

# CorkSport Power Series Stage II Intake

2007-2013 Mazdaspeed 3



Thank you for purchasing the CorkSport Mazdaspeed 3 Short Ram Intake Stage II. Installing the CorkSport Power Series Stage II Intake will reduce intake restrictions and provide an impressive improvement in power. Thanks to the included turbo inlet pipe you will also increase your stock inlet pipe flow by 14%. With gains of up to 25 lb/ft of torque and 33 HP the Short Ram Intake Stage II is the best bang for your buck modification possible.

Feel free to submit a review at:

<http://www.corksport.com/corksport-power-series-short-ram-intake-2010-mazdaspeed-3.html>



## Pre-Installation Notes:



**Disconnection of battery, removal of battery box and Vehicle ECU are required for installation.** Consult factory service manual or owners manual for your car for specific details on disconnection of battery. Bridging the terminals on the battery can cause SERIOUS damage to vehicle electronics and can cause injury.



**How our instructions work:** To best cover all of our customers experience levels, we have included an overview checklist for the more technically advanced users along with step-by-step instructions for customers that require additional detail.



**These instructions were written for reference only** and the use of a factory service manual is recommended. Please read these instructions thoroughly prior to starting installation

## Materials and Time:



### General Info.

Part #: Axl-6-118  
Time Est: 60-90 min  
Wrench Rating: 2/5



### Tooling List

3/8 Drive Ratchet  
6" 3/8 Drive Extension  
12" 3/8 Drive Extension  
8mm deep socket  
10mm deep socket  
12mm deep socket  
Phillips Screwdriver  
Long nose Angled Pliers  
Silicone Spray



### Parts List

4x 83-91mm T-Bolt Clamps  
1x 63-71mm T-Bolt Clamp  
1x45 Degree Silicone Elbow  
1xCorkSport Turbo Inlet Pipe  
1x 58-63mm T-Bolt Clamp  
1x 63-71mm T-Bolt Clamp  
1x 2" to 2.25" Silicone Reducer  
10" Long Large ID Silicone Hose  
6" Long Small ID Silicone Hose  
1x MAF assembly  
1x Dryflow Filter

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## Checklist

This is an overview of each step in the build. You can use this as a reference and a checklist as you button up the work on your car

### 1. Remove the Factory Intake and Filter Housing.

- a) Remove the top mount intercooler cover (TMIC).



Now is a good time to look at your intercooler and see if you have any bent fins or debris lodged in the intercooler fins. Removing debris and straightening the fins will improve the performance of the intercooler.

- b) Loosen the two (2) 10mm hose clamps on the factory rubber intake elbow. (red circle and green circle in Figure 1b).
- c) Unplug the MAF housing sensor. (green circle in Figure 1c).
- d) Remove the two 10mm bolts on the air filter housing bracket and remove the bracket (shown in red circle in Figure 1c).
- e) Remove the valve cover breather tube. (Figure 1d)




[video support on removal of the valve cover breather hose located in knowledgebase](#)



- f) Pull up on the filter housing and remove from car.

### 2. Remove the Battery and ECU.

- a) Remove the battery box cover .
  - b) Disconnect the battery. Refer to Figure 2b for negative (-) and positive terminals (+). Disconnect the negative terminal of the battery first before the positive terminal.
  - c) Remove the two 10mm nuts for the battery tie down bracket (Shown with red circles in Figure 2b).
  - d) Remove the battery from the battery box.
  - e) Remove the front battery box panel.
  - f) Disconnect the ECU plugs by pushing on the tab (Red Arrow in Figure 2c) and pulling the white lock upward simultaneously (Green Arrow in Figure 2c).
-  When done correctly, this process should be effortless.
- g) Remove the battery box. Remove the three 10mm bolts in the bottom of the box, and remove the battery box and ECU (Red Circles Figure 2d).
  - h) Remove the hose clamps and recirculation valve hose. You will be re-installing this later.
  - i) Remove the 10mm nut that holds the stock turbo inlet pipe in place (blue circle in Figure 2f).
  - j) Remove the two wiring harness clips (red arrows in Figure 2f) located on the stock turbo inlet pipe.

