

# CorkSport Cold Air Intake

2007+ Mazdaspeed 3



**Thank you for purchasing the CorkSport Mazdaspeed 3 Cold Air Intake.** Installing the CorkSport Power Series Cold Air Intake will reduce intake restrictions and provide an impressive improvement in power throughout the entire engines RPM range. The CorkSport Mazdaspeed 3 Cold Air is Interchangeable with the CorkSport Stage Two Power Series Short Ram Intake so you can run your short ram intake during the winter and your cold air intake during the summer months for optimal performance gains. We hope you enjoy your new CAI. Please let us know your feedback by submitting a review at: <http://www.corksport.com/corksport-stage-iii-cold-air-intake-for-the-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-6-216  
**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 long socket  
 10mm long socket  
 12mm long socket  
 Phillips Screwdriver  
 Longnose Angled Pliers  
 Wire Cutters  
 Channel Lock Pliers  
 Silicone Spray  
 Flashlight



### Parts List

1x Cold Air Intake Pipe  
 1x Silicone Hump  
 1x Rubber Isolator  
 2x M6 nut  
 4x 83-91mm T-Bolt Clamps  
 1x 63-71mm T-Bolt Clamp  
 1x45 Degree Silicone Elbow  
 1x MAF assembly  
 1x Dryflow Filter  
**Optional Turbo Inlet Pipe**  
 CorkSport Turbo Inlet Pipe  
 1x 58-63mm T-Bolt Clamp  
 1x 63-71mm T-Bolt Clamp  
 1x 2" to 2.25" Silicone Reducer  
 6" Long Small ID Silicone Hose

### Cold Air Intake Upgrade Parts:

1x Cold Air Intake Pipe  
 1x Silicone Hump  
 1x Rubber Isolator  
 2x M6 nut  
 2x 83-91mm T-Bolt Clamps

**Gen1 Mazdaspeed3 Only:**  
 Drill and 1/4" or 5/16" drill bit

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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



These instructions were written for a install of the CorkSport Cold Air intake replacing all the original intake from the factory. If you purchased this as an upgrade to an existing intake start at Step 7a. All other intakes will start at the beginning of these instructions.

### 1. Removing Factory Intake

- a) Remove the top mount intercooler cover (TMIC) by removing the two 10mm bolts (Figure 1a)  
 Now would be a good time to take a 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) Unplug the MAF housing sensor located on the air box (shown in green circle in Figure 1c)
- c) Loosen the 10mm hose clamp bolt connecting the factory rubber intake elbow to the air box (shown in red circle in Figure 1b)
- d) Remove the two 10mm bolts on the air box bracket and remove the bracket (Shown in red circle in Figure 1c)
- e) Pull up on the intake box to pop it free from the car and remove it
- f) Remove the valve cover breather tube connected to the factory rubber intake elbow (circled in red Figure 1d). You will need to press in on both sizes of the blue clip to pull it off of the connection.
- g) Loosen hose clamp (circled in green in Figure 1b) from intake elbow to factory turbo inlet pipe and remove elbow.
- h) Loosen the hose clamp and remove the valve cover fitting from the factory elbow (shown in Figure 1e)

### 2. Removing the Factory Turbo Inlet Pipe






If you did not purchase a turbo inlet pipe with your CorkSport Cold Air Intake proceed to Step 5a. If you purchased the optional turbo inlet pipe continue with Step 2a.

- a) Remove the battery box cover . The cover is held on with two clips (shown in Figure 2b).
- b) Remove the Battery. First, Disconnect the battery terminals with a 10mm end wrench. Disconnect the negative terminal of the battery first before the positive terminal. Next, Remove the two 10mm nuts for the battery tie down bracket (shown in Figure 2c). Finally lift the battery out of your car and place it in a safe location.
- c) Disconnect the three wiring tie downs on the battery box and remove the front cover. Remove all three connectors (shown in Figure 2d) and remove the front cover of the battery box.
- d) Remove the cover from the engine control unit (ECU) if you have not already by disconnecting the latch (see Figure 2e for location of ECU cover and latch).

