79-04 Ford Mustang Perfect Fit K-Member
Part # 20022

Installation Instructions

Congratulations on your purchase of the AFCO Perfect Fit K-member for the 79-04 Ford Mustang. ***Please read and understand each of the steps involved with the installation of your new k-member prior to getting started.***

The AFCO team takes pride in providing the utmost in quality and performance. Should you have a concern about the product you receive, please contact AFCO Customer Service at 1-800-632-2320 or Email to sales@afcoracing.com

AFCO Racing Products P.O. Box 548 Boonville, IN 47601, 800-632-2320 Fax: 812-897-1757, www.AFCORacing.com

Special Notes Before You Get Started

AFCO highly recommends hiring a professional installer, one that is familiar with the installation of aftermarket performance products.

AFCO products are not covered under any warranty either expressed or implied.

AFCO is not responsible for any product that has been improperly installed, crashed, welded to, or modified in any way. AFCO does not cover damage to any related components. Neither the seller nor AFCO will be responsible or liable for any loss, damage, or injury resulting from the direct or indirect use of this product or inability by the purchaser to determine proper use or application of this product.

This instruction manual is written for two different scenarios:

1. With the factory k-member and engine still installed.
2. With the factory k-member and engine removed

1. Take inventory of all the parts you have to install your new k-member. Make sure each piece is accounted for prior to taking your vehicle out of service.
2. Look at the **Tool and supply list** below to make sure you have all the needed tools and supplies before you get started.

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Tool and supply list

Miscellaneous hand tools are required for proper installation of this K-member. We have listed a few of the required and optional tools to help with your installation.

- Assorted metric sockets and wrenches (required)
- Assorted standard sockets and wrenches (required)
- Ratchet and extensions (required)
- 25-200 ft/lb torque wrench (These usually can be borrowed or rented from most local auto part stores)
- 4 plumb bob's
- Tape measure
- Rubber mallet or dead blow hammer
- Floor jack and jack stands or a hydraulic lift
- Engine hoist or engine truss
- Coil spring compressor
- Safety glasses or goggles
- Penetrating fluid (optional)
- Fender pads (optional)
- Work gloves (optional)

3. **The factory struts and springs cannot be used with this installation.**

   Therefore the following parts are required:

- AFCO Struts (Part # 30022)
- 2-5/8" I.D. Coil-Over Springs: 10" or 14" can be used with coil over strut kit.

  Recommendations:

  Drag race applications: 14" tall 125 lb. rate (Part# 24125CR)

  Non–drag race applications: 10" tall, 200 lb. rate (Part# 23200CR)
- Coil- Over Kit Part # 29022
- Caster/Camber Plates Part #'s 40022 (79-89), 40023 (90-93) and 40024 (94-04)
- AFCO Lower Control Arm Install Kit (Part# 200017)

On 79-93 Models, some additional steering components are also required.

- ¾ X 36 to ¾" DD low profile steering u-joint. AFCO part# 200003 or Flaming River part# FR1925
- ¾ DD to ¾ DD low profile steering u-joint. AFCO part# 200004 or Flaming River part# FR1920
- ¾ DD steering shaft Material. AFCO part# 200007 or Flaming River part# FR1850SS
- Steering column tongue. 3" FR1504T or 6" FR9950TLG

(On 94-04 Models the steering parts listing above is not required, however will provide extra header clearance.)

