

# CorkSport Front Mount Intercooler Kit for SRI

2010+ Mazdaspeed 3



## This Package should contain:

- ❑ One (1) CorkSport FMIC with Brackets
- ❑ Five (5) Intercooler Pipes (see other side)
- ❑ Ten (10) 63-71mm T-bolt Hose Clamps
- ❑ Two (2) 70-78mm T-bolt Hose Clamps
- ❑ Two (2) 77-85mm T-bolt Hose Clamps
- ❑ Four (4) 2.25" Silicone Couplers
- ❑ Two (2) 2.25"-2.5" Silicone Reducers
- ❑ One (1) 2.75" Silicone Coupler
- ❑ One (1) 24" Long Silicone Hose
- ❑ Two (2) M8 Bolts and Washers
- ❑ One (1) Silicone BPV Hose
- ❑ Installation Instructions
- ❑ Hardware Kit

## Additional Parts List:

### Corksport Intake Installed



- ❑ One (1) Silicone Elbow
- ❑ Two (2) 38-43mm T-bolt Hose Clamps

### Corksport Short Ram Intake



- ❑ One (1) Turbo Inlet Pipe
- ❑ One (1) Silicone Elbow
- ❑ Five (5) Hose Clamps
- ❑ One (1) MAF Assembly
- ❑ One (1) Filter
- ❑ One (1) Silicone Reducer
- ❑ One (1) Silicone Hose Kit

## Included Intercooler Piping

### This Package should contain:



□ Intercooler Pipe #1



□ Intercooler Pipe #2



□ Intercooler Pipe #3



□ Intercooler Pipe #4



□ Intercooler Pipe #5

# CorkSport Power Series Front Mount Intercooler Kit For SRI

2010+ Mazdaspeed 3



**Thank you for purchasing the CorkSport Front Mount Intercooler (FMIC) Kit with Optional Short Ram Intake (SRI).** Our FMIC has been vigorously tested to ensure optimal characteristics. Testing showed an average 2psi pressure drop across the core and an 85% increase in efficiency which means greatly reduced core temperatures over the stock intercooler. We hope you enjoy the solid power gains in your Mazdaspeed 3. Please let us know your feedback by submitting a review at: <http://www.corksport.com/corksport-2010-mazdaspeed-3-fmic-kit-for-short-ram-intake.html>

## Pre-Installation Notes:



**This kit will raise boost level approximately 2-3 psi on an otherwise stock car.** If you have other modifications to your vehicle, please make sure fuel delivery is correct and safe for your modifications including this intercooler kit.



**Make sure your vehicle is completely cooled down prior to starting installation.** If you are going to work on your car within an hour or two of having driven it, use of a fan to cool of the area around the intercooler and exhaust manifold is highly recommended.



**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.



**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 would like additional detail.



**This kit has been developed to work with a CorkSport Short Ram Intake System.** If you are using another brand intake we cannot guarantee fitment. Also if you currently have a CorkSport SRI, a new piece of silicone is required and should come with your FMIC kit if ordered correctly.



**This kit has been tested and is known to fit the following Bypass/BOV:** HKS, Greddy, OEM Mazda and Forge. If you have another type of valve there may be clearance problems and relocation of the valve flange may be required.

## Materials and Time:



**General Info.**  
Part #: Axl-6-140  
Time Est: 4-5 Hours  
Wrench Rating: 3/5



**Tooling List**  
3/8 Drive Ratchet  
6" 3/8 Drive Extension  
8mm Long Socket  
10mm Long Socket  
12mm Socket  
Phillips Screwdriver  
Longnose Angled Pliers  
Channel Lock Pliers  
3mm Allen Wrench  
10mm Wrench  
12mm Wrench  
Silicone Spray  
Flashlight  
T30 Torx Bit



**Parts List**  
CorkSport FMIC  
(5) Intercooler Pipes  
(2) Intercooler Brackets  
(4) 2.25" Silicone Couplers  
(2) 2.25"- 2.5" Silicone Reducers  
(1) 2.75" Silicone Coupler  
(10) 63-71mm T-Bolt Clamps  
(2) 70-78mm T-Bolt Clamps  
(2) 77-85mm T-Bolt Clamps  
CorkSport SRI Kit (optional)  
Intake Silicone Elbow (optional for CS SRI)  
(1) Bypass Hose Extension (optional)  
(1) Hardware Kit

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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. Support Car on Floor Jack/Jackstands or Lift

- 1a) Use a floor jack and Jackstands to gain access to the underside of the vehicle. Always follow proper safety procedures when working on a vehicle

### 2. Remove Intercooler Cover

- 2a) Remove intercooler cover (2x 10mm Hex Head Bolts). If you have an SRI already installed, skip to step 4. If you have a CorkSport SRI, replace the silicone elbow with the new elbow provided

### 3. Removal of Parts for CorkSport SRI Installation

- 3a) Remove the battery box cover (2 integral latches)
- 3b) Disconnect the negative then positive battery terminals
- 3c) Remove battery hold down bracket (2x 10mm Hex Nuts)
- 3d) Remove the battery and place in a safe location
- 3e) Remove the front of the battery box, disconnecting three wire loom clips in the process
- 3f) Remove the ECU cover
- 3g) Disconnect latching ECU plugs
- 3h) Unplug the MAF Sensor Harness
- 3i) Disconnect and Remove Air Box (12mm Hex Head & Push in Grommets)
- 3j) Disconnect and Remove Battery Box (3x 10mm Hex Bolts)
- 3k) Unclip and Disconnect valve cover breather hose
  -  For video on this, please go to FMIC installation instructions in our knowledgebase
- 3l) Remove rubber accordion hose between turbo inlet pipe and air box (10mm hose clamp)
- 3m) Disconnect and remove recirculation valve hose between turbo inlet pipe and recirculation valve (spring hose clamps)
- 3n) Disconnect mount of turbo inlet pipe (10mm nut)
- 3o) Disconnect two loom clips from turbo inlet pipe
- 3p) Disconnect boost control solenoid line from turbo inlet and boost control solenoid
- 3q) Disconnect the boost control solenoid line.
- 3r) Disconnect hose clamp at turbocharger and extract turbo inlet pipe

