

MM Rear Coil-Over Kit - Koni 30 Series (MMCO-6)



Read all instructions before beginning work. Following instructions in the proper sequence will ensure the best and easiest installation.

Note: If you do not have a MM Panhard Bar you will need a second MM Lower Shock Mount (MMSM-2). Please contact our sales staff.

Thank you for purchasing Maximum Motorsports' rear coil-over kit for Koni 30 Series shocks. There are many features you will find that set this coil-over kit apart from the rest. Starting at the top:

- Designed to work with our Racing Rear Upper Shock Mount (MMSM-3), our combination of parts provides over 1" additional bump travel than the rod-end type mounts under the shock tower.
- May still be used with a rod-end type mount under the shock tower, while providing additional benefits listed below.
- Our upper spring perch assembly has been fully engineered for optimum strength, clearance, and bump travel—it is shaped far better than any other.
- Utilizes 2-1/4" instead of 2-1/2" springs. This provides more clearance in critical areas, and does not require bending of the inner fender liner which reduces tire clearance.

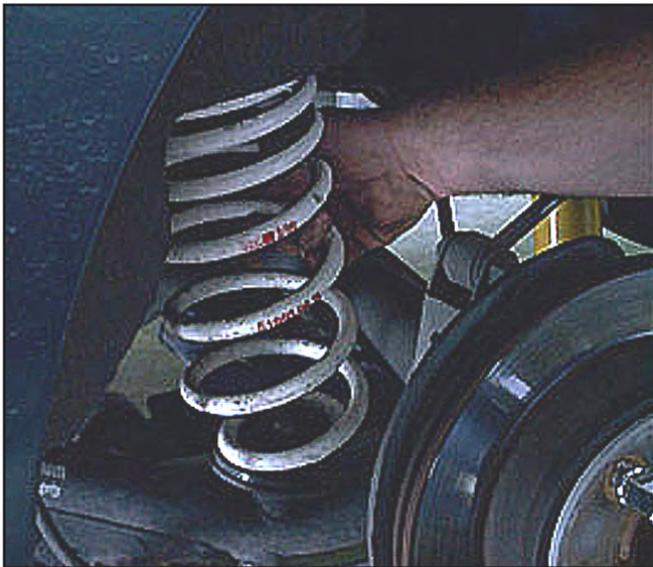
- The 2-1/4" lower spring perch provides additional clearance around the axle and brake lines. This results in a wider range of usable adjustment.
- 2-1/4" springs are significantly lighter than 2-1/2" springs.
- The lower spring perch is drilled for easy adjustment with a MM Spanner Wrench if pre-loading the spring is necessary. A set screw ensures that the lower spring perch will never move.
- Properly designed alloy lower shock bearing inserts register in the spherical bearing and are strong enough to withstand OEM shock bolt torque without collapsing.
- The two-bolt mounting design of our lower shock mount provides a more rigid attachment to the axle. The higher loads of a coil-over conversion on the original factory shock mount will distort and bend the bracket on the housing. In extreme cases, the single bolt of the factory shock mount has been known to break.
- While other companies simply anodize their aluminum parts for appearance, we have critical components *hard* anodized for maximum life.

Finishing off the kit, we recommend using only top-quality springs such as Hypercoil and Eibach. We back them with our extensive technical knowledge of rates, free lengths, and proper spring travel, all to ensure that your car will perform to its maximum potential.

1. Measure the ride height of the rear of the car. To do this, measure from the floor to the top of the wheel well opening. Record your reading.



2. Loosen, but do not remove, the lug nuts of the rear wheels.
3. Block the front wheels and jack up the rear of the car. Once raised, support the rear of the car with jack stands under the subframes or torque boxes. With the shocks just short of full extension, support the axle on jack stands.
4. Remove the rear wheels.
5. Disconnect the rear sway bar from the control arms.
6. Support a rear lower control arm as close to the rear axle as possible with a floor jack. Remove the rear control arm axle pivot bolt and gradually relieve the spring tension by slowly lowering the jack until the spring is completely uncompressed and you can remove the spring by hand. With the spring removed, raise the control arm into place and reinsert the pivot bolt and torque to 111 lb-ft.



