

## CorkSport Mazdaspeed Suspension Kit

2007-2013 Mazdaspeed 3



**This Package should contain:**

- 1. Two (2) Front Assembled Shocks**
- 2. Two (2) Rear Springs**
- 3. Two (2) Rear Shocks**

# CorkSport Mazdaspeed Suspension Kit

2007-2013 Mazdaspeed 3



**Thank you for purchasing the CorkSport Mazdaspeed Suspension Kit.** Our Suspension Kit have been vigorously tested to ensure optimal characteristics. Testing completed showed a lowered center of gravity of 1.2" Front and 1.0" Rear over the stock springs providing you with improved handling, performance appearance and excellent ride quality. Please let us know your feedback by submitting a review at: <https://corksport.com/mazdaspeed-3-suspension-kit.html>

## Pre-Installation Notes:



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



**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



**Camber Plate Adjustments:** The camber plates must be adjusted off the car if the shock tower opening is NOT cut larger. The shock tower opening can be cut larger with a 3-1/8" hole saw for on car adjustability.



**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 Airgun
- Pliers
- 14mm Long Socket
- 17mm Long Socket
- Penetrating Fluid
- Hammer, Mallet (2lb or Similar)
- Torque Wrench
- Spring Compressor (rent or buy)
- 6mm Allen Wrench
- Flat Head Screwdriver
- Prybar



### Parts List

- 2x CS Front Assembled Shocks
- 2x CS Rear Springs
- 2x CS Rear Shocks



### General Info.

- Part #: AXL-3-295
- Time Est: 120-150 min
- Wrench Rating: 3/5

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

## 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. Install the Front CorkSport Suspension Kit

- 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 and remove the one (1) 14mm nut (shown in **Figure 2B** by the green up 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 shock 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

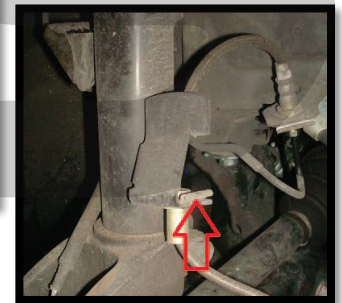


Figure 2C



Figure 2D



Figure 2E




Figure 2F



## 2. Install the Front CorkSport Suspension Kit (continued)

- g) Install the insulator from the factory spring and place it on the CorkSport spring. Shown **Figure 2G**.
- h) Remove the three (3) 14mm strut bolts holding the strut to the strut tower (shown by the **red circles** in **Figure 2H**)

 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.

- i) Remove the strut assembly from the vehicle
- j) Reinstall the strut and hand tighten the three (3) 14mm strut mount bolts (Figure 2G). Using a torque wrench and 14mm socket, tighten bolts to 30 ft lbs.
- k) Generously lubricate the strut and knuckle with lithium grease as shown in **Figure 2I** to the right.
- r) Line up the strut and knuckle by hand as best you can. Then install the wheel into the hub and hand tighten two (2) lug nuts onto the wheel studs (opposing studs).
- s) Verify that the strut and knuckle are lined up. Lower the cars lowly until the strut slides back into the knuckle. You should hear a popping sound when the strut fully seats into the knuckle.
- t) Install the 17mm bolt and nut to secure the knuckle to the strut (Figure 2D). Tighten to 45ft. lbs.
- u) Re-secure the brake line using the shim as shown in Figure 2C (bump side up)
- v) Attach the end link and reinstall the 14mm nut (shown in Figure 2B). Tighten to 25 ft lbs.
- w) Reinstall the wheel and lug nuts. Tighten lug nuts to factory specs (vary based upon wheels)
- x) Repeat steps 2a-2w for the driver's side lowering spring



