Part # AXM-6-889-11

CorkSport Oil Catch Can Kit for Turbo Applications

2014-2018 Mazda 3 with CS Turbo Kit

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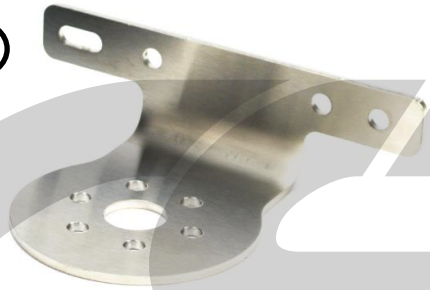

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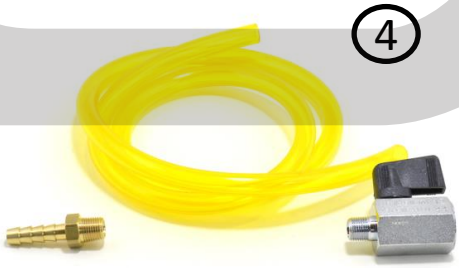

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This Package should contain:

- ☐ 1. One CorkSport Assembled Oil Catch Can
- ☐ 2. One CorkSport OCC Mounting Bracket
- ☐ 3. 11 Feet of Reinforced Silicone Hose
- ☐ 4. One CorkSport OCC Drain Kit
- ☐ 5. One Hose Reducer Adapter
- ☐ 6. One CorkSport OCC Hardware Pack

Part # AXM-6-889-11

CorkSport Oil Catch Can Kit

2014-2018 Mazda 3 with CS Turbo Kit

If performance and reliability are important to you then an oil catch can is a critical component for your SkyActiv engine, especially when equipped with a turbo kit. Cylinder blow by gases and oil vapor build up in the engine crank case during normal and spirited driving situations. The OEM design pulls these gases and vapors into the intake manifold to be recycled through the combustion process, leaving behind contaminants in the intake manifold & cylinder head. The CorkSport Oil Catch Can provides an additional step in this process to help filter out contaminates and vapors before they enter the engine.
Let us know your thoughts about the CorkSport OCC with a review at:

Pre-Installation Notes:

Use extreme caution while working under the vehicle. Use adequate load rated jack and jack stands to support the vehicle on a level surface. Please reference vehicle owners manuals for proper jacking locations.

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 a fan to cool off the car.

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.

These in car installation photos were produced using a 2016 Mazda 3 MT Sedan. Other models will be similar.

Materials and Time:

General Info.

Part #: AXM-6-889-11
Time Est: 2 hours
Wrench Rating: 2/5

Tooling List

4mm Allen Wrench
10mm Wrench
14mm Wrench
21mm Lug Nut Socket
¼" Nut Driver
8mm Socket
10mm Socket
12mm Socket
14mm Socket
Ratchet Wrench
Torque Wrench
Large Flathead Screwdriver
Blue Locktight
3/8" Drill Bit & Drill
Razor knife

Parts List

1. One Assembled Oil Catch Can
2. One OCC Mounting Bracket
3. 11 Feet of Reinforced Silicone Hose
4. One OCC Drain Kit
5. One Hose Reducer Adapter
6. One OCC Hardware Pack

Order of Operations & Table of Contents

Some of the steps in the following instructions may be skipped if you are completing the installation while installing the CS turbo kit. Some components will already be removed.

The images in the following instructions were taken with the front bumper removed. This was done to provide adequate lighting and viewing angles to aid in installation. Removal of the front bumper is not required.

1. Undercarriage Disassembly

a) **Position the vehicle on a level surface.**

b) **Raise the vehicle with a hydraulic jack** and support the vehicle with jack stands in the OE recommended locations.

c) **Remove the front left hand wheel.**

d) **Remove the engine under tray.** Use a 10mm to remove the bolts circled in red and a large flathead screwdriver for the plastic pop clips circled in blue in Figure 1a.

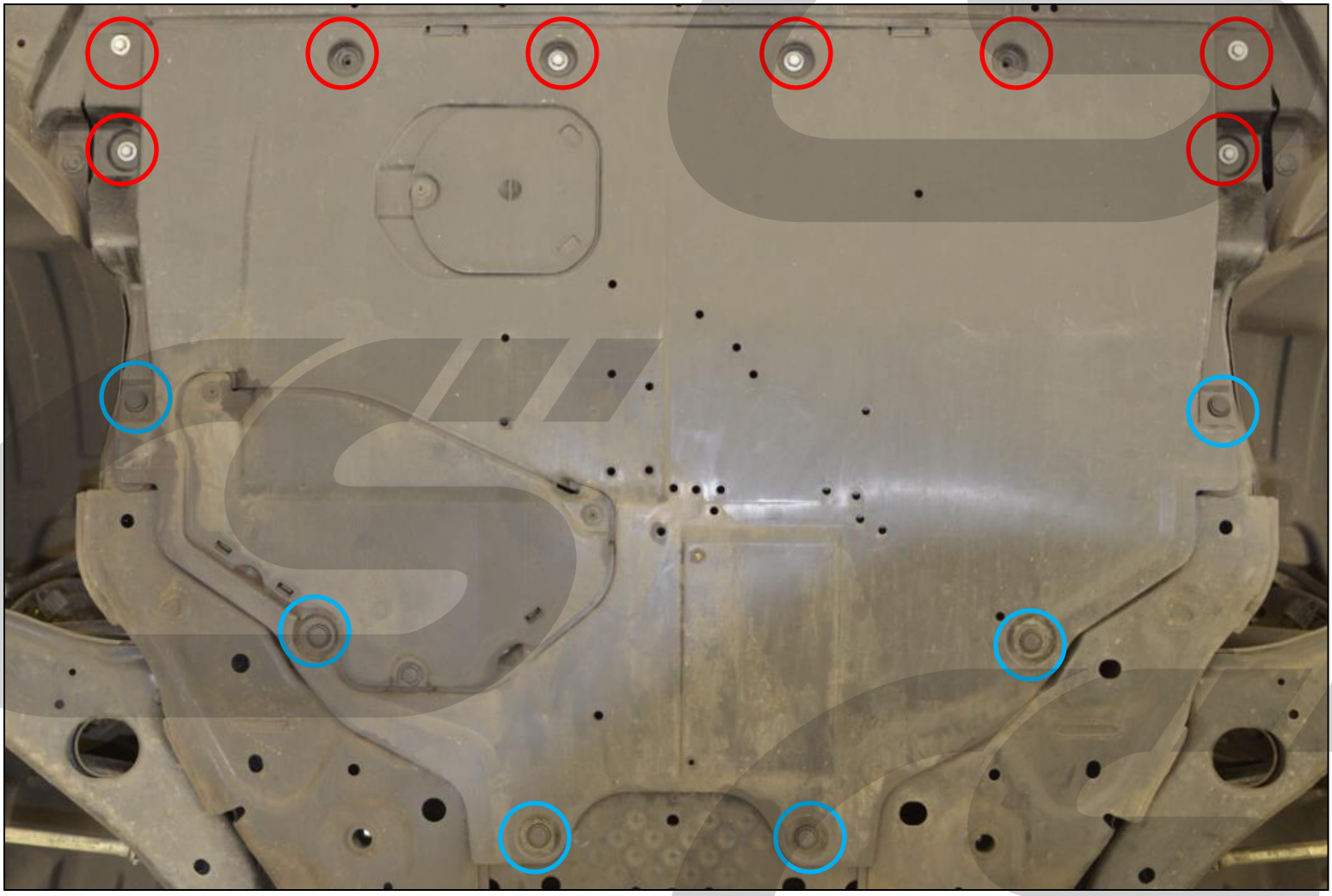


Figure 1a

1. Undercarriage Disassembly (continued)

e) Loosen the left hand side inner finder. Remove the five 8mm head screws for the lower section of the inner fender. Red circles in figure 1b.