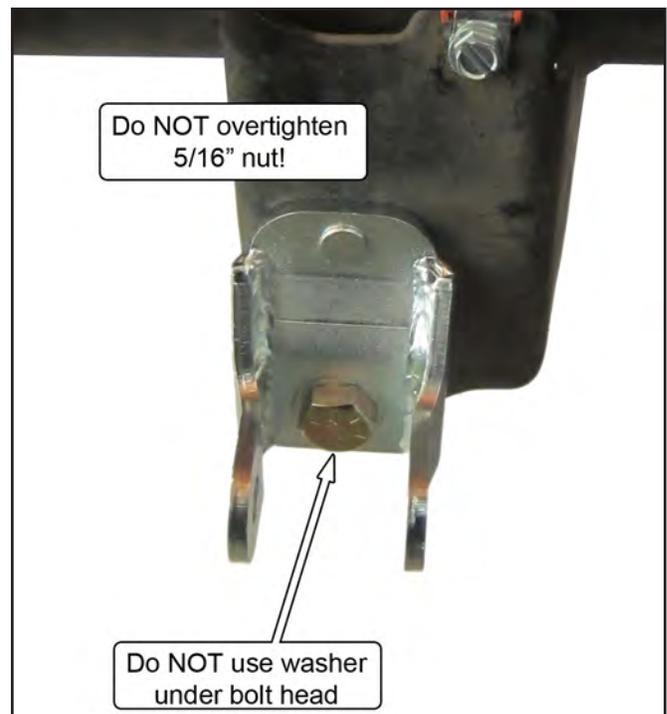
7. Repeat Step 6 with the opposite rear control arm. Reconnect the rear sway bar to both control arms.

NOTE: You may also wish to install MM lightweight control arms that have no spring perches at this time.

8. From inside the car, remove the nut, thrust washer and upper rubber isolator from the top of each shock piston rod.
9. Remove the bottom shock bolts from the factory lower shock mounts (or the MM Panhard Bar Axle Mount) and remove the shocks from the car.

10. Discard the OEM style shocks and mounting hardware EXCEPT the 12mm lower shock mounting bolts and nuts. Keep these bolts to install the Koni 30 series shocks.
11. Remove the factory lower shock mounts from the passenger side of the axle.
12. Install the MM lower shock mount onto the passenger side of the axle. Insert the 1/2" bolt (no washer) through the lower hole, with the bolt head facing the rear of the car. Then place a 1/2" washer onto the bolt and thread on the 1/2" nut. Next place a 5/16" washer onto the stud and thread on the 5/16" nut. First, torque the 1/2" bolt to 119 lb-ft. Next, torque the 5/16" nut to 16 lb-ft.

If the car does not have a MM Panhard Bar, repeat Steps 11 - 12 to install a second MM lower shock mount on the driver's side.



13. Thread a lower spring perch onto each threaded sleeve. NOTE: There is a nylon tipped set screw that needs to be installed in each spring perch.





14. Install a MM threaded sleeve onto each shock body by sliding the sleeve on from the top end of the shock, with the flanged lip of the threaded sleeve facing downward. There should be a circlip in the second groove from the bottom of the shock. The threaded sleeve will completely encapsulate this circlip and prevent it from dislodging from the shock.



15. Place a 2-1/4" diameter coil-over spring onto each lower spring perch. Position the lower spring perch so the top of the spring is about 3" below the threaded portion of the shock shaft. This will make the installation of the rest of the parts easier.



16. Place a bumpstop into position on the shock shaft.

NOTE: If you are using MM's upper shock mount (MMSM-3) follow the steps to choose the appropriate bumpstop as detailed in the MMSM-3 instructions. If you are using Koni's rod-end upper shock mount leave the SHORT 25mm long bumpstop.

17. Position the upper spring perch over the end of the shock shaft with the top of the perch slid down past the threaded portion of the shock shaft.



18. Thread the 14mm jam nut onto each shock until it bottoms against the smooth portion of the shaft. Do not force the nut once it has bottomed, as this will damage the threads.

19. If you are using the MMSM-3, set up the top of the shock by referring to the MMSM-3 instructions. Make sure the upper shock mount is installed in the car. If you are using the Koni rod-end upper shock mount, thread the rod-end onto the shock until it bottoms out. Tighten the nut up to the rod-end. Make sure the rod-end clevis is installed in the car.



