

CorkSport
MAZDA PERFORMANCE

INSTALLATION INSTRUCTIONS



CORKSPORT 4" Intake

2007-2013 Mazdaspeed 3

PART #: AXL-6-2101-1X

Need Help With Your Installation? Call (360)260-CORK



*We absolutely, positively,
deliver - every time.*

CORKSPORT.COM

PAGE 1



CORKSPORT 4" Intake *2007-2013 Mazdaspeed 3*

PRODUCT DESCRIPTION:


Thank you for purchasing the CorkSport 4" Intake for Mazdaspeed 3. We went back to the drawing board to create a fantastic fitting and functioning intake for big power MS3's. Setup your build with enough airflow to support whatever lofty power goal you're striving for. All this comes in a package that looks great and keeps fuel trims right where they belong!

Please let us know your feedback of the by submitting a review at: <https://corksport.com/2007-2013-mazdaspeed-3-4-inch-intake-system.html>


PRE-INSTALLATION NOTES:

 **Recalibration of MAF settings in the ECU are required for your car to run properly with the CorkSport 4" Intake.**

 **Disconnection and removal of battery and ECU is required for installation. Use caution when removing both to prevent serious damage to your vehicle.**

 **The CorkSport 4" Intake will not clear the stock ECU and/or battery location. Replacement of the battery box and ECU relocation is required for installation. The CS 51R battery box is a great fit!**

 **These instructions were written for reference only and the use of a factory service manual is recommended.**

 **How our instructions work: To best cover all of our customers experience levels, we have included a table of contents/order of operations along with step-by-step instructions.**

MATERIALS & TIME:

GENERAL INFO:



Time Est:
2hr



Difficulty:
3/5



CEL:
No



Warranty:
2-Year

TOOLING LIST:

- 3/8" Drive Ratchet
- 6" Ratchet Extension
- 12" Ratchet Extension
- 10mm Deep Socket
- 12mm Deep Socket
- 10mm Wrench
- 3mm Allen Wrench
- Phillips Screwdriver
- Flathead Screwdriver
- Needle Nose Pliers
- Channel Lock Pliers

PARTS LIST:

- One (1) CorkSport 4" Intake
- One (1) aFe Dry-Flow Air Filter
- One (1) 107-115mm T-Bolt Clamp
- One (1) 63-71mm T-Bolt Clamp
OR
- One (1) 95-103mm T-Bolt Clamp
OR
- One (1) Additional 107-115mm T-Bolt Clamp
- One (1) CorkSport 4" Intake to OEM Turbo Inlet Silicone
OR
- One (1) CorkSport 4" Intake to 3.5" Turbo Inlet Silicone
OR
- One (1) CorkSport 4" Intake to 4" Turbo Inlet Silicone

ORDER OF OPERATIONS & TABLE OF CONTENTS:

	VEHICLE DISASSEMBLY	
	Section 1: Intake Removal	Pg. 4-5
	Section 2: Battery Box & ECU Removal	Pg. 5-7
	Section 3: Intercooler Removal	Pg. 7-8
	Section 4: Turbo Inlet Pipe Removal	Pg. 9
	CORKSPORT 4" INTAKE INSTALLATION	
	Section 5: CorkSport 4" Intake Setup	Pg. 10
	Section 6: CorkSport 4" Intake Installation	Pg. 11-14
	Section 7: Vehicle Reassembly	Pg. 14

DETAILED INSTRUCTIONS:

1. Intake Removal

NOTE We recommend using plastic bags and a sharpie to label all bolts and parts throughout install.

NOTE Installation is shown with OEM components. Your setup may be different depending on modifications however the order of operations is the same.

a) Remove the cover from the top mount intercooler (TMIC) by removing the two 10mm bolts. **Circled in red in Figure 1a.**

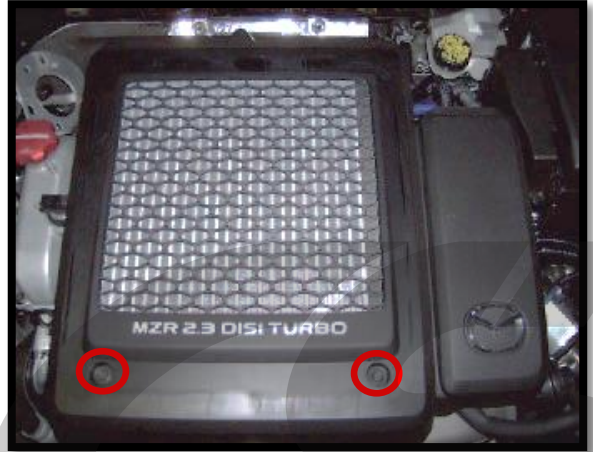


Figure 1a

b) Loosen the 10mm hose clamp that connects the OEM intake elbow to the OEM turbo inlet pipe (TIP). **Circled in red in Figure 1b.**