## Checklist

### 2. Remove the Battery and ECU Continued....

- k) Using needle nose pliers, remove the hose** from solenoid fitting on the stock turbo inlet pipe and the boost control solenoid (identified in **Figure 2f** and **Figure 2g** by **blue** arrow).



Be very careful to not break the nipple off the boost control solenoid.



If you are having difficulty getting it loose, try rotating the hose to break the seal of the rubber to the plastic fitting and then pulling straight up. It takes a little force, but cleanly comes off.

- l) Remove the plastic inlet pipe from the turbocharger.**

### 3. Assemble the CorkSport Turbo Inlet Pipe (TIP)

- a) Assemble the turbo inlet pipe** (shown in **Figure 3a**). First place the silicone reducer on the end of the TIP. Then, add the 57-65mm T-bolt clamp to the turbo side and the 63-71mm T-bolt clamp to the turbo inlet pipe side.
- b) Remove the factory mounting grommet and washer from the factory TIP and install it on the CorkSport TIP.**
- c) Add the 6" of silicone tubing to the CorkSport TIP** (Shown with **blue arrow** in **Figure 3a**).

### 4. Installing the CorkSport Turbo Inlet Pipe



- a) Place the CorkSport TIP in a similar orientation to the factory pipe.** Feed the silicone coupler end of the TIP toward the turbocharger inlet. Align the bracket on the CorkSport Turbo Inlet pipe with the stud on the valve cover bracket and connect the silicone coupler over the end of the turbocharger compressor inlet.
- b) Attach the bracket on the CorkSport Turbo Inlet** over the stud on the factory valve cover bracket and start the nut onto the stud (shown in **Figure 4a**). Then tighten the t-bolt band clamp at the turbocharger compressor inlet with 10mm deep socket and 12" extension.
- c) Connect the 6" small ID silicone tubing to the boost control solenoid** (shown **blue arrow** in **Figure 2f**).
- d) Connect the 12" long large ID Silicone tubing from the turbo inlet pipe to the valve cover.**
- e) Install the factory recirculation valve hose** between the recirculation valve and the lower pipe on the CorkSport Turbo Inlet
- f) Install the battery box back into place**, with three 10mm bolts (shown in **Figure 2d**).
- g) Install the ECU connectors** and latch the cam locks to seat the connectors into the ECU. Install the ECU cover over the connectors (shown in **Figures 2b & 2c**).
- h) Place the battery into the battery box.**
- i) Install the battery tie down with 10mm socket wrench.**


## Checklist

### 4. Installing the CorkSport Turbo Inlet Pipe Continued...

- j) Install the positive battery cable onto its terminal and tighten the 10mm nut. Install the negative battery cable onto its terminal and tighten the 10mm nut.
- k) Install the front cover onto the battery box and snap the wiring harness clips into place (shown in **Figures 2b**) Finish by installing the battery box top.
- l) Install the intercooler cover.

### 5. Installing the CorkSport Intake

- a) Install the CorkSport silicone elbow onto the turbo inlet pipe using the 63-71 T-bolt clamp. Do not tighten hose clamp yet.
- b) Remove the MAF sensor from factory air box and install it into the CS MAF housing using the supplied Allen screws .
-  You might want to use a drop of oil or silicone spray on the o'ring to help install it into the aluminum housing.
-  Caution, MAF sensor is sensitive to dirt and damage. Do not drop or place anywhere that is not clean.
- c) Install MAF using the 83-91 T-bolt clamp into the CS silicone elbow (**Figure 5f**). Pay close attention to the AIRFLOW arrow on the side of the MAF housing. It should point towards the silicone elbow.
- d) Connect MAF sensor Wiring. (Reference **Figure 1c**).
- e) Install CS air filter onto the end of the MAF housing using the 83-91 T-bolt clamp (**Figure 5g**).
- f) Adjust the silicone elbow so that the MAF and filter and sitting level in the car (shown in **Figure 5g**) and tighten all the hose clamps.


 This completes the installation of your CorkSport StageII Intake. if there are issues with the idle, check your connections - hose clamps for tightness and check to make sure the MAF sensor is fully seated in the housing and not cocked at a non parallel angle relative to the housing surface. After a test drive, recheck all hose clamps again for tightness.

## Detailed Instructions

 These installation instructions were written using a 2010 Mazdaspeed 3. Other year Mazdaspeed3 models will be similar

### 1. Remove the Factory Intake and Filter Housing.

a) Remove the top mount intercooler cover (TMIC) by removing the two 10mm bolts (Red Circles in Figure 1a).

