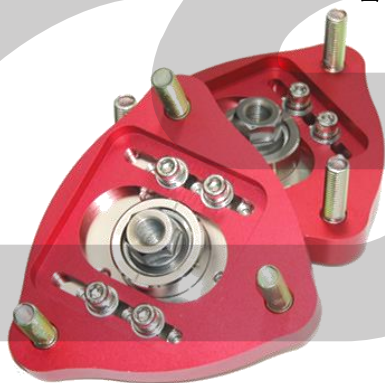


CorkSport Mazdaspeed 3 Camber Plates

2007+ Mazdaspeed 3 and Mazda 3



Thank you for purchasing the CorkSport Mazdaspeed 3 Camber Kit. Our camber plates are designed to give you up to -3 degrees of camber. They have been designed for use on and off the track and are ideal for racing and performance driving.

Please let us know your feedback by submitting a review at:

<http://www.corksport.com/corksport-mazdaspeed-3-camber-plates.html>

Pre-Installation Notes:



CorkSport recommends a wheel/tire alignment check once installation is complete. Failure to do so could result in premature tire wear.



Thoroughly read the precautions and instructions that come with your Floor Jack and Jack Stands as well as your vehicle's owners manual for appropriate jacking methods and jacking/support points. Always double up support on a vehicle – Jack Stands and Floor Jack etc.



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

Materials and Time:



Tooling List

Lift or Floor Jack & Jackstands
Transmission Jack or Floor Jack
3/8" or 1/2" Drive Ratchet or Air Gun
Torque Wrench
14mm Wrench
14mm Long Socket
17mm Long Socket
19mm Long Socket
Penetrating Fluid
Hammer, Mallet (2lb or Similar)

6mm Allen Wrench
Flat Head Screwdriver
Prybar
Pliers

Optional:

Spring Compressor (rent or buy)
3 1/8" Bi-Metal Hole Saw
Drill
Round File
Sandpaper



General Info.

Part #: Axl-3-303
Time Est: 120-150 min
Wrench Rating: 4/5



Parts List

2x Camber Plates
2x Pillow Ball Nuts

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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 the floor jack and jackstands to gain access to the underside of the vehicle


2. Remove Front Struts

- ☐ 2a) Remove the front passenger wheel from vehicle
- ☐ 2b) Remove (1) 14mm nut holding the front end link to the factory sway bar
- ☐ 2c) Using pliers, free the brake line
- ☐ 2d) Remove (1) 17mm lower strut bolt
- ☐ 2e) Spray penetrating fluid on the suspension upright knuckle. Figure 2e.
- ☐ 2f) Using a 2lb mallet , pound the knuckle free from the strut
 -  This process can be frustrating and difficult, so take your time
 -  [For video on this, please go to our knowledgebase](#)
- ☐ 2g) Remove (3) 14mm strut bolts holding the strut to the strut tower
 -  Be sure to only use a ratcheting wrench or end wrench to avoid shearing the head of the bolt
- ☐ 2h) Remove the strut assembly from the vehicle
- ☐ 2i) Repeat for the other side


3. Install the CorkSport Camber Plates on Struts

-  For Coilovers Skip to Step 4
- ☐ 3a) Using spring clamps , compress spring until no longer tight against upper mount
- ☐ 3b) Remove (1) 17mm nut that holds upper strut mount to strut
- ☐ 3c) Remove the upper strut mount and boot as one unit
- ☐ 3d) Remove top half of strut mount using a flat head screw driver. Figure 3d.
- ☐ 3e) Replace top strut mount with CorkSport camber plate
- ☐ 3f) Install camber plate and dust boot back on the strut and spring
- ☐ 3g) Skip to step 5


4. Install the CorkSport Camber Plates on Coilovers

-  This is an overview of installing camber plates on aftermarket coilovers using Mazdaspeed brand. Your set-up may differ
- ☐ 4a) Assemble coilover in the order shown in figure 4a
- ☐ 4b) Install pillow nut and torque to 50ft-lbs (Refer to picture 4b for how the assembled coilover should look)


