



## JWest Engineering “Perfect Balance” Brake System Rear Brakes Installation Instructions

jwestengineering.com

### WARNING

IT IS THE RESPONSIBILITY OF THE PERSON INSTALLING ANY BRAKE COMPONENT OR KIT TO DETERMINE THE SUITABILITY OF THE COMPONENT OR KIT FOR THAT PARTICULAR APPLICATION. IF YOU ARE NOT SURE HOW TO SAFELY USE THIS BRAKE COMPONENT OR KIT, YOU SHOULD NOT INSTALL OR USE IT. DO NOT ASSUME ANYTHING. IMPROPERLY INSTALLED OR MAINTAINED BRAKES ARE DANGEROUS. YOU, OR THE PERSON WHO DOES THE INSTALLATION, MUST KNOW HOW TO PROPERLY USE THIS PRODUCT. IT IS NOT POSSIBLE FOR REMOTE TECHNICAL HELP TO UNDERSTAND OR FORESEE ALL THE ISSUES THAT MIGHT ARISE IN YOUR INSTALLATION. RACING EQUIPMENT AND BRAKES MUST BE MAINTAINED AND SHOULD BE CHECKED REGULARLY FOR FATIGUE, DAMAGE, AND WEAR. THIS KIT HAS NOT OBTAINED APPROVAL AND/OR CERTIFICATION IN ANY REGIONS AND COUNTRIES, THEREFORE ANY LOCAL RESTRICTIONS AFFECTING THE SYSTEMS MODIFIED WILL BE ASSUMED TO RENDER THE VEHICLE OPERABLE FOR OFF-ROAD USE ONLY.

### Items needed that are not included in the kit:

Brake fluid, basic suspension and brake tools (pliers, wrenches, socket set, torque wrench).

- #3 Phillips Screwdriver (possibly a manual impact driver) for rotor screws
- T-30 Torx bit for new rotor screws (optional)
- 19mm socket/ratchet for caliper mounting bolts
- 19mm box end wrench for caliper mounting bolts
- 13mm wrench/socket for brake shield
- 11mm flare wrench for brake fittings
- 14mm wrench for original brake hose
- 17mm wrench for original brake hose
- 7/16", 1/2", 11/16" SAE wrenches
- Torque wrenches with range from 7-52 ft-lb (10-70 Nm)
- Brake bleeding equipment (hose in a jar/pressure bleeder/assistant/etc.)

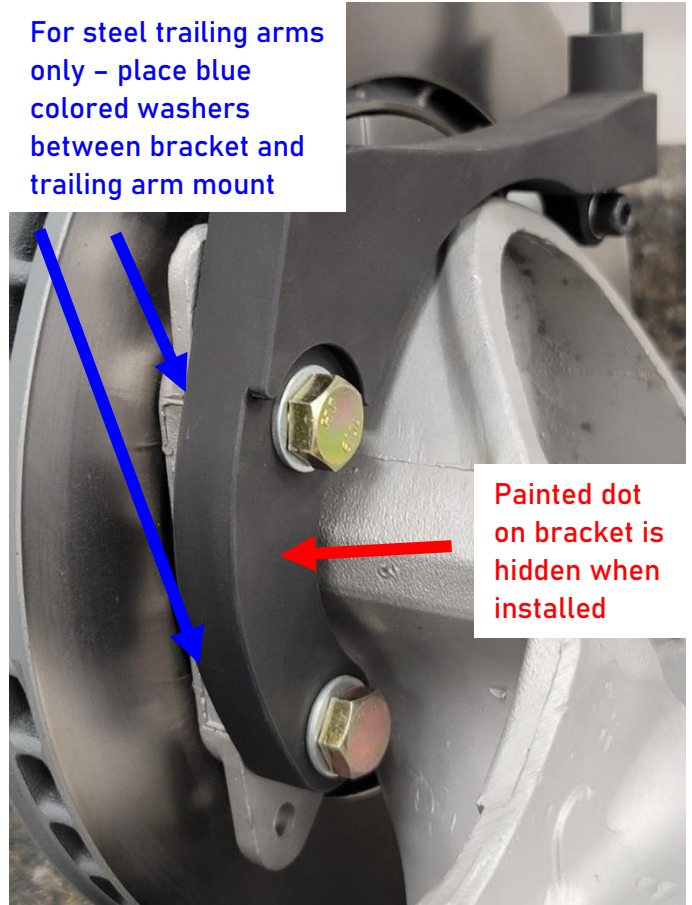
### Optional items:

Parking brake shoes, if worn.