 Now is a good time to look at your intercooler and see if you have any bent fins or debris lodged in the intercooler fins. Removing debris and straightening the fins will improve the performance of the intercooler.

b) Loosen the two (2) 10mm hose clamps on the factory rubber intake elbow. (red circle and green circle in Figure 1b).

c) Unplug the MAF housing sensor located on the air filter housing (green circle in Figure 1c).

d) Remove the two 10mm bolts on the air filter housing bracket and remove the bracket (shown in red circle in Figure 1c).

e) Remove the valve cover breather tube. Push the hose connector toward the valve cover and press both sides of the colored clip simultaneously, and then pull the hose away from the valve cover (Figure 1d).



[Video support on removal of the valve cover breather](#)



f) Pull up on the filter housing to pop it free from the car and remove it along with the intake elbow and breather tube.

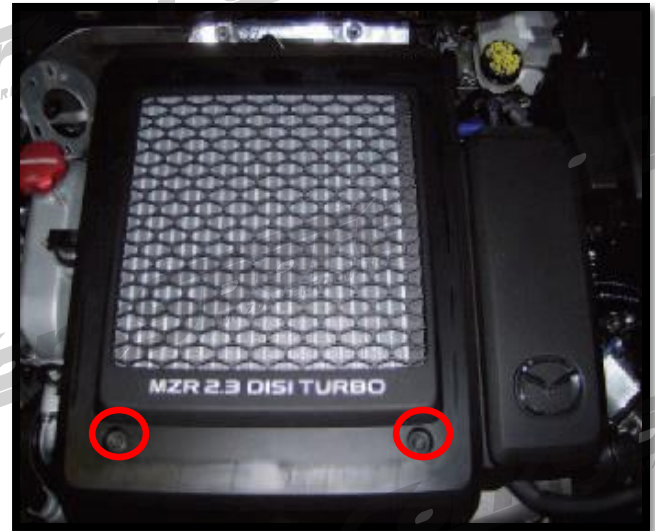


Figure 1a

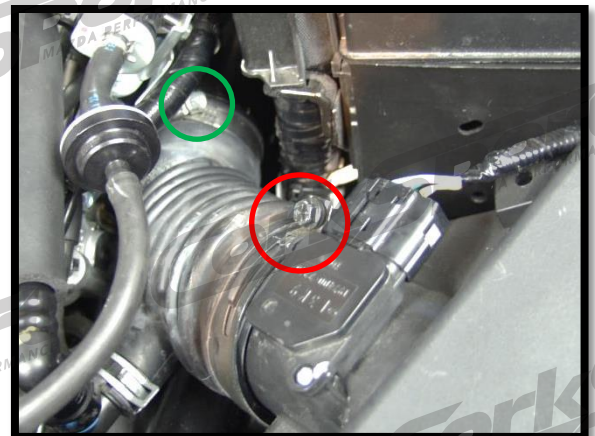


Figure 1b

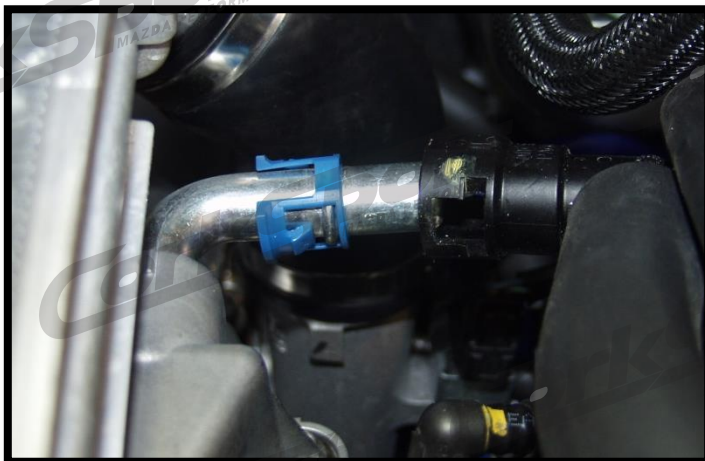


Figure 1d

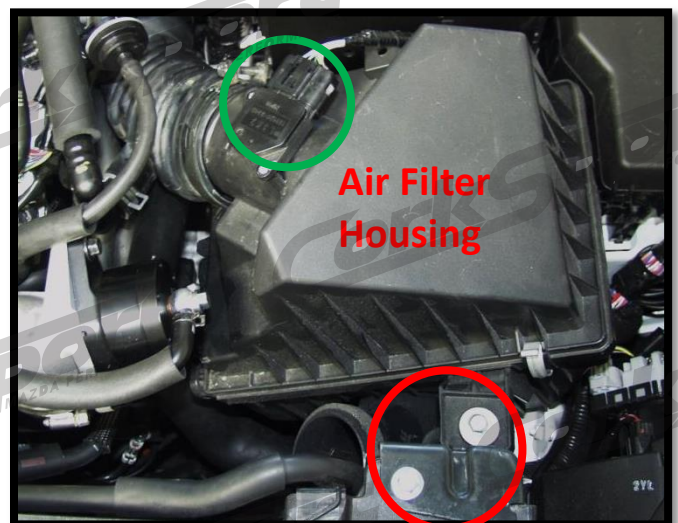



Figure 1c

## 2. Remove the Factory Turbo Inlet Pipe

- a) **Remove the battery box cover** . The cover is held on with two clips (shown with **red arrows** in **Figure 2a**). Pry the clips outward by hand and lift the front of the lid off of the box.
- b) **Disconnect the battery**. Disconnect the battery terminals with a 10mm end wrench. Refer to Figure 2b for negative (-) and positive terminals (+). Disconnect the negative terminal of the battery first before the positive terminal. Terminals shown with symbols in **Figure 2b**.
- c) **Remove the two 10mm nuts for the battery tie down bracket** (Shown with **red circles** in **Figure 2b**).
- d) **Remove the battery** from the battery box.
- e) **Remove the front battery box panel**. Remove the MAF wiring harness clip (**Blue Circle Figure 2b**), and negative battery cable clip (**Purple Circle Figure 2b**), from the front battery box panel using needle nose pliers to compress the clips on the inside of the battery box. Then slide the panel upwards and remove it. (**Green Arrow** in **Figure 2b**)
- f) **Disconnect the ECU plugs** by pushing on the tab (**Red Arrow** in **Figure 2c**) and pulling the white lock upward simultaneously (**Green Arrow** in **Figure 2c**). Refer to **Figure 2b** for location of ECU plugs and **Figure 2c** for close ups.
  -  When done correctly, this process should be effortless.
- g) **Remove the battery box**. Remove the three 10mm bolts in the bottom of the box, and remove the battery box and ECU (**Red Circles Figure 2d**).

