

## KM761 – Drag K-Member for 2015-2020 S550 Mustang

### REQUIRED TOOLS:

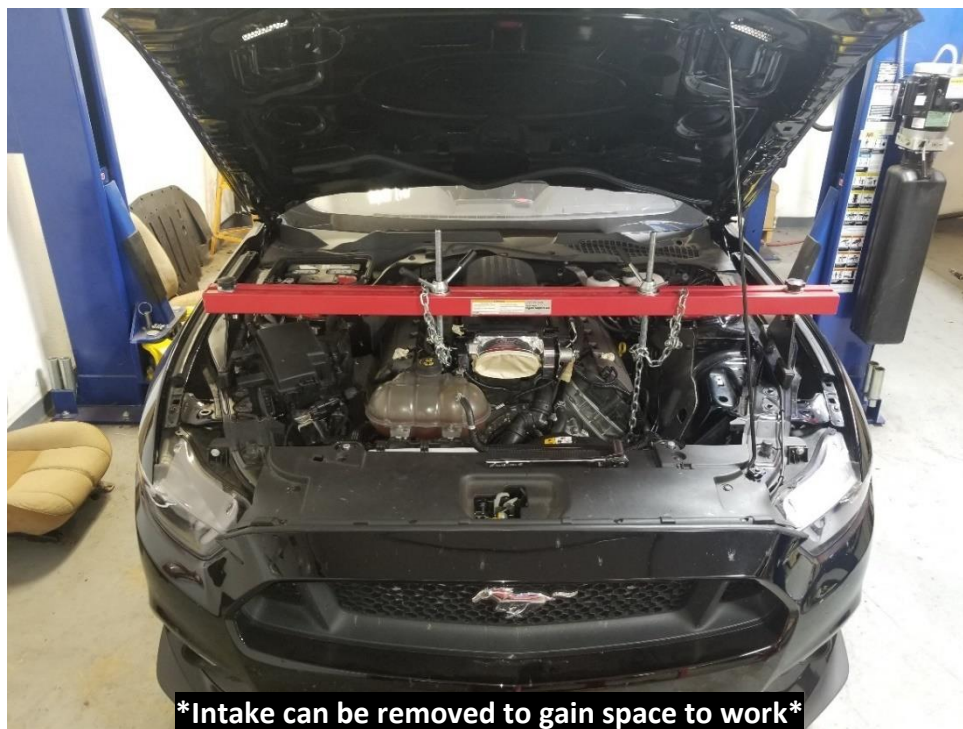
- Engine Support Brace
- Assorted sockets and wrenches
- Trim Clip Tool
- Basic Hand Tools

### K-Member Removal:

- 1) Disconnect the battery.
- 2) Using masking tape, tape the steering wheel to the steering column as shown in **IMAGE 1**. This will help preserve the clock spring when you remove your steering shaft.
- 3) Support motor using a support bar shown in **IMAGE 2**. It is recommended that you support the engine off of the headers if possible but you can also use bolts for the alternator, AC compressor or a super-charger pulley.



