

# CorkSport Turbo Inlet Pipe

Mazdaspeed 3, Mazdaspeed 6 and CX-7



Thank you for purchasing the CorkSport Mazdaspeed 3 Turbo Inlet Pipe. Constructed from mandrel bend aluminum, the CorkSport Mazdaspeed 3 Turbo Inlet Pipe will provide a 14% improvement in flow over your stock turbo inlet pipe.

Please let us know your feedback by submitting a review at: <http://www.corksport.com/corksport-power-series-turbo-inlet-pipe.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 #: Gen-6-463  
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

CorkSport Turbo Inlet Pipe (Optional Breather Fitting)  
1x 58-63mm T-Bolt Clamp  
1x 63-71mm T-Bolt Clamp  
54-57mm Silicone Reducer  
6" Long Small ID Silicone Hose

#### Optional:

12" Long, Larger ID Silicone Hose  
\*when ordering optional breather fitting.

#### Optional Cx7 only:

1x Transmission Relocation Bracket  
1x M6x1.0x20mm Bolt  
1x M6x1.0 Nut

Need Help With Your Installation?

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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. Removing the Factory Turbo Inlet Pipe



These instructions were written using a 2010 Mazdaspeed 3. CX-7 and Mazdaspeed 6 are similar but where there are differences you will find notes included and pictures in the 2 appendix sections for each car.



If installing a CorkSport intake or other aftermarket intake follow instruction for removing all of the factory intake pieces (Shown in Appendix A) before starting on the installation of the CorkSport Turbo Inlet Pipe. If you are maintaining the factory intake you can leave all the pieces in place when performing this work.

- a) **Start by removing the (2) 10mm bolts that connect the intercooler cover to the intercooler** (shown in [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.



For CX-7 remove 2 plastic clips instead of two bolts from the front of the intercooler shroud. They will be attached at the core support instead of the motor as shown in Appendix [Figure 6a](#) and [Figure 6b](#).

- b) **For Mazdaspeed 3 owners, remove the battery box cover**. The cover is held on with two clips (shown in [Figure 1b](#)). Pry the clips outward by hand and lift the front of the lid off the box.



For CX-7 and Mazdaspeed 6 owners who do not have a battery box. Skip this step and proceed to the next step.

- c) **Remove the Battery** (shown [Figure 1c](#)).



The CX-7 is very similar to the Mazdaspeed 3 (shown circled in [Figure 6c](#)) and the Mazdaspeed 6 has one 10mm bolt and one 10mm nut (shown in [Figure 5a](#)).

- d) **Disconnect the three wiring tie downs on the battery box and remove the front cover** (shown in [Figure 1d](#))



For Mazdaspeed 6 there is only one wiring harness connector. Unclasp it and the wiring will be freed (shown in [Figure 5b](#)).



For CX-7 there is no wiring on the battery box but take this opportunity to remove the 10mm bolt on the transmission fill tube now (bolt is shown in [Figure 6d](#)).

- e) **Remove the cover from the engine control unit (ECU) if you have not already** by disconnecting the latch (see [Figure 1e](#) for location of ECU cover and latch).

- f) **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 1f](#)).



When done correctly, this process should be effortless.

- g) **Remove the (3) 10mm bolts from the floor of the battery box** (shown in [Figure 1g](#)) using a ratchet, 10mm socket and 6" 3/8" drive extension. Remove the battery box and ECU.



For Mazdaspeed 6 there are only two bolts in the battery tray. (Shown in [Figure 5b](#).)



For CX-7 there are three 10mm bolts and one 10mm nut. (Shown in [Figure 6e](#) and [Figure 6f](#).)

- h) **Remove the valve cover breather hose** using two screwdrivers to push the pins in simultaneously in order to release the internal clips. The clips will be green on the valve cover and blue on the inlet accordion hose.

## Checklist



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



You can also remove the clips using a modified paper clip (shown in [Figure 1h](#)) Slide the paper clip in behind the latch clip and remove the entire assembly.