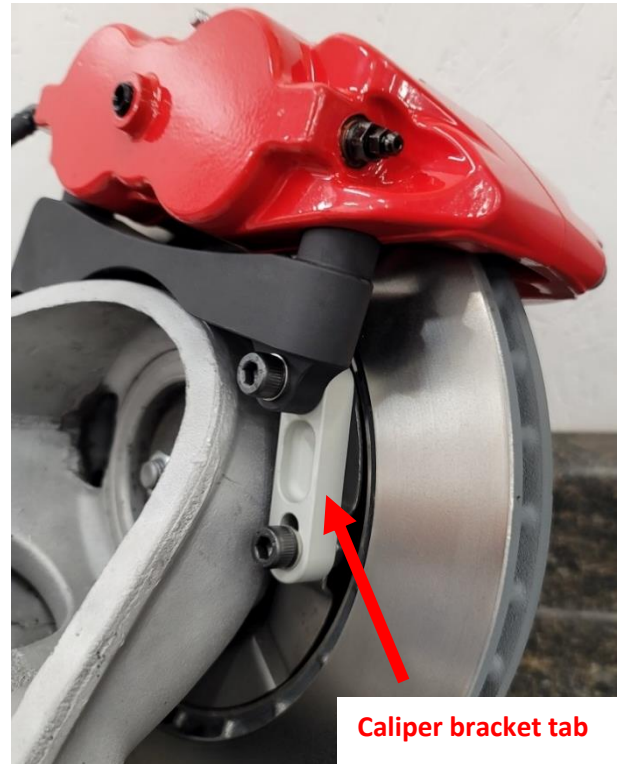
1. Raise and support the rear of the car and remove the wheels.
2. Remove the fluid line from the hose fitting on the trailing arm using 11mm and 17mm wrenches. The hardline can be removed from the caliper or left attached to come off with the caliper. Remove the hose clip from the trailing arm. Remove the brake caliper using a 19mm wrench. Remove the brake hose from the body connection using 11mm and 14mm wrenches and remove the hose from the car.
3. Remove the brake backing plate using a 13mm wrench (backing plate will not be reused).
4. For '84-'89 cars not changing rotors, proceed to the next step. For earlier cars, remove the Phillips head rotor retaining screws. Make sure the handbrake is fully off and remove the rotor.

5. Install the caliper mounting bracket using new M12x35mm hex bolts and washers. Left and right brackets are different, so make sure the red painted side indication goes against the mounting pad (hidden from view when installed). For steel trailing arms only, place the blue colored washers between the caliper bracket and the trailing arm to replace the thickness of the splash shield bracket. Torque the bolts to 60 Nm (43 ft-lb) for aluminum trailing arms [or 70 Nm (52 ft-lb) for steel trailing arms] using a 19mm socket. The lower bolt will most likely need a box wrench if you don't have a super short socket/ratchet combination.
6. Install the rear caliper support arm onto the caliper bracket tab. The bolt goes through the tab and into the threaded end of the support arm. The slotted end of the arm aligns with the brake backing plate nut. Initially tighten each bolt lightly until they are both in position, then torque to 23 Nm (17 ft-lb).
7. For '83 and older cars or '84-'89 installing new rotors, install the new rotor and secure with the included Torx screws; torque with a T-30 bit to 10 Nm (7 ft-lb). These Torx screws are included as a convenience since the Phillips head screws strip easily.
8. Slide the caliper onto the rotor and the mounting studs. The fitting that attaches to the hose faces the front of the car. Do not install the nuts at this time.

