



## Panhard Bar

PART# 264-898

### Installation Instructions

## For: MGB with Tube Type Axle, Wire or Disc Wheel

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Please read and understand these installation instructions before beginning the installation.

**Warning: This Panhard bar may not fit your car! Please read the following and return the Panhard bar before attempting to install it if the following applies:**

#### Fuel tanks with vertical forward-facing walls and later (1976 onward) style parking brake cables:

- We have found some fuel tanks that are not compatible with this Panhard bar if the car is also equipped with a late style parking brake cable and mount on the rear axle. Look at your fuel tank from the side of the car. It may be easiest to see with a rear wheel removed.
- If the gas tank's forward-facing wall is perpendicular to the ground with the vehicle at ride height, and you have the late parking brake cable, the Panhard bar is not suitable for your car.
- The Panhard bar will come in contact with the fuel tank and/or the parking brake cable during suspension compression. There is simply not enough room in between a vertical front wall and late parking brake cable for the Panhard bar. See step 19 for more information.
- If the forward-facing wall of the fuel tank angles back as it gets closer to the ground, the Panhard bar is most likely compatible but may need to be shimmed and checked for clearance. This is covered in the following instructions.
- If you have a later parking brake cable, but a vertical forward wall tank, you will need to modify parking brake cable mount at the rear axle. See step 19.

#### Rearward Angled Fuel Tank:



#### Late Parking Brake Cable:



# Installation Instructions

Images may vary from actual product.

## Tools:

- Shop manual
- Jack + jack stands
- Wheel chocks
- Drill (motor)
- Drill bits: pilot bit  $\sim\frac{1}{8}$ " and "P" drill or  $\frac{1}{64}$ " (for  $\frac{5}{16}$ " bolt holes)
- Center punch
- Marking scribe
- Hammer
- Small round file  $\leq \frac{5}{16}$ "
- $\frac{5}{16}$ " Allen wrench
- Torque wrench
- 3 jaw puller (for rear hub)
- Impact wrench
- Wrenches and sockets:  $\frac{1}{2}$ ",  $\frac{9}{16}$ ",  $\frac{5}{8}$ ",  $\frac{3}{4}$ ", 1  $\frac{5}{16}$ " or large crescent wrench
- #2 Phillips screwdriver
- Paint or rust inhibitor for drilled holes in body
- Silicone gasket maker for drilled holes

## Installation Instructions

1. Chock the front wheels. Jack the rear of the car up and place jack stands under the body of the car, not the axle or leaf springs. You want the axle to be at full droop for more room to maneuver when drilling the holes in the trunk floor. Never work on a car supported only by a jack.
2. Remove both rear wheels.
3. Remove all contents from the trunk as you will be drilling up through it.
4. Remove the right rear drum.



Figure 4

5. Remove the right rear hub to give access to the brake backing plate fasteners. Consult your shop manual. This can be really stuck on after removing the large 1-5/16" axle nut. The hub sits on 2 taped washers. Knocking the hub with a hammer can help break the tapered connections.

We recommenced a high powered impact wrench to remove the nut. If no impact is available, a length of bar in between the studs and held in place by the ground is an alternative.

Pulling the hub may require a 3 jaw puller. Local auto part stores will sometimes rent them out.



Figure 5a



Figure 5b

6. Remove the two top bolts and bottom rear bolt holding the brake backing plate to the differential housing. Install the new longer  $\frac{5}{16}$ " bolts. Install the axle side bracket,  $\frac{3}{8}$ " lock washers and  $\frac{3}{8}$ " nuts. Tighten the hardware to 30-35 ft-lbs.



7. Install the hub and brake drum. Follow the procedure in the shop manual.
8. Remove the left rear axle limiting strap upper hardware.



9. Find the largest bracket (main bracket, body side) and the outside corner bracket pictured in figure 9. Use two  $\frac{5}{16}$ " bolts, flat washers, lock washers and nut to secure (finger tight only) the outside corner bracket to the large main bracket, through the two bottom holes.