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

- i) **Loosen the hose clamp that connects the intake tube to the factory turbo inlet pipe** if this has not already been done (shown with **green circle** in [Figure 1i](#)) and remove the intake tube.
- j) **Using pliers release the hose clamp** (shown in [Figure 1j](#) and [Figure 1i](#) 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.
- k) **Remove the 10mm nut that holds the stock turbo inlet pipe in place** (location shown in [Figure 1i](#)).
- l) **Disconnect Boost Solenoid Line** using [Figure 1i](#) as a reference. Remove the two wiring harness clips (shown with **the red arrows** in [Figure 1i](#)) located on the stock turbo inlet pipe.
- m) **Using needle nose pliers, remove the hose** from solenoid fitting on the stock turbo inlet pipe and the boost control solenoid (identified in [Figure 1i](#) by **blue** arrows).
  -  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 comes off cleanly.
- n) **Remove the plastic inlet pipe from the turbocharger.** Loosen the hose clamp and pull the stock turbo inlet pipe off the turbocharger.

### 2. Assemble the CorkSport Turbo Inlet Pipe

- a) **Assemble the turbo inlet pipe** (shown w/o the breather connection in [Figure 2a](#) and with the breather hose connection **circled in red** in [Figure 2b](#)). Add the 58-63mm T-bolt clamp clamps to the turbo and the 63-71mm T-bolt clamp clamps to the turbo inlet pipe. The T-bolt band clamp that hold 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 2a](#) and **blue** on factory TIP shown [Figure 1i](#))

### 3. 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 2" diameter silicone coupling over the end of the turbocharger compressor inlet (shown in [Figure 3a](#)).
- 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 3a](#)).

## Checklist

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

- If you have purchased the **Optional: Turbo inlet pipe with extra breather** (Shown circled in [Figure 3b](#)). You will need to perform Step 3c if you did not get the Optional breather then skip to Step 3d.
- c) **If you purchased Optional Turbo Inlet Pipe with extra breather fitting only, otherwise skip to step 3d.** Route the 12" long larger ID breather hose from the port (circled in [Figure 3b](#)) underneath the wiring harness (Shown in [Figure 3c](#)) and into the valve cover breather fitting.
  - For CX-7 install the optional transmission dipstick relocation bracket. (Shown in Appendix [Figure 6g](#)) Use the supplied m6 bolt and nut to attach the tube to the bracket. Then, use the original 10mm head bolt to tighten the bracket down to the original location.
- d) **Install the factory recirculation valve hose** between the recirculation valve and the lower pipe on the CorkSport Turbo Inlet Pipe. Reuse the factory spring clips (circled in [Figure 3e](#)).
  - If installing a CorkSport or other Aftermarket intake you can now continue with the supplied instructions for your specific intake. Then continue at step 3e. If you are leaving the factory intake you should continue to step 3e now.
- e) **Install the battery box back into place**, with three 10mm bolts (shown in [Figure 1h](#)). Feed the battery terminal lines through the cutouts in the box.
  - For Mazdaspeed 6 there are only two bolts in the battery tray. (Shown in [Figure 5b](#).)
  - For CX-7 there are three 10mm bolts and one 10mm nut. (Shown in [Figure 6e](#) and [Figure 6f](#).)
- 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 1f](#)).
- g) **Install the battery into the battery box** (shown in [Figure 1d](#)).
- 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.
  - For CX-7 reuse the 2 plastic clips from step 1a. Shown [Figure 6a](#) and [Figure 6b](#)



**This completes the installation of your Turbo Inlet Pipe. 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 place. After a test drive, recheck all hose clamps again for tightness**

## Detailed Instructions



These instructions were written using a 2010 Mazdaspeed 3. CX-7 and Mazdaspeed 6 are similar but where there are differences you will find notes included and pictures in the 2 appendix sections for each car.



If installing a CorkSport intake or other aftermarket intake follow instruction for removing all of the factory intake pieces (Shown in Appendix A) before starting on the installation of the CorkSport Turbo Inlet Pipe. If you are maintaining the factory intake you can leave all the pieces in place when performing this work.

### 1. Removing the Factory Turbo Inlet Pipe

- a) Start by removing the (2) 10mm bolts that connect the intercooler cover to the intercooler (shown in [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.



For CX-7 remove two plastic clips instead of two bolts from the front of the intercooler shroud. They will be attached to the core support instead of the motor as shown in Appendix [Figure 6a](#) and [Figure 6b](#).

- b) For Mazdaspeed 3 owners Remove the battery box cover.

The cover is held on with two clips (shown in [Figure 1b](#)). Pry the clips outward by hand and lift the front of the lid off the box.



CX-7 and Mazdaspeed 6 owners do not have a battery box. Skip step 1b and proceed to the next step.

- c) 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 1c](#)). Finally lift the battery out of your car and place it in a safe location.