20. Insert two bearing inserts into the lower rod-end of the shock.



You Have now completed one coil-over assembly. Repeat Steps 13 - 20 for the second shock absorber.

21. Place the assembled shock assembly in position on the passenger side of the car. Insert the OEM 12mm lower shock bolt through the lower shock mount and the bearing inserts in the shock rod-end. Torque to 59 ft-lbs.
22. If you are using the MMSM-3, follow the procedure listed in the MMSM-3 instructions to install the top of the shock in the car.



If you are using the Koni rod-end, install the rod-end in the clevis and tighten to manufacturer's specification.

23. Raise the lower spring perch until the spring is just contacting the upper and lower spring perches.

24. If your vehicle is equipped with quad shocks, verify that you have sufficient clearance between the outside of the coil over spring and the quad shock piston rod dust sleeve. You may increase the clearance slightly by placing a 12mm flat washer between the rear quad shock eye and the frame-mounted stud.



25. Repeat Steps 21-24 to install the completed coil-over assembly into the driver side of the car.
25. Reinstall the wheels and torque the lug nuts to factory specs.
26. Remove the jack stands and lower the car.
27. Roll the car back and forth to settle the suspension.
28. Measure the ride height as done in in Step 1. Compare to the dimension recorded in Step 1, and determine if the car needs to be raised or lowered to match that starting ride height. If a different ride height is desired, we suggest first adjusting to match the previous ride height, and then making further adjustments. Support the car on jack stands to get the weight off the springs, and adjust the spring perches. Hold the threaded sleeve with one hand and turn the lower spring perch with your other hand. (up, to raise the car, and down, to lower the car)

NOTE: If you need to preload the spring, use MM's spanner wrench to help rotate the lower spring perch.

29. Once the ride height is correct, use the supplied 5/32" hex key to snug the nylon tipped set screw in the lower spring perch. This will hold the spring perch in position.

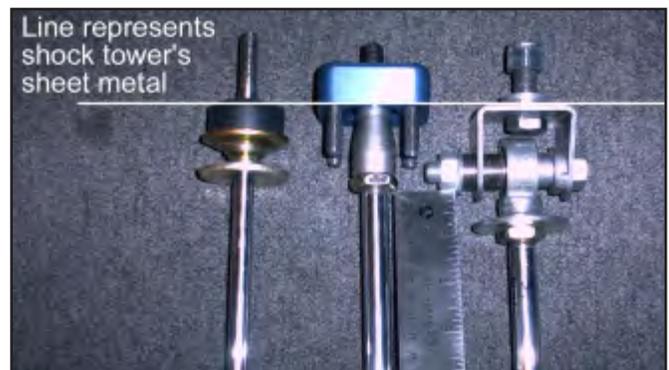
NOTE: Do NOT overtighten the setscrew. It only needs to be tight enough to prevent the spring perch from rotating. Overtightening it can damage the perch, the threaded sleeve, and even the shock.

This kit includes the following:

- 2 Threaded sleeves
- 2 Lower spring perches
- 2 Upper spring perches
- 2 Set screws
- 1 Lower shock mount
- 4 Bearing Inserts
- 1 5/32" Hex key
- 1 1/2" x 1-1/4" G8 bolt
- 1 1/2" G8 nut
- 1 5/16" G8 nut
- 1 1/2" G8 washer
- 1 5/16" washer

Available for your Rear Coil-over Kit - the **Racing Rear Upper Shock Mount (MMSM-3).**

The racing rear upper shock mount uses a solid aluminum block and steel doubler plate to reinforce the shock tower for coil-over applications. These upper shock mounts also use a spherical bearing (just like the MM Caster/Camber plates) to positively locate the upper end of the rear shock. Performs a similar function as a rod-end on the top of the shock, but provides 1" more bump travel than a rod-end mount under the shock tower; thus restoring the bump travel to what was originally available stock. This means the car will perform better with a longer progressive bumpstop for the same ride height, or may be run very low for racing with a short bump stop. The shock shaft is relocated 1" upward relative to the body of the car. This reduces the amount of unnecessary droop in the shock when using stiff rear springs. A stock shock is shown on the left for reference.



NOTE: The installation of the upper shock mount is not easily reversible. Due to the drilled holes, the shock tower will be too weak if the shock is run in stock configuration without welding the holes closed.