



Big Brake Kit (BBK) Installation Manual

S03-304-P01

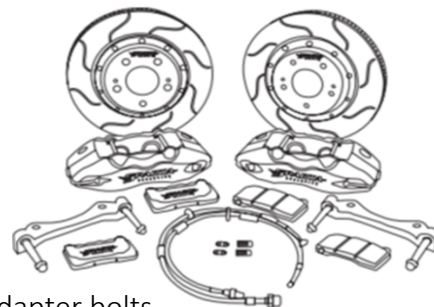
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Before installing your Sparta Evolution big brake system, ensure you have all the necessary tools and components for a successful installation.

Package Contents:

- Calipers (1 Left, 1 Right)
- Pads (4)
- Rotors (1 Left, 1 Right)
- Adapters (2)
- Lines (2), Banjo Bolt* (2), Crush Washer (4).

*Some kits use AN fittings instead



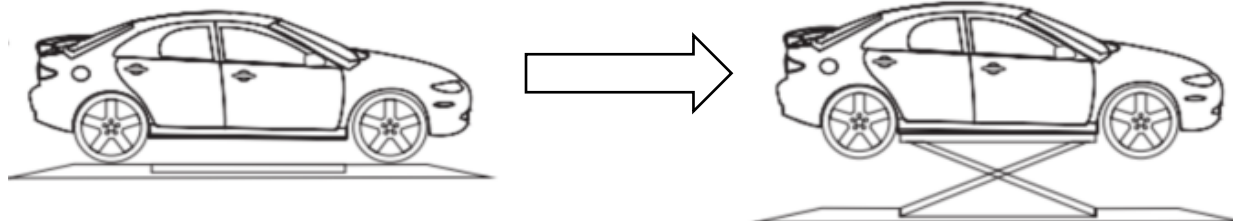
Note: Installation of adapter requires re-use of OE caliper ear/adapter bolts.

Ensure brakes have cooled before beginning installation. Sparta Evolution cannot be held liable for any damage or injury resulting from the use of this guide.

Step 1 - Preparing to Install your Sparta Evolution BBK

Locate and utilize the OEM jacking points to raise the vehicle. If you do not have access to an impact wrench, remember to loosen wheel nuts/bolts before lifting the vehicle.

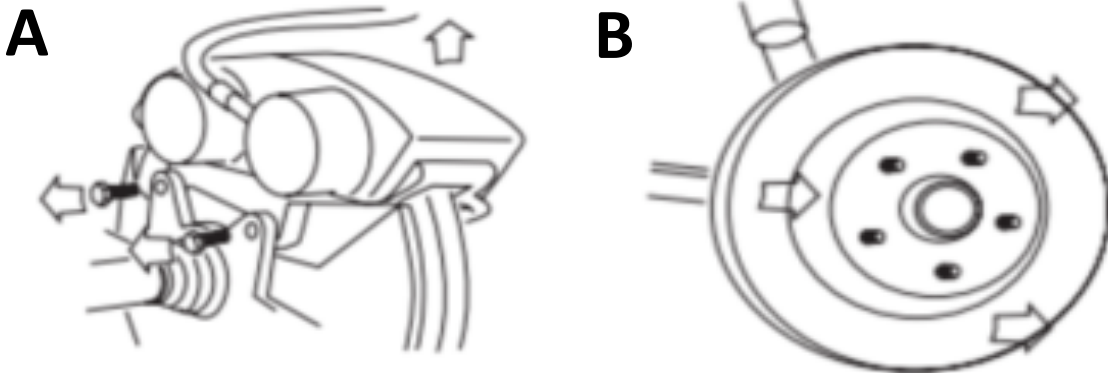
1. Block wheels and use the parking brake to ensure vehicle is stable and secure during lifting process.
 - a. Once the vehicle is lifted, disengage the parking brake in order to remove the rear brake rotors.
2. Rest vehicle on jack stands. A floor jack is NOT a safe or acceptable substitute.





Step 2 - Removal of OEM Caliper and Rotor

1. Remove the wheel and position a drain pan under your working area.
 - a. Nitrile gloves, paper towels, and soapy water are advised. Brake fluid is a caustic chemical that can damage paint and cause skin irritation through prolonged contact. If spilled, wash effected areas with soapy water immediately.
2. If you are not planning to flush your brake fluid, proceed to step 3. Detach the OE brake line from the chassis mounting point. Brake fluid will begin draining from the soft line and chassis mounted hard line. Remove any subsequent brake line mounts on the shock tower or suspension upright.
3. Remove the two caliper retaining bolts on the back of the hub (Figure A).
4. Lift the caliper off the rotor.
 - a. Note: If the brake line is still attached, do NOT allow the caliper to hang by the brake line, instead suspend the brake line using a zip tie or rope.
5. Remove the rotor retaining bolt(s) from the hub (some vehicles) and slide the rotor off the hub away from the car (Figure B). If stuck, hit the outer circumference of the rotor with a rubber mallet to knock it loose.