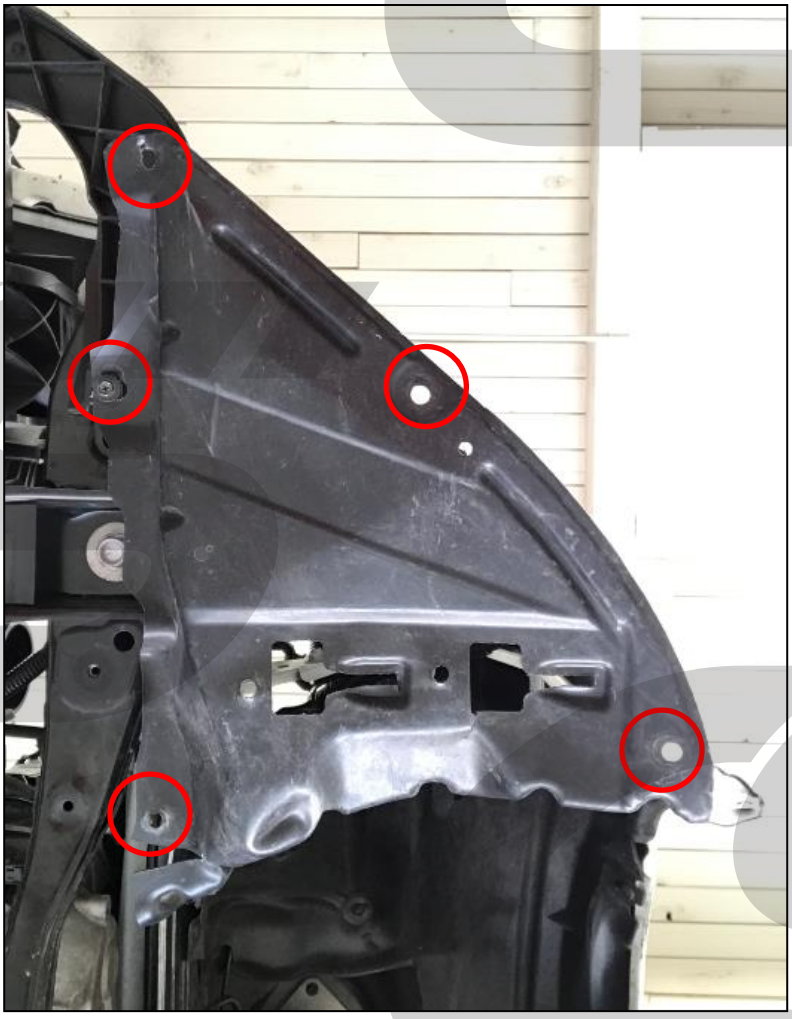


Figure 1b

2. OCC Installation

a) Assemble the OCC. Locate the OCC, mounting bracket, and 1/4-20 button head screws.

b) Install the bracket onto the OCC. The mounting tab on the bracket needs to be the most perpendicular to the ports as possible.

c) Install the screws. Align the two most correct holes in the bracket and OCC. Apply a small amount of blue locktight to the threads. Torque to 8-10 ft-lbf.

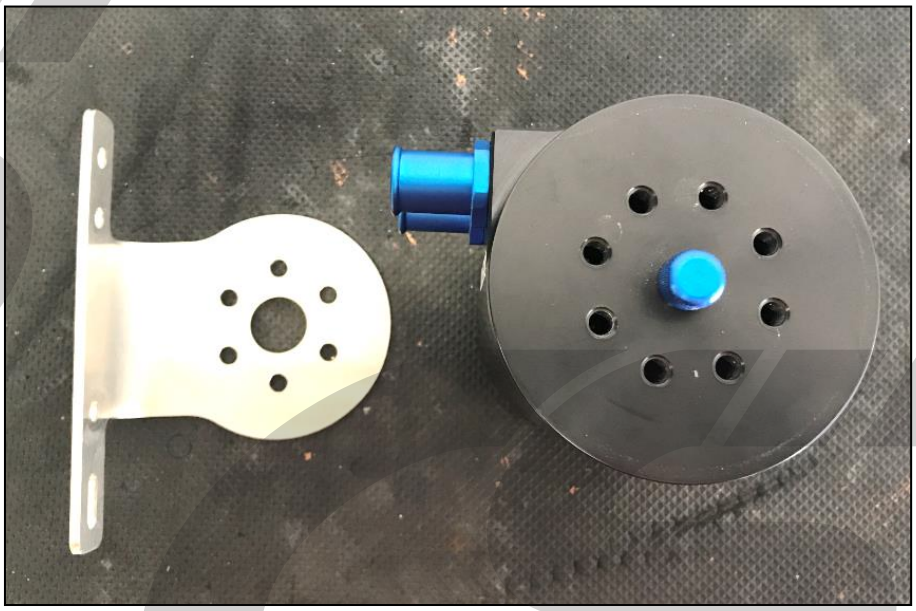


Figure 2a

Figure 2b

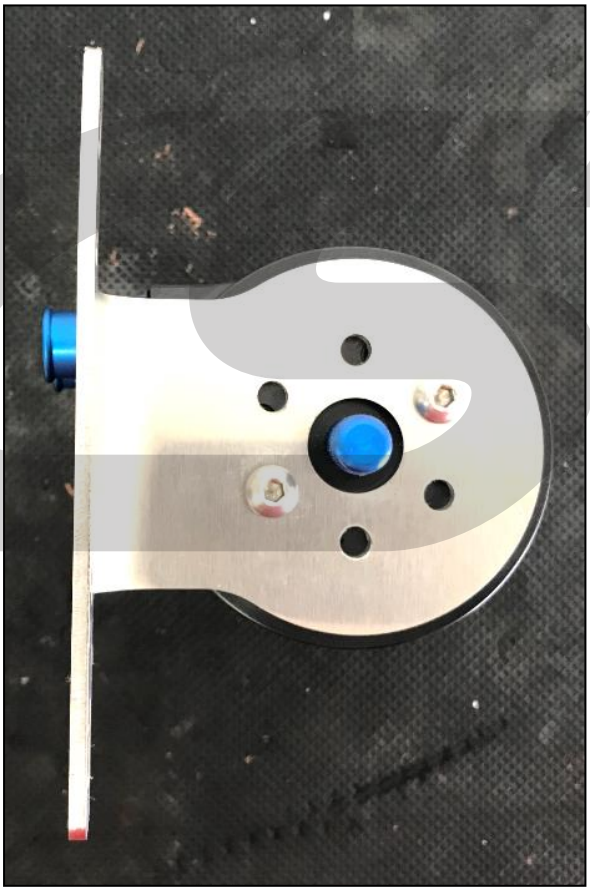


Figure 2c

2. OCC Installation (continued)

d) Locate hardware for installation. Locate the 35mm long M6 bolts and the large outer diameter M6 washers. Install the washer onto the bolts as shown in Figure 2a.

Figure 2d

e) Install the bolts through the holes in the chassis shown in Figure 2e.

f) Place the nylon spacers on the bolts as shown in Figure 2f.

