

# CorkSport Mazdaspeed 3 4 Piston Calipers

2007+ Mazdaspeed 3, 2004 + Mazda 3



**Thank you for purchasing the CorkSport 4 Piston Caliper Kit.** CorkSport Big Brake calipers provide 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. We hope you enjoy your new CorkSport Brake Kit. Please let us know your feedback at: <http://www.corksport.com/corksport-mazdaspeed-3-big-brake-caliper-kit.html>

## Pre-Installation Notes:



**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. Please read these instructions thoroughly prior to starting installation



**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 installation instructions were written using a 2010 Mazdaspeed 3.** Other year Mazdaspeed3 models will be similar.



**For use on 2004+ Mazda 3, this brake kit requires the use of 300mm Mazdaspeed 3 front brake rotors.**

## Materials and Time:



### General Info.

Part #: Axl-3-411  
Time Est: 1.5 hours  
Wrench Rating: 4/5



### Tooling List

10mm flare nut wrench 3/8" Drive Ratchet  
11mm flare nut wrench 1/2" Drive Ratchet  
12mm wrench Pliers  
17mm wrench Flat Head Screw Driver  
17mm Socket Brake Fluid  
21mm Socket Small ID Hose  
10mm Allen Socket Blue Loctite  
Torque Wrench



### Parts List

One (1) CorkSport Caliper Set  
One (1) CorkSport Bracket Set  
One (1)CorkSport Brake line Set  
Two (2) Banjo Bolts  
Four (4) Crush washers

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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 the Car on Floor Jack/Jackstands or Lift

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

### 2. Install the Front CorkSport Brake Calipers

- a) Remove the front drivers 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).
- b) Free the brake line using pliers or a screw driver to remove the clip from the brake line mount on the strut (shown by the red circle in Figure 2a.)



When releasing brake fluid make sure to catch it with a pan. Brake fluid can take off paint and coatings so be cautious when performing this step.

- c) Remove the one (1) 10mm brake line bolt using a 10mm line wrench. Line wrench and brake line shown in Figure 2b).

- d) Free the brake line using pliers or a screw driver to remove the clip from the brake line mount on the body (shown by the red arrow in Figure 2b.)

- e) Remove the two 17mm bolts from the back of the caliper and remove the caliper. A long 17mm wrench makes this easy. Shown with red circles in Figure 2c.

- f) To install the caliper brackets you will need blue Loctite and you will reuse the factory bolts. Simply put a small amount of blue Loctite on the threads of the factory 17mm bolts. Shown In Figure 2d.

- g) Install the Bracket reusing the 17mm bolts. Shown in Figure 2e with rotor removed to make this more visible. Tighten with a wrench and then torque to 64-71ft.lbs.

- h) Check the rotors for wear or cracking. **Resurfacing or replacing the rotors is recommended.**



Only 300mm Mazdaspeed3 front rotors may be used

- i) Install the caliper using the provided Allen Bolts. Tighten with 10mm Allen socket to 64-71ft.lbs. Make sure the bleeder valves face up. Bleeder valve shown circled in Figure 2f.

- j) Install the brake line by starting at the caliper. Install the line with provided banjo bolt and two crush washers. Make sure the line is facing towards the top of the caliper and tighten to 15-19ft.lbs. Shown Figure 2g.

- k) Next tighten the 10mm fitting at the chassis.. Shown Figure 2h with red arrow.

- l) Next tighten the 12mm end of the brake line. Shown with green arrow in Figure 2h.

- m) Then finally tighten the 12mm end of the brake line at the caliper, again verify that the line is not kinked. Shown Figure 2i.

- n) Install the brake line in the factory holder attached to the strut. Shown Figure 2j.

## 2. Install the Front CorkSport Brake Calipers Continued

- o) **Modify the clip that was removed from the bracket line bracket on the chassis side.** You will need to take pliers and bend the ends to make it fatter. Shown **Figure 2k** and installed in **Figure 2l**.
- p) **Replace Wheel and torque nuts to 70ft.lbs**
- q) **Repeat Step 2 Procedure for Passenger side of vehicle.**

## 3. Bleed the Brake Lines



Always start with the outside bleeder to ensure best results. Remember there are two bleeders per caliper so you will need to check each one. Outside and inside bleeds are shown in Figure 3a.



There are two methods provided for bleeding. If you have a friend with you, the second Method is faster and more preferred for accurate bleeding.

