

#M21400-PK - Installation Instructions for Mustang II Power Rack & Pinion

Rack and Pinion Specifications:

Input shaft is 3/4"-36 splined shaft.

Pressure fitting is -6AN. The pressure port is M14-1.5 O-ring.

(High pressure from the pump into the rack.)

The return fitting is -6AN. The return port is M16-1.5 O-ring.

(Low pressure from the rack into the reservoir.)

Tie rod thread is 9/16-18.

Recommendations:

Power steering reservoir part #**19-6969SB** (black) or #**19-6969SB-C** (Chrome) is ideal for most small block Chevrolet installations.

Power steering reservoir part #**19-6969BB** (black) or #**19-6969BB-C** (Chrome) is ideal for most big block Chevrolet installations.

Power steering pump part #**19-PUMP**.

Hose kit part #**M2PSH-RT**.

Rack extender 1" part #**300-3234-16**.

Rack extender 2" part #**300-3232-16**.

Outer tie rod 3.4" part #**ES429R**.

Outer tie rod 5.0" part #**ES2128**.

General Applications for Rack Extenders:

23-1/4" arm to arm and 2-1/2" arm to rack uses a 1" extender on the passenger side.

23-1/4" arm to arm and 3-1/2" arm to rack uses a 1" extender on the driver side.

24-1/4" arm to arm and 3-1/2" arm to rack uses a 1" extender on each side.

24-1/4" arm to arm and 2-1/2" arm to rack uses a 2" extender on the passenger side.

24-1/4" arm to arm and 4-1/2" arm to rack uses a 2" extender on the driver side.

26-1/4" arm to arm and 4-1/2" arm to rack uses a 2" extender on each side.

26-1/4" arm to arm and 2-1/2" arm to rack uses a 4" extender on the passenger side.

26-1/4" arm to arm and 6-1/2" arm to rack uses a 4" extender on the driver side.

Heidt's recommendations for rack extenders:

48-64 Ford Pickups, 55-59 Chevrolet pickups, and 60-1/2" track width uses a 2" extender on each side.

TCI's recommendations for rack extenders:

48-64 Ford Pickups, and 55-59 Chevrolet pickups uses a 2" extender on the drivers side.

49-54 Chevrolet car and all Corvette use a 1" extender on the drivers side.

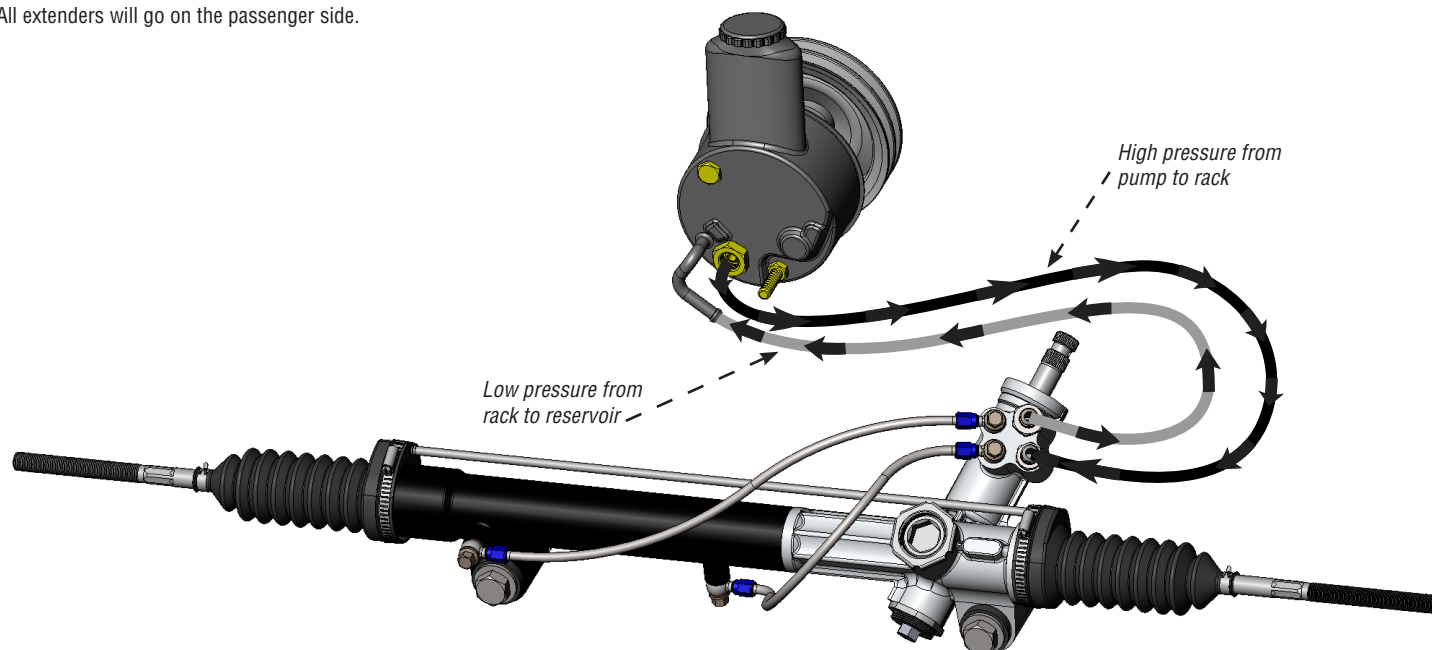
35-40 Ford car & pickup and 47-54 Chevrolet pickup do not use extenders.

