordering a Flaming River Steering System: 1. Choose the type of intermediate shaft you will be using-Splined or DD. This will determine one side of the Universal Joint that you will need to order.

- 2. Determine whether you will need a two or three U-Joint system. This is dictated by the angle-we recommend a 15° angle for the optimal setup, however up to 30° is acceptable. If using a three U-Joint system, a Support Bearing is necessary. The center U-Joint should either be 3/4" DD X 3/4" DD or 3/4"-36 X 3/4"-36 depending on whether you are using splined or DD shafts.
- 3. Use the Reference Application Chart to select the proper Rack and Pinion or Steering Box spline size for your system. If the chart does not list your application, just measure the diameter of the shaft and count the number of individual splines. If there is a flat, count half of the splines and then double that number.
- 4. Measure your column's output shaft. If it is a DD shaft (two rounds, two flats), then measure the rounds-it will either be a 1" DD or 3/4" DD. If there are splines, then measure the diameter and count the individual splines-it will either be 1"-48 or 3/4"-36.
- 5. If you are using splined shafts and a two U-Joint system, then measure the distance between the steering gear shaft and the column and then subtract 3-1/4". Round this number up to the next whole number to determine the shaft length you reauire.
- 6. If you are using a three U-Joint system, we recommend using dowel rods to mock up the system. Simply measure the length of the dowel rod and this will be the length of the shaft you will require. DD shafting can easily be cut down to size.

#### **Important Notes:**

- Phasing Keep the forks of the yokes closest to each other in line, and parallel to the center of the shaft to avoid binding.
- NEVER weld a Universal Joint! Welding reduces the strength of the metal and can melt the needle bearing seal.
- Set screws are supplied on all splined and DD Universal Joints. However, it is necessary to indent, by drilling, the shaft to properly secure the set screw mechanism. A red thread locker
  - should also be used. Periodically inspect the set screws to ensure tightness.
- The shaft should be installed 7/8" into the yoke (flush). A shaft that does not engage fully, could sacrifice the strength of the system. However, if a shaft is too long, it can cause the shaft to interfere (bind) with the operation of the system.





Steering Column Shaft Sizes			
Application	Size	Dia.	Spline
GM Column			
Small Spline	3/4"-36	.750	36
Large Spline	1"-48	1.00	48
Small DD	3/4"-DD	.750	DD
Large DD	1"-DD	1.00	DD
Ford Column			
Small Spline	3/4"-36	.750	36
Small DD	3/4"-DD	.750	DD
Large DD	1"-DD	1.00	DD

#### The Billet-Joint® -

Satin Polished (Polished U-Joints are Non-Returnable) Universal Joints are CNC-machined from aircraft steel to precision tolerances. The sealed needle bearing design will last ten times longer than a standard pin and block universal joint. The unique nickel plating prevents rust without the hassle of painting. Polishing available for a stainless look at a nominal charge.

### <u>Billet-Joint</u> <u>Quick Order Installation Kits</u> Save by Ordering U-Joints as a Kit! Each kit includes (2) two

Save by Ordering U-Joints as a Kit! Each kit includes (2) two nickel-plated needle bearing Billet-Joints® and (1) one extra-long 22" DD shaft. Stainless U-Joint kits also available.

Part No.	Column/Rack	Application
FRUJKT1	1"DD / 9/16"-26	FR Manual Racks
FRUJKT2	1"DD / 5/8"-36	Vega / Corvair Box
FRUJKT3	1"DD / 3/4"-36	Mustang Power
FRUJKT4	1"DD / FR Power	FR Power Racks
FRUJKT5	1"DD / 3/4"-30	GM Power Box - 78 to Present
FRUJKT6	1"DD / 13/16"-36	GM Power Box - 77 and Prior
FRUJKT7	3/4"DD / 3/4"DD	Center U-Joint with Support Bearing & Bracket

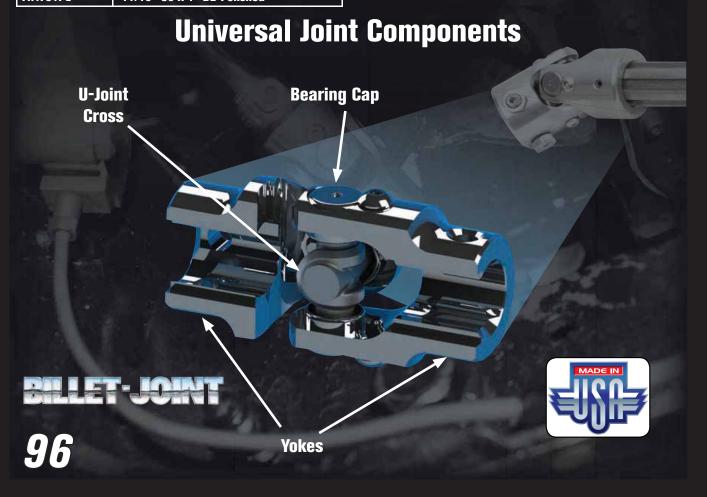


Part No.	Description BILLET-JOINT	
FR1700	3/4" X 3/4"	Ĭ
FR1700PL	3/4" X 3/4" Polished	
FR1701	3/4" X 9/16"-26	
FR1701PL	3/4" X 9/16"-26 Polished	
FR1702	3/4" X 3/4"-36	
FR1702PL	3/4" X 3/4"-36 Polished	
FR1703	3/4" X 3/4"-30	
FR1703PL	3/4" X 3/4"-30 Polished	
FR1704	3/4" X 5/8"-36	
FR1704PL	3/4" X 5/8"-36 Polished	
FR1705	3/4" X 1"-48	
FR1705PL	3/4" X 1"-48 Polished	
FR1706DD FR1706DDPL	3/4" X 3/4"DD 3/4" X 3/4"DD Polished	
	3/4" X 1"DD	
FR1707DD		
FR1707DDPL	3/4" X 1"DD Polished	
FR1708	9/16"-26 X 3/4"-36	
FR1708PL	9/16"-26 X 3/4"-36 Polished	
FR1709DD	9/16"-26 X 3/4"DD	
FR1709DDPL	9/16"-26 X 3/4"DD Polished	
FR1710DD	1"-48 X 1"DD	
FR1710DDPL	1"-48 X 1"DD Polished	
FR1711	3/4"-36 X 3/4"-36	
FR1711PL	3/4"-36 X 3/4"-36 Polished	
FR1712DD	1"-48 X 3/4"DD	
FR1712DDPL	1"-48 X 3/4"DD Polished	
FR1713	1"-48 X 3/4"-36	
FR1713PL	1"-48 X 3/4"-36 Polished	
FR1714DD	1"DD X 3/4"-36	
FR1714DDPL	1"DD X 3/4"-36 Polished	
FR1715DD	3/4"-36 X 3/4"DD	
FR1715DDPL	3/4"-36 X 3/4"DD Polished	
FR1716DD	3/4"DD X 3/4"DD	
FR1716DDPL	3/4"DD X 3/4"DD Polished	
FR1717DD	1"DD X 3/4"DD	
FR1717DDPL	1"DD X 3/4"DD Polished	
FR1718	13/16"-36 X 3/4"	
FR1718PL	13/16"-36 X 3/4" Polished	
FR1719DD	13/16"-36 X 3/4"DD	
FR1719DDPL	13/16"-36 X 3/4"DD Polished	
FR1720	3/4"-48 X 3/4"	
FR1720PL	3/4"-48 X 3/4" Polished	
FR1722DD	5/8"-36 X 3/4"DD	
FR1722PL	5/8"-36 X 3/4"DD Polished	
FR1723	13/16"-36 X 3/4"-36	
FR1723PL	13/16"-36 X 3/4"-36 Polished	
FR1724	3/4"-30 X 3/4"-36	

Part No.	Description 214 3 1 2 1 1 1
FR1724PL	3/4"-30 X 3/4"-36 Polished
FR1725DD	3/4" X 17mm DD
FR1725DDPL	3/4" X 17mm DD Polished
FR1726	5/8"-36 X 3/4"-36
FR1726PL	5/8"-36 X 3/4"-36 Polished
FR1727DD	3/4"-48 X 1"DD
FR1727DDPL	3/4"-48 X 1"DD Polished
FR1728DD	3/4"-48 X 3/4"DD
FR1728DDPL	3/4"-48 X 3/4"DD Polished
FR1729	3/4"-48 X 3/4"-36
FR1729PL	3/4"-48 X 3/4"-36 Polished
FR1730	3/4"-48 X 17mm DD
FR1730PL	3/4"-48 X 17mm DD Polished
FR1731	3/4"-48 X 3/4"-48
FR1731PL	3/4"-48 X 3/4"-48 Polished
FR1733DD	3/4"-30 X 3/4"DD
FR1733DDPL	3/4"-30 X 3/4"DD Polished
FR1734	1"-48 X 3/4"-30
FR1734PL	1"-48 X 3/4"-30 Polished
FR1735DD	5/8"-36 X 1"DD
FR1735DDPL	5/8"-36 X 1"DD Polished
FR1736	3/4"-36 X 17mm DD
FR1736PL	3/4"-36 X 17mm DD Polished
FR1737	9/16"-26 X 3/4"-48
FR1737PL	9/16"-26 X 3/4"-48 Polished
FR1738	1" x 1"
FR1738PL	1" x 1" Polished
FR1739	5/8 inch X 7/8 inch
FR1740	1" x 3/4"
FR1740PL	1" x 3/4" Polished
FR1742	1" x 3/4"-36
FR1743DD	1"DD X 9/16"-26
FR1743DDPL	1"DD X 9/16"-26 Polished
FR1744	13/16"-36 X 1"-48
FR1744PL	13/16"-36 X 1"-48 Polished
FR1745	1"-48 X 5/8"-36
FR1745PL	1"-48 X 5/8"-36 Polished
FR1746DD	1" DD X 3/4"-30
FR1746DDPL	1" DD X 3/4"-30 Polished
FR1749	5/8"-36 X 5/8 inch-36
FR1749DD	3/4"DD X 1"
FR1749DDPL	3/4"DD X 1" Polished
FR1749PL	5/8"-36 X 5/8 inch-36 Polished
FR1750	7/8" x 3/4 DD
FR1750C	9/16"-26 X 5/8"-36(Chry)
FR1750CPL	9/16"-26 X 5/8"-36(Chry) Polished

Part No.	Description SILLET JOINT
FR1750PL	3/4"DD X 7/8 Dia Polished
FR1754	1"DD X 1"DD
FR1754PL	1"DD X 1"DD Polished
FR1755	5/8"-36(Chry) X 3/4"DD
FR1755PL	5/8"-36(Chry) X 3/4"DD Polished
FR1756	5/8"-36(Chry) X 3/4"-36
FR1756PL	5/8"-36(Chry) X 3/4"-36 Polished
FR1757	5/8"-36(Chry) X 3/4"
FR1757PL	5/8"-36(Chry) X 3/4" Polished
FR1758	13/16"-36 X 1"DD
FR1758PL	13/16"-36 X 1"DD Polished
FR1759DD	17mm DD X 3/4"DD
FR1759DDPL	17mm DD X 3/4"DD Polished
FR1760	13/16 inch-36 X 13/16 inch-36
FR1760PL	13/16 inch-36 X 13/16 inch-36 Polished
FR1761	9/16"-36 X 9/16"-36
FR1761PL	9/16"-36 X 9/16"-36 Polished
FR1762DD	9/16"-36 X 3/4"DD
FR1762DDPL	9/16"-36 X 3/4"DD Polished
FR1763	5/8"-36 X 1"
FR1780	11/16"-36 X 3/4"
FR1780PL	11/16"-36 X 3/4" Polished
FR1781	11/16"-36 X 1" DD
FR1781PL	11/16"-36 X 1" DD Polished

Part No.	Description Example 1
FR1782	11/16"-36 X 3/4"-36
FR1782PL	11/16"-36 X 3/4"-36 Polished
FR1783DD	11/16"-36 X 3/4" DD
FR1783DDPL	11/16"-36 X 3/4" DD Polished
FR1784DD	Triangle Yoke X 1" DD
FR1784DDPL	Triangle Yoke X 1" DD Polished
FR1785DD	11/16"-36 X 1"-48
FR1785DDPL	11/16"-36 X 1"-48 Polished
FR1786DD	Triangle Yoke X 3/4"
FR1786PL	Triangle Yoke X 3/4" Polished
FR1788	Triangle Yoke X 3/4"-36
FR1788PL	Triangle Yoke X 3/4"-36 Polished
FR1789-9	13/16"-36 x 1"
FR1789-9PL	13/16"-36 x 1" Polished
FR1789DD	Triangle Yoke X 3/4" DD
FR1789DDPL	Triangle Yoke X 3/4" DD Polished
FR1789P	FR Power Rack U-joint: pyr x 3/4-DD®
FR1789P-2	FR Power Rack U-joint: pyr x 3/4-36
FR1789P-2PL	FR Power X 3/4-36 Polished
FR1789P-3	FR Power X 1" DD
FR1789P-3PL	FR Power X 1" DD Polished
FR1789P-4	FR Power X 3/4"
FR1789PPL	FR Power X 3/4" DD Polished



#### **Stainless Steel**



Stainless Steel Universal Joints
Flaming River now introduces a new Stainless Steel
Universal Joint series. We have carefully selected
303 Stainless Steel for its strength, superior corrosion
resistance and shine. Our stainless steel universal
joints have such a precision machined finish that they
look great right out of the box.

## Stainless Steel Quick Order Installation Kits

Installation Kits
Save by Ordering U-Joints as a Kit! Each kit includes (2) two
Stainless Steel needle bearing universal joints and (1) one
extra-long 22" DD stainless shaft. Satin or Polished finish



Part No.	Column/Rack	Application	
FRUJKT1SS	1"DD / 9/16"-26	FR Manual Racks	and the last
FRUJKT2SS	1"DD / 5/8"-36	Vega / Corvair Box	
FRUJKT3SS	1"DD / 3/4"-36	Mustang Power	-
FRUJKT4SS	1"DD / FR Power	FR Power Racks	and the same
FRUJKT5SS	1"DD / 3/4"-30	GM Power Box - 78 to Present	
FRUJKT6SS	1"DD / 13/16"-36	GM Power Box - 77 and Prior	
FRUJKT7SS	3/4"DD / 3/4"DD	Center U-Joint with Sup- port Bearing & Bracket	
		Lifetime Servicea	
		PLAMING RIVI	WIN THE REPORT OF THE PARTY OF
MAI	DE IN	CERTIFIED	





Town Navion	Description Stainless Steel
Part No.	Description Stainless Steel 3/4" X 3/4"-36
FR2502	
FR2508	9/16"-26 X 3/4"-36
FR2508PL	9/16"-26 X 3/4"-36 Polished
FR2509DD	9/16"-26 X 3/4" DD
FR2509DDPL	9/16"-26 X 3/4" DD Polished
FR2511	3/4"-36 X 3/4"-36
FR2511PL	3/4-36 X 3/4-36 Polished
FR2512DD	1"-48 X 3/4" DD
FR2512DDPL	1"-48 X 3/4" DD Polished
FR2513	1"-48 X 3/4"-36
FR2513PL	1"-48 X 3/4"-36 Polished
FR2514DD	1" DD X 3/4"-36
FR2514DDPL	1" DD X 3/4"-36 Polished
FR2515DD	3/4"-36 X 3/4" DD
FR2515DDPL	3/4-36 X 3/4" DD Polished
FR2516DD	3/4" DD X 3/4" DD
FR2516DDPL	3/4" DD X 3/4" DD Polished
FR2517DD	1" DD X 3/4" DD
FR2517DDPL	1" DD X 3/4" DD Polished
FR2519DD	13/16"-36 X 3/4 DD
FR2519DDPL	13/16"-36 X 3/4 DD Polished
FR2522DD	5/8"-36 X 3/4" DD
FR2522DDPL	5/8"-36 X 3/4" DD Polished
FR2523	13/16"-36 X 3/4"-36
FR2523PL	13/16"-36 X 3/4"-36 Polished
FR2524	3/4"-30 X 3/4"-36
FR2524PL	3/4"-30 X 3/4"-36 Polished
FR2526	5/8"-36 X 3/4"-36
FR2526PL	5/8"-36 X 3/4"-36 Polished
FR2528DD	3/4"-48 X 3/4" DD
FR2528DDPL	3/4"-48 X 3/4" DD Polished
FR2529	3/4"-48 X 3/4"-36
FR2529PL	3/4"-48 X 3/4"-36 Polished
FR2530DD	17mm DD X 3/4"-48
FR2530DDPL	17mm DD X 3/4"-48 Polished
FR2533DD	3/4"-30 X 3/4" DD
FR2533DDPL	3/4"-30 X 3/4" DD Polished
FR2534	1"-48 X 3/4"-30
FR2536DD	17mm DD X 3/4"-36
FR2536DDPL	17mm DD X 3/4"-36 Polished
FR2546DD	1" DD X 3/4"-30
FR2546DDPL	1" DD X 3/4"-30 Polished
FR2555C	5/8"-36C X 3/4" DD
FR2555CPL	5/8"-36C X 3/4" DD Polished
FR2556C	5/8"-36C X 3/4"-36

Part No.	Description Stainless Steel
FR2556CPL	5/8"-36C X 3/4"-36 Polished
FR2559DD	17mm DD X 3/4"DD
FR2559DDPL	17mm DD X 3/4" DD Polished
FR2561	9/16"-36 X 9/16"-36
FR2561PL	9/16"-36 X 9/16"-36 Polished
FR2562DD	9/16"-36 X 3/4" DD
FR2562DDPL	9/16"-36 X 3/4" DD Polished
FR2563	17mm-54 X 3/4" DD
FR2564	17mm-54 X 1" DD
FR2567	M16.5-36 X M16.5-36
FR2570	9/16"-36 X 3/4"-36
FR2570PL	9/16"-36 X 3/4"-36 Polished
FR2582	11/16"-36 X 3/4"-36
FR2582PL	11/16"-36 X 3/4"-36 Polished
FR2583	11/16"-36 X 3/4" DD
FR2583PL	11/16"-36 X 3/4" DD Polished
FR2586	3/4" DD X 16.5 X 36
FR2587	3/4" X 16.5 X 36
FR2589-2	Stainless Steel U-Joint: 3/4" X 3/4"
FR2589-4	3/4" X 9/16"-26
FR2589-6	3/4" X 3/4" DD
FR2589-22	17mm-54 X 17mm-54
FR2589P	FR Power X 3/4" DD
FR2589P-2	FR Power X 3/4"-36
FR2589P-2PL	FR Power X 3/4"-36 Polished
FR2589P-3	FR Power X 1" DD
FR2589PPL	FR Power X 3/4" DD Polished
FR2598-13	17mm-54 X 3/4" DD Double
FR2598-26	17mm-54 X 17mm-54 DD Double



## Pinch Bolt Universal Joints

**Stainless Pinch Bolt Universal Joints** 

Stainless Pinch Bolt Universal Joints are CNC-machined from high-quality 304 stainless steel for added strength and durability. The high-strength shoulder bolt securely clamps the yoke to the shaft for a smooth, low-profile appearance.



Part No.	Description
FR2703	3/4"-30 x 3/4" Satin Finish
FR2703PL	3/4"-30 x 3/4" Polished Finish
FR2704	5/8"-36 x 3/4" Satin Finish
FR2704PL	5/8"-36 x 3/4" Polished Finish
FR2708	9/16"-26 X 3/4"-36 Satin Finish
FR2708PL	9/16"-26 X 3/4"-36 Polished Finish
FR2709DD	9/16"-26 x 3/4" DD Satin Finish
FR2709DDPL	9/16"-26 x 3/4" DD Polished Finish
FR2711	3/4"-36 x 3/4"-36 Satin Finish
FR2711PL	3/4"-36 x 3/4"-36 Polished Finish
FR2715DD	3/4"-36 x 3/4" DD Satin Finish
FR2715DDPL	3/4"-36 x 3/4" DD Polished Finish
FR2716DD	3/4" DD x 3/4" DD Satin Finish
FR2716DDPL	3/4" DD x 3/4" DD Polished Finish

Part No.	Description
FR2717DD	3/4" DD x 1" DD Satin Finish
FR2717DDPL	3/4" DD x 1" DD Polished Finish
FR2718	13/16"-36 x 3/4" Satin Finish
FR2719DD	13/16"-36 x 3/4" DD Satin Finish
FR2722DD	5/8"-36 x 3/4" DD Satin Finish
FR2722DDPL	5/8"-36 x 3/4" DD Polished Finish
FR2723	3/4"-36 x 13/16"-36 Satin Finish
FR2725DD	17MMDD x 3/4" Satin Finish
FR2725DDPL	17MMDD x 3/4" Polished Finish
FR2726	3/4"-36 5/8"-36 Satin Finish
FR2726PL	3/4"-36 5/8"-36 Polished Finish
FR2733DD	3/4"-30 x 3/4" DD Satin Finish
FR2733DDPL	3/4"-30 x 3/4" DD Polished Finish

Forged True®

Forged Universal Joints
These Forged Universal Joints have a needle bearing design and are ideal for

performance applications. These U-Joints can be welded and pinned as required by sanctioning bodies. Available in most popular sizes, including 3/4" smooth.