### 4. Install CorkSport Turbo Inlet Pipe

- 4a) Assemble CorkSport Turbo Inlet Pipe as shown in Figure 4a – If you already have an SRI skip to step 5
- 4b) Install CorkSport Turbo Inlet Pipe to Turbo. Do not tighten

#### 4. Install CorkSport Turbo Inlet Pipe Continued...

- 4c) Attach turbo inlet bracket to stud with 10mm nut and tighten. Tighten T-Bolt clamp on turbocharger/silicone coupler
- 4d) Attach valve cover breather hose to valve cover (Use silicone spray)
- 4e) Attach 4mm hose to boost control solenoid. (Use silicone spray)

#### 5. Remove Factory Top Mount Intercooler

- 5a) Remove the intercooler fasteners (3x 12mm nuts with washers).
- 5b) Remove the breather hose from the BOV (with pliers).
- 5c) Loosen the intercooler hose clamps (10mm hex head or phillips).
- 5d) Remove the intercooler from the engine and set aside.
- 5e) Remove the two boost tubes from vehicle (10mm hex head).

#### 6. Remove Front Bumper

- 6a) Remove the front undertray shield (12x hex head screws).
- 6b) Remove the driver's side undertray to fender liner bolts (2x 10mm bolts).
- 6c) Repeat step 6b for the passenger's side bolts.
- 6d) Remove the 3 lock screws holding the driver's side fender liner to the side of the bumper (3x phillips head clips).
- 6e) Remove the bolt holding the driver's side of the bumper to the fender (1x 8mm hex/phillips head bolt).
- 6f) Repeat steps 6a & 6b for the passenger's side.
- 6g) Remove the 3 driver's side lock clips holding the top of the bumper in place.
- 6h) Remove the driver's side torx head bolt holding the top of the bumper in place (T30 torx bit).
- 6i) Repeat steps 6g & 6h for the Passenger side.
- 6j) Unclip both fog lights and free wiring from bumper.
- 6k) Remove the bumper from the vehicle.



First unclip the sides, then the front of the bumper.



Set bumper on soft cloth or towel to avoid damaging the paint.



#### 7. Install FMIC Piping & Intercooler

- 7a) Install a 2.25" coupler & 63-71mm T-bolt clamp to the turbo outlet and tighten.
- 7b) Install a 63-71mm T-bolt clamp (loose) and intercooler pipe #1.
- 7c) Install a 2.25" coupler to the other end of intercooler pipe #1 and slide 2 63-71mm T-bolt clamps on to the coupler.
- 7d) Remove the 12mm bolt from the A/C compressor bracket.
- 7e) Install intercooler pipe #2 into the coupler on intercooler pipe #1 and attach the bracket to the A/C compressor and reinstall bolt.

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## 7. Install FMIC Piping Continued...

- 7f) Install the intercooler brackets on the intercooler (2x 8mm bolts).
- 7g) Install the intercooler. If installing a larger intercooler see the note below extended Step 7g on page 7 about removing crash bar.  
 You may want an extra set of hands for this step.
- 7h) Install a 2.25" silicone coupler and 2 63-71mm T-bolt clamps on the end of intercooler pipe #2.
- 7i) Install a 2.5"-2.25" silicone reducer onto intercooler pipe #3 and the intercooler using 1 70-78 & 1 63-71mm T-bolt clamps.
- 7j) Go back through and tighten all T-bolt clamps and bolts.
- 7k) Install a 2.5"-2.25" silicone reducer onto intercooler pipe #4 and the cold side of the intercooler using 1 70-78 & 1 63-71mm T-bolt clamps and check pipe clearances.
- 7l) Install a 2.25" silicone coupler with 2 63-71mm T-bolt clamps on to the end of intercooler pipe #4.  
 You may want to tighten the lower clamp enough so that the clamps do not slide back down intercooler pipe #4.
- 7m) Install the 2.75" silicone coupler & 2 77-85mm T-bolt clamps on to intercooler pipe #5.
- 7n) Install the other side of intercooler pipe #5 on to the 2.25" silicone coupler on the open end of intercooler pipe #4.
- 7o) Install intercooler pipe #5 on to the throttle body.
- 7p) Check pipe clearance and go back through and tighten all T-bolt clamps and bolts.

## 8. Install Intake

- 8a) Install CorkSport Long By-Pass Valve Hose using the factory hose clamps. If you own a non-CorkSport Intake, skip to step 9
- 8b) Remove the white clip from the wiring harness near the battery tray.
- 8c) If you own a CorkSport SRI, remove the silicone elbow from your intake.
- 8d) Install silicone elbow provided with kit.
- 8e) Install the CorkSport MAF Housing.
- 8f) Install CorkSport Dryflow Air Filter.
- 8g) Clock the Intake at roughly a 15 degree downward angle.
- 8h) Install MAF Sensor into MAF Housing and secure with two M4 socket head cap screws.
- 8i) Check the Turbo Inlet Pipe and SRI for any final adjustments before reinstalling battery.
- 8j) Install battery box and attach with 3x 10mm hex head bolts.
- 8k) Install ECU Connectors and cover over ECU
- 8l) Install the battery into the battery box, attach hold down bracket w/ 10mm nuts, install front panel of battery box and snap wiring clips into place. Install negative battery cable then positive battery cable and tighten. Install battery box top.