**Method #1** is to get a two foot section of 5/32 diameter hose and a 1 liter plastic bottle. Put the hose on the end of the bleed screw. Put the other end of the hose in the 1 liter bottle. Fill the bottle with enough brake fluid to submerge the end of the hose. Loosen the brake bleed screw and make sure the hose stays attached to the end of it. Pump the brake pedal in the car until there are no bubbles coming from the hose in the 1 liter bottle. Tighten the bleed screw then remove the rubber hose. Check the brake fluid level in the master cylinder and keep it at the full line after bleeding each caliper, starting with the Passenger side because it is the furthest from the master cylinder.

**Method #2** requires two people, a two foot section of 5/32 diameter hose, and a 1 liter plastic bottle. Put the rubber hose on the bleed screw and the other end in the 1 liter bottle. Have the extra person pump the brake pedal until there is pedal pressure. Have the extra person hold the pedal with pressure while you loosen the bleed screw. The pedal will go to the floor. Have the extra person hold the pedal to the floor until you tighten the bleed screw. Repeat the procedure 3 times per caliper. Check the brake fluid level and keep it at the full line after bleeding each caliper, starting from the farthest from the master cylinder.



**This completes the installation of your CorkSport Brake Calipers. Check to make sure that the brake system is sealed and does not leak. On the first drive check your brakes carefully before speeding up. Also make sure to burnish your pads for the first time.**

## 4. Burnishing Your New Brake Pads




While burnishing your brakes, never drag the brake pedal while accelerating. Below is the preferred method but if you can not find an area to do this variations of this procedure can be performed. The idea is to slowly heat and cool the brakes. Not to start with a 60mph hard stop.

- a) **Find an open road and accelerate to 30mph.**
- b) **Brake evenly and smoothly until you are almost stopped then accelerate to 30mph again.**
- c) **Repeat steps 4a and 4b roughly 10 times.**
- d) **Accelerate to 45mph.**
- e) **Brake evenly and smoothly but make these stops much harder. Brake until you are almost stopped then accelerate to 45mph again.**
- f) **Repeat steps 4d and 4e roughly 2-3 times**
- g) **Allow 15 minutes for system to cool. You are now ready to brake normally.**

## 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 Brake Calipers

a) Remove the front drivers 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).

b) Free the brake line using pliers or a screw driver to remove the clip from the brake line mount on the strut (shown by the red circle in Figure 2a.)

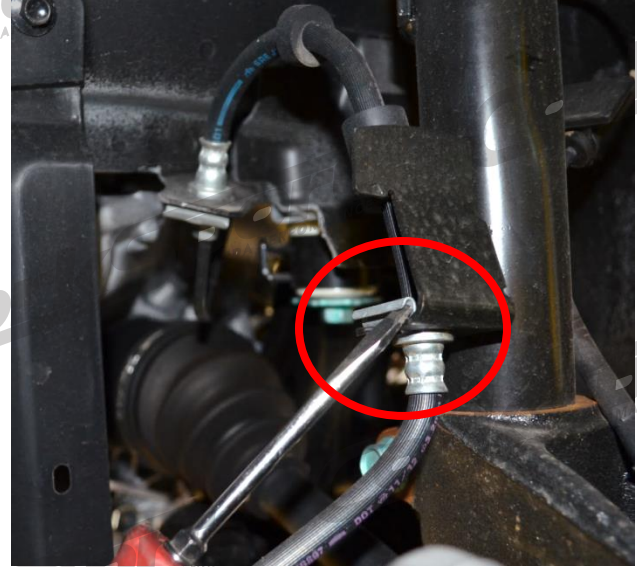



Figure 2a

 When releasing brake fluid make sure to catch it with a pan. Brake fluid can take off paint and coatings so be cautious when performing this step.

c) Remove the one (1) 10mm brake line bolt using a 10mm line wrench. Line wrench and brake line shown in Figure 2b).