Rated at 350+ ft.. Lbs.. Black oxidized finish for corrosion resistance.





Part No.	Description
FR2630	3/4" X 3/4"
FR2631	3/4" X 9/16"-26
FR2632	3/4 X 5/8"-36
FR2633	3/4" X 5/8"-36C
FR2634	3/4" X 3/4"-30
FR2635	3/4" X 3/4"-36
FR2636	3/4" X 13/16"-36

Part No.	Description
FR2637	3/4" X 3/4"-48
FR2638	3/4" X 17mm DD
FR2640	3/4" X 3/4"-20
FR2642	5/8"-36 X 5/8"-36
FR2643	3/4"-36 X 3/4" DD
FR2644	3/4" DD X 3/4" DD
FR2645	3/4" DD X 9/16"-26

Part No.	Description
FR2646	3/4"-48 X 3/4"-20
FR2647	3/4"-30 X 3/4"-20
FR2648	3/4" DD X 3/4"
FR2651	3/4"-36 X 3/4"-36
FR2655	3/4" DD X 13/16"-36
FR2661	3/4"-20 X 5/8"-36

### **Double U-Joints / Vibration Resistors**



#### **Billet Double Universal Joints**

A complete line of Double Universal Joints are available. This design can accommodate up to a 60° angle for added flexibility when designing your steering system. The Double Universal Joints are also CNC-machined and Electroless nickel plated. Satin or Polished finish Overall Length is 5-1/8"

Part No.	Box/Column	Shaft		
FR1790	3/4"-36	3/4"-DD		
FR1791	9/16"-26	3/4"-DD		
FR1792	3/4"-36	3/4"-36		
FR1793	9/16"-26	3/4"-36		
FR1794	3/4"-DD	3/4"-DD		
FR1795	3/4"-30	3/4"-36		
FR1796	3/4"-DD	1"-48		
FR1797	3/4"	3/4"		
FR1798	3/4"-36	5/8"-36		
FR1798-1	3/4"-36	3/4"-48		
FR1798-2	3/4"	3/4"-DD		
FR1798-3	5/8"-36	3/4"-DD		
FR1798-4	7/8"	3/4"		



#### **Stainless Steel Double Universal Joints**

Part No.	Description
FR2592	3/4"-36 X 3/4"-36
FR2592PL	3/4"-36 X 3/4"-36 Polished
FR2593	9/16"-26 X 3/4"-36
FR2593PL	9/16"-26 X 3/4"-36 Polished
FR2594	3/4" DD X 3/4" DD



#### **Vibration Resistor Universal Joints**

Our Vibration Resistor Universal Joints utilize a bushing system of thermoplastic rubber to absorb vibration or "road feel" from the steering system. This unique, load-absorbing material is resistant to oil, salt, and weather conditions. Overall length is 4-3/4". Busing side of U-Joint is available in 3/4" DD or 3/4"-36. Custom sizes available.

**Satin or Polished finish** 

Part No.	Resistor/Bushing Side	Yoke/Shaft Side	
FR1880	3/4"-36	9/16"-26	
FR1881	3/4"-36	5/8"-36	
FR1882	3/4"-36	3/4"-30	
FR1883	3/4"-36	3/4"-36	
FR1884	3/4"-36	3/4"-48	
FR1885	3/4"-36	13/16"-36	
FR1886	3/4"-36	1"-48	
FR1887	3/4"-DD	3/4"-36	
FR1888	3/4"-36	1"-DD	
FR1889	3/4"-DD	9/16"-26	
FR1897	3/4"-DD	5/8"-36	
FR1898	3/4"-DD	3/4"-30	
FR1899	3/4"-DD	3/4"-48	
FR1893	3/4"-DD	13/16"-36	
FR1894	3/4"-DD	1"-48	
FR1895	3/4"-DD	3/4"-DD	
FR1896	3/4"-DD	1"-DD	

Part No.	Description
FR2594PL	3/4" DD X 3/4" DD Polished
FR2598-2	1" DD X 1"-48
FR2598-22	17MMDD X 3/4" DD
FR2598-22PL	17MMDD X 3/4" DD Polished
FR2598-2PL	1" DD X 1"-48 Polished

# **Chrome Moly**



#### **Chrome Moly Universal Joints**

Flaming River has designed and manufactured a new low-profile Chrome Moly U-Joint. These needle bearing universal joints can do not require lubrication, can accommodate up to a 35° angle and will outlast pin and block universal joints in racing applications. With a strength rating of 400+ ft. Lbs.., these can be used for street use. **Block oxidized finish for corrosion resistance.** 

Description
3/4" x 3/4"-20
3/4" x 3/4"-30
3/4" x 3/4"-36
3/4" x 13/16"-36
3/4" x 5/8"-36C*
3/4" x 5/8"-36
3/4" x 3/4"
3/4" x 9/16"-26
3/4" x 17MMDD
5/8"-36 x 5/8-36
3/4"-DD x 3/4"-DD
5/8"-36 x 3/4"-36
3/4"-36 x 3/4"-36
9/16"-26 x 3/4"-36
9/16"-26 x 3/4"-DD

Part No.	Description
FR1925	3/4"-36 x 3/4"-DD
FR1926	3/4" x 3/4"-DD
FR1927	5/8"-36 x 3/4"-DD
FR1928	3/4"-DD x 3/4"-30
FR1929	13/16" x 3/4"DD
FR1930	17MMDD x 3/4"-48
FR1932	17MMDD x 3/4"-DD
FR1934	1"DD x 3/4"-DD
FR1935	1"DD x 3/4"
FR1939-1	3/4"-36 x 1"DD
FR1939-10	5/8"-36C x 3/4"-DD
FR1939-11	1"DD x 9/16"-26
FR1939-15	5/8"-36 x 1"DD
FR1939-21	3/4"-30 x 3/4'-36
FR1939-22	3/4"DD x 3/4"-20

Part No.	Description	
FR1939-26	17MM-54 x 13/16"-36	
FR1939-41	17MM-54 x 3/4"	
FR1939-4	3/4"-36 x 17MMDD	
FR1939-8	3/4"-30 x 1"DD	
FR1939-9	1"DD x 1"DD	
FR1963	17MM-54 x 3/4"DD	
FR1964	17MM-54 x 1"DD	
FR1967	17MM-54 x 17MM-54	
FR1968	17MM-54 x 3/4"-36	
FR1969	FR Power x 3/4"DD	
FR1971	17MM-54 x 3/4"	
FR1977	FR Power x 3/4"	
FR1984	17MM-54 x 3/4"-20	
*Chrysler Power Box		



Flaming River has designed and manufactured a new Chrome Moly Needle-Bearing Double Universal Joint that allows for up to 80° angles. This Universal Joint is for applications where clearance and weight are primary concerns. These Needle Bearing U-Joints will outlast Pin and Block style U-Joints in racing applications and do not require lubrication. Standard strength rating is 300 foot Lbs.

Part No.	Description	Part No.	Description
FR2800	3/4" x 3/4"	FR2808	17MM-54 x 3/4"DD
FR2801	3/4" x 9/16"-26	FR2809	17MM-54 x 1"DD
FR2802	3/4" x 3/4"-36	FR2810	13/16"-36 x 1"DD
FR2803	9/16"-26 x 3/4"DD	FR2811	5/8"-36C x 1"DD
FR2804	3/4"-36 x 3/4"DD	FR2812	3/4"-48 x 3/4"
FR2805	3/4"DD x 3/4"DD	FR2813	3/4" x 3/4"DD
FR2806	3/4"DD x 1"DD	FR2814	3/4"DD x 17MMDD
FR2807	FR Power x 3/4"DD	FR2815	17MM-54 x 17MM-54

Part No.	Description
Part No. FR2816	3/4"-30 x 3/4"-36



### Couplers, Pin & Block U-Joints & Mil-Spec



Part No. Description Part No. **Description** FR1940 FR1944 3/4" x 3/4"-30 3/4" x 9/16"-26 FR1941 3/4" x 3/4"-36 FR1945 3/4"-DD x 3/4"-DD FR1942 3/4"-36 x 3/4"-36 FR1946 3/4" x 3/4"-DD FR1943 3/4" x 5/8"-36 FR1948 3/4" x 11/16"-36

Inspection Hote Inspection
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outside diameter of 1" (except FR1942, which is 1-1/4").

Part No.	Nomi- nal Size O.D.	0.D. "A" +.000 002	I.D. "G" + .004- .001	Max Dia. "J" +1/64	Length "B" +/- 1/	Max "C"	Min "D"
FR1800B8	1/2"	.495	.375	29/32	2-5/16"	5/8"	11/16"
FR1800B10	5/8"	.620	.500	1-3/32"	2-3/4"	3/4"	13/16"
FR1800B12	3/4"	.745	.625	1-1/32"	3-3/16"	7/8"	15/16"
FR1800B14	7/8"	.870	.750	1-1/2"	3-5/8"	1"	1-1/16"
	"H" +/- 1/64	Wt. (Lbs.)	Min. Ult. Static Torque (In Lbs.)	Axial Tension & Comp. (Lbs.)	Tension- al Play Max Degrees	Endur- ance torque Test (In. Lbs)	
FR1800B8	9/16"	.079	675	1,000	0.62	90	
FR1800B10	11/16	.133	1,200	1,500	0.50	162	
FR1800B12	13/16	.212	2,100	2,000	0.42	285	
FR1800B14	15/16	.314	3,500	3,500	0.36	450	

Steel Pin and Block Universal Joints
The preferred choice of drag racers for their sleek and lightweight design. These are available in both 1-1/4" and 1" diameter designs.

Note: For racing applications only -NOT recommended for street use. Frequent lubrication required.

Part No.	Description	0.D.
FR1900	3/4" x 3/4"	1-1/4"
FR1901	3/4" x 9/16"-26	1-1/4"
FR1902	3/4" x 3/4"-36	1-1/4"
FR1903	3/4" x 3/4"-30	1-1/4"
FR1904	3/4" x 5/8"-36	1-1/4"
FR1905	9/16"-26 x 3/4"-36	1-1/4"
FR1906	3/4" x 13/16"-36	1-1/4"
FR1907	5/8"-36 x 7/8"	1-1/4"
FR1820	3/4" x 3/4"	1"
FR1821	3/4" x 9/16"-26	1"
FR1822	3/4" x 5/8"-36	1"



#### Mil-Specification Universal Joints

These Universal Joints are similar to military specification joints for aircraft and have become the select choice of drag racers due to their lightweight design. A lubricant-filled silicone boot provides maintenance-free operation for extended universal joint life. This boot is designed to operate under high temperature conditions, with a continuous rating of 650°F. Please note nominal size is the outside diameter. Not intended for street use.

#### **Not For Street Use**

IMPORTANT: This is a lightweight application that is not designed for circle track, street, or highway use and not recommended for steering. Please see inch Lbs. Torque rating listed in the chart above to determine if this is suitable for your application. Ideal for shifter linkage.

### **Shafts & Support Bearings**

#### **Stainless Steel Shafts**

Flaming River now offers a line of stainless steel shafts manufactured from high quality 303 stainless. This is one of the best alloys of stainless steel for strength, corrosion resistance and shine. Our stainless shafts are available with 3/4"-36 spline or 3/4" DD (3/4" Round with two flats) and come in different lengths which can be cut down to size. Available with or without polishing.



Description
4" Stainless Steel
4" Polished Stainless
6" Stainless Steel
6" Polished Stainless
8" Stainless Steel
8" Polished Stainless
10" Stainless Steel
10" Polished Stainless
12" Stainless Steel
12" Polished Stainless
18" Stainless Steel
18" Polished Stainless
20" Stainless Steel
20" Polished Stainless
22" Stainless Steel
22" Polished Stainless
30" Stainless Steel
30" Polished Stainless
32" Stainless Steel
32" Polished Stainless
36" Stainless Steel
36" Polished Stainless



escription
D" DD Carbon Steel
0" DD Stainless Steel
3" DD Carbon Steel
3" DD Stainless Steel
3" DD Polished Stainless
2" DD Carbon Steel
2" DD Stainless Steel
2" DD Polished Stainless
6" DD Carbon Steel
6" DD Stainless Steel
6" DD Polished Stainless

#### Frame Mount Support Bearing

This show-quality billet support bearing mounts using two 1/4"-20 fasteners. 2-1/2" length to fit a 3/4" shaft diameter. Polished aluminum finish.



Frame Mount Support Bearing Kit

This frame bracket allows for easy mounting of support bearing. Slotted for adjustability. Available in an Angled or Straight design.

Part No.	Description
FR1810KA	Angled Bracket & Support Bearing
FR1810KAC	Angled Bracket & Support Bearing Chrome Finish
FR1810KS	Straight Bracket & Support Bearing
FR1810KSC	Straight Bracket & Support Bearing Chrome Finish

**Support Bearing** 

When using a three-joint steering system, a Double U-Joint, or a Vibration Resistor, a Support Bearing is necessary to complete the installation.

Available in Zinc, Stainless,

and Polished Stainless finishes.

Part No.	Description
FR1810	Support Bearing - Zinc Plated
FR1811	Support Bearing - Stainless
FR1811PL	Support Bearing - Polished

## Truck Slip Shaft



Part No.	Year		
Dodge Truck			
FR1517-76P	1976-78 Power		
FR1517-76M	1976-78 Manual		
FR1517-79P/M	1979-82 Power/Manual		
FR1517-83S	1983-90 Straight Column		
FR1517-83T	1983-90 Tilt Column		
FR1517-79P/M	1991-93		
FR1517-94V	1994 w/ Vibration Upgrade		
FR1517-96V	1995-98 w/ Vibration Upgrade		
FR1517-94	1994		
FR1517-96	1995-98		
Ford F150 / F250 /	F850		
FR1518-36	1974-79		
FR1518-1DD	1984-94		
Jeep CJ-5 / CJ-6 / C			
FR1519-76P	1972-86 Power Steering		
FR1519-76M	1972-86 Manual Steering		
FR1519-PTLT	72-86 Power Steering w/ FR Column		
FR1519-MTLT	72-86 Manual Steering w/ FR		
	Column		
Jeep Wrangler			
FR1519-87P/M	1987-95		

Truck Steering Slip Shaft Kits – Ideal for Lift Kits These unique steering systems are designed to completely update the OEM steering system. The slip shaft kit includes a universal joint for the column, a slip-universal joint for the steering box or rack and pinion, a 36" DD shaft—which can be cut to size—and protective bellows. The system allows for up to two inches of slip and collapsibility.

- Vibration upgrade available
- Plating and polishing available
- All kits include two universal joints

1997-2000 Jeep TJ Steering Slip Shaft Kit
This new slip and collapsible steering shaft kit
is designed to eliminate any play in the factory
system and to accommodate lift applications. It
features three inches of slip and collapsibility.
Includes two sealed needle bearing universal
joints, protective bellow and slip-shaft. Ideal
for off-road use or for daily drivers.

FR1519-97





Jeep Power Steering Boxes Available in four ratios including 12:1 & 16:1. Fits 1986-97 XJ, YJ, TJ and ZJ Jeeps. Also can be used with CJ Jeeps by installing the shaft kit. Jeep

**Ford** 

Chevy



### **BMW Shaft**

BMW M3 (17MM-54 x 17MM-54 U-Joints) FR1517BM

#### Slip Shaft Kit (No Universal Joint)

Use one of these steering shafts to update the OEM steering system in your vehicle. The kit includes a 1" DD shaft, a 3/4" DD shaft and protective

bellows. The slip joint system allows for almost 3" of movement to compensate for chassis twist and eliminate binding. Overall length of 30".

Note: Requires U-joints that must be ordered separately.



#### **EZ Fit Shaft**

Custom Lengths	
Part No.	Lengths
FR1857-14S	12-14" OAL
FR1857-16S	14-16" OAL
FR1857-18S	16-18" OAL
FR1857-20S	18-20" OAL
FR1857-22S	20-22" OAL
FR1857-24S	22-24" OAL
FR1857-26S	24-26" OAL
FR1857-27\$	25-27" OAL
FR1857-30S	28-30" OAL

\*Must specify steering column yoke and steering gear yoke sizes **EZ Fit Steering Shaft Kit** 

EZ Fit Shaft Kit includes 3" of up and down movement to absorb chassis flex and will collapse in the event of collision. We can make an EZ Fit shaft for any two U-Joint system - just specify the length and column and box size.

- Shock-Absorbing Design
- Factory-assembled steering shaft system
- Installs easily in minutes with ordinary hand tools
- No cutting or measuring EZ fit telescoping action
- Spring-loaded shaft absorbs road shock and chassis flex
- Hexagon shaft is the ultimate in strength and reliability
- EZ fit Shaft is plated for corrosion resistance

#### Smooth Out The Road!

Application	Part No.	Length	Column Size	Box Size
74-79 Ford F150 / F250 / F350	FR1857-FDS	19-22" OAL	3/4"-36	3/4"-36
80-94 Ford F150 / F250 / F350	FR1857-FD2S	19-22" OAL	1"DD	3/4"-36
79-80 Dodge 4WD w/Tilt & 77-78 Dodge Manual Steering	FR1857-DOS	24-26"	3/4"-36C	3/4"-36
79-80 Dodge 4WD w/o Tilt & 77-78 Dodge Manual Steering	FR1857-D02S	24-26"	1" Smooth	3/4"-36



# Power Rack & Pinion Steering

Lock to Lock - Stop to Stop Full Turning Radius

- Lifetime Serviceability
- All New Components
- Stronger Rack Shaft .982" in diameter
- More than 6" of travel for improved turning radius
- Braided Stainless Pressure Lines for low profile design and added clearance
- Finned Valve acts as a heat sink for lower fluid temperatures
- Billet Pillow Blocks Allow for adjustable pinion angle



# Power Steering Hoses

FR 16 10

For All Flaming River Rack and Pinions & Rack

and Pinion Cradle Kits

FR 1623

For Flaming River Power Steering Box to GM Style Power Steering Pump with Integral Reservoir





#### Kits Include:

- Tilt Column Mounting Hardware
- Wiring Connector
- Universal Joints & Shafting
- Power Steering Pump & Pulley
- Reservoir



# Turn Key Tilt Steering Columns

Flaming River manufactures a column for every build.... Floor Shift, Column Shift, Original GM Style Key, or No Key at all! Every steering column is built using all new components for up - to - date steering technology with a nostalgic look.

### Steering Column Features:

- Made In the USA 5 Position Tilt
- GM 4-1/4" Plug All New Components
- 304 Stainless Steel Construction
- Billet Aluminum Dress Up Kit Included

# Muscle Car Floor Mounts

- 55-57 Chevy 67-69 Camaro/69-74 Nova 70-81 Camaro
  - 69-82 Corvette 64-67 Chevelle 68-72 Chevelle
  - 58-64 Impala 67-72 C-10 Truck 65-66 Mustang
    - 67-70 Mustang 49-53 Ford 53-56 Ford Truck
    - A-Body Mopar 62-69 B-Body Mopar

See pg 91





# Rack & Pinion Cradle Systems A New Curve In Steering The Most Complete Cradle Kits on the Market!

**All-New Bolt-in Rack and Pinion** Cradle Systems for Classic, Performance, and Muscle Cars. Flaming **River's Rack and Pinion Steering** Systems continue to expand by customer demand. Our Rack and Pinion Kits enable classic vehicles to have the benefits and safety of modern steering, without any chassis modification-no cutting,

The jig welded cradle concept bolts right in to the original mounting location-eliminating

drilling, or welding required!

worn steering parts and maintaining the original suspension. The cradle also correctly positions the steering rack, and adds independent support of the suspension parts.

Rack and Pinion steering is lighter and more responsive than the box. All Flaming River Rack and tory turning radius and are Made in the USA in Berea, OH.

original recirculating ball steering Pinion Systems retain the full fac-



- Today's Steering Technology...
- **All-new parts**

Bolts in place of

- Made in the USA with Lifetime Serviceability
- Bolts into the original steering box location and provides full turning radius!
  - Patented cradle technology

Note: All Flaming River Rack and Pinion Cradle Systems have been designed and tested using a factory original platform vehicle. Any variation or modification from the vehicle's original chassis, suspension, drivetrain, or drive height may require additional modification for installation.