For video on this, please go to FMIC installation instructions in our knowledgebase

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## 9. Check Installation

- 9a) Start the car, check for leaks, retighten if necessary. If idle stumbles or check engine light appears check the MAF sensor is fully plugged into harness and that the MAF Sensor is properly seated in the MAF housing.
- 9b) If possible, fully warm up the car and test drive it under hard acceleration to check for boost leaks. If any are suspected, recheck all silicone connections and recheck all hose clamps

## 10. Reinstall Front Bumper

- 10a) Reinstall the bumper cover being sure that it is correctly positioned and install the 2 bolts holding the side of the bumper to the fender (2x 8mm hex/phillips head).
- 10b) Reinstall the 2 torx head bolts & 6 push clips into the top of the bumper to secure it in place.
- 10c) Reinstall both fog lights and clip in all wiring clips to ensure that the wiring will stay in place.
- 10d) Reinstall the 3 driver's side phillips head clips that hold the bumper to the fender liner. Then repeat for passenger side.
- 10d) Reinstall the under tray using the 4 10mm hex head bolts to secure the inner side fender liners to the sides of the under tray and 12 10mm hex head screws to secure the rest of the under tray back into position.
- 10f) Lower the vehicle, being sure to remove anything out from under the vehicle.

**!** This completes the installation of your FMIC. Take your vehicle for a test drive. Once your vehicle is up to operating temperature, open the hood and check for boost leaks or any loose connections and tighten connections as needed. Check out our [knowledgebase](#) for additional install information.

## What's Next:

### CorkSport Rear Adjustable Sway Bar



Remove the tendency of the Mazdaspeed 3 of overpowering the front tires under hard cornering. The CorkSport sway bar attaches both sides of the rear suspension together and compresses the inside suspension, which effectively increases the spring rate on the side of the suspension which is compressed most. This extra spring rate helps to minimize body roll and suspension compression.

### CorkSport Front Sway Bar

Improve handling and maintain ride height and comfort, while minimizing body roll during cornering with the CorkSport 2010+ Mazdaspeed 3 Front Sway Bar. Designed with the rear sway bar in mind, the increased bar diameter has been engineered to match the middle setting on our rear sway bar



## Detailed Instructions

### 1. Support Car on Floor Jack/ Jackstands or Lift

1a) Use a floor jack and Jackstands to gain access to the underside of the vehicle. Always follow proper safety procedures when working on a vehicle

### 2. Remove Intercooler Cover

2a) Use a 10mm Socket and 3/8" drive ratchet to remove the two bolts that attach the intercooler cover shown in Figure 2a. Lift the front of the intercooler cover off of the intercooler and push the entire cover toward the firewall and off of the catch at the back of the intercooler.

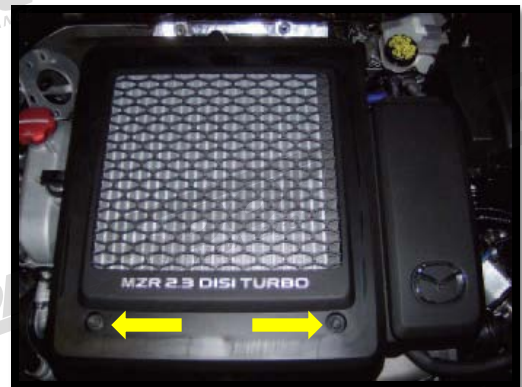


Figure 2a

### 3. Remove Parts for New Intake

If you already have a SRI installed you can skip to step 4. If you have a CorkSport SRI, replace the silicone elbow with the new elbow provided in the kit and then skip to step 4.

3a) The battery box cover is held on with two clips shown in Figure 3a, pry the clips outward and lift the front of the lid upward and then pull the lid forward out of the latch mechanism at the back of the box.

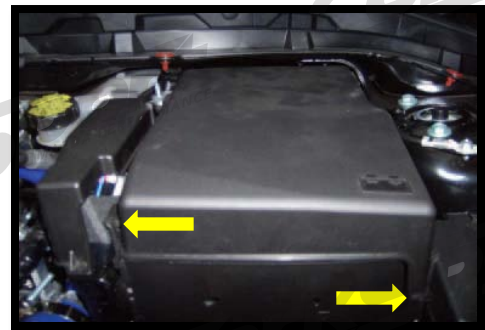


Figure 3a

3b) Use a 10mm end wrench and disconnect the negative terminal of the battery (the one nearest the firewall), place the battery negative lead out of the way between the battery box and fender well. Disconnect the positive lead using the 10mm end wrench and pull the leads clear of the front of the battery to make it easier to remove the battery.

3c) Remove the two 10mm nuts shown in Figure 3b from the battery hold-down bracket and lift the bracket free of the studs.

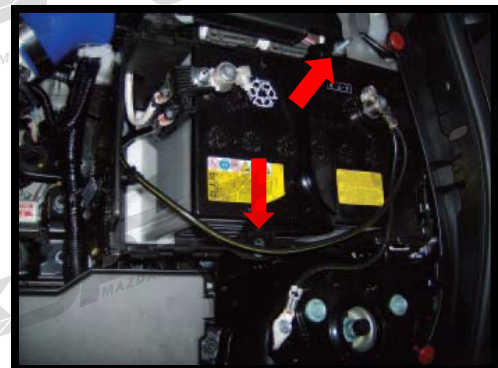


Figure 3b

3d) Lift the Battery free of the battery box, and place it in a safe location.

3e) Remove the wiring harness clips attached to the front of the cover shown in Figure 3c. Remove the front battery cover by sliding the front battery cover upward to remove.

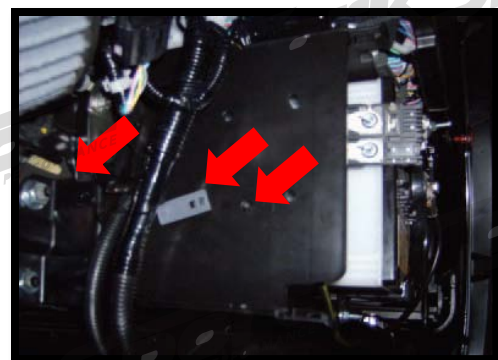


Figure 3c

3f) Remove the cover from the engine control unit (ECU) by disconnecting the latch that attaches the front of the cover to the battery box and ECU shroud. See red arrow in Figure 3d for location of ECU cover and latch.



