

CorkSport Mazdaspeed Top Mount Intercooler (TMIC)

2007-11 Mazdaspeed 3, 2007-11 CX7, & 2006-2007 Mazdaspeed 6



Thank you for purchasing the CorkSport Top Mount Intercooler (TMIC). Our TMIC has been vigorously tested to ensure optimal characteristics. Testing completed on a SuperFlow test bench proved a 46% increase in airflow over the Mazda OEM intercooler. During the testing, the CorkSport TMIC showed an average decrease in pressure across the core by 53% and an increase in overall efficiency of 25% over the stock intercooler. We hope you enjoy the solid power gains you should see in your Mazdaspeed 3, MS6 or CX7 turbo. Please let us know your feedback by submitting a review at: <http://www.corksport.com/corksport-mazdaspeed-top-mount-intercooler.html>

Pre-Installation Notes:



Make sure your vehicle is completely cooled down prior to starting installation. Just because it is called an intercooler doesn't mean that it can't get hot enough to seriously injure you. If you are going to work on your car within an hour or two of having driven it, use a fan to cool off the area around the intercooler and exhaust manifold.



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 require additional detail.



These installation instructions are for use with a 2007-2011 MS3, CX7, and 2006-2007 MS6. If you have a different vehicle, contact us for the appropriate instructions for your application.

Materials and Time:



General Info.

Part #: Gen-6-930

Time Est: 20-30 min

Wrench Rating: 2/5



Tooling List

3/8 Drive Ratchet

10mm Long Socket

12mm Long Socket

Small Phillips Screwdriver

Opt: 10 mm End Wrench

Opt: 4 mm Allen Wrench



Parts List

CorkSport TMIC

2xM6 x 1.0 Bolts

Opt: Aluminum Trim Ring

See Install Kit for opt. parts info.



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Checklist

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

1. Remove the Factory Top Mount Intercooler

-  **These instructions are made for all 2.3L DISI engines.** Your specific engine cover and engine bay may differ slightly from the pictures, but the process for removal remains the same.
-  **For the CX7,** you will first need to remove the vent shroud before proceeding.
- 1a)** Remove the intercooler cover
- 1b)** Remove the three (3) 12 mm nuts securing the TMIC to the engine
- 1c)** Remove the BOV connection shown by the **green** and **red** circles in [Figure 3A](#)
- 1d)** Loosen the top hose clamp on both the front and rear boost tubes
- 1e)** Remove the TMIC as shown by the **red arrow** in [Figure 4B](#)


2. Install the CorkSport Top Mount Intercooler

- 2a)** Remove the cold pipe from the stock TMIC
 -  **Be sure to remove and reinstall the metal gasket**
- 2b)** Install the cold pipe onto the CorkSport TMIC with the metal gasket positioned between the cold pipe and the TMIC. Hand thread all four(4) bolts and tighten them using a ratcheting wench and 10mm socket
- 2c)** Remove the three (3) mounting grommets and spacers from the stock TMIC
- 2d)** Install the three (3) mounting grommets and spacers onto the CorkSport TMIC
- 2e)** Install the CorkSport TMIC being sure that all three (3) bolt holes line up as shown in [Figures 2A and 2B](#) and that both boost tubes connect to the TMIC [\(shown in Figures 6A and 6B\)](#)
- 2f)** Tighten the top two (2) boost tube clamps being sure that the TMIC connections are fully seated into the boost tubes
- 2g)** Reinstall the BOV hoses as shown in [Figure 3A](#)
- 2h)** Reinstall the three (3) 12mm intercooler nuts as shown in [Figures 2A and 2B](#)
- 2i) If you DID NOT purchase the optional trim ring:** Reinstall the intercooler cover using the two (2) supplied M6 bolts as shown in [Figure 1B](#)
 -  **If installing on a CX7,** you will not need to reinstall the factory metal cover (shown in Figure 7B) to obtain a factory-like seal with the TMIC. Skip step I and reinstall the factory shroud
 -  **Make sure to reinstall the cover as performance decrease can happen.** It is important to note that the intercooler cover help direct air over the intercooler.
- 2j) If you DID purchase the optional trim ring:** **2010+ Mazdaspeed 3** install the trim ring as shown in [Figure 8A](#) or **2007-2009 Mazdaspeed 3 or a Mazdaspeed 6** install the trim ring as shown in [Figure 8B](#) [Figure 8C](#) and [Figure 8D](#). Also be sure to set the stock shroud in a safe place in case you need it at a later date.



This completes the installation of your TMIC. Take your vehicle for a test drive. If you experience any loss of power or a check engine light, recheck all connections to the TMIC and make sure they are fully secured. Check out our [knowledgebase](#) for additional install information

Detailed Instructions

 These instructions are made for all 2.3L DISI engines. Your specific engine cover and engine bay may differ slightly from the pictures, but the process for removal remains the same.