## Installation Instructions

10. Use another  $\frac{5}{16}$ " bolt and nut through the top hole that is securing the corner and main bracket together. This bolt is only being installed temporarily to help align the two brackets. Now tighten the two nuts installed in the previous step to 18 ft-lbs. Once those are tight, remove the top temporary bolt + nut and set aside for later.



11. The main bracket/corner bracket assembly can now be used to template where the holes need to be drilled in the floor and back wall of the trunk. Hold the bracket firmly up against the body on the three sides of the trunk corner as you scribe around the inside of a few holes.
12. Drill a small pilot hole through the trunk floor. Once again hold the main/corner bracket up against the body and check that your pilot hole is centered in the hole with the bracket assembly hard up against the three sides of the trunk. Drill a new pilot hole if necessary. Once you are sure of the first hole's location, drill the hole out to final size ( $\frac{5}{16}$ "+). Install one  $\frac{5}{16}$ " bolt down through the trunk floor, and through the bracket assembly. Install a nut to hold the bracket up in place. This first bolt and nut are only going on temporarily so that you can use the bracket assembly as a drill guide.



13. With the bracket assembly being held in place with the first bolt, use a  $\frac{5}{16}$ " drill, make one hole on the forward-facing trunk wall and the left facing trunk wall. That way the bracket assembly can be held the body on three different planes which will firmly locate the bracket in its final place. If needed, remove the bracket assembly and file open the holes or use a slightly larger drill to open them up a bit.
14. Once you have the main bracket assembly held to the body with hardware on all three planes, go around and drill through the remainder of the holes, one at a time. It is recommended to install the hardware through each hole as you drill them out. See the figures below to also install the small backing plates in the trunk in their proper locations.

### Note:

- Paint the bare metal drilled holes.
- Also, it is possible that each of these drilled holes could let water from the outside into the trunk. It is recommended to use silicon gasket maker on each of the bolts when you go together for final assembly.
- Two of the holes must be drilled from inside the trunk. The rearward hole on the left trunk wall will be obvious as you can use the bracket as a guide. Drill a small pilot hole first and check it from the outside.
- The hole closest to the corner of the trunk on the front wall is the most difficult. Chuck a small pilot bit into the drill so only  $\frac{1}{2}$ " is sticking out of the drill to keep it short. From the outside and underneath the car, center punch and drill the small pilot through the main/corner brackets assembly hole. It may be difficult to hold the drill perpendicular to the surface, but just get the pilot hole drilled and then open it up to size from the inside of the trunk.
- Use an extra flat washer on the two left wall and forward corner under the lock washer on

the outside, as well as under the head of the bolts. Those holes in the brackets are a bit larger so require flat washer under the lock washers. The rest of the holes only require a lock washer up against the main bracket.



**Figure 14a**



**Figure 14b**



**Figure 14c**

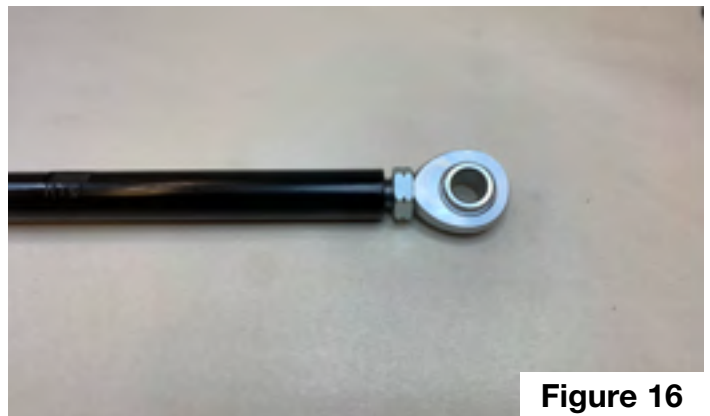


**Figure 14d**



**Figure 14e**

15. Install the previously removed left side axle limiting strap.
16. Install a nut onto each of the rod ends. Note one rod end and nut are left hand threads and the other is right hand threads. So, if there is trouble getting a nut on, try the other 1/2" nut. Thread each of the rod end/nut assemblies into the bar. Again, you may need to swap end and spin the rod end the opposite direction to get it installed. This is done so that once the bar is on the car, it can be adjusted while still being bolted to both brackets. Loosen the lock nuts and turn the bar to lengthen or shorten it.



