Part # Ate-3-411

CorkSport Mazdaspeed 6 4 Piston Calipers

2006-2007 Mazdaspeed 6

This Package should contain:

- ❑ 1. Driver Side Caliper
- ❑ 2. Passenger Side Caliper
- ❑ 3. Brake pads
- ❑ 4. Brackets
- ❑ 5. Stainless Steel Brake Lines
- ❑ 6. Mounting bolts
- ❑ 7. Banjo bolts with crush washers

Please note: calipers will come fully assembled with pads

Kit Assembly By: _____ Date: _____

CorkSport Mazdaspeed 6 4 Piston Calipers

2006-2007 Mazdaspeed 6

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-6-big-brake-caliper-kit.html

Pre-Installation Notes:

Make sure your vehicle is completely cooled down prior to starting installation.

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 would like additional detail.

These installation instructions were written using a 2007 Mazdaspeed 6. Other years of Mazdaspeed6 models will be similar.

Materials and Time:

General Info.

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

Tooling List

10mm flare nut wrench
11mm flare nut wrench
12mm wrench
17mm wrench
17mm Socket
21mm Socket
10mm Allen Socket
Torque Wrench
3/8” Drive Ratchet
1/2” Drive Ratchet
Brake Fluid
Small ID Hose
Blue Loctite

Parts List

One (1) Driver Side Caliper
One (1) Passenger Side Caliper
Four (4) Brake pads
Two (2) Brackets
Two (2) Stainless Steel Brake Lines
Four (4) Mounting bolts
Four (2) Banjo bolts
Four (4) crush washers

Part # Ate-3-411

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

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

2. Remove the Factory Brake Caliper

- [ ] **a) Remove the front drivers wheel** from the vehicle (Figure 1a).

- [ ] **b) Free the brake line** from the strut mount using a 12mm wrench (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) Loosen the hard line flare nut** (Figure 2b).

- [ ] **d) Remove the brake line from the body** (Figure 2b).

- [ ] **e) Remove the two 17mm bolts that attach the factory caliper bracket to the spindle,** and remove the caliper from the car (Figure 2c).

3. Install the Front CorkSport Brake Calipers

- [ ] **a) To install the caliper brackets reuse the factory 17mm bolts.** Apply a small amount of **blue Loctite** to the threads (Figure 3a).

- [ ] **b) Install the bracket to the spindle (flat side towards rotor)** re-using the two 17mm bolts and tighten with a wrench. Torque to 64-71ft-lbs.

- [ ] **c) Check the rotors for wear or cracking. Resurfacing or replacing the rotors is recommended.**

Only 320mm Mazdaspeed6 front rotors may be used.

- [ ] **d) Install the caliper using the provided 10mm Allen bolts.** Apply **blue Loctite** and tighten with a 10mm Allen socket to 64-71ft-lbs. Make sure the bleeder valves face up (Figure 3c).

3. Install the Front CorkSport Brake Calipers (continued)

- [ ] **e) Install the brake line, starting at the caliper.** Install the banjo fitting with the provided banjo bolt and two crush washers. Torque the Banjo bolt to 15-19ft-lbs (Figure 3d).

- [ ] **f) Attach the brake line to the strut bracket.** Use the 12mm bolt you removed with the factory brake line (Figure 3e). Do not tighten the black plastic adjuster at this time.

- [ ] **g) Mount the brake line to the body.** Hand thread the hard line flare nut into the brake line adaptor. Use the factory 12mm bolt to attach the brake line bracket to the body and tighten with a wrench (Figure 3f).

- [ ] **h) Tighten the brake line connection at the body.** Use a 17mm wrench to hold the adaptor and tighten the hard line flare nut with a 10mm flare nut wrench. Finally tighten the brake line to the adaptor with an 11mm flare nut wrench (Figure 3f).

- [ ] **i) Adjust the brake line so it does not rub on the body or any suspension components.** Tighten the black plastic brake line holder attached to the strut bracket (Figure 3g).

- [ ] **j) Lastly tighten the 11mm brake line fitting to the banjo at the caliper** with an 11mm flare nut wrench (Figure 3h).

  Failure to tighten the brake line to the banjo fitting will result in loss of fluid and brake pressure!

