

# CorkSport Camber Plates

2014+ Mazda 3, 2014+ Mazda6 and 2013+ CX-5



**Thank you for purchasing the CorkSport Mazda Camber Kit.** Get adjustability to dial in performance and handling with the CorkSport Mazda 3, Mazda 6 and the CX5 Front Camber Kit. CorkSport's custom designed front camber plates provide up to -3 degrees of camber and are CNC machined from anodized aluminum with built in studs for easy strut installation. Please let us know your feedback by submitting a review at:

<http://www.corksport.com/corksport-mazda-3-mazda-6-cx-5-camber-plates.html>

## Pre-Installation Notes:



**Optional cutting needed to adjust camber without removing struts.**



**Installation of the front camber plates will raise the front ride height approximately 5mm.**



**You will be removing the front suspension of your vehicle.** If you are not comfortable with this or do not have the proper tools, please do not proceed.



**When under your car,** you should always wear mechanics gloves or other form of hand protection as well as ANSI Approved Safety Glasses.



**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.



**It is recommended that you have an alignment done during or shortly after this step** to be sure you have your desired camber correct.

## Materials and Time:



### General Info.

Part #: Axm-3-303

Time Est: 2 hours

Wrench Rating: 4/5



### Tooling List

Lift or Floor Jack & Jackstands  
Needle Nose Pliers  
Penetrating Fluid (optional)  
Hammer, Mallet (2lb or Similar)  
Torque Wrench  
Spring Compressor (rent or buy)  
Flat Head Screwdriver  
3/8" or 1/2" Drive Ratchet or Impact Gun

14mm Deep Socket  
17mm Deep Socket  
17mm Deep Socket  
21mm Deep Socket  
23mm Deep Socket  
6mm Allen Wrench  
5mm Allen Wrench



### Parts List

Two (2) CS Front Camber Plates  
Two (2) CS Pillow Ball Nuts

### Optional Tooling

Drill  
3" Bimetal Hole Saw  
Round File  
Sand Paper  
Spray Paint

Need Help With Your Installation?

Call (360) 260-CORK



## 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



These instructions are for 2014+ Mazda 3.

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

- a) Use a floor jack and jackstands to gain access to the underside of the vehicle.



Always refer to the floor jack and jackstand manufacturers instructions as well as the factory owners manual for your vehicle to determine jacking points and support points. Alternately, use an automotive lift to gain access to the underside of the vehicle. Redundant support mechanisms are recommended.

### 2. Remove the Strut Assembly

- a) Remove the front Driver's wheel from the vehicle using a 21mm socket or other if using locking lug nuts (Figure 2a).
- b) Remove the ABS sensor attachments from the strut (shown in Figure 2b and 2c). Use a pair of needle nose pliers to carefully squeeze the tabs.
- c) Free the brake line by removing the clip from the brake line mount (Figure 2d).
- d) Remove the sway bar end link from the strut body (Figure 2e).
- e) Remove the two (2) 17mm lower strut bolts using a 17mm socket (red arrows in Figure 2e).
- f) carefully tap the knuckle out of the strut body.
- g) Remove the three (3) 14mm nuts holding the strut to the strut tower (Figure 2f).
- h) Remove the strut assembly from the vehicle.



Do not damage the braking or suspension components by letting the strut fall.

- i) Compress the spring until it is no longer tight against the upper mount as shown in Figure 2g.
- j) Remove the 17mm nut holding the upper strut mount to the strut (Figure 2h).
- k) Remove the upper strut mount . Leave the boot, bump stop and spring on the strut (Figure 2i).
- l) Carefully separate the strut bearing from the strut mount (Figure 2i).



Use caution when separating the bearing from the mount. The bearing is made of plastic and breaks easily.

### 3. Install the CorkSport Camber Plates

- a) Place the strut bearing onto the CorkSport Camber plate making sure it is fully seated (as shown in **Figure 3a**).
- b) Place the assembled camber plate onto the strut assembly and thread on the supplied pillow ball nut on by hand until it fully seats (**Figure 3b**).
- c) Loosen the spring compressor slightly to put some spring pressure onto the camber plate assembly (**Figure 3c**).
- d) Tighten the pillow ball nut to 50ft-lbs (**Figure 3b**). Use of an air impact may be required. Set air pressure to 45psi before use.
- e) Fully release and remove the spring compressor from the strut assembly (**Figure 3d**).

### 4. (OPTIONAL) Cut Strut Tower for Easy Camber Adjustment



To adjust camber without pulling the strut assembly, cutting of the strut tower is required.