The CX-7 is very similar to the Mazdaspeed 3 (shown circled in [Figure 6c](#)) and the Mazdaspeed 6 has one 10mm bolt and one 10mm nut. (Shown in [Figure 5a](#))

- d) 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 1d](#) on next page) and remove the front cover of the battery box.



Figure 1a



Figure 1b

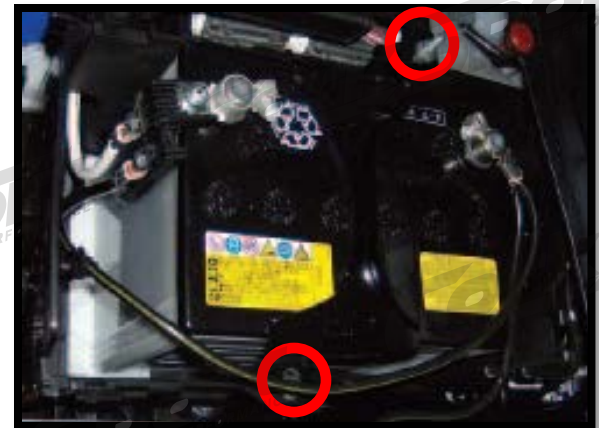




Figure 1c

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

 For Mazdaspeed 6 there is only one wiring harness connector. Unclasp it and the wiring will be freed (shown in [Figure 5b](#)).

 For CX-7 there is no wiring on the battery box but take this opportunity to remove the 10mm bolt on the transmission fill tube now (bolt is shown in [Figure 6d](#)).

e) **Remove the cover from the engine control unit (ECU)** if you have not already by disconnecting the latch (See [Figure 1e](#) for location of ECU cover and latch).

f) **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 1f](#)).

 When done correctly, this process should be effortless.

g) **Remove the (3) 10mm bolts from the floor of the battery box** (shown in [Figure 1g](#)) using a ratchet, 10mm socket and 6" 3/8" drive extension. Remove the battery box and ECU.

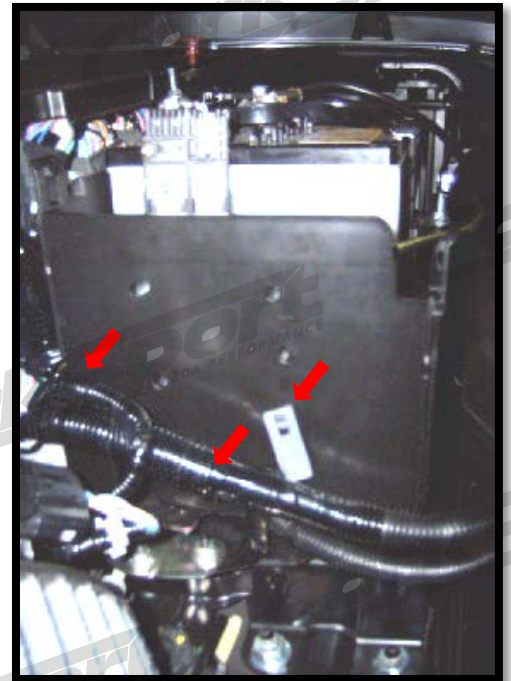


Figure 1d

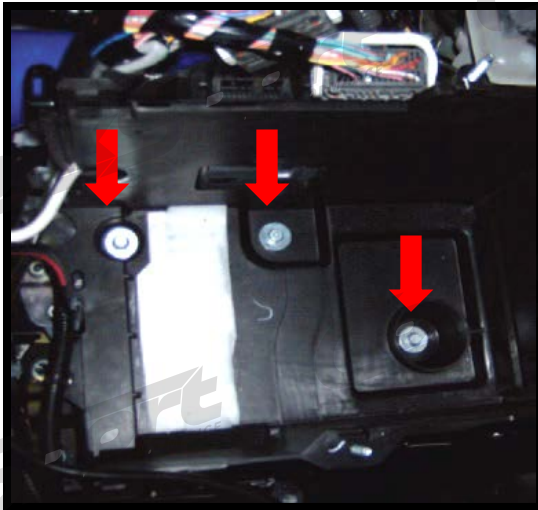




Figure 1g



Figure 1e

 For Mazdaspeed 6 there are only two bolts in the battery tray. (Shown in [Figure 5b](#).)


