

# CorkSport Mazda 3 Lowering Springs

2014+ Mazda 3



**Thank you for purchasing the CorkSport Mazda 3 Lowering Springs.** Our lowering springs have been vigorously tested to ensure optimal characteristics. Our springs will lower your ride a total of 1.75" in the front and 2.25" in the 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:

<http://www.corksport.com/corksport-2014-mazda-3-lowering-spring-set.html>

## Pre-Installation Notes:



**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.



**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:



### General Info.

**Part #:** Axm-3-288  
**Time Est:** 2 hours  
**Wrench Rating:** 3/5



### Tooling List

Lift or Floor Jack & Jackstands  
Transmission Jack  
3/8" or 1/2" Drive  
Ratchet or Impact Gun  
14mm Wrench  
14mm Deep Socket  
17mm Deep Socket  
17mm Wrench  
19mm Wrench  
19mm Deep Socket  
21mm Deep Socket  
Penetrating Fluid  
Hammer, Mallet (2lb or Similar)  
Torque Wrench  
Spring Compressor (rent or buy)  
6mm Allen Wrench  
Needle Nose Pliers



### Parts List

Two (2) CS Front Lowering Springs  
Two (2) CS Rear Lowering Springs

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 checklist as you perform work on the vehicle.



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 drivers wheel from the vehicle using a 21mm socket (Figure 2a).
- b) Remove the ABS sensor attachments from the strut (shown in Figure 2b and 2c).
- 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) 19mm lower strut bolts using a 19mm socket (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.

### 3. Install the Front CorkSport Lowering Springs

- a) Use a spring compressor to compress the spring until it is no longer tight against the upper mount (Figure 3a).
- b) Remove the 17mm nut holding the upper strut mount to the strut (Figure 3b).
  - If the strut piston spins use a 6mm Allen wrench inserted into the top of the strut piston to remove the nut.
- c) Remove the upper strut mount and spring from the strut. Remove the boot and bump stop from the strut piston (Figure 3c).
- d) Use a knife to cut the bump stop in half. Place the larger portion back onto the strut piston and place the boot back over the bump stop (Figure 3d).

### 3. Install the Front CorkSport Lowering Springs (continued)

- e) Set the CorkSport front lowering spring on the strut and transfer the spring compressor to the new spring (Figure 3e).
- f) Make sure the bottom of the spring is seated fully in its perch. Tighten the spring compressor (Figure 3f).
- g) Replace the upper strut mount and reinstall the 17mm upper strut nut (as shown in Figure 3g). Tighten to 50ft-lbs.
- h) Remove the spring compressor from the strut assembly (Figure 3g).
- i) Place the strut assembly back up into the strut tower. Replace the three (3) nuts and tighten to 30ft-lbs (Figure 3h).
- j) Pull the spindle up into the strut. Insert the 19mm bolts and nuts. Torque to 75ft-lbs (Figure 3i).
- k) Re-install the sway bar end link. Torque the 14mm nut to 25ft-lbs (Figure 3i).
- l) Place the brake line back into the strut bracket and replace the clip (Figure 3i).
- m) Replace the ABS sensor clips.
- n) Reinstall the wheel and lug nuts. Tighten lug nuts to factory specs (this may vary based upon wheel manufacturer).
- o) Repeat the install process to the passenger side.

### 4. Install the Rear CorkSport Lowering Springs

- a) Remove the drivers side rear wheel from the vehicle using the same method as you did for the front wheels.
- b) Place a jack under the rear control arm and jack up the control arm slightly (Figure 4a).
- c) Remove the sway bar end link from the control arm with a 14mm wrench (Figure 4a).
- d) Remove the 17mm bolt that holds the spindle to the control arm (Figure 4a) using a 17mm socket and ratcheting wrench.
- e) Slowly lower the jack and remove the spring.

#### 4. Install the Rear CorkSport Lowering Springs (continued)

- f) Remove the lower spring damper bolt with a 17mm socket (Figure 4a).
- g) Remove the two (2) upper damper nuts with a deep 12mm socket (Figure 4b). Remove the damper from the vehicle.
- h) Remove the 12mm upper mount nut and separate the bump stop from the aluminum mount (Figure 4c).
- i) Trim the bump stop in half (Figure 4c). Re-assemble the damper boot, bump stop and mount, and re-install the assembly back into the vehicle.
- j) Transfer the upper rubber spring perch to the new spring and place the spring back up into the car (Figure 4d).
- k) Seat the bottom of the spring into the lower control arm parch. Make sure it is seated correctly in the control arm (Figure 4e).
- l) Place the jack back under the control arm and slowly raise the control arm compressing the spring.
- m) Line up the bolt holes at the end of the control arm and the spindle. Insert the 17mm bolt and tighten to 45ft-lbs (Figure 4f).
- n) Re-connect the sway bar end link and tighten the 14mm nut to 25ft-lbs (Figure 4f).
- o) Reinstall the wheel and lug nuts. Tighten lug nuts to factory specs (this may vary based upon wheel manufacturer).
- p) Repeat steps 3a-j for the passengers side lowering spring.
- q) 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.