- a) See section 4 in the detailed instructions. Skip To Step 5 if you don't want to cut your strut towers.

### 5. Install the Front Strut Assembly

- a) Place the strut assembly back up into the strut tower. Thread on the three (3) supplied nuts and tighten to 30ft-lbs (**Figure 5a**).
- b) Pull the spindle up into the strut and line up the holes. Insert the 17mm bolts and nuts. Torque to 75ft-lbs (**Figure 5b**).
- c) Re-install the sway bar end link. Thread on the 14mm nut and torque to 25ft-lbs (**Figure 5b**).
- d) Place the brake line back into the strut bracket and replace the clip (**Figure 5b**).
- e) Replace the ABS sensor clips (**Figures 2b and 2c**).
- f) Reinstall the wheel and lug nuts. Tighten lug nuts to factory specs (this may vary based upon wheel manufacturer).



This completes the installation of your camber plates. **CorkSport recommends a wheel/tire alignment check once installation is complete. Failure to do so could result in premature tire wear.** Check out our [knowledgebase](#) for additional install information, tips, and helpful video's

## Detailed Instructions



These instructions are for 2014+ Mazda 3.

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

- a) Use a floor jack and jackstands to gain access to the underside of the vehicle.



Always refer to the floor jack and jackstand manufacturers instructions as well as the factory owners manual for your vehicle to determine jacking points and support points. Alternately, use an automotive lift to gain access to the underside of the vehicle. Redundant support mechanisms are recommended.



Figure 2a

### 2. Remove the Strut Assembly

- a) Remove the front driver's wheel from the vehicle using an impact wrench or 1/2" drive ratcheting wrench (or breaker bar) and 21mm socket or other if using locking lug nuts (Figure 2a).

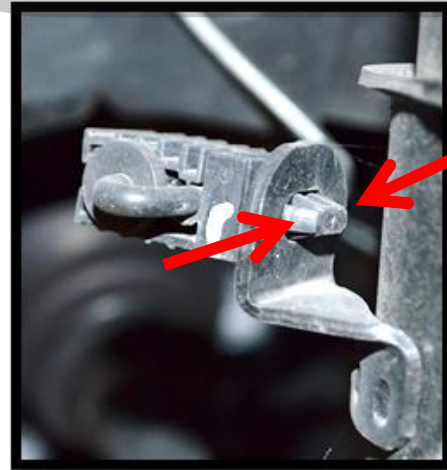


Figure 2b

- b) Remove the ABS sensor attachments from the strut (shown in Figure 2b and 2c). Use a pair of needle nose pliers to carefully squeeze the tabs in the direction of the red arrows.

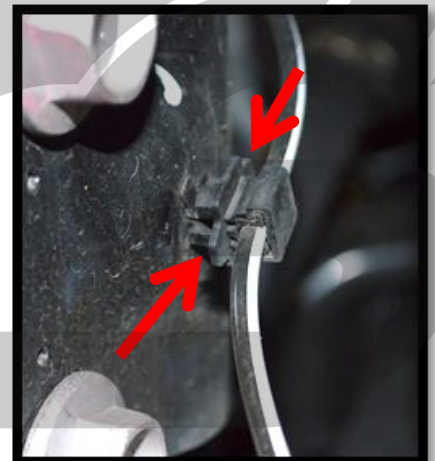


Figure 2c

## 2. Remove the Strut Assembly (continued)

- c) **Free the brake line** using pliers or a flat head screw driver to remove the clip from the brake line mount (red arrow in Figure 2d).
- d) **Remove the sway bar end link** from the strut body using a 14mm socket wrench (red circle in Figure 2e).
- e) **Remove the two (2) 17mm lower strut bolts** using a 17mm socket and 19mm ratcheting wrench (red arrows in Figure 2e).



Mazda 6 and CX-5 use 21mm bolts and 23 nuts

- f) **Use a 2lb mallet** (or similar) to carefully tap the knuckle out of the strut body.

- g) **Remove the three (3) 14mm nuts** holding the strut to the strut tower (red circles in Figure 2f).



Be sure to support the strut before removing the last 14mm nut.