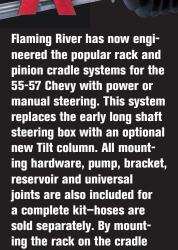


Flaming River Certified The Flaming River Certified imprinted logo indicates that each of our products have been tested to exacting standards.



If It Doesn't Say Flaming River... It Just I sn't Good Enough!

# 55-56 Chevy Rack & Pinion Power or Manual Cradle System



system, we not only reinforce the chassis, but also provide increased ground clearance. This true fixture welded mounting cradle fits between the frame rails and bolts in place using the original chassis location. No suspension modification is required and the system installs easily with hand tools. Full turning radius is engineered into the system.

### Manual Rack and Pinion Kit Includes:

- Paintable or Polished Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Patented Rack & Pinio Cradle System
- Swivel Floor Mount for easy column installation

Part No.	Description		
Till Floor Shift			
FR306KT	55-56 Manual Cradle System		
FR307KTPW	55-56 Power Cradle System		
Tillt Column Shift			
FR309KT	55-56 Manual Cradle System		
FR309KTPW	55-56 Power Cradle System		
No Column - (L	loes not include U-Joints)		
FR306NM	55-57 Manual Cradle System		
FR307NP	55-57 Power Cradle System		





# **57 Chevy Rack & Pinion Cradle System**



**Power Rack and Pinion Kit Includes:** 

- Paintable or Polished Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Patented Rack & Pinion Cradle System
- Power Steering Pump with Bracket and Pulley
- Aluminum Reservoir (Hoses sold separately)
- Swivel Floor Mount for easy column installation

Exhaust modification may be necessary with big block

Part No. Description Till Floor Shift FR308KT **57 Manual Cradle System** FR308KTPW **57 Power Cradle System** Till Column Shift FR310KT **57 Manual Cradle System** FR311KTPW **57 Power Cradle System** No Column - (Does not include U-Joints) FR306NM 55-57 Manual Cradle System FR307NP 55-57 Power Cradle System

Power Steering Hose Kit FR1610 Sold Separately See Pg. 132



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# 1967-69 Camaro Power Rack & Pinion Cradle System



Flaming River has designed a
direct bolt-in steering system
that utilizes a power rack and
pinion engineered for your
Classic Camaro! Like the
manual kit, the power rack
and pinion provides a quick
steering ratio with full turning
radius! The power rack and
pinion installs easily (within
hours) using the existing
chassis hole locations. Available with or without steering
column.

 Designed for Big Block and Small Block Chevy applications with stock style oil pans

- All NEW Power Rack and Pinion with Lifetime Serviceability
- Billet-Joint® and Column Adapter included
- Stronger Rack Gear -1 inch diameter
- More than 6 inches of travel and Full Turning Radius
- Bolts into Existing Chassis with no Suspension Modification
- Fluid and Pressure Tested and Certified

Part No.	Description		
Big Block			
FR303PWB	67-68 Power Cradle Kit with Paintable Tilt Column		
FR304PWB	69 Power Cradle Kit with Paintable Tilt Key Column		
Small Block			
FR303PW	67-68 Power Cradle Kit with Paintable Tilt Column		
FR304PWK	69 Power Cradle Kit with Paintable Tilt Key Column		
No Column Ki	No Column Kits		
FR304RCPW	67-69 Power Cradle - This kit does not include P/S Pump, U-Joints or accessories.		
FR304NCPW	67-69 Power Cradle - This kit includes P/S Pump, U-Joints and accessories.		



**Power Rack and Pinion Kit Includes:** 

- Paintable or Polished Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Patented Rack & Pinion Cradle System
- Power Steering Pump with Bracket and Pulley
- Aluminum Reservoir (Hoses sold separately)
- Swivel Floor Mount for easy column installation



Power Steering Hose Kit FR1610 Sold Separately See Pg. 132

# 1967-69 Camaro Manual Rack & Pinion Cradle System Lifetime Serviceability Flaming River Certified The Flaming River Certified imprint and the logo stamped on each product indicate that all have been tested to exacting standards.

Flaming River has designed a direct bolt-in steering system that utilizes a manual rack and pinion engineered for your Classic Camaro! The rack and pinion has a travel and ratio with full turning radius that feels almost like power steering! The best part of this system is that it installs easily (within hours) using the existing chassis hole locations. Complete kit with everything needed except the steering wheel. Patented cradle technology and he most complete kit on the market.

- Maintains original suspension
- No Welding Bolts into existing chassis holes
- Manual steering that feels like power
- Installation hardware and U-Joints/shaft kit included
- Tilt Column Kits include mounting clamp and female wiring adapter
- Designed for small block Chevy applications

Part No.	Description
Big Block	
FR303KTB	67-68 Manual Cradle Kit with Paintable Tilt Column
FR304KTB	69 Manual Cradle Kit with Paintable Tilt Key Column
Small Block	
FR303PW	67-68 Power Cradle Kit with Paintable Tilt Column
FR304PWK	69 Power Cradle Kit with Paintable Tilt Key Column
No Column Kits	3
FR303RC	67-69 Manual Cradle - This kit does not include P/S Pump, U-Joints or accessories.
FR303NC	67-69 Manual Cradle - This kit includes P/S Pump, U-Joints and accessories.





Part No. Description

FR316KTPW 70-81 Power Cradle Kit with Paintable Tilt Key Column

FR316KTMN 70-81 Manual Standard Ratio (20:1) Cradle Kit with Paintable Tilt Key Column

FR316KTQR 70-81 Manual Quick Ratio (15:1) Cradle Kit with Paintable Tilt Key Column

This new bolt-in rack and pinion cradle is available for both power and manual steering systems. This unique new style of steering system utilizes the original inner and outer tie rod ends. • This makes for simple installation and maintains the original pivot position. •

No cutting, welding or drilling to the chassis-it bolts into the existing steering box holes. Easily converts this steering box application to rack and pinion steering without any modification.

- All NEW Power Rack and Pinion with Lifetime Serviceability
- Billet-Joint® and Column Adapter included
- Stronger Rack Gear 1 inch diameter
- More than 6 inches of travel and Full Turning Radius
- Bolts into Existing Chassis with no Suspension Modification
- Fluid and Pressure Tested and Certified





Power Steering Hose Kit FR1610 Sold Separately See Pg. 132

**Power Rack and Pinion Kit Includes:** 

- Tilt Key Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Rack and Pinion Cradle System
- Aluminum Mounting Reservoir (Hoses sold separately)
- Power Steering Pump and Pulley
- Billet Swivel Floor Mount

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# 1963-82 Corvette Power & Manual Rack & Pinion Cradle System



A new Power Rack and Pinion Cradle System is now available for improved horsepower, performance and road handling. Kit includes hardware, universal joints, cradle and quick ratio rack and pinion.

- All New Components
- Bolts into existing chassis and original mounting locations with no suspension modification
- More Than 6" of Travel for Full Turning Radius!
- Stronger Rack Shaft
- Longer Cylinder and Overlapping Tube Design
- Lifetime Serviceability

Note: This kit works with the factory steering column and power steering pump--column and pump not included.

**Power Rack and Pinion Kit Includes:** 

- Universal Joints
- Patented Rack and Pinion Cradle System
- Universal Joints and Shafting
- Mounting Hardware
- Stainless Braided Hose Kit
- Support Bearing Kit



Power Steering Pump Kit to convert your manual steering to power





Flaming River Certified
The Flaming River Certified
imprint and the logo stamped
on each product indicate
that all have been tested to
exacting standards.

Part No.	Description
FR312KT	Manual Rack & Pinion Cradle Kit
FR312PW	67-82 Power Rack & Pinion Cradle Kit - For Use with Stock Power Steering Pump
FR312PW-1	63-66 Power Rack & Pinion Cradle Kit - For Use with Stock Power Steering Pump
FR312PW1	Power Rack & Pinion Cradle Kit - For Use with Flaming River P/S Pump Kit
FR312PK	Power Steering Pump Kit - Small Block
FR312PK2	Power Steering Pump Kit - Big Block

# 1964-67 Chevelle Power & Manual Rack & Pinion Cradle System



The Rack & Pinion Cradle System for the 1964-65 Chevelle uses a travel bar design to properly position the steering pivot points to the original location and deliver original turning radius. The travel bar system features a stabilizer clamp that provides added stability while driving. This kit uses the factory

tie rods to connect the travel bar to the vehicle's spindles. It installs in the original mounting holes for the steering box and idler arm assembly, and does not require any cutting, drilling, or welding, and installs easily using basic hand tools.



Power Steering Hose Kit FR1610 Sold Separately See Pg. 132

Part No.	Description
FR330KT	64-65 Power Cradle Kit with Paintable Tilt Column
FR330KTM	64-65 Manual Standard Ratio (20:1) Cradle Kit with Paintable Tilt Column
FR366KT	66-67 Power Cradle Kit with Paintable Tilt Column
FR366KTM	66-67 Manual Standard Ratio (20:1) Cradle Kit with Paintable Tilt Column

**Power Rack and Pinion Kit Includes:** 

- Tilt Key Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Rack and Pinion Cradle System
- Aluminum Mounting Reservoir (Hoses sold separately)
- Power Steering Pump and Pulley
- Billet Swivel Floor Mount





Flaming River has introduced a
Rack & Pinion Cradle System for the
1968 to 1972 Chevrolet Chevelle
and El Camino, plus other sister GM
Intermediate cars of the same period
- Pontiac GTO/LeMans, Oldsmobile
4-4-2/Cutlass and Buick GS/Skylark,
plus the GMC Conquistador.

The system is designed for cars powered by small or big block Chevrolet engines, and uses a unique Travel Bar system that connects new tubular inner tie-rod ends to the original pivot points, reducing bump steer.

The Chevelle Rack and Pinion Cradles are precision jig-welded and install in the stock steering system mounting holes. No drilling, cutting or welding is required.

- All NEW Power Rack and Pinion with Lifetime Serviceability
- Billet-Joint<sup>®</sup> and Column Adapter included
- Stronger Rack Gear 1 inch diameter
- More than 6 inches of travel and Full Turning Radius
- Bolts into Existing Chassis with no Suspension Modification
- Fluid and Pressure Tested and Certified

**Power Rack and Pinion Kit Includes:** 

- Tilt Key Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Rack and Pinion Cradle System
- Aluminum Mounting Reservoir (Hoses sold separately)
- Power Steering Pump and Pulley
- Billet Swivel Floor Mount

Part No.	Description
FR313KT	68 Power Cradle Kit with Paintable Tilt Column
FR313KTK	69-72 Power Cradle Kit with Paintable Tilt Key Column
FR315KT	68 Manual Cradle Kit with Paintable Tilt Column
FR315KTK	69-72 Manual Cradle Kit with Paintable Tilt Key Column
FR315KTNC	68-72 Manual Standard Ratio (20:1) Cradle Kit with out column.



Ulta-Angle Exhaust Headers

FR50001C



# 1958-60 Impala Power Rack & Pinion Cradle System

The new Flaming River 1958-60 Impala Power Rack and Pinion Cradle Kit has over 6" of travel, provides full lock-to-lock turning radius, and has an adjustable pinion angle. This kit uses a travel bar design to properly position the steering pivot points to the original location and deliver the original turning radius. The travel bar system features a stabilizer guide clamp that provides added stability

while driving. Our Rack and Pinion system uses the factory tie rods to connect the travel bar to the vehicle's spindles. This kit installs in the original mounting holes for the steering box and idler arm assembly, and does not require any cutting, drilling, or welding, and installs using basic hand tools. This is a completely new unit, and is Made in the USA. No core charge required.







Part No.	Description
FR331KT	58-60 Power Cradle Kit with Paintable Tilt Floorshift Column - Small Block
FR332KT	58-60 Power Cradle Kit with Paintable Tilt Columnshift Column - Small Block
FR334KT	58-60 Manual Cradle Kit with Paintable Tilt Floorshift Column - Small Block
FR335KT	58-60 Manual Cradle Kit with Paintable Tilt Columnshift Column - Small Block
FR337KT	58-60 Power Cradle Kit with Paintable Tilt Floorshift Column - Big Block
FR338KT	58-60 Power Cradle Kit with Paintable Tilt Columnshift Column - Big Block
FR340KT	58-60 Manual Cradle Kit with Paintable Tilt Floorshift Column - Big Block
FR341KT	58-60 Manual Cradle Kit with Paintable Tilt Columnshift Column - Big Block

**Power Rack and Pinion Kit Includes:** 

- Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Rack and Pinion Cradle System
- Aluminum Mounting Reservoir (Hoses sold separately)
- Power Steering Pump and Pulley
- Billet Swivel Floor Mount



Power Steering Hose Kit FR1610 Sold Separately See Pg. 132

# Power Rack and Pinion Kit Includes: 1 Tilt Column Mounting Hardware Wiring Connector Universal Joints Rack and Pinion Cradle System (Hoses sold separately) Power Steering Pump and Pulley Billet Swivel Floor Mount

Part No.	Description	
FR343KT	61-62 Power Cradle Kit with Paintable Tilt Floorshift Column - Small Block	h
FR344KT	61-62 Power Cradle Kit with Paintable Tilt Columnshift Column - Small Block	
FR346KT	61-62 Manual Cradle Kit with Paintable Tilt Floorshift Column - Small Block	
FR347KT	61-62 Manual Cradle Kit with Paintable Tilt Columnshift Column - Small Block	
FR349KT	61-62 Power Cradle Kit with Paintable Tilt Floorshift Column - Big Block	
FR350KT	61-62 Power Cradle Kit with Paintable Tilt Columnshift Column - Big Block	
FR352KT	61-62 Manual Cradle Kit with Paintable Tilt Floorshift Column - Big Block	
FR353KT	61-62 Manual Cradle Kit with Paintable Tilt Columnshift Column - Big Block	

Part No.	Description
FR355KT	63-64 Power Cradle Kit with Paintable Tilt Floorshift Column - Small Block
FR356KT	63-64 Power Cradle Kit with Paintable Tilt Columnshift Column - Small Block
FR358KT	63-64 Manual Cradle Kit with Paintable Tilt Floorshift Column - Small Block
FR359KT	63-64 Manual Cradle Kit with Paintable Tilt Columnshift Column - Small Block
FR361KT	63-64 Power Cradle Kit with Paintable Tilt Floorshift Column - Big Block
FR362KT	63-64 Power Cradle Kit with Paintable Tilt Columnshift Column - Big Block
FR364KT	63-64 Manual Cradle Kit with Paintable Tilt Floorshift Column - Big Block
FR365KT	63-64 Manual Cradle Kit with Paintable Tilt Columnshift Column - Big Block

# 65-69 Impala / Caprice Power Rack & Pinion Cradle System



The new Flaming River 1965-69 Impala/Caprice Power Rack and Pinion Cradle Kit has over 6" of travel, provides full lock-tolock turning radius, and has an adjustable pinion angle. This kit uses a travel bar design to properly position the steering pivot points to the original location and deliver the original turning radius. The travel bar system features a stabilizer guide clamp that provides added stability while driving. Our Rack

and Pinion system uses the factory tie rods to connect the travel bar to the vehicle's spindles. This kit installs in the original mounting holes for the steering box and idler arm assembly, and does not require any cutting, drilling, or welding, and installs using basic hand tools. This is a completely new unit, and is Made in the USA. No core charge required.

Part No.	Description			
Floor Shift Tilt Column				
FR369	65-68 Power Cradle Kit with Paintable Tilt Column			
FR370	69-74 Power Cradle Kit with Paintable Tilt Key Column			
No Column Kits				
FR369NC	67-69 Power Cradle - This kit includes P/S Pump, U-Joints and accessories.			



**Power Rack and Pinion Kit Includes:** 

- Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Rack and Pinion Cradle System
- Aluminum Mounting Reservoir (Hoses sold separately)
- Power Steering Pump and Pulley



**Ultra-Angle Exhaust Headers** 









•	One i	niece 1	formed	crad	le d	esian
	UIIG		иши:	GIUU	U U	GOIGH

- Built in skid protection
- Solid Plate Steel 3/8 inch for increased strength
- Features new front steer power tubular style rack and pinion
- Rack and pinion features .98 inch rack shaft for increased strength and cast servo valve for cooler operation
- Includes Tilt Column with GM Ignition Key for easier installation and convenience
- Lifetime Serviceability and Flaming River Tested and Certified

Part No.	Description	
FR318KT	Power Cradle Kit with Paintable Tilt Key Floor shift Column	
FR318KTPL	Power Cradle Kit with Polished Tilt Key Floor shift Column	



### **Power Rack & Pinion Kit Includes:**

- Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints and shafting
- Rack and Pinion Cradle System
- Power Steering Pump and Pulley
- Aluminum Mounting Reservoir (Hoses sold separately)

1962-67 Nova - Chevy II Power & Manual Rack & Pinion Cradle System



Front Steer Rack and Pinion improved clearance allows the use of virtually any oil pan. The front steer design is achieved by reversing the OE spindle arms. This moves the rack forward and out of the way of the oil pan as well as accommodating both Big Block and Small Block Engines. The Quick Ratio Power Rack and Pinion Cradle Systems replace the early long shaft steering box in the 62-67 Nova. The true fixture welded mounting cradle fits between the frame rails and bolts in place using the original chassis location. The system installs easily using simple hand tools, and provides Full Turning Radius with a much more responsive steering system than the original.

- All NEW Power Rack and Pinion
- Full Turning Radius with more than 6 inches of travel
- Adjustable Billet Mounts
- Bolts into existing chassis with no suspension modification
- Tilt Column and mounting hardware included
- Pressure and Fluid Tested and Certified

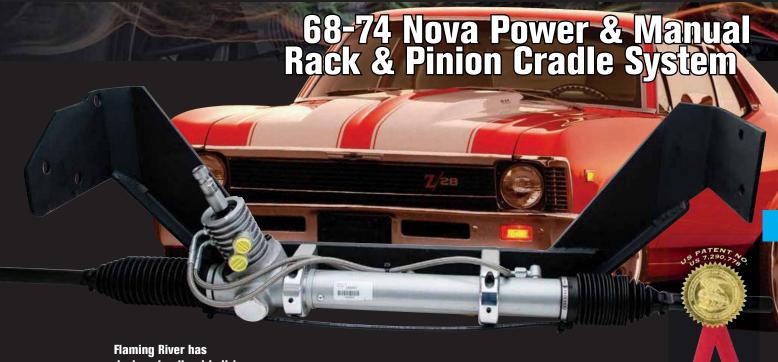
The Quick Ratio Manual and Power Rack and Pinion Cradle Systems replace the early long shaft steering box in the 62-67 Nova. The true fixture welded mounting cradle fits between the frame rails and bolts in place using the original chassis location. The system installs easily using simple hand tools, and provides Full Turning Radius with a much more responsive steering system than the original

Part No.	Description	
Rear Steer		
FR305KT	62-67 Manual Cradle Kit with Paintable Tilt Column	
FR305KTPW	62-67 Power Cradle Kit with Paintable Tilt Column	
Front Steer		
FR305FS	62-67 Power Cradle Kit with Paintable Tilt Column	

**Power Rack and Pinion Kit Includes:** 

- Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Patented Rack and Pinion Cradle System
- Aluminum Mounting Reservoir (Hoses sold separately)
- Power Steering Pump and Pulley





Flaming River has
designed a direct bolt-in
steering system that utilizes a power rack and
pinion engineered for
your Nova! The power
rack and pinion provides •
a quick steering ratio
with full turning radius,
installs easily (within
hours) using the existing
chassis hole locations
and is available with or
without steering column.

 Designed for Big Block and Small Block Chevy applications with stock style oil pans. All NEW Power Rack and Pinion with Lifetime Serviceability Billet-Joint® and Column Adapter included Stronger Rack Gear - 1 inch diameter More than 6 inches of travel and Full Turning Radius Bolts into Existing Chassis with no

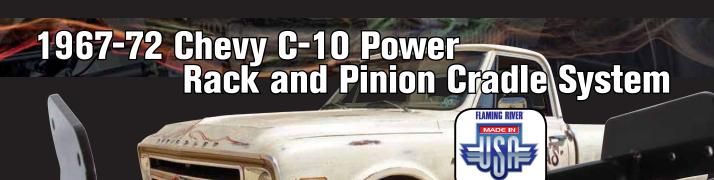
Suspension
Modification
Fluid and Pressure
Tested and Certified

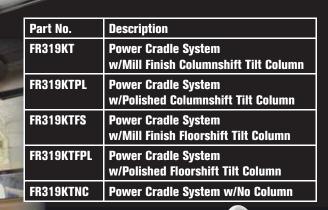
Part No.	Description	
Floor Shifft Ti	It Golumn	
FR367PW	68 Power Cradle Kit with Paintable Tilt Column	
FR367MN	68 Manual Cradle Kit with Paintable Tilt Column	
FR368PW	69-74 Power Cradle Kit with Paintable Tilt Key Column	
FR368MN	69-74 Manual Cradle Kit with Paintable Tilt Key Column	
No Column Kits		
FR367NC	67-69 Power Cradle - This kit includes P/S Pump, U-Joints and accessories.	

