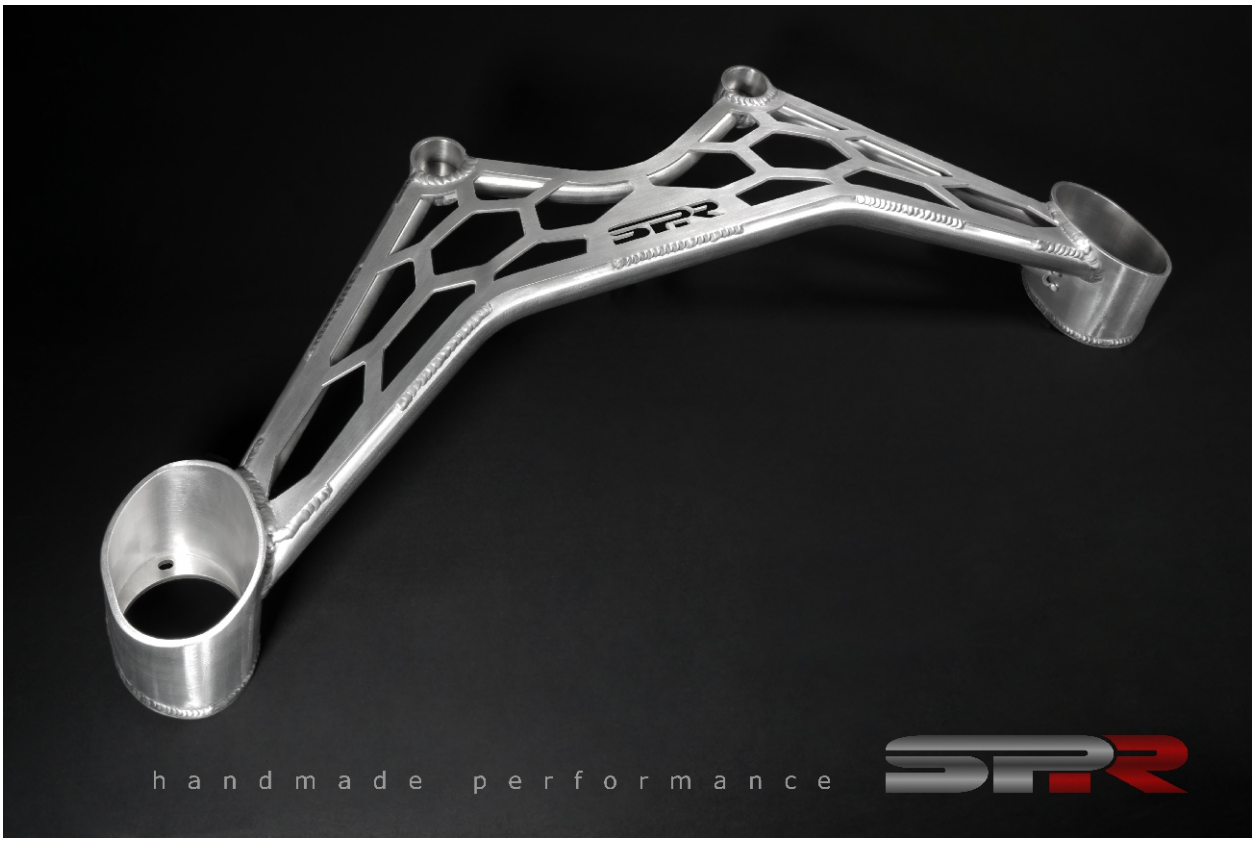
Installation guide for strut bar Mazda MX-5 NB



Steps for installation:

The installation requires some technical understanding of the vehicle and craftsmanship.

If you have never worked on a vehicle or not confident in the installation, have your strut bar installed in a professional workshop. We also offer installation services.

Read the installation instructions carefully and proceed diligently during installation.

This guide assumes a stock engine bay.

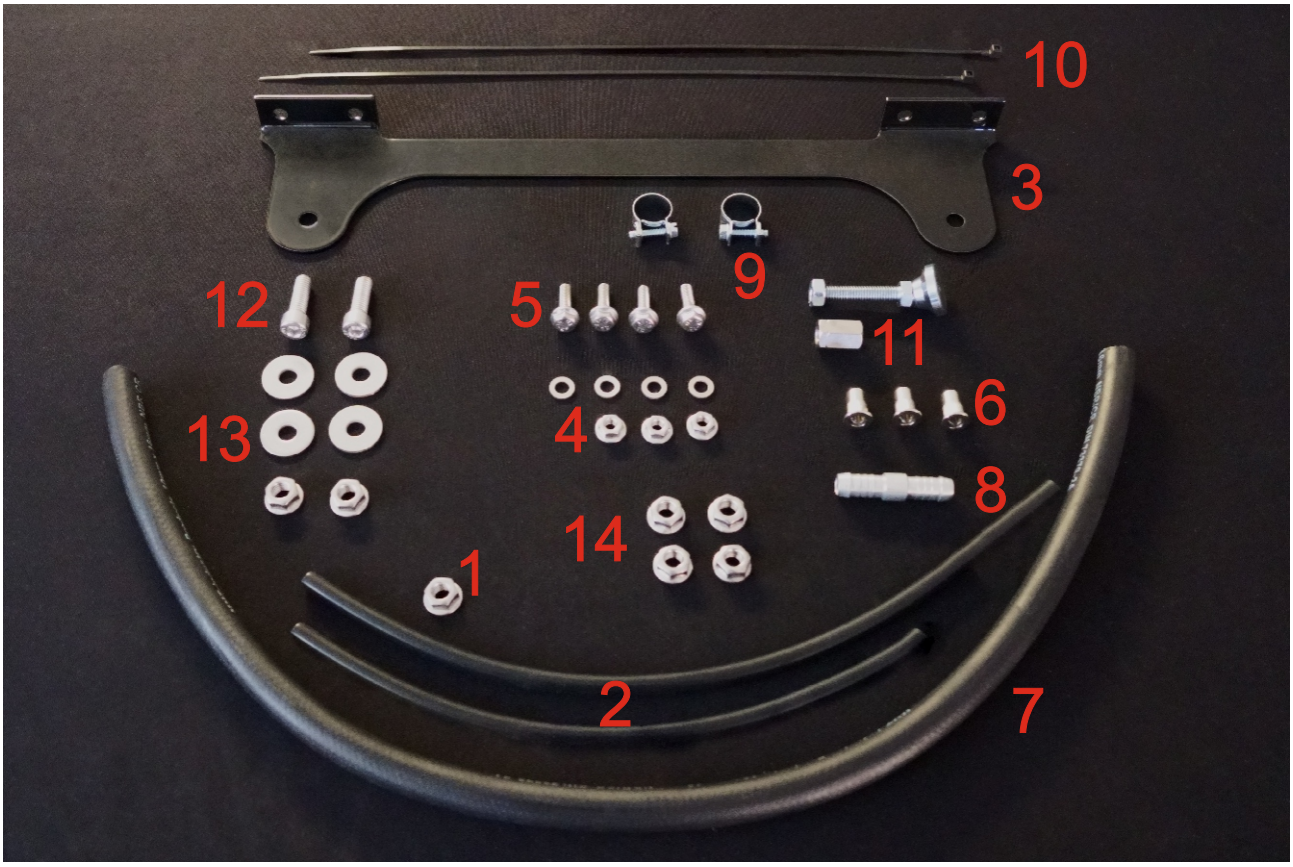
If modifications have already been made to your engine bay it is possible that some steps can be skipped. It may also occur that components are in the way that are not addressed in this manual. In such cases, further adjustments or relocation of components may be necessary to create space for the strut brace.