- h) **Remove the strut assembly from the vehicle.**

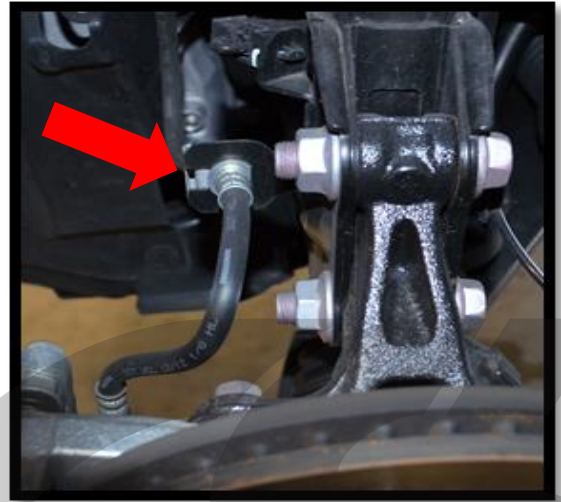


Figure 2d

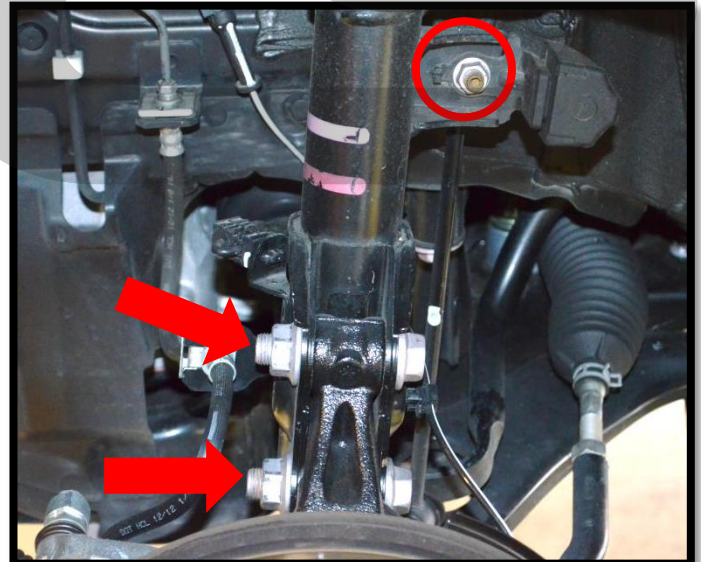


Figure 2e

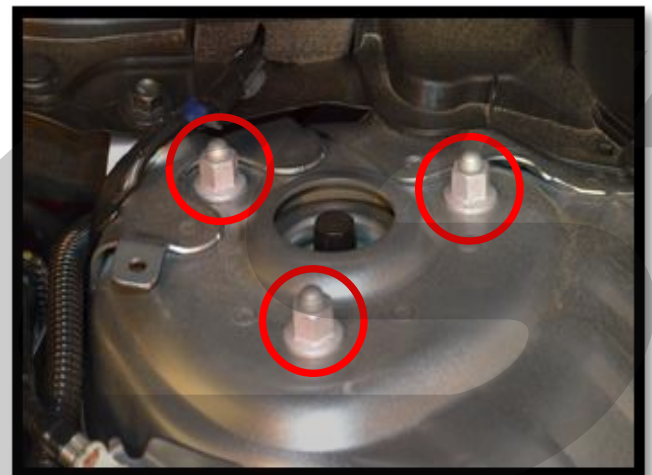


Figure 2f

## 2. Remove the Strut Assembly (continued)

- i) Use a spring compressor to compress the spring (evenly on both sides) until it is no longer tight against the upper mount as shown in Figure 2g.

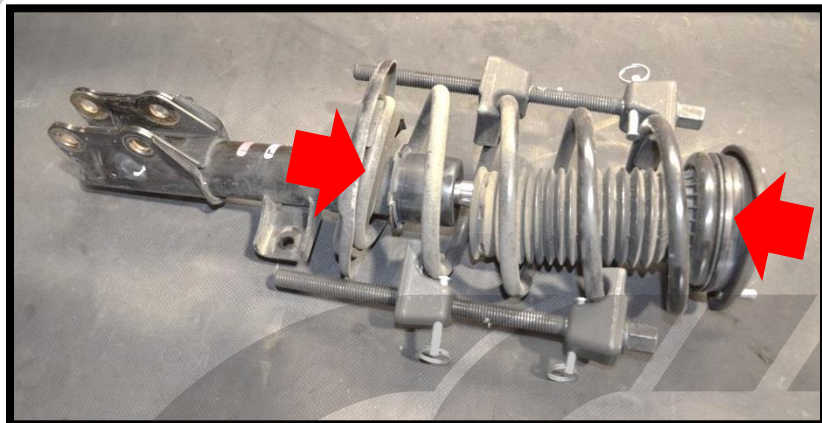


Figure 2g

- j) Remove the 17mm nut holding the upper strut mount to the strut (red circle in Figure 2h).