**IMAGE 1**

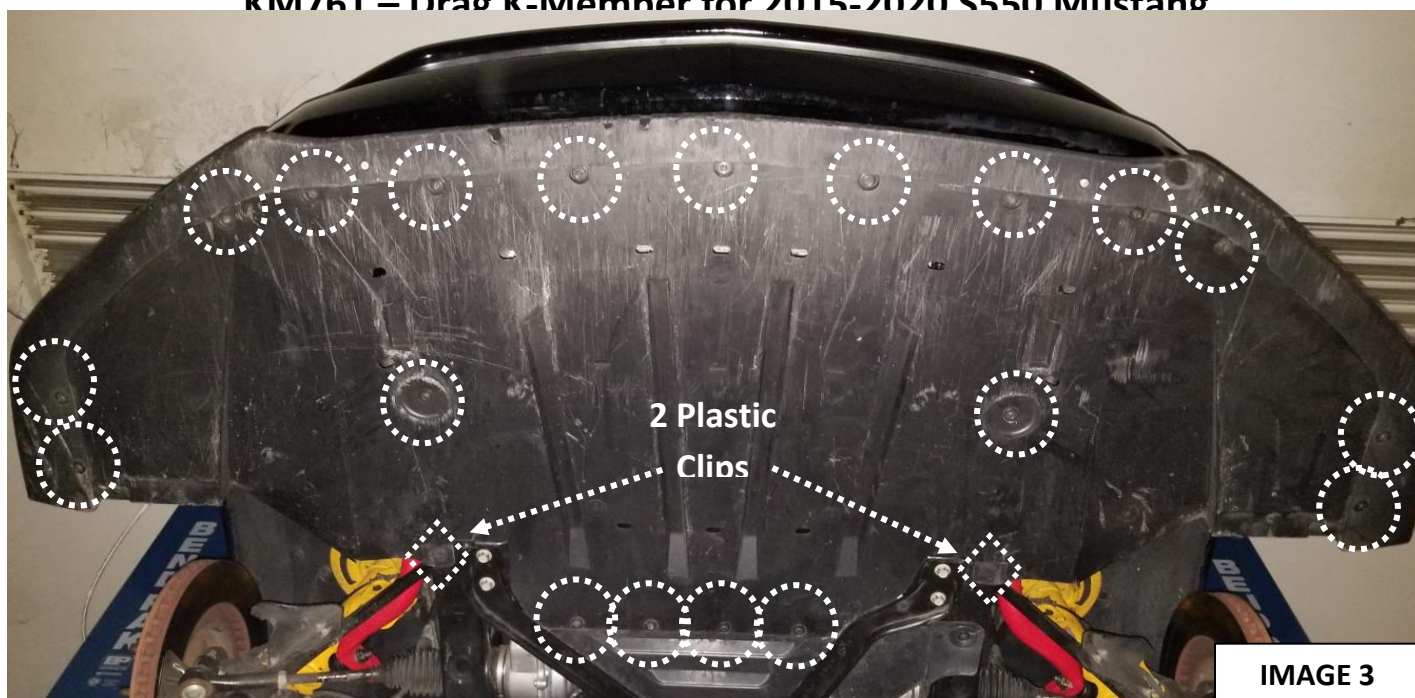


**\*Intake can be removed to gain space to work\***

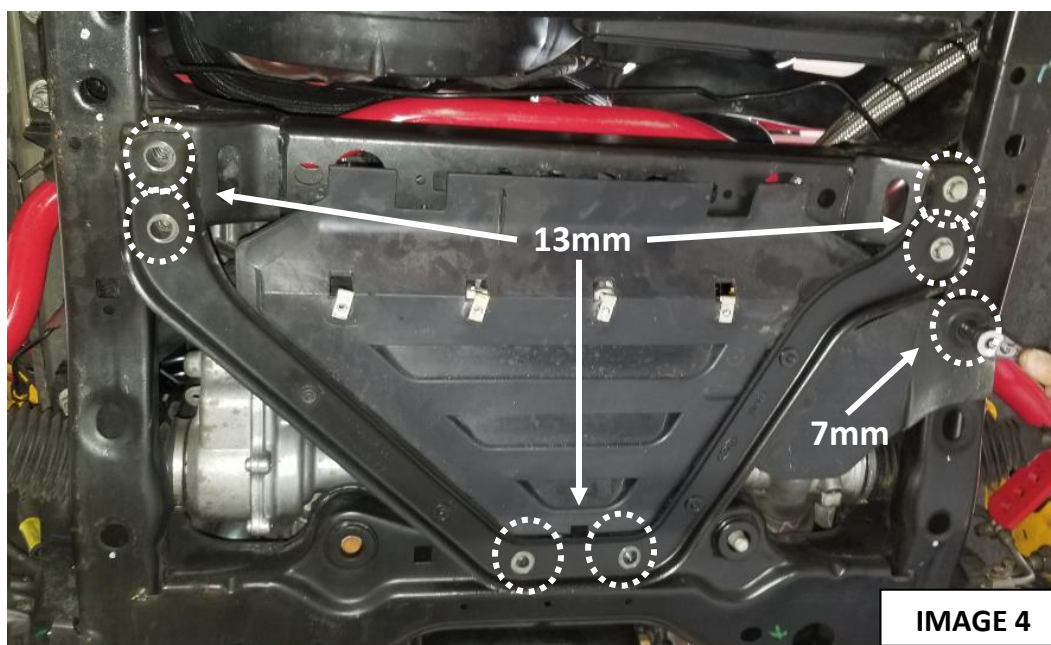
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- 4) Raise vehicle off the ground, you will need at least 24" of work space beneath the vehicle. Make sure vehicle is stable and secure.
- 5) Using a 7mm socket, remove the nineteen (19) fasteners and the two (2) plastic clips holding the belly pan onto the subframe of the car. Shown in **IMAGE 3**.
- 6) Using a 7mm and a 13mm, remove the reinforcement tray from the factory K-Member as shown below in **IMAGE 4**.

