

STAGE 1 MIATA INTAKE "ELK" 1999-2005



The DDMWorks Intake replaces your Miata's restrictive air box with a beautiful stainless steel heat shield and free flowing foam filter.

Installation time of this intake depends on you and your mechanical skills. It is suggested that you read through these directions a few times to familiarize yourself with the components of the kit, and your car.

If you are pretty handy with tools the intake can be installed in under 15 minutes, however we suggest that you schedule at least an hour for the install.

If you have any questions during the installation you can call us at (864) 907-6004 or email us at Tech@ddmworks.com.

TOOLS NEEDED

- Socket wrench and 8" extension
- 10mm, 12mm, and 13mm extension
- Phillips and Flat head screwdriver

PACKING LIST

Description	Qty
Stainless Steel Intake / Heat Shield	1
Pre-oiled 2 3/4" Inlet Dual Stage UNI Foam Filter	1
Rubber Grommet (installed on heat shield)	1
13mm Hex head bolt (M8x20)	1
10mm Hex head bolts (M6X20)	4
Large flat washer (M8)	1
Large lock washer (M8)	1
Small flat washers (M6)	8
Small lock washers (M6)	4
M6 Nut	2
Short 10mm Hex head bolts (M6X10)	2

Before you start installing the intake you need to do the following:

1. Make sure the car has had time to cool as you will be working close to the engine.
2. Disconnect the negative terminal from the battery.

***** 99-05 Miata's with ABS require the relocation of the windshield washer bottle or trimming of the heat shield to fit the intake system. A universal reservoir can be purchased from an auto parts store although there are no exact instructions.**

Removal of Stock Filter Assembly

1. Remove the snorkel on the factory air box by removing the 10mm head hex bolt holding it in place. Once the bolt has been removed, the snorkel will pull off of the air box.
2. There is one 12mm head hex bolt holding the back of the airbox in place, remove that bolt. There is also a 12mm hex head nut holding the front of the airbox, remove that nut also.
3. Once you have removed the bolt and nut, gently pull on the intake air temp sensor located on the fender side of the air box. The intake air temp sensor will pull right out of grommet holding it in place. We also need to unplug the air flow meter that is on top of the factory air box. The air flow meter plug has a tab to push and will allow the plug to be pulled off of the air flow meter. Lastly there is a plastic slip holding the air intake temp wire to the air box, use needle now pliers to release that clip from the stock air box.
4. Once both the intake air temp sensor and the air flow meter are unplugged, use a Phillips screwdriver and loosen the hose clamp on the black factory crossover pipe that is attached to the air flow meter. After you loosen this hose clamp, gently pull the crossover pipe off of the air flow meter. You should be able to remove the factory air box from the car at this point. Take the factory air box and set it aside for now.
5. We need to remove the factory relays located behind the headlight on the black piece of vertical plastic. Using your 10mm socket wrench, loosen the nuts and bolts holding the relays in place and remove the relays from the vertical plastic piece. Keep the bolts and nuts in a safe place, we will be re-using them later.
6. Next remove the black plastic vertical piece by removing the 10mm head bolt holding the front of it and the 10mm nut holding the back, remove this piece from the car, it will not be re-used.
7. Now we need to remove the metal support bracket that was under the factory air box. This bracket is held in place with two 10mm head bolts. Use your socket wrench to remove these bolts and then remove the metal bracket from the car, it will not be re-used.
8. Now find the factory air box that we removed earlier, we need to remove the air flow meter from the air box. There are two 10mm head bolts holding the air flow meter in place, remove both of these bolts. Once those bolts are removed the air flow meter will pull out of the air box. Just pull gently and make sure you do not put your fingers inside of the air flow meter, as you can damage it.
9. Your car should look like the picture, if so, we are now ready to install the new intake on your car.



Installation of the Intake

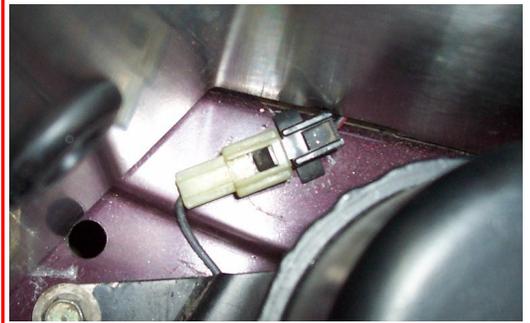
1. Now that we have removed all of the old intake, it is time to start to install the parts for the new intake.
2. Find the Stainless Steel intake heat shield in the kit. We will first install the air flow meter onto this intake, before installing the intake in the car. Use the two 10mm head bolts that you removed from the air flow meter earlier to attach the air flow meter to the new intake heat shield.
3. Once you tighten up the bolts holding the air flow meter to the new intake shield, place the new intake into the car. You will need to get the hardware bag that came with your kit and remove the included bolts. Use the 13mm head bolt, lock washer and flat washer to secure the back of the intake. Next secure the middle of the intake with a

Hint: Get all of the bolts started before tightening any of them down, this will make it easier to get all of the bolts to line up correctly.

10mm head bolt, lock washer and flat washer. The last bolt to put in is in the front of the intake, line the front mounting tab up with the hole in the chassis and secure the front of the intake with the last 10mm head bolt, lock washer and flat washer.

4. Next find the plug that went to the air flow meter and plug it back into the air flow meter. Also put the air temp sensor back into the rubber grommet on the new intake. This can be a little tight, if you have a hard time getting it to go through the grommet, you can lube the grommet with a little liquid soap and then hose off the soap after installation.
5. Now we will put the factory crossover pipe back on the air flow meter, you will need to stretch it over to the new location of the air flow meter a little. Once you get the crossover pipe onto the air flow meter, tighten down the hose clamp with a Phillips screwdriver.
6. Find the bolts and nuts that held on the relays we removed earlier and re-attach the relays to the new intake in the two holes provided for them near the front of the intake.
7. Lastly, remove the new foam filter and install it directly onto the end of the air flow meter. Usually you will need to loosen the hose clamp on the new filter a couple turns to make it loose enough to fit over the air flow meter. Once you get the new filter installed, tighten the hose clamp back down.
8. Check and make sure that the air flow meter wire and the air intake temp wire are not close to any moving parts.
9. Close the hood and go enjoy your new intake!

On cars equipped with power steering there is a wire that goes under the intake to a connector by the power steering reservoir. That connector has to be rotated in order for the new intake to bolt correctly into place.



Congratulations!

You did it! If you have any questions feel free to call or send us an email. If you have a digital camera, send us a picture of the intake installed on your car, we would love to see it!

DDMWorks
Automotive Performance Specialists

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