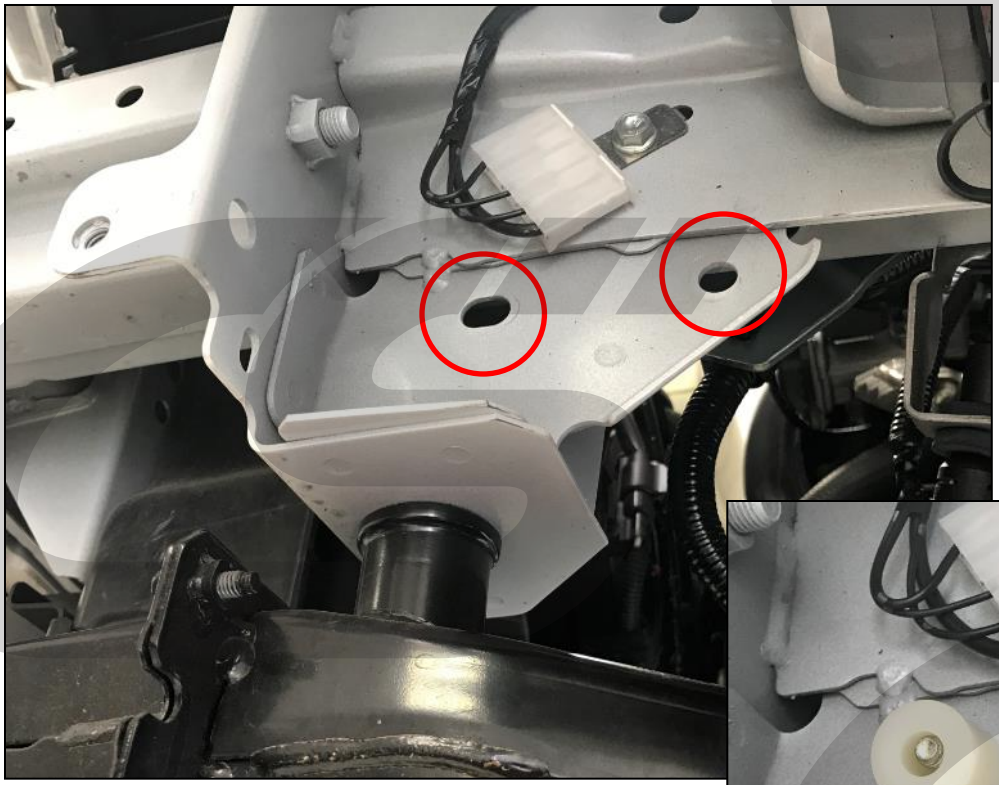


Figure 2e

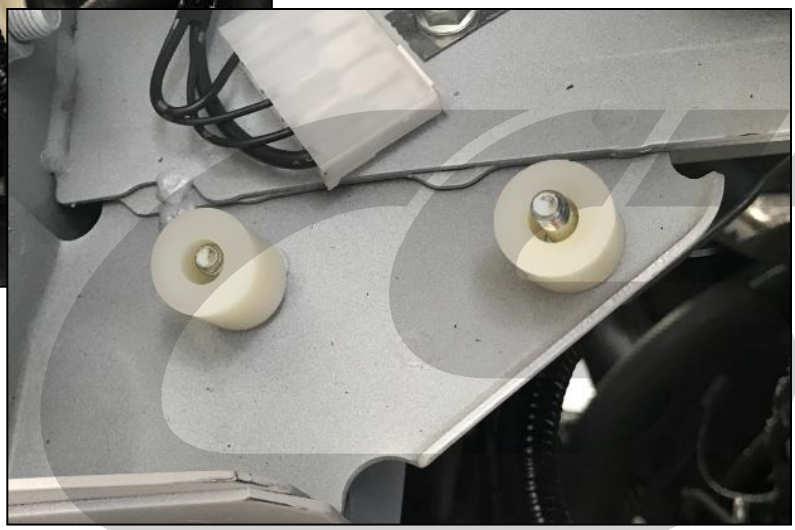


Figure 2f

2. OCC Installation (continued)

h) Install the assembled OCC onto the chassis. Align the two central mounting hole in the bracket with the hardware in the chassis.

i) Install and hand tighten the small OD washer and M6 nylock nuts shown in Figure 2g.

j) Tighten the hardware to a snug fit then adjust the position of the OCC so it sits vertical.

k) Fully tighten the hardware. Verify that the OCC and ports are not touching anything in the chassis.

This completes the OCC installation, next will be the hose installation. If you are choosing to use the OCC Drain Kit, now is a good time to install the kit before secure the inner fender. If you plan to leave the brass barb on the OCC permanently you will need to drill a 3/8" hole in the fender liner for the brass barb to protrude through.

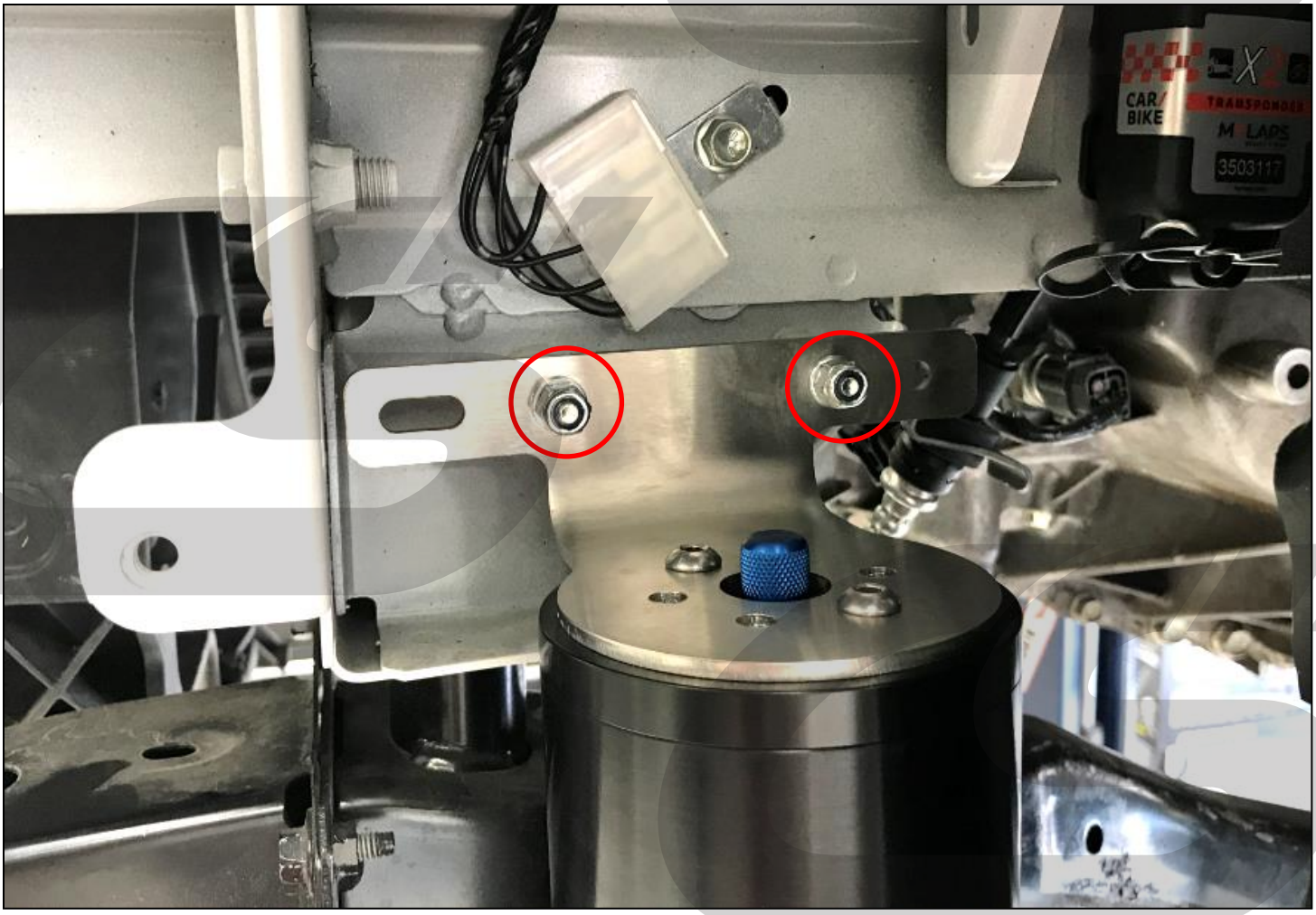


Figure 2g

3. Intake Removal

a) **Remove Engine Cover** by pulling up on it. There are no screws that hold it down. This will help when loosening the intake clamp (shown in green square Figure 3a).

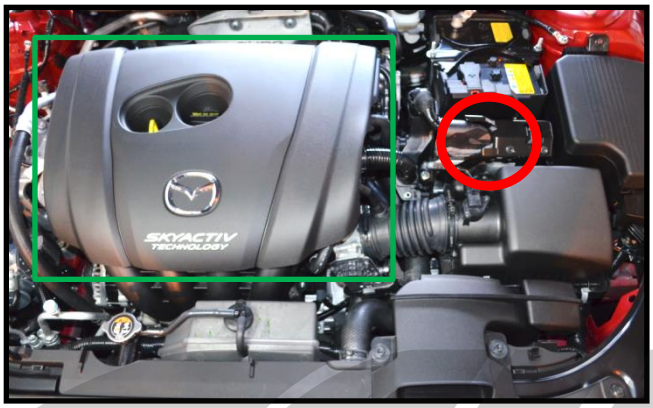


Figure 3a

b) **Unplug MAF sensor** (shown in Figure 3a with a red circle and in Figure 3b close up). Press down on the latch and the sensor will unplug.

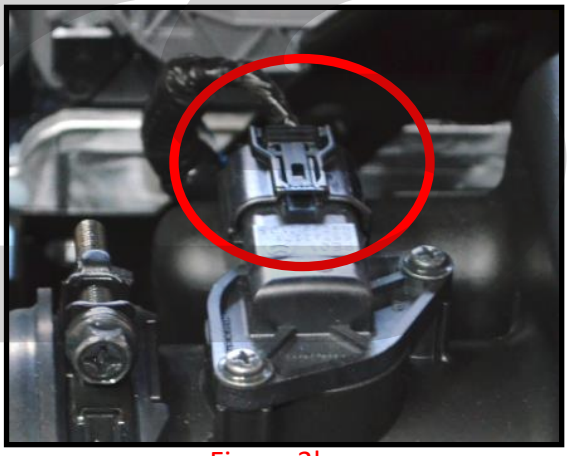


Figure 3b

c) **Remove valve cover hose** from intake elbow. It should pull out with a little effort (shown removed in Figure 3c).

d) **Trace this hose back to the engine and remove it from the valve cover.** Shown with red arrows in Figure 3d.

e) **Loosen hose clamp on air box** to throttle body (green arrow Figure 3e). This will require a large screw driver or a 10mm socket.