 For CX-7 there are three 10mm bolts and one 10mm nut. (Shown in [Figure 6e](#) and [Figure 6f](#).)


h) **Remove the valve cover breather hose** by using two screwdrivers to push the pins in simultaneously in order to release the internal clips. The clips will be green on the valve cover and blue on the inlet accordion hose.



Figure 1f

**1. Removing the Factory Turbo Inlet Pipe Continued...**

 You can also remove the clips using a modified paper clip (shown in **Figure 1h**) Slide the paper clip in behind the latch clip and remove the entire assembly.

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

i) **Loosen the hose clamp that connects the intake tube to the factory turbo inlet pipe** if this has not already been done (shown with **green circle** in **Figure 1i**) and remove the intake tube.

j) **Using pliers release the hose clamp** (shown in **Figure 1j** and **Figure 1i** 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.

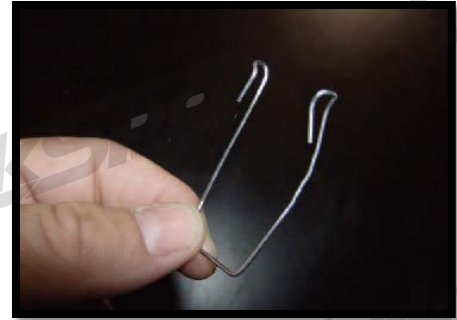


Figure 1h

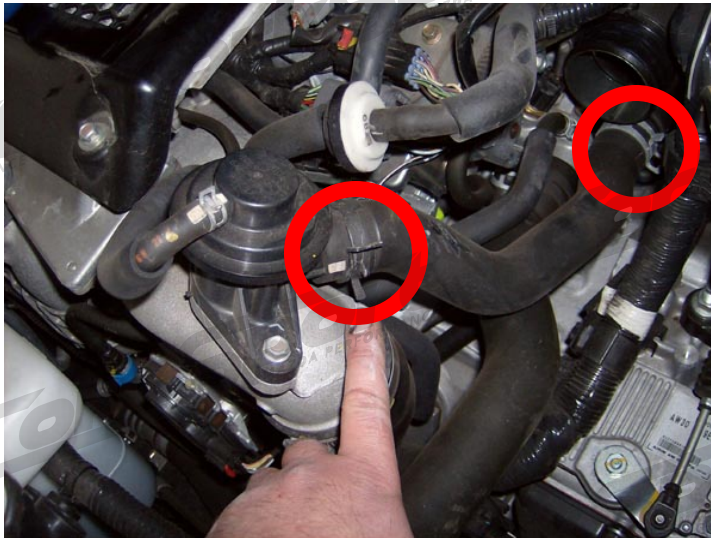


Figure 1j

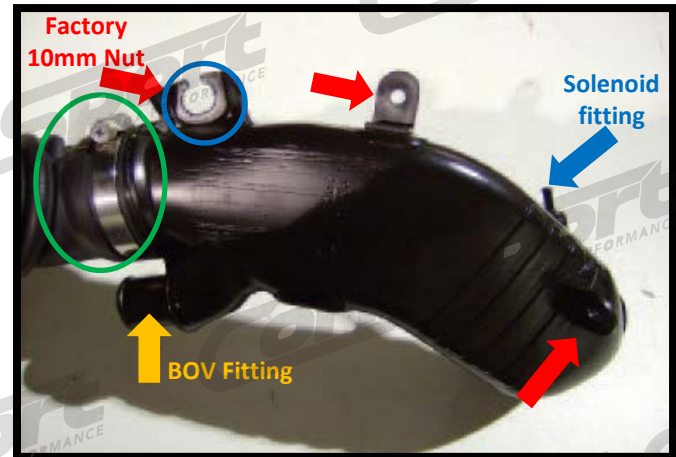



Figure 1i

k) **Remove the 10mm nut that holds the stock turbo inlet pipe in place** (location shown in **Figure 1i**).


l) **Disconnect Boost Solenoid Line** (using **Figure 1i** as a reference). Remove the two wiring harness clips (shown with **the red arrows** in **Figure 1i**) located on the stock turbo inlet pipe.

m) **Using needle nose pliers, remove the hose from solenoid fitting on the stock turbo inlet pipe and the boost control solenoid** (identified in **Figure 1i** 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 comes off cleanly.

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

 For Mazdaspeed6 there is a bracket that holds the wiring harness towards the rear of the factory turbo inlet pipe. To make it easier to install the new turbo inlet pipe.