Fat Man's recommendations for rack extenders:

All extenders will go on the passenger side.

Instructions:

1. Using the 2 mounting bolts and mounting bushings bolt the rack and pinion onto its mount; the flanged side of the bushing will be towards the crossmember. The mounting bolts are spaced 15-1/2" apart. The mounting bolts are 5/8" diameter. Some installations may need to use the rack and pinion spacers.
2. Connect the steering shafts from the column to the rack and pinion. The rack and pinion will move on its mounts. The frame will flex. The body will flex and move on its mounts. Make sure the steering shafts can allow for this movement without binding or transferring any forces into the rack and pinion or the steering column. We recommend using 2 U-Joints in the steering shafts; one at the steering column, and one at the rack and pinion.
3. Install the rack extenders if needed. Some applications will require the use of rack extenders. They are installed on the end of the rack/piston. To install the extender, start by removing the clamp on the rubber boot where the extender needs to be. Carefully remove the rubber boot from the end of the rack housing. Remove the inner tie rod. Install the rack extender on the end of the rack/piston shaft. Re-install the inner tie rod onto the rack extender. Re-install the rubber boot onto the rack housing. Re-install the clamp on the rubber boot.
4. Install the outer tie rods onto the inner tie rods. Adjust the toe in to 1/16" of toe in for now. Be sure to have the vehicle professionally aligned after the vehicle is completed. Tighten the jam nuts against the outer tie rods.
5. Connect the high pressure hose from the power steering pump to the lower fitting on the rack and pinion. Connect the other end of the high pressure hose to the fitting on the power steering pump. Always use new clean hoses, pump, and reservoir. Re-using old or dirty parts will contaminate the new rack and pinion, and can prevent the rack from working correctly. **Warning: The warranty will be void if the hoses are connected to the wrong ports, or if the valve has been contaminated from old or dirty parts.**