Figure 3d

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## Detailed Instructions

### 3. Remove Parts for New Intake Continued...

**3g) 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. Both operate identically. The ECU plugs can be seen circled in red in Figure 3e.



Figure 3e

**3h) Press down on the latch on the top of the lock sealed connector** that the Mass Airflow (MAF) sensor (as shown in Figure 3f) is plugged into and pull on the connector with one hand while supporting the MAF housing and airbox with the other hand.

**3i) Remove the factory airbox.** Remove the 10mm bolt attaching the box to the vehicle and back off the 10mm bolt on the hose clamp attached to the rubber accordion inlet pipe. Push the pipe off of the air box. Pull the airbox up and out of the engine compartment.

**3j) Remove the battery box** by removing the three 10mm bolts from the floor of the battery box shown in Figure 3g using a ratchet, 10mm socket and 6" 3/8 drive extension. Extract the battery box and ECU from the engine compartment. Be careful when removing this box as the car's ECU is attached.

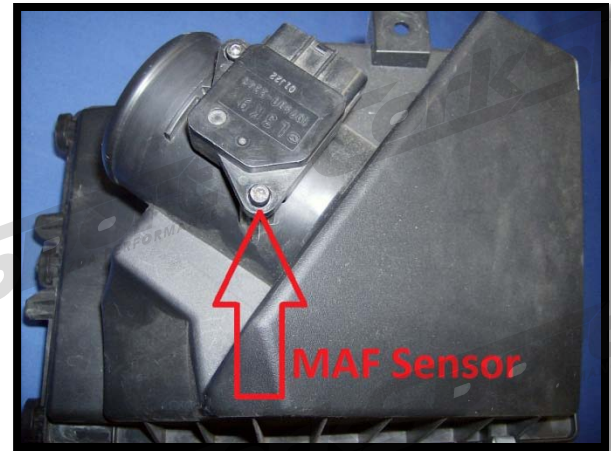


Figure 3f

**3k) Remove the Valve Cover Breather Hose, Rubber accordion hose, Recirculation Hose, Inlet pipe Bracket.**

Use two screwdrivers to release each of the latches on the internal clips (green on the valve cover, blue on the inlet accordion hose) for the valve cover breather hose. You can also fashion a release mechanism out of a paper clip shown in Figure 3h. Slide the clip in behind the latch clip (green/blue parts) and remove the entire assembly. As an alternative, you can pull the green or blue clip assembly out of the hose toward the valve cover.



For video on removal of the Inlet Pipe please go to the FMIC + SRI installation instructions in our knowledgebase.

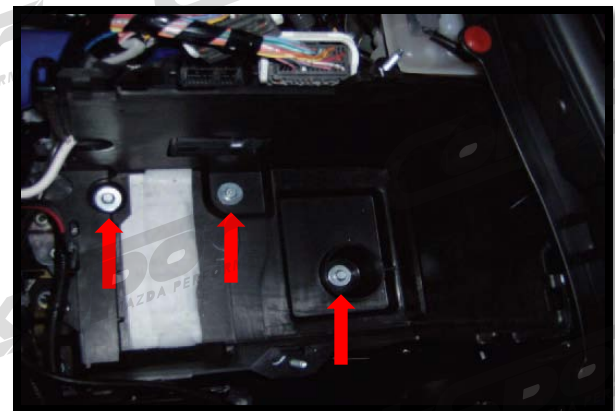


Figure 3g

**3l) Extract the accordion hose** that connects the air box to the hard plastic turbo inlet pipe. The rubber accordion hose is held onto the turbo inlet pipe with a 10mm hose clamp. Back the 10mm bolt out of the hose clamp and store it away, it will not be reused.

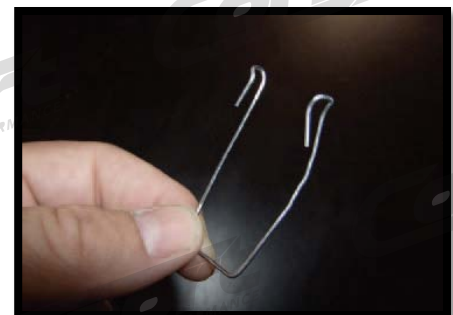


Figure 3h

## Detailed Instructions

### 3. Remove Parts for New Intake Continued...

- 3m) Use the pliers to release the clamp tension of the recirculation hose.** It is attached to the recirculation valve (sometimes known as a blow-off valve) on the intercooler and onto a fitting on the underside of the hard plastic turbo inlet pipe on the other, as shown in **Figure 3i**. Both ends are retained with a pair of hose clamps that can be released with channel lock pliers. Move the hose clamps to the center of the hose away from the fittings to remove the hose.
- 3n) Disconnect the 10mm nut that holds the hard plastic turbo inlet pipe in place.** See **Figure 3j** for location. Remove the nut and pull the grommet and hard plastic hose free of the mounting stud.
- 3o) Disconnect Wiring harness clips from intake.** Remove the clips and pivot them out of the way.
- 3p) Disconnect Boost Solenoid Line and Turbo Inlet pipe** from turbocharger.
- 3q) The boost control solenoid line fitting is marked on **Figure 3k**.** Remove the hose clamp from both ends of the line attached to this fitting by using needle nose pliers, and remove the hose from the fitting on the turbo inlet pipe and the boost control solenoid. Great care should be taken with the end of the line on the boost control solenoid as it is a plastic housing. If you have difficulty, try rotating the hose to break the seal of the rubber to the plastic fitting and then pulling straight up. It does take some force, but it comes off cleanly if pulled in line with the attached fitting.
- 3r) Remove the plastic inlet pipe from the turbocharger.** Depending on year and model, the inlet pipe will most likely have a hose clamp that is actuated with a pair of pliers, but on some models and years, there is a hose clamp with an 8mm bolt. Back the hose clamp off and pull the hard plastic inlet pipe off of the turbocharger inlet. The stud that mechanically mounts the inlet pipe to the bracket may have fallen back into place, so make sure it is removed. Extract the plastic turbo inlet pipe and set aside.