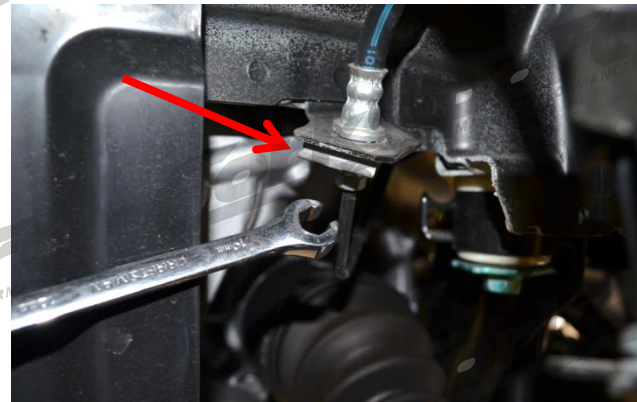


Figure 2b

d) Free the brake line using pliers or a screw driver to remove the clip from the brake line mount on the body (shown by the red arrow in Figure 2b.)

e) Remove the two 17mm bolts from the back of the caliper and remove the caliper. A long 17mm wrench makes this easy. Shown with red circles in Figure 2c.

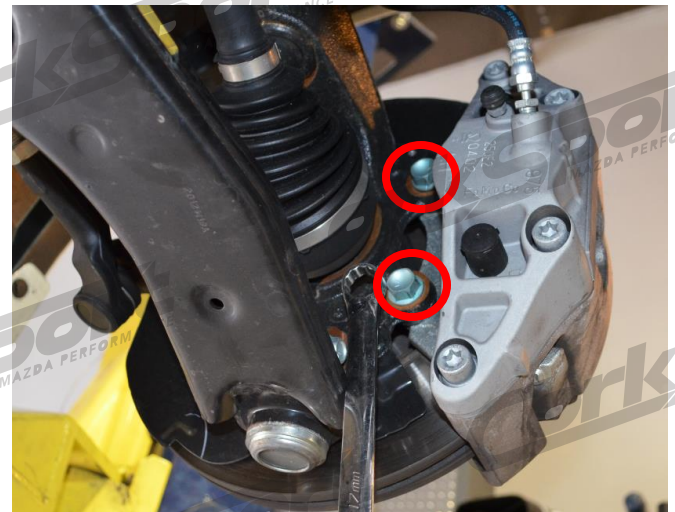


Figure 2c

f) To install the caliper brackets you will need blue Loctite and you will reuse the factory bolts. Simply put a small amount of blue Loctite on the threads of the factory 17mm bolts. Shown In Figure 2d.



Figure 2d

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## 2. Install the Front CorkSport Brake Calipers Continued

g) **Install the Bracket reusing the 17mm bolts.** Make sure the flat side of the bracket is faced towards the rotor. Shown in **Figure 2e** with rotor removed to make this more visible. Tighten with a wrench and then torque to 64-71ft.lbs.

h) Check the rotors for wear or cracking. **Resurfacing or replacing the rotors is recommended.**



Only 300mm Mazdaspeed3 front rotors may be used.

i) **Install the caliper using the provided Allen Bolts.** Tighten with 10mm Allen socket to 64-71ft.lbs. There is a left and right caliper. Make sure the bleeder valves face up. Bleeder valve shown circled in **Figure 2f**. Drivers side shown for reference.



Figure 2e



Figure 2f



Figure 2g

j) **Install the brake line by starting at the caliper.** Install the line with provided banjo bolt and two crush washers. Make sure the line is facing towards the top of the caliper and tighten to 15-19ft.lbs. Shown **Figure 2g**.

k) **Next tighten the 10mm fitting at the chassis.** Use a 17mm wrench and 10 flare wrench to keep the line from spinning. Make sure the line is not kinked. Shown **Figure 2h** with red arrow.

l) **Next tighten the 12mm end of the brake line.** Shown with green arrow in **Figure 2h**.

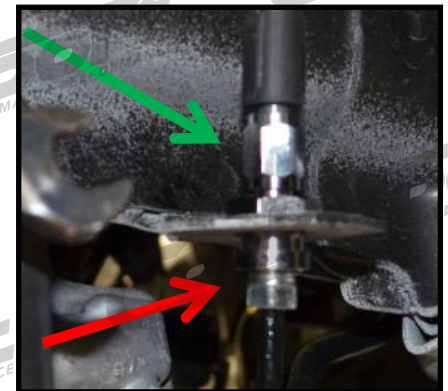


Figure 2h

m) **Then finally tighten the 12mm end of the brake line at the caliper,** again verify that the line is not kinked. Shown **Figure 2i**.