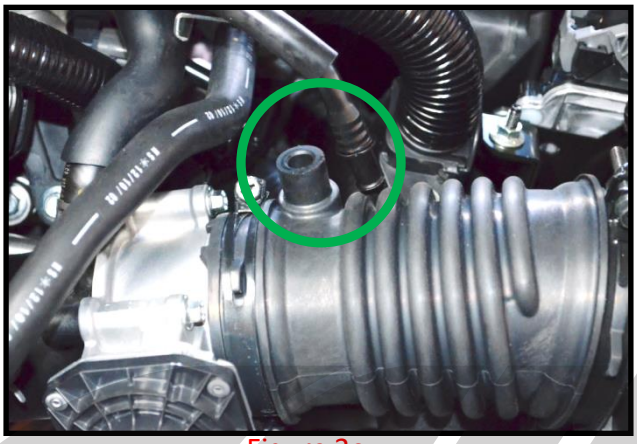


Figure 3c

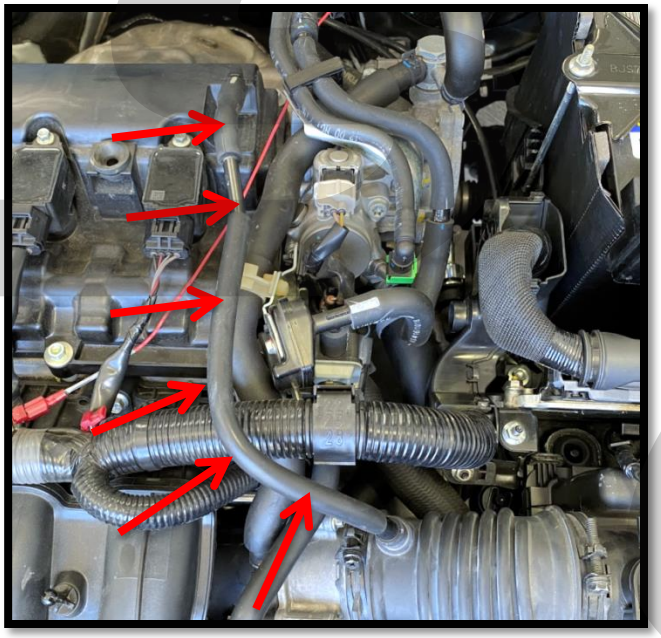


Figure 3d

Figure 3e

3. Intake Removal (continued)

f) **Remove Air Box Bracket** (red arrows Figure 3e). They will push off the top of the box but stay on the lower housing of the air box.

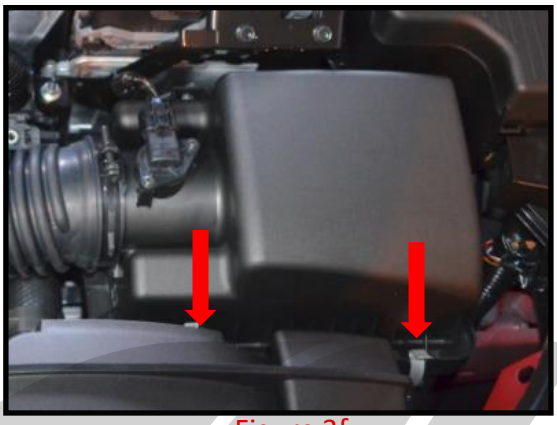


Figure 3f

g) **Disconnect the MAF wiring and pull up on air box lid and remove it from the car** (Figure 3f). You will need needle nose pliers to compress the sides of the wiring harness tie down.

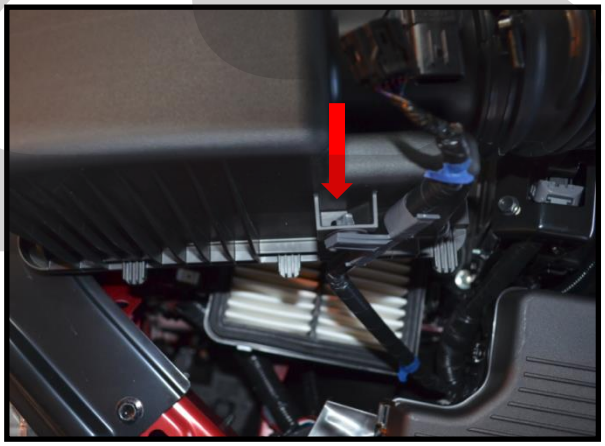


Figure 3g

h) **Remove two (2) 10mm bolts** that hold the lower air box (red circles in Figure 3g) and remove it from the car. Simply pull up.

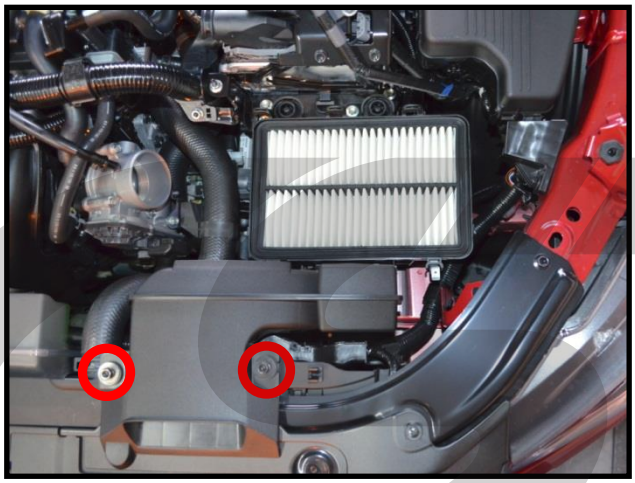


Figure 3h

4. Starter Removal

Disconnect the negative & positive battery cables

a) **Locate the engine starter on the front of the engine** as shown in Figure 4a.

b) **Disconnect the white plastic clip** from the starter shown in Figure 4b.

c) **Open the starter power wire cover** as shown with the red arrows in Figure 4a.

d) **Use a 12mm socket to remove the power wire nut** circle in red in Figure 4c. Remove the power wire from the starter.