**Power Rack and Pinion Kit Includes:** 

- Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Rack and Pinion Cradle System
- Aluminum Mounting Reservoir (Hoses sold separately)
- Power Steering Pump and Pulley
- Billet Swivel Floor Mount







Shown with optional LED Indicator



- Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints and shafting
- Rack and Pinion Cradle System
- Power Steering Pump and Pulley
- Aluminum Mounting Reservoir (Hoses sold separately)
- Billet Swivel Floor Mount

Check out our Install video

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**Original Parts Removed** 



**Verifying The Chassis Dimension** 



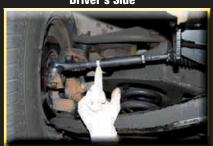
Bolting The Cradle Into Place Driver's Side



Bolting The Cradle Into Place
Passenger Side



**Install The Outer Tie Rod End** 



Make Sure That The Jam Nuts Are Installed



Reservoir and Power Steering

Hose Routing



**All New Aluminum Floor Mount** 



**Alignment Slot in New Column** 



**Installing New Flamig River Column** 



New Column Install Using Factory Dash Mounting Bracket



Turn Signal Wiring (GM 4-1/4" Plug) and The Shift Indicator Light (Gray Wire)



Column Coming Through The Firewall



**U-Joint and Shaft Installation** 



Classic Corvette Style Wheel Installed on New Tilt Column



Description
Original Spindle - Paintable Tilt Column for Aftermarket Steering Wheel
Original Spindle - Paintable Tilt Column for Ford Mustang Steering Wheel
Granada Spindle - Paintable Tilt Column for Aftermarket Steering Wheel
Granada Spindle - Polished Tilt Column for Aftermarket Steering Wheel
Granada Spindle - Paintable Tilt Column for Ford Mustang Steering Wheel
Granada Spindle - Polished Tilt Column for Ford Mustang Steering Wheel
Original Spindle - No Column
Granada Spindle - No Column

Flaming River has designed a direct bolt-in manual rack and pinion steering system for your Classic Mustang! The custom designed quick ratio rack and pinion offers full turning radius and travel with 3-1/2 turns lock to lock. The patented cradle technology mounts in the original chassis hole locations with no modification required.

Kits are designed to work with Small Block,

Big Block, 351W and 351C engine styles (with or without headers)

- Full turning radius
- Quick Ratio Rack & Pinion with 3-1/2 turns lock to lock
- No chassis or suspension modifications required
- Kits can be purchased with or without Tilt Steering Column
- Lifetime Serviceability

**Rack and Pinion Cradle Kit Includes:** 

- Tilt Column
- Grade 8 Mounting Hardware
- Wiring Connector
- Universal Joints
- Shaft Support Bearing
- Patented Rack and Pinion
  Credio System



Ultra-Angle Exhaust Headers FR50005C



# 65-70 Mustang Power Rack & Pinion Cradle System

An all-new power steering conversion system is now available for the classic Mustang-adding modern driving comfort and performance. Our patented cradle design mounts in the original chassis location-no suspension modification

required and the center support does not have to be removed. All kits available with our without Tilt Column. Fits 289 - 302 ci engines. Flaming River Exhaust Headers recommended.

Part No.	Description
FR300PW1	Power Kit - Floor Shift Paintable Tilt Column
FR300PW1PL	Power Kit - Floor Shift Polished Tilt Column
FR300NP1	Power Kit - No Column



Tilt Column included with Cradle Kits

Ultra-Angle Exhaust Headers
FR50003C

### **Rack and Pinion Kit Includes:**

- All new Billet-Power™ Rack and Pinion
- Patented Rack and Pinion Cradle System
- All Mounting Hardware required for installation
- Wiring Connector
- Universal Joints and Shafts
- Power Steering Pump and Pulley
- Aluminum Mounting Reservoir

Riser Kit will allow for ride height adjustment







Part No.	Description
	Cradle Rack & Pinion Riser Kit

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# 60-65 Comet / Falcon Power Rack & Pinion Cradle Systems



CALIENTE



**Rack and Pinion Kit Includes:** 

- All new Billet-Power™ Rack and Pinion
- Patented Rack and Pinion Cradle System
- All Mounting Hardware required for installation
- Wiring Connector
- Universal Joints and Shafts
- Power Steering Pump and Pulley
- Aluminum Mounting Reservoir

A complete Power Rack and **Pinion Conversion System is** now available for the 1960-65 Ford Comet/Falcon for improved steering and handling performance. No cutting, drilling, or welding is required for installation-the kit simply bolts into the vehicle's original mounting holes using basic hand tools. This power rack kit is available with a Floor Shift Tilt Steering Column, Column Shift Tilt Steering Column, or no column at all. A brand new Billet-

Power™ Rack and Pinion is included and provides more than 6" of travel and full turning radius: Lock-to-Lock, Stop-to-Stop. Every Flaming River Power Rack and Pinion is Made in the USA, is fluid and pressure tested before it leaves our facility and comes with lifetime serviceability.

Flaming River also offers coated Small Block Ford Long Tube Exhaust Headers to eliminate clearance issues (FR50003C).



**Hose Kit Sold Separately** 

Power Steering Hose Kit FR1610

- Crimped fittings on all pressure ends-eliminates banjo fittings
- Can be mounted straight off AN fittings or at 90 degrees
- AN fittings included for convenience of assembly
- Hose angles can be rotated to almost any position
- Custom hose lengths available through our custom hose program



FR21018 Comet/Falcon Floor Shift
Paintable Tilt Column



pension Modification
Fluid and Pressure
Tested and Certified

Part No.	Description
FR314KT1	Power Kit - Floor Shift Paintable Tilt Column for Aftermarket Steering Wheel
FR314KT1PL	Power Kit - Floor Shift Polished Tilt Column for Aftermarket Steering Wheel
FR314KT2	Power Kit - Floor Shift Paintable Tilt Column for Stock Steering Wheel
FR314KT2PL	Power Kit - Floor Shift Polished Tilt Column for Stock Steering Wheel



and the remote mount res-

ervoir. Hoses not included.

**Rack and Pinion Cradle Kit Includes:** 

- Paintable or Polished Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Patented Rack & Pinion Cradle System
- Power Steering Pump with Bracket and Pulley
- Aluminum Mounting Reservoir (Hoses sold separately)



Part No.	Description
FR317KT	Power Kit - Floor Shift Paintable Tilt Column for Aftermarket Steering Wheel
FR317KTPL	Power Kit - Floor Shift Polished Tilt Column for Aftermarket Steering Wheel
Note: For modular motors only. Standard column is designed for aftermarket steering wheel - Ford	

New Cradle Rack & Pinion system designed for Ford Galaxie and other full-size Fords provides power steering for modern driving comfort - especially when parking. The cradle mounts in the original chassis location with no chassis modification and the center support does not have to be removed.

Note: Outer Tie Rod Ends should be 11/16"-18 Male thread

- All NEW Power Rack and Pinion with Lifetime Serviceability
- Stronger Rack Gear 1 inch diameter
- More than 6 inches of travel and Full Turning Radius
- Bolts into Existing Chassis with no Suspension Modification
- Includes adapter fitting for your existing pump
- Mustang II style tie-rod ends required for this application
- Fluid and Pressure Tested and Certified



**Rack and Pinion Cradle Kit Includes:** 

Spline also available.

- Tilt Column
- Mounting Hardware
- Wiring Connector
- Universal Joints
- Patented Rack and Pinion Cradle System
- Aluminum Mounting Reservoir (Hoses sold separately)



# Right Hand Drive Power Rack & Pinion The new Right Hand Drive • All NEW Power Rack Cradle System

The new Right Hand Drive
Rack and Pinion System were
requested by the Australian
marketplace and we delivered. These Power Rack kits
provides easy conversion
from steering box to an all
new rack and pinion steering system. The kit features
our new Billet-Power™ Rack
and Pinion with more than 6
inches of travel for full
turning radius.

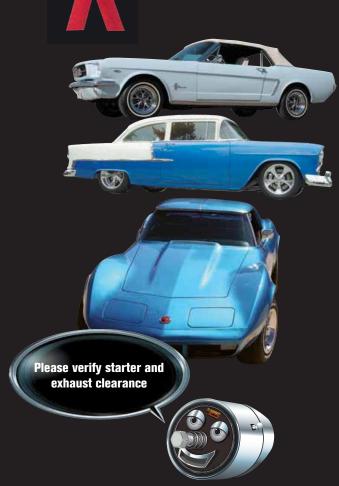
- All NEW Power Rack and Pinion with Lifetime Serviceability
- Billet-Joint® and Column Adapter included
- Stronger Rack Gear -1 inch diameter
- More than 6 inches of travel and Full Turning Radius
- Bolts into Existing
   Chassis with no
   Suspension Modification

• Fluid and Pressure Tested and Certified



FLAMING RIVER

Part No.	Description
Corvette	
FR312PWRHC	63-82 RHD PWR VETTE CONVERSION - W/O COLUMN, PUMP
FR312RH	63-82 VETTE MANUAL KIT RHD
55-57 Chevy	
FR322PWRH	57 CHEVY RHD US CONV KIT NO COL
FR322PWRHGS	57 CHEVY RHD US CONV KIT W/GS
FR323NPP	RHD TRI-5 PWR KIT W/O COL&PMP
FR323PWRH	57 CHEVY RHD OEM KIT NO COL
FR324PWRHPL	55-56 CHEVY RHD OEM KIT POL GS
FR325PWRH	55-56 CHEVY RHD OEM KIT PAINT FS
FR325PWRHPL	55-56 CHEVY RHD OEM KIT POL FS
FR325PWRHPLC	55-56 CHEVY RHD OEM KIT PL COL FS
FR325PWRHUS	55-56 CHEVY RHD US CONV PAINT FS
FR326PWRH	57 CHEVY RHD KIT W/ FS COL
FR326PWRHPL	57 CHEVY RHD KIT W/ FS COL POL
FR327PWRH	57 CHEVY RHD KIT W/ GS COL
FR327PWRHPL	57 CHEVY RHD KIT W/ GS COL POL
Mustang	
FR328PWRH	65-70 RHD MUST POWER KIT
FR328PWRHPL	65-70 RHD MUST POWER KIT POL
FR329RH	65-70 RHD MUST MANUAL KIT V8
FR329RHPL	65-70 RHD MUST MNL KIT V8 POL



### **Rack & Pinion Accessories**

LS3 Power Steering

LS3 Power Steering Pump Extended AN Fitting Part No. - FR1634

AN Fitting Kit
(To allow clearance
for LS Motors)
Part No. - FR1632
includes:

(1) M14 X 1.5-AN6 Pressure Fitting

(1) M16 X 1.5-AN6 Return Fitting

(2) **0-Rings** 

Variable Pressure Low-Flow Pump (3/4" Shaft Size)
FR1570 (w/o Pulley)
FRPMPSB-V (w/ V-Belt Pulley
pre-assembled for easy installation)
FRPMPSB-S (w/ 7 groove S-Belt Pulley
pre-assembled for easy installation)

The intelligent design of this pump allows for pressure reduction at higher RPMs for maximum control during highway driving and easy steering in parking situations. Remote reservoir (FR1614) required.

Pump Speed	Pressure	Flow
465 RPM	4.58 MPA	2.16 LPM
1500 RPM	1 MPA	6.8 LPM
5000 RPM	1 MPA	5.16 LPM





- Crimped fittings on all pressure ends eliminates banjo fittings
- Can be mounted straight off AN fittings or at 90 degrees
- AN fittings included for convenience of assembly
- Hose angles can be rotated to almost any position
- Custom hose lengths available through our custom hose program

**Hose Kit Sold Separately** 





Cradle Rack & Pinion Riser Kit for 65-70 Mustang Part No. - FR20060MU

Part No.	Description
FR500101	65-66 Mustang 289-302
FR500102	67-70 Mustang, Cougar 289-302
FR500103	67-70 Mustang, Cougar 390-428 FE







By relocating the primary tube, our Ultra-Angle headers are designed to ensure the clearest path for your steering universal joints. We've collaborated with a top-notch manufacturer to develop coated headers that work exclusively with our Rack and Pinion Cradle Kits, so that you get the steering clearance you need with the performance you desire. Available for the 1955-57 Chevy, 1962-67 Nova, 1968-1970 Camaro, and for 1965-70 long tube Mustangs.

Part No.	Coating	Application
FR50001C	Coated	57 Chevy, Chevelle, Camaro
FR50003C	Coated	65-70 Ford Mustang, Comet 289-302 with FR Power Cradle Kit
FR50005C	Coated	65-70 Ford Mustang, Comet 289-302 with FR Manual Cradle Kit
FR50004C	Coated	62-67 Nova with FR Front or Rear Steer Cradle Kit





FR50004C

# **Rack and Pinions**



Flaming River incorporates state-of-the-art engineering, technology, precision machining and quality control in manufacturing process.

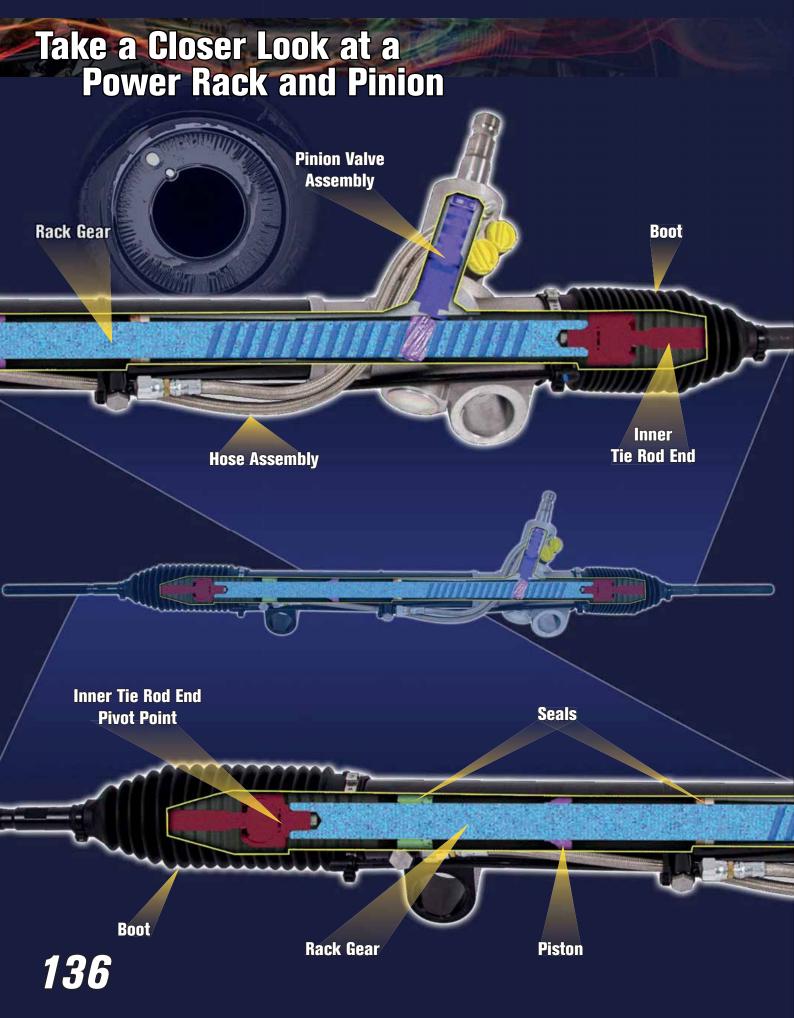


Each Flaming River Power Rack and Pinion is pressure and fluid tested...Flaming River Certified.



The Die Cast Valve Finned Housing takes production to a new level.

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NEW! Chassis Builders' 14 Choice Power	2-143
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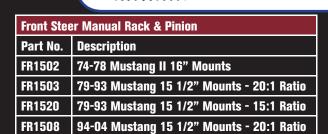


# **Rack and Pinions**



Omni Rear Steer Manual Rack & Pinion	
Part No.	Description
FR1507-2	45" OAL Manual Rear Steer Rack
FR1507-3	41.69" OAL Manual Rear Steer Rack

Front Steer Power Rack & Pinion	
Part No.	Description
FR40001	74-78 Mustang II 16" Mounts
FR40002	79-93 Mustang 15 1/2" Mounts
FR40003	94-04 Mustang 15 1/2" Mounts



FR1508Q 94-04 Mustang 15 1/2" Mounts - 16:1 Ratio



Pinto Front Steer Manual Rack & Pinion	
Part No.	Description
FR1501	Pinto Manual Front Steer Rack
FR1501-2	5" Shortened Pinto Manual Front Steer Rack



Cobra/MGB Manual Rack & Pinion	
Part No.	Description
FR1512	Manual Rack & Pinion with 3 turns lock to lock



Custom Front Steer Manual Rack & Pinion	
Part No.	Description
FR1502-2x2	2" Shorter 74-78 Mustang II 16" Mounts
FR1502-3x3	3" Shorter 74-78 Mustang II 16" Mounts
FR1502-4x4	4" Shorter 74-78 Mustang II 16" Mounts
FR1503-3x3	3" Shorter 79-93 Mustang 15 1/2" Mounts





From Engineering Concept to Final Design, Flaming River manufactures all new power rack and pinions.

The Faro Arm, a state-of-the-art digital measuring device, is used to precisely measure precision tolerances.



# **Road Race Power Rack and Pinion**



Variable Pressure Low-Flow Pump FR1570 See pg 132 Custom-designed Power Rack and Pinion designed for Road Racing. FR40040 - Custom

### **Features:**

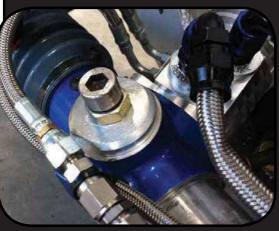
- Quick Ratio Design Rack gain of 2.27" per one revolution of the pinion
- Adjustable positive-lock rack gear will not back away from pinion
- Travel can be customized at the factory for specific applications
- Fluid and pressure tested and certified
- Braided stainless pressure lines for low-profile design and added clearance
- Made in the USA

### **Benefits:**

- 1 inch dia. rack gear made of hardened and precision-ground 1040 steel for longevity and strength
- Maintains positive mesh between rack gear and pinion gear, which is ideal for racing applications
- All new components-including valve, piston, seals, bearings, bushings and rack gears
- Lifetime serviceability



**Positive Torque Adjustment** 





# **Mustang Power Rack and Pinions**



# BILLET - POWER

The only ALL NEW Mustang II (74-78) style Power Rack & Pinion available for Hot Rodders!

The Billet-Power™ Front Steer Rack and Pinion (Mustang style) is designed to fit Mustang II applications (15.5" or 16" available). Made from all new components, including a new valve and piston, our Power Rack offers over 6-inches of travel, which provides the maximum turning radius for classic and street rod applications. Each Flaming River Power Rack is proudly Made in the USA, and is fluid and pressure tested and certified before leaving our facility.

- All new components Including valve, piston, seals, bearings and bushings, and pinion and rack gears
- More than 6 inches of travel for full turning radius
- Lighter Approximately 12 Lbs. lighter than OE
- Stronger 1 inch diameter Rack Shaft
- Sleek, attractive powder coated design
- Longer cylinder and overlapping tube design for rack stability
- Lifetime Serviceability
- Test Certification included with each unit

Precision Steel Power Steering Pump Bracket
This power steering pump bracket is for Stage II style
pumps and features a revolutionary new design-made
of black oxide steel and available for Small Block and
Big Block vehicle applications. Features an adjustable
design that allows for use with short neck and long
neck water pumps. Includes a billet aluminum tension
adjuster and mounting hardware. Manufactured using
precision laser machinery.

Part No.	Description
FR40001	16" Mounts
FR40001-V	16" Mounts - with P/S Pump and V-Belt Pulley
FR40001-S	16" Mounts - with P/S Pump and Serpentine Belt Pulley
FR40002	15-1/2" Mounts



The time Service ability

 $(\mathbf{R})$ 

Flaming River Certified
The Flaming River Certified imprinted logo
stamped indicates that each of our products have
been tested to exacting standards.