- [ ] **k) Repeat step 2 procedure for passenger side of vehicle.**

- [ ] **l) Bleed the brakes as described in section 4.**

- [ ] **m) Replace the wheels and torque lug nuts to 70ft-lbs.**

4. 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 bleeders 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 outer 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, remove the rubber hose and repeat the process to the inner caliper bleed screw. 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 outer 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 should 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 for the outer and inner bleed screws for each 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.

5. 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

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 highly recommended.

Figure 1a

2. Remove the Factory Brake Caliper

a) **Remove the front drivers wheel** from the vehicle using an impact wrench or 1/2" drive ratchet (or breaker bar) and 21mm socket (or wheel lock key if using locking lug nuts) (Figure 1a).

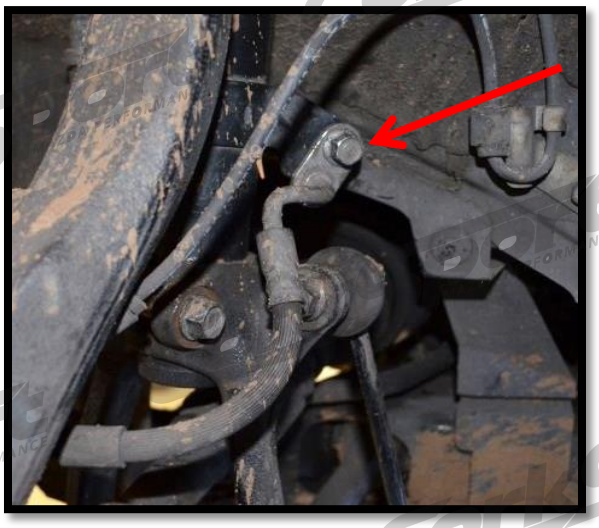


Figure 2a

b) **Free the brake line** from the strut mount using a 12mm wrench (red arrow in Figure 2a).

c) **Loosen the hard line flare nut** (green circle in Figure 2b) with a 10mm flare nut wrench.

Figure 2b

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.

2. Remove the Factory Brake Caliper (continued)

d) **Remove the brake line from the body** using a 12mm wrench (red arrow in Figure 2b).

e) **Remove the two 17mm bolts that attach the factory caliper bracket to the spindle** and remove the caliper from the car (red circles in Figure 2c).

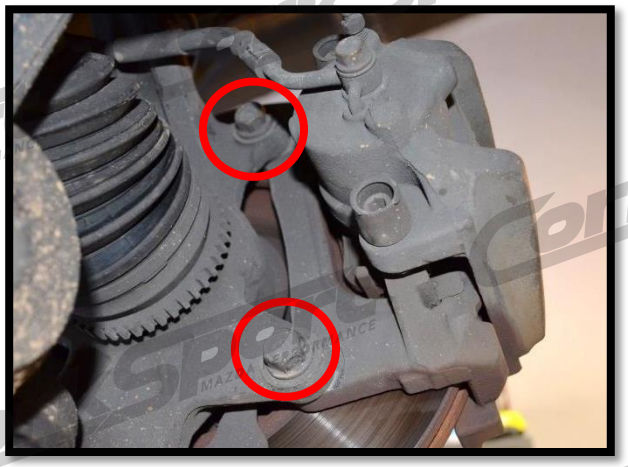


Figure 2c

3. Install the Front CorkSport Brake Calipers

a) **To install the caliper brackets reuse the factory 17mm bolts.** Apply a small amount of **blue Loctite** on the threads of the factory 17mm bolts (shown in Figure 3a).

Figure 3a

b) **Make sure the flat side of the bracket is faced towards the rotor** (shown in Figure 3b with rotor removed to make this more visible). Install the bracket with the two 17mm bolts and tighten with a wrench and torque to 64-71ft-lbs.