Optional Parts Available for your new K-Member

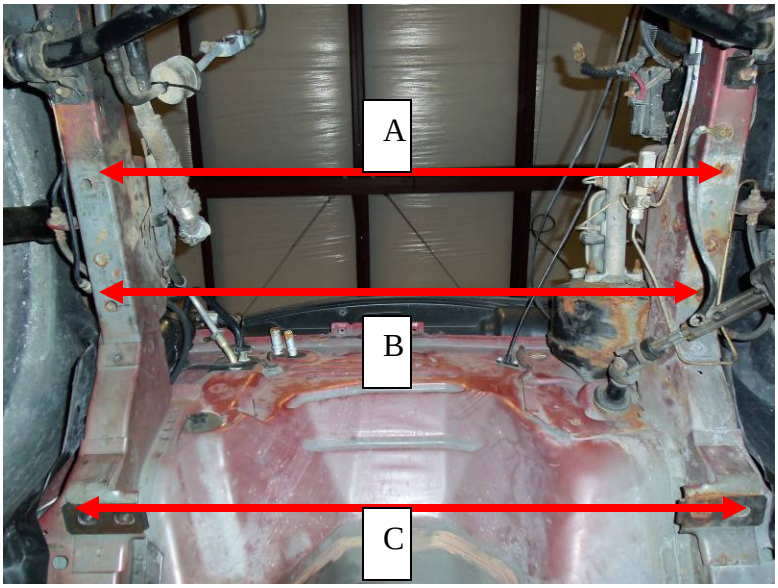
Your new K-member has been designed to be compatible with factory lower control arms and factory rack and pinion. However we also recommend the following optional parts:

- Lightweight Tubular Lower Control Arm Assemblies Sold in pairs.

  Part # 200008 (79-93 rod end style)
  Part # 200009 (79-93 bushing end style)
  Part # 200010 (94-04 rod end style)
  Part # 200011 (94-04 bushing end style)

- Engine Mount Kits Available

  Part # 20024 (5.0 Small Block Ford)
  Part # 20025 (4.6 Modular Ford)
  Part # 20026 (SBC, BBC, & LS Based Engines)
  Part # 20027 (Big Block Ford)



4. Measure the distance across the front mounting holes center-to-center. This number should be about 34" for the 1st set (A) and 33-3/8” for the second set (B). Complete the same measurement on the outside rear mounting holes (C). This number should be about 32 1/4" center to center.These measurements are the same for the SN95 and Fox Body. Check these measurements to determine if the frame is close to factory specs. If your measurements are considerably different you may experience installation and alignment issues.

5. If you are putting in a different engine and transmission combination other than stock it may be necessary to modify the transmission crossmember.

6. **Measure the ride height at the front wheel on both sides of the car** and document the measurement. Note: Measure ride height on a flat level surface from the ground to the bottom edge of the front fender. Stock ride height should measure around 27”s.

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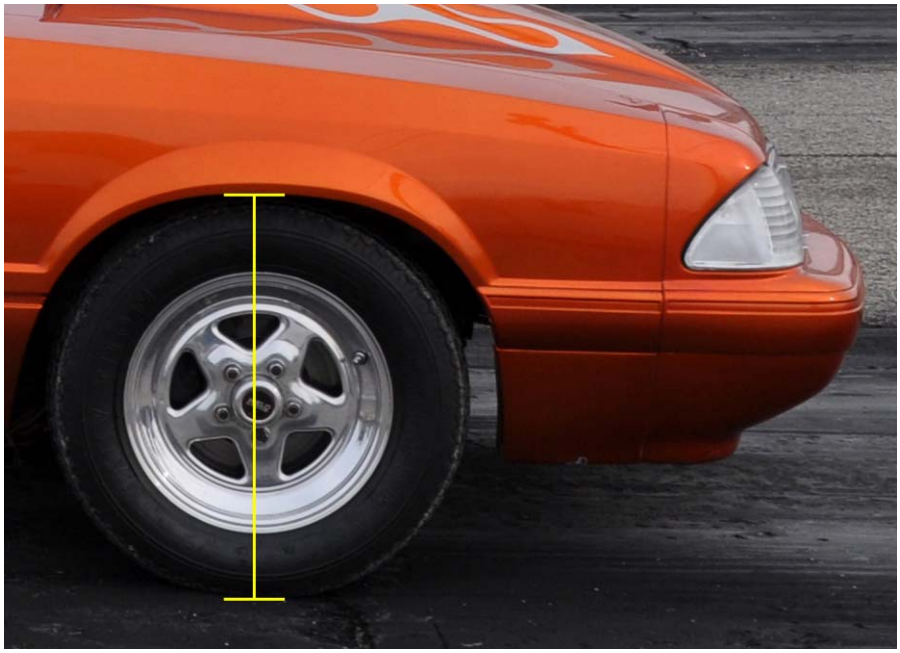