## Part # Gen-6-462 & Gen-6-463

### 2. Assemble the CorkSport Turbo Inlet Pipe

- a) Assemble the turbo inlet pipe (shown w/o the breather connection in **Figure 2a** and with the breather hose connection **circled in red in Figure 2b**). Add the 58-63mm T-bolt clamp clamps to the turbo and the 63-71mm T-bolt clamp clamps to the turbo inlet pipe. 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 2a** and **blue on factory TIP shown Figure 1i**)



Figure 2a

### 3. 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 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 3a**). This should fit easily - if not, the t-bolt band clamp is probably too tight.
- 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 3a**). 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.

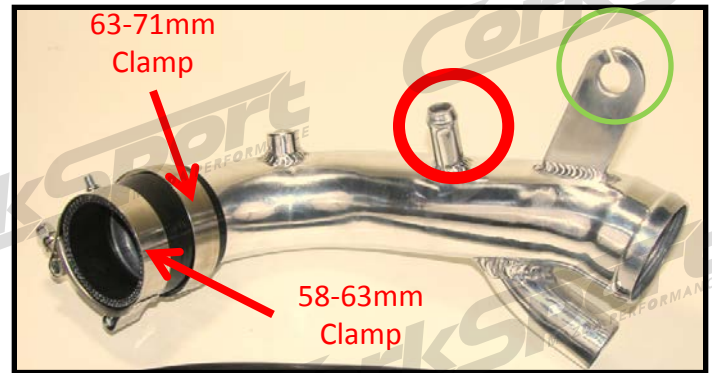


Figure 2b


 If you have purchased the **Optional Turbo inlet pipe with extra breather** (Shown **circled in red in Figure 3b**). You will need to perform Step 3c if you did not get the Optional breather then skip to Step 3d.



Figure 3a



Figure 3b



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

c) If you purchased **Optional Turbo Inlet Pipe with extra breather fitting only otherwise skip to step 3d**. Route the 12" long larger ID breather hose from the port (circled in **Figure 3b**) underneath the wiring harness (Shown in **Figure 3c**), and into the valve cover breather fitting.

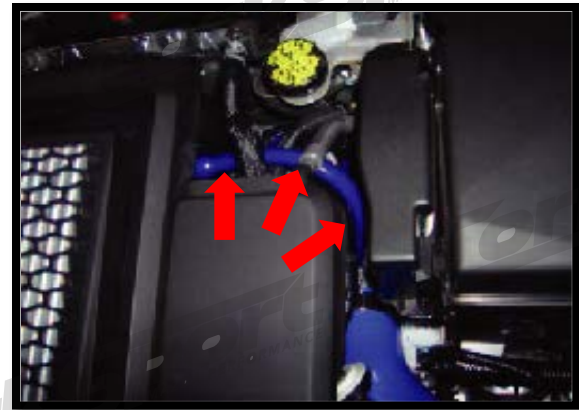


Figure 3c

For CX-7 install the optional transmission dipstick relocation bracket. (Shown in Appendix **Figure 6g**). Use the supplied m6 bolt and nut to attach the tube to the bracket. Then, use the original 10mm head bolt to tighten the bracket down to the original location.

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 3e**).

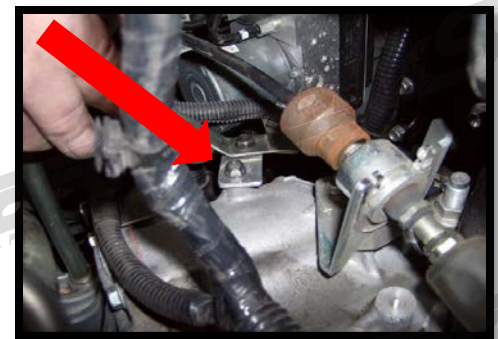


Figure 3d

If installing a CorkSport or other aftermarket intake you can now continue with the supplied instructions for your specific intake then continue to step 3e. If you are leaving the factory intake you should continue with step 3e now.

e) **Install the battery box back into place** with three 10mm bolts (shown in **Figure 1h**). Feed the battery terminal lines through the cutouts in the box.

For Mazdaspeed 6 there are only two bolts in the battery tray. (Shown in **Figure 5b**.)

For CX-7 there are three 10mm bolts and one 10mm nut. (Shown in **Figure 6e** and **Figure 6f**.)



Figure 3e

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 1f**).

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 **Figure 1d**) 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.