Part No.	Description
FR1612	Small Block Chevy
FR1613	Big Block Chevy
FR1630	2.5" Belt Tensioner Only
FR1631	3.5" Belt Tensioner Only

### Variable Pressure

**Power Rack & Pinion Pump System** All New...All The Time!

**Pressure and Return Valve Ports clearly** marked on every power rack and pinion. The Flaming River Power Rack is the first new Power Rack and Pinion designed with the street rodder in mind. With the pump, it is properly calibrated to avoid over-steer. The Power Rack uses Mustang II 16-inch center mounts and FR1601 outer ends. Our Power Rack is designed for maximum front end vehicle weight of 1,750 Lbs.



Aluminum

**Remote Reservoir Our Remote Reservoirs** feature a threaded cap and two machined billet brackets. A sleek radius design will complement any engine compartment. **Recommended for use with Flaming River Power Rack** Systems, but can also be used with other Stage II Pumps.

**Machine finish shown** 

Stainless Braided Hose Kits - FR1610

**Hose Kit Sold Separately** This remote reservoir style hose kit includes stainless braided lines with fittings for installing Flaming River Power Rack and Pinion with a remote reser-

**Variable Pressure** Low-Flow Pump (3/4" Shaft Size) FR1570 (w/o Pulley) FRPMPSB-V (w/ V-Belt Pulley

pre-assembled for easy installation) FRPMPSB-S (w/ 7 groove S-Belt Pulley pre-assembled for easy installation)

The intelligent design of this pump allows for pressure reduction at higher RPMs for maximum control during highway driving and easy steering in parking situations. Remote reservoir (FR1614) required. See pg 132

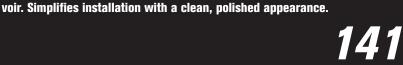


LS3 Power Steering

**Pump Extended AN** 

Part No. - FR1634

**Fitting** 





# ...Power Rack and Pinion



OEM LINE POSITION

**PRESSURE PORT** 

**RETURN PORT** 



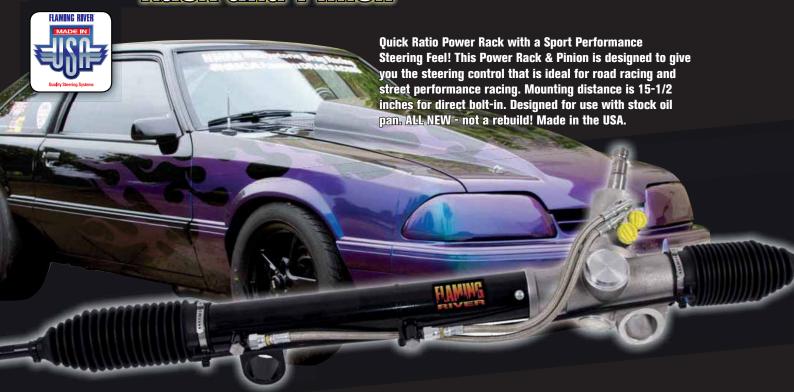
Check out our New Power Rack and Pinion!
Featuring a larger rack gear and a new robotic welding process. OEM line position and an adjustable pinion housing allow for easier installation.

Made in the USA in Berea Ohio! • OEM Line Position
Stainless Steel Braided Hoses • Robotically Welded In-House
12:1 Ratio • 2 1/2 Turns Lock to Lock • 6" of Travel



Lifetime Serviceability

# 79-04 Mustang Power Rack and Pinion



Part No.	Description
FR40037	1979-93 Power Rack and Pinion
FR40039	1994-04 Power Rack and Pinion



Fitting Adapter Kit to attach to your original pump. Includes return fitting and hose and pressure line adapter.



**Installation Kit Includes:** 

- Two Universal Joints/ **Shaft Kit**
- **Outer Ends**
- Two-piece Urethane **Bushing**

**Shaft Kit Only:** 79-93 FR1504P2 94-04 FR1504P3





### **Long Tongue**

FR9950TLG Longer length tongue available for use with 79-93 Mustang shaft kits. This longer tongue is the perfect way to extend the universal joints down from the column to make even more room for larger tube headers. Sold Separately.



**Variable Pressure Low-Flow Pump** FR1570 See pg 132

# 79-04 Mustang Manual Rack and Pinions



1979-93 Mustang Deluxe Manual Rack & Pinion Installation Kit - Standard Ratio - FR1890

This installation kit is a direct bolt-in replacement for the 1979-93 5.0L Mustang. It eliminates the power rack, pump, pulley, and rag joint for a total vehicle weight reduction of up to 30 Lbs., and provides smooth responsive vehicle steering.

**Kit Includes:** 

- **Manual Rack and Pinion (FR1503)**
- High Performance Needle-Bearing U-Joint Shaft Kit
- Manual Tie Rod Ends (FR1603)
- **2-Piece Mounting Bushings**



1979-93 Mustang High Performance Shaft Assembly FR1504P Power Rack

FR1504M Manual Rack

This high performance shaft kit utilizes two smooth, needle bearing Universal Joints, a prefabricated shaft to bolt directly into the column, and weldless intermediate shaft for easy installation. This long-wearing design eliminates the rag joint for better steering response, streamlined appearance and improved header clearance. An absolute must when using large tube headers. The overall length is 13 inches. Additional DD shaft can be ordered for applications requiring longer length. This can be used with our Manual Rack and Pinion or the factory Power Rack to eliminate the rag joint and improve steering response!



1979-93 Mustang Low-Profile Shaft Kits Forged True®

This lightweight, low-profile kit weighs only 2.5 Lbs. and features 40° angle capability and 1.25" diameter for increased header clearance. A black oxide finish resists corrosion. Rated at 350 ft. Lbs.

FR1504MFT - Low-Profile Manual Shaft Kit FR1504PFT - Low-Profile Power Shaft Kit **Chrome Moly** 

FR1504MLP - Low-Profile Manual Shaft Kit FR1504PLP - Low-Profile Power Shaft Kit

1994-04 5.0L Mustang Manual Rack and Pinion Installation

This installation kit is a direct bolt-in replacement for the 1994-03 5.0L Mustang without hydro boost (non-modular motors). This kit allows for a total vehicle weight savings of up to 30 Lbs. off of the front end-where it matters most!

### **Kit Includes:**

- **Manual Rack and Pinion (FR1508)**
- **Universal Joint**
- Outer Tie Rod Ends (FR1603-L)
- **2-Piece Mounting Bushings** Also available: Deluxe Kit with

FR1892D

Complete Shaft Kit

1994-04 Mustang Shaft Kit -

This shaft kit is a direct bolt-in replacement for the factory steering of the 1994-04 5.0L Mustang. With a 1-1/2" diameter, this kit greatly improves header clearance. Needlebearing universal joint included.

FR1509P – Power Shaft Kit FR1509M – Manual Shaft Kit

**Vibration Dampener Kits also available:** 

FR1509-VP - Vibration Power Shaft Kit

FR1509-VM - Vibration Manual Shaft Kit



1979-93 5.0L Mustang Manual Rack and Pinion -15:1 Quick Ratio - FR1520

This quick steer unit is designed for the 1979-93 Mustangs and delivers exceptional performance. Ideal for road racing, street, drag, and other applications where a very responsive steering system is required.

3.3 turns lock-to-lock (25% faster than a standard unit) 5.25" of rack travel 45" overall length

### **Rear Steer Power Rack and Pinions**

# Billet - Power

### Full Turning Radius More Than 6" of Travel Lifetime Serviceability

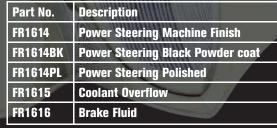
- All new components Including valve, piston, seals, bearings and bushings, and pinion and rack gears
- Stronger rack shaft almost 1 inch diameter
- More than 6 inches of travel for full turning radius
- Sleek, attractive powder coated design
- Universal, precision 6061 Aluminum, billet mounting
- Lifetime Serviceability

The Billet-Power® Rear Steer Rack & Pinion is made of all new components, including the valve and piston, and is designed to fit any classic rear steer vehicle (mounts behind the spindle). Billet mounting "pillow blocks" allow for universal mounting and the pinion shaft rotates to align with your vehicle's steering shafting. Billet finned housing provides heat reduction.



Each system includes a new Power Rack and Pinion, Pump with aluminum pulley (V-Belt or Serpentine) and fittings for connecting hoses to the hose kit of your choice. Hoses, U-Joint, and Reservoir are not included.

Part No.	Description
FR40020	45" Rear Steer Power Rack
FR40020-V	45" Rear Steer Power Rack - with P/S Pump and V-Belt Pulley
FR40020-S	45" Rear Steer Power Rack - with P/S Pump and Serpentine Belt Pulley
FR40031	41.69" Rear Steer Power Rack
FR40031-V	41.69" Rear Steer Power Rack - with P/S Pump and V-Belt Pulley
FR40031-S	41.69" Rear Steer Power Rack - with P/S Pump and Serpentine Belt Pulley



### **Aluminum Remote Reservoir**

Our Remote Reservoirs feature a threaded cap and two machined billet brackets. A sleek radius design will complement any engine compartment. Recommended for use with Flaming River Power Rack Systems, but can also be used with other Stage II Pumps. Machine finish shown



### **Front Steer Power Rack and Pinions**

Unlike OEM Rack and Pinions, where hard lines are set and often cause interference. our Custom Manufacturing allows you to determine where the pressure ports should be located.

Dimensionally interchangeable with the Mustang or Omni Racks-with new mounting versatility! Precision-machined billet aluminum mounts retrofit to virtually any vehicle application and feature an adjustable pinion to improve universal joint angle. The Universal Mount Power Rack and Pinion is pressure and fluid tested after assembly to ensure maximum quality and performance. Each Flaming River Power Rack comes with Lifetime Serviceability and is made in the US

- All New Components Including valve, piston, seals, bearings and bushings, and pinion and rack gears
- No Core Charge
- Stronger Rack Shaft Almost 1 inch diameter
- More than 6" of travel for improved turning radius
- Braided stainless pressure lines for low profile design and added clearance
- Finned Valve acts as a heat sink for lower fluid temperatures
- Billet Pillow Blocks Allow for adjustable pinion angle
- Racks available in 45" and 41.69" overall lengths Custom designs also available
- Made in the USA
- **Lifetime Serviceability**

"Pillow Blocks" allow for universal mounting and the pinion shaft rotates to align with your vehicle's steering shafting.



Part No.	Description
FR40022	Front Steer Universal Power Rack - Blue Rack Housing
FR40022PLN	Front Steer Universal Power Rack - Standard Cast Rack Housing
FR40022XX	Custom Steer Universal Power Rack - Standard Cast Rack Housing
FR40022-V	Front Steer Universal Power Rack - with P/S Pump and V-Belt Pulley
FR40022-S	Front Steer Universal Power Rack - with P/S Pump and Serpentine Belt Pulley

Shown with the Rack and Pinion Valve in the standard position with the pressure and return ports facing forward and the pressure lines in the standard position on the front of the tube.



the back of the tube.



**Rack and Pinion Pressure Lines or** the top of the tube.





Rack and Pinion Valve in the stan-

dard position with the pressure and return ports facing forward.

**Rack and Pinion Valve reversed** allows the pressure and return ports to face the backside of the



**Low-Flow Pump** FR1570

See pg 132



# **Xtra Long Power Rack and Pinions**

4" Longer Than Stock (No Extender Necessary)

The all new XL Front Steer Power Rack and Pinion—designed for wide framed cars and trucks—eliminates the need for an extender and ensures that the bellow is never overextended. The new rack is based upon the popular front steer 1974-78 Mustang II platform, but is now offered in a design that is 4" longer, for a total length of 49" with a 28.5"

pivot-perfect for pickup trucks with a Mustang II style front end.

This is the only new power rack with over 6" of travel for full turning radius—lock to lock, stop to stop. Each rack is pressure-tested and certified (certificate included) and Made in the USA.



Part No.	Description
FR40004	XL Front Steer Power Rack & Pinion
FR40004-V	XL Front Steer Power Rack & Pinion with P/S Pump and V-Belt Pulley
FR40004-S	XL Front Steer Power Rack & Pinion with P/S Pump and Serpentine Belt Pulley











FRPMPSB-V (w/ V-Belt Pulley pre-assembled for easy installation)
FRPMPSB-S (w/ 7 groove S-Belt Pulley pre-assembled for easy installation)
See pg 132



# Aluminum Remote Reservoir Our Remote Reservoirs feature a threaded cap and two machined billet brackets. A sleek radius design will complement any engine compartment. Recommended for use with Flaming River Power Rack Systems, but can also be used with other Stage II Pumps. Polished finish shown

Part No.	Description
FR1614	Power Steering Machine Finish
FR1614BK	Power Steering Black Powder coat
FR1614PL	Power Steering Polished
FR1615	Coolant Overflow
FR1616	Brake Fluid



# Right Hand Drive Power & Manual Rack and Pinions Manual Rack and Pinions

Made of all new components, including a new valve and piston, this Power Rack and Pinion is now designed for Right Hand Drive vehicles. As custom cars have become more popular around the world, we have had increasing interest in Rack and

MEN DESTIN

**Drive applications. The most** exciting aspect of the new RHD Power program is that it is not limited by core availability, since Flaming River Rack and Pinions are all new, and never rebuilt.

- Cons	
Part No.	Description
FR40023	Power RHD Front Steer Rack & Pinion
FR40024	Power RHD Rear Steer Rack & Pinion



Universal, precision 6061 aluminum, billet mounting

All new components - Including valve, piston, seals,

- **Billet finned housing provides heat reduction** 
  - Lifetime Serviceability

	\		
	1974-78 Mustang II Manual Rack	45" Omni Manual Rack	Cobra / MGB Manual Rack
Part No.	FR1502RH	FR1507RH	FR1512RH
OEM Design Style	74-78 Ford Mustang	78-83 Dodge Omni	Cobra / MGB
Steering Design	Front Steer	Rear Steer	Front Steer
Total Weight	14 lbs.	14 lbs	14 lbs
Rack Gain	1.36" per turn	1.125"	
No. Turns Lock-to-Lock	3.92	4	3.00
Total Rack Travel	5.34"	5.00"	6.25"
Overall Length (end to end)	45"	45"	41.00"
Input Shaft Angle	18°	18°	
Input Shaft Spline Size	9/16"-26	9/16"-26	3/4"-48
Input Shaft Length	6.44"	3.5" from cap	7.5"
Pivot Points	24.5"	23.77"	
Inner End Diameter	14mm (.551")	14mm (.551")	
Inner End Thread Size	9/16"-18	9/16"-18	
Bellows Material	Nitrile Rubber	Nitrile Rubber	
Bellows Part No.	FR1502B (pair)	FR1502B (pair)	
Outer End Part No.	FR1601 (2 req'd)	FR1601 (2 req'd)	



**Billet Pillow Block** FR1617P

# **Straight Arrow Modular**

### **Rack and Pinions**

### CUSTOM BILLET ALUMINUM MANUAL RACK AND PINION

Flaming River's new Straight Arrow™ billet aluminum custom manual rack and pinion features cutting-edge appearance coupled with all-new components to produce a rack that delivers application flexibility, durability, strong eye-appeal and outstanding steering performance.

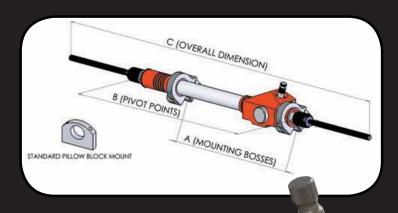
The Straight Arrow™ racks are ideal for custom steering situations in street and motorsports applications with various rack lengths, multiple pinion lengths, over 20 different inner ties rods ends and several steering ratios. The Straight

Arrow™ rack program includes front or rear steer configurations and is available for left and right-hand steering applications.

The Flaming River custom length program for the new Straight Arrow rack and pinions allows

the user to specify the rack dimensions.





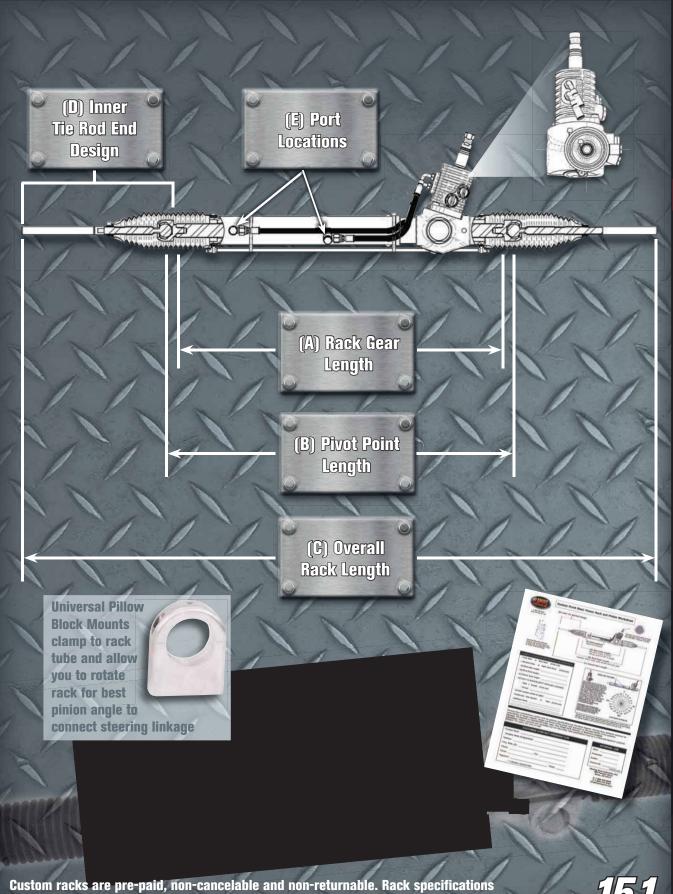
Standard Modular Rack & Pinion Reference Sheet					
	Front Steer	Rear Steer			
Part No.	FR1580	FR1585			
OAL	45"	41 5/8"			
Pivot	24.5"	23.75"			
Mount	Pillow Block	Pillow Block			
Tie Rods 9/16" Male 9/16" Male					
Mounts Sold Separately					





Billet Pillow Block FR1617P

# **Custom Rack and Pinions**



must be in writing and signed by customer. Please allow 4-6 weeks from time of order.

### **Street Rod Manual Rack and Pinions**



1974-78 Mustang II Manual Rack and Pinion -

This design features high-quality aluminum castings, two mounting holes (16" center to center) and a chrome-plated steel center tube.

- 4 turns lock-to-lock
- 5.25" of rack travel
- 45" overall length

**Custom Length Mustang II Manual Rack and Pinion** Custom, shortened designs of our popular Mustang II Manual Rack and Pinion are now available for Willy's, Corvette, Anglia, and other custom chassis applications. Several popular custom sizes are now offered from stock.

FR1502-2X2 FR1502-4X4



**Outer Tie Rod Ends** Designed to be the perfect complement to our Manual Rack and Pinions FR1601 1974-78 Mustang FR1603 1979-93 Mustang FR1603-L 1994-03 Mustang



### 2-Piece Mounting Bushings

**Custom designed thermoplastic** rubber for firm vibration absorption. Two sets are required for installation.



### **Mounting Bushings -**FR1600

Impact absorbing rubber bushings with steel core are used to mount the Mustang II Rack and Pinion (FR1502)

Two required.

Omni Manual Rack and Pinion (Rear Steer)

45" OAL FR1507-2 FR1507-3 41.69" OAL

This rear steer design mounts behind the crossmember and provides oil pan clearance for a Ford engine. The rack features an aluminum housing with a chrome-plated steel center tube. Designed for use with Mustang II spindles and outer tie rod ends.

- Mounting Clamp (FR1507C) available.
- 4 turns lock-to-lock
- 5" of rack travel

Also available: Omni Rack with Short Pinion -

FR1507-5

**Mustang II Rack with Short Pinion -**

### FR1502-5

This new version of the popular 1974-78 Mustang rack features a 1-1/2" long input shaft, which makes mounting easier and reduces the universal joint angle.

1971-72 Pinto Manual Rack and Pinion -

### FR1501

This Manual Rack and Pinion is designed to meet top chassis builders' standards for a new drag race steering system. It is designed to be sleek, lightweight, and durable-using high-quality aluminum castings and has a chrome-plated steel center tube.

Weighs only 12 Lbs.

- 3.75 turns lock-to-lock
- 5.25" of travel
- 45.5" overall length

Cobra/MGB Manual Rack and Pinion -

Flaming River now offers an all new manual rack and pinion for the Cobra and early MGB. Although this unit is dimensionally interchangeable with the original MGB rack, it uses today's technology for a smoother steering feel. The all new construction ensures extended life far superior to rebuilt units.