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

Need Help With Your Installation?

Call (360) 260-CORK



## 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 breaker bar and 21mm socket (Figure 2a).

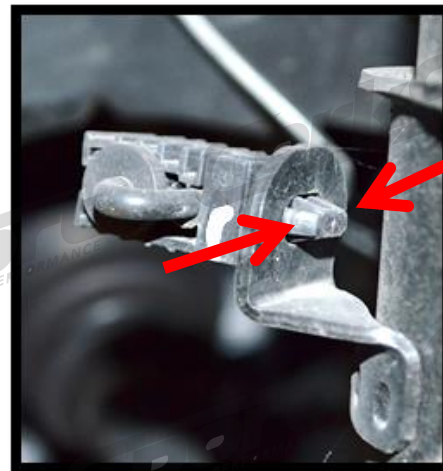


Figure 2b

- 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.

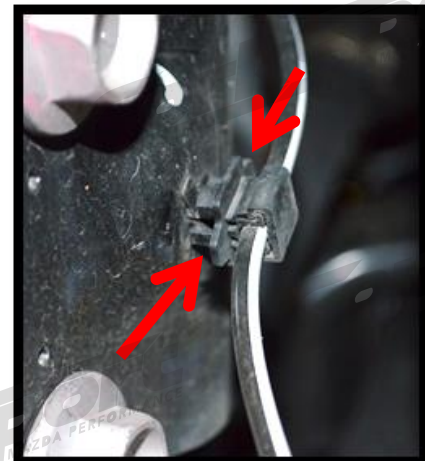


Figure 2c

**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**).

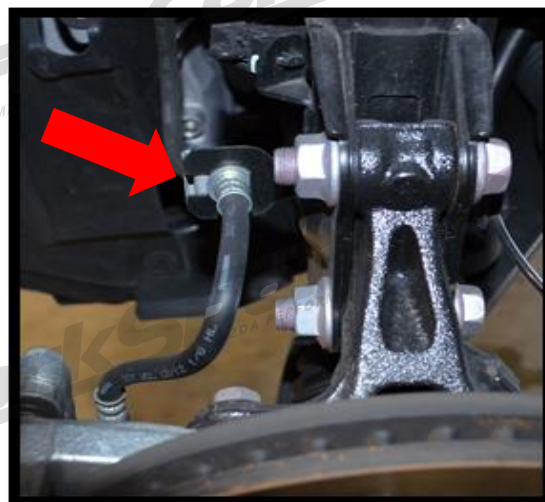


Figure 2d

d) **Remove the sway bar end link** from the strut body using a 14mm socket wrench (**red circle** in **Figure 2e**).

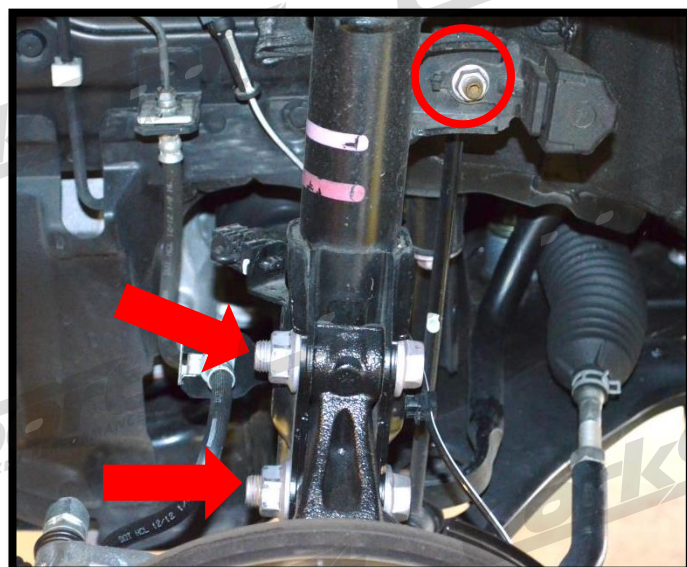


Figure 2e

e) **Remove the two (2) 19mm lower strut bolts** using a 19mm socket and ratcheting wrench (**red arrows** in **Figure 2e**).