Safety Notes:

While this installation can be done on the floor with the use of jack stands, we strongly recommend that this job be completed utilizing a hydraulic lift. The use of safety goggles is strongly recommended, as debris may be dislodged from beneath your vehicle while removing or installing parts.

Stock K-member Removal with Engine Still in Vehicle

1. Disconnect the negative battery cable.

2. Raise the front and the rear of the car up as high as possible next, support on jack stands, on each front frame rail just behind the radiator support and under the rear axles on the rear.

3. Support the engine with an engine hoist or an engine support truss.

4. Remove the front wheels.

5. Unbolt the caliper off of the spindle and hang it out of the way to prevent damage to the brake hose.
6. Place a floor jack under the lower control arm. Leave enough room between the jack and the control arm to tap the ball joint loose from the

spindle but not removing it. Once loose the control arm will rest against jack keeping pressure on the spring until it is compressed in a later step.

7. Remove the sway bar link from the control arm

8. Remove the tie rod end from the spindle.

9. Lower the jack just enough to separate the control arm from the spindle.

10. Remove strut bolts at the spindle and remove the spindle.

11. Remove the strut.

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12. Use an internal spring compressor and compress the spring. CAUTION: A compressed spring is under an extreme amount of load and if compressed improperly could result in serious injury. Make sure you follow the directions of the spring compressor.

13. Lower the jack and carefully remove the spring.

14. Repeat steps 5 through 13 for the other side of the car.

15. Remove the bolt holding the steering shaft to the rack and pinion also remove the shaft from rack and pinion.

16. Unhook power steering lines and remove the rack and pinion.

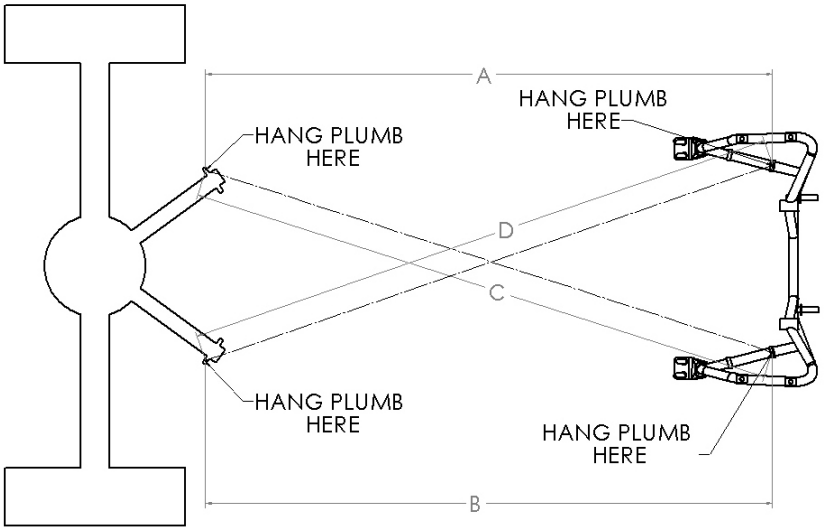
17. With engine supported remove engine mount bolts and raise engine enough to clear the mounts from k-member.

18. Check for any wiring/ground straps etc. attached to k-member and remove if necessary. Place a floor jack under the center of the k-member and loosen 8 bolts fastening it to the vehicle. Lower the jack and remove k-member from vehicle.