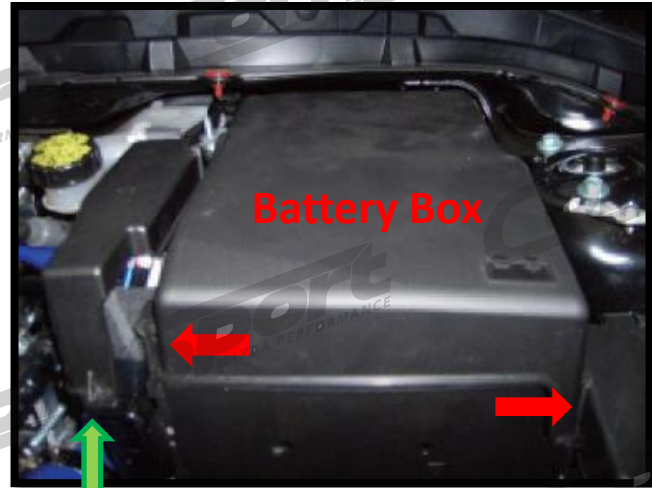


Figure 2a

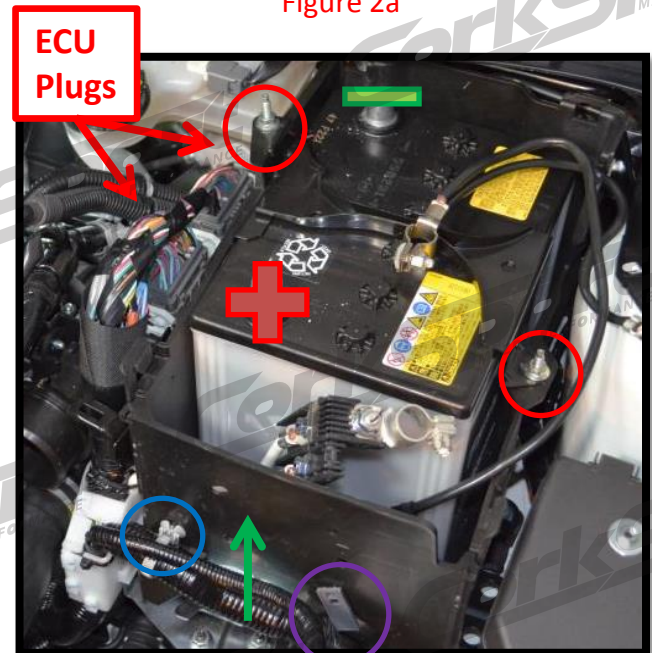


Figure 2b

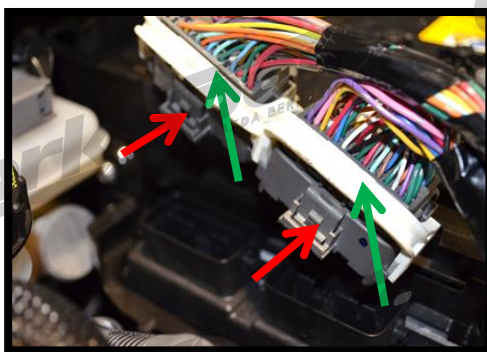


Figure 2c

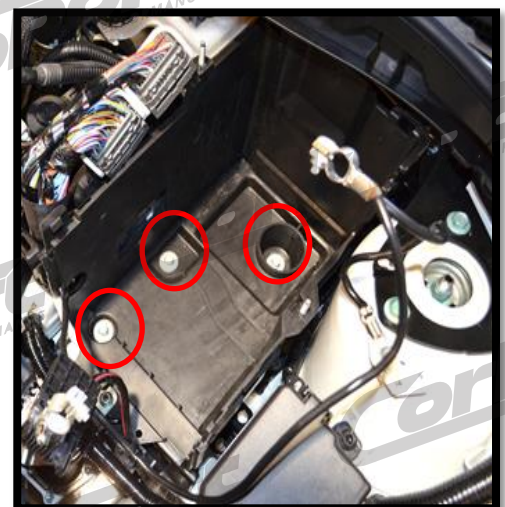


Figure 2d

## 2. Removing the Factory Turbo Inlet Pipe Continued...

- h) Using pliers, release the hose clamps (red circles in Figure 2e) located on the recirculation valve hose. Remove the hose from the car and save. You will be re-installing this later.
- i) Remove the 10mm nut that holds the stock turbo inlet pipe in place (blue circle in Figure 2f).