5. (OPTIONAL) Cut Front Tower Bar for Easy Camber Adjustment

- ☐ **5a)** Skip to step 6 if you don't want to cut your strut tower
- ☐ **5b)** Use a 3-1/8 bi metal hold saw and factory strut tower brace as guide to drill out the center of the strut tower
 -  Take your time to do this step and make sure the hole is clean. See Figure 5c for a picture of a finished example
- ☐ **5c)** Use a round file to clean the burs on the edges
- ☐ **5d)** Use sand paper to prepare the surface for proper paint adhesion
- ☐ **5e)** Mask off the strut tower and spray paint the exposed bare metal to prevent corrosion

6.) Install the Strut/Coilover Assembly

- ☐ **6a)** If you are installing without cutting the strut tower complete step 7 before moving on to the rest of step 6
- ☐ **6b)** Reinstall the strut or coilover and hand tighten the three strut mount nuts. Next use a torque wrench to tighten to 44 ft-lbs.
- ☐ **6c)** Generously lubricate the strut and knuckle with lithium grease. See Figure 6c
- ☐ **6d)** Line up the strut and knuckle and install the wheel on the hub and hand tighten (2) opposite lug nuts onto the wheel studs
- ☐ **6e)** Verify that the strut and knuckle are lined up and lower the car until the strut slides back into the knuckle
- ☐ **6f)** Install the 17mm bolt and nut to secure the knuckle to the strut and tighten to 45 ft-lbs.
 -  You should hear a popping sound when the strut fully seats into the knuckle
- ☐ **6g)** Re-secure the brake line using the shim as shown in figure 2c
- ☐ **6h)** Attach end link and reinstall 14mm nut. Tighten to 25 ft-lbs.
- ☐ **6i)** Reinstall the wheel and lug nuts and tighten to factory specs
- ☐ **6j)** Repeat for 6a-6i for the other side

7.) Set Camber with the CorkSport Camber Plates

- ☐ **7a)** Loosen the (4) screws on the top of the camber plate to adjust camber
- ☐ **7b)** Raise and support the vehicle on a jack stand
- ☐ **7c)** Move strut inward for more negative camber and move it outward for more positive camber
 -  See Figure 7c for a visual representation of the camber settings



This completes the installation of your Camber Kit. 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

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

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. Removing Front struts

- a) **Remove the front passenger wheel** from the vehicle using an impact wrench or 1/2" drive ratcheting wrench (or breaker bar) and 19mm socket (or other if using locking lug nuts). Your front wheel wells should now look like **Figure 2A** to the right.
- b) **Start with the passenger side** of the vehicle, remove the one (1) 14mm nut (shown in **Figure 2B** by the **green arrow**) holding the front end link to the factory sway bar using a 14 mm wrench.
- c) **Free the brake line** using pliers to remove the shim from the brake line mount (shown by the red arrow in **Figure 2C**.)
- d) **Remove the one (1) 17mm lower strut bolt** using a 17mm socket and ratcheting wrench (shown in **Figure 2D** by the **red arrow**).
- e) **Spray penetrating fluid on the suspension upright knuckle** as shown in **Figure 2E** by the **red circle**.
- f) **Using the 2lb mallet** (or similar) carefully, but forcefully pound the knuckle until it comes free from the strut upright. You will need to be patient as the knuckle will need to slide down roughly 2-3" before it releases from the shock. Your suspension should now look like **Figure 2F**.