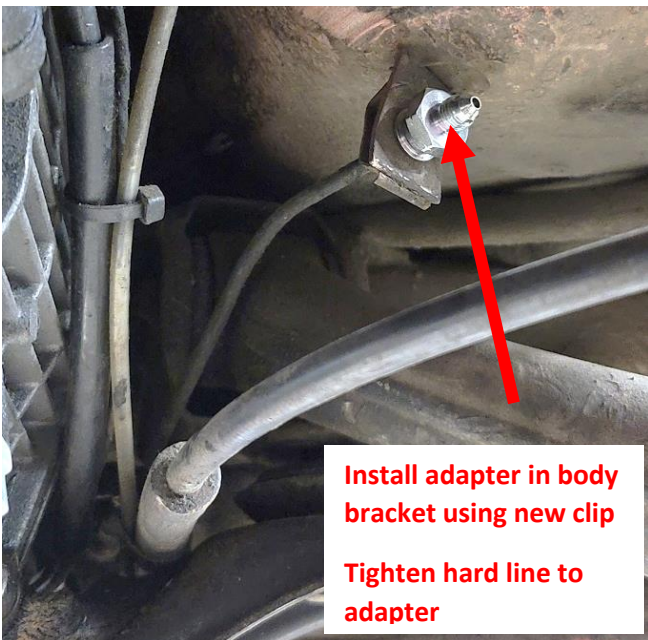
For steel trailing arms only – place blue colored washers between bracket and trailing arm mount



Painted dot on bracket is hidden when installed



Caliper bracket tab



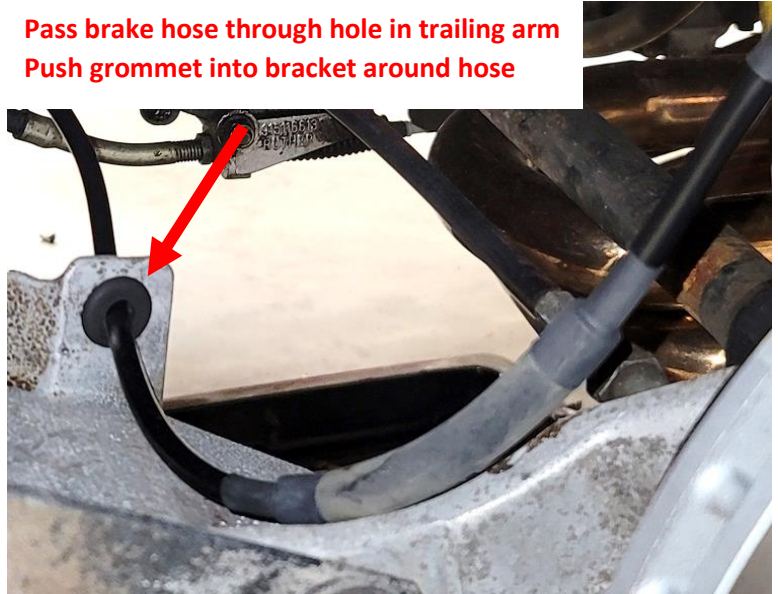
Install adapter in body bracket using new clip  
Tighten hard line to adapter

9. Insert the brake hose adapter fitting into the body bracket. Using the new clip, install and tighten the body hard line using 11mm and 11/16" wrenches.



10. Route the straight end of the new brake hose through the trailing arm hose bracket (90-degree end toward the caliper). Push the grommet into the trailing arm bracket. Work it in by pushing it around the hose, and finish with a dull screwdriver or similar. Screw the hose onto the body bracket adapter fitting, but leave it loose enough to rotate the hose for now.

Pass brake hose through hole in trailing arm  
Push grommet into bracket around hose



11. Screw the 90-degree hose end onto the caliper fitting. Rotate to the correct position using the template and picture as a guide and tighten using 7/16" and 1/2" wrenches. Remove any twist from the hose and tighten the end at the body bracket adapter fitting using 7/16" and 11/16" wrenches.

12. Bleeding is next – find bleeding instructions in a separate section. Once bled, remove the caliper bleeder brackets and spacers and slide the calipers onto the mounting studs.

13. Install the 12-point 3/8" nuts and torque to 47 Nm (35 ft-lb) using the included 1/2" socket.

14. The oil lines above the caliper on the right side of the car need to be tucked close to the body to clear the

caliper at full bump. Make sure the clamps are in place and the lines are well secured.