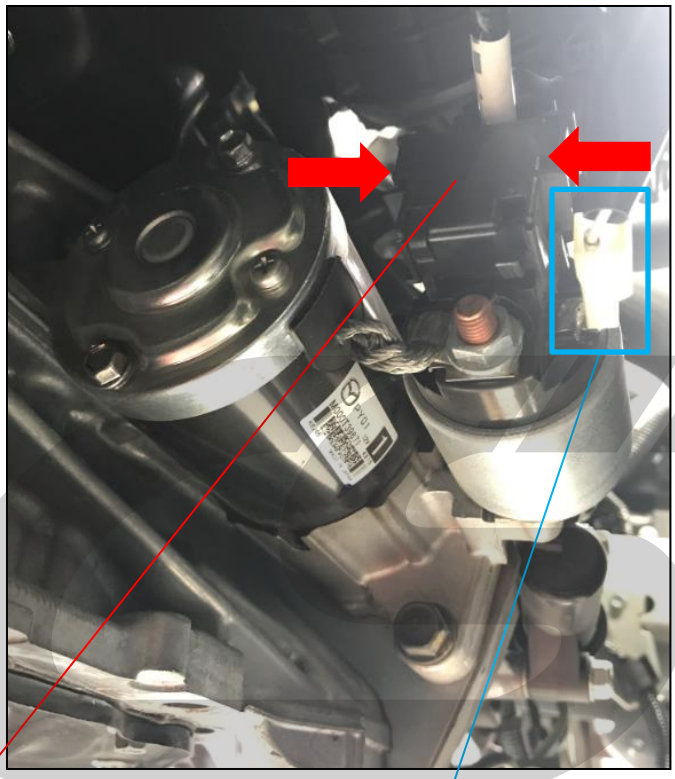


Figure 4a

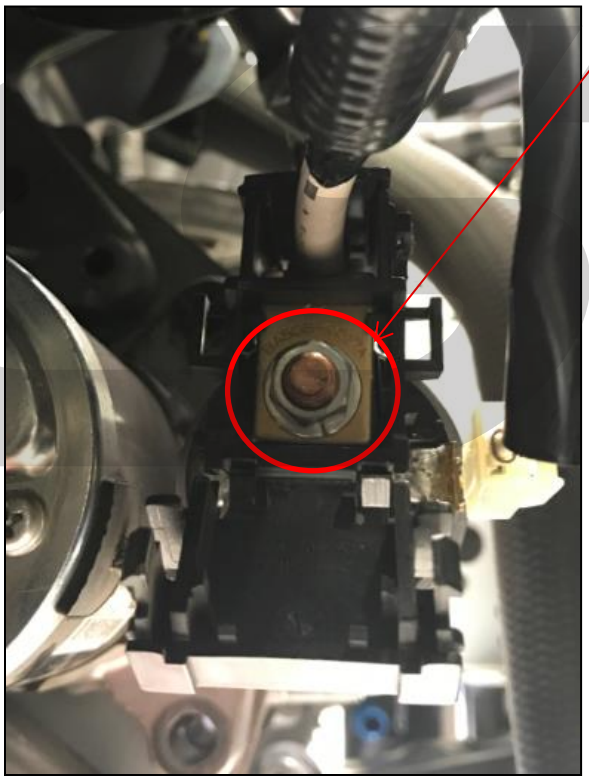


Figure 4c

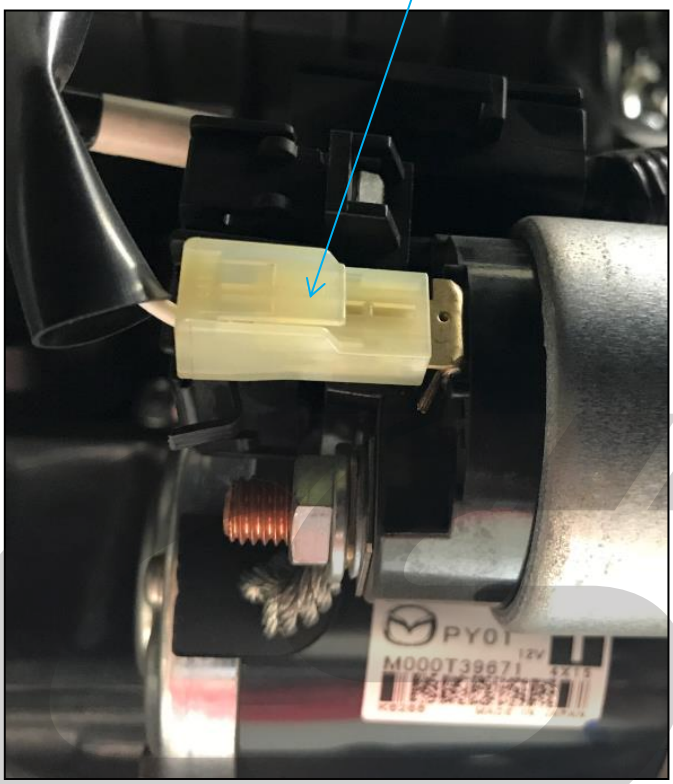


Figure 4b

4. Starter Removal (continued)

e) **From the driver's side of the engine bay locate the upper starter bolt.** Break the bolt loose with a 14mm wrench then use a short socket, extension, and ratchet to remove. Shown with the red circle in Figure 4d.

f) **From the passenger's side of the engine bay locate the lower starter bolt.** Remove the bolt with a 14mm wrench or ratchet. Shown with the red circle in Figure 4e.

g) **Remove the starter from the vehicle.**

Driver Side View of Starter

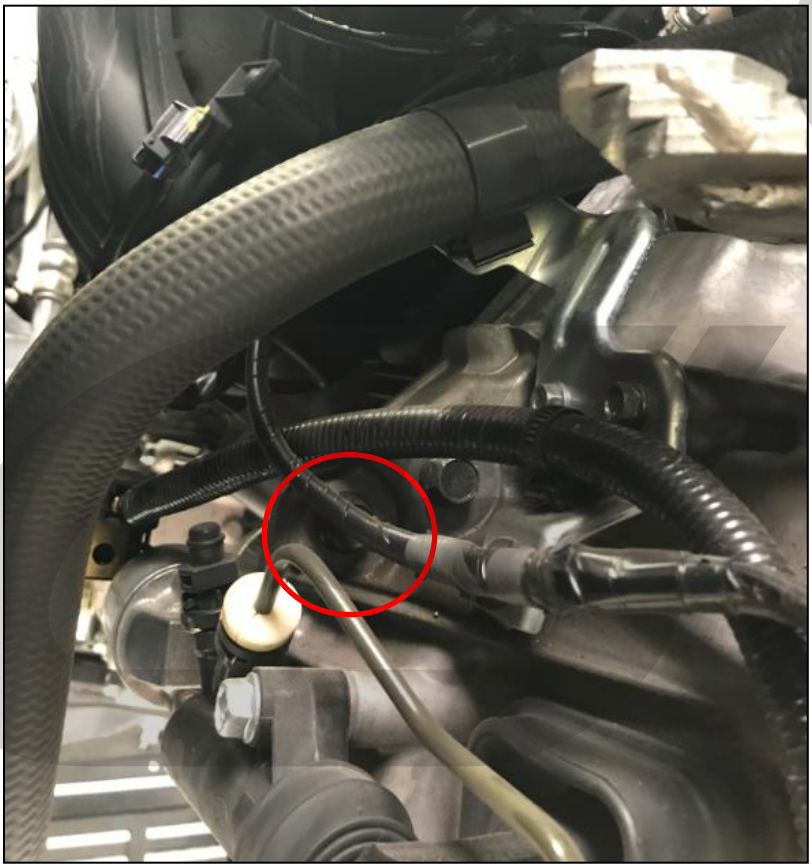


Figure 4d

Passenger Side View of Starter

Figure 4e

5. Hose Installation

High Pressure Fuel Line in Area. The red circle in Figure 5a shows the high fuel line that feeds the fuel rail. Be cautious to not damage this part while working in this area

