

## Adding a Roll Bar - Daryl Baker April 2016

A very popular addition to our soft top Miatas is a roll bar, the most popular being Hard Dog (<http://www.bethania-garage.com>) and Boss Frog bars (<http://www.bossfrog.biz>) both of which come in various styles and levels of protection. Daryl chose the Hard Dog M2 Sport, with two diagonal braces for his Miata. In addition he ordered the padding and leather cover to protect an occupant's head from a nasty bump should it come into contact with the bar.

While installation isn't all that difficult, it isn't for the timid since the seats, console and rear interior panels need to be removed. Installation also requires the drilling of 12, 3/8" holes in the floor (which requires removal of the rear wheels & plastic inner fender liners), and cutting the thin sheet metal gas tank cover, rear shelf carpet and the plastic interior panels. Having a lift helps in getting to the under car bolting points, but this job could be done with jack stands.

Daryl figures that the crack installation team (Daryl Baker, Bob Maurer, Dave Baker & Rich Velardo) spent 6 hours installing the bar itself in the car and that he spent another 8 hours doing interior cleaning (carpets & plastic panels) and trimming the plastic panels to fit around the new roll bar.

Following are pictures and explanations of the basic steps to installing the roll bar:



**Step 1**, remove the interior: note that on some Miatas the seat belt reel must be removed and wiring disconnected during this step as well. Make a big pile of parts and fasteners (in marked bags) behind the car. Remove both rear wheels and add them to the pile.



**Step 2**, put the bar in the car, carefully position it and mark all of the holes. Remove the bar (you'll get used to putting the bar in and taking it out and the extra hands make it much easier), pilot drill the holes & then drill to 3/8" diameter. Don't forget to be happy in your work & smile...or is that a grimace? No matter, just get it done.



**Step 3**, finally, bolt the bar back in the car, spray some rust proofing on the exposed new nuts under the car and reconnect the wiring. Oh, don't forget to run the wires **BEFORE** bolting the bar in the car so that they'll have enough slack to be reconnected (don't ask how we know this).



**Step 4**, Put the seats & console back in, trim the rear shelf carpet and plastic panels to fit around the new roll bar & install those.

**2018 update:** Since the roll bar fastens right to the chassis it makes the car tighter and the suspension firmer. It really isn't that noticeable until you are in the twisties. Although it's considered a roll-over protection device, I prefer to call it a safety bar.

The odds of rolling over any car are very minimal, and extremely rare for a miata. The odds of sliding sideways are more likely, and statistically, the odds of getting rear-ended is the most likely to happen. Very few cars can stop as quickly as a Miata, so the greatest danger (we) Miata drivers face is the car behind us. The roll bar offers a stout layer of protection to the cockpit and occupants, especially from the rear and sides. We must accept the vulnerability that exists in an open cockpit sports car, but taking an extra measure to protect ourselves and hoping never to need it makes sense to me.

I also like the look of the roll bar on the car, but my wife doesn't. Why should we start agreeing on something now?

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