Additionally, there are different washer fluid reservoirs depending on the model year. Depending on the washer fluid reservoir installed in your vehicle, it may need to be replaced.

We recommend using the washer fluid reservoir from the Suzuki Cappuccino. This will be mounted behind the bulkhead below the windshield wipers.

Suzuki part number Cappuccino Tank: 38450-80F00

Component Overview MX-5 NB



No.	Component	Required in Section ...
1	M6 Nut	2.1
2	25 cm + 35 cm vacuum hose 5 mm	2.1
3	Stainless steel support plate	3.4
4	3 x M6 nuts + 4 x washers for support plate	3.4
5	4 x M6 screws for support plate	3.4
6	3 x alternative M6 rivet nuts for support plate	3.3
7	Vacuum hose 10 mm	4.1
8	Vacuum hose connector	4.1
9	2 x clamps for vacuum hose	4.1
10	cable ties	4.2
11	Articulated foot & long locknut (BMC stopper)	5.1
12	2 x M8 hex screws for rear mounting	5.2
13	2 x nuts, 4 x washers M8 for rear mounting	5.2
14	4 x nuts, for mounting on strut	5.2

SPR HANDMADE PERFORMANCE

1. Required Tools

Required tools and materials:

- Ratchet with extension (3/8-inch or 1/4-inch, do not use a 3/4-inch ratchet!)
- Appropriate sockets: 7 mm, 10 mm, 13 mm
- Open-end wrenches: 10 mm, 12 mm, 13 mm
- 6 mm hex key
- Side cutters
- Combination pliers or similar
- Drill or cordless screwdriver
- 6.5 mm or 9 mm drill bit (depending on the chosen option: nuts or threaded inserts)
- Felt-tip pen or other marking tool
- Optional: Rivet nut tool (for the supplied threaded inserts)
- Corrosion protection (e.g., paint or body sealant)

2. Preparations

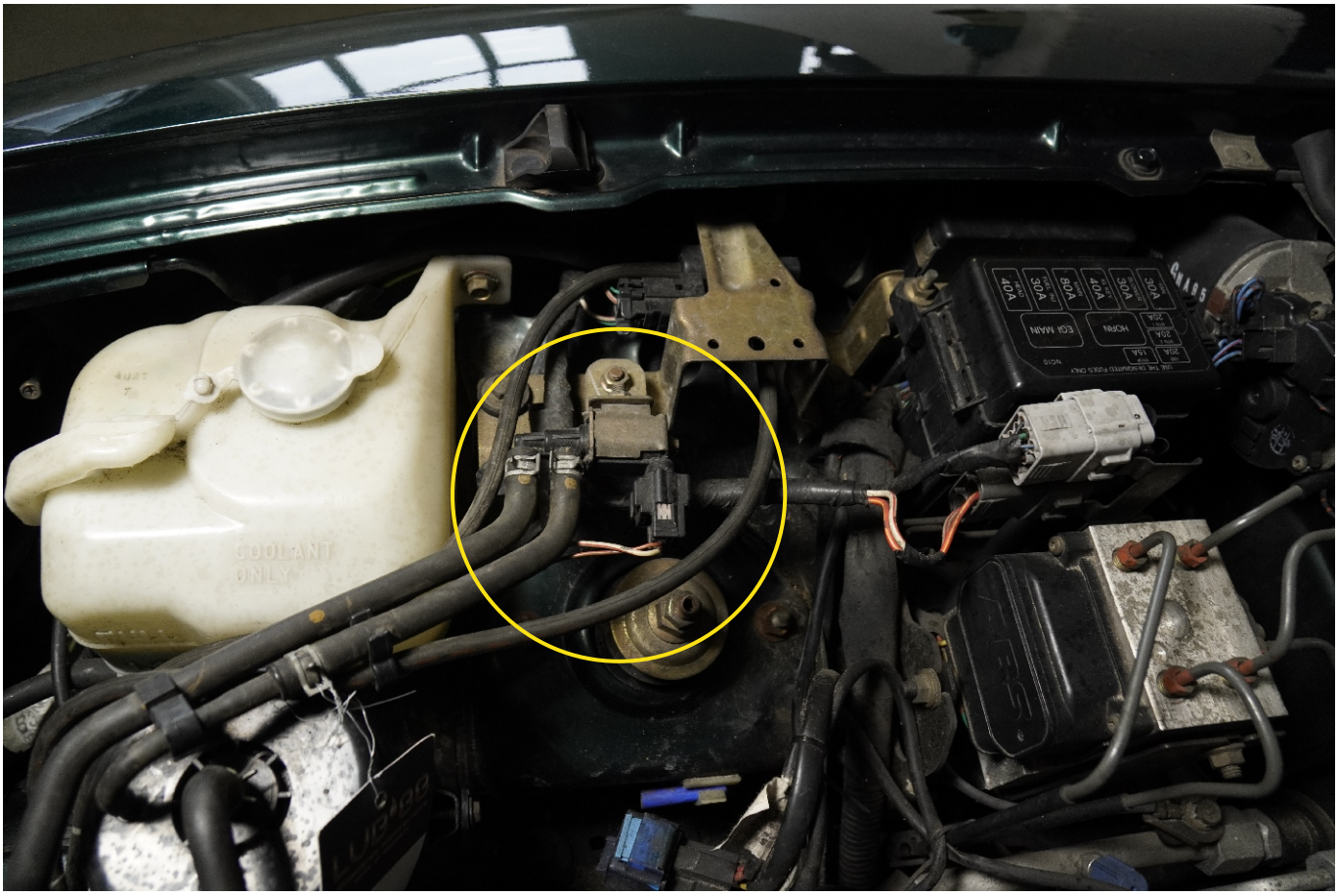
2.1. Relocating the solenoid valve

Steps to relocate the solenoid valve:

1. Identify the original position of the solenoid valve:

The solenoid valve is located on the strut tower on the passenger side.

It must be relocated to generate space for the strut bar.