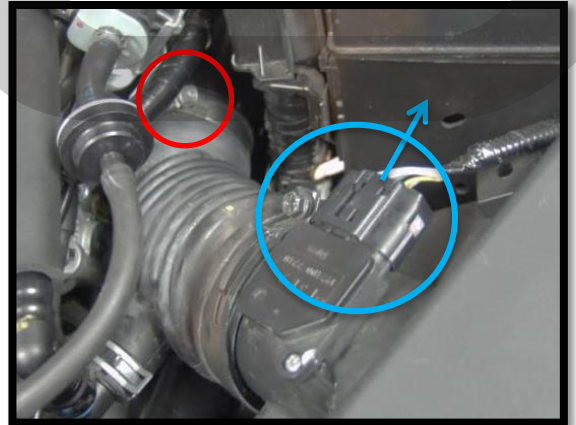


Figure 1b

c) Unplug the MAF sensor connector by pressing down on the upper tab and gently pulling in the direction shown in **Figure 1b**. MAF sensor connector **circled in blue in Figure 1b.**

d) Remove the two 10mm bolts on the air filter housing. Shown **circled in red in Figure 1c.**

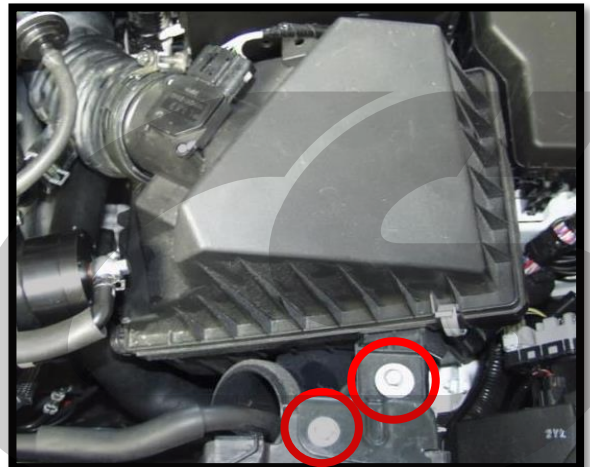


Figure 1c

DETAILED INSTRUCTIONS:

1. Intake Removal (continued)

- e) Remove the valve cover breather tube from the rear right of the valve cover. Push the hose connector toward the valve cover and press both sides of the colored clip simultaneously. Then pull the hose away from the valve cover. Hose shown removed in **Figure 1d**.
- f) Pull the OEM intake elbow off of the TIP by pulling toward the front of the vehicle near the clamp that was loosened in step 1b.
- g) Pull up on the filter housing to remove it from the rubber mounts. The housing will "pop" off the rubber mounts.
- h) Remove the filter housing, intake elbow, and breather tube from the vehicle.

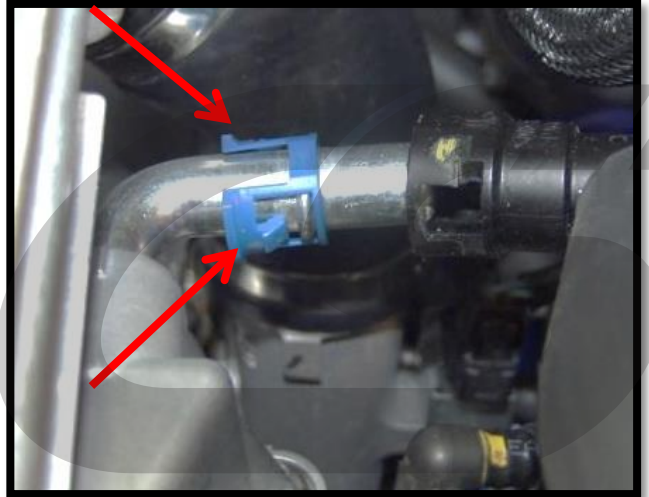


Figure 1d

2. Battery Box and ECU Removal

- a) Remove the battery box cover. There are two clips (shown with **red arrows** in **Figure 2a**). Pry the clips outward by hand and lift the lid off the box.