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**).



Figure 2f



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

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



### 3. Install the Front CorkSport Lowering Springs

- a) Use a spring compressor to compress the spring (evenly on both sides) until it is no longer tight against the upper mount (red arrow in Figure 3a).

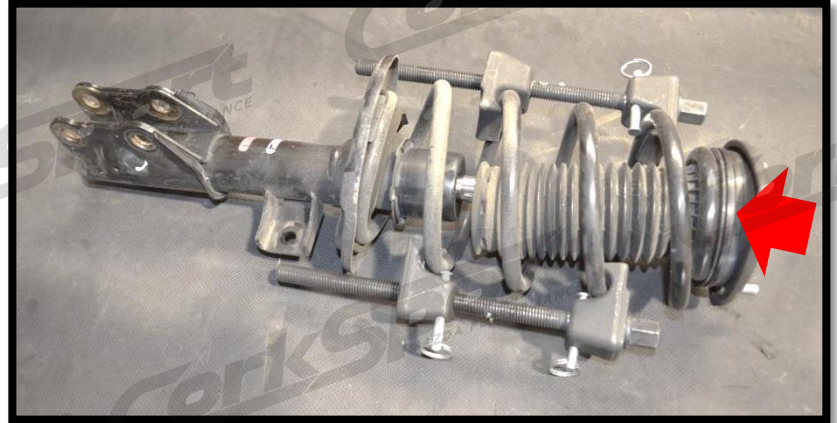


Figure 3a

- b) Remove the 17mm nut holding the upper strut mount to the strut (shown removed in Figure 3b).



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

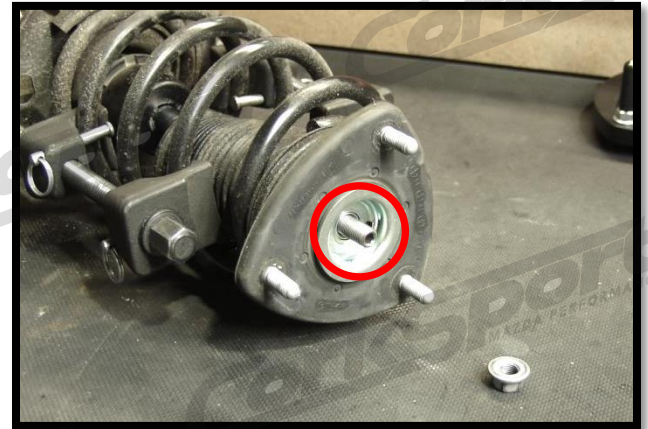


Figure 3b

- c) Remove the upper strut mount and spring from the strut. Remove the boot and bump stop (red arrow) from the strut piston (Figure 3c).



Figure 3c

- d) Use a knife to cut the bump stop in half. Place the larger portion back onto the strut piston and place the boot back over the bump stop (Figure 3d).



Figure 3d

Cut Bump Stop Here

### 3. Install the Front CorkSport Lowering Springs (continued)

e) Set the CorkSport front lowering spring on the strut and transfer the spring compressor to the new spring (shown in **Figure 3e**).



Figure 3e

f) Make sure the bottom of the spring is seated fully in its perch. Tighten the spring compressor (**Figure 3f**).



Figure 3f

g) Replace the upper strut mount onto the strut piston and reinstall the 17mm upper strut nut (as shown in **Figure 3g**). Tighten to 50ft-lbs.



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

h) Fully release and remove the spring compressor from the strut assembly (**Figure 3g**).

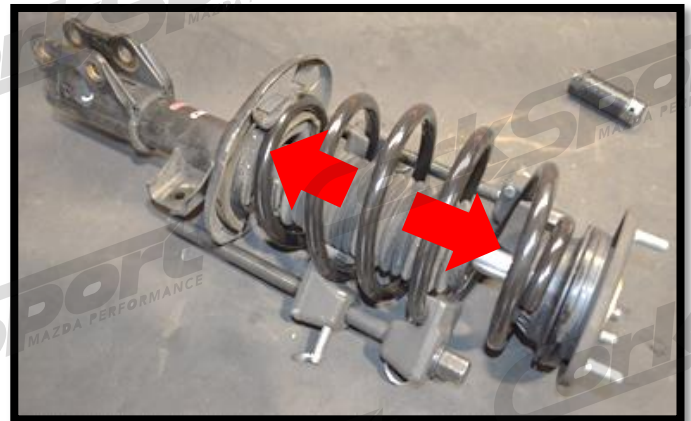


Figure 3g



### 3. Install the Front CorkSport Lowering Springs (continued)

i) Place the strut assembly back up into the strut tower. Thread on the three (3) nuts you removed in step 2g and tighten to 30ft-lbs (Figure 3h).