For CX-7 reuse the 2 plastic clips from step 1a. Shown **Figure 6a** and **Figure 6b**



**This completes the installation of your Turbo Inlet Pipe. 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 place. After a test drive, recheck all hose clamps again for tightness**

#### 4. Appendix (A) Removing Factory Intake

 These installation instructions were written using a 2010 Mazdaspeed 3. Other year Mazdaspeed 3, Mazdaspeed 6 and CX-7 models will be similar

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

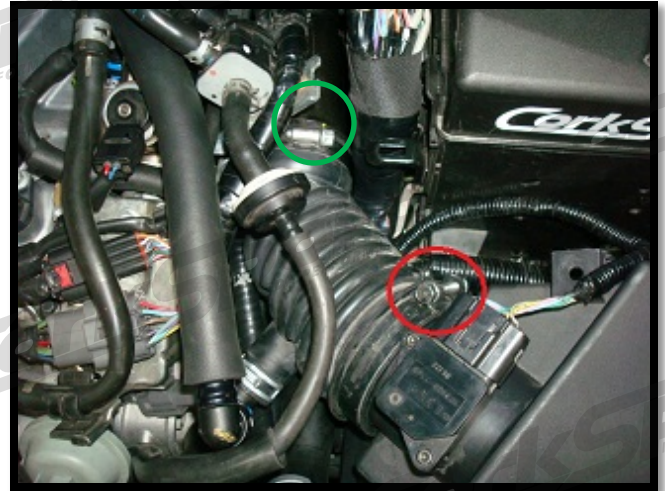


Figure 1a

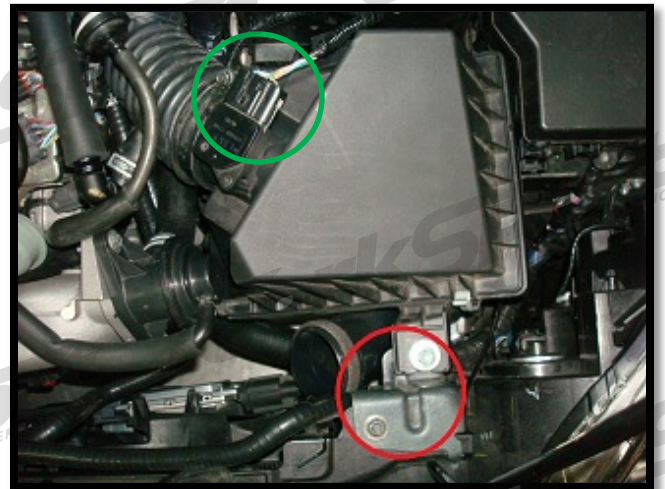


Figure 1b



Figure 1c

- f) Remove the ECU cover (circled in Figure 1d) located next to the battery to gain access to the lower hose clamp on the intake elbow.
- h) Loosen hose clamp (circled in green in Figure 1a) from intake elbow to factory turbo inlet pipe and remove elbow.