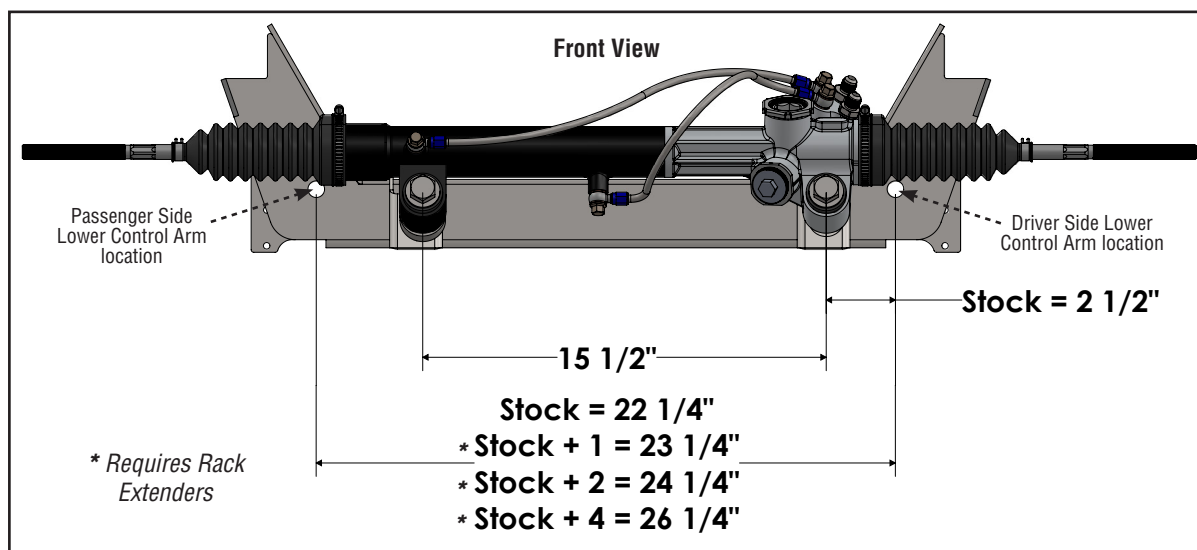
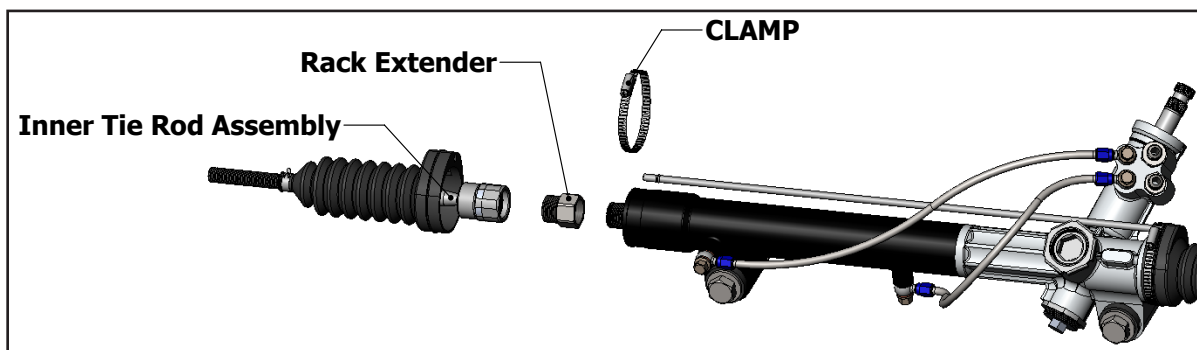


#M21400-PK Installation Instructions (Continued)

6. Connect the low pressure hose on the upper fitting. The other end of the low pressure hose will connect to the power steering reservoir. Always use new clean hoses, pump, and reservoir. Re-using old or dirty parts will contaminate the new rack and pinion, and can prevent the rack from working correctly. **Warning: The warranty will be void if the hoses are connected to the wrong ports, or if the valve has been contaminated from old or dirty parts.**
7. Fill and bleed the system. *It is recommended the tires are on the ground and the tie rods connected when the engine is started. If the hose connections are crossed the rack can violently turn the steering wheel; there is less chance of causing damage if the tires on the ground.* Fill the reservoir with new high quality power steering fluid. After filling the reservoir replace the cap on the reservoir. Start the engine and let it idle for 10-15 seconds.

Stop the engine. Check the fluid level, add fluid as needed. Continue to run the engine for 10-15 seconds and add fluid until the fluid level remains the same (you don't need to add any more fluid). Then, with the engine at idle begin to steer the rack in to the end of its travel. Stop the engine immediately if the pump starts to make any noise, or if the steering effort starts to get heavier. Add more fluid and replace the cap on the reservoir. With the engine at idle continue to steer the rack to the ends of its travel, and add fluid as needed until the fluid level remains the same (you don't need to add any more fluid). *Note: Lower quality fluids are more likely to foam, cause noises, and create steering pulses.*

Warning: Seal damage can be caused by crossing the low and high pressure hoses. This will void the warranty.



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GENERAL TORQUE SPECIFICATIONS:

1/4" grade 5	10lb/ft	1/4" grade 8	14lb/ft
5/16" grade 5	19lb/ft	5/16" grade 8	29lb/ft
3/8" grade 5	33lb/ft	3/8" grade 8	47lb/ft
7/16" grade 5	54lb/ft	7/16" grade 8	78lb/ft
1/2" grade 5	78lb/ft	1/2" grade 8	119lb/ft
9/16" grade 5	114lb/ft	9/16" grade 8	169lb/ft
5/8" grade 5	154lb/ft	5/8" grade 8	230lb/ft

NOTE: With 18" and larger wheels we recommend 1/2" wheel studs. The larger the wheel diameter, the greater the force is on the wheel studs. Please inquire about replacement wheel stud kits available from CPP.