**Figure 16**

## Installation Instructions

17. Install the Panhard bar on the axle side bracket. Make sure the bar is sitting over the exhaust on the left side of the car so that it can be installed on the main body bracket later. The misalignment spacers should sandwich the rod end as pictured. Tighten the hardware using a  $\frac{5}{16}$ " Allen wrench and  $\frac{3}{4}$ " combination wrench or socket. Torque spec is 80 ft-lbs. Note: never use shims on this side of the Panhard bar. Only install the hardware in this step as pictured. The bar will come very close to the body of the car and shimming it with any additional washers could cause contact with the suspension at full bump. You will notice there is only one hole in the axle mount bracket for the same reason. Moving the bar up would cause contact with the body.



Figure 17a



Figure 17b

18. The Panhard bar now needs to be installed temporarily on the main body side bracket. Adjust the length of the pan hard bar by holding the body bracket side Heim joint in on by hand and twisting the bar with the other. This will ensure roughly the same amount of threads will be exposed on each Heim joint. If it is difficult, stick a screwdriver through the free Heim joint and turn the bar using an open end  $\frac{1}{16}$ " wrench. Once the length is correct, install the bolt into the Heim joint, then the misalignment spacer and finally the bottom hole of the main bracket. Loosely install the nut. There should only be one misalignment spacer on this side of the bar and it should be in between the Heim joint and the main bracket.

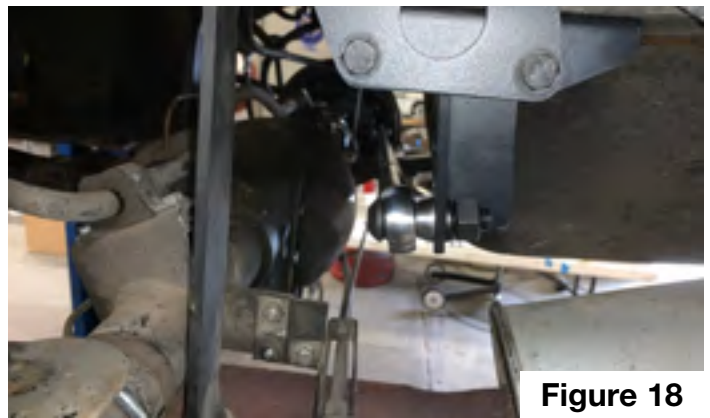


Figure 18

19. With the Panhard bar temporarily installed on the main body mount bracket, check for clearance on the fuel tank side and the axle side of the bar:
- If the front side of your gas tank is perpendicular with the ground, you may need to put spacers (washers) in between the misalignment spacer and the main body mount bracket. This will space the bar away from the fuel tank. Use the minimal number of spacers to achieve clearance.
  - The second place is the axle side of the Panhard bar. Generally, the closest thing will be the parking brake cable, where it splits into two cable near the left rear wheel. You may need to bend some of the parking brake cable brackets a little. On later style parking brake setups, the cable is mounted to the axle via a rubber mount. The rubber mount should be cut back toward the axle and a new hole drilled in so that the parking brake cable mounts closer to the axle. Figure 18 shows a 1979 with the rubber mount modified to pull the cable closer to the axle.
  - Make sure the differential housing clears the Panhard bar at the ring gear bulge also. This will generally not be a problem unless you have spaced the Panhard bar too far away from the fuel tank.
  - If the fuel filter is directly above the Panhard bar, make sure that no aftermarket fuel filter has been added to the fuel line that may be impacted by the Panhard bar. . When the right wheel and leaf spring are at full compression (bump), the Panhard bar is designed so that it takes advantage of the area in between the trunk and the limiting strap upper mount. Therefore a fuel filter should not be in this area. If your car just has a fuel line, generally it will not be a problem, but you should inspect this area after the first test drive and periodically after. Reroute the fuel lines using gasoline compatible rubber hose if appropriate.
  - The Panhard bar gets closer to the axle and fuel tank as the suspension cycles upward. It is best to check this before driving. It is possible but it is a little difficult. Install the right rear tire and torque the lug nut to factory spec. Jack the car up, remove the