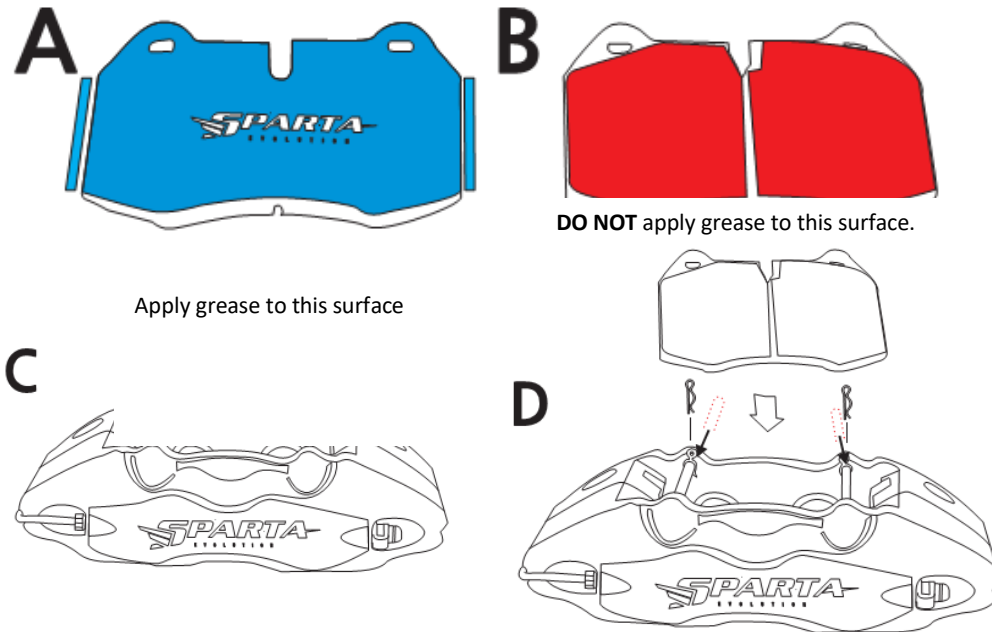


Step 3 - Installing Pads in your Sparta Evolution Calipers

1. Remove pads from package and test fit them in the caliper. The pads should fit tightly in the caliper, but it may be necessary to remove up to 1mm from the side of the pads for proper fitment.
2. Apply the supplied grease to the metal backing plate where the pads and pistons will touch, and to the side of the pad where it will contact the caliper (Figure A).
 - a. DO NOT APPLY GREASE TO THE FRICTION SURFACE as seen in Figure B.



3. Remove the pad pins from the caliper (Figure C), place both pads in the caliper with the friction surfaces facing each other (Figure D) and place the pad pins back in the caliper.
4. Secure the pad pins with the R shaped retainer clips. R Clips should be positioned between the back of the pad and the edge of the caliper such that they will not interfere with the movement of the pads towards the rotor.



Step 4 - Installation of Sparta Evolution BBK

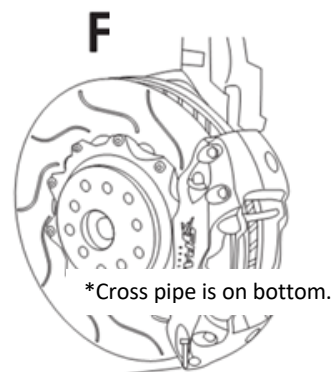
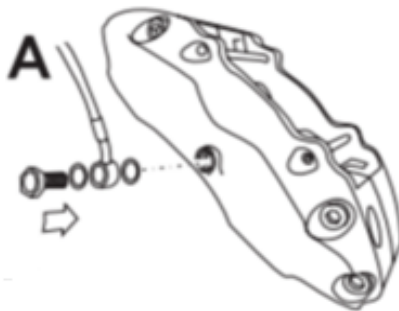
1. If the OE brake line is still attached, unthread it from the chassis hard line, and remove the OE caliper from the vehicle. Attach the supplied brake line to the chassis hard line and route the brake line to the same locations as the OE line. Let the caliper side of the brake line hang over a drain pan to catch any residual fluid.
2. Using the OE caliper mounting bolts, install your Sparta Evolution adapter to the OE caliper mounting points. Torque these bolts to the OE caliper mounting bolt recommended torque specification (usually close to the same value as the wheel nut/bolt installation torque).
 - a. Slide the caliper onto the adapter to check clearance. If the caliper contacts the OE dust shield, trim the dust shield with tin snips or an angle grinder, and remove any burrs with a metal file or sand paper. After verifying clearance, remove the caliper for rotor installation.



3. Before installing your Sparta Evolution brake rotor, clean the hub-rotor mating surface of any rust or particles using brake clean, or wire brushes if necessary. Also, take note of the vane direction of the rotors. Sparta Evolution rotors are directional and installing them

backwards can result in insufficient cooling. Each Sparta Evolution rotor will have a left (driver side) or a right (passenger side) sticker on them. Place the rotor onto the hub and reinstall the retainer bolt. If there is no retainer bolt, thread on a lug bolt/nut to hold the rotor in place for caliper installation. Sparta Evolution rotors are zinc coated to prevent corrosion during transit, so cleaning the rotors before use is not necessary.