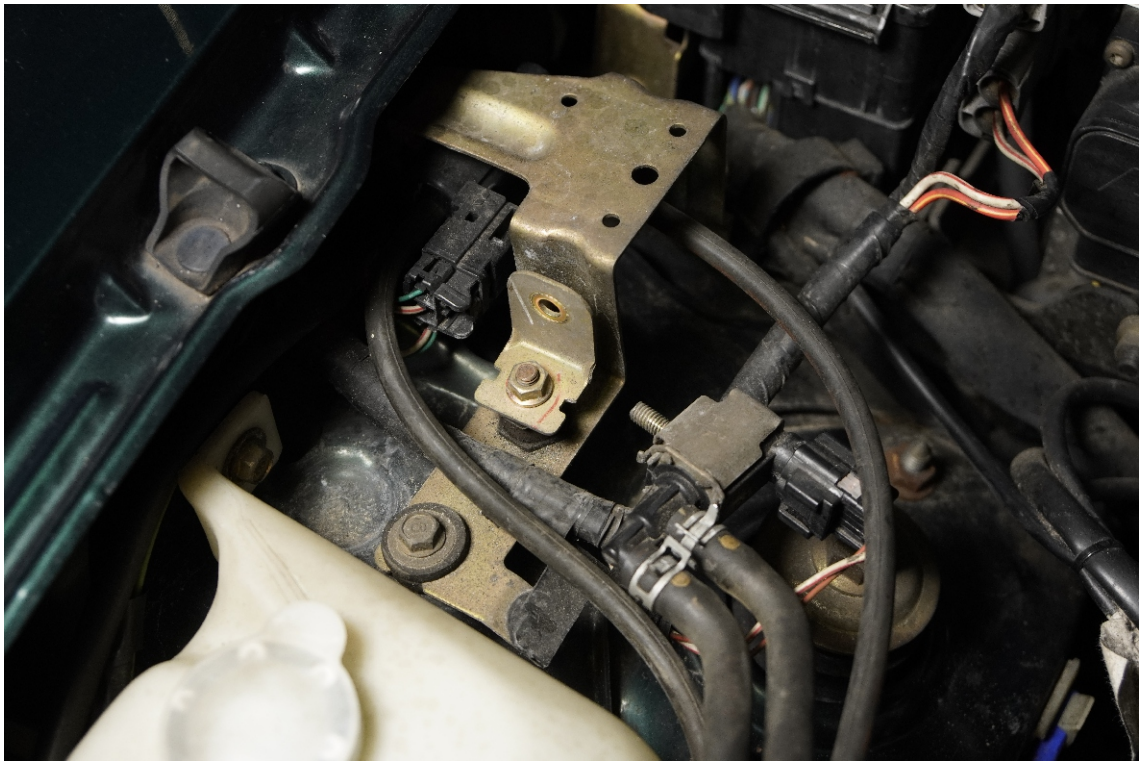


2. Unscrewing the solenoid valve

- Unscrew the solenoid valve from the silent bushing.

3. Relocating the bracket:

- Unscrew the bracket from the solenoid valve.
- Attach it to the silent bushing using the side that was previously fixed to the solenoid valve, and rotate the bracket by 90 degrees as shown in the image.



4. Attach the nut as a spacer:

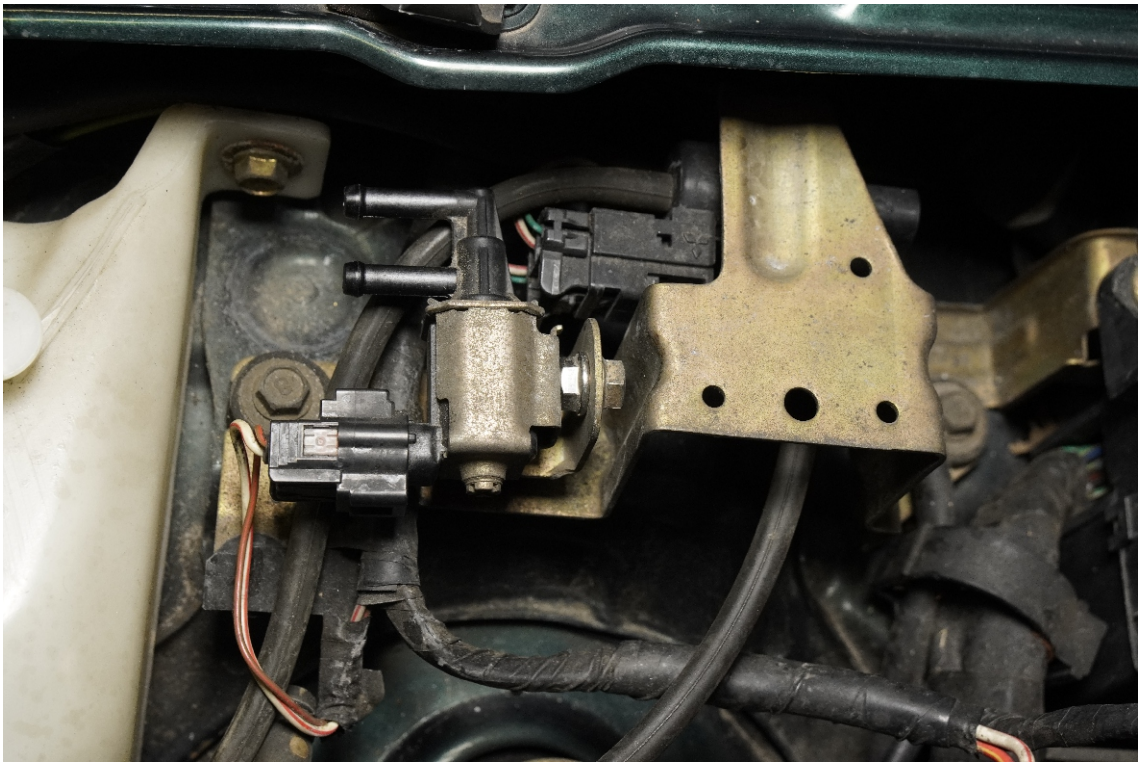
- Screw the supplied M6 nut onto the solenoid valve as shown in the image.

5. Removing the vacuum lines:

- Now disconnect the two vacuum lines from the solenoid valve.

