

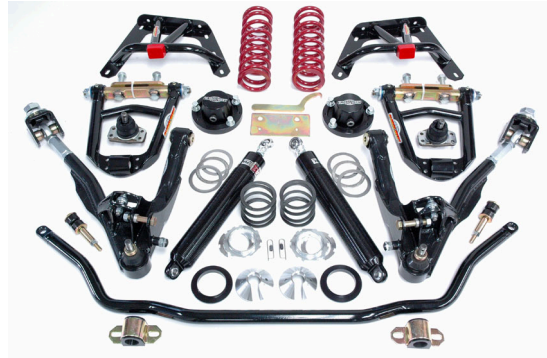


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Mustang coilover instruction sheets for 64-66

Kit includes the following

- 2 upper shock mounts
- 2 shocks
- 2 springs
- 1 set shock thrust bearing kit
- 2 helper springs
- 2 helper spring spacers
- 2 sets coilover shock adjusting collars
- 2 tubular lower arms
- 2 tubular upper arms
- 1 sway bar with hardware
- 2 inner fender tower supports with bump stops
- 1 Spanner Wrench
- 1 drill template (Negative roll kits only)
- 1 Hardware pack



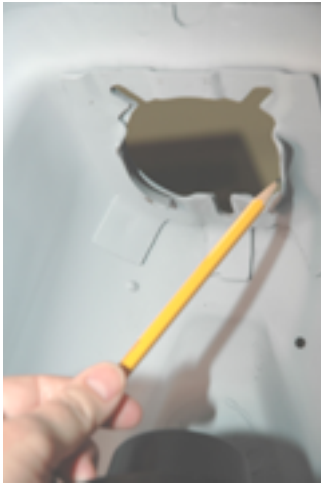
Installation requires removing the front suspension components except the steering. A Chiltons or Mitchell shop manual will be helpful if you have never attempted this before. The following steps are based on the suspension being off the car.

1. Check the slots of the upper shock mount in the tower and see if 3/8 diameter bolts pass through the slots. Sometimes the bolt will clear without filing or grinding. If not, open up the holes slightly at the very end of the slot. You do not have to grind the entire slot. Shown to the right we used a 1/4 inch air grinder.
2. The kit contains 2 billet upper aluminum shock mounts. The mounts are installed from underneath the tower. On the wheel side inside the tower there are indexing tabs that center the stock springs. (see picture)



Notice the indexing tabs:

The new shock mount has a machined groove cut out to allow the tabs to rest inside the mount. Sometimes the tabs require a slight bend so they will fit into the mount. You do not have to grind these tabs, simply bend the tabs using a pliers. The goal is to have the mount seat flat up against the tower.



3. If you have ordered a negative roll system you will have an upper control arm template for drilling different locating holes. **Note: If you did not order a negative roll system no template will be provided but you will have to drill the upper mounting holes out to 9/16 diameter.** The original holes are 1/2 inch diameter. Slide a couple of 1/2 inch bolts through the template and inner shock tower. Position the new holes so they are down below the original. Center punch the holes.



The picture below shows the template in position and center punching the lower holes.

Drill the new hole location with a 3/8 drill bit and then step the hole up to a final size of 9/16 diameter.



If you have ordered a non-negative roll system (ST) you will still need to drill the original holes out to 9/16 diameter.

4. After the holes are drilled in the towers install the upper control arms. There are right and left upper arms. The arm has an offset that pulls the ball joint towards the rear of the car. Therefore, looking at the arm installed on the car, the ball joint should be positioned to the rear of the car. If you put the

control arms on backwards, the coilover shock assembly will interfere.

(Note: If you have a negative roll system, place the 3/8 inch steel spacer plate between the upper control arm shaft and the shock tower. **If you do not have a negative roll system you will not have the plate. Just bolt the upper control arm direct.**)

Just tighten the nuts down. Do not torque them down because the alignment is going to be done using shims between the upper arm and shock tower.



5. Install the lower control arm by sliding it up into position. Make sure the gold centering sleeve is over the 1-inch diameter bolt. The hex adjuster with the jam nuts should also be loose. The design calls for two threads showing on each side of the jam nuts. We will explain this later. Once you have slide the bolt through the frame, install the large diameter flat washer / lock washer / and then the nut. Go ahead and tighten them to 90 foot-pounds.



Slide the other side of the lower a-arm up into the frame. Occasionally due to frame discrepancies the hex adjuster may need to be lengthen or shortened in order for the arm to install. Slide the 1/2 inch bolt through the assembly and torque to 70 foot-pounds.



Important – (Adjusting the lower arm). With the control arm bolted tight to the chassis, cycle the lower control arm up and down making sure it moves freely. With a 1-inch wrench, adjust the hex adjuster so there are approximately two threads showing on each side of the jam nuts. Feel the amount of pressure needed to adjust the wrench. What you are looking for is the least amount of resistance to move the wrench / hex adjuster. If you adjust the length too long or short, the rod end will have unnecessary side loads placed on the bearing and you will feel that when you are adjusting the assembly. The hex adjuster is harder to turn. This does not mean two threads showing are required. Two threads should be normal but your car may require something else. The centering of the assembly with the least amount of side loads is most important. Remember! Extra side loads will prematurely wear the bearing out. Adjust the hex adjuster correctly and you will have no premature wear. **Do not use the Hex**



adjuster to set caster. Caster is pre-built into the upper control arms.