If the strut spins use a 6mm Allen wrench inserted into the top of the strut piston to remove the nut.

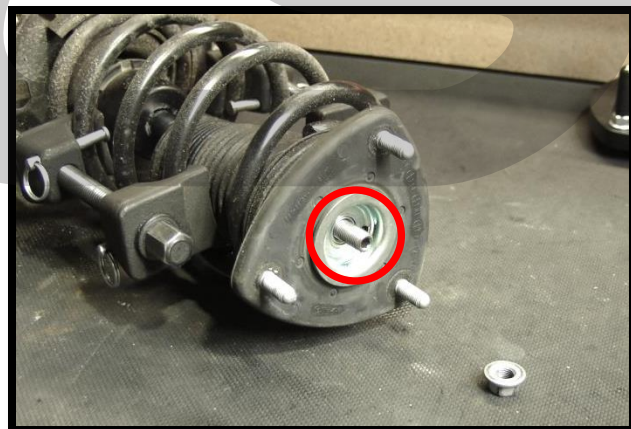


Figure 2h

- k) Remove the upper strut mount. Leave the boot, bump stop and spring (red arrow) on the strut (Figure 2i).

- l) Use a flat blade screw driver to carefully separate the strut bearing from the strut mount (Figure 2i).



Use caution when separating the bearing from the mount. The bearing is made of plastic and breaks easily.

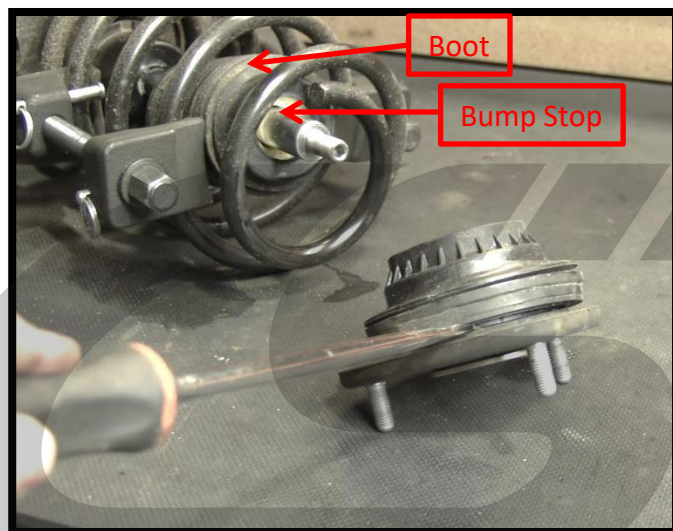


Figure 2i

### 3. Install the CorkSport Camber Plates

- a) Place the strut bearing onto the CorkSport camber plate. Push the bearing onto the camber plate making sure it is fully seated (as shown in Figure 3a).

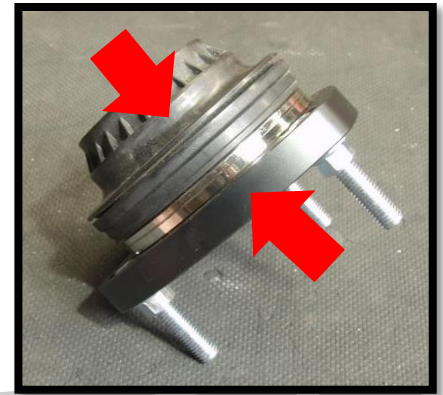


Figure 3a

Pillow Ball Nut

- b) Place the assembled camber plate onto the strut assembly and thread on the supplied pillow ball nut on by hand until it fully seats (Figure 3b).



Figure 3b

- c) Verify the bottom of the spring is seated fully in its lower perch (Figure 3c). Loosen the spring compressor slightly to put some spring pressure onto the camber plate assembly.



Figure 3c

- d) Tighten the pillow ball nut to 50ft-lbs (Figure 3b). Use of an air impact may be required. Set air pressure to 45psi before use.



If the strut spins use a 6mm Allen wrench inserted into the top of the strut piston to remove the nut.

- e) Fully release and remove the spring compressor from the strut assembly (Figure 3d).



If not cutting the strut tower for camber adjustment access described in section 4, set the camber adjustments to the plates at this time. Refer to section 6 for adjustment setting and procedure.