## Checklist

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

- e) **Disconnect the two ECU plugs** by depressing the hasp below the white camlock latch of the plug housing (shown in **Figure 2f**).
  -  When done correctly, this process should be effortless.
- f) **Remove the (3) 10mm bolts from the floor of the battery box** (shown in **Figure 2g**) using a ratchet, 10mm socket and 6" 3/8" drive extension. Remove the battery box and ECU.
- g) **Using pliers release the hose clamp** (shown in **Figure 2j** and **Figure 2i** with a yellow arrow) located on the recirculation hose that is attached to the recirculation valve (BOV) and plastic turbo inlet pipe. Move the hose clamps away from the fittings and remove hose.
- h) **Remove the 10mm nut that holds the stock turbo inlet pipe in place** (location shown in **Figure 2i**).
- i) **Disconnect Boost Solenoid Line** using **Figure 2i** as a reference. Then, remove the two wiring harness clips (shown with **the red arrows** in **Figure 2i**) located on the stock turbo inlet pipe.
  -  Be very careful to not break the nipple off the boost control solenoid (**Figure 2k**). It is plastic so the solenoid can be broken easily. Heat and time make these extremely brittle.
- j) **Using needle nose pliers, remove the hose** from solenoid fitting on the stock turbo inlet pipe and the boost control solenoid (identified in **Figure 2i** by **blue** arrows) and in **Figure 2k** with a **blue** arrow.
  -  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 comes off cleanly.
- k) **Remove the plastic inlet pipe from the turbocharger.** Loosen the hose clamp and pull the stock turbo inlet pipe off the turbocharger.

### 3. Assemble the CorkSport Turbo Inlet Pipe


- a) **Assemble the turbo inlet pipe** (shown in **Figure 3a**). 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 (circled in **green** in **Figure 3a** and **blue** on factory TIP shown **Figure 2i**).
- c) **Add the 6" silicone tubing to the CorkSport TIP** (shown with **blue arrow** in **Figure 3a**).

## Checklist

### 4. Installing the CorkSport Turbo Inlet Pipe

- a) **Place the CorkSport TIP in a similar orientation to the factory pipe.** Connect the 2" diameter silicone coupling 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.
- b) **Attach the bracket on the CorkSport Turbo Inlet** (shown 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.
- c) **Connect the 6" silicone tubing to the boost control solenoid** (shown in **Figure 2k**).
- d) **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**).
- e) **Install the battery box back into place**, with three 10mm bolts (shown in **Figure 2h**). Feed the battery terminal lines through the cutouts in the box.
- f) **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 **Figure 2f**).
- g) **Install the battery into the battery box** (shown in **Figure 2d**). Finish by installing the battery box top.
- h) **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 breather tube fitting that was removed in Step 1h** into the CS silicone elbow facing up (as shown in **Figure 5a**). It may need to be adjusted to the correct angle when elbow is installed.
- b) **Install the CorkSport silicone elbow** onto the factory or CorkSport turbo inlet pipe using the 63-71 T-bolt clamp. Do not tighten hose clamp yet.  
 You may have to remove the nut from the clamp to fit it over the silicone. It's a tight fit.
- c) **Remove MAF sensor from factory air box and install** into the CS MAF housing using the supplied Allen screws (Allen screws shown in **Figure 5b**) that are preinstalled in the MAF housing. Install the MAF and sensor (shown in **Figure 5c**).
- d) **Install MAF using the 83-91 T-bolt clamp into the CS silicone elbow** (shown in **Figure 5c**).
- e) **Connect MAF sensor**






The CorkSport Cold Air Intake is designed to be converted back and forth from Short Ram intake to Cold Air Intake. Use Step 6 for the Short Ram Intake and Step 7 for the Cold Air Intake installation.

## Checklist

### 6. Installing the CorkSport Short Intake

- a) Install CS air filter onto the end of the MAF housing using the 83-91 T-bolt clamp (shown in **Figure 6a**).
- b) Connect the valve cover breather tube (shown in **Figure 1d**) to the fitting on the silicone elbow.
- c) Adjust the silicone elbow so that the MAF and filter and sitting level in the car (**Figure 6b**) and tighten the hose clamps.