19. With the k-member removed, install the new engine mounts to the engine block. Torque the bolts to 50 ft-lbs

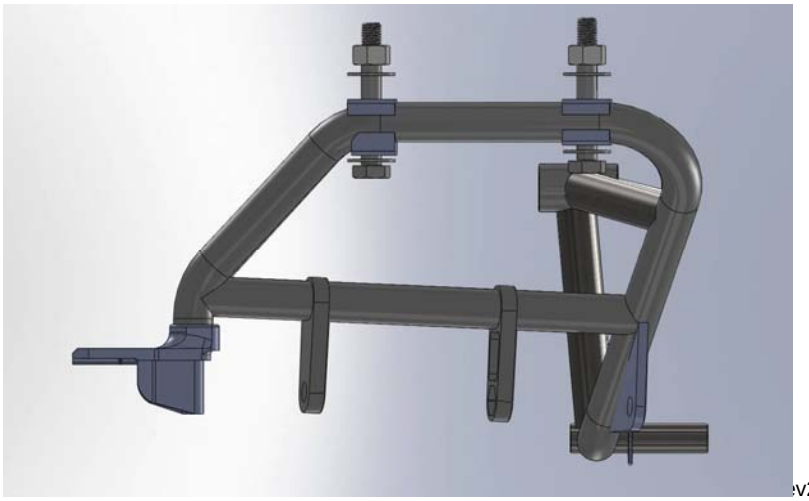
20. Install all bolts in the k-member and only snug the bolts enough that the k-member can still be moved from side to side and from front to back. The front frame rail bolt is 9/16 X 5-1/2" long and rear frame rail bolt is 9/16 X 6" long. The four rear mounts maintain the use of the factory bolts.

21. Square the k-member at this time using plumb bob's. **(Refer to the chart on the next page for reference.)** Start by squaring the k-member from front to rear and move the k-member accordingly until measurement "A" and measurement "B" are equal. Without moving the k-member from front to rear square the k-member from side to side until measurement "C" and measurement "D" are equal. Refer to diagram below. Note: ***Be sure that the plum bob's are hanging from the same points on each side of the car so the measurements are accurate, the outside of the rear control arm bolt against the nut on the rear of the car and directly in the center of the front control arm mounting bracket on the front of the k-member.***



22. Torque the four front k-member bolts to 115 ft-lbs and the four rear bolts to 72 ft-lbs. The k-member was designed to use a 9/16 USS washer on the front bolts, 1-1/2” outside diameter, 5/8” inside diameter and 1/8” thick. Once the bolts are all torqued double check the measurements to make sure the k-member is still square. If the k-member has moved during the tightening process, loosen and start the squaring process again.

23. Install the rubber engine mount bushings and inner steel sleeves, provided in the motor mount kit, into the k-member engine mount tubes.

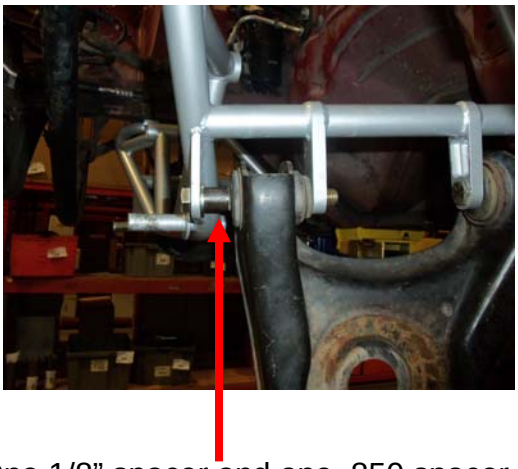


23. Lower the engine down until you line up the engine mount and the engine mount bushings.

24. Install motor mount bolts and torque to 80 ft-lbs.

25. Install the lower controls arms. If installing the factory control arms and the optional premium hardware kit, torque the bolts to 159 ft-lbs. If installing tubular control arms refer to the recommended torque spec from the manufacturer.