6. Assemble the coilover shock.

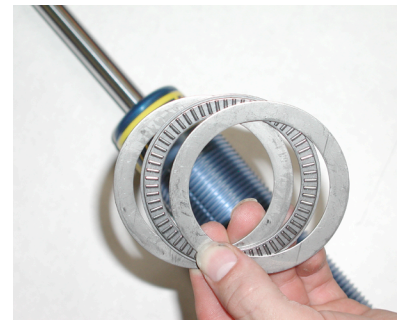
- A. First install the collar on the shock. The Afco shock uses a single adjusting collar with a setscrew that locks the collar from rotating. QA-1 shocks use a jam nut instead of a setscrew. Both work well.



The photo to the left shows a QA-1 application with jam nut.

Thread the collar almost all the way down on the shock.

- B. Install the needle bearing kit next onto the shock collar. Install as shown – flat washer / needle bearing/ flat washer. Do not lubricate the needle bearing or threads on the shock body. Lubrication will attract dirt and make adjustments hard later on.



- C. Slide the needle bearing assembly onto the shock adjuster.

- D. Next slide the spring over the shock.



- E. Next locate one spring adapter ring. The ring will index on top of the spring.



- F. Next on top of the adapter ring install the short helper spring.



G. The upper cone slides over the shaft as shown to the right.

H. Locate the retaining clip that holds the top shock cone. Notice: The clip indexes in the



upper shock mount. Close the clip with your fingers and the upper shock cone will slide up and index in the slot. Make sure the clip when installed angles down towards the base of the shock.

I. Adjust the collar at the bottom of the shock, up until the entire spring assembly falls into alignment on the shock.



7. On the bench install the shock assembly into the upper mount. For proper fit make sure the top shock adjustment is accessible facing the wheel and the head of the allen bolt (after install) is facing the front of the car. The mount has a slot that accepts bearing or polyurethane shock ends. **The poly requires no spacers.** The bearing type uses two spacers, one on each side of the shock bearing. Slide the allen bolt through the mount with one spacer on each side of the bearing. The allen bolt nut indexes on one side so you do not need a wrench to hold it. Simply start the bolt and tighten down to the nut. The nut just needs to be tight no set torque is required.



8. Install the shock through the upper control arm.



9. Rotate the upper mount till it sides through the shock tower hole. Once the allen bolt gets past the tower you will be able to index the mount. Install the mount using the hardware supplied in your kit. Tighten down the bolt to 25 foot-pounds. Note: You do not need a cushion between the billet mount and the shock tower.



10. Next swing the lower control up and attach the bottom of the shock to the arm. You will notice 2 spacers on the bolt. Again these spacers go on each side of the bearing. If the shock uses polyurethane mounts. The spacers are not used.



11. Install the spindle onto the lower ball joint. A spacer (supplied on the lower ball joint) goes next to the nut and on top of the spindle. It acts as a spacer. Torque the ball joint to 90-foot pounds and cotter pin.(below)



12. Install the upper ball joint through the spindle. Torque the upper ball joint to 70-foot pounds and cotter pin.



13. Install the new inner tower supports. The stock support would bolt on as seen in the photo to the left. The tubular support installs just as stock. There is a right and left unit. You cannot install them incorrectly. Hardware is supplied.



Install all the bolts and nuts in the support loosely. Place the head of the bolt in the engine compartment side. Tighten down the top 2 bolts first and then move from the top, side bolts down the bracket. Tighten to 25 pounds.



14. The vehicle must be lowered to the ground and ride height set.

Note: When checking ride height the vehicle must be rolled at least the distance of the wheel base and bounced before a measurement can be taken.

Adjusting the ride height requires raising the front end off the ground. A spanner wrench (provided in your kit) is used to rotate the adjusting collar. Once the ride height is set, lock the adjusting collar in place by the setscrew or jam nut depending on what shock you have.

15. Installing the sway bar is next. With the vehicle on the ground or on a drive on rack, install the sway bar to the factory location. Lubricate the bushing during assembly with synthetic grease. You want to use water resistant grease and synthetics are generally water resistant. The sway bar end link was installed on the lower control arm when you received it. Unscrew the end link out of the rod end. That will put one bolt, 2 cushions, 2 concave washers, one steel sleeve, and one jam nut in your hand. Disassemble the link and reassemble the end link with the sway bar in between the cushions. It is best to do both sides before swinging the sway bar up into position.



Rotate the sway bar up to the lower arms and start the bolts. You will run the bolts while holding the jam nut up until you start compressing the end link cushions. Tighten the jam nut to the rod end at that time and then complete the other side.

16. Setting the steering stop: The easiest way is to have the car on an alignment rack with turntables. Turn the steering wheel lock to lock and observe from underneath the car the suspension. Look for the tire and rim hitting anything at all. If so, adjust the steering stop out to stop the steering knuckle arm from turning too far. Allow at least an 1/8-inch of clearance at the location of clearance problem.



Alignment specs for street application power steering.

(Note: For manual application reduce caster to 2 degrees positive on passenger side and 1 ½ degrees positive on driver side.)

Caster

Driver side 3 degrees positive

Passenger side 3 ½ degrees positive

Camber

¼ degree negative both sides

Toe-in

3/32 total toe in

Alignment for road racing initial setting

Caster

3 ½ degrees positive both sides

Camber 1 ¼ negative both sides

Toe-in 1/16 in per side