Figure 3h

j) Pull the spindle up into the strut and line up the holes. Insert the 19mm bolts and nuts. Torque to 75ft-lbs (red arrows in Figure 3i).

k) Re-install the sway bar end link. Thread on the 14mm nut and torque to 25ft-lbs (Figure 3i).

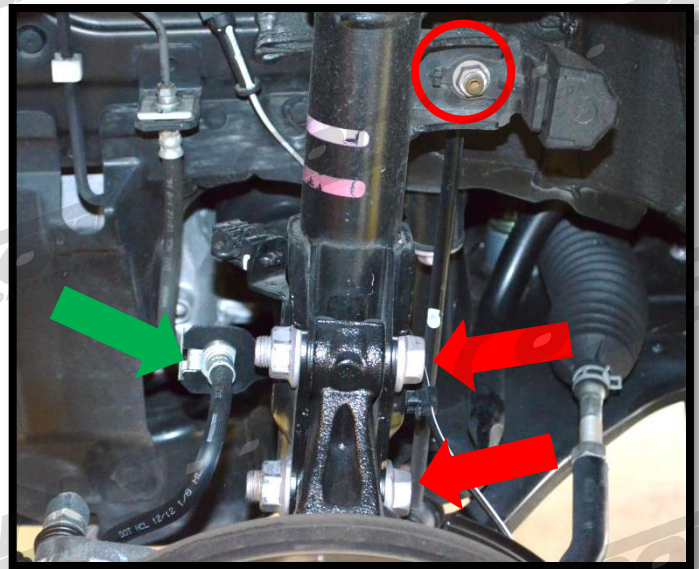


Figure 3i

l) Place the brake line back into the strut bracket and replace the clip (green arrow in Figure 3i).

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

n) Reinstall the wheel and lug nuts. Tighten lug nuts to factory specs (this may vary based upon wheel manufacturer).

o) Repeat steps 2 and 3 for the passenger side.

#### 4. Install the Rear CorkSport Lowering Springs

a) Remove the drivers side rear wheel from the vehicle using the same method as you did for the front wheels.

b) Place a jack under the rear control arm and jack up the control arm slightly (shown with red arrow in Figure 3a).



Figure 4a

c) Remove the sway bar end link from the control arm with a 14mm wrench (green circle in Figure 3a).

d) Remove the 17mm bolt that holds the spindle to the control arm (red circle in Figure 3a) using a 17mm socket and ratcheting wrench.

e) Slowly lower the jack and remove the spring.

f) Remove the lower spring damper bolt with a 17mm socket (green arrow in Figure 4a).

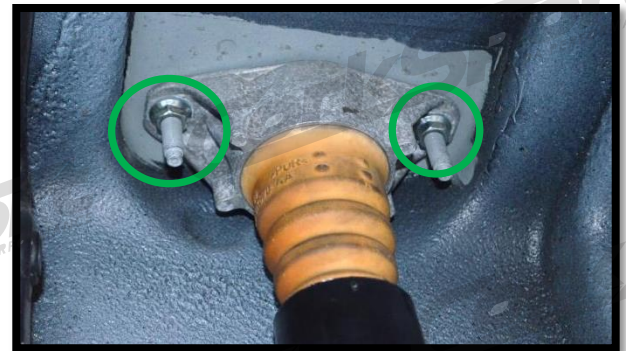


Figure 4b

g) Remove the two (2) upper damper nuts with a deep 12mm socket (green arrows in Figure 4b). Remove the damper from the vehicle.

h) Remove the 12mm upper mount nut and separate the bump stop from the aluminum mount (green circle in Figure 4c).

i) Trim the bump stop in half (red arrow in Figure 4c). Re-assemble the damper boot, bump stop and mount, and re-install the assembly back into the vehicle.