Front



One 1/8" spacer and one .850 spacer

Rear

one 1/8" washer and one 1/16" washer

26. Install the rack & pinion and torque bolts to 80 ft-lbs

27. Install the spindles to the control arms and torque the nuts to 120 ft-lbs

28. Install the caster/camber plates following the installation manual for the caster/camber plates.

29. Install the coil-over struts following the strut installation manual.

30. Tighten strut bolts to spindles then torque to 148 ft-lbs

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31. Install tie rod ends and torque to 59 ft-lbs.
    Note: The rack and pinion mounts are moved towards the passenger side of the car to allow for additional left side header clearance so it may be necessary to adjust the tie rod ends from the factory location.

32. Reinstall the calipers

33. Reinstall the sway bar. It may be necessary to raise the control arms using a floor jack or lower the car down on it's suspension to reinstall the sway bar end links.

34. Reinstall the front tires. (Refer to owners manual for lug nut torque specifications

35. Center the rack and pinion travel from side to side. Follow these steps:

Step 1 Install the steering shaft onto rack and pinion. It is not necessary to tighten it at this time. Turn the steering wheel all the way to the right.

Step 2 While turning the steering wheel; count the revolutions from lock to lock on the rack and pinion. Divide the number of revolutions by 2.

Step 3 Starting from one side, turn the wheel from the number calculated in step 2 to center the rack and pinion.

Step 4 Remove the steering joint at the rack and pinion. Make sure you don't turn the rack and pinion during removal.

Step 5 Straighten the steering wheel from inside the car and re-install the steering shaft and torque the steering shaft bolt to 25 ft-lbs. If using an aftermarket shaft refer to the manufacturer instructions for torque specs.

36. Adjust the caster and camber as close as you can by eye and be sure to have an alignment done on the vehicle. It also may be necessary to adjust the toe as close as you can before the alignment.

37. Remove the jack stands.

38. Settle the suspension by rolling the car forward and back a few times and pushing down on the front and the rear of the car a few times before checking ride height.

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39. Measure the ride height in the same manner as instructed earlier in this manual and adjust accordingly. Refer to the installation manual for the coil- over struts for the proper adjusting procedure.

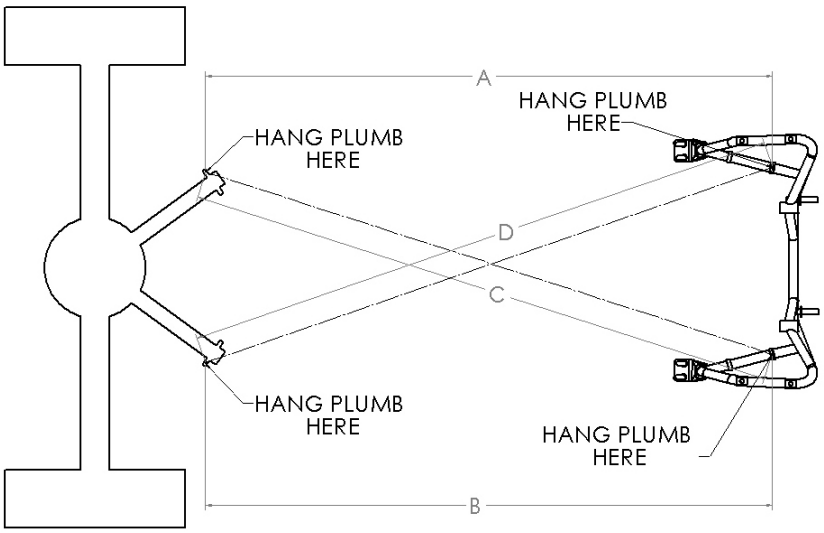
40. Contact your local alignment shop for an appointment to get your alignment specification set.