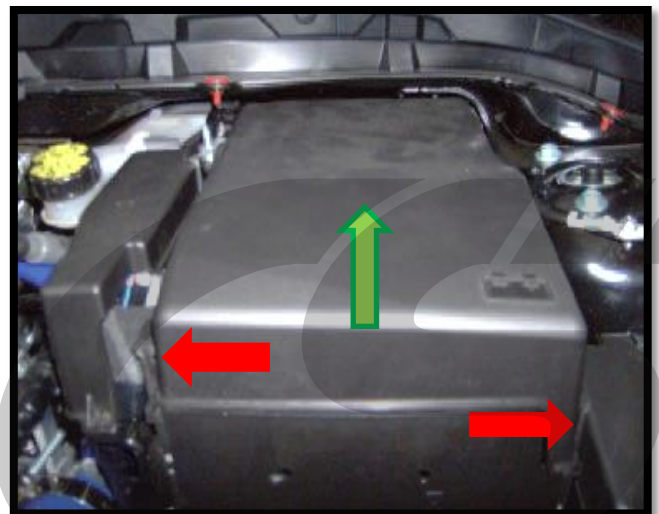


Figure 2a

DETAILED INSTRUCTIONS:

2. Battery Box and ECU Removal (continued)

b. **Disconnect the battery.** Disconnect the negative terminal first with a 10mm wrench, then disconnect the positive with the same wrench. Terminals are labeled in **Figure 2b** for reference.

c. **Remove the two 10mm nuts from the battery tie down bracket.** Shown **circled in red** in **Figure 2b**.

d. **Remove the battery and tie down bracket from the vehicle.**

e. **Remove the front battery box panel.** Remove the MAF wiring harness clip (**red circle** in **Figure 2c**), and negative battery cable clip (**blue circle** in **Figure 2c**) from the front battery box panel. Use 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 2c**).

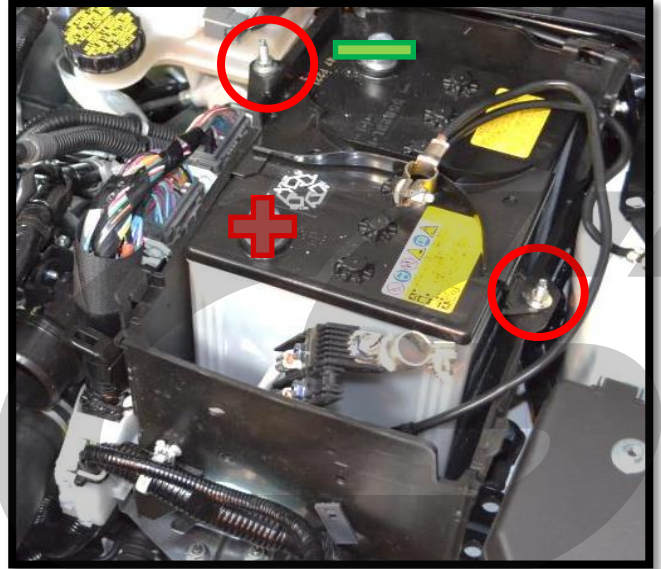


Figure 2b

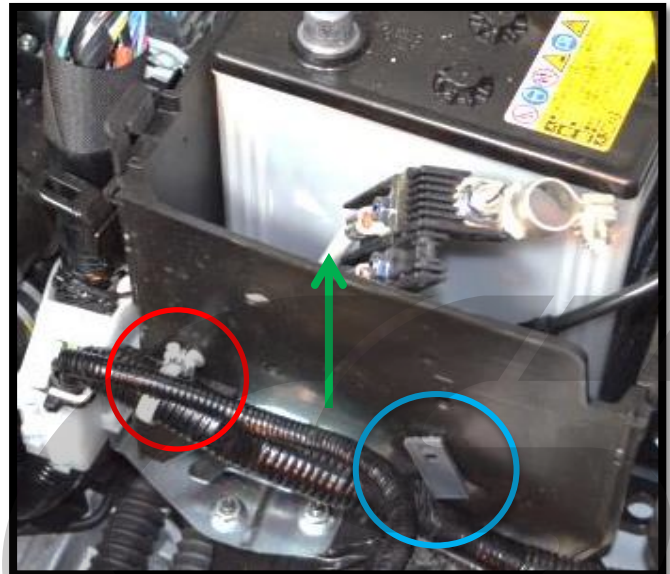


Figure 2c

DETAILED INSTRUCTIONS:

2. Battery Box and ECU Removal (continued)

- f. Disconnect the ECU plugs. Push on the tabs (red arrows in Figure 2d) and pull the white lock upward simultaneously (green arrows in Figure 2d).