1. Remove the Factory Top Mount Intercooler

A) Remove the intercooler cover by removing the (2) 10 mm bolts shown in Figure 1B (MS3 cover shown) using the 3/8" drive ratchet and the 10mm long socket.


 For the CX7, you will first need to remove the vent shroud by unclipping the two push style clips (shown by the red circles in Figure 1A) and pulling towards the front of the engine bay.



Figure 1B



Figure 1A

B) Remove the three (3) 12mm nuts (shown in Figures 2A and 2B by the 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.

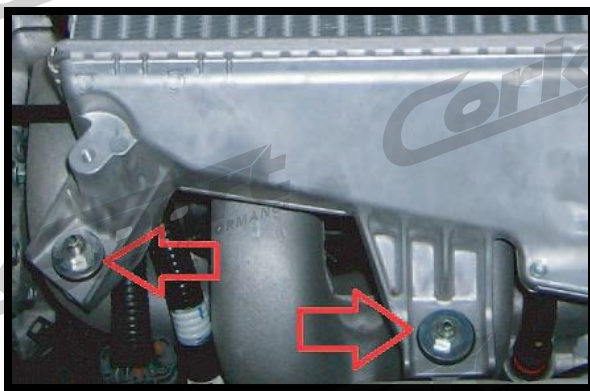


Figure 2A



Figure 2B

C) Remove the blow-off valve connections by sliding down the clip shown by the red circle in Figure 3A and removing the vacuum line connection shown by the green circle in Figure 3A

 If you have an aftermarket blow-off valve (BOV), this step may be slightly different depending on your specific BOV make and model, but the end result will be the same.



Figure 3A

1. Remove the Factory Top Mount Intercooler (continued)

D) Loosen the top hose clamp 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 (the top hose clamp for the front and rear boost tubes can be seen by the **red circles** in Figures 4A & 4B respectively).

E) Remove the TMIC as shown by the red arrow in Figure 4A




Figure 4A



Figure 4B

2. Install the CorkSport Top Mount Intercooler

A) Remove the cold pipe from the stock TMIC by removing the four (4) bolts using a ratcheting wrench and a 10mm socket (shown by the **red circles** in Figure 5A).

 **Be sure to reinstall the metal gasket on the CorkSport TMIC before installing the cold pipe**

B) Install the cold pipe onto the CorkSport TMIC by installing the metal gasket and hand threading the four (4) bolts being sure not to cross-thread them. Then tighten the bolts using a ratcheting wrench and a 10mm socket to 15 ft-lbs (shown by the **red circles** in Figure 5A)

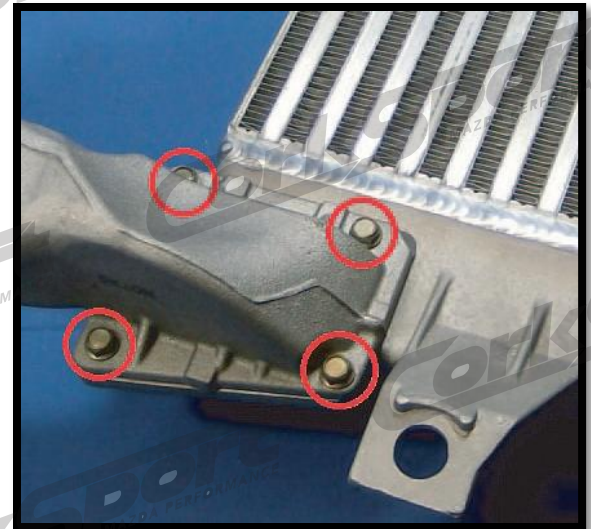


Figure 5A

C) Remove the three (3) mounting grommets and spacers from the stock TMIC following Figure 5B from left to right for each mount.

D) Install three (3) mounting grommets and spacers onto the CorkSport TMIC following Figure 5B from right to left for each mount.



Figure 5B

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2. Install the CorkSport Top Mount Intercooler (continued)

- E) **Install the CorkSport TMIC** making sure that all three (3) bolt holes line up (shown in Figures 2A & 2B). Also make sure that both boost tubes are on fully with the clamps in place as shown in Figures 6A & 6B.


 Figures 6A & 6B are shown with the CorkSport silicone boost tubes installed with T-bolt clamps. The process is the same for the stock boost tubes. Figure 6A Figure 6B



Figure 6A



Figure 6B

- F) **Tighten the top two (2) boost tube clamps** using the 3/8" drive ratchet and the 10mm long socket. Double check to make sure that they are securely holding the boost tubes to the TMIC.

- G) **Reinstall the BOV hoses** as shown in Figure 3A.

- H) **Reinstall the three (3) 12mm intercooler nuts** as shown in Figures 2A & 2B using the 3/8" drive ratchet and 12mm long socket.