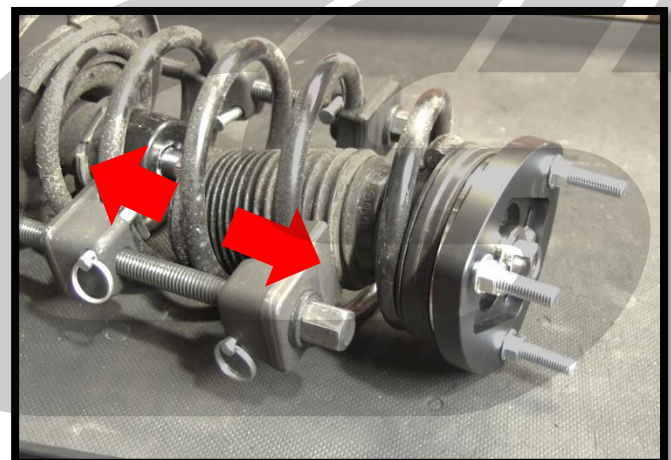


Figure 3d



#### 4. (OPTIONAL) Cut Strut Tower for Easy Camber Adjustment



To adjust camber without pulling the strut assembly, cutting of the strut tower is required.



Pictures shown are of 2010 Mazda 3. 2014 Mazda 3 will be similar.

- a) **Skip To Step 5 if you don't want to cut your strut towers.**



Skipping this step will require removal of the strut assembly for camber plate adjustments.

- a) **Drill out the center of the strut tower.** Use a 3" bi-Metal hole saw and drill. Take your time as you do this step to make sure you make the hole as clean as possible. (Figure 4a shows an uncut strut tower. Figure 4b shows how the strut tower should look once it has been cut.)

- c) **Clean the burrs on the edge of the cut** to smooth it out with a round file or similar.

- d) **Prepare the surface for proper paint adhesion** and surface finish with sand paper.

- e) **Mask off the strut tower and spray paint the exposed bare metal** to help prevent corrosion.



Figure 4a



Figure 4b

**5. Install the Front Strut Assembly**

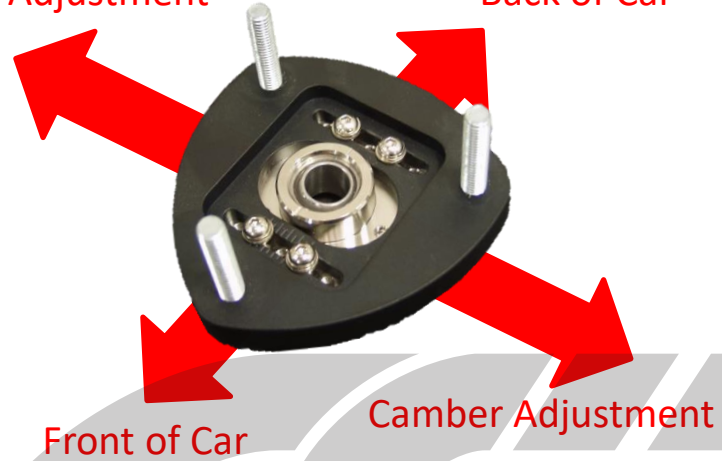
- a) Place the strut assembly back up into the strut tower. Thread on the three (3) supplied nuts and tighten to 30ft-lbs (Figure 5a).



Verify the Camber plate is installed into the strut tower as shown to the right.

Camber Adjustment

Back of Car



- b) Pull the spindle up into the strut and line up the holes. Insert the 17mm bolts and 19nuts. Torque to 75ft-lbs (red arrows in Figure 5b).



Mazda 6 and CX-5 use 21mm bolts and 23 nuts

- c) Re-install the sway bar end link. Thread on the 14mm nut and torque to 25ft-lbs (Figure 5b).

- d) Place the brake line back into the strut bracket and replace the clip (green arrow in Figure 5b).

- e) Replace the ABS sensor clips removed in Figures 2b and 2c.