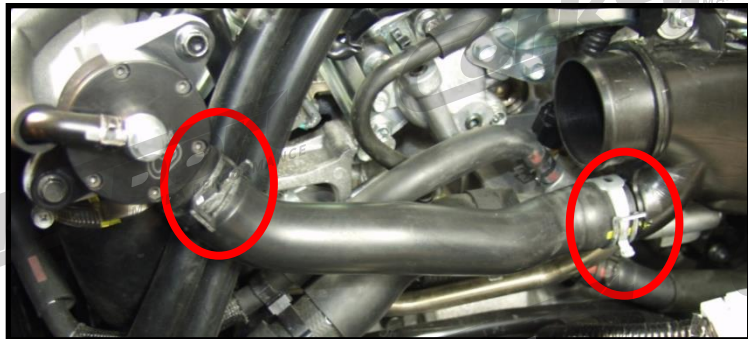


Figure 2e

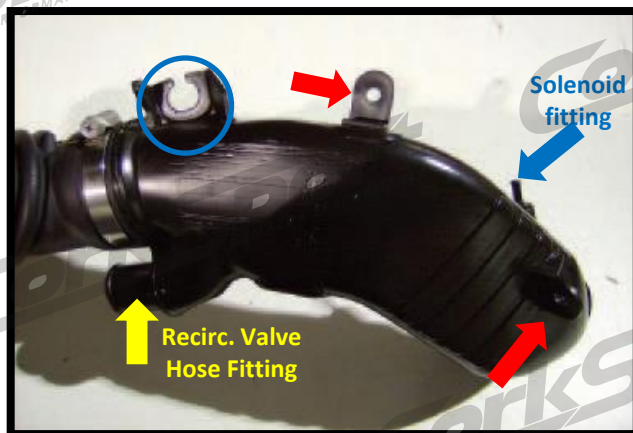


Figure 2f

- j) Remove the two wiring harness clips (red arrows in Figure 2f) located on the stock turbo inlet pipe.
- k) Using needle nose pliers, remove the hose from solenoid fitting on the stock turbo inlet pipe and the boost control solenoid (identified in Figure 2f and Figure 2g by blue arrow).



Be very careful to not break the nipple off the boost control solenoid.



If you are having difficulty getting it loose, try rotating the hose to break the seal of the rubber to the plastic fitting and then pulling straight up. It takes a little force, but cleanly comes off.

- l) Remove the plastic inlet pipe from the turbocharger. Loosen the 10mm hose clamp at the turbo inlet, pull the stock turbo inlet pipe off of the turbocharger, and remove it from the car.



Figure 2g

## 3. Assemble the CorkSport Turbo Inlet Pipe (TIP)

- a) Assemble the turbo inlet pipe (shown in Figure 3a).

First place the silicone reducer on the end of the TIP. Then, add the 57-65mm T-bolt clamp to the turbo side and the 63-71mm T-bolt clamp to the turbo inlet pipe side. The T-bolt band clamp that holds the silicone tubing to the turbocharger compressor housing should just be tightened down slightly, but still loose on the silicone coupling.

- b) Remove the factory mounting grommet and washer from the factory TIP and install it on the CorkSport TIP location (blue on factory TIP shown Figure 2e and circled in green in Figure 3a).

- c) Add the 6" of silicone tubing to the CorkSport TIP (Shown with blue arrow in Figure 3a).

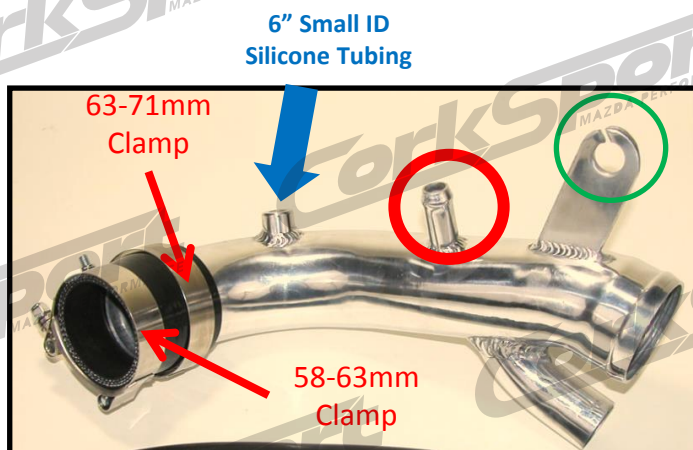


Figure 3a

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#### 4. Installing the CorkSport Turbo Inlet Pipe

a) Place the CorkSport TIP in a similar orientation to the factory pipe. Feed the silicone coupler end of the TIP toward the turbocharger inlet. Align the bracket on the CorkSport Turbo Inlet pipe with the stud on the valve cover bracket and connect the silicone coupler over the end of the turbocharger compressor inlet, taking care to keep the loose hose clamp in place (shown in **Figure 4a**). This should fit easily - if not, the t-bolt band clamp is probably too tight.