- I) **If you DID NOT purchase the optional trim ring:**

Reinstall the intercooler cover using the two (2) supplied M6 bolts that secure it to the intercooler using the 3/8" drive ratchet and 10mm long socket (shown in [Figure 1B](#)).

 **If installing the CorkSport TMIC on a CX7**

you will not need to reinstall the factory metal cover (shown in Figure 7A) to obtain a factory-like seal with the TMIC. Skip step 21 and reinstall the vent shroud as shown in Figure 1A being sure that the two round holes lineup on the firewall. Then reinstall the two (2) push type clips (shown by the **red circles** in [Figure 1A](#)).


 Make sure to reinstall the cover as performance decrease can happen. It is important to note that the intercooler cover help direct air over the intercooler.



Figure 7A

- J) **If you DID purchase the optional trim ring:**

 **If installing the CorkSport TMIC on a 2010+ Mazdaspeed 3 with a Shroud:**

- Install the trim ring as shown in Figure 8A using the supplied M6 bolts (**green circle** shows the top rubber grommet and the bottom **red circles** show the M6 bolts installed). You will not use the stock shroud, but be sure to set it in a safe place if you ever wish to reinstall it.

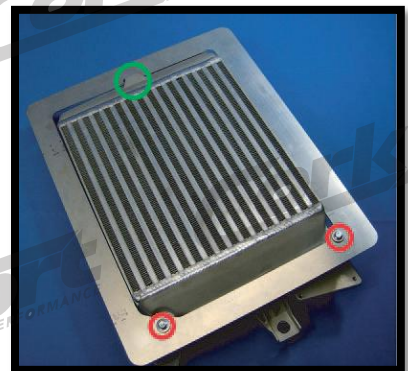


Figure 8A

 **If installing the CorkSport TMIC on a 2007-2009 Mazdaspeed 3 or a Mazdaspeed 6 with a Shroud:**

1. **install the 40mm bolt** through the machined aluminum bracket and through the aluminum shroud as show in Figure 8B. Use the M6 flange nut on the bottom to secure the bolt and bracket leaving it slightly loose. Repeat this for the other bracket



Figure 8B

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Part # Gen-6-930

Installing the CorkSport TMIC with Shroud on a 2007-2009 Mazdaspeed 3 or a Mazdaspeed 6 with a Shroud: Continued

2. Set the shroud on the TMIC starting with the rear to get the tab of the shroud to catch on the tab at the back of the intercooler tank. With the shroud sitting loose line up the aluminum brackets with the holes for the screws on the front of the intercooler end tank. Install the 16mm bolt through the brackets into the intercooler and tighten as shown in Figure 8C.



Figure 8C

3. With the brackets tightly installed in the intercooler, tighten the M6 nuts on the 40mm long bolts as shown in Figure 8D to complete the installation.



Figure 8D

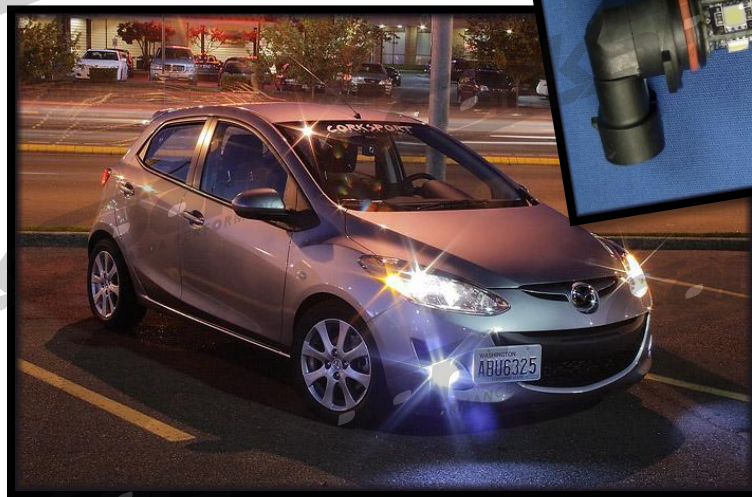


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What's Next:

An alternative to HID's, these LED lights are designed for use in your factory fog light housings and output a color temp in the 6,000k range that is perfect for matching existing or future HID headlights. The kit includes 2 bulbs, each with 23 LED's and requires no tools for plug and play installation. These lights last longer than the factory incandescent bulbs and draw less power.

[CorkSport DRL Light Kit](#)



[CorkSport DISI Silicone Bypass Valve Hose](#)



CorkSport now offers the Power Series Bypass Valve

Hose specifically designed and tested for the Mazda MZR DISI Turbo engine. The hose is a clamp-in replacement for the stock non-reinforced rubber hose. Install the hose to complete your engine bay colors and match the CorkSport SRI silicone connectors and Boost Tubes. The bypass hose is a 5 layer silicone part that contains 4 layers of reinforcement for a strong, yet flexible connection which allows for ideal flow from the bypass valve to the turbo inlet pipe.

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