### 7. Installing the CorkSport Cold Air Intake

- a) Disconnect your filter from the MAF housing if you already have a filter installed from your SRI otherwise move on to step 7b.
- b) Install the hump coupler onto the MAF using a 83-91 hose clamp. Your intake should look like **Figure 6a** at this point.
  -  Depending on how low your car is you may need to jack the side of your car up for access to the next step
  -  If you do need to jack the side of your car up follow the manufacture recommended directions when doing so to prevent damage or injury.
- c) On the bottom of the drivers side bumper you will need to remove the (3) 10mm bolts holding the fender liner (see **Figure 7b**).
- d) Pull the fender liner down and you will see on the frame rail an empty bolt hole (shown in **Figure 7c**).
- e) Thread the M6 head isolator provided so the isolator is on the inside of the frame rail (shown in **Figure 7d**).
  -  For Gen1 fitment: You will need to drill a 5/16" hole in the location shown circled in **Figure 7e**. You can then put the isolator through the hold on the engine bay side and tighten down the provided 10mm head nut.
- f) From the top, feed the cold air intake tube down, connect the bracket onto the bolt end of the isolator and install the nut provided in the kit (see **Figure 7f** and **Figure 7d** for a close up).
- g) Install the air filter on the end of the CAI cold pipe using a 83-91 hose clamp (see **Figure 7g**).
- h) Reinstall the flap on the bottom of the bumper with the three 10mm bolts.
- i) Connect the CAI into the hump silicone using a 83-91 hose clamp (see **Figure 7h**). With everything aligned, tighten all of the hose clamps.



This completes the installation of your Cold Air Intake. You are now ready to start the car. If there are issues with the idle, check your connections. Check 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. Check out our [knowledgebase](#) for additional install information.

## Detailed Instructions

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



These instructions were written for a install of the CorkSport Cold Air intake replacing all the original intake from the factory. If you purchased this as an upgrade to an existing stage II intake start at Step 7a. All other intakes will start at the beginning of these instructions.

### 1. Removing Factory Intake

- a) Remove the top mount intercooler cover (TMIC) by removing the two 10mm bolts (Figure 1a)

Now would be a good time to take a 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) Unplug the MAF housing sensor located on the air box (shown in green circle in Figure 1c).
- c) Loosen the 10mm hose clamp bolt connecting the factory rubber intake elbow to the air box (shown in red circle in Figure 1b).
- d) Remove the two 10mm bolts on the air box bracket and remove the bracket (Shown in red circle in Figure 1c).
- e) Pull up on the intake box to pop it free from the car and remove it
- f) Remove the valve cover breather tube connected to the factory rubber intake elbow (circled in Figure 1d). You will need to press in on both sides of the blue clip to pull it off of the connection.

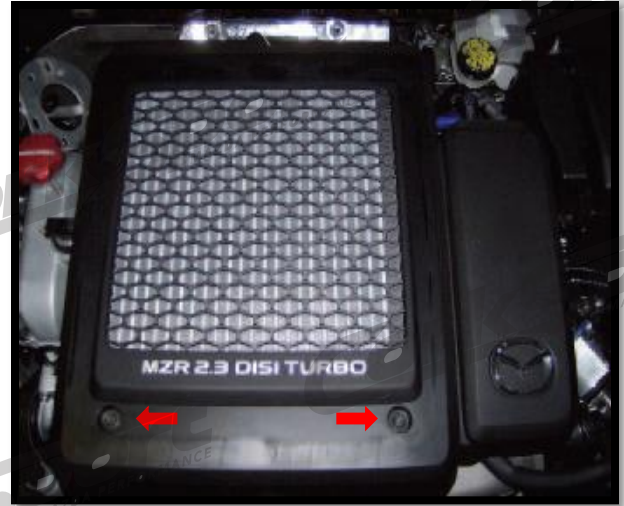


Figure 1a



Figure 1b



Figure 1d

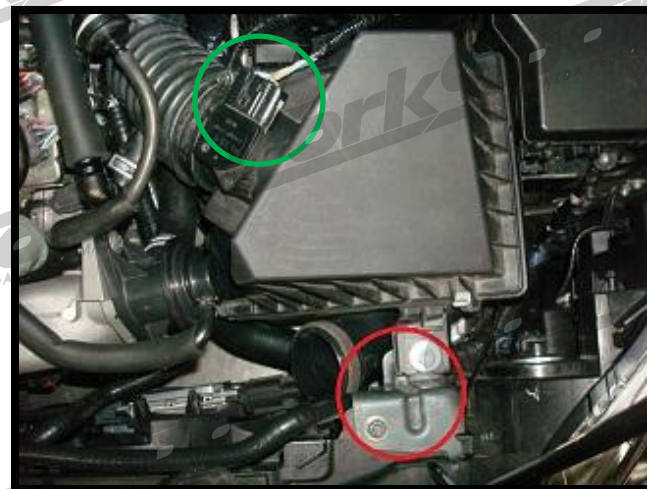


Figure 1c

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## 1. Removing Factory Intake Continued...

