

**BIKE MAIER INC**

2276 Research Drive

Livermore CA 94550

925 443 6300



**MOD PANHARD ROD KIT**

**1964 - 73 FORD MUSTANG**

**FXXAA00100**

# INSTALLATION INSTRUCTIONS

## BEFORE STARTING

Read all installation instructions to their fullest before beginning the installation of your product. Always make sure to wear the appropriate safety equipment when working on your vehicle and that the car is safely placed on jack stands. If any questions arise before/during/after you install the product please call MMI at 925-443-6300 or email us at maier@mikemaierinc.com.

**NOTE: All work should be performed by a qualified technician.**

**LEGAL DISCLAIMER: Mike Maier Inc. is not liable for personal, property, legal, or financial damages from the use or misuse of any product we sell. The purchaser is solely responsible for the safety and performance of these products. No warranty is expressed or implied.**

## INCLUDED IN THIS KIT



ITEM NO.	DESCRIPTION	QTY.
1	MOD1 Panhard Rod Chassis Bracket	1
2	MOD1 Panhard Rod Axle Bracket	1
3	Panhard Rod	1
4	.550" Thick Aluminum Spacer	2
5	.225" Thick Aluminum Spacer	2
6	3 1/2" Long 5/8" Bolt w/2 5/8" Washers & 5/8" Nyloc	1
7	2 3/4" Long 5/8" Bolt w/2 5/8" Washers & 5/8" Nyloc	1

## A. CHASSIS PREPARATION

1. Loosen the rear lug nuts on your vehicle prior to jacking up the car.
2. Place jack stands under the vehicle.
  - Ensure the car is level on jack stands to make the chassis bracket alignment easier.
3. Before beginning the project look for any potential clearance issues for the panhard rod chassis bracket.
  - Some aftermarket fuel systems may need to be moved if they protrude out the front of the fuel tank.
  - Observe the clearance for exhaust if using over the axle exhaust. In many cases exhaust modification may be needed. If modification is required then cut the exhaust at the muffler flange.



*On vehicle fitment for clearance of exhaust, fuel lines*



*Drivers side view showing clearance for exhaust and fuel system.*

4. Spray the passenger side U-bolts with penetrating oil if excessive rust/corrosion is present.
5. Remove the section of exhaust that goes over the axle (if applicable).
6. Mock up the panhard rod chassis bracket on the vehicle based on the following.
  - The slot sits on the driver's side.
  - The rear face of the panhard rod chassis bracket should be perpendicular to the ground.
  - Measure 1 1/2" from the rear face of the panhard rod chassis bracket to the roll pan flange (flange just forward of the fuel tank).



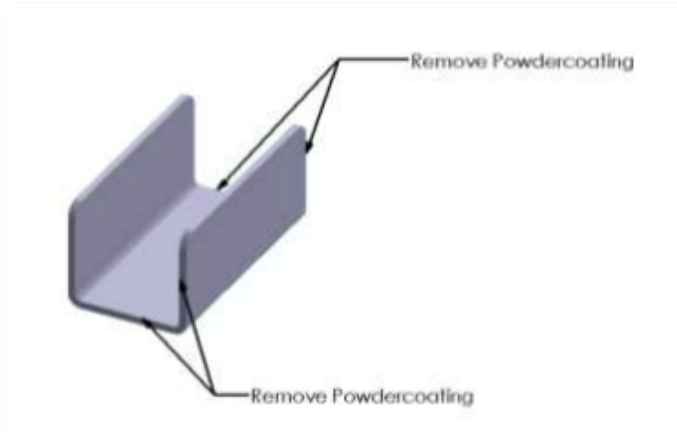
*A.6 - Referenced measurement for alignment to front flange of fuel tank. Measurement shows approximately 1 3/8" whereas 1 1/2" is desired.*

7. Use jack stands or an assistant to hold the panhard rod chassis bracket in place while you scribe the area with a felt tipped marker.
  - In some years and vehicle codes an exhaust hanger may exist where the panhard rod chassis bracket mounts. In this case it will need to be removed or relocated depending upon exhaust.
8. Remove the panhard rod chassis bracket from the vehicle and using a flapper wheel or other sanding device remove paint and debris from the area scribed in step 7. Ensure the area within 1/2" of the marked area is clean.