NOTE When done correctly, the ECU plugs will disconnect easily. Do not force or pry the plugs as you could damage them.

- g. Remove the battery box by removing the three 10mm bolts in the bottom of the box (circled in red in Figure 2e). The battery box and ECU can then be removed from the vehicle.

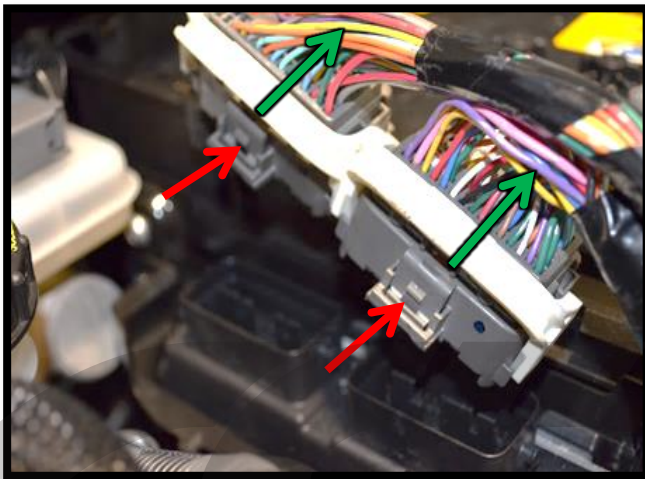


Figure 2d

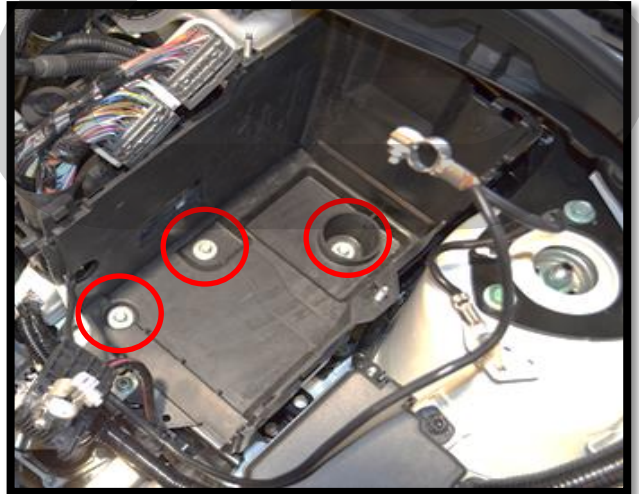


Figure 2e

3. Intercooler Removal

NOTE TMIC removal is optional however removing it helps when installing the intake silicone onto the turbocharger.

- a. Using pliers, release the hose clamps connecting the bypass valve (BPV) hose to the TIP and BPV (clamps circled in red in Figure 3a). Slide the clamp back along the tube.
- b. Pull the end of the BPV hose off the end of the TIP and off the BPV itself. Pull in direction shown with blue arrow in Figure 3a.

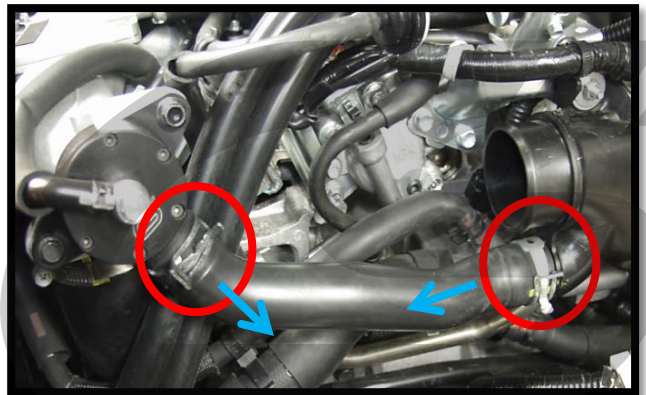


Figure 3a

DETAILED INSTRUCTIONS:

3. Intercooler Removal (continued)

- c. Loosen the clamps that connect the boost tubes to the intercooler using a 10mm socket. Clamps circled in red in Figure 3b.
- d. Detach the vacuum signal hose from the top of the BPV. Use pliers to release the clamp, then pull the line off the barbed fitting. Hose/clamp location circled in blue in Figure 3b.