- 3 turns lock-to-lock
- 6.25" of travel
- 7.5" pinion length for better clearance than the original
- Spline size is 3/4"-48.
- 41" overall length



**Omni Rack Mount Clamp with Bushing - FR1507C** 

# **05-14 Mustang Manual Rack and Pinions**



### FR1515

Our customers asked for it and we delivered - Introducing the 2005-2014 Mustang Manual Rack & Pinion! The newest addition to Manual Rack & Pinion steering is lighter than the factory Mustang power system - reducing vehicle weight by 10-15 Lbs. (depending on vehicle specifications) by eliminating hoses, pulleys and pumps. Also, the billet aluminum mounting brackets can be adjusted to modify the pinion angle for large tube headers and engine swaps in custom applications.

Please Note: This specific Rack requires a 9/16"-26 U-Joint for installation.

### **Product Specs:**

- **Bolts into same mounting location as OEM Power Rack**
- 54-1/2" overall length
- 3-3/4 turns lock to lock
- 14" mounts center to center
- 1/2" diameter mounting holes
- 9/16"-26 spline pinion shaft
- 13" inner ends
- M14 X 1.5 X 2.5" inner tie rod end thread

- Bolts up to OEM Mount
- **Uses stock outer** tie rod ends
- Weighs only 14 Lbs.
- **Billet Mounts included**
- Adjustable pinion angle
- Made in the USA with Lifetime Serviceability

Danny Thompson and the Hajek **Motorsports Team used this Manual** Rack & Pinion in their 2010 E-85 Mustang-the fastest production-based Mustang in the world!





**Provides Additional Header Clearance** 













# Coil Over Shocks

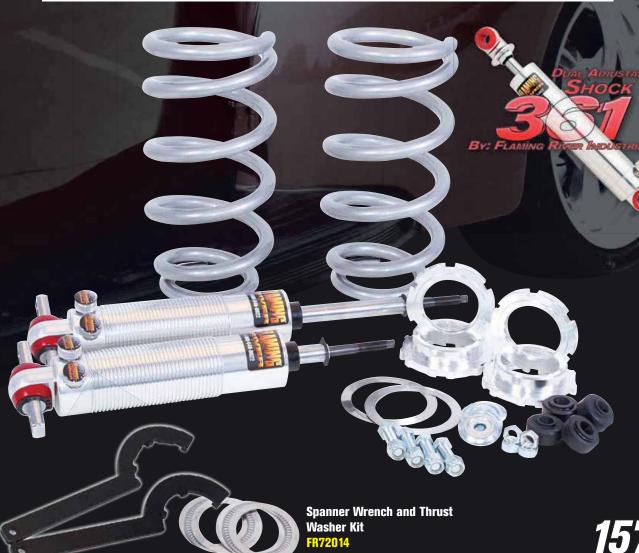
Model	Year	Smooth Body Front	Smooth Body Rear	Coil Over - Small Block Drag	Coil Over - SB Street - BB Drag	Coil Over - SB Road Race - BB Street
Buick						
Century	78-81	FR70040	FR70049	FR70016	FR70018	FR70019
Regal	73-87	FR70040	FR70049	FR70016	FR70018	FR70019
Riviera	63-65	FR70041	FR70048	FR70030	FR70032	
Riviera	71-78	FR70041	FR70049	FR70030	FR70032	
Skylark	64-67	FR70041	FR70049	FR70033	FR70035	FR70036
Skylark	68-72	FR70040	FR70049	FR70020	FR70022	FR70023
Skylark	75-79	FR70040	FR70049	FR70016	FR70018	FR70019
Chevrolet						
Camaro (Single-Leaf)	67-69	FR70040	FR70051	FR70024	FR70026	FR70027
Camaro (Multi-Leaf)	67-69	FR70040	FR70056	FR70024	FR70026	FR70027
Camaro	70-81	FR70041		FR70029	FR70031	FR70032
Camaro	82-92		FR70052			
Camaro	93-02		FR70052			
Chevelle/Malibu	64-67	FR70041	FR70049	FR70033	FR70035	FR70036
Chevelle/Malibu	68-72	FR70040	FR70049	FR70020	FR70022	FR70023
Chevelle/Malibu	73-83	FR70040	FR70049	FR70016	FR70018	FR70019
Chevy II / Nova	62-67		FR70051			
Chevy II / Nova	68-74	FR70040	FR70049	FR70024	FR70026	FR70027
Chevy II / Nova	75-79	FR70040	FR70049	FR70016	FR70018	FR70019
Corvette	63-82	FR70045	FR70046			
Corvette	84-87	FR70043	FR70047			
Corvette	88-96	FR70043	FR70050			
Corvette	97-12	FR70044				
El Camino	64-67	FR70041	FR70049	FR70033	FR70035	FR70036
El Camino	68-72	FR70040	FR70049	FR70020	FR70022	FR70023
El Camino	73-87	FR70040	FR70049	FR70016	FR70018	FR70019
Tri-Five / GM Full Size	55-57	FR70041	FR70056	FR70033	FR70035	FR70036
GM Full Size / Impala	58-85	FR70041	FR70049	FR70033	FR70035	FR70036
GM Full Size / Impala	94-96	FR70041	FR70049	FR70029	FR70031	FR70032
Monte Carlo	70-72	FR70040	FR70049	FR70020	FR70022	FR70023
Monte Carlo	73-88	FR70040	FR70049	FR70016	FR70018	FR70019
C1500 2WD / C-10 (Leaf)	63-72	FR70046				
C1500 2WD / C-10	73-87	FR70046	FR70048			
C1500 2WD / C-10	88-99	FR70041				
C1500 2WD	00-06	FR70041	FR70048			
S10 2WD (EXCL ZQ8/ZR2)	82-04	FR70040		FR70016	FR70018	FR70019
Vega	72-77		FR70049			

Model	Year	Smooth Body	Smooth Body	Coil Over -	Coil Over - SB	Coil Over -
	NGGIL	Front	Rear	Small Block	Street - BB	SB Road Race
		S. Constant		<b>Drag</b>	Drag	- BB Street
Dodge		The same of the sa	West (1)		AN AN ANTA	
330/440	63-64	FR70038	FR70048			
Challenger	70-74	FR70038	FR70048			
Charger / Coronet	65-72	FR70038	FR70048			
Dakota P/U 2WD	87-96	FR70040				
Dakota P/U 2WD	97-99	FR70040	FR70048			
Dart / Demon / Swinger	62-76	FR70038	FR70048		1	
Ford		- 10				
Galaxie / LTD / Crown Vic.	65-02	FR70041	FR70053	FR70031	FR70032	
Galaxie / LTD / Crown Vic.	03-12	A. or	FR70055			
Maverick	69-77	FR70094 (Kit)		1		
Mustang	64-70	FR70094 (Kit)	FR70095 (Kit)			
Mustang	71-73		FR70095 (Kit)			
Mustang II	74-78	FR70039	FR70095 (Kit)			
Mustang	79-93		FR70053			
Mustang	94-04		FR70053			
Mustang (Cobra IRS)	99-04		FR70054			
Mustang	05-Present		FR70055			- " []
Ranchero	57-59	FR70040				- [] -
Ranchero	60-65		FR70095 (Kit)	1		
Ranchero	66-71					
Ranchero	72-79	FR70041		FR70029	FR70031	FR70032
Thunderbird	63-66	FR70037				
Thunderbird	67-71	FR70041	FR70053	FR70031	FR70032	K. Y.
Thunderbird	72-79	FR70041		FR70031	FR70032	k
Torino	68-71		40			
Torino	72-76	FR70041	FR70051	FR70029	FR70031	FR70032
F-150 2WD (Incl Lightning)	80-84	FR70038				
F-150 2WD (Incl Lightning)	85-96	FR70038	FR70048			
F-150 2WD (Incl Lightning)	97-03	FR70042	FR70057	T- 1		
Oldsmobile						
Cutlass / 442 / F85	64-67	FR70041	FR70049	FR70033	FR70035	FR70036
Cutlass / 442 / F85	68-72	FR70040	FR70049	FR70020	FR70022	FR70023
Cutlass / 442	73-87	FR70040	FR70049	FR70016	FR70018	FR70019
Omega	73-74	FR70040	FR70049	FR70024	FR70026	FR70027
Omega	75-79	FR70040	FR70049	FR70016	FR70018	FR70019



# Coil Over Shocks

		TOWN TO			_	Ī
Model	Year	Smooth Body Front	Smooth Body Rear	Coil Over - Small Block Drag	Coil Over - SB Street - BB Drag	Coil Over - SB Road Race - BB Street
Pontiac		10				
Firebird (Single Leaf)	67-69	FR70040	FR70051	FR70024	FR70026	FR70027
Firebird (Multi-Leaf)	67-69	FR70040	FR70056	FR70024	FR70026	FR70027
Firebird	70-81	FR70041	40h 11	FR70029	FR70031	FR70032
Firebird	8292		FR70052	V N		
Firebird	93-02		FR70052	1		
Grand Am	78-80	FR70040	FR70049	FR70016	FR70018	FR70019
Grand Prix	69-72	FR70040	FR70049	FR70020	FR70022	FR70023
Grand Prix	73-87	FR70040	FR70049	FR70016	FR70018	FR70019
GTO / Tempest / LeMans	64-67	FR70041	FR70049	FR70033	FR70035	FR70036
GTO / Tempest / LeMans	68-72	FR70040	FR70049	FR70020	FR70022	FR70023
GTO	73-74	FR70040	FR70049	FR70016	FR70018	FR70019
GTO	04-06		FR70058			
LeMans	73-81	FR70040	FR70049	FR70016	FR70018	FR70019
Ventura	74-77	FR70040	FR70049	FR70016	FR70018	FR70019



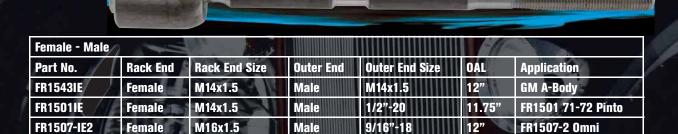
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# Inner Tie Rod Ends, Bellows and Rack Accessories

Male - Male							
Part No.	Rack End	Rack End Size	Outer End	Outer End Size	OAL	Application	
100506	Male	M14x1.5	Male	9/16"-18	11.5"	FR40001/FR40002 Lt. Side	
100587	Male	M14x1.5	Male	9/16"-18	11"	FR40001/FR40002 Rt. Side	
FR1502IE	Male	M14x1.5	Male	9/16"-18	11"	FR1502 - 74-78 Mustang II	
FR1503IE	Male	M14x1.5	Male	9/16"-18	11"	FR1503/FR1520 - 79-93 Mustang	
FR1508IE	Male	M14x1.5	Male	9/16"-18	12.5"	FR1508/FR1508Q - 94-04 Mustang	
100493	Male	M16x1.5	Male	M14x1.5	13"	05-10 Mustang	



Male - Female						
Part No.	Rack End	Rack End Size	Outer End	Outer End Size	OAL	Application
100377	Male	M14x1.5	Female	11/16"-18	11.5"	C-10 Cradle Kit



Male

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THE RESERVE OF THE PARTY OF THE		
THE PERSONNEL		
Co. Householder	The second lines in the lines of	
A COLUMN TWO IS NOT THE OWNER.	The second second second	
Nill Street, S		

10.25

FR1507-30 Omni

9/16"-18

Female - Female					
Part No.	Rack End	Rack End Size	Outer End	Outer End Size	OAL
FRIE1003FM	Female	M16x1.5	Female	5/8"-18	10"
FRIE1004FM	Female	M16x1.5	Female	11/16"-18	7.75

FR1507-30IE

Female

M16x1.5



Rack Bellow					
Part No.	Inner End Side	Rack Body Size	Static Length	Application	
FR1501-P	7/16"	1-1/16"	7-1/2"	Passenger Side of Omni, Pinto, All Manual Rack Kits	
FR1501-D	7/16"	1-11/16"	6-1/2"	Driver's Side of Omni, Pinto, All Manual Rack Kits & All Mustang Manual Racks (Both Sides)	
100163	1/2"	2"	8"	All Flaming River Power Racks (Both Sides)	

### Tie Rod Adjuster Sleeves - FR1620

- 1971-72 Monte Carlo, Cutlass, Lemans, Chevelle, El Camino, Malibu, 422, GTO
- 1973-77 Chevelle, El Camino, Regal, Malibu, Monte Carlo, Lemans & Cutlass
- 1970-81 Camaro & Firebird
- 1979-90 Caprice
- 1991-96 Caprice, Impala, & Roadmaster



Bellow Kit		
Part No.	Parts In Kit	
FR1501B	FR1501-P & FR1501-D	
FR1502B	FR1501-D (qty 2)	



### 2-Piece Mounting Bushings

Custom designed thermoplastic rubber for firm vibration absorption. Two sets are required for installation.



Impact absorbing rubber bushings with steel core are used to mount the Mustang II Rack and Pinion (FR1502). Two required.



Outer Tie Rod Ends
Designed to be the perfect complement
to our Manual Rack and Pinions
FR1601 1974-78 Mustang - 3.5" OAL
FR1603 1979-93 Mustang - 5" OAL
FR1603-L 1994-03 Mustang - 6" OAL

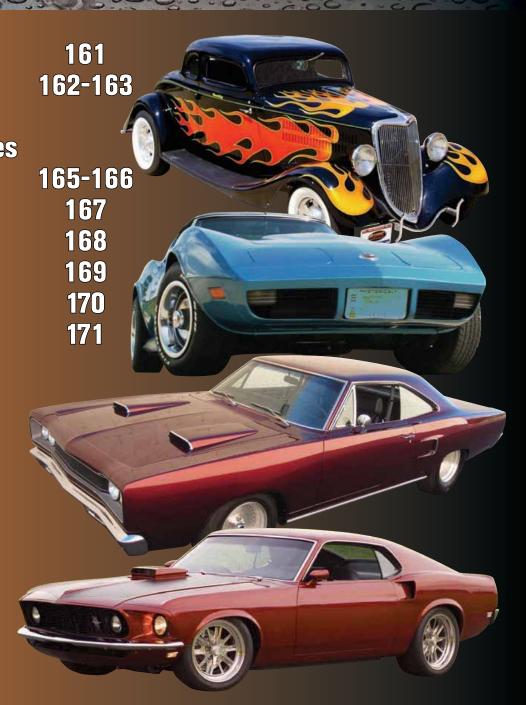
Omni Rack Mount Clamp with Bushing - FR1507C



*159* 

# **Steering Boxes**

Try V Power
Power Steering
Pumps, Pulleys and
Power Steering Lines
Vega
Corvair & T-Bucket
63-82 Corvette
Mopar
65-70 Mustang
62-67 Nova &
525 Manual



# TRY POWER



- Available in three ratios (12:1, 14:1, 16:1) to fit virtually any application with the steering feel you prefer.
- Trivalent Chromium Free Plating offers ten times the corrosion resistance of a painted box.
- Unique Tech billet cap included.
- Rack and Pinion Valve Spool for smooth and precise steering and handling.
- Four bolt mounting pattern also interchanges to early three bolt application.
- 3/4"-30 splined input shaft

Note: Ratios are approximate.

Price		
Part No.	Description	
FR1560	12:1 Ratio	
FR1562	16:1 Ratio	



If It Doesn't Say Flaming River...
It Just Isn't Good Enough!

# Power Steering Pumps, Pulleys & Braided Stainless P/S Line Kits





Flaming River now manufactures Braided Stainless Hose Kits for our Power Steering Systems.

- All pressure ends are crimped fittings—eliminates banjo fittings
- Can be mounted straight off AN fitting or at 90° angle
- Hose angles can be rotated to almost any position
- Custom hose lengths available



Part No.	Description
FR1632	AN Fitting Kit

Part No.	Description
FR1610	FR Power Rack & Pinion - 30" Pressure & Return Line
FR1625	GM Power Rack - 24" Pressure and Return Line
FR1623	GM Power Box or Rack going to Integral Reservoir Pump



Billet Aluminum Remote
Reservoirs
Our polished aluminum Remote Reservoir
features a threaded cap
and two machined billet brackets for secure
mounting. A sleek,
radiused design complements any beautiful
engine compartment.
Recommended for use
with Flaming River

Power Racks-it can also be used with other Stage II Pumps. Similar styles available for Radiator Overflow and Master Cylinder Remote Reservoirs. Machine finish shown

Part No.	Description
FR1614	Power Steering Chrome Powder coat
FR1614BK	Power Steering Black Powder coat
FR1614PL	Power Steering Polished
FR1615	Coolant Overflow
FR1616	Brake Fluid



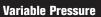
LS3 Power Steering Pump Extended AN Fitting Part No. - FR1634 Corvette-Style "Transverse Compact" Low-Flow Pump (5/8" Shaft Size) FR1571 This Transverse Compact Pump is ideal for street rods and features a bearing design and a flow of 2.4 to 2.8 gallons per minute. Polished version also available. Remote Reservoir (FR1614) required.

Integral Reservoir Pump (5/8" Shaft Size) FR1572

The reservoir features trivalent chromium free plating for corrosion resistance. Flow of 2.7 to 3.1 gallons per minute. Fits most popular GM applications.



Part No.	Description
FR1573	5" Pulley - GM P/S Pump
A01G5001	4" Pulley V-Belt FR Pump
100385	4" Pulley V-Belt GM Pump



**Low-Flow Pump (3/4" Shaft Size)** 

FR1570 (w/o Pulley)
FRPMPSB-V (w/ V-Belt Pulley)

pre-assembled for easy installation)

FRPMPSB-S (w/ 7 groove S-Belt Pulley

pre-assembled for easy installation)

The intelligent design of this pump allows for pressure reduction at higher RPMs for maximum control during highway driving and easy steering in parking situations. Remote reservoir (FR1614) required.



This power steering pump bracket is for Stage II style pumps and features a revolutionary new design-made of black oxide steel and available for Small Block and Big Block vehicle applications. Features an adjustable design that allows for use with short neck and long neck water pumps. Includes a billet aluminum tension adjuster and mounting hardware. Manufactured using precision laser machinery.

Part No.	Description
FR1612	Small Block Chevy
FR1613	Big Block Chevy





Flaming River Synthetic Power Steering Fluid - FR41001

Formulated for High Performance Steering Systems! This newly

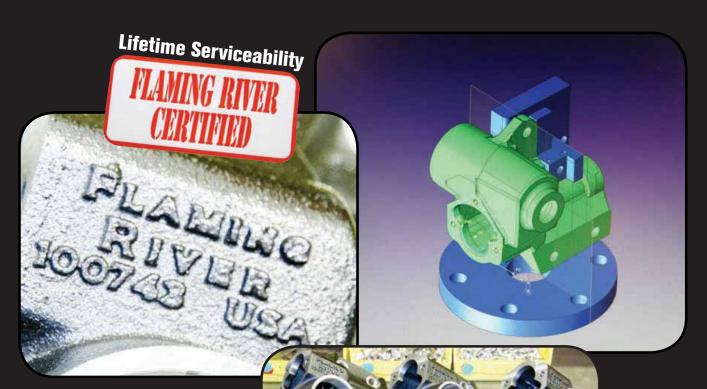
developed line of Synthetic Power Steering Fluid is a natural addition to Flaming River's Power Rack and Pinions and Power Steering Accessory product lines. Available in a 1 quart bottle, this Power Steering Fluid reduces operating temperatures and fluid expansion, resists foaming, and also increases the life of power steering systems by reducing internal wear and tear.

Flaming River's Synthetic Power Steering Fluid is recommended for all power steering applications. Simply purge the vehicle of its current power steering fluid and replace with Flaming River's unique blend that safely mixes with any trace amounts of other steering fluid left behind. Viscosity ISO Grade 30.

# **Steering Box Manufacturing**



Each Flaming River manual steering box is tested for proper steering torque and bearing adjustment... Flaming River Certified!



Each
Steering Box
Is Made with All
New Internals!

# Street Rod - Vega Boxes

### **Performance Vega Steering Boxes**

The Flaming River Performance Vega style steering box is an all-new unit designed specifically for street rods. This box is 30% stronger than the OEM box and utilizes the latest technology with a smooth needle bearing design. This new design far outlasts the original bushing design of the 70's. The Vega-style box is preferred by most builders due to the steering geometry of straight-axle equipped cars. We have dramatically improved the Flaming River Vega-style box. There is no "VEGA" in the Flaming River Vega-style box!