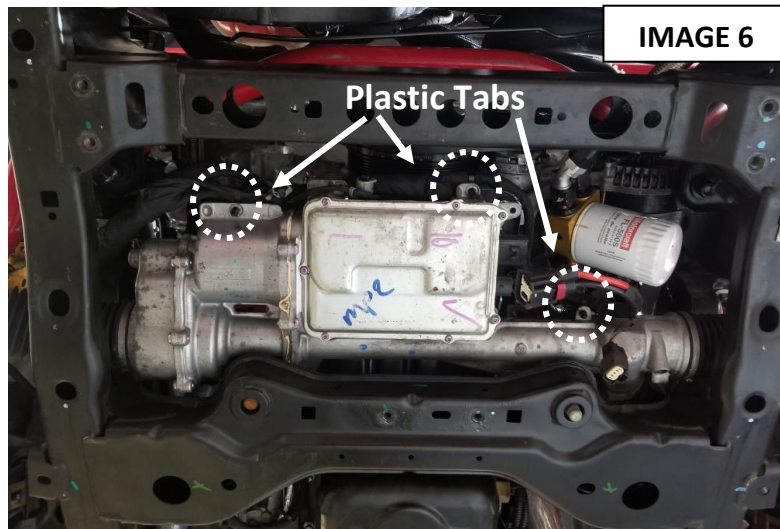


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- 7) Disconnect the electrical connectors from the steering rack as shown in **IMAGE 5**.
- 8) Remove the 3 plastic tabs holding the wiring harness to the front of the steering rack shown in **IMAGE 6** using a trim tool.

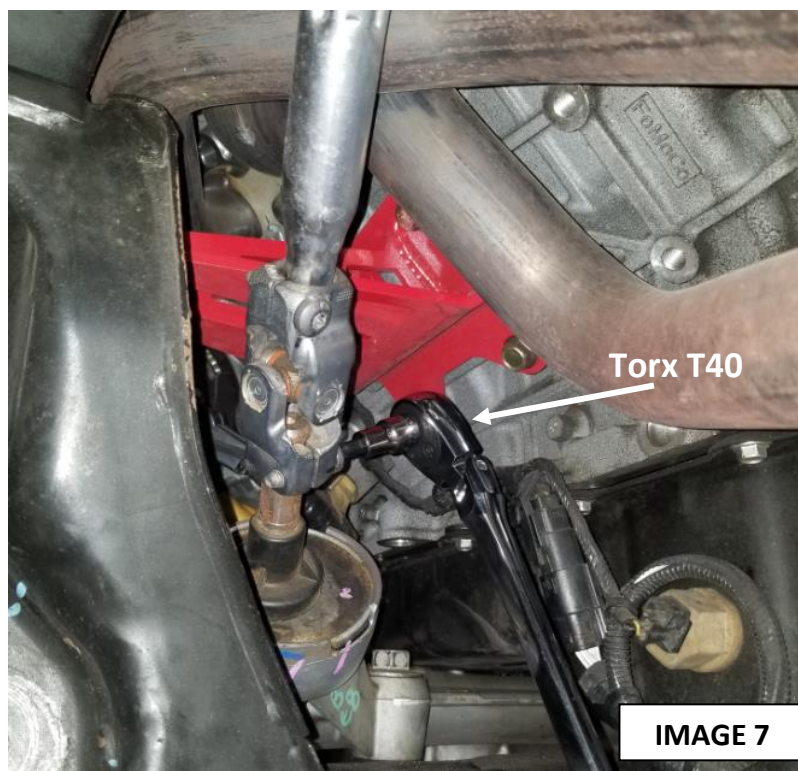


- 9) Using a T40 Torx socket, remove the screw holding the steering shaft to the input shaft on the steering rack as shown in **IMAGE 7**.

- 10) Remove the outer tie rods from the spindle as shown in **IMAGE 8** using a 18mm wrench. Use a brass or non-marring hammer to break the seal of the ball joint and the spindle.