Figure 3i



Figure 3j



Figure 3k

## Detailed Instructions

### 4. Install CorkSport Turbo Inlet Pipe

If you already have another brand SRI, or a CorkSport SRI then skip to step 5.

#### 4a) Assemble the turbo inlet pipe as shown in Figure 4A.

As seen, 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. The 2" diameter end connects to the turbocharger while the 2.25" end connects to the CorkSport Short Ram Intake. Each of the silicone hoses – The 6" long, smaller diameter short hose for the Boost Control Solenoid and the 12" long, larger ID Hose for the valve cover breather connection – should be lubricated with silicone spray prior to attaching the fitting on the TIP. Also, remove the factory mounting grommet and washer from the factory TIP and install on the CorkSport TIP as shown by the red arrow in Figure 4a.



Figure 4a

#### 4b) Install the turbo inlet pipe onto the turbocharger.

Align the bracket on the CorkSport Turbo Inlet Pipe with the stud on the valve cover bracket (see red circle in Figure 4b) and connect the 2" diameter silicone coupling over the end of the turbocharger compressor inlet. This should fit easily - if not, the T-bolt clamp is probably too tight.

#### 4c) Attach the bracket on the CorkSport turbo Inlet

over the stud on the factory valve cover bracket and start the nut onto the stud as indicated in Figure 4b. Make sure the silicone coupling is still fully engaged between the turbocharger and turbo inlet pipe and tighten the nut the rest of the way. Then tighten the T-bolt band clamp at the turbocharger compressor inlet. This has to be tight.



Figure 4b

#### 4d) Feed the 14mm valve cover breather hose

underneath the wiring harness toward the valve cover breather fitting as shown in Figure 4c. Apply a small amount of silicone spray to the inside of the hose and to the valve cover fitting and slide the hose over the fitting up to the stop collar. If there are any kinks in the hose, re-evaluate the routing. This will prevent your crankcase from venting properly.

#### 4e) Apply a small amount of silicone spray

onto the free end of the 6" long 4mm hose and connect it to the boost control solenoid outlet. Be Gentle.



Figure 4c

### 5. Remove Factory Top Mount Intercooler

#### 5a) Remove the three (3) 12mm nuts (shown in Figures 5A & 5b by red arrows) securing the intercooler to the top of the engine using the 3/8" drive ratchet and the 12mm long socket. There are two bolts on the bottom of the intercooler and one located on the top left corner.

## Detailed Instructions

### 5. Remove Factory Top Mount Intercooler Continued...

5b) Using pliers, remove the breather hose (shown in [Figure 5c](#) by the red circle).

5c) Loosen the top hose clamp on both the front and rear ([Figure 5d](#)) boost tubes using the 3/8" drive ratchet. A small phillips screwdriver may be used instead.

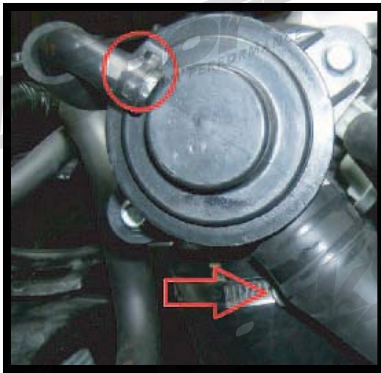


Figure 5c



Figure 5d



Figure 5a



Figure 5b

5d) Remove the intercooler from the engine and set aside.

5e) Loosen the bottom hose clamps on both the front and rear boost tubes using either the 3/8" drive ratchet and 10mm long socket, or the small phillips head screwdriver.

### 6. Remove The Front Bumper

6a) Remove the 12 (twelve) hex head screws (shown by the red arrows in [Figure 6d](#)) using the ratcheting wrench and 10mm long socket.

6b) Remove the 2 (two) 10mm screws (shown by the red arrows in [Figure 6a](#)) using a ratcheting wrench and 10mm long socket..

6c) Repeat step 6b for the driver's side of the undertray and remove the undertray.

6d) Remove the 3 (three) plastic lock screws (shown by the red circles in [Figures 6b & 6d](#)) on the edge of the driver's side wheel well using a small phillips screwdriver.

6e) Remove the 1 (one) 8mm hex head bolt (shown by the red arrow in [Figure 6c](#)) using a small phillips screwdriver or ratchet and 8mm socket.

6f) Repeat steps 6d & 6e for the passenger side.



Figure 6a



Figure 6b



Figure 6c

## Detailed Instructions

### 6. Remove The Front Bumper Continued...

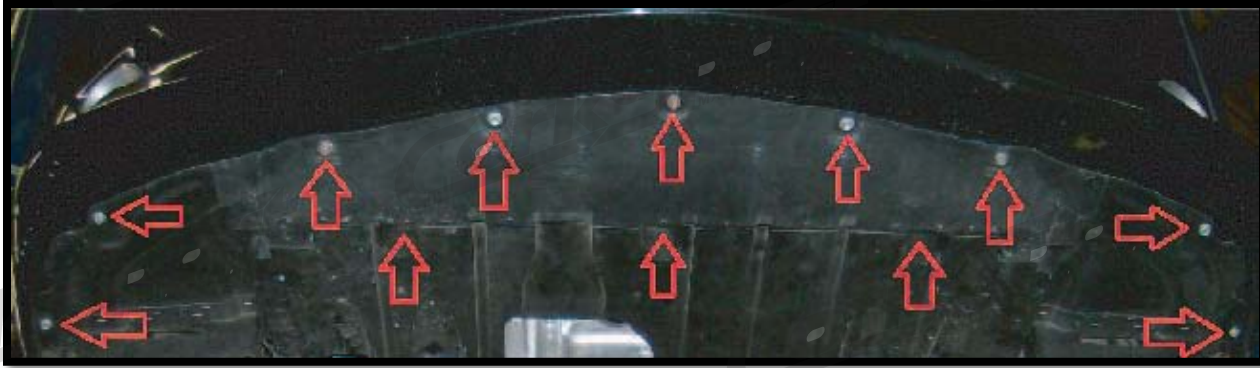


Figure 6d

**6g) Locate the 3 (three) lock clips on the top of the bumper** (shown in Figure 6e in the red circles) on the driver's side of the engine bay. Remove them by using a flathead screwdriver to pop the tabs up and then pull the clip out of the hole.