### **Smooth Precise Steering:**

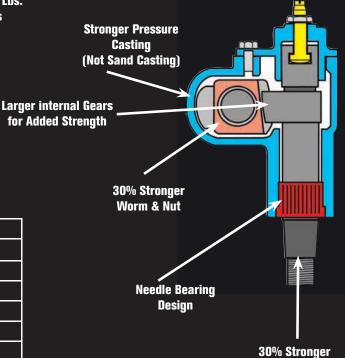
- Direct bolt-in replacement
- New smooth needle bearing design for longer life
- Heavy-duty worm gear and roller bearing design is 30% larger than original for smoother, more comfortable steering end to end
- Crowned Sector Higher torque at center position reduces vibration and provides for more natural return of steering wheel.
- Stronger Casting & Internals
- New double cupped seal
- NEW high tech chromed cap included.
- Factory marked center position.
- One-Year Warranty

Note: Not recommended for vehicles that exceed 3,000 Lbs. Not intended for circle track racing. Use in Motorsports activities voids all warranties.



Part No.	Description	
FR1500	20:1 Ratio - Black Finish	
FR1500Q	16:1 Ratio - Black Finish	
FR1500C	20:1 Ratio - Chrome Finish	
Pitman Arms		
FR1493	6" Vega Style Steel Pitman Arm	
FR1493PL	6" Vega Style Chrome Pitman Arm	





### Vega Mounting Bracket

This bracket allows for mounting of the Vega Box and comes complete with mounting plate and gusset. Note: Must be welded in place.



**Sector Shaft** 



High-Performance Manual
Steering Box Kits
These manual steering box kits
are a direct replacement for
power and larger manual boxes
for most GM applications. The
compact steering box weighs
only 12 Lbs. Can reduce front
end weight by up to 30 Lbs.
Kit Includes: Performance Steering Box, Pitman Arm, Needle
Bearing U-Joint, Shaft Adapter
Increase Horsepower, Reduce
ET!

 All new manual steering box designed specifically

- for racing and street use (weighs only 12 Lbs.)
- Direct bolt-in replacement for most popular applications
- Installs easily in under one hour
- Streamlines engine compartment
- Gain header clearance
   Note: Not recommended for vehicles that exceed 3,000 Lbs.
   Not intended for circle track racing. Use in Motorsports activities voids all warranties.

Part No.	Description
FR1494	1973-77 Chevelle
FR1496	1975-79 Skylark - 1970-81 Camaro - 1975-79 Nova
FR1500BS	Vega-Style Ball Socket Manual Steering Box Kit - 1967-69 Camaro - 1967-68 Firebird



Vega-Style Ball Socket Manual Steering Box Kit FR1500BS

This kit is designed for the early Camaros, Novas, and Firebirds. Compact steering box weighs only 12 Lbs. and educes front end weight and improves header clearance. 20:1 Standard Ratio (16:1 Quick Ratio also available).

Kit Includes: Performance Steering Box and Ball Socket Pitman.

NOTE: Adapter is recommended for installation FR1798-100, FR1798-148

(sold separately)
Fits the following applications:
1967-69 Camaro
1968-74 Nova
1967-68 Firebird,
GMC Cyclone/Typhoon
Note: Not Recommended for Vehicles over 3,000 Lbs. Not intended for circle track racing or for use in vehicles that are subject to wheel stands. Use in Motorsports activi-

ties voids all warranties.

Vega Steering Box installed in a 1976 Nova



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# Corvair / T-Bucket Steering

### T-Bucket Steering Box (Reversed)

This steering box is manufactured from steel for improved strength and has a reversed design made specially for T-Bucket steering. An all-new needle bearing design with brand new castings and internals, allows for longer life and less vibration. 20:1 ratio.



New "Tech" Series Steering Boxes

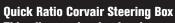
A new fluted styling is

machined into this new chrome

series of steering boxes. With
detailing normally only seen
by top builders, you can
now add a striking and
unique look to your
street rod-each

FLAMING RIVER

street rod-each one is virtually a work of art.



This all-new steering box is manufactured from steel for added strength and perfect for Corvair and autocross applications. A heavy-duty internal needle bearing design will give you smoother performance and a longer life than the original. Quick ratio design – 3.5 turns lock-to-lock. NOTE: Fits 60-63 direct bolt in. 64 & Early 65 with long steering shaft requires Universal Joint FR1789-55.



All-new steering slip shaft is designed for use with our Quick Ratio Corvair Steering Box in early 65 with Telescopic columns, late 65 and all 66 Corvair applications. Early 65 with Telescopic Columns also need FR1722DD Universal Joint.

## **Corvette Steering Boxes**

All-New-Manual Steering Boxes for the 1963-82 Corvette

These manual steering boxes are manufactured from high-quality materials and contain all new components—including the sector, recirculating ball worm and nut, bushing, roller bearings, casting, and cap. This unit is dimensionally interchangeable with the original box, but all new parts improve the performance, steering, and handling of your vehicle. Available with quick 16:1 ratio preferred by enthusiasts.

Year	Part No.	Pinion Shaft Size
1963-68	FR1513-36	3/4"-36
1969-82	FR1513-30	3/4"-30

1963-82 Corvette Manual Steering Box Rebuild Kit

Flaming River offers a parts kit to rebuild your own box. Most rebuilt boxes on the market only have new bearings, races and seals installed. The worn nut and sector, which are the critical parts that are needed for

that new steering response, are not available new so the old parts are recycled into rebuilt boxes. We new offer all new internals so you can rebuild your box and get back on the road safely!

Note: Re-manufacturing your own steering box requires technical expertise and some machining may be necessary (i.e. bushings.)

Year	Part No.	Pinion Shaft Size
1963-68	FR1514-36	3/4"-36
1969-82	FR1514-30	3/4"-30

# 525 Style Manual Steering Box

This heavy-duty manual steering box is designed for heavier applications. It features a 3 bolt pattern and uses the stock manual pitman arm. Spline size is 3/4"-30 with a 20:1 ratio. Made with all-new parts-not rebuilt!

FR1543 20:1 Ratio





This adapter is ideal for increasing header clearance by eliminating the old rag joint from your stock power box. This box is resistant to corrosion with electroless nickel plating. With an overall length of 4-1/2", it can't be used for power to manual conversion, but is the best option for adding clearance to your existing setup.



FLAMING RIVER

MADE IN

Quality Steering Systems

Mopar Steering Wheel Adapters These Wheel Adapters allow for use of our WaterFall Wheel or a standard 5/6 bolt aftermarket wheel with the original 1970-74 Mopar "E" Body Steering Columns.

FR20119D0 - 5/6 Bolt Patterns FR20119D02 - WaterFall Wheel





Mopar Coupler Shaft Kit - Power to Manual Conversion - FR1505M

This kit simplifies installation by eliminating the factory coupler and is a must-have when converting from Power to Manual steering. Kit includes a coupler to fit the manual steering box, a connecting shaft, and a universal joint for the steering column.

Part No.	Description
FR20150HGAD	FR Tilt Column
FR201500E	GM Column
FR20150M69	Dodge 1966-69
FR20150M70	Dodge 1970-75
FR20161AD	Flaming River Tuff Wheel Adapter
FR20180	5/6 Bolt 1966-69
FR20181	5/6 Bolt 1970-75

# 1965-70 Classic Mustang Steering

Classic Mustang Manual Steering Boxes

The Popular Manual Steering Boxes for the 1965-70 Mustang are now made right here, in the USA. Our Mustang Boxes are made from all-new components including

a new casting, sector gear shaft, and internals-no rebuilt parts

in this box! Replace that worn steering box with an all-

new needle bearing steering box and experience

the difference in steering, handling, and

performance!



FR1498

1965-66 Mustang Manual Steering Box

This Manual Steering Box comes with a 1" sector shaft and 45" long steering shaft. Made with all-new components, it installs easily into the classic 1965-66 Mustangs. 16:1 ratio, but 19:1 ratio available upon request. Made in the USA.

1967-70 Mustang Manual **Steering Box** 

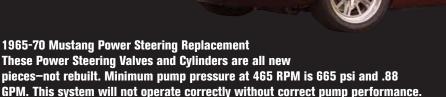
FR1498 FR1498-6 67 (Mustang Only - Short Shaft 1"

Sector)

This Manual Steering Box comes with a 1-1/8"

sector shaft and short steering shaft. Made with all-new components and comes with 16:1 ratio.

Made in the USA.



Note: 90 Day Warranty. Hoses/Pump not included.

Part No.	Description	
FR1497VLV	1965-66 P/S Valve	
FR1498VLV	1967-70 P/S Valve	
FR1498PWR	Power Steering Cylinder	
FR1498VLKT	1967-70 Valve and Cylinder Kit	



FR1497Q

FR1498PWR



## 1962-67 Nova



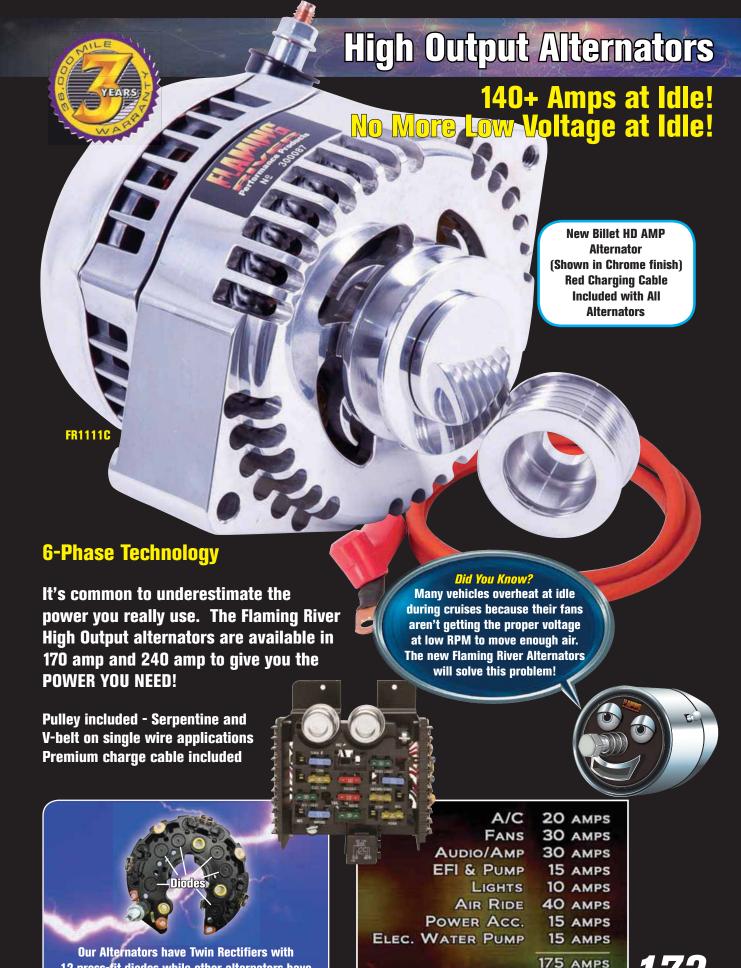
Flaming River makes a new direct bolt-in steering system for your early Nova. This kit eliminates the long shaft steering column and sloppy, worn-out steering box. This new box design mounts with a convenient chassis bracket and features a quick steering ratio with only 3-1/2 turns lockto-lock for an improved steering response.

Because the Nova used a Slave Cylinder, this Manual Box can be used with either a power or manual system. We've included virtually everything you need for a clean, simple installation-including the Mounting Bracket, Universal Joints, and an all-new Tilt Steering Column.



# Racing & Battery Disconnect Switches

Billet HD Amp - Alternators	173-176	
Battery Relocation Kit	173-170	
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Mag Kill & Big Switch with Lever Kit		
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12 press-fit diodes while other alternators have only one rectifier with 6 diodes

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# HERMINIST HILD A

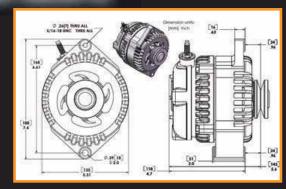


# NEW

FR1108C 170 Amp FR1109C 240 Amp

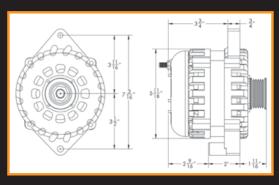
63-85 GM

Die Cast w/Chrome Housing 6 Phase 170 or 240 Amp **High Output Alternator with** 1 wire regulator and internal cooling fans.



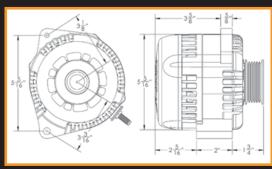


FR1145 240 Amp 92-96 Corvette (except ZR1)/Grand National Black Finish 6 Phase 170 or 240 Amp **High Output Alternator and** Internal cooling fans. Accepts OEM Alternator Plug.





FR1114 170 Amp FR1117 240 Amp 88-95 C/K Truck 4.3 - 5.0 - 5.7 170 or 240 Amp **Chrome Finish** This unit fits popular aftermarket accessory systems for small block Chevy, and has proven to be a very good seller to street rod customers with those kits. Equipped with side output stud to fit many popular aftermarket bracket kits.



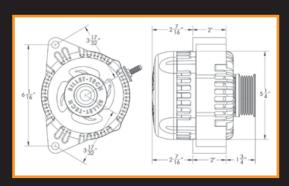


FR1 152 170 Amp FR1155 240 Amp

05-13 Corvette (except ZR1) **Machine Finish** 6 Phase 170 or 240 Amp High

**Output Alternator and Internal** cooling fans.

**Accepts OEM Alternator Plug.** 



### PROMINET HOLD ANNIP

Part No.	Amps	Finish		
63 - 85 GM Die Cast Housing Includes				
V-Belt and Serpentine Belt Pulley				
FR1108C	170	Chrome		
FR1108B	170	Black Anodized		
FR1109C	240	Chrome		
FR1109B	240	Black Anodized		
	Ü	Includes V-Belt		
and Serpentine				
FR1110	170	Machined		
FR1111	170	Polished		
FR1111C	170	Chrome		
FR1112	170	Black		
88-95 C/K Truck 4.3 - 5.0 - 5.7 Includes				
V-Belt and Serp				
FR1113	170	Machined		
FR1114	170	Polished		
FR1115	170	Black		
FR1116	240	Machined		
FR1117	240	Polished		
FR1118	240	Black		
96-04 Silverad	96-04 Silverado All Motors Direct Fit			
FR1119	170	Machined		
FR1120	170	Polished		
FR1121	170	Black		
FR1122	240	Machined		
FR1123	240	Polished		
FR1124	240	Black		



Part No.	Amps	Finish	
05-13 Silverad			
- 6.6L - 8.1L Direct Fit			
FR1125	170	Machined	
FR1126	170	Polished	
FR1127	170	Black	
FR1128	240	Machined	
FR1128P	240	Polished	
FR1129	240	Black	
01-07 Silverad	o 6.6L Diese	el Direct Fit	
FR1119	170	Machined	
FR1120	170	Polished	
FR1121	170	Black	
FR1122	240	Machined	
FR1123	240	Polished	
FR1124	240	Black	
99-04 Escalado Direct Fit	e 5.7L - 6.0	L - 6.2L	
FR1119	170	Machined	
FR1120	170	Polished	
FR1121	170	Black	
FR1122	240	Machined	
FR1123	240	Polished	
FR1124	240	Black	
05-13 Escalade 5.7L - 6.0L - 6.2L			
Direct Fit			
FR1125	170	Machined	
FR1126	170	Polished	
FR1127	170	Black	
FR1128	240	Machined	
FR1128P	240	Polished	
FR1129	240	Black	

Part No.	Amps	Amps Finish	
03-09 Hummer H2 6.0L - 6.2L, H3 5.3L Direct Fit			
FR1119	170	Machined	
FR1120	170	Polished	
FR1121	170	Black	
FR1122	240	Machined	
FR1123	240	Polished	
FR1124	240	Black	
88-92 Camaro	5.0L - 5.7L	Direct Fit	
FR1113	170	Machined	
FR1114	170	Polished	
FR1115	170	Black	
FR1116	240	Machined	
FR1117	240	Polished	
FR1118	240	Black	
98-02 Camaro 5.7L Direct Fit			
FR1119	170	Machined	
FR1120	170	Polished	
FR1121	170	Black	
FR1122	240	Machined	
FR1123	240	Polished	
FR1124	240	Black	
92-96 Corvette All - Exc ZR1 Direct Fit			
FR1143	240	Machined	
FR1144	240	Polished	
FR1145	240	Black	

Part No.	Amps	Finish		
Turbo Charged Buick Grand National				
Direct Fit				
FR1143	240	Machined		
FR1144	240	Polished		
FR1145	240	Black		
05-13 Corvette	- Exc ZR1	Direct Fit		
FR1152	170	Machined		
FR1153	170	Polished		
FR1154	170	Black		
FR1155	240	Machined		
FR1156	240	Polished		
FR1157	240	Black		
65-85 Ford 6 8	k 12 O'Cloc	k Bolt Pattern		
V-Belt Direct Fi	t			
FR1164	170	Machined		
FR1165	170	Polished		
FR1166	170	Black Anodized		
85-95 Ford 6 8	4 12 O'Cloc	k Bolt Pattern		
with 6 Groove S	Gerpentine P	ulley Direct Fit		
FR1167	170	Machined		
FR1168	170	Polished		
FR1169	170	Black		
		Anodized		
FR1 170	240	Machined		
FR1171	240	Polished		
FR1172	240	Black		

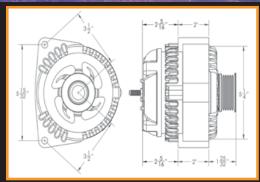
To determine your vehicle's pulley ratio, divide the diameter of your crankshaft pulley by the diameter of your alternator pulley



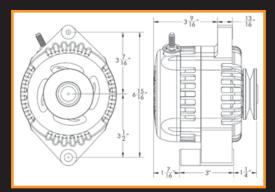




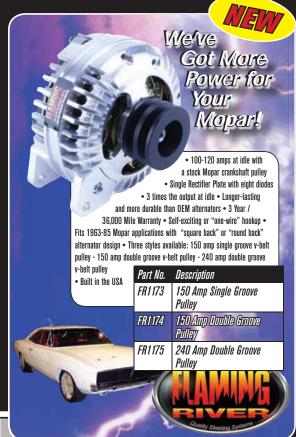
## **High Output Alternators**

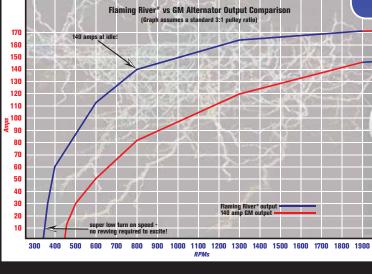


96-04 Silverado



68-85 Ford





Co Co

Racing Alternators
FR1182 - 50 Amp
Racing Alternator
FR1183 - 50 Amp
Racing Alternator For
16 Volt Racing Battery
FR1184 - 80 Amp
Racing Alternator
FR1185 - 80 Amp
Racing Alternator For
16 Volt Racing Batteries









WITH IDLER PULLEY

### **Eliminating Belt Slip**

If belt slip becomes an issue, a free spinning backside idler pulley may be mounted next to the alternator pulley, increasing contact surface area and belt drive tension at the same time. Eliminating belt slip is absolutely critical to proper charging system performance.

# Battery Relocation, Alt Cable Install Kit & Marine Alternator

### FR1060 Battery Relocation Kit

Flaming River has introduced a new battery relocation kit. The 20 foot 1/0 gauge positive cable and 8 foot 1/0 gauge ground cable are flexible, soft and easy to work with. The cables are rated for 250 amps and have more than 4,700 ultra-fine strands for low resistance and flexibility. "No crimp" ends simplify the installation process and all hardware is included for an easy install.

### **Kit Contains:**

- 20 feet of red 1/0 gauge ultra-flexible positive
- 8 feet of black 1/0 gauge ultra-flexible ground
- (12) cable clamps and (12) self-tapping hex drive sheet metal screws to mount the cable to the
- (12) plastic cable ties to secure the installation
- (6) heavy duty "no crimp" cable ends
- (1) negative battery clamp terminal
- (1) positive battery clamp terminal
- (6) waterproof heat shrink sleeves to seal the cable
- WEIGHT SAVINGS 1/0 gauge cable in this kit is 50% lighter than standard 1/0 gauge cable
- IMPROVED FLEXIBILITY "Ultra-flexible" each cable is flexible, soft, and easy to work with.
- Cables are rated for 250 amps and have 4700 ultra-fine strands for low resistance and flexibility.
- All hardware is included for installation
- No crimp ends and battery terminals are also sold separately.