- g) Loosen hose clamp (circled in green in Figure 1b) from intake elbow to factory turbo inlet pipe and remove elbow.
- h) Loosen the hose clamp and remove the valve cover fitting from the factory elbow (shown in Figure 1e)



Figure 1e



Figure 2b

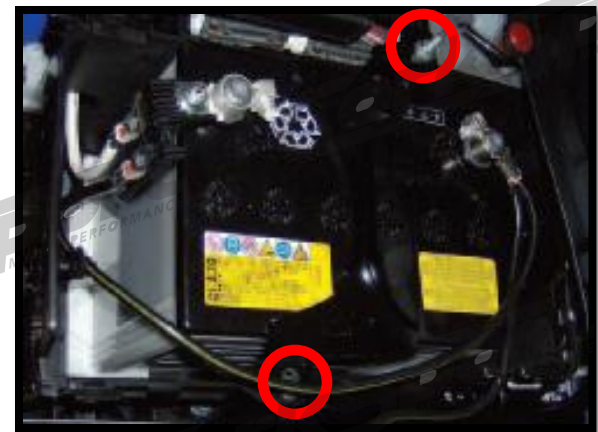


Figure 2c

## 2. Removing the Factory Turbo Inlet Pipe



If you did not purchase a turbo inlet pipe with your CorkSport Cold Air Intake proceed to Step 5a. If you purchased the optional turbo inlet pipe continue with Step 2a.

- a) **Remove the battery box cover** . The cover is held on with two clips (shown in Figure 2b). Pry the clips outward by hand and lift the front of the lid off the box.
- b) **Remove the Battery**. First, Disconnect the battery terminals with a 10mm end wrench. Disconnect the negative terminal of the battery first before the positive terminal. Next, Remove the two 10mm nuts for the battery tie down bracket (shown Figure 2c). Finally lift the battery out of your car and place it in a safe location.
- c) **Disconnect the three wiring tie downs on the battery box and remove the front cover**. Remove the three wiring harness loom straps by compressing their push lock connectors with a pair of angled or straight needle nosed pliers and pushing them back through the hole they are attached to. Remove all three of these connectors (shown in Figure 2d) and remove the front cover of the battery box.

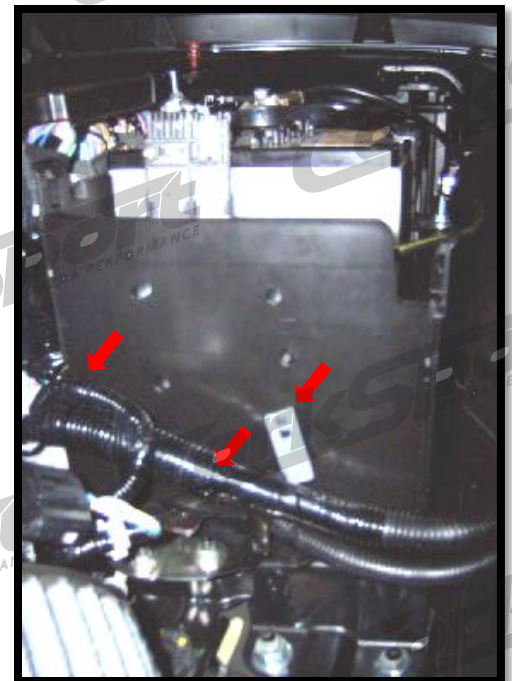


Figure 2d

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

- d) Remove the cover from the engine control unit (ECU) if you have not already by disconnecting the latch (see Figure 2e for location of ECU cover and latch).
- e) Disconnect the two ECU plugs by depressing the hasp below the white camlock latch of the plug housing. When the hasp is depressed, lift the white latch mechanism which will unlock and disconnect the ECU plugs (shown in Figure 2f).

When done correctly, this process should be effortless.