**6h) Locate the 1 (one) Torx head bolt on the top of the bumper** (shown in Figure 6f by the red arrow) on the driver's side of the engine bay. Remove it by using a T30 Torx bit and ratchet.

**6i) Repeat steps 6g & 6h for the passenger side clips and bolt.**

**6j) Unclip both fog lights from the wiring harness** by squeezing on the blue clip and pulling down (shown in Figure 6g by the red arrow). Once unplugged, make sure that the wiring is free from any connection to the bumper cover.

**6k) Remove the bumper from the vehicle**

**NOTE** The best way to remove the bumper is to unclip the sides of the bumper from the fender and then pull up and out on the front

**!** Caution: Set bumper on soft cloth or towel to avoid damaging the paint.



Figure 6e



Figure 6f

### 7. Install FMIC Piping

**7a) Install a 2.25" straight silicone coupler with 63-71mm T-bolt clamp on to turbo outlet.** Tighten the hose clamp using a ratcheting wrench and 10mm long socket (bottom T-bolt clamp shown in Figure 7a).



Figure 7a

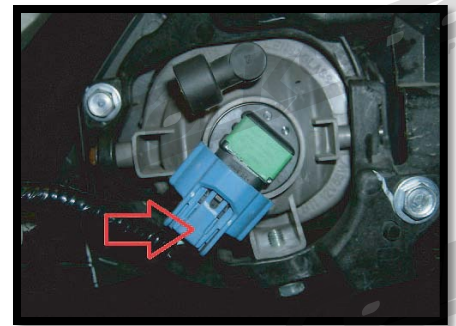


Figure 6g

## Detailed Instructions

### 7. Install FMIC Piping Continued...

7b) Install a 63-71mm T-bolt clamp on to the other side of the previously installed silicone coupler and install intercooler pipe #1 into the coupler as shown in **Figure 7a & 7b** (both images are of the same pipe and connection). Leave the T-bolt clamp somewhat loose at this time.

**NOTE** Please refer to the packing list that came with the instructions for definitions and pipe labels.

7c) Install a 2.25" straight silicone coupler on the other end of intercooler pipe #1 and slide 2 (two 63-71mm T-bolt clamps onto coupler).

7d) Remove the 12mm hex head bolt from the A/C compressor bracket shown in **Figure 7c**. Set aside for later use.



Figure 7b



Figure 7e

7e) Install intercooler pipe #2 into the coupler on pipe #1 and attach the bracket to the A/C compressor using the factory 12mm hex head bolt. Leave the bolt and T-bolt clamps loose at this time (See **Figure 7e**)

7f) Install the intercooler brackets on the intercooler with the supplied M8 bolts and lock washers (See red circles in **Figure 7f**).

7g) Remove the 10mm hex head core support bolts (See red arrows in **Figure 7f**) using a ratcheting wrench and 10mm long socket. There is a group of three bolts on each side of the bottom of the core support. Use the uppermost bolt to mount the intercooler. Line up the radiator brackets and reinstall the core support bolts. Make sure that the intercooler is installed as far up as it can go (close to the bottom of the crash bar) and this will ensure that your bumper and under tray will clear the intercooler.

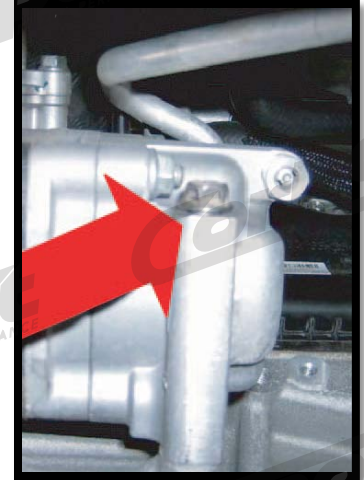


Figure 7c



Figure 7f

**NOTE** You may want an extra set of hands to help install the intercooler.

**NOTE** The brackets shown to the left are for a first gen, but the process remains the same in both generation vehicles.

**NOTE** **Note: If installing a larger intercooler, the crash bar must be removed. Remove the bolts circled in Figure 7g and unclip the temperature sensor from behind the crash bar. Use the supplied top intercooler bracket and mount to the hood release mechanism support (center red circle in Figure 7g).**



Figure 7g

The side brackets mount in the same location as laid out in Step 7g. The temperature gauge sensor will have to be relocated.

## Detailed Instructions

### 7. Install FMIC Piping Continued...

7h) Install a 2.25" straight silicone coupler and 2 (two) 63-71mm T-bolt clamps on the end of intercooler pipe #2 (See red arrows in Figure 7h).

7i) Install a 2.5" - 2.25" silicone reducer onto the intercooler (larger side on intercooler). Install 1 (one) 70-78mm and one (1) 63-71mm T-bolt clamp onto the silicone reducer and install intercooler pipe #3 as shown in Figure 7h.

7j) At this time, you can go back through and check clearances of the installed intercooler piping and tighten all T-bolt clamps and bolts.

7k) Install a 2.5" - 2.25" silicone reducer with 1 (one) 63-71mm and 1 (one) 70-78mm T-bolt clamp onto intercooler pipe #4 and the cold side of the FMIC as shown in Figure 7i. Leave the T-bolt clamps loose for now.

