Header

Installation Instructions

1994-97 Miata

PART # 903-110

Congratulations on your Cobalt header purchase! We at Cobalt have gone to great lengths to design, dyno test and build this header to be the highest quality, longest lasting header you can buy. Our header incorporates many features not found anywhere else. We use CNC flanges for accurate fitting and ease of installation. We apply a space age ceramic coating for protection against thermal fatigue, corrosion and increased gas velocity due to the heat retention properties of the coating. Its protective qualities will continue for years to come.

This header installation is very straight forward. If you have good mechanical ability, two jack stands and some good metric tools this installation should be very simple.

Caution: You will be working under your Miata. Always use jack stands to support the vehicle. NEVER WORK UNDER YOUR CAR SUPPORTED BY YOUR JACK ONLY.

Also, Mazda is very famous for their self locking exhaust nuts. Always apply generous amounts of penetrating lubricant (WD-40) to all exhaust nuts at least 1/2 hour before starting removal. If you damage any of the exhaust nuts or studs they can be repaired using a tap and die set. You will need a 10x1.50 and 10x1.25 tap and die. They are usually available at your local hardware dealer at a very minimal cost.

TOOLS REQUIRED:

- Floor jack
- Two jack stands
- WD-40 or equivalent
- Socket set
- 22mm wrench and possibly the aforementioned taps and dies.
- If you don't have a shop manual now is a good time to purchase one.

Getting started:

1. The first thing that you need to do is to get the car comfortably up on jack stands. If you already have the Jackson Racing COLD AIR INDUCTION™ you can skip step #2.

2. Unplug the harness from the air flow meter on the driver side fender well. Special note: there is a small wire clip that retains the harness to the meter. Push that clip in with your finger as you are pulling on the harness during removal. Remove the 10mm headed bolt and loosen the clamp that holds the small intake tube to the air filter box and remove the tube. Loosen the large clamp on the opposite side of the air filter box. Remove the three 12mm headed bolts that hold the air filter in place. If you have cruise control, one of the bolts goes through your cruise control bracket. You can lift the air filter box up and out of the large rubber tube and out of the car at this point.

3. Remove the 10mm headed bolts that secure the heat shield to the stock exhaust. This will allow access to the exhaust manifold nuts. This is a good time to apply WD-40 to the exhaust manifold nuts. Also, get under the car and apply WD-40 to the nuts at the lower head pipe and the catalytic converter.

4. It is now time to unplug the stock oxygen sensor wire. The plug is located next to the coil assembly.

5. Now that you have unplugged the sensor this would be a good time to loosen all the exhaust manifold nuts 1/2 turn and reapply WD-40 to the now loosened nuts. (if a manifold nut is frozen to the stud and the stud unscrews from the head, don't panic. It can be screwed back into the cylinder head like a bolt.) Do the same for the nuts at the catalytic converter.

6. Remove the oxygen sensor from the stock exhaust manifold.

7. Remove the two 17mm bolts that hold the head pipe bracket to the bell housing/block. Note the two different bolt lengths for reinstallation. You will not be reusing the bracket. To gain access, loosen the 12mm headed pinch bolt that is part of the bracket.

8. Remove the two 14mm headed nuts at the catalytic converter applying liberal amounts of WD-40 as you go. If the nuts start to bind, reapply WD-40 and retighten the nuts. This will allow the penetrating oil into the threads. Then remove them again. You can reinstall the two 17mm headed bolts back into the bell housing/block at this time. (Do not tighten using an air tool.)

9. Using the same method listed above, remove all 14mm headed nuts that hold the stock manifold to the block and remove the manifold from the car. Leave the stock stainless steel exhaust gasket on the cylinder head as it is reusable.

10. It is now time to install the Cobalt header system. You will be installing the header into the area vacated by the stock manifold. Install it with the two bolt flange headed in first with the header at approximately 45 degrees. Make sure you have adequate clearance under the car and that the Cobalt header doesn't come into contact with the ground or lift if you are working in a shop. This is a VERY large tube header and due to its unique design, getting it past the engine and the chassis right where the transmission mounts to the engine can sometimes be difficult. In this case, merely remove the two 14mm nuts that hold the motor mounts to the chassis. They can be reached easily from under the wheel wells. Put a jack (use a wood block between the jack and the pan) under the oil pan and gently lift the engine off its mounts to facilitate getting the header past the tight spot.

11. Once past the tight spot there will be abundant room to move the header onto the cylinder head studs. Be sure to pull the tab for the water pipe out of the way before you put the header in place. You can now lower the engine back onto its mounts and reinstall the two 14mm nuts. Now that the header is in place you can install the water pipe tab over the exhaust stud and install all the exhaust manifold nuts using liberal amounts of WD-40 or anti-seize compound during installation.

12. You will now need to bolt the catalytic converter to the Cobalt header secondary pipe. Apply liberal amounts of anti-seize compound on all threads.

13. It is now time to carefully reinstall the stock oxygen sensor, remember to reconnect the sensor plug.

14. You can now reinstall the air box assembly.

It is now time to enjoy!

Designed and Distributed by Moss Motors, Ltd.

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