## B. TACK WELDING & PANHARD BAR CHASSIS BRACKET PLACEMENT

**DANGER: WEAR A RESPIRATOR OR OTHER DEVICE WHEN GRINDING AND WELDING IN THE FOLLOWING STEPS. GALVANIZING WAS USED DURING THE CONSTRUCTION OF THE CHASSIS AND WHEN GRINDING AND WELDING TOXIC FUMES & DUST ARE RELEASED.**

1. Move back to the panhard rod chassis bracket and remove the powder coating.



*B.1 - Panhard Rod Chassis Bracket U-Channel showing locations of powder coat to be removed*

2. Place the panhard bar chassis bracket back onto the chassis.
  - The slot sits on the driver's side.
  - The rear facing face of the panhard rod chassis bracket should be perpendicular to the ground.
  - Measure 1 1/2" from the rear face of the panhard bar chassis bracket to the roll pan flange (flange just forward of the fuel tank).
3. Tack weld the panhard bar chassis bracket to the frame rail. Refer to figure B.3 for the tack weld locations. Re-measure the location of the bracket to ensure it is properly placed.



*B.3 - Panhard bar chassis bracket tack welded in 2 locations*

## C. PANHARD ROD AXLE BRACKET INSTALLATION

1. Remove the lower shock nut from the passenger side of the vehicle.
2. Remove the 4 nuts holding on the U-bolts.
  - In some applications, the spring plate can be preloaded by the shock, be cautious when removing.
3. Remove the spring plate from the leaf spring and replace with MMI panhard rod axle bracket
4. Check the U-Bolts to ensure they are in good condition and replace if necessary.
  - MMI offers replacement U-bolts in 3 sizes.
5. Tighten the U-bolts to their recommended torque spec. (Values given for grade 2)
  - 7/16" diameter U-bolt torque spec: 36 ft-lbs
  - 1/2" diameter U-bolt torque spec: 55 ft-lbs
6. Fasten the lower shock mount to the spring plate and torque to 15-25 ft-lbs.

## D. PANHARD BAR CHASSIS BRACKET WELDING

1. Ensure you have your safety gear on when welding on the frame. The Mustang chassis is galvanized and when welding dangerous fumes are released.
2. Weld the outer face and the bottom face using a 1" stitch weld (1" of weld, followed by a 1" gap).
  - We do not recommend welding the inside face of the panhard bar in the case that the chassis bracket needs to be removed as clearance is very tight for tools.
  - If desired, spray weld-thru primer on the frame rail and inner bracket to prevent corrosion.



*D.2 – Passenger's side of bracket, stitch welded to the frame rail*



*D.2 – Driver's side of bracket, stitch welded to the frame rail*

3. If desired, clean and paint the raw metal surface to prevent corrosion.

## E. PANHARD ROD INSTALLATION

1. Gather the panhard rod, 2 5/8" bolts, spacers, washers, & nuts.
2. Hand thread the left & right hand threaded rod ends all the way into the rod.
3. Place the panhard bar in the slot channel on the axle and chassis bracket.
4. Bolt the panhard bar into the chassis bracket using the longer 5/8" bolts and thicker spacers. Ensure there are washers on both outer faces of the chassis bracket.
  - Tighten nut until it hits the nylock.



*E.4 - Chassis bracket with panhard bar bolted in*

5. Adjust the length of the panhard rod by rotating the rod until the rod end lines up with the slot in the panhard rod axle bracket
6. Bolt in the axle bracket using the shorter 5/8" bolts and thinner spacers. Ensure there are washers on both outer faces of the axle bracket. a. Tighten nut until it hits the nylock.

#### F. PANHARD BAR ALIGNMENT & FINAL ASSEMBLY

1. Set the vehicle on the ground to set the final height of the panhard bar.
  - If you cannot adjust the panhard bar while the car is on the ground set jack stands under the axle and in front of the front sway bar.
2. Adjust the length of the panhard bar until it can move smoothly upward and downward and is level to the ground.
3. Set the bar in the middle of its range of adjustment.
4. Tighten the 5/8" bolts on the panhard bar chassis and axle bracket to 115 ft-lbs.
5. After 50 miles of driving re-torque your u-bolts and panhard bar.



*F – Reference photo of completed installation*



*F – Reference photo of completed installation*

## G. PANHARD BAR ADJUSTMENT

By adjusting the location of the panhard bar vertically you are changing the location of the vehicles roll center. By moving the panhard bar upward you are moving the roll center closer to the center of gravity. When you do this, it will make the car feel more free or loose. When you move the panhard bar downward then you are doing the opposite and allowing the car to grip up.

On some 65' model year Mustangs the rear end housing was manufactured slightly offset. In those cases, a slight amount of preload can be used to assist in centering the axle.



*F – Reference photo of completed installation*



*F – Reference photo of completed installation*