Figure 2i

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## 2. Install the Front CorkSport Brake Calipers Continued

- n) Install the brake line in the factory holder attached to the strut. The top portion of the holder unscrews. This can be tightened in place with a wrench but do not over tighten. The bottom nut can be tightened by hand. This keeps the line from sliding up and down. Shown **Figure 2j**.
- o) Modify the clip that was removed from the bracket line bracket on the chassis side. You will need to take pliers and bend the ends to make it fatter. This will allow enough tension to hold the brake line in place. Shown **Figure 2k** and installed in **Figure 2l**.



Figure 2j



Figure 2k

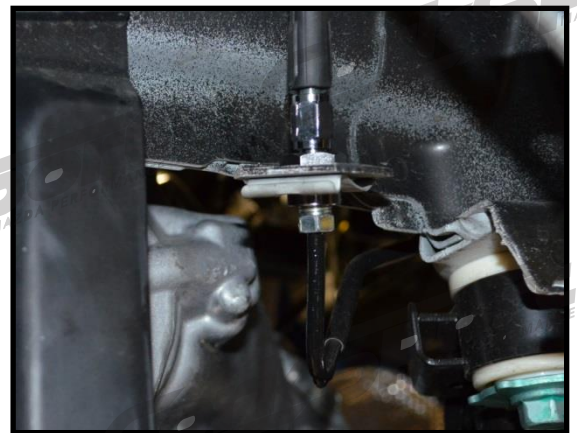




Figure 2l

- p) Replace Wheel and torque nuts to 70ft.lbs
- q) Repeat Step 2 Procedure for Passenger side of vehicle.

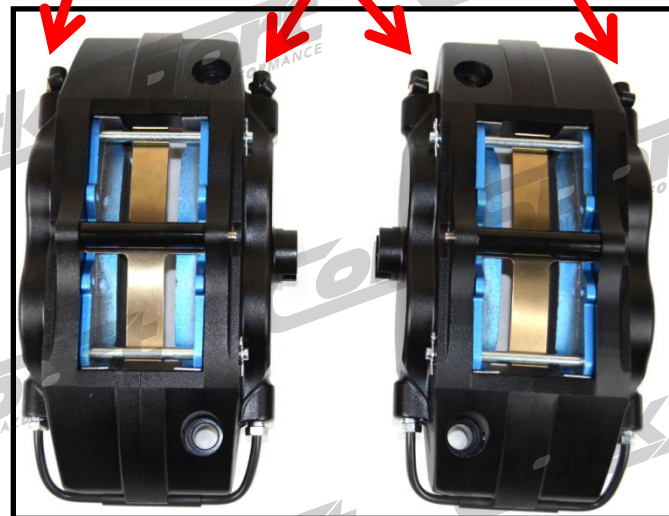
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Outside Bleeder      Outside Bleeder  
 Inside Bleeders



### 3. Bleed the Brake Lines Continued

**Method #2** requires two people, a two foot section of 5/32 diameter hose, and a 1 liter plastic bottle. Put the rubber hose on the bleed screw and the other end in the 1 liter bottle. Have the extra person pump the brake pedal until there is pedal pressure. Have the extra person hold the pedal with pressure while you loosen the bleed screw. The pedal will go to the floor. Have the extra person hold the pedal to the floor until you tighten the bleed screw. Repeat the procedure 3 times per caliper. Check the brake fluid level and keep it at the full line after bleeding each caliper, starting from the farthest from the master cylinder.



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- e) Brake evenly and smoothly but make these stops much harder. Brake until you are almost stopped then accelerate to 45mph again.
- f) Repeat steps 4d and 4e roughly 2-3 times
- g) Allow 15 minutes for system to cool. You are now ready to brake normally.

## What's Next:

### [CorkSport Mazdaspeed 3 FMIC Kit for Short Ram Intake](#)



**Dramatically improve cooling efficiency and performance** with the CorkSport Mazdaspeed 3 Front Mount Intercooler Kit designed for use with an Short Ram Intake. Available in two aluminum core sizes with custom cast end tanks and 2.25" aluminum mandrel bent piping with bead rolled ends, the CorkSport FMIC for SRI has been developed specifically for the 2010+ Mazdaspeed 3 and designed and tested to integrate seamlessly with the CorkSport Power Series Short Ram Intake. This kit can be purchased standalone to compliment your current Short Ram Intake or can be purchased with a CorkSport Power Series Short Ram Intake for additional savings and power gains.

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