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

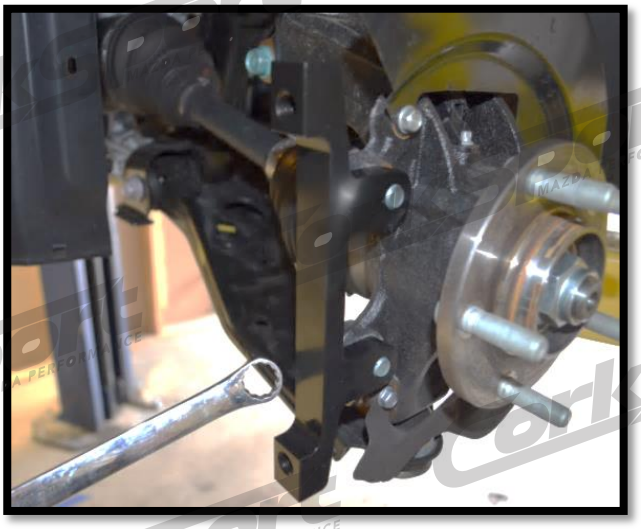


Figure 3b

3. Install the Front CorkSport Brake Calipers (continued)

d) **Install the caliper using the provided 10mm Allen bolts.** Apply **blue Loctite** and tighten with a 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 3c).

Only 320mm Mazdaspeed6 front rotors may be used.

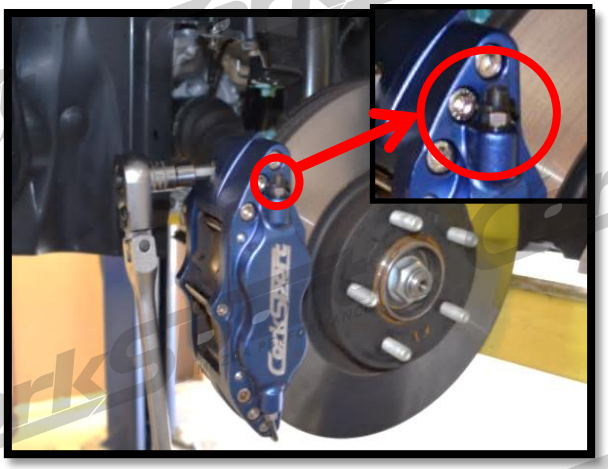


Figure 3c

e) **Install the brake line starting at the caliper.** Install the banjo fitting with the provided banjo bolt and two crush washers. Tighten the banjo bolt to 15-19ft-lbs (position of the brake line and location of crush washers shown in Figure 3d).

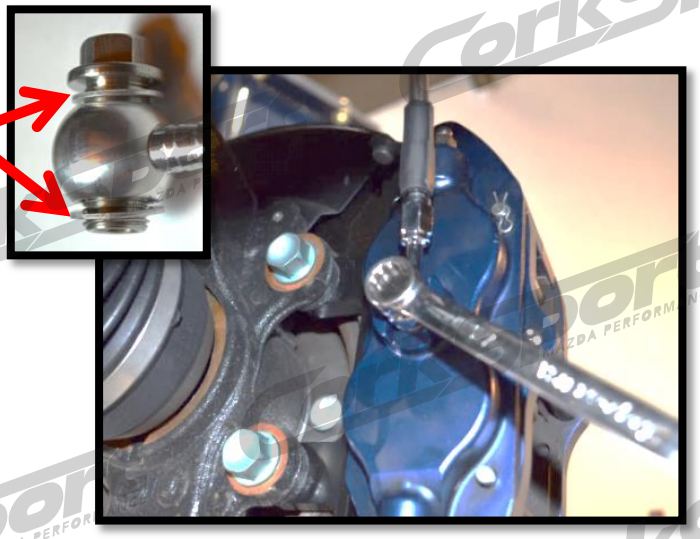


Figure 3d

f) **Attach the brake line to the strut bracket.** Use the 12mm bolt you removed with the factory brake line and tighten the brake line bracket as shown in Figure 3e. Do not tighten the black plastic adjuster at this time.

Figure 3e

3. Install the Front CorkSport Brake Calipers (continued)

g) **Next mount the brake line to the body.** Hand thread the hard line flare nut (red arrow) into the brake line adaptor (green arrow). Use the factory 12mm bolt to attach the brake line bracket to the body and tighten with a wrench (Figure 3f).

Figure 3f

h) **Tighten the brake line connection at the body.** Use a 17mm wrench to hold the adaptor (green arrow), and tighten the hard line flare nut with a 10mm flare nut wrench (red arrow). Finally tighten the brake line to the adaptor with an 11mm flare nut wrench (green circle in Figure 3f).