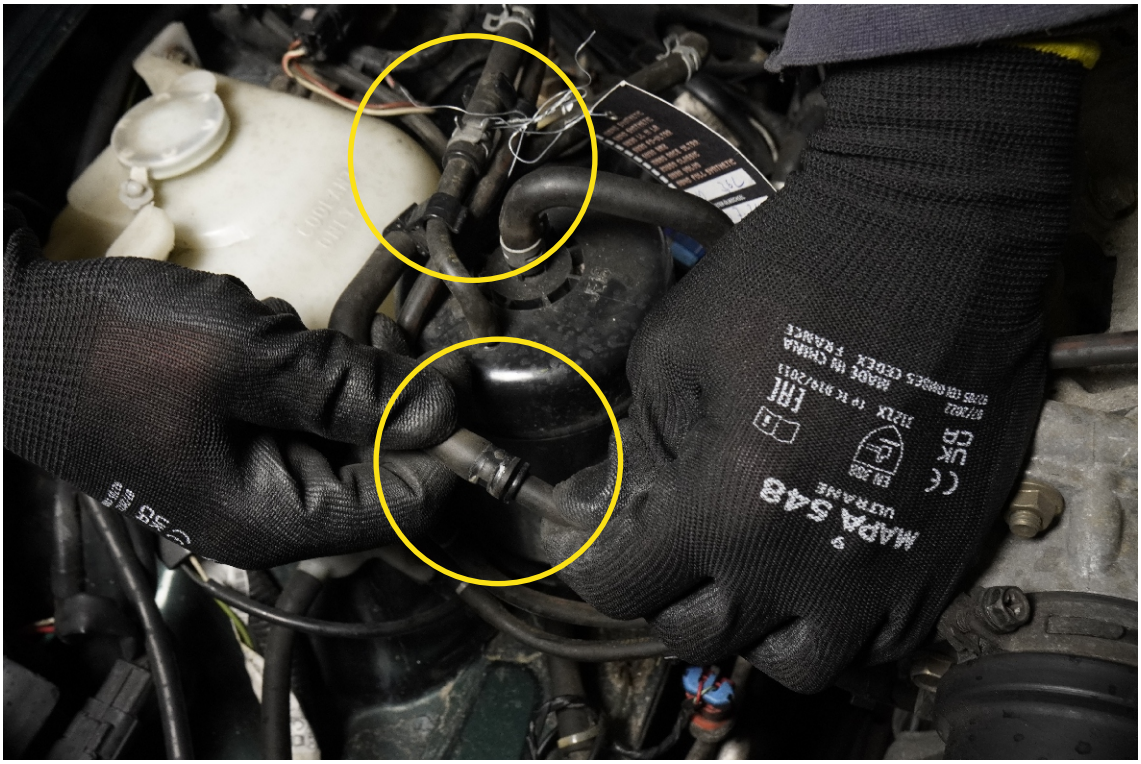
6. Installing the solenoid valve:

- Now fasten the solenoid valve to the bracket using the original nut, as shown in the image.



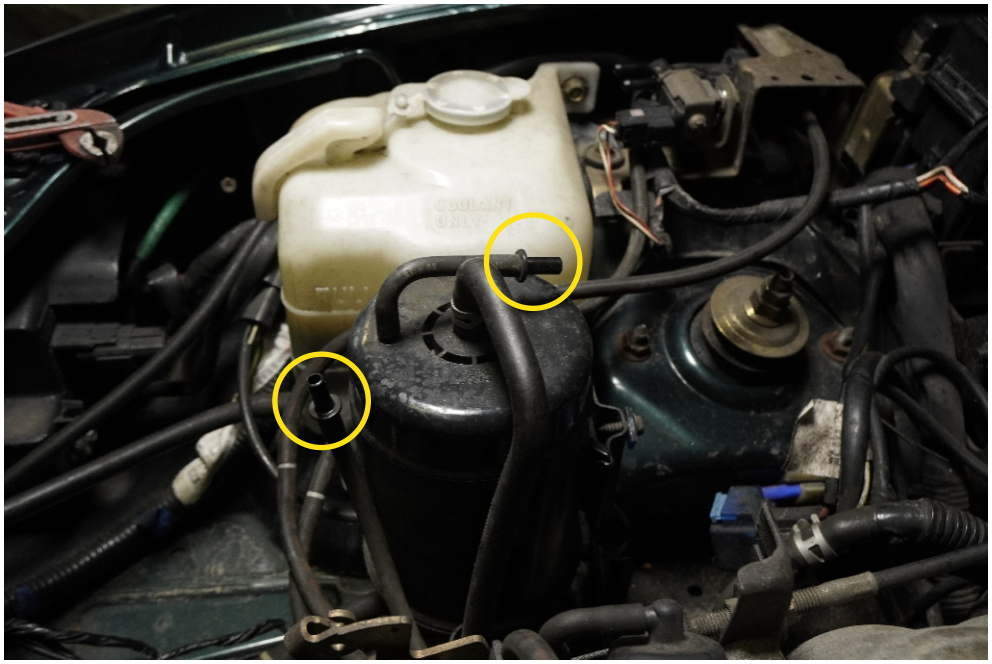
7. Removing the two original hoses:

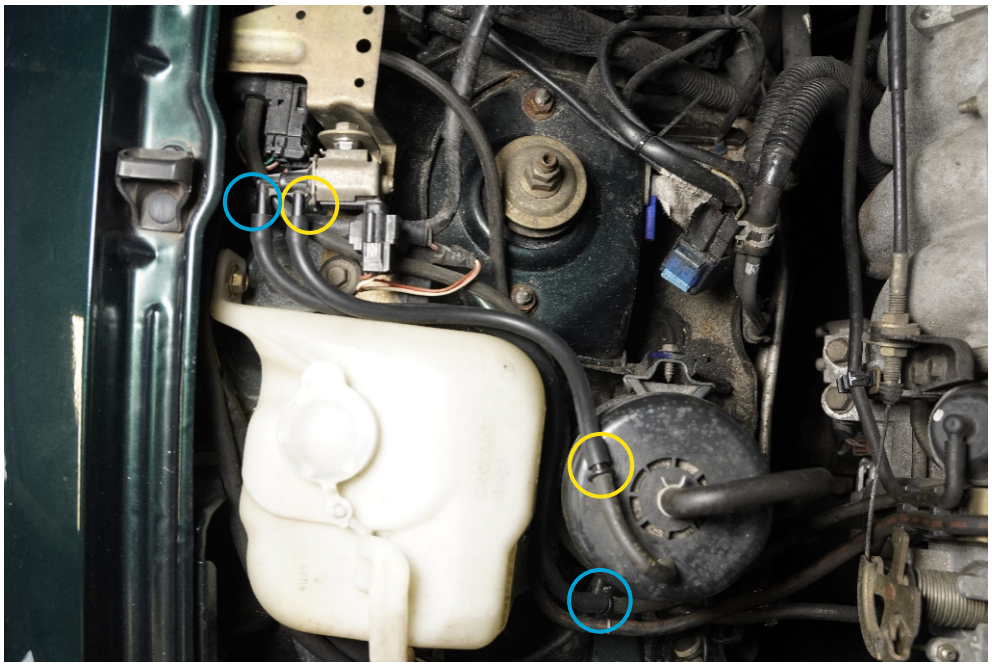
- Disconnect the original hoses from the hose connectors.