**Figure 2G**





**Figure 2H**



**Figure 2I**

### 3. Install the Rear Springs

- a) Remove the passenger's side rear wheel from the vehicle using the same method as you did for the front wheels
- b) Remove the 17mm bolt that holds the spindle to the control arm (see **Figure 3A**) using a 17mm socket and ratcheting wrench
- c) Remove the four (4) 14mm bolts holding the rear sway bar (CS rear sway bar shown in **Figure 3B**) using a 14mm socket and ratcheting wrench
  -  The sway bar will still hang from the end links and you leave the bushings on the bar
- d) Free control arm from the spindle as shown in **Figure 3C**
- e) Remove the factory spring from the vehicle
- f) Swap the rubber upper spring perch mount from the factory spring to the CorkSport lowering spring. Be sure to note the orientation of the spring in relation to the rubber mount.
- g) Put the CorkSport lowering spring onto the vehicle. Spin the spring around until the bottom coil is positioned into the lower mount slot as shown in **Figure 3D**.
- h) Jack up the control arm using a floor jack or transmission jack (depending on if your vehicle is on a lift or jackstands) and reinstall the 17mm bolt into the control arm and spindle (**Figure 3C**).
  -  This step is not easy if you have not done it before. Take your time and ask for an extra set of hands (one person jacks up the control arm and one person lines up the control arm and bolt).
- i) Reinstall the wheel and lug nuts. Tighten lug nuts to factory specs (vary based upon wheels).
- j) Repeat steps 3A-I for the driver's side lowering spring.
- k) Reconnect the sway bar bushings using the four (4) 14mm bolts that you previously removed (**Figure 3B**). You will want to use a drop of blue threadlock on each of the four (4) bolts.
- l) Remove the vehicle from jackstands (or lift) and take the vehicle for a short drive. If you hear or feel any clunking, inspect all hardware and ensure everything is tight and properly installed.

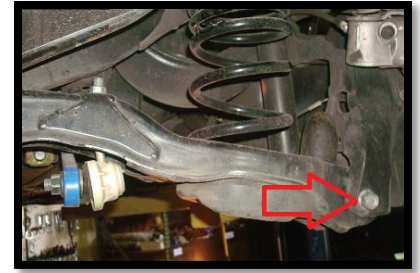


Figure 3A

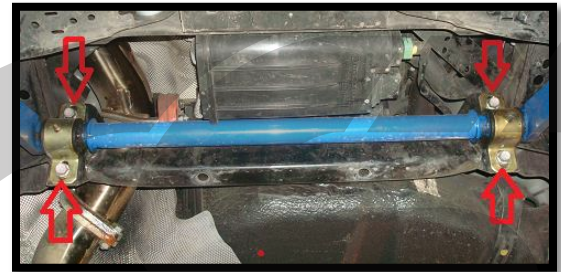


Figure 3B

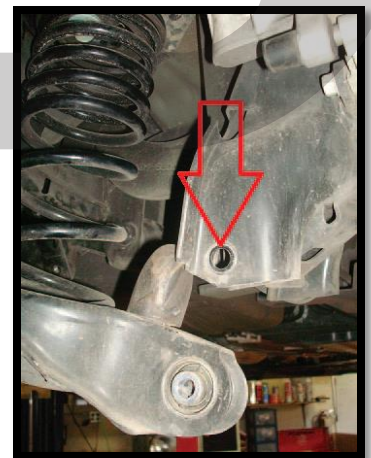


Figure 3C



Figure 3D



### 3. Install the Rear Springs (continued)

- k) Reconnect the sway bar bushings using the four (4) 14mm bolts that you previously removed (Figure 3B). You will want to use a drop of blue threadlock on each of the four (4) bolts.

### 3. Install the Rear CorkSport Adjustable Shocks

- a) Remove the passenger's side rear wheel from the vehicle. Use the same method as you did for the front wheels.

- b) Place a jack under the rear control arm and remove the 17mm bolt that holds the shock to the spindle (see Figure 3a).

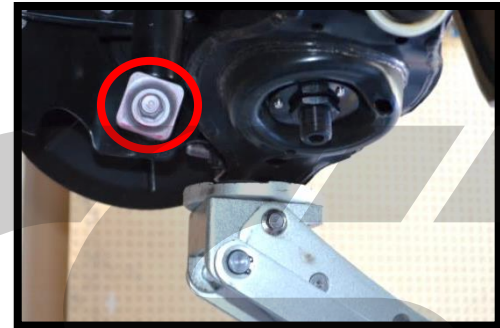



Figure 3a

 Failure to hold the lower control arm in place while removing the lower shock bolt will result in the spring releasing and possible injury or damage.

- c) Remove the two (2) 12mm nuts that hold the shock up in the fender well and remove the shock from the car (Figure 3b).