Figure 3g

i) **Adjust the brake line so it does not rub on the body or any suspension components** and tighten the black plastic brake line holder attached to the strut bracket (red arrow in Figure 3g). This can be lightly tightened with a wrench but do not over tighten!

j) **Lastly tighten the 11mm brake line fitting to the banjo at the caliper** with an 11mm flare nut wrench (Figure 3h).

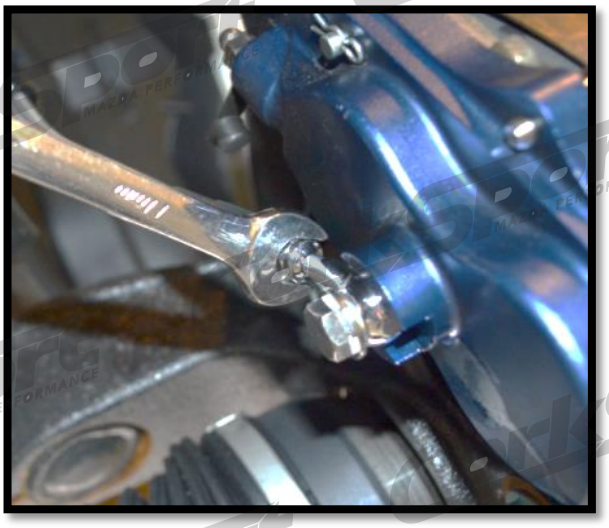


Figure 3h

Failure to tighten the brake line to the banjo fitting will result in loss of fluid and brake pressure!

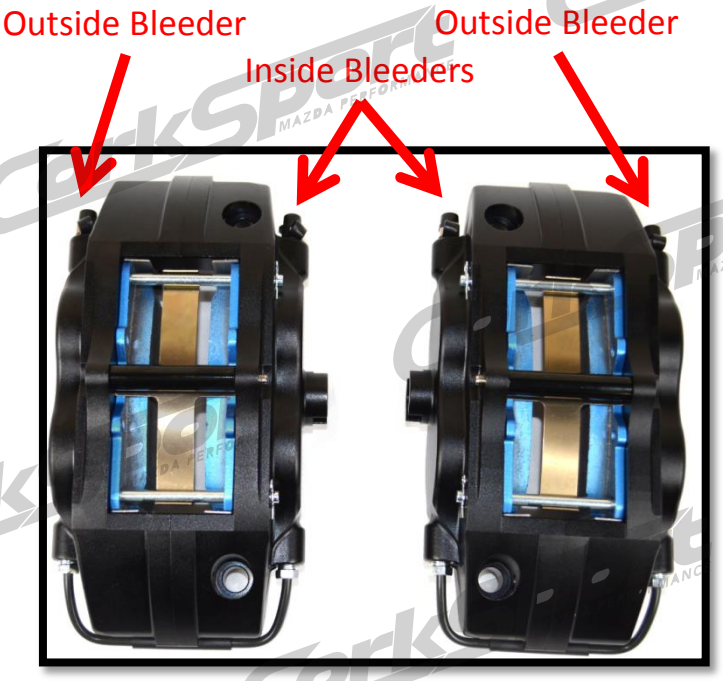
Over tightening the brake line to the banjo fitting will result in loss of fluid and brake pressure!

k) **Repeat sections 2 and 3 procedures for passenger side of vehicle.**

4. 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 outer 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, remove the rubber hose and repeat the process to the inner caliper bleed screw. 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 outer 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 should 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 for the outer and inner bleed screws for each 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.

Reinstall the wheel and lug nuts. Tighten lug nuts to factory specs (vary based upon wheels). Check to make sure that the brake system is sealed and does not leak. Lower the car off jackstands. On the first drive check your brakes carefully before speeding up. Burnishing of your new brake pads is required for proper brake performance.

5. 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.

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 2-3 times**

g) **Allow 15 minutes for system to cool. You are now ready to brake normally.**

This completes the installation of your CorkSport Brake Calipers.

What's Next:

[CORKSPORT Mazdaspeed 6 FMIC kit for Short Ram Intake]

Dramatically improve cooling efficiency and performance with the CorkSport Mazdaspeed 6 Front Mount Intercooler Kit for Short Ram Intake. The CorkSport FMIC features a 21x10x3" aluminum core intercooler with custom cast end tanks and 2.25" aluminum mandrel bent piping with bead rolled ends connected by your choice of black, red or blue silicone couplers and stainless steel T-bolt clamps.