- 11) Using a trim tool, disconnect the two clips holding the wheel speed sensor to the strut as shown in **IMAGE 9**.

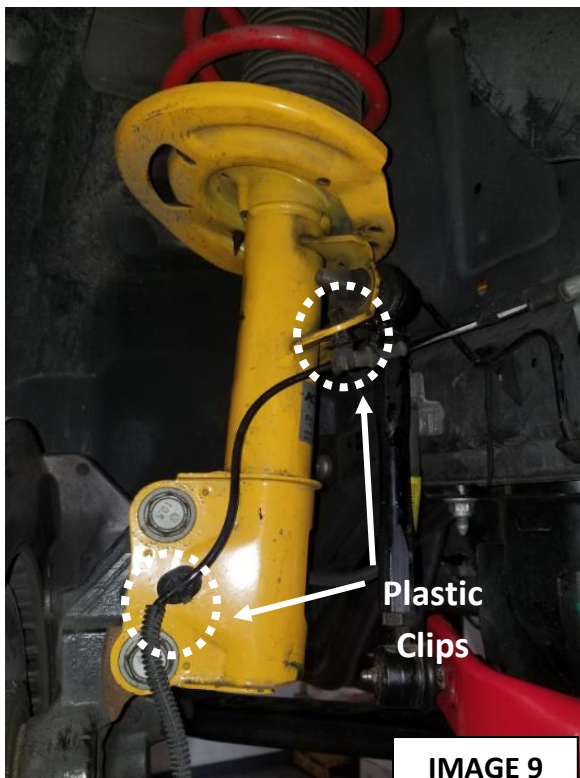
- 12) Using a 10mm socket, remove the wheel speed sensor from the hub as in **IMAGE 10**.



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**IMAGE 8**



**IMAGE 9**



**IMAGE 10**

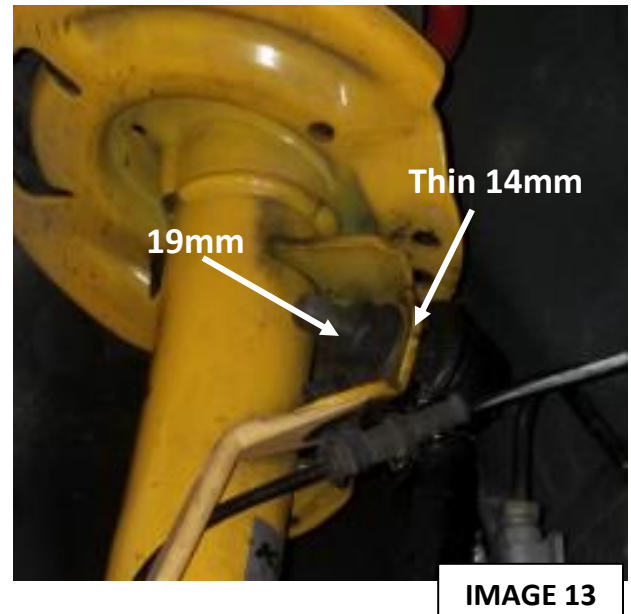
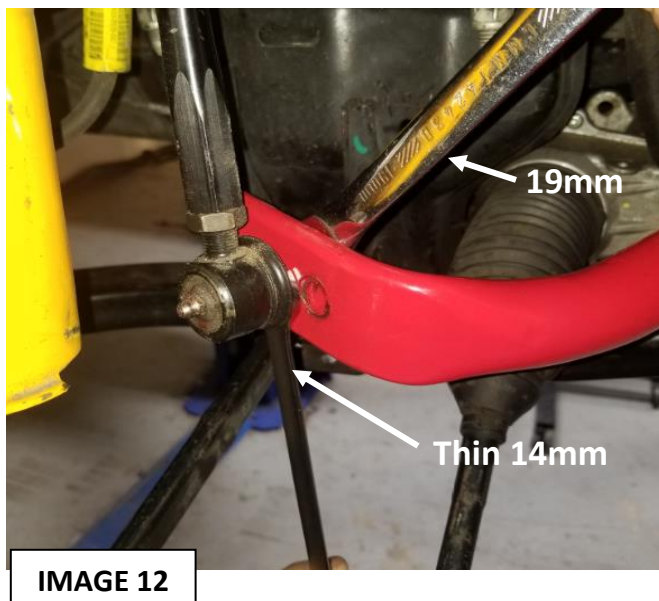
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- 13) Using a ratchet strap, support the radiator and AC condenser as shown in **IMAGE 11**. Be careful not to over tighten the strap and damage the radiator or condenser. If you prefer to completely remove radiator, remember to refill your coolant and re-charge your AC system.