- e. Remove the three 12mm nuts that attach the intercooler to the top of the engine. Nuts shown circled in red in Figure 3c.
- f. Pull upwards to remove the intercooler from the vehicle. The BPV will remain attached to the intercooler pipe.

DETAILED INSTRUCTIONS:

4. Turbo Inlet Pipe Removal

- a. Remove the 10mm nut that holds the TIP to the engine. Location shown circled in red in Figure 4a.
- b. Remove the two wiring harness clips . Squeeze the back side with needle nose pliers to remove. Circled in blue in Figure 4a.

 Be very careful not to break the plastic barb in the next step.

- c. Remove the hose from the plastic barb near the turbocharger. Use needle nose pliers to release the clamp, then pull straight up to disconnect the hose. Plastic barb shown circled in green in Figure 4a. This line connects to your electronic boost control solenoid (EBCS). Take note of where it connects as it will be replaced later.



Figure 4a

- d. Loosen the clamp that connects the TIP to the turbocharger using a 10mm socket and extension. Location shown in Figure 4a with purple arrow.
- e. Pull the TIP off of the turbocharger , then remove the TIP from the vehicle.

DETAILED INSTRUCTIONS:

5. CorkSport 4" Intake Setup

- a. Remove the MAF sensor from the OEM intake by removing the two screws with a Phillips head screwdriver. Gently pull the MAF sensor free from the OEM housing
- b. Install the MAF sensor into the CS 4" Intake MAF housing. Using the provided Allen head screws, secure the MAF sensor using a 3mm Allen wrench. Tighten both screws evenly until snug. Shown completed in **Figure 5a**.
- c. Install the BPV hose onto the BPV recirculation port of the CS 4" intake. Loosely secure with the clamp that was removed earlier. Alignment shown in **Figure 5b** is approximate best alignment for a FMIC setup.



Figure 5a



We recommend installing the BPV hose now as the clamp can be difficult to access when the intake pipe is installed. Alignment may need to be adjusted for best fitment later on.



Figure 5b

DETAILED INSTRUCTIONS:

6. CorkSport 4" Intake Installation



We used an OEM sized turbocharger silicone for installation images. Installation on 3.5" or 4" turbocharger inlet is identical.

- a. Slide the supplied t-bolt clamp onto the turbo side of the supplied CS intake silicone. For reference, the turbo side DOES NOT have the CS logo near it.



OEM turbocharger inlet uses 63-71mm clamp. 3.5" turbocharger inlet uses 95-103mm clamp. 4" turbocharger inlet uses 107-115mm clamp.

- b. Install the supplied CS silicone onto the inlet of the turbocharger. Ensure the clamp is positioned as shown in **Figure 6a** for easiest access. Leave clamp loose for now.