jack stands from under the body and place one of the jack stands under the left rear of the axle tube. Make sure at least one front wheel is chocked on both sides and the parking brake is set so that the car cannot roll when lowered. Slowly lower the car so that the rear of the car is supported by the right rear wheel and a jack stand under the left side of the axle. This will allow you to see what is going on with the car at ride height. Do not get under the car or put yourself in a position where the vehicle could fall on you. Check for Panhard bar clearance. Put ballast, (sandbags, or heavy items) in the trunk of the car close to the left rear corner to compress the suspension on the left side. Have a helper bounce the car while you watch for clearance if possible.

- Using a straight edge, position it perpendicular to the ground and up against the parking brake cable where it is closest to the bar. You are looking for clearance at the pan hard bar. In the figure below, the straight edge is about .080" thick and there is still a gap in between the bolt head and straight edge. which is acceptable.



**Figure 19**

Tighten the heim joint jam nuts against the panhard bar using a  $\frac{3}{4}$ " wrench on the nuts and a  $\frac{1}{16}$ " wrench to hold the bar. Tighten one jam nut, then use the  $\frac{1}{16}$ " wrench to twist the bar as needed so that both heim joints are centered in their rotational travel, and then tighten the other heim joint while holding the bar in place. This will allow the bar to move freely and not bind during suspension travel.