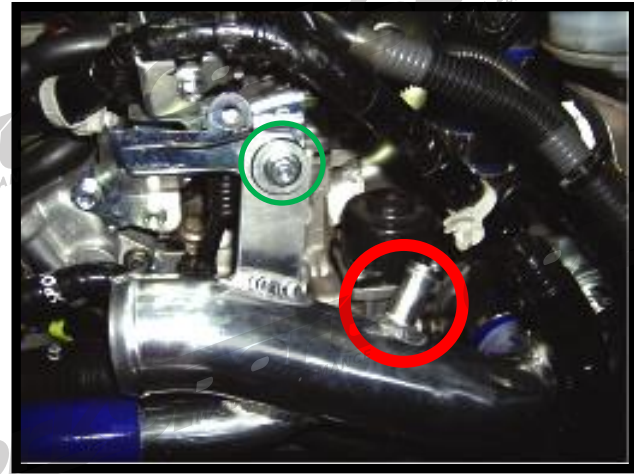


Figure 4a

b) Attach the bracket on the CorkSport Turbo Inlet over the stud on the factory valve cover bracket and start the nut onto the stud (shown **green circle** in **Figure 4a**). Check to ensure that the silicone coupling is still fully engaged between the turbocharger and turbo inlet pipe and tighten the nut the rest of the way. Adjust as needed before tightening the nut. Then tighten the t-bolt band clamp at the turbocharger compressor inlet with 10mm deep socket and 12" extension.



Figure 4b

c) Connect the 6" small ID silicone tubing to the boost control solenoid (shown **blue arrows** in **Figure 4c**).

d) Connect the 12" long large ID Silicone tubing from the turbo inlet pipe to the valve cover. Make sure to route the hose so it doesn't interfere with wiring, pinch or kink. Shown with **red arrows** in **Figure 4c** after full install.

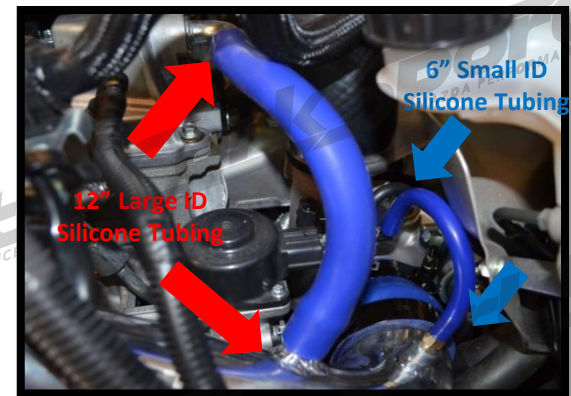


Figure 4c

e) Install the factory recirculation valve hose between the recirculation valve and the lower pipe on the CorkSport Turbo Inlet (reuse the factory spring clips circled in **Figure 4b**).

f) Install the battery box back into place, with three 10mm bolts (shown in **Figure 2d**). Feed the battery terminal lines through the cutouts in the box.

g) Install the ECU connectors and latch the cam locks to seat the connectors into the ECU. Install the ECU cover over the connectors (shown in **Figures 2b & 2c**).

h) Place the battery into the battery box.

i) Install the battery tie down with 10mm socket wrench.

j) Install the positive battery cable onto its terminal and tighten the 10mm nut. Install the negative battery cable onto its terminal and tighten the 10mm nut.

k) Install the front cover onto the battery box and snap the wiring harness clips into place (shown in **Figures 2b**) Finish by installing the battery box top.

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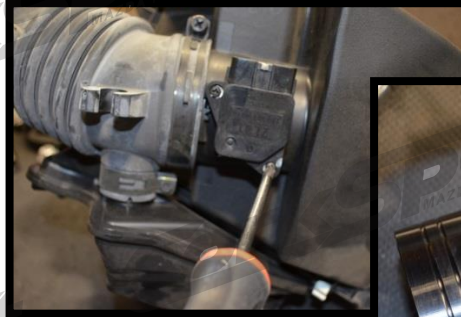


**4. Installing the CorkSport Turbo Inlet Pipe Continued...**

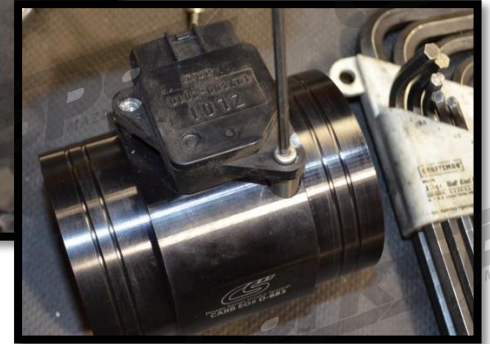
- l) **Install the intercooler cover**, making sure that the metal bracket under the cover is latched onto the tab in the back of the intercooler tank casting. Lower the front of the intercooler cover and install the two 10mm head bolts hand tight. (Shown in **Figure 1a**)

**5. Installing the CorkSport Intake**


- a) **Install the CorkSport silicone elbow** onto the turbo inlet pipe using the 63-71 T-bolt clamp. Do not tighten hose clamp yet.
- b) **Remove the MAF sensor from factory air box and install it into the CS MAF housing** using the supplied Allen screws . Remove with Philips head screw driver (Shown **Figure 5a**). Install with 3mm Allen being sure not to pinch the o’ring when installing the MAF sensor into the MAF housing (Shown in **Figure 5b**).