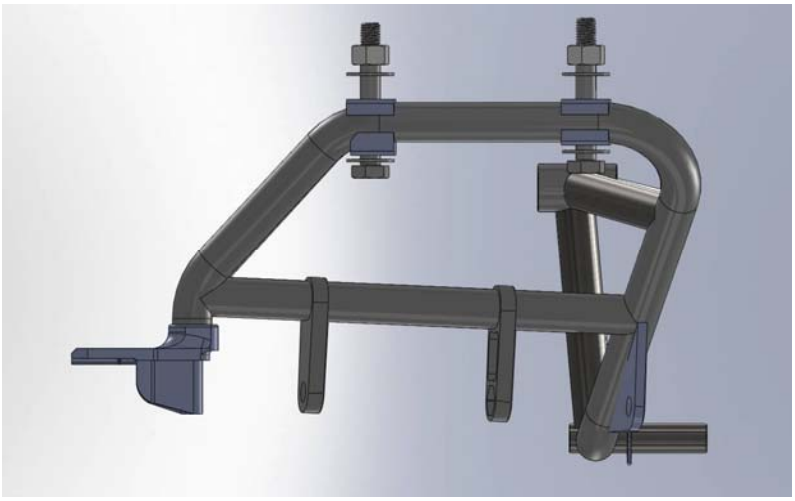
K-member installation with engine and factory k-member removed.

1. Raise the front and the rear of the car up as high as possible next, support on jack stands on each front frame rail just behind the radiator support and under the rear axles on each side.

2. Install all bolts in the k-member and only snug the bolts enough that the k-member can still be moved from side to side and from front to back. The front frame rail bolt is 9/16 X 5-1/2” long and rear frame rail bolt is 9/16 X 6” long. The four rear mounts maintain the use of the factory bolts.

3. Square the k-member at this time using plumb bob's. **(Refer to the chart below for reference.)** Start by squaring the k-member from front to rear and move the k-member accordingly until measurement "A" and measurement "B" are equal. Without moving the k-member from front to rear square the k-member from side to side until measurement "C" and measurement "D" are equal. Refer to diagram below. Note: ***Be sure that the plum bob's are hanging from the same points on each side of the car so the measurements are accurate, the outside of the rear control arm bolt against the nut on the rear of the car and directly in the center of the front control arm mounting bracket on the front of the k-member.***



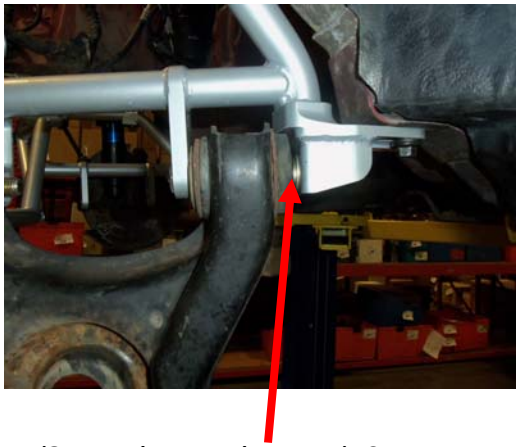


5. Install lower controls arms. If installing the factory control arms and the premium hardware kit torque the bolts to 159 ft-lbs, refer to the pictures below for control arm spacer location. If you're installing tubular control arms refer to the recommended torque spec from the manufacture.

Front

One 1/8" spacer and one 1.850 spacer

Rear



one 1/8" washer and one 1/16" washer

6. Install the rack & pinion and torque bolts to 80 ft-lbs.

7. Install the spindles and torque the nuts to 120 ft-lbs.

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8. Install caster/camber plates following the installation manual for the caster/camber plates.

9. Install the coil-over struts following the installation manual for the struts.

10. Tighten strut bolts to spindles and then torque to 148 ft-lbs.

11. Install tie rod ends and torque to 59 ft-lbs.
Note: The rack and pinion mounts are moved towards the passenger side of the car to allow for additional left side header clearance so it may be necessary to adjust the tie rod ends from the factory location.