4. Slide your Sparta Evolution caliper onto the adapter, ensuring the bleeder valves are facing up, and the crossover pipe is facing down. **Torque both caliper nuts to 44 ft-lbs (60 N-m) using a 14mm socket.**
5. Attach the brake line to the caliper using the supplied banjo bolt and crush washers (or AN fitting). Ensure there is a crush washer between the caliper and the brake line, and between the brake line and the banjo bolt cap (Figure A). **Torque the banjo bolt to 26 ft-lbs (35 N-m) using a 12mm socket.**

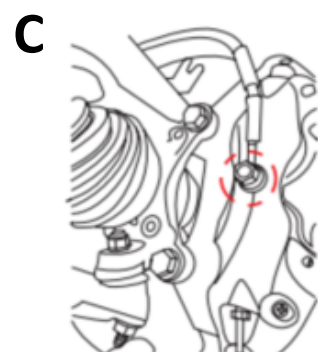
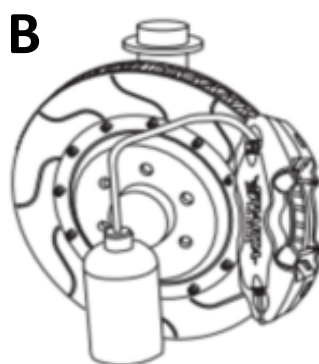
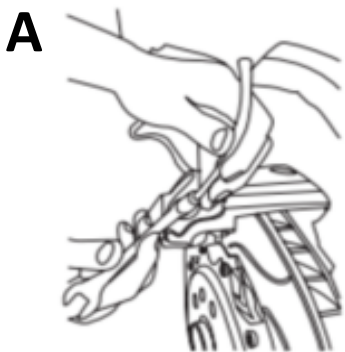


Step 5 - Bleeding your Sparta Evolution Brake System (2 people required*)

*Sparta Evolution recommends manual bleeding, especially for competition vehicles, though power/pressure bleeders may be used for vehicles that will not experience high heat.

1. Remove the lid from the brake fluid reservoir, and ensure the reservoir is filled to the highest indicated level.
2. Place a 10mm wrench on the outboard bleeder valve of the caliper that is furthest from the brake master cylinder. For most vehicles, this will be the passenger side rear caliper.

3. Fit a clear plastic tube over the bleeder valve. Place the other end of the tube in an empty container (Figure A, Figure B)
4. With the engine running, repeatedly pump the brake pedal until pressure has built in the system.
5. Once pressure has built, hold the brake pedal down firmly while a second person opens and closes the bleeder valve one time.
6. Repeat steps 4 and 5 until no air bubbles are seen leaving the bleeder valve, then torque the bleeder valve to 9 ft-lbs (12 N-m). Continually check the fluid reservoir to ensure it never drops below its minimum indicated level during these steps.
7. Repeat steps 3 through 6 on the inboard bleeder valve.
8. Confirm there is no fluid leaking from between the crush washers and brake line (Figure C).
9. After bleeding each caliper, rinse the area surrounding the bleeder valve with soapy water and/or compressed air to remove any residual brake fluid.
 - a. Brake fluid left on or around the bleeder valve may damage or destroy the caliper surface coating over time. This damage is exacerbated through heat cycling.
10. Repeat steps 2 through 9 on the next furthest caliper from the brake master cylinder. On most vehicles, this will be the driver side rear, followed by the passenger side front, then the driver side front.



Final Steps

- Confirm all bolts are torqued to the proper specification.
- Confirm there is no interference when turning the front wheels lock-to-lock.
- Reinstall wheel and confirm there is no interference between BBK and wheel.
 - In the case of caliper-wheel interference, you may be able to clear the caliper using a wheel spacer.
- Lower the vehicle back onto the ground and torque your wheel nut/bolts.
- Test drive the vehicle at low speeds and confirm there are no ticking or grounding noises.
 - If you hear any noises, lift the vehicle, and identify the source before continuing.
- If there are no interference or noise issues, continue to the pad/rotor bed in procedure.



Cleaning your Sparta Evolution BBK

- Powder Coated Aluminum / Anodized Aluminum Calipers / Anodized Aluminum Rotor Hats
 - Use warm, soapy water and a soft cloth to wash your Sparta Evolution calipers. Automotive specific soap is recommended.
 - Brake cleaner and rubbing alcohol can damage the caliper coating if left on the surface and heat cycled. If any chemicals come in contact with the calipers or rotor hats, wash the affected areas with warm soapy water until all chemicals are removed.
- Nickel Coated Grey Iron Brake Rotors
 - Brake cleaner or rubbing alcohol can be used to clean your Sparta Evolution brake rotor. To prevent overspray onto your caliper or rotor hat, apply solvents to a clean paper or cloth towel before cleaning the rotor. Brake cleaner and rubbing alcohol will not damage your brake pads in small quantities but can cause noise if allowed prolonged contact with the pad.