- 14) Using a 19mm and thin 14mm wrench remove the sway bar end links from the sway bar and from the strut. Remove the lower control arm and radius rod bolts from the factory k-member using a 21 and 24mm. It is easiest to leave the lower control arm and radius rod connected to the spindle and leave the spindle and strut installed as shown in **IMAGE 12 and 13**.



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- 15) Using an 18mm, loosen and remove the sway bar saddles and remove the sway bar from the vehicle.
- 16) Using a 21 and 24mm, remove the bolts holding the lower control arm and radius rod to the factory K-Member as shown in **IMAGE 14**. You can leave to control arms attached to the spindle, and leave the spindle mounted to the strut in the vehicle.



- 17) Using a 15mm socket, bolts from motor mount that secures it to the factory K-Member.

- 18) Place a jack under the transmissions bellhousing to help support the drivetrain as you remove the K-Member.

- 19) Before removing the K-member, ensure that there is nothing attached to the factory K-Member. Check for wiring harnesses, coolant lines, or anything that may get in the way of removing the K-Member.

- 20) Using an 18mm, remove the four (4) bolts holding the rear legs of the k-member in place as in **IMAGE 15**.

- 21) Using a 18mm, loosen all eight (8) nuts holding the k-member in place.

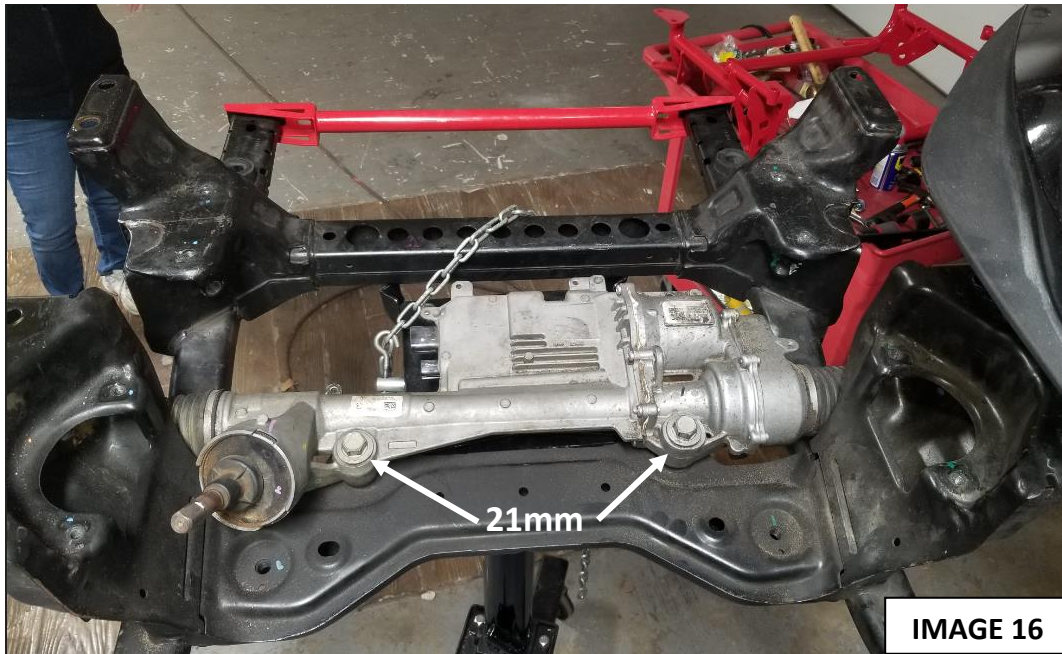


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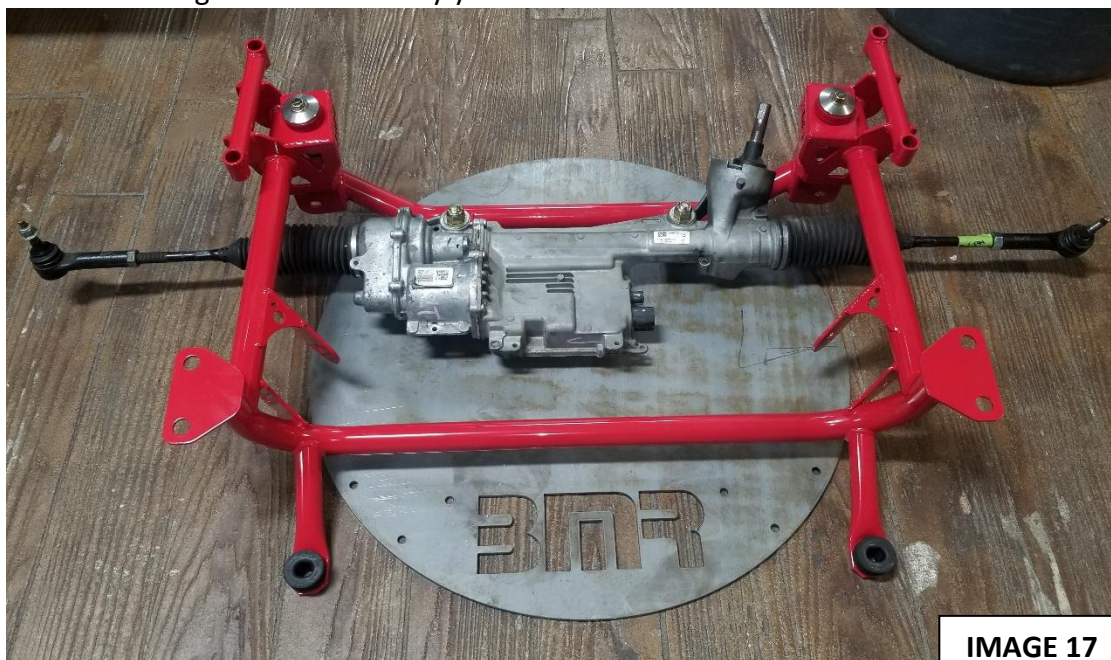
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- 22) With an assistant, remove all eight (8) nuts and slowly lower the K-Member.  
23) If reusing the factory steering rack, remove it from the K-Member using a 21mm socket as in **IMAGE 16**.



- 24) Using the provided 5/8" bolts, nuts and washers, reinstall the steering rack as shown in **IMAGE 17**. Torque to 180ftlbs. You can also install the steering rack after the K-Member is in the vehicle to if you are installing the K-Member by yourself.



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- 25) Insert the radiator bushings into the front ears of the K-Member, it helps installation to spray a light oil on the bushings, like WD-40.
- 26) Raise the your BMR Drag K-Member back onto the stud frames ensuring that the radiator bushings are lined up. Use the factory nuts to retain the K-Member, *do not torque these nuts yet.*