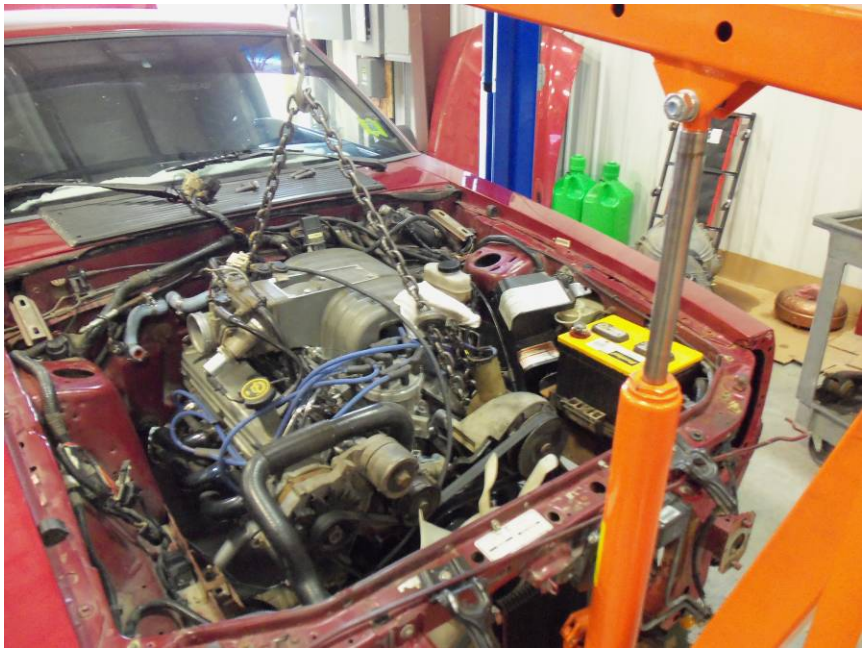
12. Reinstall the calipers.

13. Reinstall the sway bar. It may be necessary to raise the control arms up using a floor jack or lower the car down on it's suspension to reinstall the sway bar end links.

14. Install the rubber engine mount bushings and inner steel sleeves, provided in the motor mount kit, into the k-member engine mount tubes.

15. Lower the engine down until you line up the engine mount and the engine mount bushings.

16. Install motor mount bolts and torque to 80ft-lbs.



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17. Hook up all remaining wiring, hoses, etc. From the engine removal.

18. Reinstall the front tires. (Refer to owner's manual for lug nut torque specifications)

19. Center the rack and pinion travel from side to side. Follow these steps:

- Install the steering shaft onto rack and pinion. It is not necessary to tighten it at this time. Turn the steering wheel all the way to the right.
- While turning the steering wheel, count the revolutions from lock to lock on the rack and pinion. Divide the number of revolutions by 2.
- Starting from one side, turn the wheel to the divided number to center the rack and pinion.
- Remove the steering joint at the rack and pinion. Make sure you don't turn the rack and pinion during removal.
- Straighten the steering wheel from inside the car and re-install the steering shaft and torque the steering shaft bolt to 25 ft-lbs. If using an aftermarket shaft refer to the manufacturer instructions for torque specs.

20. Adjust the caster and camber as close as you can by eye and be sure to have an alignment done on the vehicle. It also may be necessary to adjust the toe as close as you can before the alignment.

21. Remove the jack stands.

22. Settle the suspension by rolling the car forward and back a few times and pushing down on the front and the rear of the car a few times before checking ride height.

23. Measure the ride height in the same manner as instructed earlier in this manual and adjust accordingly. Refer to the installation manual for the coil over struts for the proper adjusting procedure.

24. Contact your local alignment shop for an appointment to get your alignment specifications set.

Congratulations! You have just completed the installation of your Perfect Fit K-Member. You now have the highest quality, best performing k-member available.

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We make every effort to build our products to the highest standards of workmanship and materials possible. This also applies to our documentation. We have tried to make the removal of the stock system and the installation of the new system as clear and concise as possible. If, however, you find points in our instruction manual that you feel need to be clarified or changed, please e-mail us your constructive comments. We will use them to correct and enhance our documentation to the benefit of all customers.