8. Installing the new hoses:

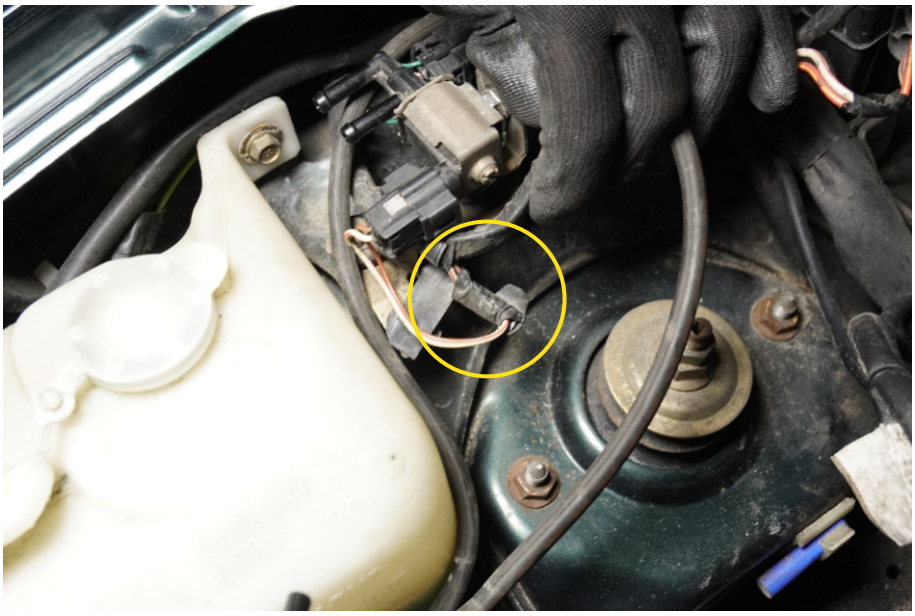
- Now install the two new 5 mm silicone hoses (25 cm & 35 cm) from the solenoid valve to the charcoal canister, as shown in the images.





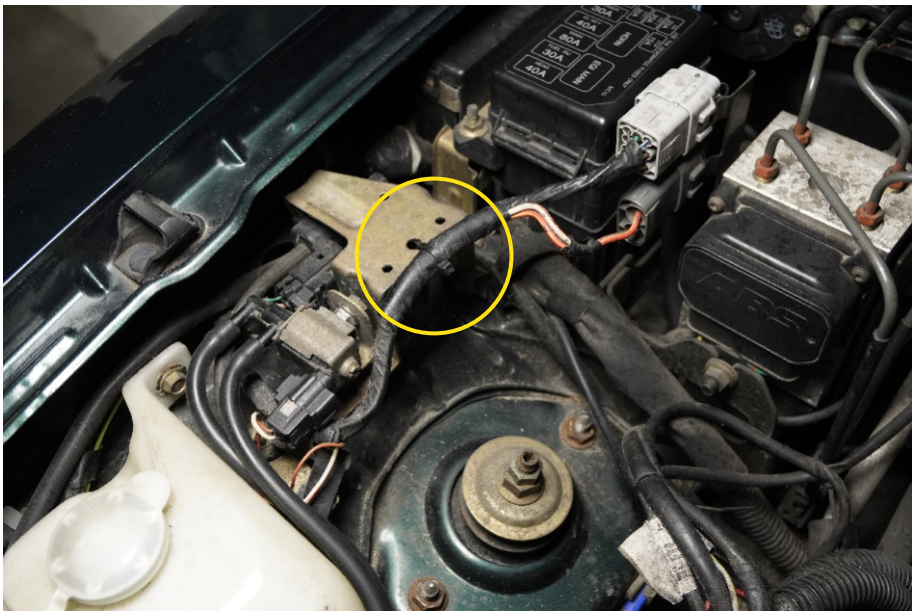
9. Routing the electrical wire from the solenoid valve

- Remove the insulating tape from the wire and the bracket.



- Cut off the protruding part of the bracket. Alternatively, it can be bent downward.

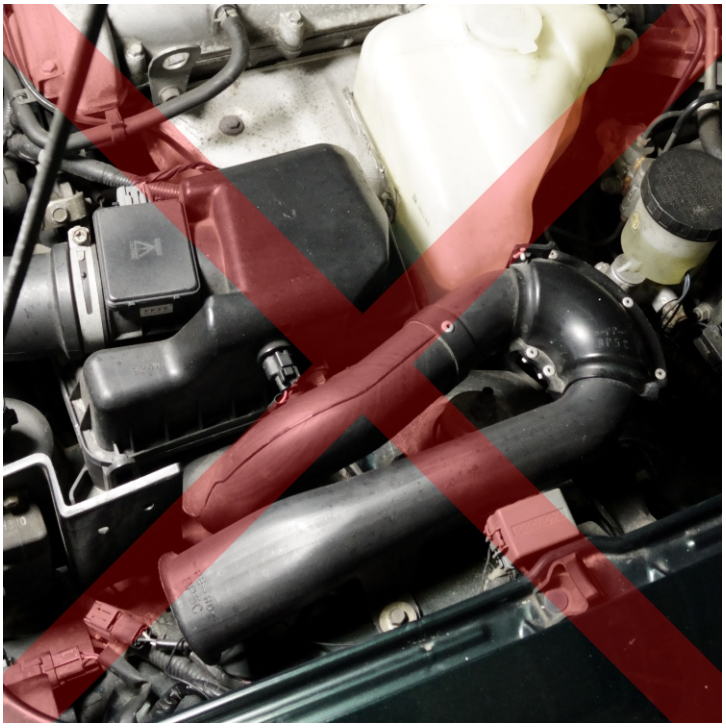
- Now you can secure the wire to the bracket using the supplied cable tie.



2.2. If necessary, relocate / adjust the intake hose

There are different intake pipes for the MX-5 NB.
Here you can find examples of which intake pipes need to be replaced, modified, or adjusted when installing our strut bar.
If you don’t want to deal with this issue, get a different intake pipe, or modify your current one,we offer a solution that can be optionally ordered from our shop.