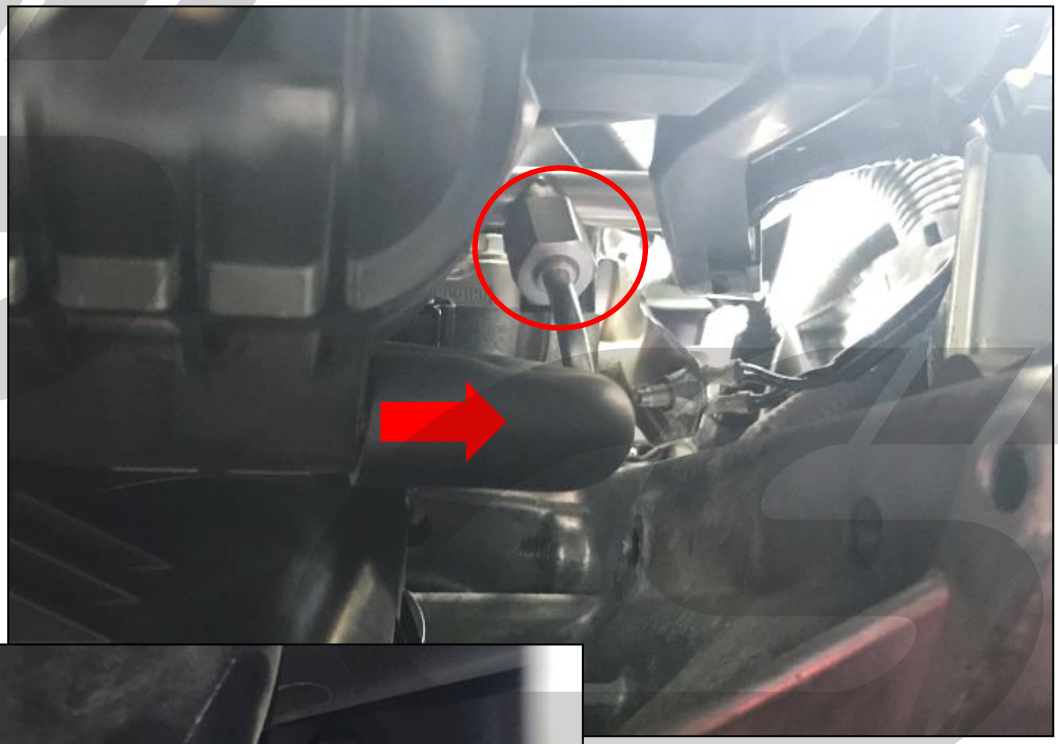


Figure 5a

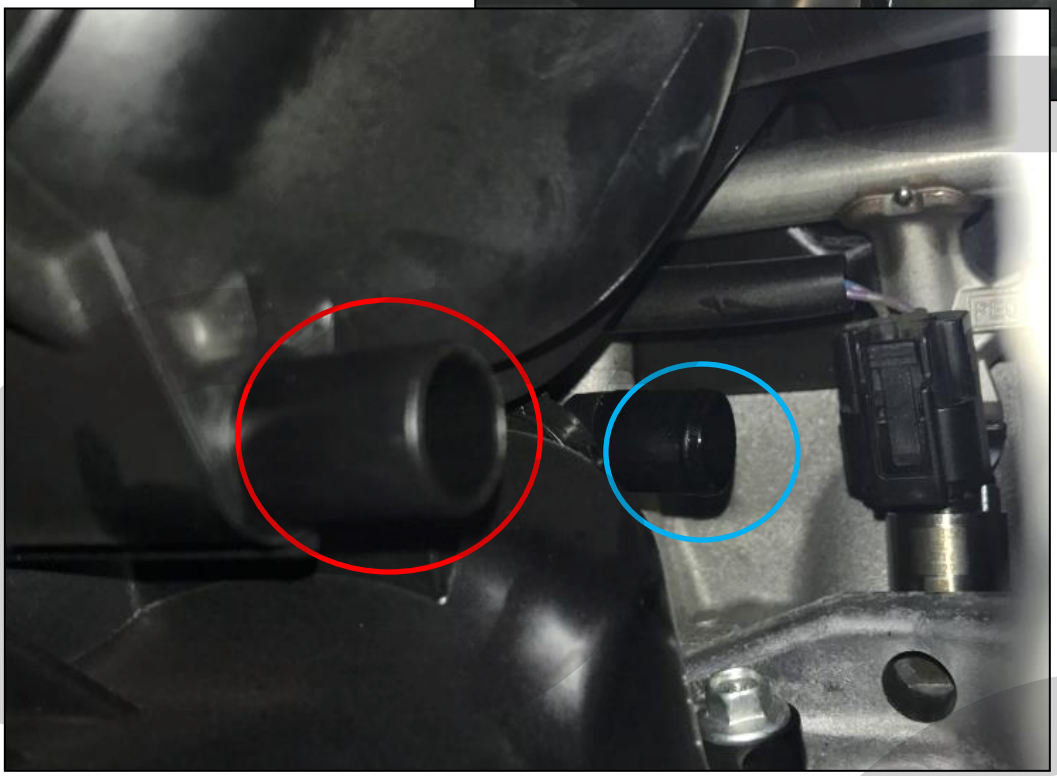


Figure 5b

a) **Remove the OE PVC hose.** Remove the rubber hose in Figure 5a in the direction of the red arrow.

b) **Pull the hose in the direction of the red arrow** for both the lower and upper ports.

c) **With the OE PCV hose removed you need to identify the two exposed ports.**

c) The port circled in blue in Figure 5b is the Positive Crankcase Ventilation (PCV) valve.

d) The port circled in red in Figure 5b is the Intake Manifold port.

5. Hose Installation (continued)

To maximize the efficiency of the Oil Catch Can we are going to connect the Cam Case breather and the PCV Valve together. Figure 5c shows the final routing. Use this for reference through the rest of the instructions.

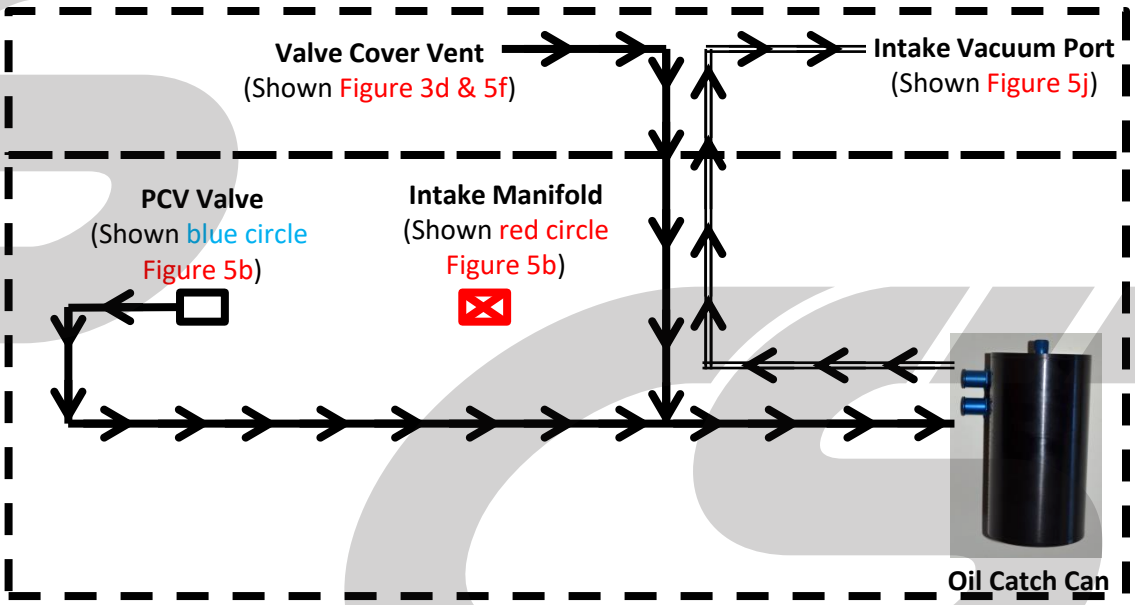


Figure 5c

d) **Attach the vacuum cap and one of the supplied clamps on the intake manifold port** where the hose was removed in step 5b (Shown with red circle Figure 5b) and tighten the clamp until snug. Try to pull the cap free to ensure the cap is secure.

e) **Slide the other supplied clamp over the end of some of the supplied 14mm hose.**

f) **Install the hose with clamp onto the PCV valve** where the hose was removed in step 5b (shown with blue circle in Figure 5b). Press the hose onto the PCV port until there is at least 3/4" overlap. The valve can pivot so verify that it is aligned when installing.

g) **Tighten the clamp but make sure not over tighten!** The factory PCV valve is made of plastic and can crack. Once complete, pull on the hose slightly to verify the hose is secure.

5. Hose Installation (continued)

h) **Route the hose from the PCV valve to the OCC.** Route the hose under the coolant hose as shown in Figure 5d.

i) **Trim the hose to length, and install it onto the lower port of the OCC.**

j) **Using a razor knife or large scissors, cut the hose that was just installed** in the approximate location shown with blue line in Figure 5d.

k) **Insert the supplied T fitting into the hose with the open port facing upwards.**

l) **At the top of the engine, install the supplied smaller hose & reducer fitting onto the valve cover port.** Shown in Figure 5e.