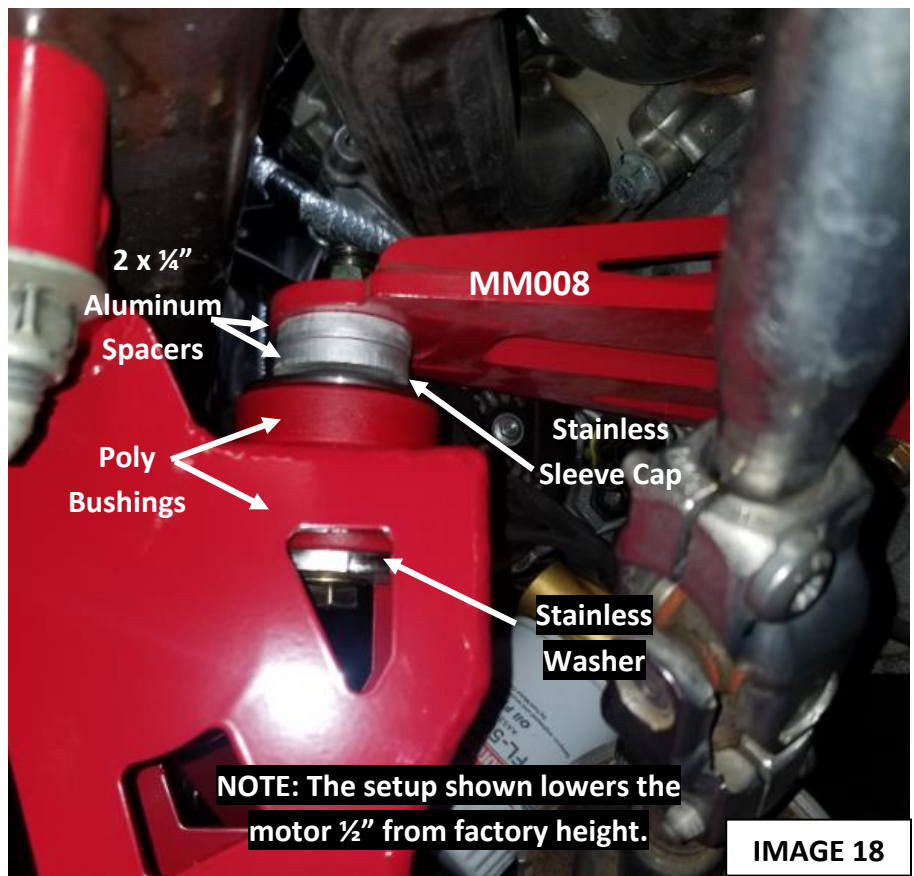


**MM008**

- 27) Assemble the motor mount bushings as shown in **IMAGE 18**. The BMR Drag K-Member will lower your motor  $\frac{1}{2}$ ". If you wish to retain the factory motor height use two (2) supplied  $\frac{1}{4}$ " aluminum washers on top of each motor mount.

**NOTE: BMR also offers Adjustable Steel Motor Mount Brackets (MM008) that allow you to lower motor  $\frac{1}{2}$ " from stock height. You will need to use the shorter 3/8" bolt with these brackets.**

- *MM008 lowers your motor  $\frac{1}{2}$ " from factory height if you do not use any of the supplied  $\frac{1}{4}$ " spacers with the factory motor mounts.*
- *Your KM761 BMR Drag K-Member will also lower your motor  $\frac{1}{2}$ " if you do not use any of the supplied  $\frac{1}{4}$ " spacers with the factory motor stands.*
- *The fully lowered adjustment of both components cannot be used together.*
- *If you are using both a MM008 and a KM761 it is recommended that you use two (2)  $\frac{1}{4}$ " spacers on top of each motor mount, this will only lower your motor  $\frac{1}{2}$ " from stock.*