Figure 2e



Figure 2f

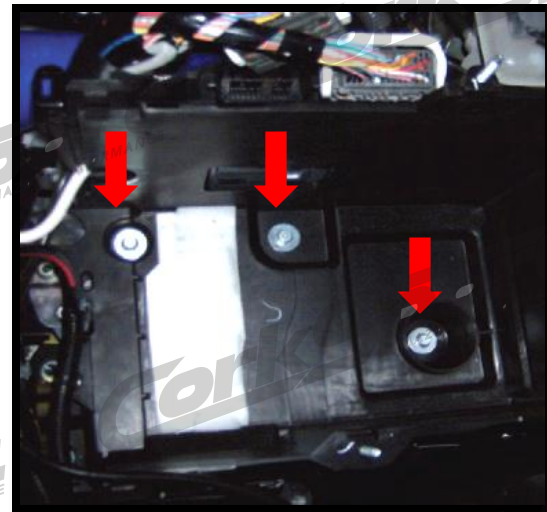


Figure 2g

- f) Remove the (3) 10mm bolts from the floor of the battery box (shown in Figure 2g) using a ratchet, 10mm socket and 6" 3/8" drive extension. Remove the battery box and ECU.
- g) Using pliers release the hose clamp (shown in Figure 2j on next page and Figure 2i with a yellow arrow) located on the recirculation hose that is attached to the recirculation valve (BOV) and plastic turbo inlet pipe. Move the hose clamps away from the fittings and remove hose.
- h) Remove the 10mm nut that holds the stock turbo inlet pipe in place (location shown in Figure 2i).

- i) Disconnect Boost Solenoid Line using Figure 2i as a reference. Then, remove the two wiring harness clips (shown with the red arrows in Figure 2i) located on the stock turbo inlet pipe.

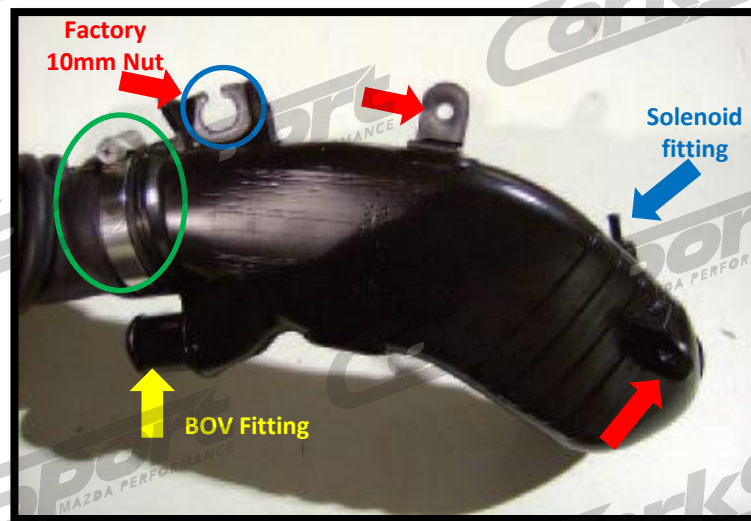


Figure 2i



Be very careful not to break the nipple off the boost control solenoid (Figure 2k) It is plastic so the solenoid can be broken easily. Heat and time make these extremely brittle.



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

- j) Using needle nose pliers, remove the hose from solenoid fitting on the stock turbo inlet pipe and the boost control solenoid (identified in Figure 2i by blue arrows) and in Figure 2k with a blue arrow.



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 comes off cleanly.

- k) Remove the plastic inlet pipe from the turbocharger. Loosen the hose clamp and pull the stock turbo inlet pipe off the turbocharger.