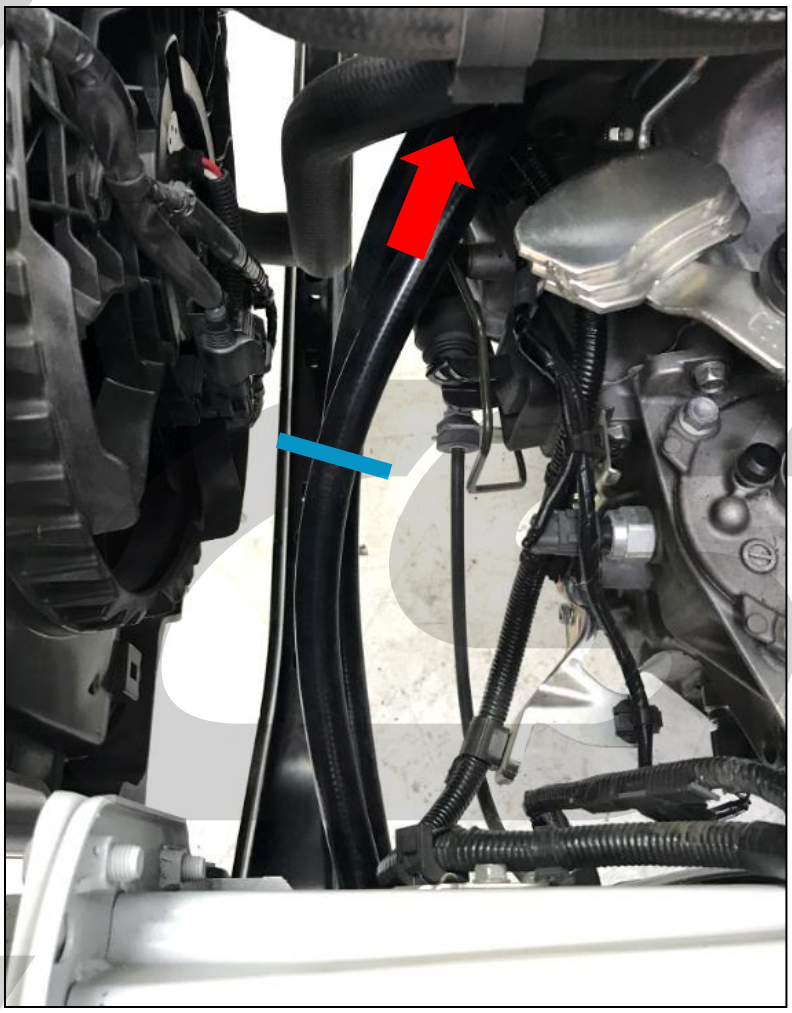


Figure 5d

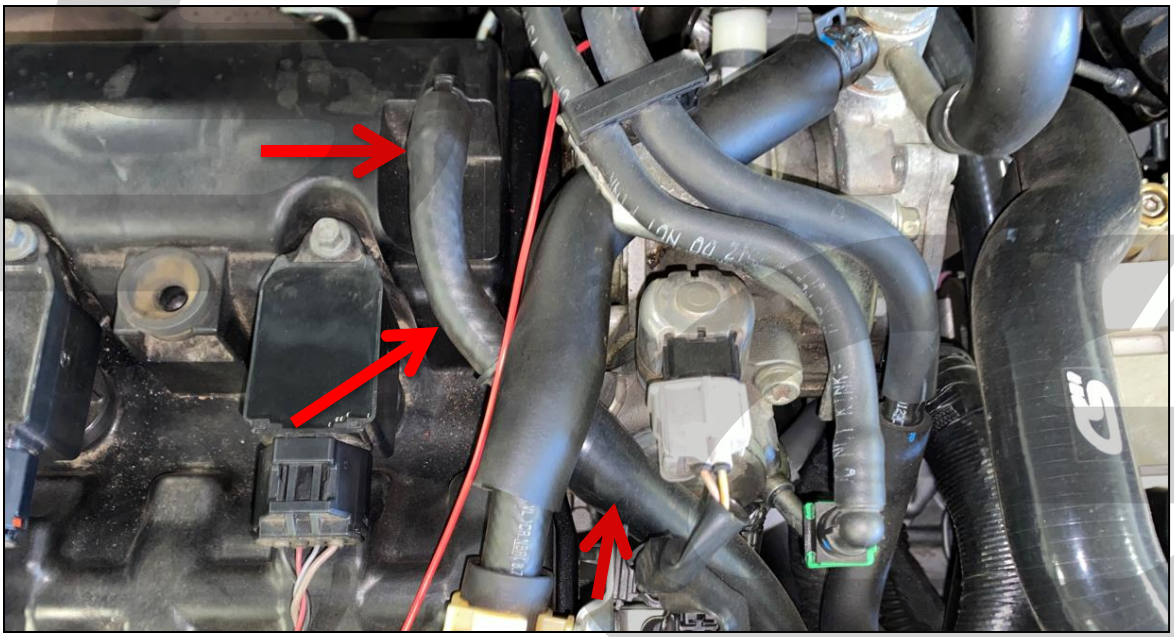


Figure 5e

5. Hose Installation (continued)

m) **Install supplied hose onto the reducer fitting coming off the valve cover.** Route down towards the T fitting installed earlier. Approximate routing with turbo kit shown in Figure 5f.

n) **Trim the hose to length & install on the T fitting.** Final routing into the T fitting shown in Figure 5g for reference. Catch can ports also shown for reference in Figure 5h.

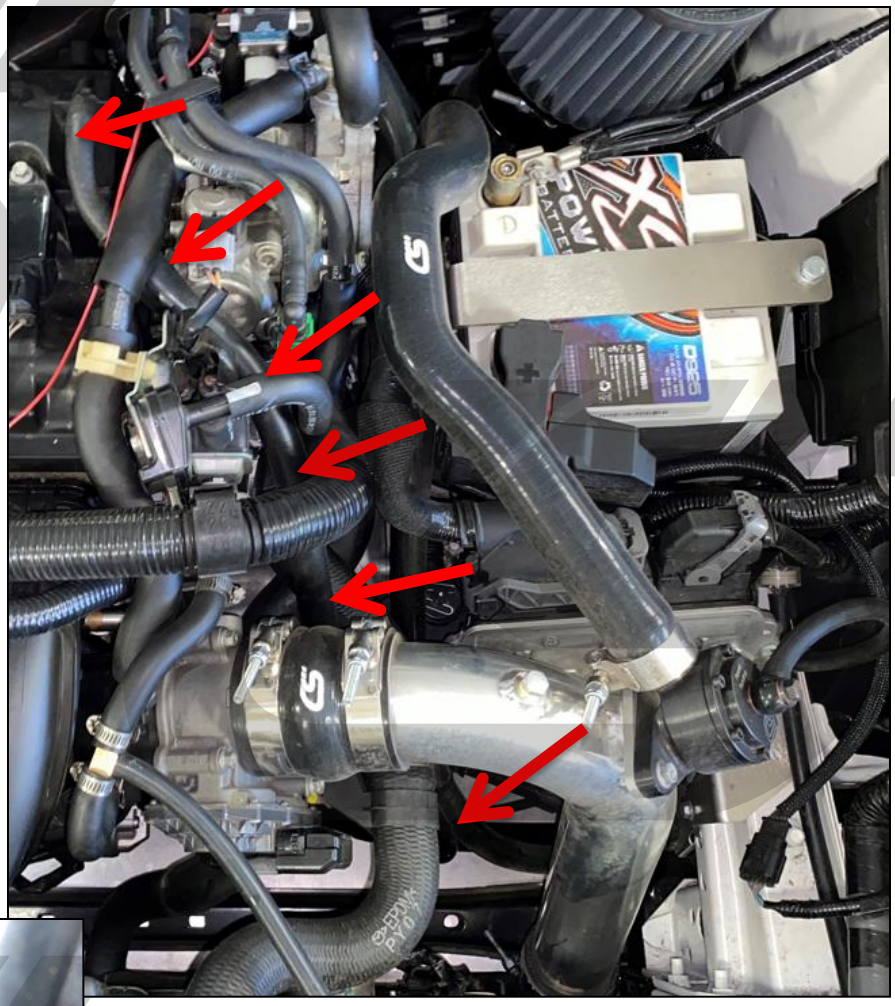


Figure 5f

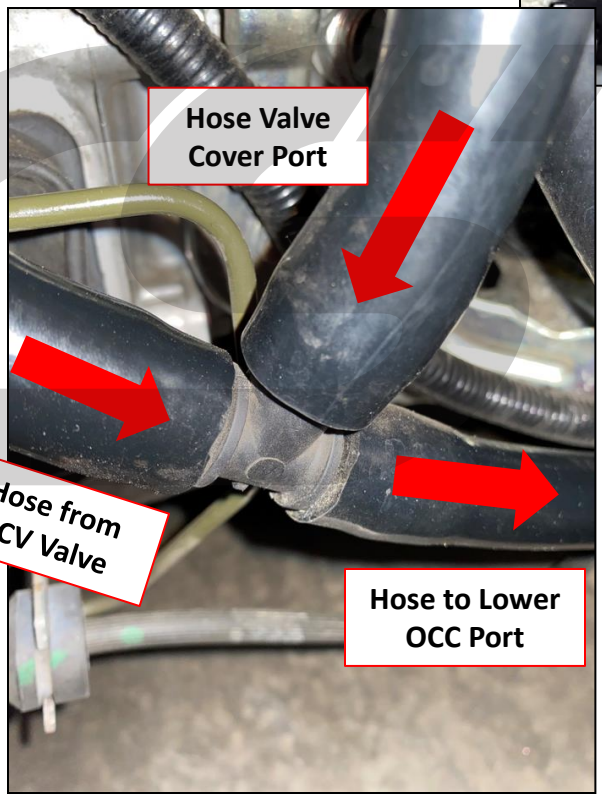


Figure 5g

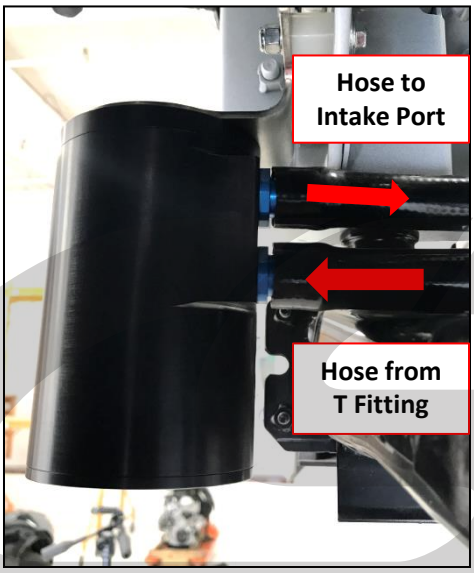


Figure 5h

5. Hose Installation (continued)

o) **Using the remaining hose, connect to the upper port of the OCC.** Route this hose along the hose previously installed and along the side of the battery to the port on the intake pipe. Connection to OCC shown for reference in Figure 5h on the previous page. Approximate routing shown in Figure 5i.