**Figure 5a**

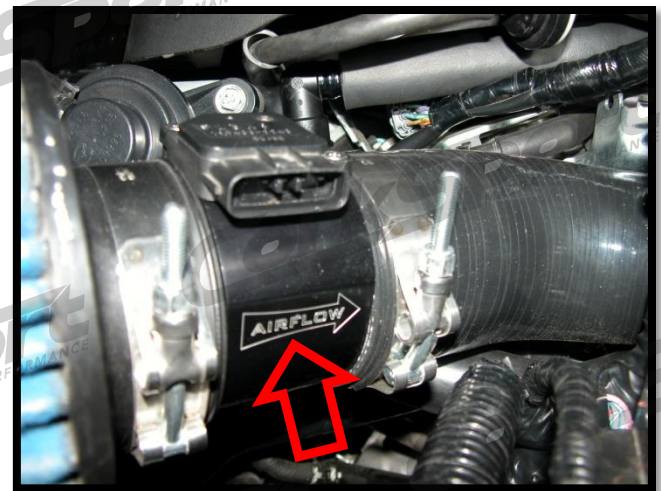


**Figure 5b**

 You might want to use a drop of oil or silicone spray on the o’ring to help install it into the aluminum housing.

 **Caution**, MAF sensor is sensitive to dirt and damage. Do not drop or place anywhere that is not clean.

- f) **Install MAF using the 83-91 T-bolt clamp into the CS silicone elbow** (**Figure 5c**). Pay close attention to the AIRFLOW arrow on the side of the MAF housing. It should point towards the silicone elbow.
- g) **Connect MAF sensor Wiring.** (Reference **Figure 1c**).



**Figure 5c**

- h) **Install CS air filter onto the end of the MAF housing** using the 83-91 T-bolt clamp (**Figure 5d**).
- i) **Adjust the silicone elbow so that the MAF and filter and sitting level in the car** (shown in **Figure 5d**) and tighten all the hose clamps.



This completes the installation of your CorkSport StageII Intake. if there are issues with the idle, check your connections - hose clamps for tightness and check to make sure the MAF sensor is fully seated in the housing and not cocked at a non parallel angle relative to the housing surface. After a test drive, recheck all hose clamps again for tightness.



**Figure 5d**

## What's Next:

**Reduce the throw of your shifter and improve precision and performance.** Improve your shifting times and shifter feel with the CorkSport Mazdaspeed 3 Short Shift Plate Kit. Providing an adjustable 20-32% throw reduction, the CorkSport Mazdaspeed 3 Short Shift Plate is designed for spirited driving and will reduce throw while keeping the height of the OEM shifter unchanged.

<http://www.corksport.com/corksport-mazdaspeed-short-shift-plate.html>



**Get improved handling and road feel while maintaining a comfortable ride with the CorkSport Rear Motor Mount for Mazdaspeed 3.** Designed as a direct OEM replacement, the CorkSport Mazdaspeed 3 Rear Motor Mount maintains OEM fitment while adding a large urethane thrust surface for added stiffness and improved driver responsiveness.

<http://www.corksport.com/corksport-mazdaspeed-3-mazda-3-race-rear-motor-mount.html>



**Get optimal flow and minimal back pressure with the a CorkSport Mazdaspeed 3 Power Series Exhaust.** Gain extra power while improving the sound of your car with a Cat Back Exhaust system. Available for both Generation 1 and Generation 2 models you will up to 12whp power increases accompanied by the awe inspiring growl of a CorkSport exhaust.

Get the 2007-2009 Version Here:

<http://www.corksport.com/corksport-power-series-mazdaspeed-3-exhaust-system.html>



Get the 2010-2013 Version Here:

<http://www.corksport.com/corksport-2010-mazdaspeed-3-cat-back-exhaust.html>



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