

Steeroids™ INSTALLATION INSTRUCTIONS

1965-1970 Mustang



Verify Kit Contents:

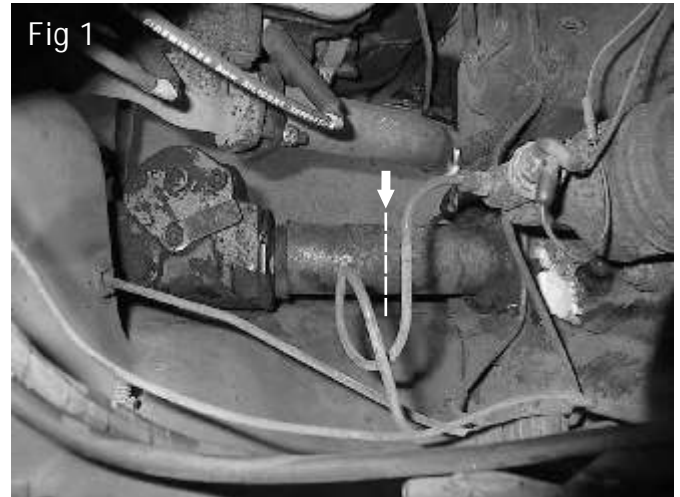
- 1 r&p unit
- 2 r&p clamps
- 1 u-joint assembly
- 1 driver's side bracket
- 1 pass. Side bracket
- 1 tie rod bracket
- 2 tie rod sleeves
- 2 5/8 rod ends and jam nuts
- 2 tie rod assemblies and jam nuts
- 1 fastener kit #690-53010 (standard)
- 1 fastener kit #690-50063 (rack bolts)
- 1 high-pressure hose (power kits only)
- 1 low-pressure hose (power kits only)

Additional Parts if Ordered with Steering Column:

- 1 steering column
- 1 firewall mounting plate
- 1 fastener kit #690-53050

BEFORE BEGINNING: Please note each steering rack is bench tested prior to shipping therefore some of the fluid from the test occasionally leaks out and may stain the box. This does not mean the rack has been damaged if fluid has leaked out. You may also find two small rubber o-rings attached to your rack with a twist tie, these are merely extras that are sometimes supplied with our steering racks. The power steering hose adapters supplied with your kit should already have o-rings attached, so the extras can be discarded.

1. Begin by performing an inventory of all the components in the kit with the above list.
2. Support the car securely on jack stands. Never support the car using only a jack.
3. To remove the old steering you will need a pickle fork to break the tie rods loose from the steering arms. The entire system can be removed as a single unit (including the steering box/column shaft) if the driver's side engine mount is removed and the engine jacked up slightly. Otherwise you will have to cut the steering column and shaft off the steering box. To remove it as a single unit you will have to disassemble the steering wheel so the shaft can slide out the column. If you are cutting the column, cut it midway between the steering box and the firewall. (fig. 1)



We recommend using high strength thread lock on all threaded applications except for power steering hose fittings.

4. Once the old steering has been removed you can install the mounting brackets. The driver's side bracket mounts to the location where the power assist ram bolted to the frame. If your car was not originally equipped with power steering you may need to install the threaded inserts into the bottom of the frame. (fig 2) Crush nut p/n 2774 is available from Dallas Mustang (1-800-mustang). You will need two of them. They install with special crush nut installation tool or they can just be welded in place. Bolt on the driver's bracket using two 3/8- 18 x 1.25 and one 3/8-24x3.5" bolt (with corresponding nylock nut and flat washer under the nut). Torque to 30 ft/lbs (fig 3)

Fig 2



Fig 3



5. Install the passenger side bracket in the stock idler arm location using two 3/8-24x3.5" bolts and nylock nuts. Use flat washers under the bolt heads and the nuts. Torque to 30 ft/lbs.

6. Attaching the tie rod bracket to the r&p unit requires the supplied metric bolts, flat washers and lock washers. Place the flat washers between the bracket and the r&p, which may compress the rubber boot -this is normal. It is possible to mount the bracket upside down so be sure to see Fig.4 photo. Place the lock washers under the bolt heads and use high-strength thread locker on the bolt threads. Torque to 60 ft/lbs. (fig 4)

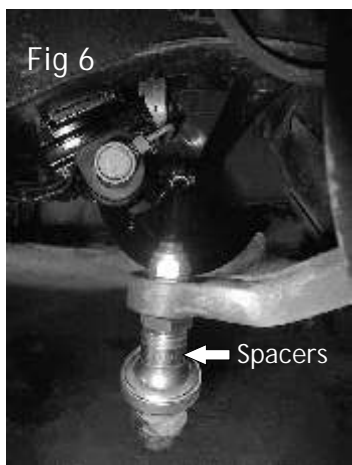


7. Center the r&p unit by turning the pinion all the way to one side and then counting the number of turns until it stops on the opposite side. Divide that number by two and turn the pinion in the other direction that amount. The rack is now centered.

