

Mazda MX-5 Butterfly Combo Chassis Reinforcement

Congratulations for choosing our high-quality chassis frame rails and butterfly brace reinforcement kit. We feel privileged to be able to provide products of our efforts to the enthusiast community. Our braces deliver superior performance and will be of great benefit to your MX-5. By your purchase you also support future development of new, custom made performance parts to make our cars even more fun.

We recommend to quickly read through the whole guide before starting the job.

Contents:

- 1 x Rail – driver side
- 1 x Rail – passenger side
- 1 x Cross brace
- 3 x Mount for plastic brake line holder

Fixings pack:

- 3 x Bolt M6x10
- 3x plastic washer M6
- 24 x Bolt M8x16
- 4 x Bolt M8x20
- 28 x Locking nut M8
- 24 x Small washer M8
- 32 x Large washer M8

There is also 1 spare from each item.



**It requires two people
(or at least two jack stands)
to install the brace.**

Installation equipment needed:

- Spanner set
- Allen key set
- Drill Ø 8.5 mm
- Drilling machine or screwdriver
- Body filler or silicone
- Base colour or another rust stopper



Before installation:

You need to have the original frame rails in somewhat straight shape to fit the new rails over them, which means you might need to first work on them. We also recommend to treat the chassis for rust on places which will be covered with your new rails before installation. Finally, you'll need a hoist/jack/pit to have sufficient space to work on your car.

Installation procedure:

Frame rails are held on the car via bolts going through the floor. The first step is to remove the interior – seats and carpets – to be able to drill the holes (photo). Seats are held in place via 4 large bolts which can be removed quite easily. To remove the carpet, you might need to unbolt or remove various bits like the sill plates/covers. Be careful if prying out some of the plastic clips, they can break very easily.



Under the car loosen the brake and fuel lines from the holders that need to be removed completely. Separate the plastic part from the metal part, dispose of the metal and clean the plastic. Then mount the plastic holder to the new mount provided with our brace (photo).

In this part you will need another person to help you mount the brace to the car. Use 4 of the M8x20 bolts, 4 nuts and 8 large washers to assemble the brace (bolt – washer – brace – washer – nut), but leave it somewhat loose, so the middle section can move freely.

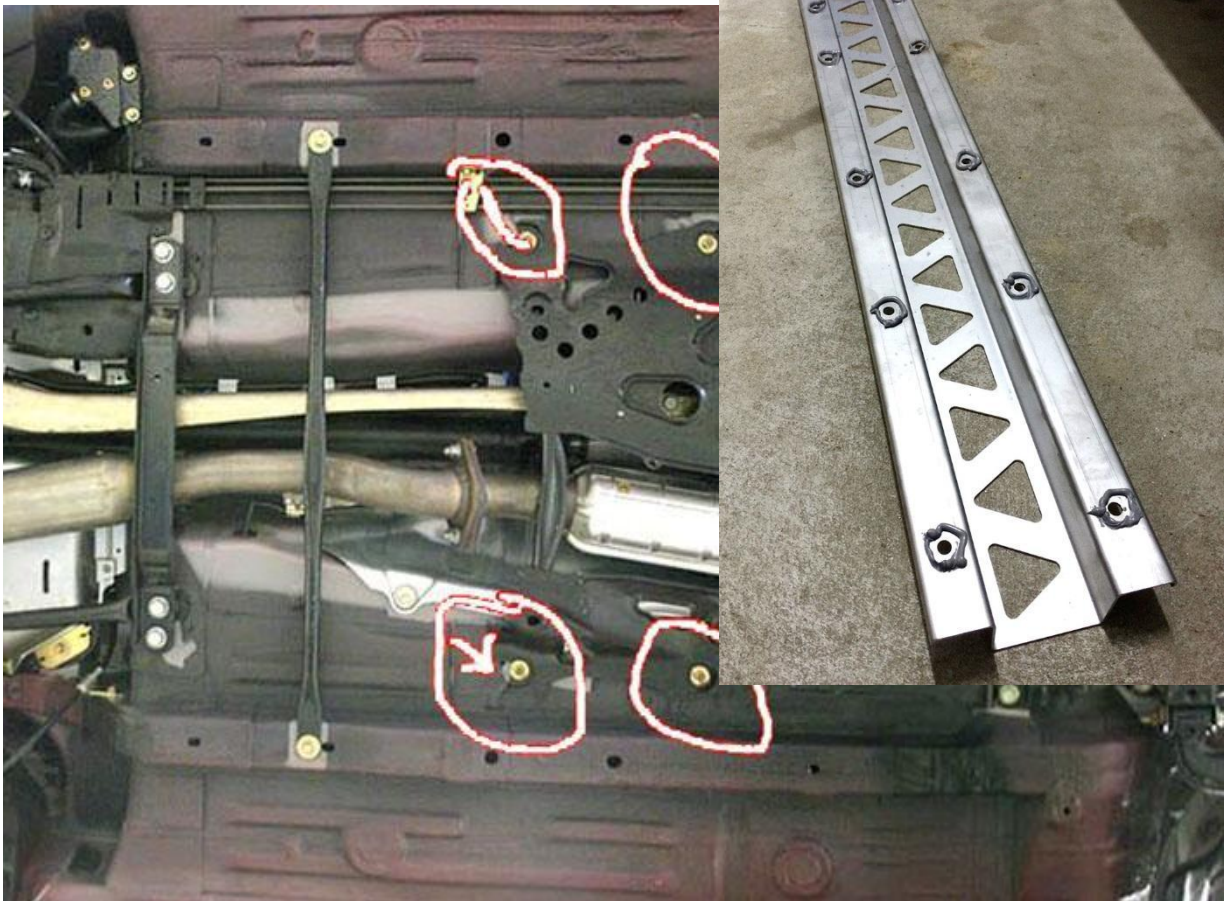
The frame rails mounting holes have different distance between them. The end with less space between holes should be facing the front of the car. Put your new brace over the original frame rails and move it as forward as possible (check for exhaust clearance). If the brace seems too narrow and you cannot properly mount it over both original frame rails, loosen the middle section nuts and bolts symmetrically on both sides.