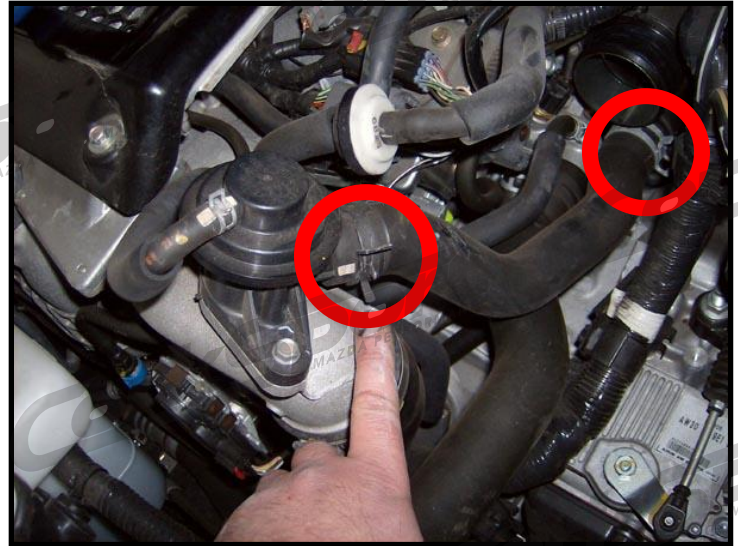


Figure 2j

## 3. Assemble the CorkSport Turbo Inlet Pipe

- a) Assemble the turbo inlet pipe (shown in Figure 3a). 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 (circled in green in Figure 3a and blue on factory TIP shown Figure 2i)

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

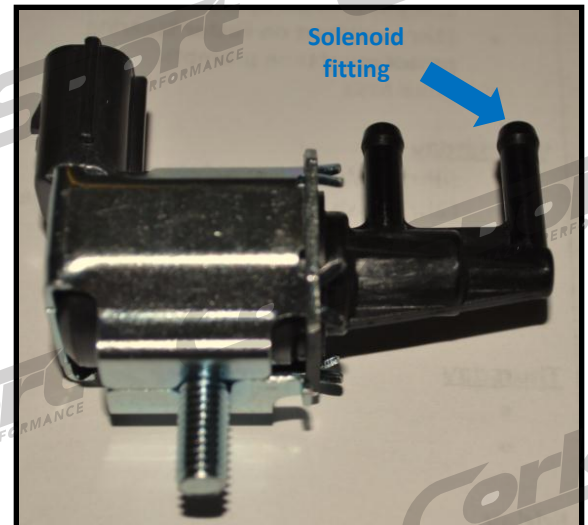


Figure 2k

## 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 on next page). This should fit easily - if not, the t-bolt band clamp is probably too tight.



Figure 3a

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

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**). 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.



Figure 4a

c) **Connect the 6" silicone tubing to the boost control solenoid** (shown in **Figure 2k**).

d) **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**).



Figure 4b

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

f) **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 2e & 2f**).

g) **Install the battery into the battery box**. First position and install the battery tie down. Next, 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. Install the front cover onto the battery box and snap the wiring harness clips into place (shown in **Figures 2b – 2d**) Finish by installing the battery box top.

h) **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 breather tube fitting that was removed in Step 1h** into the CS silicone elbow facing up (as shown in **Figure 5a**). It may need to be adjusted to the correct angle when elbow is installed.

b) **Install the CorkSport silicone elbow** onto the factory or CorkSport turbo inlet pipe using the 63-71 T-bolt clamp. Do not tighten hose clamp yet.



Figure 5a

## 5. Installing the CorkSport Intake Continued...

- b) Install the CorkSport silicone elbow onto the factory or CorkSport turbo inlet pipe using the 63-71 T-bolt clamp. Do not tighten hose clamp yet.
- c) Remove MAF sensor from factory air box and install into the CS MAF housing using the supplied Allen screws (Allen screws shown in Figure 5b) that are preinstalled in the MAF housing. Install the MAF and sensor as shown in Figure 5c.



You may have to remove the nut from the clamp to fit it over the silicone. It's a tight fit.



Figure 5b

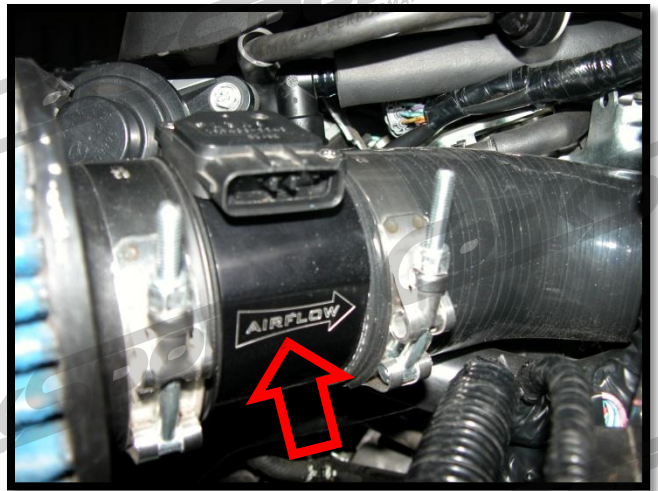


Figure 5c

- d) Install MAF using the 83-91 T-bolt clamp into the CS silicone elbow. (Figure 5c)
- e) Connect MAF sensor



The CorkSport Cold Air Intake is designed to be converted back and forth from Short Ram intake to Cold Air Intake. Use Step 6 for the Short Ram Intake and Step 7 for the Cold Air Intake installation.