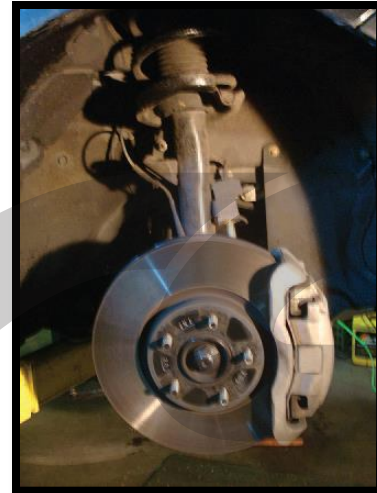


Figure 2A



Figure 2B

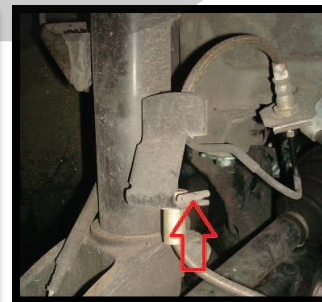


Figure 2C

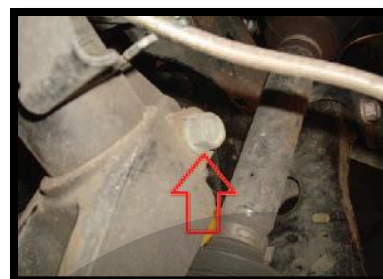


Figure 2D



Figure 2E



Figure 2F



[Please check our knowledgebase online for additional video on how to complete this step](#)

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2. Removing Front Struts (continued)

- g) Remove the three (3) 14mm strut bolts holding the strut to the strut tower (shown by the red circles in Figure 2G)



Be sure to only use a ratcheting wrench or end wrench, or you could shear off the bolt head. Also, be sure to brace the strut as the last bolt is removed or it will fall.

- h) Remove the strut assembly from the vehicle
- i) Repeat for the other side.

3. Install the CorkSport Camber Plates on Struts



For coilovers skip to step 4

- a) Using the spring clamps, compress the spring evenly on both sides until it is no longer tight against the upper mount (shown in Figure 3a)
- b) Remove the one (1) 17mm nut (shown in the red arrow in Figure 3b) holding the upper strut mount to the strut



If the stud spins, you will need to use a 6mm Allen wrench to hold the stud in place

- c) Remove the upper strut mount and boot as one unit. The aim is to free the boot from the yellow part of the strut. Once that is complete, the assembly will come out together. (shown in Figure 3c).



[Please check our knowledgebase online for additional video on how to complete this step](#)



Figure 2G



Figure 3A



Figure 3C



Figure 3B

3. Install the CorkSport Camber Plates on Struts (continued)

- d) Remove the top half of the strut mount assembly by using a flat head screw driver just above the white ring to remove it the strut mount. (See [Figure 3d](#))
- e) Replace top strut mount with Camber plate (See [Figure 3e](#))
- f) Install camber plate and dust boot back on the strut and spring and tighten 17MM nut to 50ft-lbs. You may need to use the 6mm Allen while tightening the bolt to keep the strut from turning. (See [Figure 3f](#))



You may need to use an air impact to tighten the 17MM nut. Set the air pressure to the impact at 45psi then proceed to tighten.

- g) Skip to Step 5



Figure 3D



Figure 3E



Figure 3F

4. Install the Front CorkSport Camber Plates on Coilovers



The following is an over view of installing the camber plates on Mazdaspeed Brand coil-overs . Your set up may differ.

- a) Assemble coil-over in the order shown in [Figure 4a](#).
- b) Install pillow ball nut. Your coil-overs should now look like [Figure 4b](#) on the next page.




You might need a extra person to help compress the spring while installing the pillow ball nut.



Figure 4a

5. (OPTIONAL) Cut Strut Tower for Easy Camber Adjustment

 In order to adjust camber without pulling the strut assembly, Cutting of the strut tower is required.

- a) Skip To Step 6 if you don't want to cut your strut towers.
- b) Drill out the center of the strut tower. Use a 3-1/8 bi-Metal hole saw and use the factory strut tower brace as a guide. Take your time as you do this step to make sure you make the hole as clean as possible. (Figure 5a shows an uncut strut tower. Figure 5b shows how the strut tower should look once it has been cut)



Figure 4b



Figure 5a



Figure 5c

- c) Clean the burs 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.
- c) Mask off the strut tower and spray paint the exposed bare metal to help prevent corrosion.