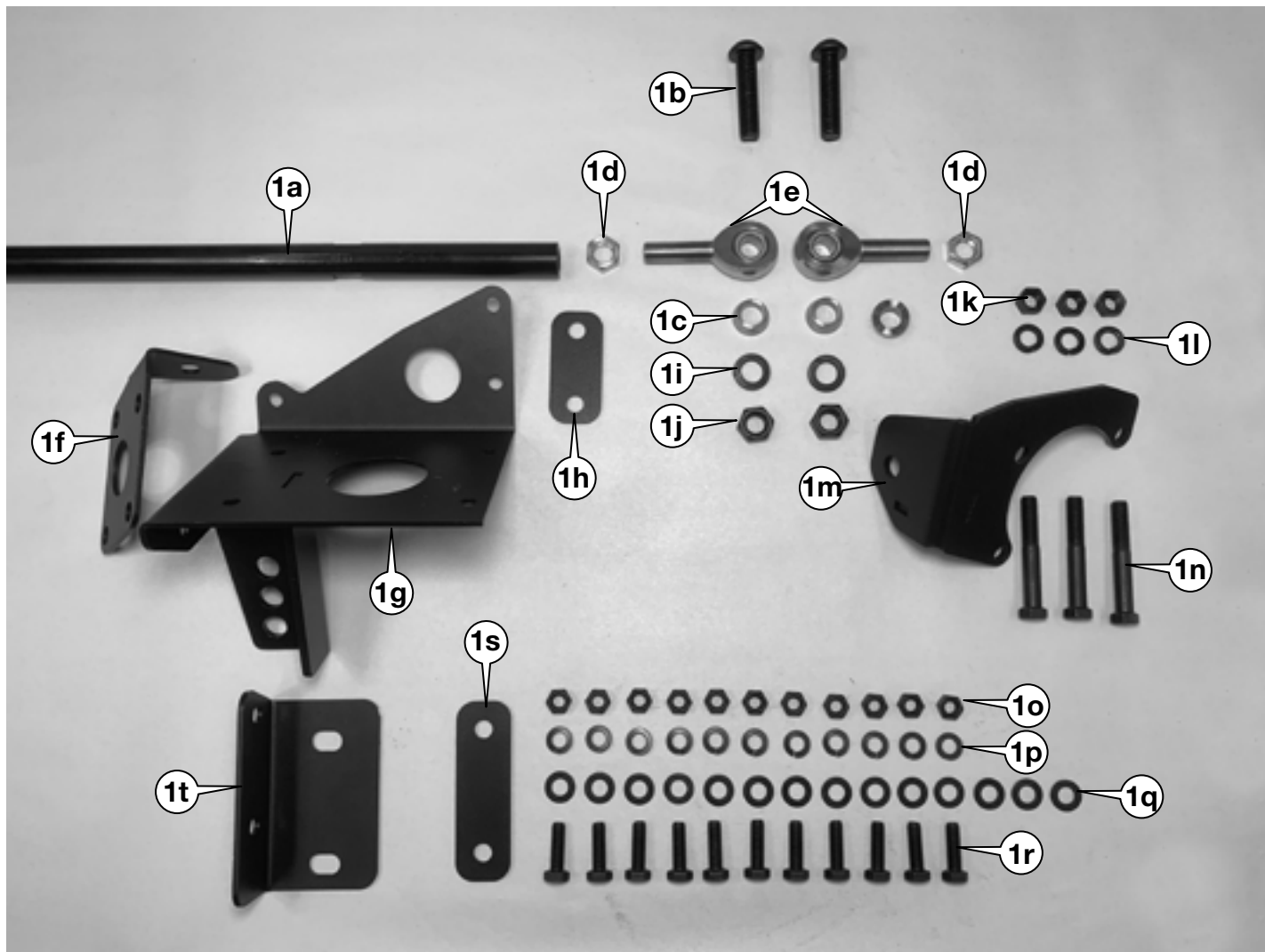


**Figure 21**

20. Once you are satisfied the Panhard bar will not contact any part of the car while cycling throughout the suspension travel, it is time to set the length and position of the Panhard bar. Ideally, the Panhard bar should be level with the ground at right height. There are three holes on the man body side bracket. Install the bar in whichever hole gets the bar closest to level at ride height. For most vehicles, this will be the bottom hole. For lowered vehicles one of the two upper holes maybe more suitable.
21. The following procedure should be done with all four wheels on the car and torqued to spec. and on the ground supporting the full weight of the car. This way there is no chance the car can fall on you. Once the correct position has been identified (pervious step), adjust the bar length so that the bolt can be installed through the Heim joint and bracket easily. Hold the free end heim joint and twist the bar while holding the heim stationary. This ensures equal threads on each side of the bar will be engaged with the heim joints. Make sure to install the lock washer and tighten the bolt to final torque 80 ft-lbs.

22. Double check all the fasteners. If you had to modify the parking brake brackets or mounts, you may need to readjust the parking brake cable to make sure it is not dragging. Take a low speed test drive preferably on a bumpy road or parking lot with speed bumps. Inspect the Panhard bar, parking brake cable, fuel tank and lines for any contact or damage. Shim the Panhard bar on the left side (body mount side) only if necessary. Make appropriate modifications to parking brake cable as necessary. Recheck the Panhard bar fasteners.
23. This concludes the installation instructions. Enjoy the Panhard Bar!

# Installation Instructions



Ref	Description	QTY
1a	Panhard Bar	1
1b	Bolt, Button Head, 1/2-20 x 2-1/4"	2
1c	Misalignment Spacer	3
1d	Jam nut, 1/2-20 (LH & RH)	1 each
1e	Rod-end (LH & RH)	1 each
1f	Outside Corner Bracket	1
1g	Main Body Bracket	1
1h	Trunk Wall Backing plate	1
1i	Lock washer, 1/2"	2
1j	Nut, 1/2-20	2
1k	Nut, 3/8-24	3

Ref	Description	QTY
1l	Lock washer, 3/8"	3
1m	Axle Bracket	1
1n	Bolt, 3/8-24 x 2-1/4"	3
1o	Nut, 5/16-24	11
1p	Lock washer, 5/16"	11
1q	Flat washer, 5/16"	14
1r	Bolt, 5/16-24 x 1"	11
1s	Trunk Floor Backing Plate	1
1t	Inside Corner Bracket	1
1w	Flat washer, 1/2" <b>(Not pictured)</b>	6

**Designed and Distributed by Moss Motors, Ltd.**

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