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MOD POWER STEERING KIT

1964 - 70 FORD MUSTANG

INSTALLATION INSTRUCTIONS

BEFORE STARTING

Read all installation instructions to their fullest before beginning the installation of your product. Always make sure to wear the appropriate safety equipment when working on your vehicle and that the car is safely placed on jack stands. If any questions arise before/during/after you install the product please call MMI at 925-443-6300 or email us at maier@mikemaierinc.com.

NOTE: All work should be performed by a qualified technician.

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ESTIMATING INSTALLATION TIME

Because of the variation between vehicles, it is difficult to estimate time requirements for installing this kit. For most, the project can be completed in a couple weekends. However, there are some places where specific installation requirements may extend the project. Before starting the installation, we recommend doing some research into your specific vehicle to make sure you have all the components required to finish the job. These are some areas to investigate:

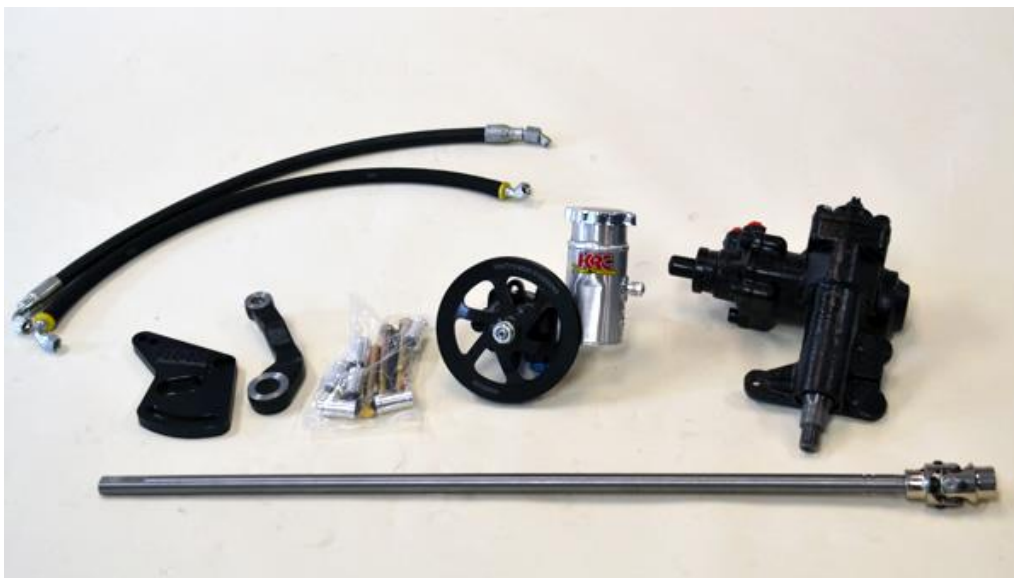
Steering Box Removal – Depending on the year of your vehicle, the disassembly required will vary. See the installation instructions for more detail, we have provided multiple options for each model year.

Header Clearance – This steering box is approximately 1/8" wider than stock. On larger motors such as the 351 Windsor we have had to clearance the header slightly to make room for the box. Not all headers are the same, so you will have to size this up once you get there.

Clutch Equalizer Bar – With this power steering box, the stock equalizer bar will not fit. A MOD equalizer bar can either be purchased, or we can provide you with details on how to modify the stock bar. Please contact MMI to discuss your vehicle before beginning the installation.

Pulley installation – As noted in the product description, this kit requires twin-rib crankshaft and water pump pulleys. Because of the wide variety of timing chain covers and water pumps that are available for these cars, it is impossible to know the exact spacing required to align the pump. Therefore, we recommend measuring the spacing required for the KRC pump before beginning the installation. That way you can purchase the correct pulleys as well as any shims or spacers that may be required before you disassemble the car. Please contact MMI if you have any questions.

Alignment – After completing the installation, the car will need an alignment. It is also likely that the steering wheel and pitman arm will require some adjustment before everything is perfect.



ITEM NO.	DESCRIPTION	QTY.
1	ABS 14:1 power steering box	1
2	Steering shaft	1
3	High-pressure power steering hose	1
4	Low-pressure power steering hose	1
5	Universal Joint (1964.5-66 Mustang only)	1
6	Rag Joint (1968-70 Mustang only)	1
7	Column adapter Kit	1
8	Pitman arm	1
9	KRC power steering kit	1

- Twin-rib water pump pulley
- Twin-rib crankshaft pulley
- V-belts
- Lucas Oil power steering fluid

TOOLS

- Jack and Jack stands
- Standard socket wrench set
- Allen wrench set
- Steering wheel puller
- Pitman arm puller
- Dead blow hammer (Or pickle fork) for disconnecting steering center link
- Safety glasses
- Measuring tape
- Right angle Dremel
- Metal saw or cutoff wheel
- Vice
- Drill
- Center punch

A. SETUP

1. Safely jack up your vehicle and install jack stands. Place two stands under either side of the axle. We recommend placing the front stands under the frame rails on either side of the strut rod mounts. This will provide enough space to complete the installation of the power steering system without interference.
2. As an extra precaution, remove the wheels and place them under the car where you will not be working.