These two variants need to be modified or replaced:

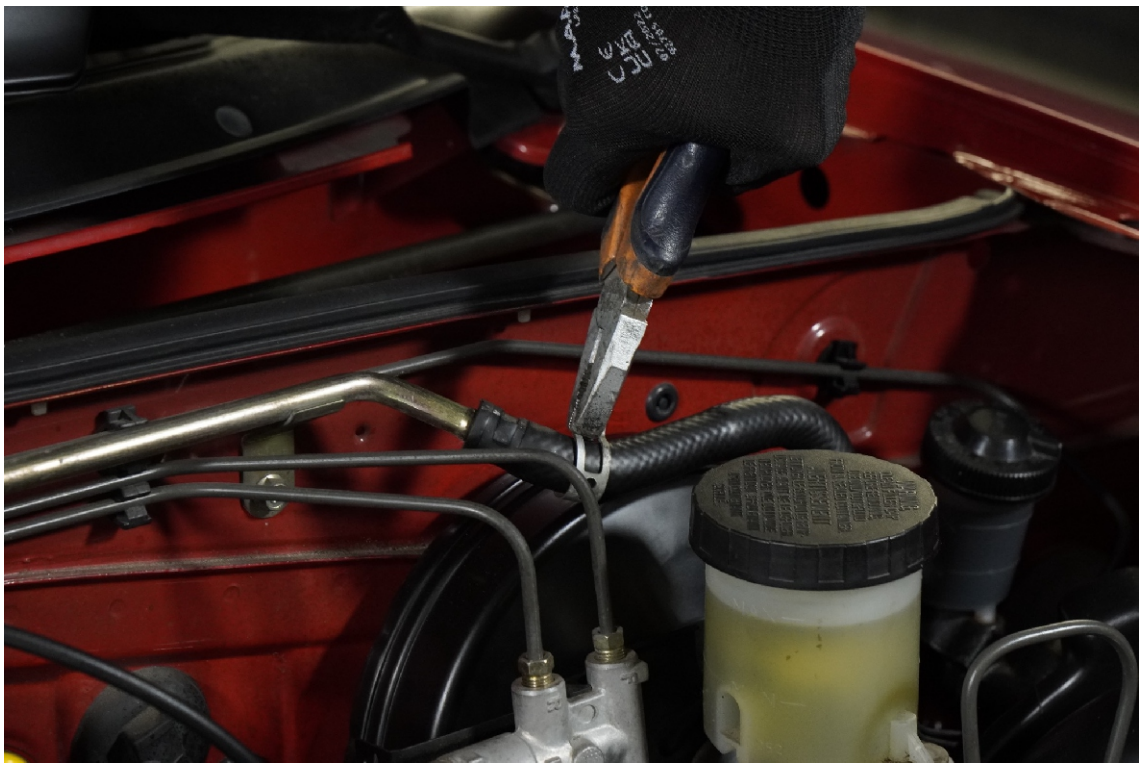


This variant can remain unchanged:

2.3. Disassembly of the vacuum line

1. Disconnect the hose from the vacuum line at the firewall:

Loosen the clamp at the connection of the vacuum line, which is mounted on the firewall. Carefully pull the hose off this line. The hose remains attached to the brake booster.

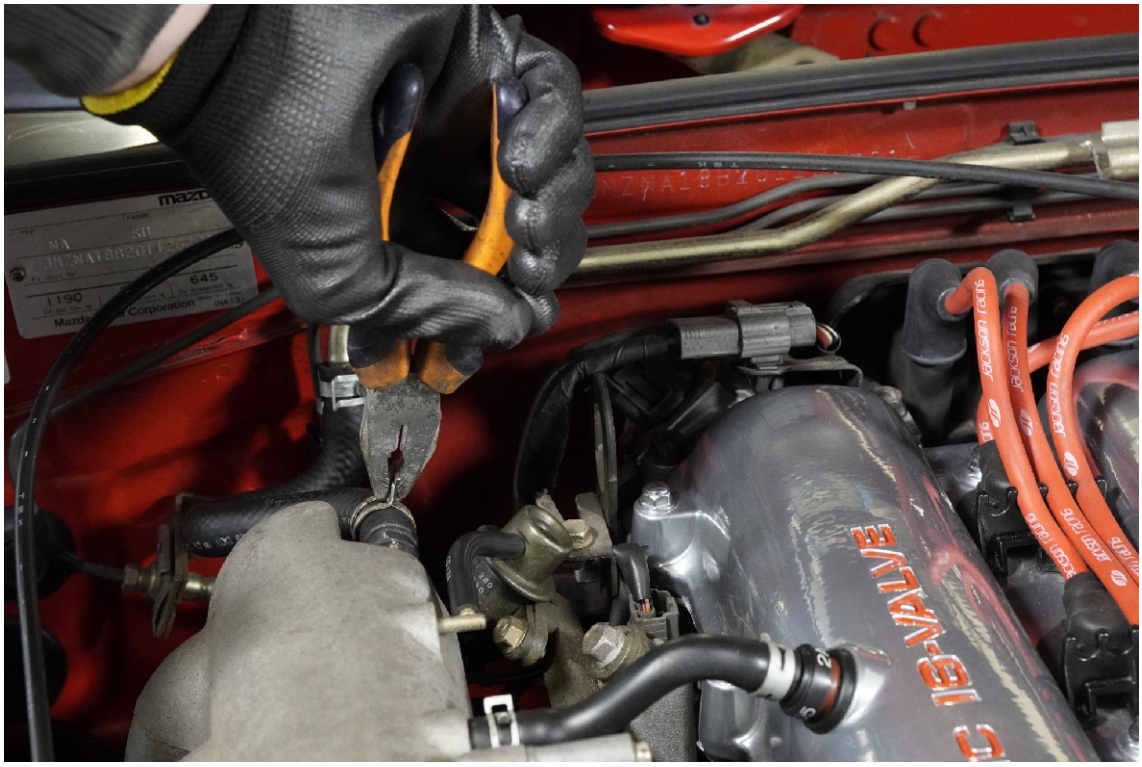


2. Disconnect the throttle cable:

Remove the throttle cable from its bracket. The throttle cable remains in its position and will later be attached to the support plate.

3. Disconnect the hose from the intake manifold:

Loosen the clamp at the connection to the intake manifold and remove the hose. The hose remains attached to the line to the firewall.



