

## Racing Beat RX-8 Header

Part No. 16133

### Installation Instructions

**Before you start the installation process, please read through the following steps thoroughly. If you have any questions regarding the installation process, contact us for more information.**

#### Recommended tools:

- Sockets – 10mm, 14mm deep, 17mm, 19mm
- Ratchets for all sockets
- Torque wrench for all sockets
- 12" and 6" extensions and a universal joint for 14 mm and 17mm sockets
- 6" to 12" extension and a universal joint for 10 mm socket
- Phillips screw driver
- 7/8" or 24mm open end wrench
- 10mm and 14mm open and box wrenches



**Caution:** The engine should be cool before starting. You should lubricate all exhaust fasteners with light oil (such as WD-40) before attempting to remove them. We recommend using never-seize compound on all studs at re-assembly.

A: Raise the car and place it on jack stands. Never work under a car supported only by a floor jack!

B: Remove the right front wheel/tire assembly.

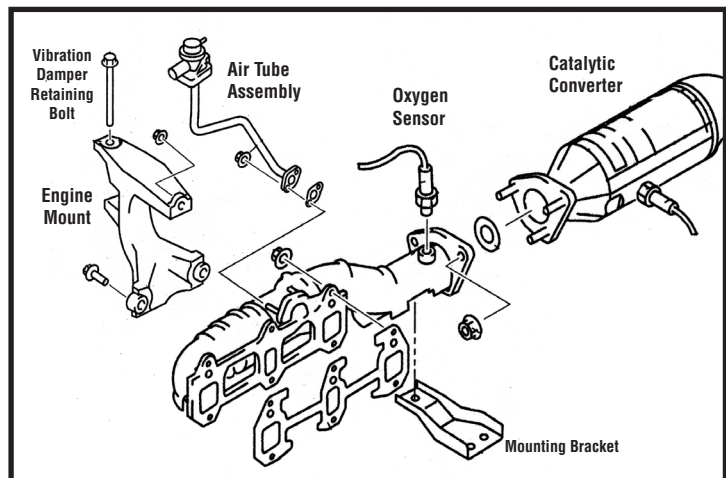
C: From under the car, remove the chassis cross member just behind the engine (6 bolts).

D: Remove the small plastic splash shield at the inner/rear of the right wheel well.

E: To remove the stock exhaust manifold the right front engine mount must be removed. Support the engine with a floor jack placed under the oil pan. Use a large piece of wood on top of the jack arm, across the oil pan rails, to distribute the load evenly and to prevent damage to the pan.

F: Remove the (2) bolts (lower) and (1) nut (upper) that attach the right aluminum engine mount to the engine. Remove the bolt that connects the outer end of that mount to the vibration damper (motor mount). Remove the bolt and nut that attach the vibration damper to the chassis. Remove the damper. **DO NOT** attempt to remove the engine mount – it will be left in the general area – just push it a bit forward for access to the exhaust manifold nuts.

It may be necessary on some chassis (2009-2011 models) to also remove the (2) bolts and (1) nut that attach the left vibration damper to the sub frame and mount bracket. By doing so, you are allowing the vibration damper to move freely. This is required to provide the clearance necessary to install the header in the chassis.



G: Remove the (2) nuts that attach the small diameter "fresh air" tube to the exhaust manifold. Remove the large diameter hose that attaches to the vacuum diaphragm at the top of the tube (you do not need to remove the small diameter hose attached to the vacuum diaphragm).

Remove the (1) bolt that attaches the top of this small diameter "fresh air" tube to the engine (just under the vacuum diaphragm at the top). DO NOT attempt to remove the tube completely from the chassis, other than to unhook the lower flange from the studs in the exhaust manifold and move the pipe no more than necessary to provide adequate clearance .

H: Remove the (3) nuts that connect the exhaust manifold to the catalytic converter.

I: Loosen the oxygen sensor at the top rear of the exhaust manifold, then continue to unscrew it by hand until it is free. DO NOT remove the electrical connection.

J: Remove the small bracket that connects the exhaust manifold to the transmission. This bracket will not be re-used during the installation of the header. Remove the (6) nuts that attach the exhaust manifold to the engine.

K: Using the floor jack, raise the engine about 1". Remove the exhaust manifold.

*All gaskets can be re-used unless they are damaged or corroded.*

### **Install the header in reverse order EXCEPT:**

1. Install the (2) provided small studs onto the header at the air tube connection port.
2. Place the small gasket originally located on the fresh air tube connection on the stock exhaust manifold onto the (2) small studs before guiding the header into position.
3. When you are ready to tighten the (2) nuts that attach the rear of the header flange to the engine, you may find it easiest to use a deep 14mm socket on a ratchet (or torque wrench) reaching up from below (between the lower pipes).
4. Once the header is tight, slip the fresh air tube flange onto the header studs (check first that the small gasket is still in place), then start the (2) nuts. Before tightening these nuts, install the bolt at the top of the tube. Now tighten the (2) nuts.
5. Place a small amount of never-seize on the oxygen sensor threads but NONE on the sensor element. Wind the oxygen sensor wire "backwards" 2 turns before threading it into the header. Do not over-tighten. Tighten to 22-36 ft lbs.

### Torque Specs:

- 6 mm nuts / bolts – 72 in lbs.
- 10 mm nuts / bolts – 32 ft lbs.
- 12 mm bolts – 40 ft lbs. EXCEPT:
  - (2) 12 mm bolts at rear of cross member - 65 ft lbs.
  - (2) 12 mm bolts at front of cross member - 80 ft lbs.
- 14 mm bolts – 95 ft lbs.

After the installation is complete, start the car and check for any signs of an exhaust gas leak. You may notice an "oily" smell after driving the car, this is normal and should dissipate after several drive cycles.

**If you should have any questions regarding your Racing Beat header or the installation process, we suggest you contact us at 714-779-8677 so that we may assist you.**

Emissions Note: This header is legal in California only for racing vehicles, which may never be used upon a highway.