Figure 5a

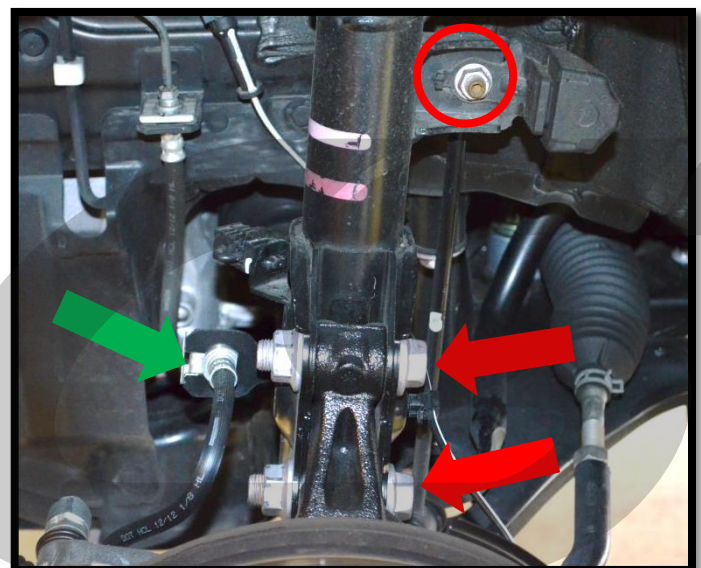


Figure 5b

## 5. Install the Front Strut Assembly Continued...

- f) **Reinstall the wheel and lug nuts.** Tighten lug nuts to factory specs (this may vary based upon wheel manufacturer).
- g) **Repeat the install process to the passenger side.**

## 6. Setting Camber with the CorkSport Camber Plates



If you opted to go without cutting the strut tower you will need to remove the strut in order to access the adjustment bolts each time you want to adjust the camber.



It is recommended that you have an alignment done during or shortly after this step to be sure you have your desired camber correct.



A simple low cost digital camber gauge (shown in [Figure 6a](#)) can be built with the use of this how to. <http://www.tomhoppe.com/index.php/2009/02/cheap-digital-camber-gauge/>



Figure 6a

- a) **Loosen the four (4) bolts on the top of the camber plate** to adjust camber (Shown on next page).
- b) **Raise and support the vehicle on a jack stand.**
- c) **Move the strut toward the engine** for more negative camber and move it outward for more positive camber.
- d) **After camber is set** tighten the (4) Allen head bolts to 9 Ft-lbs.

## 6. Setting Camber with the CorkSport Camber Plates Continued...



Passenger side adjustment of the camber plates shown below for Mazda 3, Mazda 6, and CX-5.

2014+ Mazda 3:



+0.3 Camber



-0.8/Stock Camber

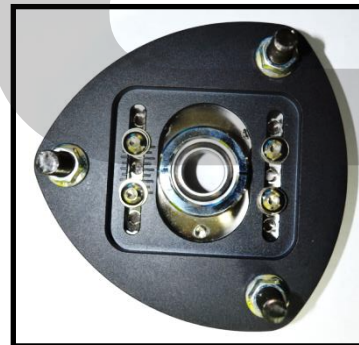


-1.6 Camber

2014+ Mazda 6:



-0.1 Camber



-0.6/Stock Camber



-1.5 Camber

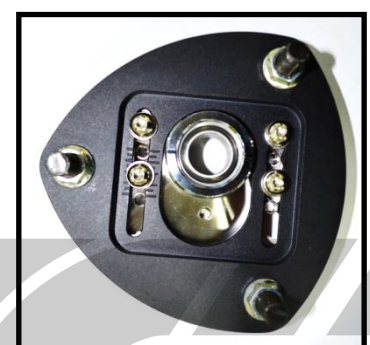
2013+ CX-5:



-0.1 Camber



-0.8/Stock Camber



-1.4 Camber



This completes the installation of your camber plates. **CorkSport recommends a wheel/tire alignment check once installation is complete. Failure to do so could result in premature tire wear.**

## What's Next:



### Mazda Lowering Spring Set

Give your car the performance appearance and edge you have been looking for with the **CorkSport Lowering Springs for your Mazda**. By reducing ride height add the CorkSport Lowering Springs to your Mazda will result in a quicker turning response, crisper road feel, a more aggressive appearance, and a firmer spring rate, all while maintaining excellent ride quality.

### Mazda Axle Back Exhaust

Get added power and upgrade the look of your Mazda with the **CorkSport Power Series Axle Back Exhaust**. As a completely new vehicle the engineers at CorkSport were given free reign to design an axle back exhaust in the best way fitting to the graceful design of the Mazda.



### Mazda Interior LED Kits

Enhance the look of your interior by adding **custom LED interior lights**. CorkSport's LED light kit replaces the incandescent bulbs for the dome light, map light, visor lights, rear hatch, and license plate. The lights simply plug in with no custom adapters or wiring required.

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