B. DISASSEMBLY

For complete disassembly instructions for factory components, please consult the appropriate shop manual for your vehicle. This guide will provide extra instruction where appropriate.

1. Remove the driver's seat to provide clearance for the steering shaft to drop.
2. Pull the steering wheel off the column. The steering hub also needs to be removed exposing the splines. Be careful to keep track of the hardware.



Figure B.2.1 – Steering wheel puller being used to remove steering wheel



Figure B.2.2 – The steering wheel has been removed, be sure not to lose any of the hardware

3. Remove the steering column - disconnect the two plugs from the steering column under the dash. Be careful because the plugs could be old and crusty. If the car still has the original column wiring, now might be a good time to freshen it up.



Figure B.3 – a view of the steering column wiring connector.

4. Unbolt the two bolts that hold the steering column clamp. Be attentive to its orientation. There is a small tab that fits into the column housing. When reassembling the column, it is nice to remember which way the tab was oriented. Once the column is unbolted and the hardware is in a safe place for later, pull the column housing off the steering shaft.



Figure B.4.1 – Removing the u-shaped bracket used to secure the steering column to the dash.



Figure B.4.2 – The steering column can now slide off the steering shaft.

Now we're done with disassembly inside the cabin, it is time to move to the engine bay. The next step is to remove the z-bar and steering linkage. Depending on your installation, you may need to remove the brake master cylinder to get access to the steering box.

5. Remove the clutch equalizer bar (z-bar).



Figure B.5 – clutch equalizer bar

- Disconnect the equalizer rod that connects the clutch pedal to the equalizer bar.
 - Disconnect the pedal rod that connects the clutch release lever to the equalizer bar.
 - Remove the equalizer bracket from the driver's side frame rail.
 - Now the z-bar can come out along with the pivots and bushings. Make sure to keep track of the hardware.
6. Now move under the car to start to pull the pitman arm off the car. This can be accomplished using a pickle fork, but we recommend using a dead blow hammer. It is quicker and will not ruin the rubber dust covers.
- Pull the castle nut off the pitman arm from the center link. Flip the castle nut and reinstall it several threads, to protect them from the dead blow hammer.
 - Next use a hammer to whack the side of the female component. For 1964-67 the female component is the pitman arm, for 67 and later this is the center link. By whacking the side of the female component, it temporarily distorts the taper fit just enough to release the connection. This may take a few tries so be patient.
 - Now that the pitman arm is disconnected from the center link, a pitman arm puller can be used to separate the arm from the steering box.



Figure B.6.1 – The castle nut installed upside-down to protect the threads



Figure B.6.2 – Here a pitman arm puller is used to separate the pitman arm from the steering box.

7. At this time we need to figure on how much disassembly will be required to get the steering box out. For cars with a collapsible steering column (1968 - 70 Mustangs) the steering box can be removed without removing the driver's side header. For 1964 through 67 Mustangs the steering shaft and steering box are one piece and require more work to remove. For these cars there are two options:

1964-67 Option 1: Remove header

- Pull the spark plug wires back and lay them down the manifold. Pull the spark plugs out.
- Pull the valve cover off and cover the valve train with clean rags. It is important to keep the debris from getting into the valve train. If the engine is a bit dirty you would want to clean around the valve cover area to keep dirt from entering the motor before pulling the valve cover.
- Disconnect the header from the collector.

1964-67 Option 2: Cut the steering shaft

- If you do not plan on keeping the stock steering box, you can save some time by cutting the shaft above at the base with a cutoff wheel. This will allow you to remove the box and shaft in two pieces without disassembling the driver's side exhaust.

Pull the three bolts out of the frame rail that hold the steering box to the car. Be mindful of the box. They generally flop against the motor. So, hold the box as you disconnect the last bolt. Save the three mounting bolts. We will reuse them with the new box.

The collapsible column boxes can be pulled out pretty simply. The non-collapsible boxes will be lifted and slid forward between the cylinder head and the shock tower.

