SUPERMIATA Qmax Coolant Reroute

89-05 Mazda MX-5 Miata

Installation Instructions

Read notes A-E before you begin

A) Disconnect battery.

B) It is recommended to have a Mazda FSM (Factory Service Manual) on hand before beginning any service on your Miata.

C) Do not attempt this install on a hot engine. Let car sit at least 8 hours before beginning.

D) Three tips to make your Qmax Reroute install easier.
1. Place entire car on jack stands so you don't have to bend over so much.
2. Remove hood. Be sure to mark position of hinges against hood to save alignment.
3. Work where there is plenty of light.
4. A Lisle 24680 funnel for bleeding will save you time. Highly recommended

E) The installation requires tightening NPT fasteners. These are tapered thread and self sealing. The tapered thread will naturally begin to bind while rotating in and eventually stop. Do not over torque these fittings or sensors. Over torquing can crack or split the housing.

The Qmax reroute system is designed for all NA & NB chassis, 89-05 Mazda MX5 Miatas using the B6 1.6L or BP 1.8L engine. Instructions will be labeled as **NA6, NA8, NB1, NB2:**

NA6 coils on the left, same side as intake manifold **NA8** coils on the exhaust side
NB1 coils in the center **NB2** coils on top of valve cover

This kit contains:

1x	Reroute housing, Supermiata, 7075 T-6
1x	Thermostat cover, Supermiata, 7075 T-6
1x	Head coolant port block off plate, Supermiata, 7075 T-6
1x	Coolant neck block off plate, Supermiata, 7075 T-6
3x	M8 x 1.25 x 25mm SHCS, black oxide
1x	M8x1.25x25mm button head, black oxide
1x	1- 11/16 inch retaining ring, HO-168SS
3x	1/8 NPT plugs, SS
1x	Bleed screw assy Wilwood 220-0627
1x	Worm drive hose clamp, 5/8" Breeze 9416, liner SS
2x	Worm drive hose clamp 1.25", Breeze 9424, liner SS
1x	3/8" NPT M- 5/8" hose barb, brass
1x	M16 x 1.5 drain plug with gasket, zinc
1x	1.25" reinforced silicone hose, 44"
1x	Thermostat, 45849 Stant Superstat 195°

1x Sealant, Permatex 22071

1. Let engine cool to ambient temperature. Drain all coolant from system. *If coolant is of unknown origin or over one year in age, discard at a state approved reclamation facility. Ethylene glycol as used in consumer anti-freeze is highly toxic. Don't send it to the nearest storm drain!

2. Remove top hose (inlet) from radiator.

3. Detach heater hose from coolant outlet on back of head. Leave other end attached to heater outlet.

4. Remove coolant outlet from rear of head. Lower fastener is a nut on a stud. The stud stays in the head and will be used for the Qmax. Fig A

5. Unscrew coolant temp sensor. NA6, unscrew fan switch. Sensor/switch may be in front water neck or rear outlet.

Fig A

Fig B

6. Clean any remaining sealant or gasket material from mating surface of coolant outlet at back of head. Take care not to gouge the aluminum mating surface.

7. Install thermostat in housing as shown in Fig B. Use supplied snap ring to secure in place.

Fig C

Fig D

8. Using supplied sealant, apply a thin coat to main housing as shown in Fig C. Also apply to thermostat side of the main housing. You do not need to apply sealant to the thermostat housing. Just one side of that interface is sufficient.

9. Using supplied 8mm SHCS & BHCS, attach thermostat cover to main housing. Use button head in location shown to allow for EGR pipe clearance. Torque to 12-16 ft lbs. Fig D

10. Install supplied 5/8" hose barb with at least the first 4 threads covered in a light coat of sealant or PTFE "plumbers" tape. This is a tapered NPT thread so it will naturally begin to bind as it is rotated in. Use only modest torque to avoid cracking main housing. Fig E

Fig E

11. Install bleed nipple in top of housing, Fig D. Bleed nipple has pre-applied sealant and is 1/8 NPT tapered thread. It will naturally begin to bind as you rotate it in. Use only modest torque to avoid cracking housing.

12. Use supplied 1/8 NPT plugs where a port is left unused. Apply a small amount of supplied sealant or PTFE "plumbers" tape to threads.

NOTE *
If installing housing while engine is in the car, practice maneuvering it into place before applying sealant to housing. This is to avoid wiping off the sealant while negotiating in the tight space.

13. Apply supplied sealant to housing as shown in **Fig C**

NOTE *
Silicone hose will increase in length when the system is at operating temperature. Allow room for 1-2" in extra length when hot.

14. Install hose onto outlet without clamp to determine hose length. We ship the hose a bit too long so you can trim to fit around any fuel regulators or non OEM intake systems. Line up with radiator inlet to estimate length. Allow for hose growth as noted above. Cut hose cleanly. Large sharp shop scissors or sharp matte knife will do.

15. Remove hose to install supplied hose clamps. Clamp should be positioned just behind raised bead on inlet/outlet nipple. Snug clamps until you can just barely see hose bulge slightly next to the clamp. Too much torque will cut the hose. It's better to have a tiny leak on first start up that you fix by adding torque than over tightening and ruining the hose.

16. The smaller plate is used if you have removed the water neck on your head. Larger plate is to block off the water neck. Either way, you have a nice paper weight or key fob. You're welcome.

17. The larger plate is to cover the water neck after removing the OEM thermostat housing. The ports are for the OEM sensors. The plugs provided cover the auxiliary sensor port. Remove any remaining sealant or gasket material from neck. Apply sealant as shown in Fig C.

18. Fill system with desired coolant mixture.
- For street use, refer to your FSM for antifreeze to water ratio.
- For competition use, fill with distilled water, one pint of anti-freeze (corrosion inhibitor) and ½ bottle of Redline Water Wetter

19. To cold bleed system, open bleed valve. During filling from radiator, air will be forced out the bleeder valve. This is an important step to insure there are no air pockets in the rear of the system. Once the radiator is full, tighten the bleed valve.

20. To hot bleed the system, start the engine and run until the thermostat opens. Upper hose will suddenly get too hot to touch when the thermostat opens (<140°f). At that point, the system will push any remaining air trapped in the system through the top house and usually cause a brief overflow out the filler neck. If you are not using a funnel, stop the engine at this point. If using the Lisle 24680 funnel, leave the engine running as coolant level drops and add coolant. Top off the radiator and reservoir to the “hot” mark. Install the cap, start engine and check for leaks.

21. Reinstall hood. You are now ready for a brief test drive.

22. Test drive briefly while watching the coolant temp gauge. After returning from your brief test drive, open the hood on a dry patch of ground. Check for leaks both visually and also for coolant odor. There should be no hint of any coolant loss.

Congratulations. You now have the coolant flow the engine was originally designed to have. Pair it with or Crossflow radiator for ultimate cooling efficiency.

More info about the early Miata cooling system
https://www.miataturbo.net/race-prep-75/miata-cooling-system-thread-79930/