

Engine Torque Brace

PLEASE READ INSTRUCTIONS BEFORE ATTEMPTING INSTALLATION!

1. Park the car with the steering wheel turned as far to the right as possible. Open the hood, if time permits allow the engine to cool down before proceeding with the installation.
2. Refer to Figures 1 & 2. On the driver's side wall of the engine compartment mark a spot 2" ahead of the firewall and 9/16" down from the underside of the triangular corner brace. (This area is reinforced by a triple layer of sheet metal and is able to support the loads applied by the Engine Torque Brace without damage.) Center punch this spot and carefully make a 3/8" diameter hole. We recommend you use a hole saw, rotary broach, or similar tool to make this hole. If you must use a drill, start with a small bit and gradually enlarge the hole with successively larger bits until the hole is 3/8" in diameter. **DO NOT MAKE THIS HOLE ANY LARGER THAN 3/8" IN DIAMETER!!**

NOTE: FOR RX-7 TURBO WE RECOMMEND REMOVAL OF THE INTERCOOLER BEFORE STEP 3.

3. Reach down between the engine and brake master cylinder and remove the bolt just below the oil filter which holds the bell housing to the engine. This bolt is also where the main engine electrical ground wire is attached.
4. Install the Engine Brace section as follows: At the top rear of the engine the bell housing is attached to the engine by a long bolt which extends toward the firewall. If there is a nut on this bolt, remove the nut. (NON-TURBO ONLY: Insert a sturdy prying tool through the hole in the lifting lug and rotate the lifting lug toward the driver's side by about 1" at the top to clear the underside of the brace.) Hold the Engine Brace, legs downward, with the shorter leg toward the passenger side. Slip the hole in the short leg over the long bolt and install the 10mm hex nut and lock washer (provided in the kit) finger tight. Re-install the bolt removed in Step 3 through the longer leg of the brace—**INSTALL THE ENGINE GROUND STRAP, BETWEEN THE BELL HOUSING AND THE BRACE.** Tighten both the nut and the bolt.
5. In the left front wheel well, remove the six small screws which secure the rear of the plastic wheel well liner. Carefully pull the plastic liner down to expose the inner wheel well access holes.

NOTE: IF TURNING THE FRONT WHEELS FULLY TO THE RIGHT DOES NOT PROVIDE ENOUGH WORKING SPACE, YOU MAY WISH TO SUPPORT THE FRONT OF THE CAR ON JACKSTANDS AND REMOVE THE LEFT FRONT WHEEL.

6. Position the long brace rod with the 3-1/2" threaded end facing you. In the following order install these components: one 3/8" jam nut, one regular 3/8" hex nut, one cup washer and one rubber bushing. (The bushing must be installed with the large nipple facing the cup washer.) Slip this end of the rod into the hole at the top of the Engine Brace. Next, install one regular 3/8" hex nut and the thick flat washer on the shorter 1" threaded end of the rod.

7. Refer to Figure 3. Locate the triangular access hole positioned on the underside of the inner fender framework. Insert the nut/extension strap through this access hole and position the nut behind the hole made in Step 2.
8. This step can be difficult. Insert the 1" threaded end of the rod, with nut and thick flat washer installed, through the hole made in step 2. Carefully screw the rod into the nut on the extension strap until the rod bottoms against the strap. (This nut extension will be left in place.)
9. When you are certain that the rod is correctly threaded into the nut/extension strap, tighten the previously installed 3/8" hex nut and thick flat washer against the side wall of the engine compartment.
10. Bend the portion of the extension strap which sticks out of the access hole so that it lies flat against the inner fender. Push the clear vinyl tube over the end of the strap to prevent chafing against the access hole. Reposition the plastic fender liner and secure it with the six small screws removed in Step 5.
11. Install the second rubber bushing, cup washer, regular 3/8" hex nut and jam nut on the rod, capturing the Engine Brace between the rubber bushings on the rod. (As before, the bushing must be installed with the large nipple facing the cup washer.)
12. Turn the regular 3/8" hex nuts until the cup washers and bushings are just beginning to press on the Engine Brace. BE SURE the bushings are pressing evenly on the Engine Brace and are not pushing it to one side. Then tighten each hex nut FOUR (4) COMPLETE TURNS. Tighten the jam nuts against the regular hex nuts.

YOUR RACING BEAT ENGINE TORQUE BRACE IS NOW INSTALLED

Operation Notes:

If, after installation, you notice unusually high engine vibrations inside the car, the nuts on the rod which compress the rubber bushings have probably been overtightened. Although tightening these nuts does slightly increase the effectiveness of the Engine Torque Brace, it ALSO increases the amount of engine vibration felt inside the car. We have found that the "four-turns-per-nut" setting provides the best combination of smoothness and low vibration.