- *If you are using the factory motor stand, it is recommended that you do not use any of the supplied washers, this will also lower your motor  $\frac{1}{2}$ ".*
- *If you wish to raise or lower your motor for additional clearance, please ensure that you have enough room in the direction you wish to go.*



**IMAGE 18**

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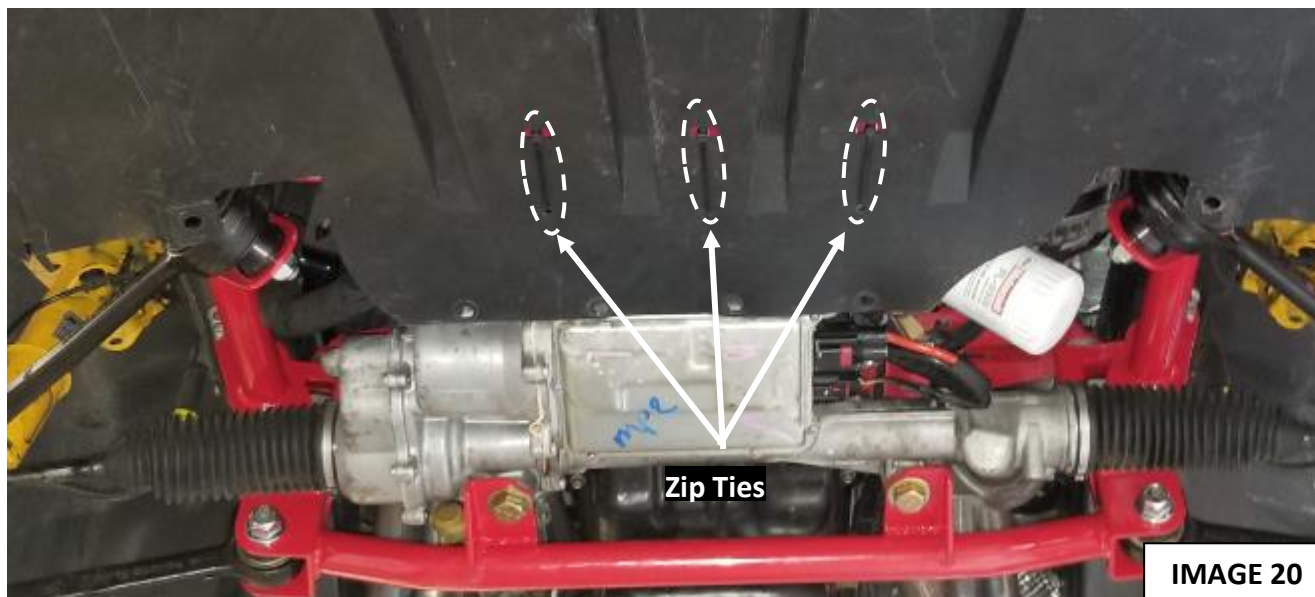
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- 28) With the motor mounts assembled, center and torque the K-Member to the frame. Torque all eight (8) nuts to 70ftlbs each.
- 29) Torque the motor mount bolts to 40ftlbs.
- 30) Using the supplied M16 Flanged Nuts, re-install the lower control arm and radius rod and torque both to 184ftlbs.
- 31) Re-attach all connectors and ensure all wiring harnesses are secured with zip ties with zip ties, re-install the wheel speed sensors and ensure.
- 32) If you wish to retain the vehicles belly pan, use a  $\frac{1}{4}$ " drill bit as shown in **IMAGE 19** and drill three holes. These holes should be about 3" from the slots.