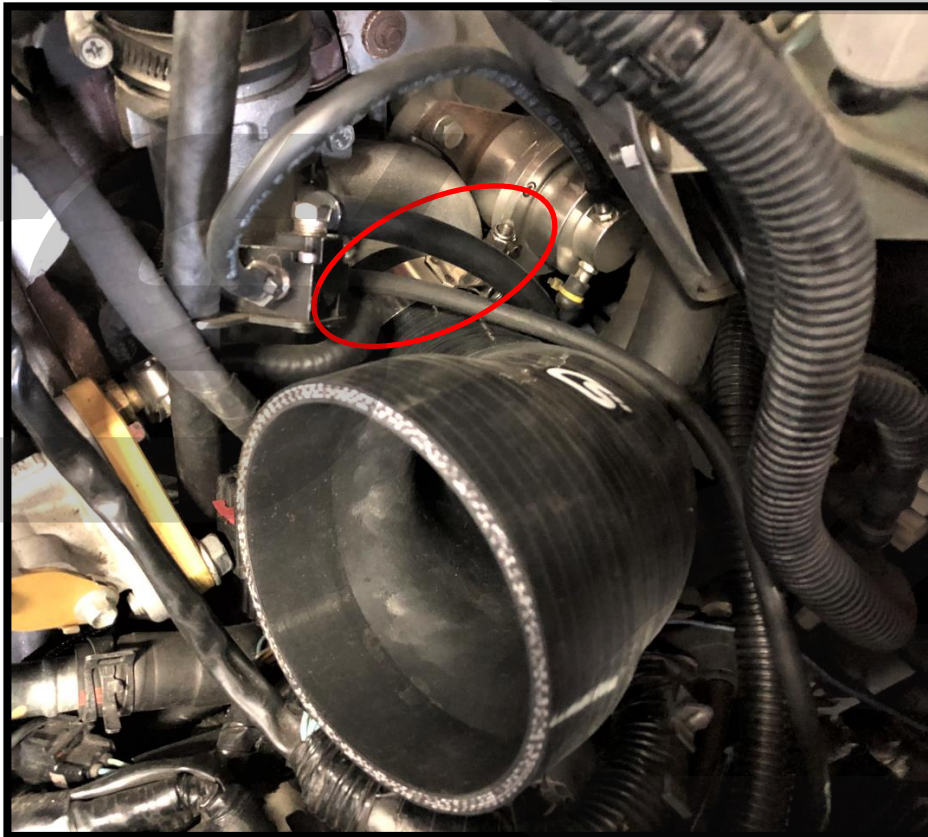


Figure 6a

DETAILED INSTRUCTIONS:

6. CorkSport 4" Intake Installation (continued)

- c. Slide the supplied 107-115mm clamp over the logo end of the CS turbo inlet silicone. Match clamp orientation shown in **Figure 6b**.
- d. Insert the CS 4" intake into the turbo intake silicone as shown in Figure 6c.
- e. Line up the mounting bracket of the CorkSport 4" Intake with the OEM mounting location. **Circled in red** in **Figure 6c**. Secure with the OEM nut but do not yet tighten.



Figure 6b

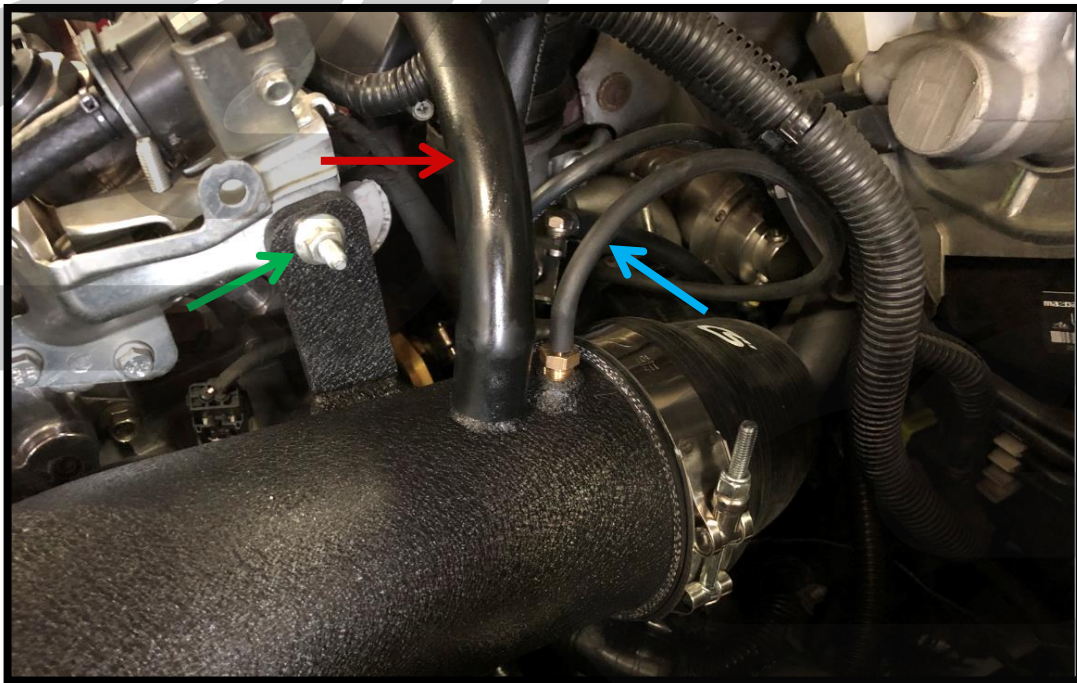
NOTE Now is a good time to verify fitment of your BPV hose. Rotate the BPV hose as needed for best fitment with your BPV. If you have a TMIC, install it temporarily to check fitment of your BPV hose.