8. The clamps slide over the rubber mounts on the r&p unit. It will be easier to align the passenger side mount before you slide the clamp over it. (fig 5). Once the clamps are in place you can bolt the r&p to the passenger and driver's side brackets using a total of four 5/16-18 bolts. Use flat washers under the heads of the bolts. Torque to 20 ft/lbs.

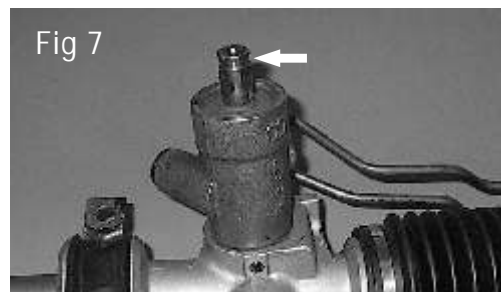


9. Thread each tie rod end with jam nut onto the tie rod sleeves an equal amount. On the other end of each sleeve, thread the remaining 5/8" rod ends with jam nuts. Attach the 5/8" rod ends to the tie rod bracket using the 5/8-18 x 1.5 bolts and lock washers. Use a high strength thread locker and torque to 50 ft/lbs.



10. To set an approximate alignment, measure the overall length of the old steering system. Measure from the center of each outer tie rod. Adjust the tie rods on the steering rack to match your measurement and tighten the jam nuts against the sleeves. To adjust the tie rods, use the included bump steer spacers. Start with half above and half below the tie rod end (fig 6). As needed, adjust the spacers so the tie rod matches the angle of the lower control arm with vehicle on the ground. When attaching the tie rod end to the spindle, torque the 15/16" nylock nut to 50 ft/lbs. (Note: the flange above the taper may not seat against the spindle - this is OK.)

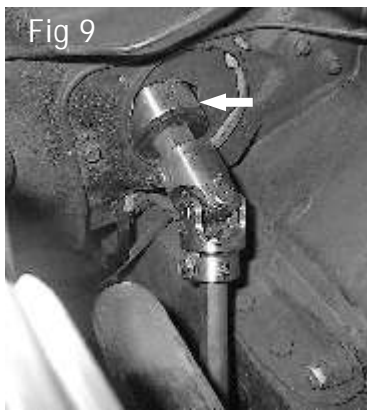
11. Install the u-joint assembly onto the r&p. Be sure that the setscrew on the round part of the shaft is lined up with the indent on the pinion shaft. (fig 7) Also make sure that the shaft ends do not protrude into the inside of the u-joints. Before you fully tighten the first setscrew, tighten the one that sits on the flat of the pinion.



12. To install the new steering column you must use the stock column clamp and insert the supplied rubber isolator. Notch the rubber in the center of one edge to clear the tab on the clamp. (Fig 8) Trial fit the column in the car to determine the depth it is to be installed. The main body of the column should protrude approximately 1/2" on the engine side of the firewall. When placing the column in the clamp take care to align the turn signal and tilt controls to your preference.

If using your stock column, see "Stock Steering Column Modification Instructions" sheet included (Doc/PN 780-65551). Then proceed to step 15 on the following page.

13. Check the firewall bracket for fitment. You may have to drill holes in the bracket to align them with existing holes in the firewall. The column should be installed so that the firewall end is as close to the engine as possible.(Fig 9) The tabs on the inside of the large hole in the bracket should be bent in towards the interior of the car. Use sheet metal screws thru the tabs to anchor the column to the firewall.



14. Slide the firewall bracket on the end of the column then place the upper half of the stock column clamp (fig 10) and install the column using the supplied bolts. Slide the u-joint onto the end of the column before you bolt the column in.

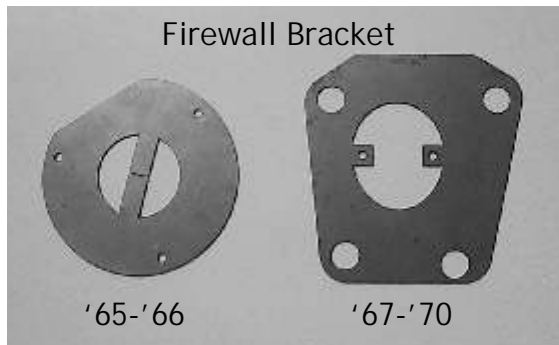


Fig 10

Column wiring:

A corresponding connector has been supplied with the steering column so the car's wiring can be adapted to the new column. The steering column wiring will have the following color coding that corresponds to the connector.