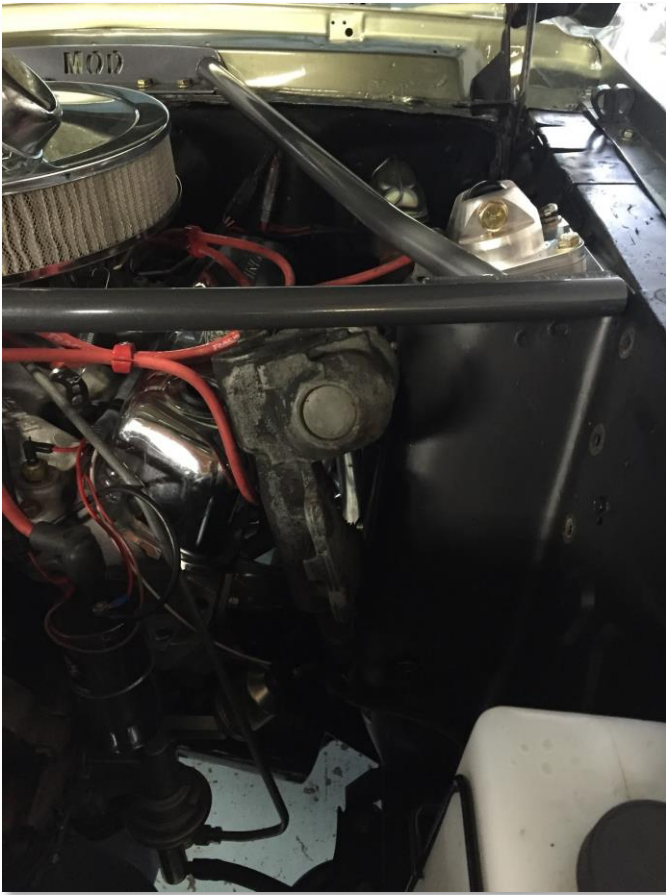


Figure B.7.1 – A view of the steering box being removed from a 64-66 Mustang



Figure B.7.2 – A view of the steering box being removed from a 64-66 Mustang, notice how it is removed by sliding it forward over the headers.



Figure B.7.3 – A side-by-side view of the original factory box and the new power steering box.

8. Clean Frame Rail - A lot of grime can build up over 50 years, take the time to clean and protect the frame rail before installing the new box. At this point the disassembly is complete and it is time to install your new components.

C. STEERING BOX INSTALLATION

1. Reuse the three bolts from the factory steering box and install them through the frame rail

NOTE: When reinstalling the new steering box, you may need to file out one of the three holes. At first, we thought this was caused by variations in manufacturing, but it is just a slight hole misalignment in the new boxes. This does not need major work. Just a little filling on the frame rail with a dremel or die grinder on the lead lower hole will make up the difference.



Figure C.1 – We used a die grinder to open up the lead lower hole



Figure C.2 - Installing the new power steering box

D. MODIFY STEERING COLUMN

On 64-67 cars, you will need to shorten the steering column housing. We are going to measure how much to cut off the end of the column housing to make up for the longer steering box.

1. Slide the universal on to the steering box. Be attentive to the notch on the input of the steering box double D. One of the Allen set screws is intended to locate inside this notch to keep it from pulling out.
2. Measure from the steering column clamp bolts under the dash to the center of the universal joint on the steering box. You can use this measurement and apply it to the column housing.
3. Put the column housing onto a work bench and with the column clamp laying in its original location on the housing.



Figure D.2 – Measuring the distance from the steering column bracket to the center of the universal joint.

4. You can now measure from the clamp bolt holes to the end of the housing. Make a mark where the center of the universal joint would be. This will be your cut point. We cut the housing a little long and have it hang a little over the universal to ensure the column seals through the fire wall.



D.4 – With the bracket placed on the steering column in the original location, the measurement from the previous step can be used to draw your cut line.

5. Cut the housing on your mark. Clean and sand the end of the column



Figure D.5 – Here is the column clamped up in the bandsaw ready to be cut.

6. Measure from the clamp under the dash again to the end of the universal closest to the dash. This will be the rough location of the column bushing that will be pressed into the end of the column housing. The column bushing is provided to locate the column housing over the new column shaft provided.

E. MODIFY STEERING SHAFT

Two shallow holes need to be drilled into the steering shaft to provide a place for the set screws to seat.

1. Unscrew the set screws from one side of the universal joint. Slide the joint onto the column, with one hole directly over the milled face on the shaft.
2. Mark the shaft at the center of each set-screw hole. This is where you will drill.



Before drilling into the rounded surface, it's a good idea to file a flat spot to prevent the drill bit from wandering.



The completed set-screw holes

F. INSTALL STEERING COLUMN

1. Press in the column bushing in the end of the housing to you designated mark from the previous step.



2. Slide the new steering shaft through the fire wall into the universal. Do not worry about tightening the set screws yet in the universal.



3. Slide the column housing over the new shaft and loosely remount the column clamp to the bottom of the dash.

G. REINSTALL FACTORY COMPONENTS

At this time, your power steering box has been installed and your column has been modified. You can go through and reinstall the components removed previously. Be sure to tighten all fasteners to factory specs.

H. POWER STEERING PUMP INSTALLATION

1. First install the pulley onto the pump. Use the supplied 3/8" course bolt to pull pulley onto pump shaft. Be sure not to press the pulley onto the pump. The internals of the pump are not designed to take the pressure of pressing the pulley on.



Apply some anti-seize onto the threads of the 3/8" bolt before installation



2. To install the pump, follow the KRC installation instructions included with the kit. We have also included some reference photos.



Here is the power steering bracket installed, you may need to shim yours depending on your pulleys.



ALIGNMENT

The installation is now complete, take the car to an alignment shop and enjoy your new power steering.