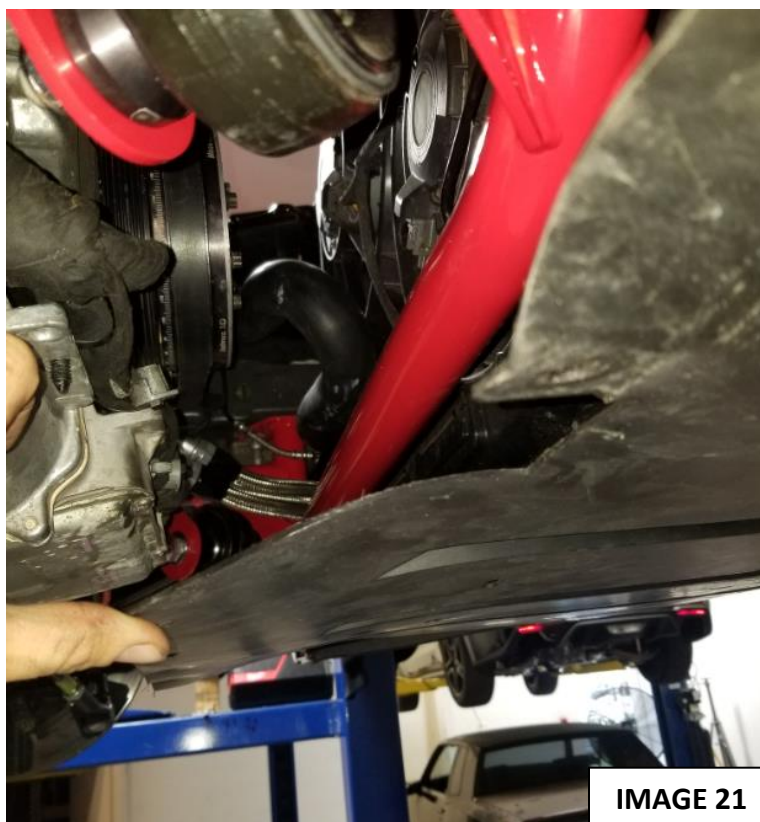
- 33) Re-install the factory belly pan. Tighten bolts until they are snug and re-attach all clips.
- 35) Using three (3) 12" long zip ties, secure the belly pan to the main cross tube as in **IMAGE 20**. Use the slotted holes in addition to the holes you have drilled to support the rear of the belly pan shown in **IMAGE 21**. Ensure that there is no wiring in between the zip tie and the tube.

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It is recommended that you have your car professionally re-aligned.

NOTE: This K-Member is designed to be used as a lightweight drag racing component, prolonged street driving is not recommended as we have removed the front sway bar mount.



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