After the brace sits well in desired place, drill holes on one end (front or back) on both left and right side. Then put bolts with nuts through the holes to fix the brace in position on that end. Afterwards drill second holes on the other end and fix the brace in place with a second set of nuts and bolts. Use marker to mark the ideal position of middle section.

With brace held by bolts well in its place drill all other remaining holes on both sides of the car. Remove the brace and tighten up the 4 nuts and bolts so they hold the middle brace where you made the marks. In case you need to leave it loose to fit the car, you should tension it after rails are on the car. When done treat the drilled surface with rust protection.

NBFL (MK2.5) only:

In case you have a MK2.5 you'll notice the brackets/supports on which you mount the cross brace are in the way. They are bent on the edge which you need to either straighten up or cut off (photo).



Before putting the brace in place permanently:

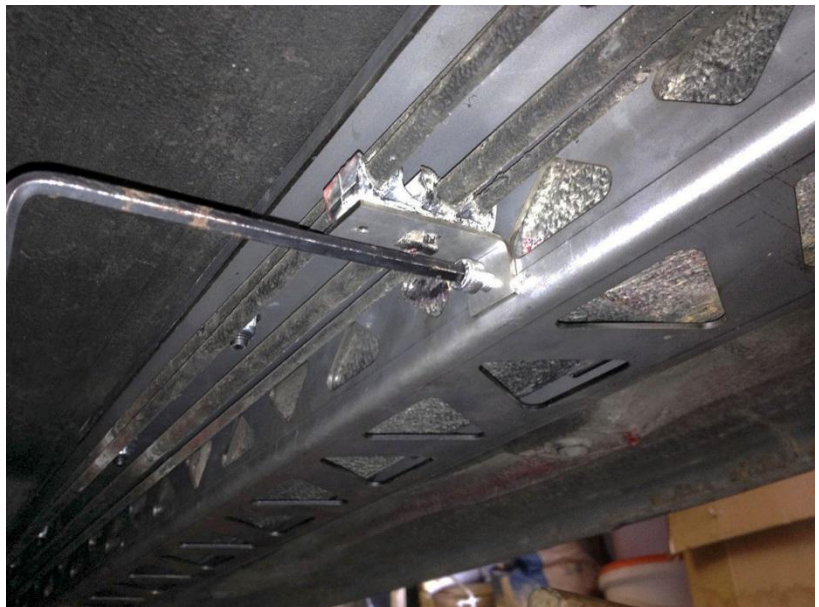
1. We recommend to practice putting it in place to make sure you don't smudge the filler/silicone all over your floor trying to fit them.
2. The bolts provided are with two different lengths as you might not have a straight surface on which you mount the brace. You can use them as you see fit, or simply put longer ones on one side and shorter on the other side of the rails.
3. The correct order of fixings, from up to bottom:
 - bolt
 - large washer
 - car floor
 - frame rail
 - small washer
 - locking nut

After the paint has dried off put some filler or silicone around the holes on rails (or both rails and the floor) to make sure it will seal properly (as on photo). Install the brace and tighten the nuts – we advise to do the tightening in two stages. There is no recommended torque but we're confident the stainless steel bolts and nuts can handle a reasonable amount (applied by hand), but there's no need for anything crazy.

With the rails in place put the brake and fuel lines back to the plastic holder and mount them to the frame rail with provided bolts (similar as on the photo).

Finally put the interior carpets back and mount the seats.

That's it! We hope you'll enjoy your stiff car as much as we do ours.



Should you have any questions or you would like to share your feedback, please let us know via hello@skidnation.com. You can also check out our social media [facebook.com/skidnation](https://www.facebook.com/skidnation) and [instagram.com/skidnation](https://www.instagram.com/skidnation) for the latest updates.