6. Install the Strut/Coil-Over Assembly

- a) If you are installing without cutting the strut tower complete step seven before moving on to the next step.
- b) Reinstall the strut or coilover and hand tighten the three (3) strut mount nuts (Shown in Figure 2g). Using a torque wrench tighten nuts to 30 ft-lbs.

- c) **Generously lubricate the strut and knuckle** with lithium grease (shown in **Figure 6c**)
- d) **Line up the strut and knuckle** by hand as best you can. Next install the wheel on the hub and hand tighten two (2) lug nuts onto the wheel studs (opposing studs).
- e) **Verify that the strut and knuckle are lined up.** Lower the car slowly until the strut slides back into the knuckle. You should hear a popping sound when the strut fully seats into the knuckle.
- f) **Install the 17mm bolt and nut** to secure the knuckle to the strut (**Figure 2d**). Tighten to 45ft. lbs.
- g) **Re-secure the brake line** bump side up using the shim (shown in **Figure 2c**).
- h) **Attach the end link** and reinstall the 14mm nut (shown in **Figure 2b**). Tighten to 25 ft-lbs.
- i) **Reinstall the wheel and lug nuts.** Tighten lug nuts to factory specs (varies based upon wheels)
- j) **Repeat 6a-6i for the other side.**



Figure 6C

7. 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 a 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 7a**) can be built with the use of this how to. <http://www.tomhoppe.com/index.php/2009/02/cheap-digital-camber-gauge/>



Figure 7a

7. Setting Camber with the CorkSport Camber Plates Continued...

- Loosen the four (4) bolts on the top of the camber plate to adjust camber (See [Figure 7b](#)).
- Raise and support the vehicle on a jack stand.
- Move the strut inward for more negative camber and move it outward for more positive camber. [Figure 7c](#) shows the approximate location for various camber settings. Your installation will vary.
- After camber is set tighten the (4) Allan head bolts to 7-9 Ft lbs.



Without cutting the strut tower camber adjustment range is somewhat limited.

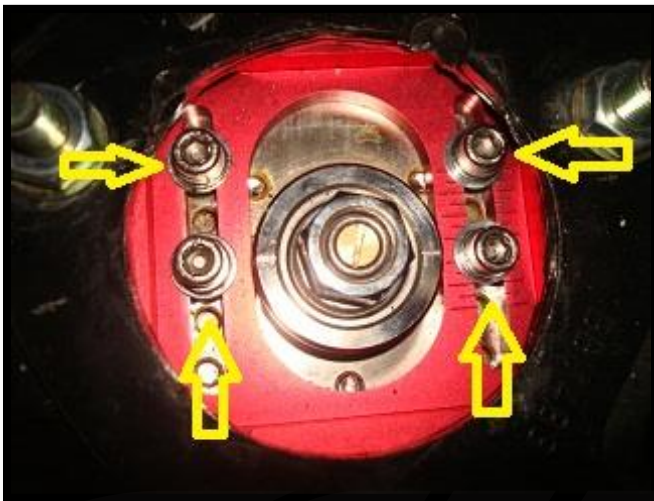


Figure 7b



Spring interference on OEM or lowering springs will prevent more than approximately 1.5 degrees of negative camber.

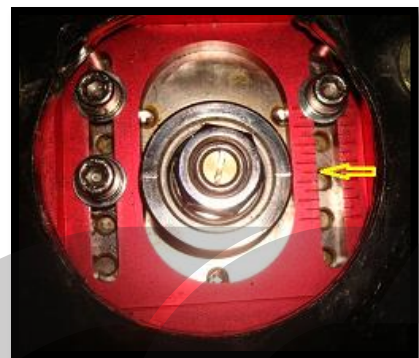
Figure 7c



-3 Camber



-.5 Camber



-1.5/Stock 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.** Check out our [knowledgebase](#) for additional install information, tips, and helpful video's