



LS1 TUBULAR K-MEMBER INSTALLATION

PART # KM019

Required Tools:

- Jack and Jack stands or Service Lift
- Wrenches: 8mm, 10mm, 11mm, 13mm, 18mm
- Sockets: 10mm, 13mm, 18mm, 21mm, 15/16"
- Various ratchet extensions and universal joints
- Brass Hammer or Pickle Fork

Installation Procedure:

1. Using an 8mm wrench, remove the positive cable on the battery.
2. Using a 15mm wrench, loosen the serpentine belt tensioner and remove the belt from the alternator.
3. Lift car so that the factory K-Member is at least 18" from the ground. Support car with jack stands under frame rails.
4. Remove wheels/tires.
5. Using a 13mm socket and wrench, remove the front sway bar.
6. Using an 18mm wrench, remove both power steering lines and cap hoses to prevent fluid loss.
7. Using a 13mm and a 15mm socket, remove all three (3) bolts holding the alternator in place, unplug wiring harness, and remove the alternator. This is necessary in order to access the factory motor mount bolt.
8. Support the motor with a jack and block of wood under the oil pan.
9. Using a 13mm socket and wrench, remove the drivers' side motor mount bolt.
10. Using an 18mm socket and wrench, remove the two (2) bolts holding the starter in place. Starter may be removed completely or it may hang, suspended by the battery cable.
11. Using a 13mm socket, remove all four (4) bolts holding the passenger side motor mount to the motor. This will require a combination of extensions and flexible u-joints in order to access all of the bolts.
12. Remove the cotter pins from both outer tie rod ends. Using an 18 mm wrench loosen both castle nuts until the nut is flush with the top of the stud. Using a brass hammer, tap the castle nut until the tie rod breaks loose from the spindle. This may also be accomplished by using a pickle fork, if available.
13. Using a 15mm wrench and 18mm socket, loosen both the rack and pinion mounting bolts. It is not possible to remove the driver's side bolt until the K-member is lowered.
14. Using an 11mm wrench, remove the steering shaft bolt located directly above the rack and pinion.
15. Using a 10mm socket, remove all four (4) brake line retaining tab bolts that attach to the side of the K-member.
16. Using a 21mm socket and wrench, remove the lower A-arm mounting bolts for both the drivers' and passengers' side.
17. Using an 18 mm socket, remove all six (6) K-member mounting bolts.
18. Lower K-member enough to remove the drivers' side rack and pinion bolt. Remove the rack and pinion assembly.
19. At this point it may be necessary to utilize a second person. While holding the A-arm assemblies out of the way, lower the K-member out of the car. Take care not to damage any brake lines or starter wiring harness when removing the K-Member. It is not necessary to remove the brake lines while performing this install.
20. Bolt the BMR engine stands onto the motor as shown in **IMAGE 1**. Leave the bolts finger tight to allow some movement in the stand. **NOTE:** The longer stand is intended for the drivers' side. If header clearance is a problem, the engine stands may be swapped to shift the motor 1/2" towards the other side.



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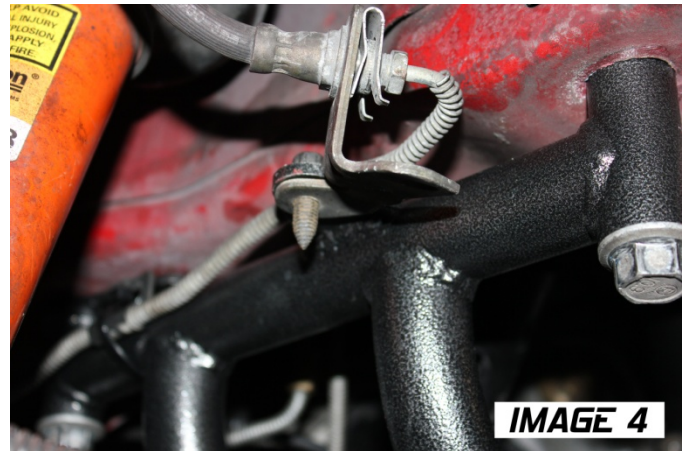
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PART # KM019 (CONTINUED)

21. If retaining the OE power rack and pinion, mount the rack to the K-member. Tighten the bolts to 80 ft/lbs.
22. Position one of the BMR polyurethane motor mount bushings onto each mount of the BMR K-member then lift the K-member up into the car (**IMAGE 2**). This will require aligning multiple points while holding the weight of the K-member at the same time so again, additional help will be required. Install and tighten all six (6) bolts.



23. Install the remaining two polyurethane motor mount bushings on the bottom side of the motor stands along with the provided washers and nuts. Lower the weight of the motor onto the K-member then tighten the motor stand nuts using a 15/16" socket. Tighten until the polyurethane bushings just start to bulge. When assembled correctly, the motor mount bushings should look like **IMAGE 3**.
24. Reinstall the alternator. Reinstall the serpentine belt.
25. Attach the steering shaft to the rack and pinion and tighten the bolt. There is an additional 11mm bolt at the top of the steering shaft that may also be loosened to allow steering shaft length adjustment, if necessary.
26. Reconnect both power steering lines and tighten.
27. Insert all four A-arm mounting bolts. If vehicle must be driven to an alignment shop, roughly center all mounting points in the adjustment slots and tighten all four (4) bolts. If vehicle is at an alignment shop, leave loose until installation is complete.
28. Insert tie rods into spindles and tighten both castle nuts. Insert new cotter pins.
29. Reinstall starter.
30. Slightly bend the factory brake lines to conform to the new K-member and then zip-tie them into place.
31. Bend the ends of the brake lines in such a way that the mounting brackets line up with the brake line mounting tabs on the K-member. You may also have to cut the OE brackets and re-bend them in order to fit properly. Insert bolts and tighten. Once connected, the brake lines should look similar to **IMAGE 4** below.
32. Re install sway bar.
33. Lower vehicle and reconnect battery.
34. Take vehicle to a reputable alignment shop to align the front suspension.



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