Figure 3b

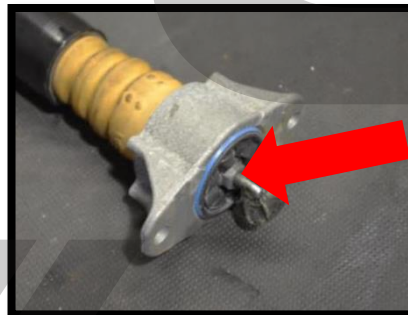


Figure 3c

- d) Peel back the dust seal on top of the aluminum shock mount, and remove the 12mm nut (Figure 3c). If the strut spins you can use pliers to hold the top and a wrench to loosen the nut.



Figure 3d

- e) Remove the aluminum shock mount from the shock, and separate the bump stop and dust boot from the shock mount (Figure 3d).

- f) Swap the aluminum shock mount over to the CorkSport Adjustable Shock and fasten with the 12mm nut torqued to 18ft-lbs. (Figure 3e).

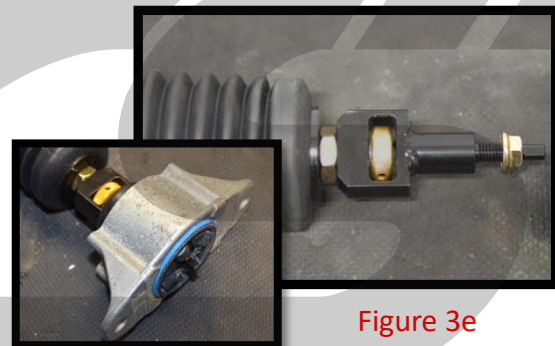


Figure 3e

- g) Transfer the shock back into the car. Fasten the top shock mount first, with the two 12mm nuts. Torque to 18ft-lbs.

- h) For Gen2 Only: Using the supplied 19mm bolt and washer, attach the bottom of the shock to the spindle and torque to 50ft-lbs. (Figure 3f). Gen1 Only: Reuse the stock hardware and torque to 50ft-lbs.

- i) Repeat steps 3a-3h for the driver's side shock.

#### 4. Adjusting the CorkSport Struts

- a) **Adjust the damping in the front to desired level.**  
Starting soft and moving up is generally the easiest way to tell difference (front adjuster shown in **Figure 4a**). The first and lowest setting is closest to the factory damping. Most aftermarket springs will perform better at the setting 8-10 clicks from the lowest setting. The higher settings are appropriate for track/autocross or more spirited driving conditions.
- b) **Adjust the damping in the rear to desired level.**  
Starting soft and moving up is generally the easiest way to tell difference here as well (Gold colored rear adjuster shown in **Figure 4b**). The first setting is closest to the factory damping. Most aftermarket springs will perform better at the setting 7-9 clicks from the lowest setting. The higher settings are appropriate for track/autocross or more spirited driving conditions.



Figure 4a

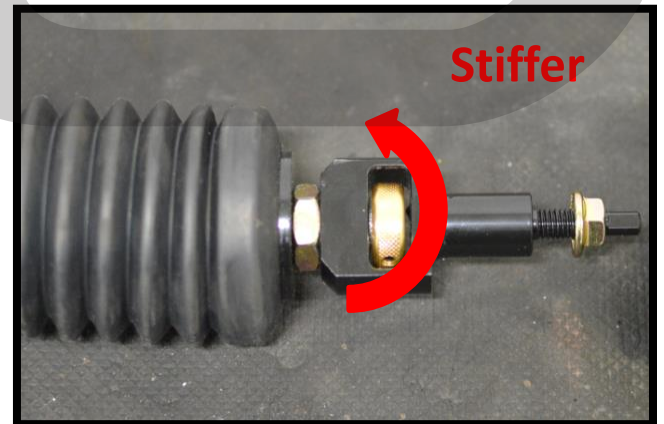


Figure 4b

**This completes the installation of your CorkSport Adjustable Struts and Shocks. Your vehicle will settle slightly over the next few days to achieve the final ride height. CorkSport recommends a wheel/tire alignment check once installation is complete. Failure to do so could result in premature tire wear.**

### What's Next:



#### Stage 2 Rear Motor Mount

The CorkSport Stage 2 Rear Motor Mount is the latest and greatest design for the car enthusiast. The “thinking-outside-the-box” design takes a new look of the RMM design for a no compromise goal of style, performance, and refinement. The CorkSport RMM significantly reduces wheel hop, torque steer, and improves throttle response by securely controlling your engine’s movement. The new design achieves this with a minimal increase in engine noise, vibration and harshness (NVH); seriously it’s impressive how smooth the CorkSport Stage 2 RMM is.