4. Unscrew the vacuum line at the firewall:

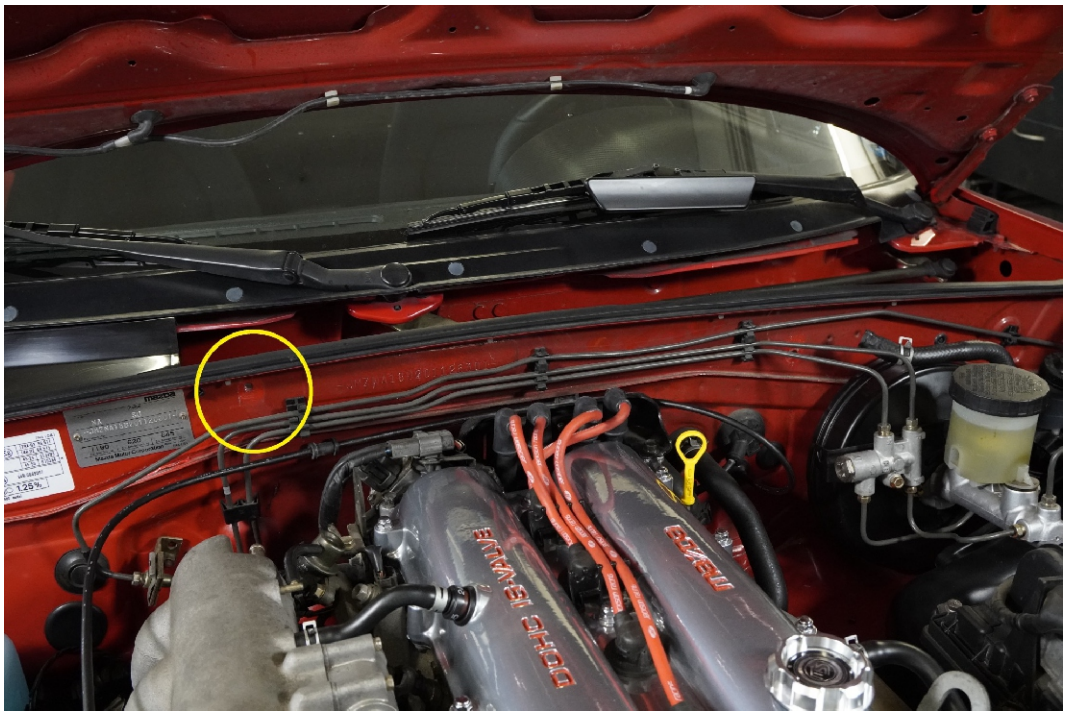
Remove the screws that secure the vacuum line to the firewall and fully remove the line.

3. Mounting the support plate to the firewall

3.1. Marking the drill holes for the support plate

1. Positioning the support plate:

Hold the support plate to the firewall. Align it so that the existing thread matches the appropriate mounting point of the support plate.



2. Attach the support plate with a screw in the existing thread. Tighten the screw only hand-tight so that the plate can still be aligned.

3. Mark the drill holes:

Mark the positions of the additional mounting holes through the cutouts of the support plate with a felt-tip pen.

3.2. Decision: Nuts or Rivet Nuts

When mounting the support plate, you can choose between using bolts, washers, and nuts or rivet nuts. Both options provide a reliable attachment:

Bolts, washers, and nuts: This option is simple and does not require any additional special tools. It provides an equally strong connection as the rivet nuts.

Rivet nuts: Instead of nuts, you can use rivet nuts (supplied). These nuts are inserted into the drilled holes using a rivet nut tool, and the support plate is then screwed directly onto the nuts with the supplied bolts and washers.

Technically, both options provide the same fastening strength. The difference is that when using rivet nuts, no nuts are visible. This method ensures a cleaner and more aesthetically pleasing appearance, as well as a permanent connection of the threads to the body. If you do not have a rivet nut tool, a professional workshop can also set the nuts for you.

3.3. Drilling Additional Holes

1. Choosing the drill size:

Use a **6.5 mm** drill bit if bolts and **nuts** are being used.

Use a **9 mm** drill bit if **rivet nuts** are being installed.

2. Drilling the holes:

Drill the marked holes through the firewall.

3. Installing rivet nuts (if chosen):

Insert the supplied rivet nuts into the drilled holes using a rivet nut.

Tip: Seal the drilled holes with corrosion protection, e.g., car paint.
For rivet nuts, you can also use body sealant.

3.4 Mounting the support plate

1. Attach the support plate to the existing thread:
Reposition the support plate on the firewall and align it precisely.
Srew the support plate into place using the previously used screw and a washer, hand-tighteningit into the existing thread.

2. Install additional screws:
Use the drilled holes to attach the support plate either with bolts and nuts or to the rivet nuts.

Screws and nuts:
Order: Screw-> Washer -> Support plate -> Firewall -> Nut

On the back, secure the screws with nuts.

Rivet nuts:

Order: Bolt -> Washer -> Support plate -> Firewall

3. Tighten screws:

Tighten all screws evenly and with appropriate torque. Make sure the support plate is mounted without stress.

4. Attaching the vacuum line and throttle cable

4.1 Laying the vacuum line

1. Preparation of the hose:

Attach the supplied hose adapter with the supplied hose clamp to the supplied new vacuum hose.

2. Connection to the existing hose of the brake booster:

Attach the prepared vacuum hose with the adapter to the already existing hose connected to the brake booster. Use the existing clamp to secure the connection.

3. Connection to the intake manifold:

Connect the other end of the new hose to the intake manifold. Use the supplied new clamp for this purpose.

4. Final inspection:

Ensure that all connections are secure and properly sealed.

4.2 Attaching the throttle cable and vacuum line to the support plate

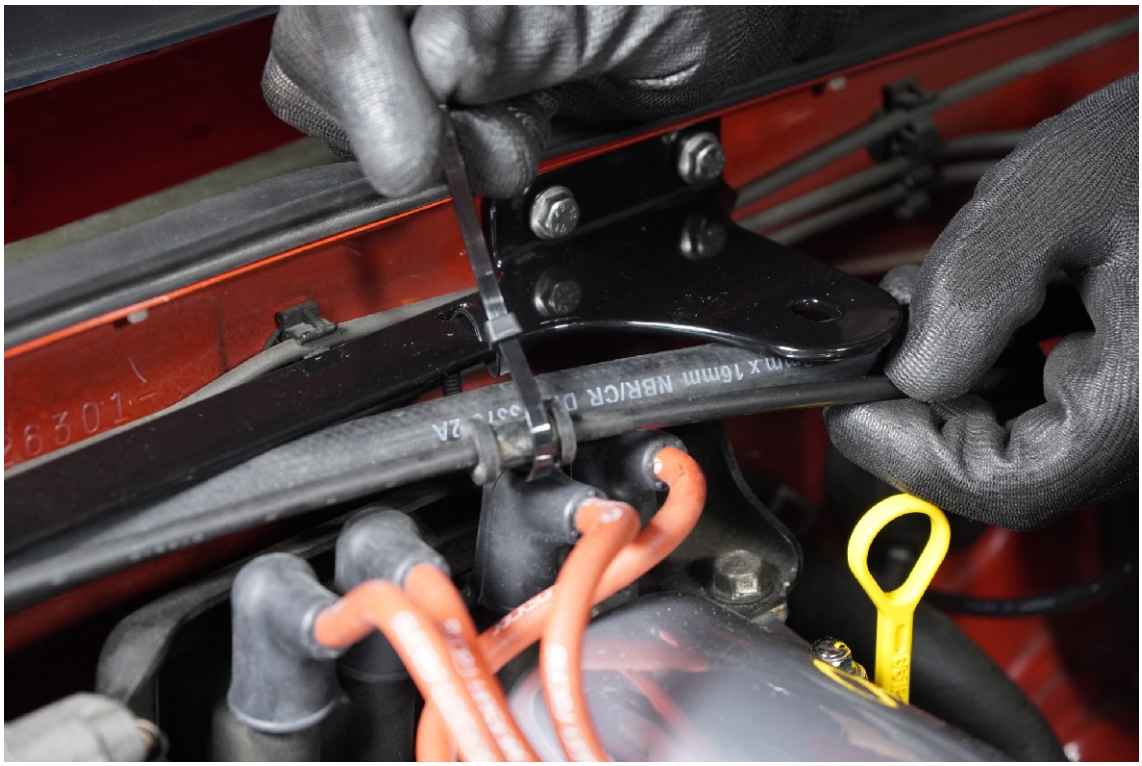
1. Thread the cable ties through the slots:

Thread the supplied cable ties through the designated slots in the stainless steel support plate.