Figure 4c



#### 4. Install the Rear Lowering Springs (continued)

j) Transfer the upper rubber spring perch to the new spring (green arrow) and place the spring back up into the car (Figure 4d).

k) Seat the bottom of the spring into the lower control arm parch. Make sure it is seated correctly in the control arm as shown (Figure 4e).

l) Place the jack back under the control arm and slowly raise the control arm compressing the spring.

m) Line up the bolt holes at the end of the control arm and the spindle. Insert the 17mm bolt and tighten to 45ft-lbs (red circle in Figure 4f).

n) Re-connect the sway bar end link and tighten the 14mm nut to 25ft-lbs (green circle in Figure 4f).

o) Reinstall the wheel and lug nuts. Tighten lug nuts to factory specs (this may vary based upon wheel manufacturer).

p) Repeat steps 4a-o for the passengers side lowering spring and trimming the bump stop.

q) 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.

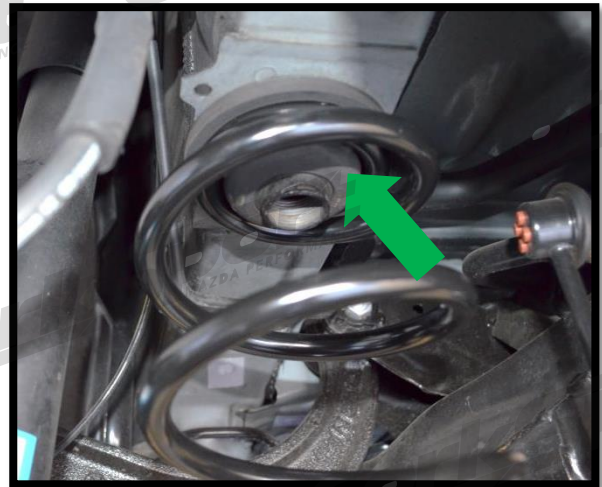


Figure 4d



Figure 4e

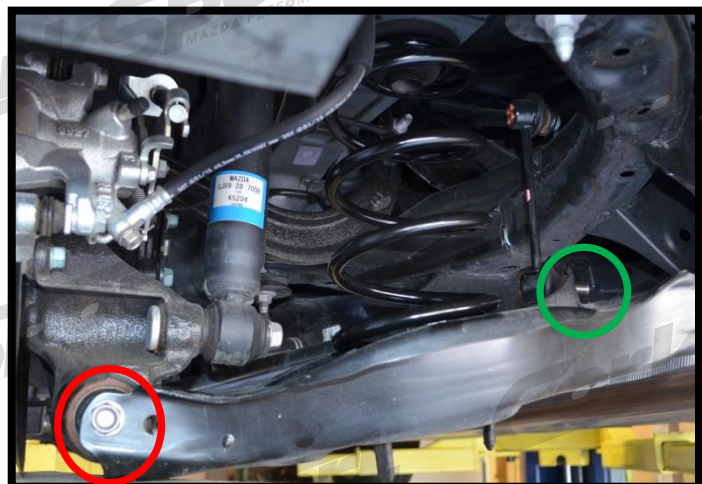


Figure 4f





This completes the installation of your lowering springs. 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.** Check out our [knowledgebase](#) for additional install information , tips, and helpful video's .

If spring noise is heard after driving, recheck that the springs are seated fully against the spring locks.

### What's Next:

#### [CORKSPORT 2014+ Mazda 3 SkyActiv Power Series Short Ram Intake 2.0 & 2.5](#)



One of the easiest and most beneficial performance enhancements you can do for your vehicle, the CorkSport Power Series Short Ram Intake replaces your factory airbox with an open intake system allowing more air into the intake chamber. Engineered with exacting tolerances, the CorkSport SkyActiv Short Ram Intake includes our precision machined MAF housing made from billet aluminum, a durable dry flow air filter and custom reinforced silicone connector.

#### [CORKSPORT 2014+ Mazda 3 License Plate Bracket Relocation Kit](#)

Give your 2014+ Mazda 3 a visual boost and improve airflow with the CorkSport License Plate Relocation Kit. By offsetting your factory license plate and moving it to the drivers side, the CorkSport license plate relocation kit will allow for better airflow and improve the overall look of your 2014+ Mazda 3.



#### [CORKSPORT 2014+ Mazda 3 Axle Back Exhaust](#)



Get added power and upgrade the look of your 2014+ Mazda 3 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 3. As always, the CorkSport Axle Back Exhaust was built using only the highest quality materials and design.

Need Help With Your Installation?

Call (360) 260-CORK