RACINGBEAT LLC

I-14030

RX-7 ENGINE TORQUE BRACE

PLEASE READ THESE INSTRUCTIONS BEFORE ATTEMPTING INSTALLATION

1. Park the car with the steering wheel turned as far to the right as possible and open the hood. If time permits, allow the engine to cool before proceeding with the installation.

2. If your car has an air conditioner hose or tube running along the left fender from the firewall to the A/C compressor, unbolt it from its fender mounting point and push it downward slightly to expose the top left, rear corner of the engine compartment.

3. Refer to figures 1 and 2 below. On the side wall of the engine compartment, mark a spot 2-3/8” ahead of the firewall and 9/16” down from the flat top surface above the side wall. This area is reinforced by a double layer of sheet metal and is able to support the loads applied by the engine torque brace. Center punch this spot, and carefully drill a 3/8” diameter starter hole. We recommend you use a hole saw, rotary broach, or similar tool to make this hole. If you 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!

Figure 1

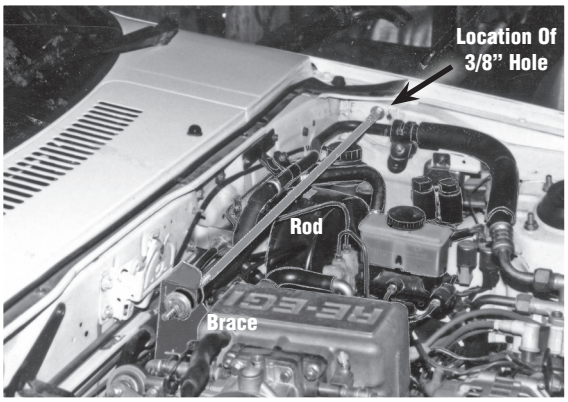
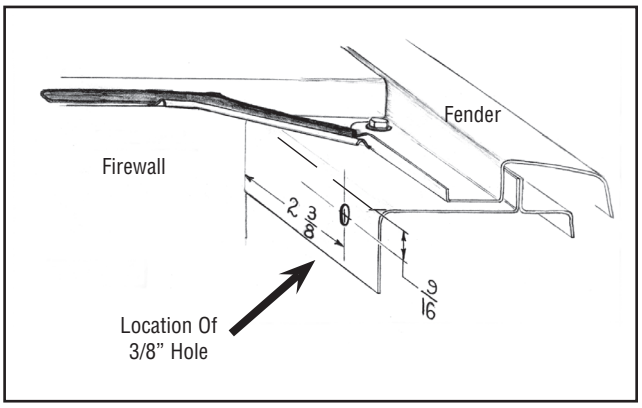


Figure 2



Install Brace On Engine

4. Reach down between the engine and brake master cylinder and remove the bolt just below the oil filter that secures the bell housing to the engine. This bolt is also where the main engine electrical ground wire is attached.

5. Install the engine brace as follows: On the top rear of the engine, a lifting lug is attached to the engine by a long bolt which extends towards the firewall. If there is a nut on this bolt, remove the nut. Loosen the bolt slightly and tip the lifting lug toward the driver's side by about 1” at the top to clear the underside of the brace, then re-tighten the bolt. Hold the engine brace, legs downward, with the shorter of the two legs toward the passenger side. Slip the hole in the short leg over the long bolt and install the 10mm nut and lock washer (both provided in the kit) finger tight. Re-install the bolt removed in step 4 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.

Note: YOU MAY WISH TO INSTALL THE ENGINE BRACE BEHIND OR IN FRONT OF THE CLUTCH HYDRAULIC HOSE DEPENDING ON MODEL, YEAR, OR OPTIONAL EQUIPMENT.

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6. In the left front wheel well, remove the three (3) small screws which secure the rear edge and top center 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.

7. Assemble in the following order, one jam nut (thin) approximately 3" onto the longer threaded end of the rod. Next, one regular 3/8" nut (larger), one cup washer and one rubber bushing. The bushing must be installed with the small nipple facing away from the cup washer. See Figure.3

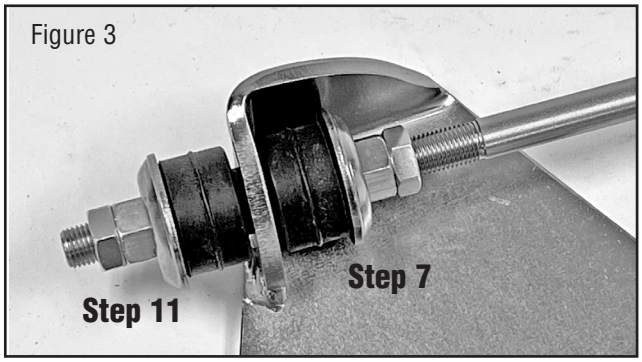

Figure 3

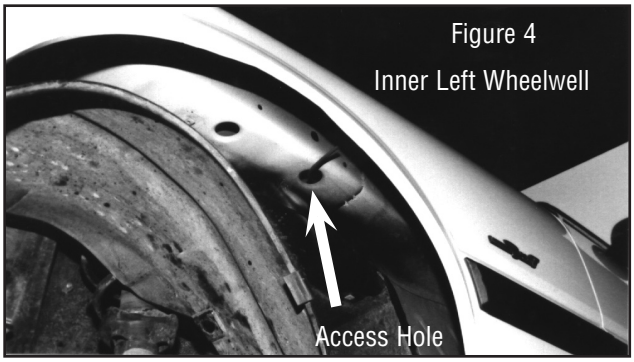

Figure 4
Inner Left Wheelwell

8. Install a 3/8" nut and thick washer onto the opposite end of the rod. Insert this end of the rod through the hole made in step 3. Referring to figure 4, locate the 1-1/4" diameter access hole which lies on the underside of the inner fender framework. Insert the long nut/extension strap through this access hole and position the nut behind the hole made in step 3. This next step can be difficult. Carefully position the long extension nut into position over the end of the rod that is now extending through the new hole in the inner fender. Tighten the rod unit it bottoms against the nut on the long extension.

Note: THE ROD CAN BE INSTALLED ABOVE OR BELOW THE AIR CONDITIONER TUBE, DEPENDING ON MODEL OR YEAR.

9. When you are certain that the rod is correctly threaded into the long nut/extension strap, tighten the previously installed 3/8" nut and thick flat washer against the sidewall of the engine compartment.

10. Bend the portion of the extension strap which protrudes 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 three small screws removed in step 6.

11. Install the second rubber bushing (nipple facing away from the cup washer), regular 3/8" nut and jam nut on the rod, capturing the engine brace between the rubber bushings on the rod. See Figure

12. Turn the regular 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 nut FOUR (4) COMPLETE TURNS. Tighten the jam nuts against the regular nuts.

13 If your car's A/C tube is in contact with the long rod, cut four coils off the plastic spiral sheath provided in the kit and install it on the rod to prevent chafing. Install the remaining spiral sheath on the clutch hydraulic hose where it comes in contact with the engine brace. The brace installation is complete.

Note: If you notice unusually high engine vibrations inside the car, the nuts on the rod which compress the rubber bushing 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.