2. Secure the throttle cable and vacuum line:

Attach the throttle cable and vacuum line together to the support plate using the two cable ties.

Die The cable ties are attached where the throttle cable was previously secured in the brackets. Ensure that both lines are securely fastened and that no tension is applied.



3. Final inspection:

Check that the throttle cable and vacuum line are securely fastened and without tension.

5. Mounting the strut bar

5.1. For selected brake master cylinder support: Screwing in the ball joint

Note for customers without the BMC stopper option:
If you have not selected the brake master cylinder support option, you can skip this section. The strut bar is mounted directly.

1. Select locknut

There are different brake booster thicknesses that affect the distance between the strut bar and the brake master cylinder.

Decision guide:

- Long nut: Use the long nut if the distance is large.
- Regular nut: Use the regular locknut if the distance is small.

Tip:

Temporarily position the strut bar over the domes and hold the ball joint in ist designated position on the brake master cylinder. This allows you to immediately determine the required distance

2. Screw in the ball joint:

Screw the ball joint completely into the thread of the brake master cylinder support using the selected locknut before mounting the strut bar.

Important:

The ball joint must be mounted now, as it will no longer be accessible after the strut bar is installed.

5.2 Strut bar assembly

1. Important warning: Do not use a 3/4-inch ratchet!

Do not use a 3/4-inch ratchet to tighten the nuts on the domes.

Reason: The socket of a 3/4-inch ratchet is too large and will rub against the strut bar. This can damage the surface, especially on powder-coated bars.

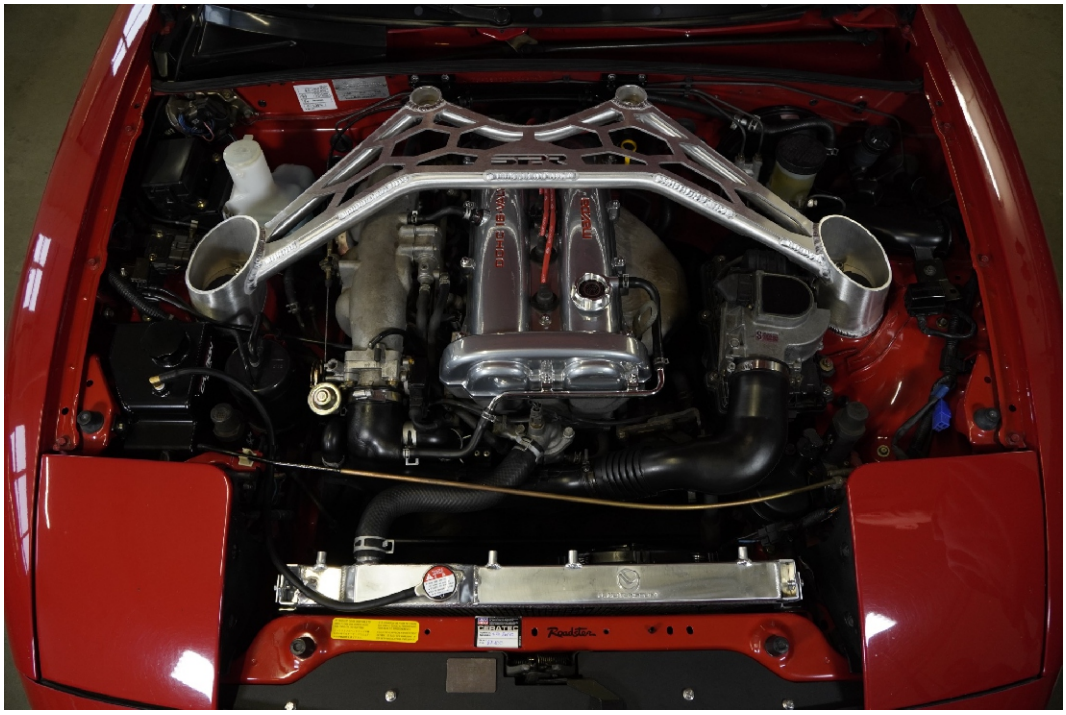
2. Correct tool choice: Use a 3/8-inch or 1/4-inch ratchet:

Instead, use a 3/8-inch or 1/4-inch ratchet. These have smaller sockets that fit easily into the recesses of the bar without damaging the surface.

3. Position the strut bar:

Place the strut bar in its designated position over the domes and the rear mounting points on the support plate.

Tip: If necessary, use a jack to slightly relieve the front axle, allowing the strut bar to better fit onto the mounting points.
In most cases, it should fit without a jack.



4. Attach the front mounting points to the domes:

Attach the strut bar to the existing studs on the domes using the supplied nuts.

! Tighten the nuts hand-tight, for the moment !

5. Attach rear mounting points to the support plate:

Insert the supplied hex screws and washers from above through the rear mounting points on the support plate.
Secure the screws from below with the supplied nuts and additional washers. Tighten the screws evenly.

6. Tighten screws and nuts:

Front mounting points: Tighten the nuts on the dome studs with an appropriate torque.

Rear mounting points: Tighten the screws and nuts at the rear mounting points of the support plate evenly and firmly.

7. Final inspection:

Check that all nuts and screws are securely and evenly tightened and that the strut bar is stably mounted.

6. Adjusting the BMC stopper

Customers without the BMC stopper option can skip this step and proceed to step 7.

1. Screw the ball joint onto the brake master cylinder: Use a wrench to screw the ball joint against the brake master cylinder until the ball joint is fully seated. Then turn it an additional 1/4 rotation.

The ball joint must be adjusted to stabilize the brake booster without exerting unnecessary pressure on the brake master cylinder.

2. Tighten the locknut:

Tighten the locknut to secure the ball joint.

Important: Hold the ball joint in place with another wrench while tightening the locknut to prevent it from twisting.

3. Check that the ball joint is correctly seated and the locknut is securely tightened.

7. Final inspection and test drive

You are finished and can now take a test drive to ensure that everything is installed correctly and that no noises or vibrations occur.

We would appreciate it if you shared your experience with our strut bar as a review in our shop with other customers.