If you notice a "buzzing" noise, check to ensure that the clear vinyl tube is correctly installed on the extension strap. Also check to ensure the rod is prevented from contacting the edges of the hole in the Engine Brace. The small nipples on the rubber bushings must extend into the hole on both sides of the brace to prevent contact.

Location of 3/8" Diameter Hole

Rod
Engine
Brace



Figure 1

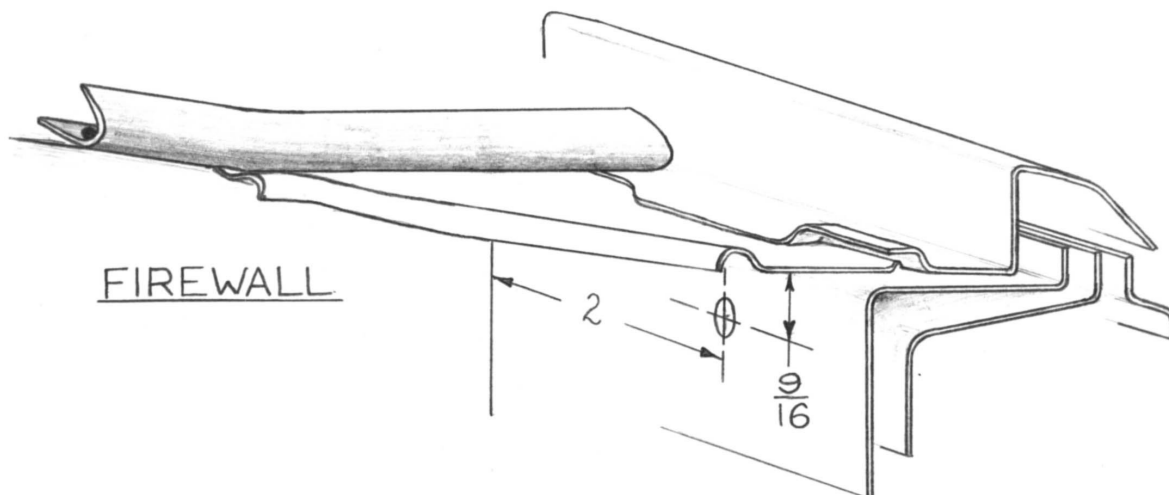


Figure 2

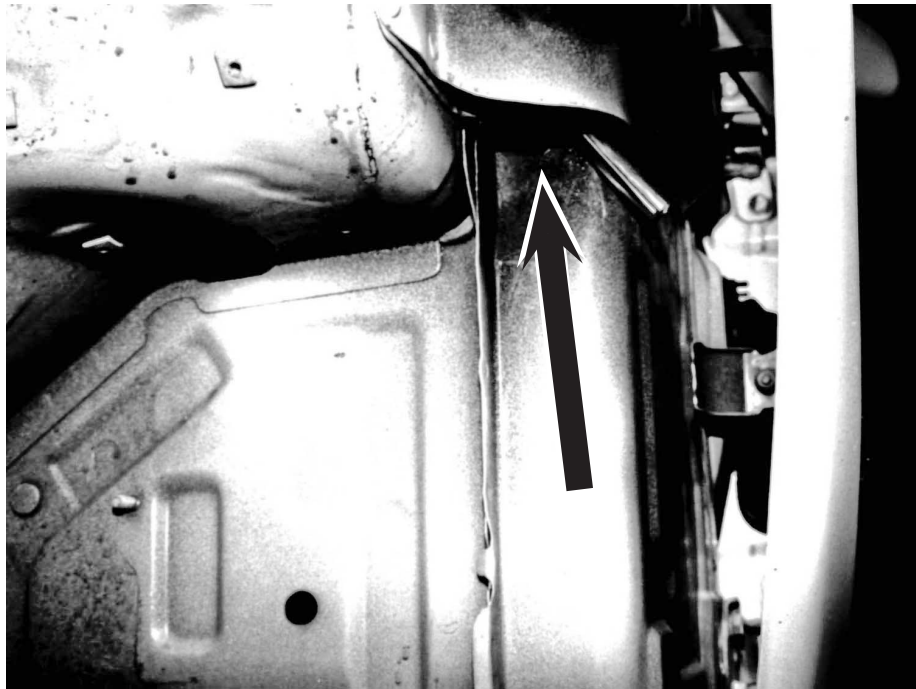


Figure 3 - Inside Left Front Wheel Well - Access Hole Location