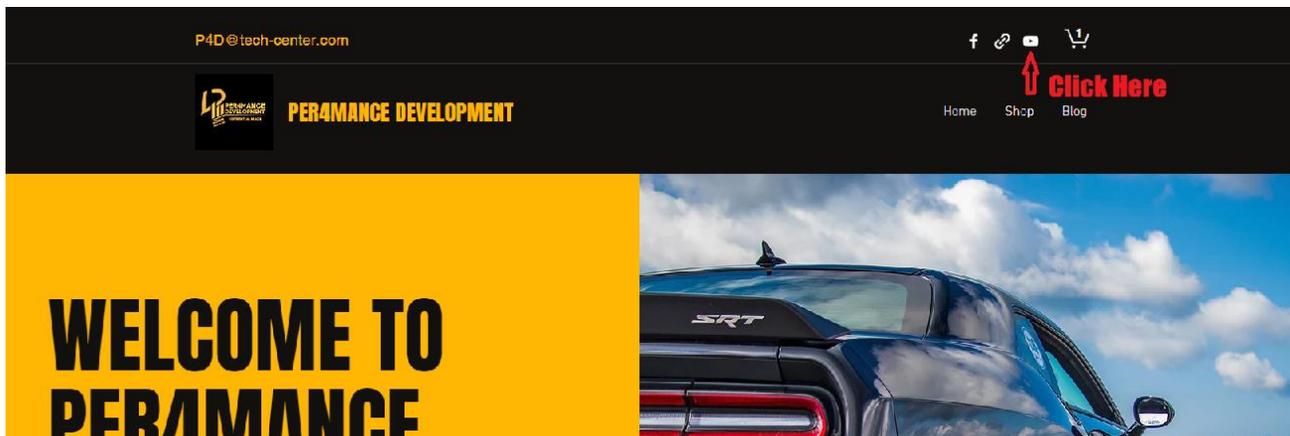




Per4Mance Development Modern Mopar IRS Differential Brace Installation Instructions for Dodge Charger and Challenger vehicles:

- Standard Brace Kit
- Extreme Brace Kit

To watch Speedy's Garage Brace Installation video, go to www.getper4mance.com and click the video icon.



Instructions – Please follow these steps in order:

Installation Prep

SAFELY jack up car and place on jack-stands or place on a certified lift to access rear differential. Please use appropriate PPE.

Important: before beginning installation, locate the holes on the bottom of the rear crossmember that the brace will bolt to. For 2015 to midyear 2016 cars, there were threaded sections in the cross-member. If your car has threaded sections, take the (2) M8 bolts and carefully test fit them to ensure the existing thread is clean and free of debris. If you encounter an issue, use a M8x1.25 tap to clean up the thread.

Important: if there are no threaded sections in the holes of your vehicle's crossmember, there are (2) M8 or M10 self-locking flange nuts included in the kit. They will need to be positioned in the crossmember.



Note: When starting step 8, if there are no threaded sections in the crossmember, you will need to place the provided M8 or M10 flange nuts in the crossmember. Place the nuts in the slots that are above and to the left of the crossmember hole. Then using a finger, move into position and hold down the nut when threading the bolts.

Specialty tools recommended for installation:

- Torque wrench with 16mm (or 5/8") crows-foot or swivel socket
- Stubby wrench and/or cutdown wrench (for tightening self-locking nuts placed in cross-member)



Installation of this brace kit is straightforward. However, the position of the brace is in a tight area of the vehicle and patience is encouraged.

- 1) Loosen the driver's side main case bolt about 1/2 inch. Remove passenger side lower main case bolt from the differential.
- 2) Slide the brace slot over the driver's side main case bolt then rotate the brace into position so the passenger' side main case bolt can be inserted through the hole in the brace and into the case then *walk the bolts in simultaneously* until they are about 1/4" from being all the way in.
- 3) Position the rubber isolator between the brace and rear cross-member and align all components and crossmember by using a large Philips head screwdriver.
- 4) Going one at a time, insert the M8 or M10 cross-member bolts with Loctite applied to the threads and lock-washer thru bottom of brace and into cross-member, add (and position with one finger) nuts in crossmember then tighten all bolts carefully and incrementally to assure perfect alignment.
- 5) **Final tightening:** The main case bolts are to be torqued to a **minimum of 80 ft./# and up to up to 90 ft./#'s if desired**. Due to variances in design and strength of crows-foot socket heads, achieving 80 ft./#'s is not always attainable without the socket head flexing off the bolt head. In those instances, torque to 50 ft./#'s and then switch to a high-quality open-end wrench (extended if possible) and rotate the bolt another 100-120 degrees to attain a torque spec of 80-90 ft./#'s. Tighten the cross-member bolts until there is a consistent squeeze (1mm bulge) on the rubber isolator.

IMPORTANT: After initial installation, check tightness after 100 miles and regularly after that based on the level of track/roll/drag racing you participate in. It is not uncommon for the differential to "settle" in and require fine-tune tightening of the cross-member bolts

Visually inspect the brace and insure that it matches the picture showing completed installation.

Completed Installation – Standard Brace Kit



Completed Installation – Extreme Brace Kit



Recommendation: It is recommended to take a Sharpie and draw a straight line on the bolt and brace (or use tamper proof torque mark [Torque Mark](#)) so that you can easily do a visual check to make that the crossmember bolts have not loosened (however if you have to place nuts in the crossmember this may not indicate they have loosened, they may have just rotated). When visually checking, make sure the parked vehicle is turned off and the emergency brake is fully on.

Drive car and recheck for tightness after use at least twice.

If you have any questions on installation, please email P4D@tech-center.com. Thank you and please enjoy the benefits of the Per4Mance Development IRS Differential Brace*.

**patent pending*