7l) Install a 2.25" straight silicone coupler with 2 (two) 63-71mm T-bolt clamps onto the end of intercooler pipe #4 as shown in Figure 7j by the red arrow.



You may want to slightly tighten down the lower T-bolt clamp so that the other clamp does not fall down the intercooler pipe.

7m) Install the 2.75" silicone coupler and 2 (two) 77-85mm T-bolt clamps onto intercooler pipe #5 as shown in Figure 7k to the right.

7n) Install the other side of intercooler pipe #5 on to the 2.25" silicone coupler on the open end of intercooler pipe #4 (shown installed in Figure 7l on the following page).

7o) Install intercooler pipe #5 on to the throttle body.

7p) At this time, go back and check clearances of the pipes and tighten all of the T-bolt clamps from the cold side of the intercooler all the way to the throttle body. Also you can reinstall your BOV using the two (2) M6 bolts and nuts supplied with the kit.

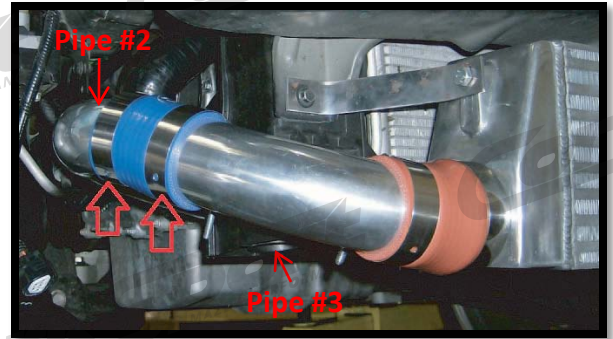


Figure 7h

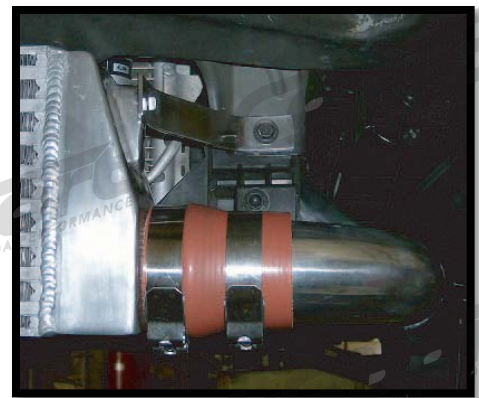


Figure 7i



Figure 7k

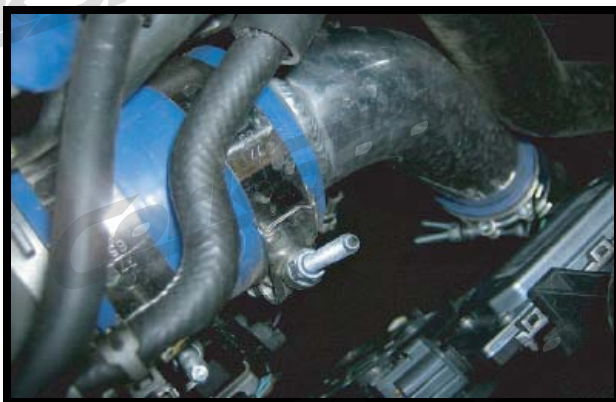


Figure 7l

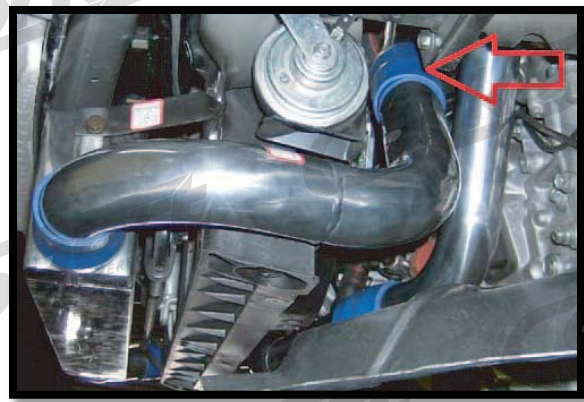


Figure 7j

## Detailed Instructions

### 8. Install CorkSport Short Ram Intake or BOV Extender

- 8a) Install the CorkSport Long By-Pass Valve Hose** between your by-pass valve and the lower inlet on your Turbo Inlet Pipe. Install the hose reusing your factory clamps.. **If you have a non-CorkSport Intake, skip to step 9.**
- 8b) Remove the white clip** that is wrapped around the wiring harness, near the battery tray to provide clearance for the intake. The clip is shown in **Figure 8b**.
- 8c) If you already had a CorkSport SRI installed**, swap the silicone elbow to the new one provided in the FMIC kit. Skip to step 9
- 8d) Install the silicone elbow provided in the kit** and the 63-71mm T-bolt band clamp over the end of the CorkSport Turbo Inlet Pipe. Leave the clamps loose so you can clock the angled coupler after the MAF housing and Air Filter have been installed. (See **Figure 8c** for picture of completed install)
- 8e) Install the 77-85mm hose clamp** over the end of the angled coupler and then install the CorkSport MAF Housing into the coupler with the arrow pointing in the direction of air flow, toward the turbocharger.
- 8f) Tighten the 3" band clamp** and install another 77-85mm T-bolt clamp and CorkSport Air Filter element onto the open end of the CorkSport MAF Housing. Tighten the 77-85mm band clamp.
- 8g) Clock the angled coupler-MAF Housing-Air filter** so the it points at roughly a 15 degree downward angle and tighten the 63-71mm T-bolt clamp that joins the small end of the angled coupler to the turbo inlet pipe.
- 8h) Installation of the MAF Sensor** is very straight forward, but a few precautions must be taken to keep the o-ring seal on the sensor and the threads on the MAF Housing intact. Seat the MAF Sensor into the hole on the housing with the connector facing the side with the arrow and press the sensor into the hole. Align the bolts holes and install the small socket head cap screws through the MAF sensor into the MAF housing. Take care not to cross thread these fasteners. If they look like they are not perpendicular with the tapped holes, check that the MAF sensor is flush with the housing and that the holes are aligned. Tighten both screws with a 3mm Allen wrench.
- 8i) Check the final adjustment of the Turbo Inlet Pipe and SRI** before installing the battery.
- 8j) Install the battery box back into place**, fastening into the chassis with the three 10mm bolts through the base of the box. Feed the battery terminal lines through the cutouts in the box as shown in **Figure 8d**.



