



Header

Installation Instructions

1999-2005 Mazda Miata

PART# 910-645

Notes:

- This header is not CARB approved.
- This header is a direct replacement for 2001-2005 (NB2) Miata with no other modifications required.
- 1999 & 2000 (NB1) Miata's require an NB2 EGR tube (Part# 903-131), which must be purchased separately.
- California emission NB1's (with a primary catalytic converter attached to the exhaust manifold) also require both O2 sensors to be relocated. In order to relocate the sensors, 903-700 race header wiring kit must be installed. This requires drilling a hole and welding an O2 sensor bung behind the secondary catalytic converter. Refer to the 903-700 instructions for this process. Failing to install the 903-700 wiring kit will illuminate the "Check Engine Light".
- Cobalt mid-pipes 909-960 & 909-962 have a post catalytic converter O2 sensor bung and pair great with 910-645 header. Using a Cobalt Mid-pipe eliminates drilling and welding for NB1.
- This header installation is straightforward. If you have good mechanical ability, a jack, two jack stands, and some good metric tools this installation should be very simple.
- No exhaust manifold gasket is provided. Most of the time the stock multi-layer steel gasket can be reused.
- The header to mid-pipe "doughnut" style gasket is provided. The replacement gasket is Part# 052-470.
- Allow exhaust to cool before working on it.

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

Caution: Apply generous amounts of penetrating lubricant (WD-40) to all exhaust nuts and manifold heat shield fasteners, at least 1/2 hour before starting removal.

Required tools:

- Floor jack
- Jack stands
- Penetrating oil (WD-40 or equivalent)
- Anti-seize compound
- 10mm, 12mm & 17mm sockets, 14mm deep socket
- 3" & 6" extensions for the sockets.
- 10mm, 17mm & 22mm wrenches
- Shop manual

Instructions

- 1) On flat level ground, raise the front of the car and support it on jack stands.
- 2) Referring to the shop manual remove the following items from the car:
 - Airbox.
 - EGR tube.
 - Dipstick tube nut and dipstick itself (the tube can stay in place).
 - O2 sensor located in the front pipe.
 - Exhaust manifold and the front-pipe (located in-between the manifold and mid-pipe).
 - Front-pipe support bracket (bolted to the transmission bell housing). Replace the transmission bell housing bolts after removing the bracket. The bracket will not be reused.
 - On cars with the windshield washer bottle on the exhaust side of the engine compartment, you will need to remove it as well.
 - Shock tower brace (if equipped).
 - Under car chassis bracing (if equipped).

Installation Instructions



Figure 2

- 4) Begin installing the EGR tube by just getting the threads started on the header. We recommend a bit of anti-seize on these threads. You only need to screw the nut on few threads for now. Once the tube is loosely screwed onto the header, fit the EGR tube flange over the studs on the intake manifold. Make sure the metal gasket is still in place on the manifold or EGR tube. Install the nuts that secure the EGR tube to the manifold.

NB1 will require the use of an NB2 EGR tube Part# 903-131. Install it now. Figure 4.

- 3) It is now time to install the Cobalt Header. If the stock multilayer steel gasket is in good condition, reuse it. If not, replace it with a new gasket. Feed the header in from the engine bay at approximately 45 degrees. Make sure the water pipe tab is out of the way, as you install the header on the head studs. Now that the header is in place, you can install the water pipe tab over the exhaust stud and reinstall all the exhaust manifold nuts loosely. The header needs to be loose while you install the EGR tube and the mid-pipe in the following steps. Use anti-seize compound on the threads of the exhaust studs. Figure 3.



Figure 4



Figure 3



- 5) Find the round, header flange gasket and install it on the end of the header. Install the mid-pipe on the header. The factory mid-pipe has studs and nuts. If you have an aftermarket mid-pipe, it should have been supplied with nuts and bolts. Either way, reuse the existing mid-pipe hardware to secure the header to the mid-pipe. Figure 5.



Figure 5

- 6) Go back and tighten all hardware. Start with the header to cylinder head nuts. Next, tighten the EGR tube on both the header side and intake manifold side. Lastly tighten the header to mid-pipe hardware.

- 7) Install the O2 sensor in the header and plug in the electrical connector.

NB1's will require Part# 903-700 race header wiring kit. Follow the instructions of that kit to relocate the O2 sensors. This requires drilling a hole and welding an O2 sensor bung (which is included in 903-700) after the catalytic converter located in the mid-pipe. Figure 7.



Figure 7

- 8) Reinstall the air box and plug MAF & IAT sensors in.
 9) Run the vehicle and inspect your connections again. Enjoy your new Cobalt Header!

910-645 BOM		
Item No.	Description	Quantity
910-645	Header	1
052-470	Gasket	1

Designed and Distributed by Moss Motors, Ltd.

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