**High-Output Alternators** 

FR1190MA - 170 Amp High Output **Alternator** FR1191MA - 240 Amp High Output Alternator

- 140+ Amps at engine idle RPM
- Hairpin Stator and twin rectifiers for durability
- SAE J1171 Marine Compliant
- **ISO 8846 Marine Safety Certified**
- Meets USCG Title 33 standards for ignition
- 3 different bolt patterns to choose from
- **Includes V-belt and 6 Rib pulley**





No Crimp Battery Cable Ends (Pair) Heavy-duty set-screw style "no crimp" cable ends for installing or relocating a vehicle battery or alternator. Two (2) ends included in this kit. FR1061CE

FR1061 Alternator Cable Installation Kit with 250 Amp Fuse FR1062FS 250 Amp Fuse for 0 to 4 gauge cable **Kits Includes:** 

- 250 Amp fuse and fuse holder
- zero gauge positive and ground cables
- no crimp cable ends



### Late-Model Racing Manual Rack and Pinions Overall length: Approx. 49" Pivots: Approx. 30.25/30.38" Mounts center to center: 11.75 FR1515CAM (mount hole diameter: .420) Camaro 2016 Short pinion, standard rack gain (long pinion available) Inner end thread is M16X1.5 Inner end length is approx. 10.38" FR1515MPR Overall length: Approx. 51.25" **Mopar Challenger 2015** Pivots: Approx. 26.01" Mounts center to center: 18.21 (mount hole diameter: .500) Short pinion, standard rack gain (long pinion available) Inner end thread is M16X1.5 FLAMING RIVER Inner end length is approx. 14" 2016 Camaro and 2016 Challenger Racing Manual Rack and Pinion FR1515MPR Mopar Challenger 2015 FR1515CAM Camaro 2016 This new Manual Rack and Pinion design replaces the power rack in the Late-Model Camaro and Challenger-resulting in significant weight savings and improved handling characteristics. Please Note: These Racks require a FR1709DD - 9/16"-26 U-Joint for installation.

### 2005-2014 Mustang Manual Rack and Pinion FR1515

This new Manual Rack and Pinion design replaces the power rack in the 2005-2010 Mustangs-resulting in significant weight savings and improved handling characteristics.

- Bolts into same mounting location as OEM Power Rack
- 54 1/2" overall length
- 3 3/4 turns lock to lock
- 14" mounts center to center
- 1/2" diameter mounting holes
- 9/16"-26 spline pinion shaft
- 13" inner ends
- M14 X 1.5 X 2.5" inner tie rod end thread

Please Note: This specific Rack requires a FR1709DD - 9/16"-26 U-Joint for installation.





Danny Thompson and the Hajek Motorsports Team used this Manual Rack and Pinion in their 2010 E-85 Mustangclocking in at 258.4 MPH and making it the fastest production-based Mustang in the world!



# **Timing Light**

Single Wire Timing Light - FR1001 Timing Light with 20FT Lead- FR1020

This self-powered timing light is designed to work without an auxiliary power source, which makes it ideal for use with magnetos, rear battery mount race cars, motorcycles, marine, go-karts, and all spark ignition systems for hassle-free timing. "The Light" is equipped with a xenon bulb which generates a bright strobe as well as a convenient work-light. Durable construction includes a rubber encased lens and 48" pickup lead. Longer leads are available for industrial applications.

- State-of-the-art single-wire design (operated on two D-Cell batteries)
- Excellent for use with magnetos and all spark ignition systems
- Bright xenon strobe clearly visible in daylight
- Accurate timing up to 14,000 RPM
- Can be used to test circuits

## Racing

Silver Bullet® Drag Racing Steering Box

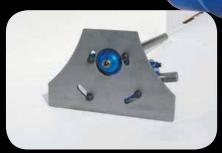
The New Silver Bullet® Drag Racing Steering Box is designed to mount into the current steering box chassis location.

- Precision-Machined Chrome Steel Pinion
- Powdercoated Billet Aluminum
- 1.8 Turns Lock-to-Lock
- Weighs Only 4.85 Lbs.

Note: This is for racing-specific applications only - Not for street use!









Adjustable Laser Cut Mounting Bracket - FR1550MB

1971-72 Pinto Manual Rack and Pinion

FR1501 Standard
FR1501-2 5" Shorter

This Manual Rack and Pinion is designed to meet top chassis builders' standards for a new drag race steering gear. Manufactured to be sleek,

lightweight and durable using high-quality, aluminum castings and a chrome-plated steel center tube.

- Weighs only 12 Lbs.
- 3.75 turns lock-to-lock
- 5.25" of rack travel
- Overall length 45-1/2"

Pitman Arm - FR1550P Coupler - FR1550C





**Shafts** 





## **Motorsports Column**



### Stainless Steel Nostalgia Column

### FRARINA

This lightweight, non-tilt column is made of paintable 304 Grade Stainless Steel. It features a compact shroud and no internal wiring and is designed for classes requiring OEM-style steering columns.

### **Straight Motorsports Column**

This basic, straight-tube design is for competition use. Mill finish 304 Grade Stainless tube with 1.75" Dia. Features 3/4"-36 output shaft. Upper shaft end is 3/4" smooth to accept a quick-release steering wheel hub. Diamond laser-cut collapsible column is also available for added safety.

Part No.	Description	
Motorsport	s Straight Column - Without Laser Cut	
FR3306	Motorsports Straight Column	
FR3306KT	Motorsports Straight Column Kit - Includes FR20142 Quick Release Hub	
Motorsports Straight Column - With Laser Cut		
FR3307	Laser Cut Collapsible Motorsports Straight Column	
FR3307KT	Laser Cut Collapsible Motorsports Straight Column Kit - Includes FR20142 Quick Release Hub	





### Quick Release Steering Wheel Hub Disconnect

### FR20142

This Quick Release Disconnect is the new standard in quick release hubs! Designed for motorsports applications, this quick release hub is lightweight, black anodized and CNC-machined from premium 6061-T6 billet aluminum.

Features a precision-tolerance design for positive steering input.

Uses a standard 3-bolt mounting pattern and can be used

with Flaming River FR20119 Billet Aluminum Wheel Adapter to fit 5 and 6-bolt steering wheels. 20-spline design fits 3/4" smooth shaft and utilizes deep beveled splines for a greater engaged surface area.

Meets SFI-Spec 42.1 requirements with a NASCAR-required steel pull disconnect ring.

### Combination Battery and Alternator Kill Switch - FR1013

This combo kill switch designed to completely shut down the battery and charging system in an emergency situation. Ideal for racing, vehicle storage, marine and RV applications Prevents battery drain, theft, and reduces the risk of electrical fire

- Push Off for emergency shut-down and color-coded to indicate operating position- ON or OFF, with a durable spring-loaded design
- Meets IHRA, NHRA and SCCA sanctioning body requirements
- Rated Capacity:
- Battery 2000 Amp Surge
- 150 Amp Continuous
- Alternator 120 Amp



### The Little Switch - FR1002

The Little Switch is rated at 100 amps continuous service and 500 amps for 10 second surges making it ideal for street rods, classics and passenger cars. In addition to preventing battery drain, this unique switch is also a cost effective anti-theft device. A rubber boot seals the neck from moisture and dirt.

- Competition approved by IMSA, ARCA, and SCCA.
- Inexpensive Anti-theft Device
- Prevents Battery Drain
- Water Resistant
- Removable Key

### The Big Switch with Lever Kit

The lever kit allows for remote actuation of the Big Switch. The kit includes an 18" long, aluminum threaded rod, T-handle, mounting bracket and necessary hardware. A "push off" decal is included. Accepted for NHRA/IHRA competition use.

### FR1003-2

The Big Switch with Lever Kit FR1006

**Lever Kit Only** 





### Combination Magneto and Battery Kill Switch - FR1010

This dual circuit switch simultaneously shuts down both the battery and magneto. Rated at 250 Amps continuous service / 2500 Amps for 5 second surges. This switch is furnished with an easy grip T-Handle, a waterproof spring-loaded design, silver plated brass contacts, and an anodized aluminum mounting bracket. Accepted for NHRA/IHRA competition use





### FR1045 - Lever Style Battery Disconnect Switch with Lock-Out

**Vehicle Applications** Voltage 12 - 24V **Maximum Continuous Current on Main** 350A

**Connections** 

Maximum Surge Current on Main Connections 800A 30 sec (tbd) **Environmental** salt spray test: 300h

**Protection Rating** 

**Stud Length** .630 in (space available for terminal cables)

**Stud Size** M12 14 ft lbs **Tightening Torque** 

**Operating Temperature Range** -30°+80°C

**Contacts** Silver plated copper **Contact Terminals** Silver plated copper **Contact Hardware Nickel plated brass** 

Waterproof IP 65, can be improved to IP67 with small

changes

### FR1046 - The Matrix Battery Disconnect with Dual Pole, **Lock-Out & Silver Plated Pads**



**Operating Temperature Range Contacts** 

**Contact Terminals** 

**Contact Hardware** Waterproof

12 - 24V 500A 1000A 30 sec

AII

salt spray test: 300h

.728 in (space available for terminal

cables) M12

14ft lbs -/+1ft lbs

-30°+80°C

Silver plated copper - with silver

pads

Silver plated copper - with silver

pads

**Nickel plated brass** 

IP67 and IP69K (water pressure

cleaning)



### **Dual Battery Disconnect Switch - FR1050**

The Dual Battery Disconnect Switch allows for two batteries to operate independent of one another, or for both to be in the ON or OFF position at the same time.

- Rated at 300 Amps continuous service, and 1000 Amps for 5 second surges.
- 12 or 24 Volts
- **IP 54 Rating**
- **300 Amps Continuous**
- 1000 Amps Surge for 5 Seconds
- **Silver Plated Contacts**



The Big Switch with Lock-Out - FR1005

The Big Switch is a heavy-duty Battery Disconnect Switch rated at 250 Amps continuous service and 2500 Amps for 5 second intervals (12V/24V). The Big Switch is manufactured with silver plated electrical contacts and with a completely sealed, waterproof design, and is able to withstand the most severe operating conditions.

We back the quality of this switch with a three (3) year warranty. This Big Switch comes with a lock-out bracket which enables a padlock to be inserted in the "OFF" position to comply with OSHA lock-out/tag-out regulation 1910.147. This prevents theft and accidental activation during equipment maintenance.

**Protect Your Fleet: 8 out of 10 Fires Are Caused by Faulty Electrical Systems!** 

**Specifications of the Flaming River Big Switch:** 

- **Waterproof and Corrosion Resistant Design**
- **Rated Capacity of 250 Amps Continuous 12V/24V**
- **Non-Corrosive Stainless Steel Terminals**
- **Silver Plated Contacts**
- **Mounting Bracket and Hardware Included**
- Fleet Discounts Available

Note: Terminals on battery disconnect switches are live parts of the electrical system and should be treated just like battery terminals. Covers are recommended, but not included, for each kit.

Contact your vehicle's manufacturer to determine proper placement and suitability.

### The Big Switch with Removable Key -FR1009

The Big Switch with removable laser cut. stainless steel key enhances the security and safety features available with the Big Switch. This unit is rated at 250 amps continuous service and 2500 amps for 5 second intervals (12V / 24V) It is a heavy duty, waterproof switch. The removable key feature is ideal for construction, farm equipment and passenger cars. An absolutely essential theft deterrent.

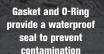


The dual spring-loaded plunger prevents circuit interruption from shock and vibration

Silver plated copper is integral with the plunger for positive circuit completion

**Rubber O-Ring provides** a waterproof seal





**Terminal Isolator** between the terminals prevents accidental arcing

Stainless Steel corrosion resistant fasteners

### **Terminal Covers** FR1003TM

Sold in sets of two, can be used to cover cables on all **Battery Disconnect Switches.** Sold separately from switch.







The Big Switch Battery Disconnect Switch **ER1003** 

Top racers realize that using a low amp switch creates resistance and actually reduces power. Flaming River's heavy duty battery disconnect switch is top of the line designed for complex electrical systems and 16 Volt batteries.

Rated at 250 amps continuous service (12/16/24V) and 2500 amps for 5 second surges.

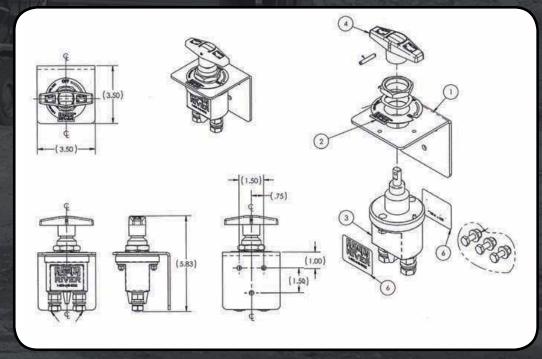
Spring-loaded, vibration resistant, waterproof design.
Accepted by most sanctioning bodies including IHRA/NHRA.
Furnished with an easy-grip T-handle, anodized aluminum
bracket and zinc plated mounting hardware.

The Big Switch with Extension Kit - FR1003-4 Extension Only - FR1003-EXT

This industrial lever kit allows for remote mounting of the Big Switch. Kit includes a custom 15" aluminum rod, handle, and the switch.

- Rated at 250 amps continuous service (12/16/24V) and 2500 amps for 5 second surges.
- Spring-loaded, vibration resistant waterproof design.
- Accepted by most sanctioning bodies including IHRA/NHRA.
- Furnished with an easy-grip T-handle, anodized aluminum bracket and zinc plated mounting hardware.

Compare The Difference			
Feature	Brand X		
Rating (12V/16V/24V)	250 Amps Continuous	20 Amps	
Rating Surge (12V/16V/24V)	2500 Amps	125 Amps	
Waterproof	Yes	No	
Silver Plated Terminal	Yes	No	
Design	Spring Loaded	Rotary	
Weight	17 oz.	14 oz.	
Warranty	3 Years	None	

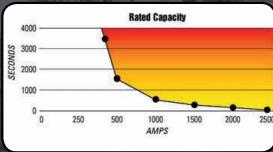


Big Switch Battery Disconnect with LED Indicator

The Big Switch is now available with an illuminated LED that indicates when the system is on. The visual cue easily identifies whether the switch and electrical system are ON or OFF for proper shut down procedure.

- LED Indicator Light Clear indicator that system is ON or OFF
- Rated Capacity 2500 Amps / 250 continuous
- Stainless Steel Fasteners for corrosion resistance
- Waterproof
- Silver plated copper internal contact plates
- M10 etude
- Lock-out feature enables use of padlock for OSHA Lock-out/Tag-Out

compliance



Part No.	Description	
FR1005LED	Big Switch Battery Discon- nect with LED Indicator	
FR1008LED	Lock-Out Bracket and LED Indicator only (for retrofit to	

existing "Big Switch"

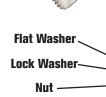
Note: Terminals on battery disconnect switches are live parts of the electrical system and should be treated just like battery terminals. Covers are recommended, but not included, for each kit.

Contact your vehicle's manufacturer to determine proper placement and suitability.

## New XL Terminal Big Switch Battery Disconnect Switch FR1044

- INCREASED TERMINAL SPACE
- 250 Amps continuous service
- 2500 Amps for 5 second intervals (12V/24V)
- silver plated copper electrical contacts
- nickel plated brass hardware
- completely sealed, waterproof design
- three (3) year warranty
  - OSHA lock-out/tag-out regulation 1910.147







.430" Space available for Terminals

HD Amp Battery Disconnect Switch with Terminal Covers FR1043

This heavy-duty battery disconnect switch, with larger diameter terminal studs, is ideal for Class 8 Trucks, RVs, Chippers and other construction vehicles. Clip on terminal covers are designed to protect against arcing. Proprietary brass attaching nut allows 180 degree rotation. Higher Amp capacity – 2500 amps/350 continuous.

- Waterproof
- Silver plated copper internal contact plates
- Increased insulation to H Class rating
- Larger diameter studs .4725 inch (M12)
- Longer studs 1.25" to allow easier double cable connection
- Stainless Steel Fasteners for corrosion resistance
- LED option: Illuminated LED indicates whether system is on or off
- Lock-out option: Enables use of padlock for security



Increased insulation bushings to H class rating

Proprietary brass nut allows for 180 degree rotation

Clip on terminal covers are designed to protect against arcing and short circuit. Terminal Covers are splash and dust proof



Terminal Covers for Grooved Terminal Stud - FRIO14771

Sold in sets of two, can be used to cover cables on all Battery Disconnect Switches. Sold separately from switch.



Stainless Steel fasteners for corrosion resistance

Thicker silver plated copper internal contact plates

Larger diameter studs - .4725 (M12) Longer Studs - 1.25" to allow easier double cable connection





This heavy-duty 12V battery disconnect switch can be configured to operate automatically with your vehicle's ignition system. When the ignition is turned to the OFF position, the battery is automatically

disengaged and becomes non-operational. ON Your Fleet
- OFF Your Mind!

Multiple installation options allow this versatile switch to be configured to suit many vehicle applications.

Our system uses Passive Magnetic Solenoid Operation. When installed in the proper configuration the FR1052 will disconnect the battery automatically when the ignition is turned off.

3 and 6 minute time delay relays are available for vehicles with a DEF System.

Part No.	Description
FR1051	12V Electro Wizard - Grounded Solenoid - Uses a 12V Pos input to engage.
FR1052	12V Electro Wizard - Insulated Solenoid with switch cover - Engagement with Pos or Neg input
FR1053	3 Minute Delay off timer relay 12V
FR1055	6 Minute Delay off timer relay 12V
FR1054	24V Electro Wizard - Insulated Solenoid with switch cover. Engagement with Pos or Neg input

12 Volt Electronic Battery
 Disconnect Switch. 24V system available upon request.

- Passive Magnetic Solenoid Operation – No mechanical switch to forget to operate
- 250 Amps Continuous / 2500 Amp Surge
- IP 65 Rating
- Sealed Waterproof Design Can withstand severe operating condition

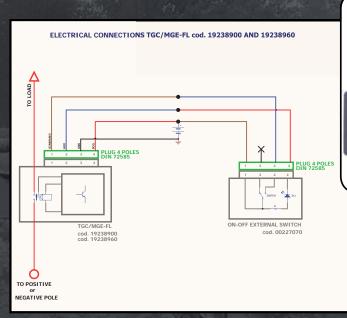
### **Ideal Protection For:**

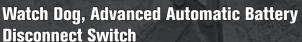
- Construction & Farm Equipment / Mining & Off-Highway Vehicles
- Heavy-Duty Trucks
- Automotive / Racing
- Marine
- DEF System Compatible

CHARACTERISTICS - FR1051/FR1052		
Voltage	12V	
Max. Continuous current on main contacts	250 A @ (74°F / 23°C)	
Max. Surge current on main contacts	2500 A for 3 sec.	
Environmental Protection Rating	IP 65	
Tightening torque M 10 nuts	14.75ft lb. / 20 NM	
Tightening torque M 5 nuts	1.18ft lb. / 1.6 NM	
Operating temperature range	-40°F - 185°F / -40°C - 40°C	
Contacts	Silver plated copper	
Contact Terminals	M10 tin-plated brass	
Contact Hardware	Brass	
Peak current coil rated input	4.4 A	
Max. Retaining coil	3.2A	
Holding coil rated input	0.4 A	



# WATCH DOG"





- Powerful (300 Amps). Designed for heavy loads.
- Bistable "magnetic latch" technology. Main switch can maintain either of its two positions without current consumption.
- Reliable. Excels in tough conditions, operating more than 100,000 cycles. Automatically works with your vehicle's ignition system.
- Durable. Maximum protection from dust and water ingress with an IP76 and IP69K rating. High corrosion resistance (salt spray test, 300h). Requires more than 80G of force to mechanically manipulate internal contacts.
- Versatile. Available for 12V and 24V systems. Can be used in simple installations or in demanding ADR (Dangerous Goods Transportation) environments. Multiple installation orientations, and positive or negative battery disconnect supported. Time delay duration can be adjusted on the main switch.
- Safe. Emergency external battery disconnect switch is available. Built-in LED indicates electrical system status: ON, OFF, or counting down time delay.

NOTE: The Watch Dog system is an electromechanical battery disconnect switch. The emergency external switch will only disconnect the battery from the electrical system. This product is NOT designed to deactivate the alternator or shut down the vehicle completely.\*



Note: Terminals on battery disconnect switches are live parts of the electrical system and should be treated just like battery terminals. Covers are recommended, but not included, for each kit. Contact your vehicle's manufacturer to

determine proper placement and suitability.

**BA Professional Jumper Cable FR1070** 



The Professional Jumper Cables are heavy-duty, 23 feet long, and ultra-flexible. Robust brass clamps designed to hold firm and thick, yet flexible cables safely allow you to jumpstart your vehicle. The set comes with one black and one red cable with clamps. Conveniently stores in a rugged carrying case.

- Nominal Voltage 12V/24V
- Clamps Material: casting brass
- Cable Material: copper (cross section 50 mm2)
- Cable Insulation: highly flexible PVC
- Max Current Carrying Capacity: 1000 A for 30 s
- Short-term Current Capacity: 2000 A for 5 s