Figure 8a

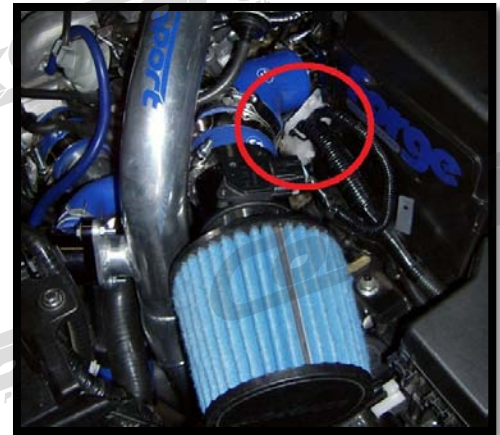


Figure 8b



Figure 8c



Figure 8d



## Detailed Instructions

### 8. Install CorkSport Short Ram Intake Continued...

- 8k) Install the ECU connectors and latch the cam locks to seat the connectors into the ECU. Install the ECU cover over the connectors.
- 8l) Install the battery into the battery box (Negative terminal toward the firewall) and install the hold down bracket over the two studs on the box. There is a diagram on the bracket that shows 'Forward' and an arrow which should point toward the front of the car. Install the two 10mm flange nuts onto the studs. Install the positive battery cable onto its terminal and tighten the 10mm nut hand tight. Install the negative battery cable onto its terminal and tighten the 10mm nut hand tight. Install the front cover onto the battery box and snap the wiring harness clips into place. Install the battery box top into place and latch the two latches on the forward sides of the box.



For video see FMIC + SRI installation instructions in our knowledgebase.

### 9. Check Installation

- 9a) **Start the car:** 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.
- 9b) **If possible, fully warm up the car and test drive it** under hard acceleration to check for boost leaks. If any are suspected recheck all silicone connections. After a test drive, recheck all hose clamps again for tightness.

### 10. Reinstall Front Bumper

- 10a) Re-position the bumper cover back on the vehicle, being sure that the clips (see red circles in Figure 10a) fully clip back into place. Then install the 2 (two) hex head bolts in to the corners of the bumper where they meet the fender (see red arrow in Figure 10a) using either a phillips head screwdriver or 8mm socket and ratcheting wrench.



Figure 10a



Warning: Use caution to avoid scratching the fender with the edges of the plastic bumper.

- 10b) Reinstall the two torx head bolts and six push clips into the top of the bumper, securing it back in place.
- 10c) Reinstall both fog lights (see red arrow in Figure 10b) and ensure that all wiring is secured back in to their wire clips.
- 10d) Reinstall the three driver's side phillips head clips holding the fender liner to the edge of the bumper (see red circles in Figures 10c & d) and repeat for the passenger side clips.

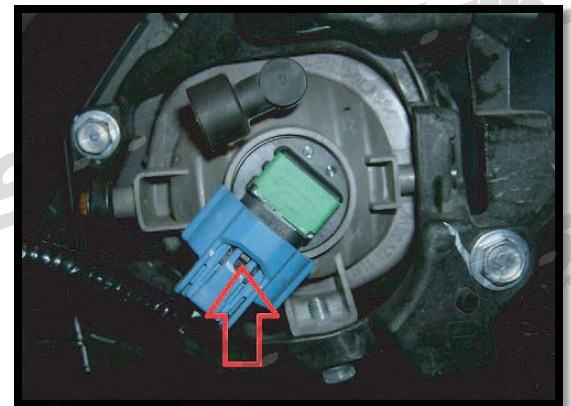


Figure 10b



Figure 10c



Figure 10d

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

## Detailed Instructions

- 10e) Trim away plastic on stock front undertray to provide clearance for the piping and intercooler. See [Figure 10e](#) for illustration of trimming.
- 10e) Reinstall the under tray by reusing the four factory 10mm hex head bolts using a ratcheting wrench and 10mm long socket in to the inside fender liner clips. Then install the 12 (twelve) hex head bolts and front under tray piece following steps.
- 10f) Lower the vehicle by removing it from the jack stands or lift.



Figure 10f



Figure 10e

**This completes the installation of your FMIC. Take your vehicle for a test drive. Once your vehicle is up to operating temperature, open the hood and check for boost leaks or any loose connections and tighten connections as needed. Check out our [knowledgebase](#) for additional install information .**

### What's Next:

#### CorkSport Rear Adjustable Sway Bar



**Remove the tendency of the Mazdaspeed 3 of overpowering the front tires under hard cornering** The CorkSport sway bar attaches both sides of the rear suspension together and compresses the inside suspension, which effectively increases the spring rate on the side of the suspension which is compressed most. This extra spring rate helps to minimize body roll and suspension compression. The rear sway bar being adjustable allows you to fine tune the handling of your Mazda 3/Mazdaspeed3.

#### CorkSport Front Sway Bar

**Improve handling and maintain ride height and comfort, while minimizing body roll** during cornering with the CorkSport 2010+ Mazdaspeed 3 Front Sway Bar. Designed with the rear sway bar in mind, the increased bar diameter has been engineered to match the middle setting on our rear sway bar. Intended to compliment the CorkSport Rear Sway Bar, this is not adjustable by design. If you prefer more under or over steer, simply set the rear bar firmer or softer to match your driving style.