Figure 6c

DETAILED INSTRUCTIONS:**6. CorkSport 4" Intake Installation (continued)**

- f. Line up the turbo side of the turbo inlet silicone. Ensure it is fully installed on the turbocharger and even all around.
- g. Line up the intake side of the turbo inlet silicone. Ensure it is straight on the intake and even all around.
- h. Once happy with silicone fitment, tighten both clamps on the turbo inlet silicone using a 10mm deep socket and ratchet. Tighten the clamps until snug. The silicone will bulge slightly at the edges of the clamp when tight.
- i. Tighten the nut at the OEM intake mounting location. Use a 10mm socket and ratchet and tighten the nut until snug. Shown tight with **green arrow** in **Figure 6d**.
- j. Install the BPV hose on your BPV and secure the clamps on either end of your BPV hose.
- k. Use the supplied 14mm ID hose to connect the large port on the CS 4" intake to your valve cover breather port. Shown with **red arrow** in **Figure 6d**. If you have an OCC, this port may be used for an OCC line.
- l. Use the supplied 4mm ID hose to replace the EBCS hose removed in Step 4c. It connects to the brass barb on the CS 4" intake as shown with **blue arrow** in **Figure 6d**.

**Figure 6d**

DETAILED INSTRUCTIONS:**6. CorkSport 4" Intake Installation (continued)**

- m. Plug in your MAF sensor wiring into the MAF sensor on the bottom side of the CS 4" intake. Shown in **Figure 6e**.

**Figure 6e****7. Vehicle Reassembly**

- NOTE** If installing an aftermarket battery tray or battery box in order to fit the CS 4" intake, now is the time to follow the instructions that came with your new battery tray/box.

- a. Follow Sections 3 and 2 in reverse in order to reinstall the vehicles intercooler (if removed) and any remaining battery box/battery/ECU components.
- b. Install the supplied aFe filter onto the end of the CorkSport 4" Intake. Secure with the supplied clamp and a flathead screwdriver. Shown completed in **Figure 7a**.

**Figure 7a**

This completes the installation of your CorkSport 4" Intake. You will need a retune to calibrate to the new intake diameter. Enjoy the new power potential and great sound!

WHAT'S NEXT?

CorkSport CST6 Turbocharger

If you're looking for big power for your Mazdaspeed without the headache of non-OE style fitment, then you have come to the right place. The CorkSport CST6 owns the Mazdaspeed Stock Flange Turbine Record at 684whp all while using stock flange components. Years of R&D have allowed us to design a high-performance turbocharger that can respond quickly, support 600+whp, and perform with stock style turbine flanges. The CST6 features a Garrett CHRA with a Ceramic Dual Ball Bearing Cartridge for improved response and durability for high boost applications. Testing has pushed the CST6 to 38psi maxing out an auxiliary fuel system flowing 40gph of methanol.



CorkSport 13" Big Brake Kit

The Stage 2 CorkSport 13" Big Brake Kit for Mazdaspeed 3 provides a drastic improvement to braking by offering improvements to each component in the system. Larger rotors, 4-piston calipers, stainless steel brake lines, upgraded pads, and everything you need to install on your Speed 3 is included in this kit. If the CorkSport Big Brake Caliper Kit was not enough for you and your MS3, look no further than the CorkSport 13" BBK.



CorkSport Mazdaspeed Exhaust Manifold

Performance, Reliability, and Sound for your build...this is the exhaust manifold for your Mazdaspeed 3. You are looking at the only performance exhaust manifold that can fit 3 different turbo flange options: Stock Mazda Flange, T3 Flange, and Precision V-Band. This modular design allows you to choose your flange style and change it later without replacing the entire manifold. Cast from 304SS, there are no welded flanges or connections that are prone to cracking and each flange surface is precision machined for flatness. Whether you are stock turbo or looking for the most powerful stock flange turbo, the CST6, this manifold supported 685 Whp with ease and don't forget the specifically designed dumptube that makes life easy for you.