<u>Column</u>	<u>Connector</u>
White	P- brake lights
Dark Green	N- Turn signal, right rear
Yellow	M- Turn signal, left rear
Purple	L- Turn signal power
Brown	K- Hazard
Blue	J- Turn signal, right front
Lt. Blue	H- Turn signal, left front
Black	G- Horn

Check functionality of the stock column and map the stock wiring color codes to each particular function before you disassemble the stock wiring and column.

Horn relay:

A relay needs to be wired into the horn circuit before it will function properly with this steering column. It is a simple matter of supplying fused power to the middle terminal on the relay then connecting the black wire from the column to the left side terminal. The right side terminal is connected directly to the horn. See fig 11



15. Tighten the setscrews on the upper u-joint. Turn the steering wheel to check for smooth operation of the u-joints. If binding is detected (stiff spots felt every 90 degrees of rotation) adjust the steering column by sliding it back or move the u-joints on the shaft to reduce the angle on the binding u-joint until rotation is completely smooth. It is important that smooth operation is attained. Driving with binding u-joints will cause them to wear prematurely.

Power Kits continue with steps 16 and 17, manual kits proceed to step 18.

16. Now the power steering hoses can be attached to the r&p unit. (Fig 12) The lower port on the r&p unit is the high-pressure port. The high-pressure hose has threaded fittings on both ends. For the r&p end be sure that the fitting has an o-ring installed on it before attaching the hose. Extras may be attached to the rack with a twist tie. Torque to 21 ft/lbs. The low-pressure hose also needs an o-ring on the r&p end. Torque to 13 ft/lbs. Carefully route the hoses away from exhaust components or anything that is high temperature. Connect the high pressure hose to the threaded fitting on power steering pump and slip the return line onto the nipple and secure with a hose clamp.



17. Power steering fluid recommendations: Run standard GM Power Steering Fluid (the rack is GM sourced). Do not run Ford PS fluids that double as transmission fluid, these contain detergents that can damage the rack seals. For those who prefer synthetic fluids you may switch to Royal Purple Synthetic after 1000 miles, but it is not required.

Bleed the system by turning the wheels all the way to the left. Add fluid to the "cold" mark on the dipstick. Turn the wheel back and forth 3 or 4 times. Start the car and allow it to idle. Fill to the "cold" mark as needed. (A) Now turn the wheels side to side until there are no more bubbles. Check the fluid level frequently while proceeding. Allow the engine to run for a few minutes. Add fluid as needed. Replace cap and shut off engine. If the fluid level rises after the engine is shut off, there is still air in the system. Repeat (A) until all air is out of the system. "Flushing" the system is not necessary, you are only bleeding it of air.

18. Now re-check every bolt and nut to be sure all are tight. Test-drive the car at low speed for a brief period. Check every bolt for tightness again. If the engine is at operating temperature check the power steering fluid level. Fill to the "hot" mark as needed.

19. The final step is to have the front end aligned and re-check all bolts for tightness after the first 100 miles.

DETAILS FOR ALIGNMENT:

Alignment recommendations:

	<u>Camber</u>	<u>Caster</u>	<u>Toe</u>
Street	0 to -1/2	3 to 4 pos	1/16 to 1/8 in
Track	-1/2 to -2	3 to 4 pos	0 to 1/16 in

***Please Note: The rack unit that we are using for this kit has some movement built into the rack. When the vehicle goes in for alignment, you may notice the center tie rod bracket can move up and down a slight amount, affecting the tow of the vehicle. THIS IS NORMAL. The GM rack we are using had this movement built into it from the factory. Do not try to move the bracket all the way to one side or the other of this movement when aligning the vehicle. Leave the bracket in the location it was at when the vehicle was pulled forward onto the lift and adjust it from there.



WARNING: FAILURE TO ADJUST THE UPPER U-JOINT SO THAT THERE IS NO BINDING WILL RESULT IN PREMATURE WEAR AND FAILURE! IF YOU FEEL ANY BINDING IN THE STEERING WHEEL, ADJUSTMENT IS STILL REQUIRED AS DETAILED IN STEP 15.

WARRANTY DISCLAIMER

Seller disclaims any express or implied warranty of merchantability with respect to the goods sold. Seller disclaims any warranty of fitness for any particular purposes whatsoever with respect to the goods being sold.

Seller disclaims all liability for any personal injury or damage which may result from the sale, installation, or use of any product sold. Labor charges, and/or damage incurred in installation, repair or replacement as well as incidental and consequential damages connected therewith are excluded and will not be paid by seller. The installation of this product may adversely affect a manufacturer's warranty with respect to certain vehicles and/or manufactured goods. Improper installation, modification and/or abuse voids any warranty.

This warranty is the only express warranty made by seller. Seller will repair or replace any product which proves to be defective in material and/or workmanship under normal installation, use and service.

This disclaimer is limited only by applicable state laws.



SpeedDirect
1901 S. FM 129, Santo, TX 76472, Tech Line (970) 731-1381 dept. 2
www.speeddirect.com