## 6. Installing the CorkSport Short Intake

- a) Install CS air filter onto the end of the MAF housing using the 83-91 T-bolt clamp (Figure 6a)
- b) Connect the valve cover breather tube (shown in Figure 1d) to the fitting on the silicone elbow.
- c) Adjust the silicone elbow so that the MAF and filter and sitting level in the car (shown in Figure 6a) and tighten the hose clamps.



Figure 6a


### 7. Installing the CorkSport Cold Air Intake


a) **Disconnect your filter from the MAF housing** if you already have a filter installed from your SRI otherwise move on to step 7b.

b) **Install the hump coupler onto the MAF** using a 83-91 hose clamp. Your intake should look like **Figure 7a** at this point.



Figure 7a

 Depending on how low your car is you may need to jack the side of your car up for access to the next step

 If you do need to jack the side of your car up follow the manufacture recommended directions when doing so to prevent damage or injury.

c) **On the bottom of the drivers side bumper you will need to remove the (3) 10mm bolts** holding the fender liner (see **Figure 7b**)



Figure 7b

d) **Pull the fender liner down** and you will see on the frame rail an empty bolt hole (shown in **Figure 7c**).

e) **Thread the M6 head isolator** provided so the isolator is on the inside of the frame rail (shown in **Figure 7d**).



Figure 7d



For Gen1 fitment: You will need to drill a 5/16" hole in the location shown circled in **Figure 7e**. You can then put the isolator through the hold on the engine bay side and tighten down the provided 10mm head nut.

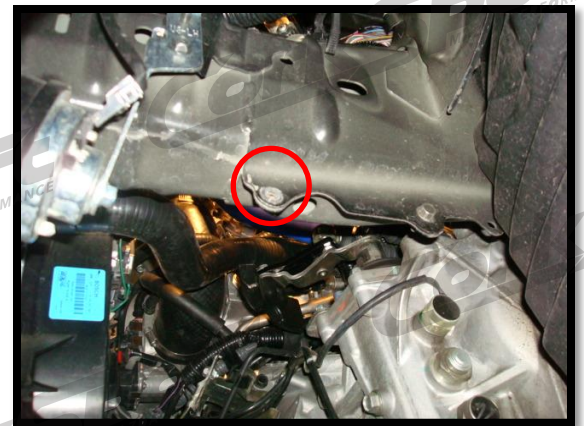


Figure 7c



Figure 7e

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## 7. Installing the CorkSport Cold Air Intake Continued...

- f) From the top feed the cold air intake tube down, connect the bracket onto the bolt end of the isolator and install the 10mm nut provided in the kit (see [Figure 7f](#) and [Figure 7d](#) for a close up).
- g) Install the air filter on the end of the CAI cold pipe using a 83-91 hose clamp (see [Figure 7g](#)).



Figure 7f



Figure 7g

- h) Reinstall the flap on the bottom of the bumper with the three 10mm bolts.
- i) Connect the CAI into the hump silicone using a 83-91 hose clamp (see [Figure 7h](#)). With everything aligned, tighten all of the hose clamps.



This completes the installation of your Cold Air Intake. You are now ready to start the car. 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. Check out our [knowledgebase](#) for additional install information



Figure 7h

## What's Next:

### [CorkSport 2010+ Mazdaspeed 3 Cat Back Exhaust](#)



Get optimal flow and minimal back pressure with the CorkSport Power Series Cat Back Exhaust for the 2010+ Mazdaspeed 3. The CorkSport exhaust features mandrel bent 80mm piping and a straight through high flow muffler for a smooth flow, increased power, and faster spool up. In initial testing the peak power gains on the dyno showed as increase of 14 wheel horsepower over stock with only an added CorkSport Short Ram Intake modification on the tested vehicle.

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