p) **Trim this final hose to length and connect it to the port on the intake pipe.** Shown in Figure 5j.

q) **Secure the hoses in the engine bay using the provided zip ties.**

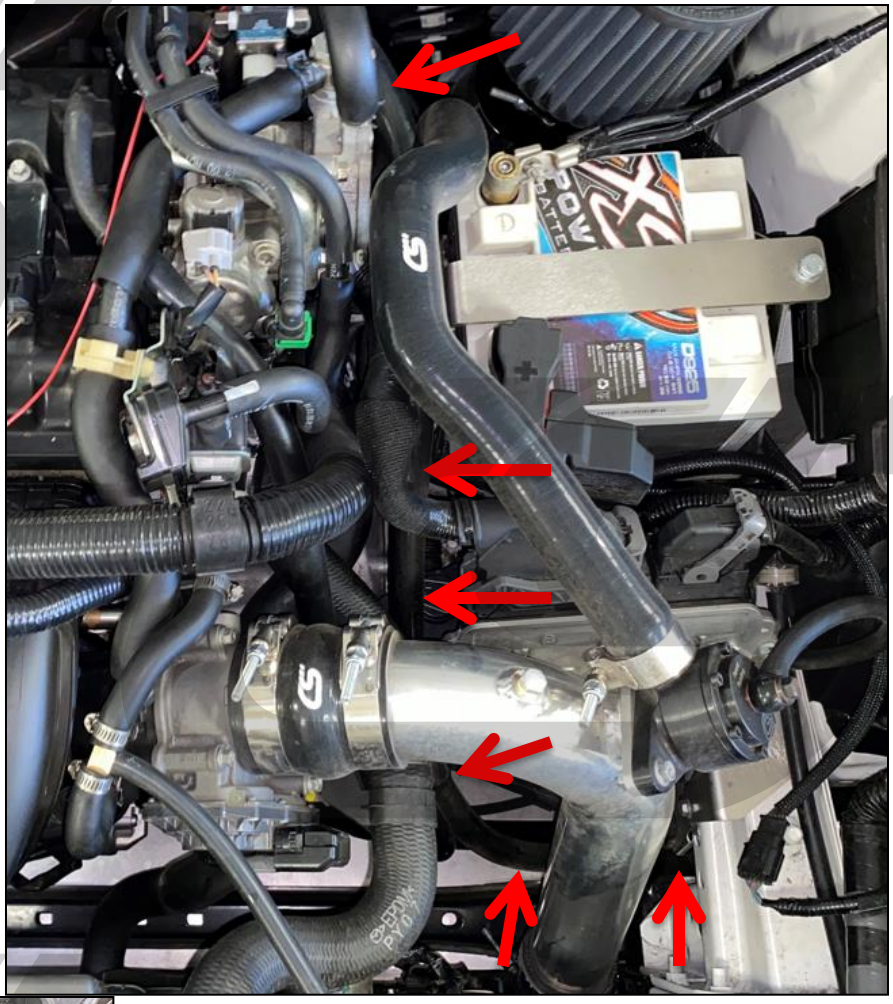


Figure 5i

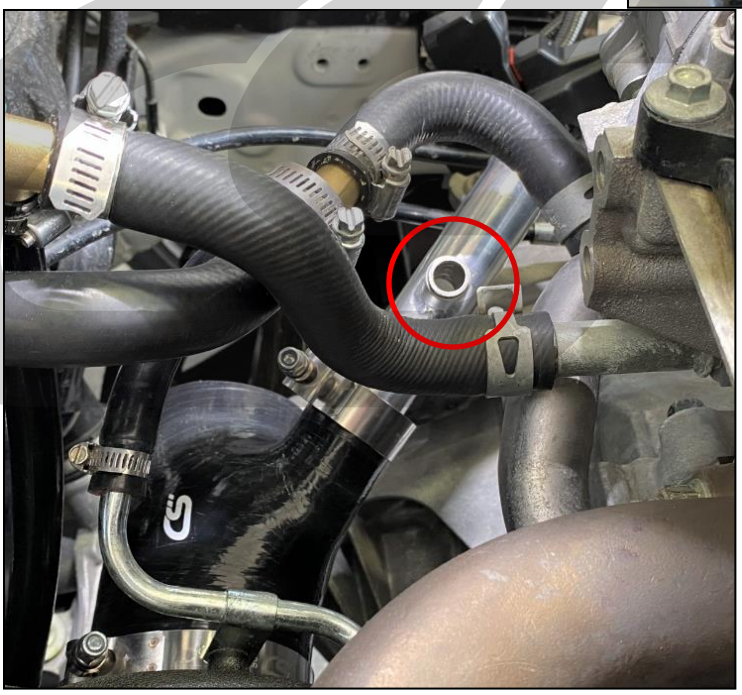


Figure 5j

Once the hoses are secure verify there is no contact with the clutch slave cylinder or the transmission shift arm in any gear.

6. Maintaining the OCC

a) **After first installation the OCC will capture an excessive amount of vapor and containments.** Drive the vehicle for approximately a week then drain the OCC.

b) **Once the initial drainage has been completed the OCC only needs to be drained every oil change** or approximately every 3 months, which ever comes first.

Reassembly:

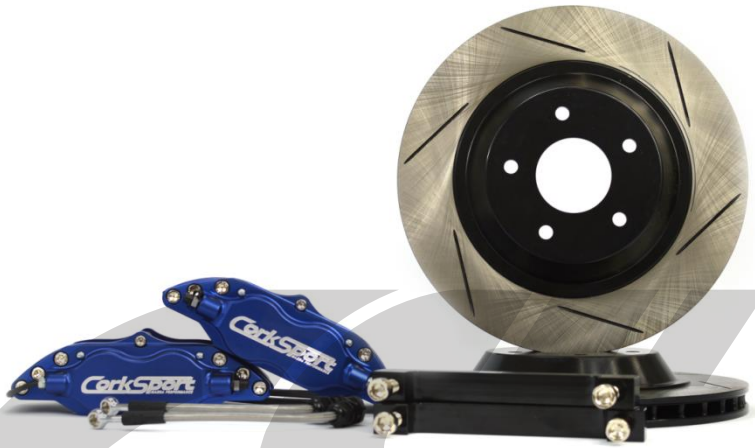
a) **With the OCC completely installed you can reinstall the removed components in the reverse order.**

b) **Torques Specs:**
   a) Intake System: Tighten hardware to hand tight
   b) Undercarriage: Tighten hardware to hand tight
   c) Starter:
      a) 14mm Bolts = 29-38 ft-lbf
      b) 12mm Nut = 89-97 in-blf

What's Next:

CorkSport Performance Steering Wheel

Take control with the CorkSport Performance Leather Steering Wheel for 2013+ Cx5, 2014+ Mazda 3 and 2016+ Cx3. Hand wrapped and stitched around a racing inspired grip design, the genuine leather is plush and comfortable for daily driving and canyon carving. Designed to be an OEM direct replacement, the CorkSport Performance Leather Steering Wheel is reasonable 90 minute installation.



CorkSport Big Brake Kit

CorkSport Big Brake Kit provides the ultimate in stopping power for your Mazda. Crafted from extremely lightweight billet aluminum, the CorkSport calipers use an opposed piston design that is fixed to provide greatly improved pad wear, and caliper rigidity over the OEM design.

CorkSport Rear Camber Arms

Get your camber back in spec with the CorkSport Adjustable camber arms. Whether you are correcting the added camber from lowering springs or search for the perfect style; the CorkSport rear camber arms will give you the adjustability you need