Figure 1d

**5. Appendix (B) For Mazdaspeed 6**



Figure 5a

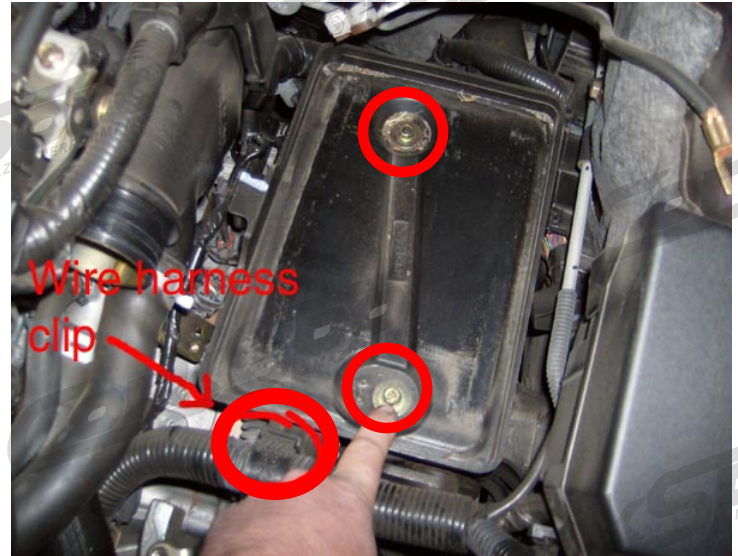


Figure 5b

**6. Appendix (C) for Mazda CX-7**

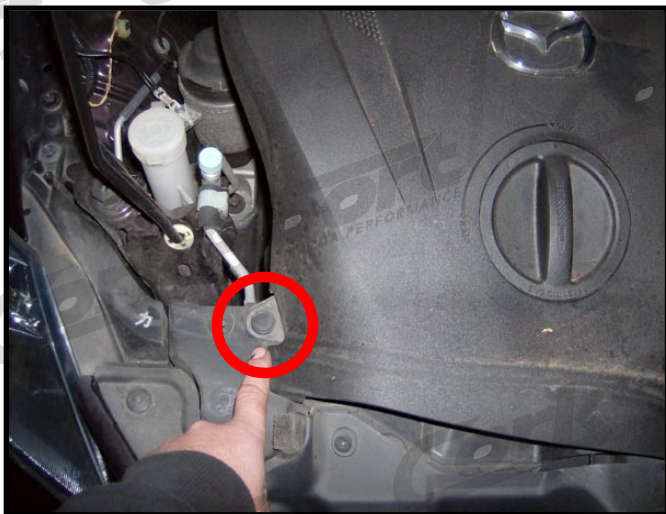


Figure 6a



Figure 6b

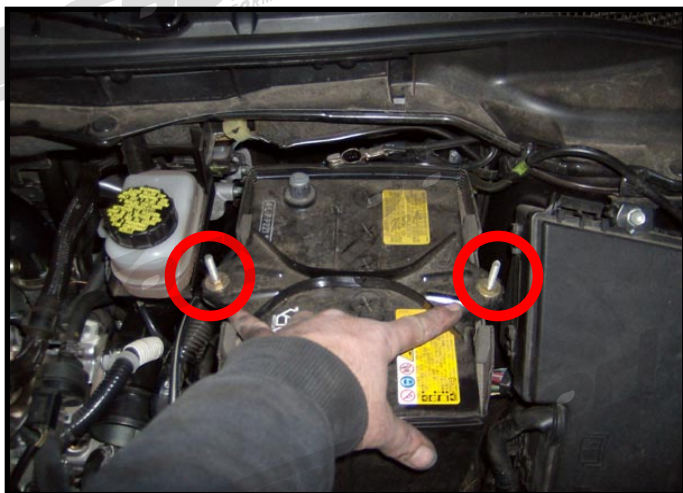


Figure 6c



Figure 6d

Need Help With Your Installation?  
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5. Appendix for Mazda CX-7 Continued...



Figure 6e

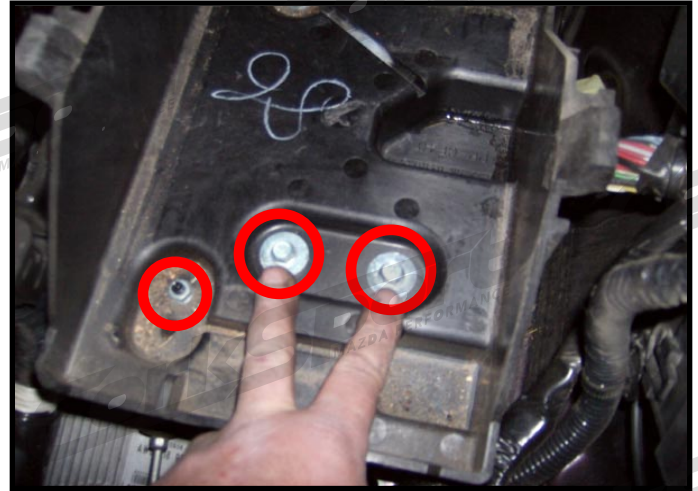


Figure 6f



Figure 6g

**What's Next?**

**CorkSport Downpipe**



**Get maximum turbo performance and dramatically increase torque** with the Mazdaspeed 3 Power Series Downpipe. The CorkSport downpipe has been expertly designed to replace the restrictive element in the Mazdaspeed 3 stock downpipe. Mandrel bent piping is used to create smooth exhaust flow for dramatic increases in power. For lasting corrosion resistance and reduced heat transfer to the engine bay, the CorkSport MS3 downpipe uses polished 3" 304 stainless steel and features TIG welds that offer superior arc and weld puddle control for a cleaner appearance and precise weld bead control.

Need Help With Your Installation?

Call (360) 260-CORK