



# Installation Instructions for EMPI Rear Disc Brake Kit

## Please Read First

These instructions are for a variety of rear disc brake conversion kits. Please read this entire set of instructions before proceeding with the installation. Any instructions that are safety related are listed in ***Bold Italic*** typeface and must be strictly adhered to.

These step by step instructions should be read before you start to do any work and you should be able to understand them completely. If you do not have the resources to do this installation then have it performed by a qualified mechanic. ***Failure to follow these directions could result in damage to your vehicle or possible bodily injury.***

Your EMPI disc brake kit is designed to be used in combination with drum brakes. If you are going to install 4-Wheel Disc Brakes, a Dual Circuit Master Cylinder will be necessary. EMPI Part # 16-9554, Dual Circuit - 20mm master Cylinder, for all Beetles and Part # 17-2808 for Super Beetles are available at your EMPI dealer.

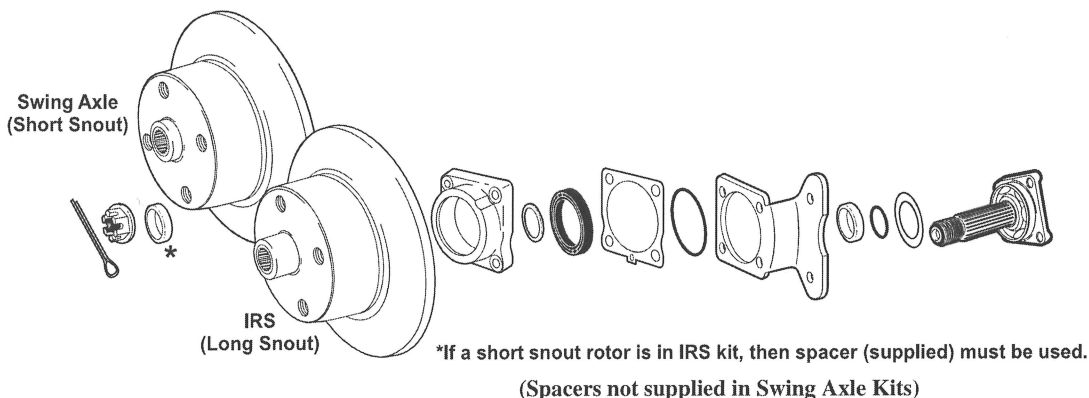
- STEP 1: To start, secure the vehicle on a level, hard surface. Block the front wheels and release the emergency brake. Loosen the rear lug nuts while the rear wheels are still on the ground. But do not remove yet.
- STEP 2: Elevate the complete rear suspension off of the ground and ***use approved jack stands to support the weight of the vehicle. (Do not use the jack only to support the vehicle.)***
- STEP 3: Remove both rear wheels.
- STEP 4: Remove the rear axle nut and brake drum, remove brake shoes and all related components from backing plate. Remove the 8 mm bolt that secures the emergency brake cable to the backing plate. Disconnect steel brake line from the wheel cylinder. Remove the bearing seal cap, backing plate can now be removed.

### Swing Axle Applications:

Qty.	Description
2	Rear Axle Seal Kit
2	Disc Brake Rotors
2	Caliper Brackets
2	Calipers
4	3/8-16x1 Hex Bolt with Washers

### I.R.S. Applications:

Qty.	Description
2	Rear Axle Seal Kit
2	Disc Brake Rotors
2	Caliper Brackets
2	Calipers
4	3/8-16x1 Hex Bolt with Washers



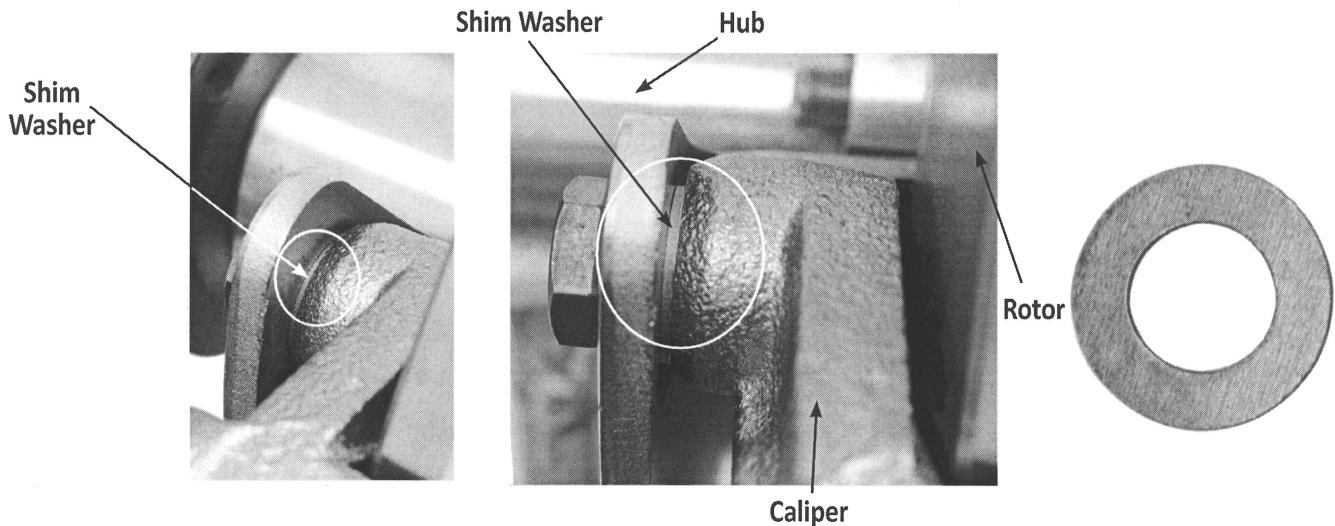
STEP 5: (See parts break down illustration) Install the bearing thrust washer, small o-ring, and original spacer on axle (Small o-ring not required on I.R.S.). Install the caliper bracket and large o-ring on the bearing flange. Install the bearing seal cap with new seal and oil deflector. Using only 1 gasket between bearing cap and caliper bracket. Torque the bearing seal cap bolts to 25 ft. lbs.

**Note:** If vehicle is equipped with early (pre 1960) bearing seal cap the brake rotor will not seat properly. The later version bearing seal cap must be used.

Step 6: Install the disc brake rotor and tighten the axle nut.

*Note: Axle nuts must be re-tightened and torque to at least 250 ft. lbs. after installation is complete and vehicle is on the ground.*

Step 7: Install the caliper, with the 3/8-16x14 bolts and washer supplied in kit. Hardened caliper shim washers are provided to accommodate for the machining variances between the rotor, caliper and spindle. If necessary, use the hardened shim washers on the caliper mounting bolts, between the caliper and spindle. There are eight (8) washers supplied in this kit, four (4) are .036 thick, four (4) are .055 thick. If necessary use a combination of washers to achieve the acceptable clearance between rotor and caliper. If shims are used, the same combination must be used on the top and bottom mounting bolts of individual caliper to ensure it is parallel with the rotor. Re-attach the brake line, the steel brake line may need to be re-shaped. Use a hand held bending tool to avoid crimping the line. When installing this kit, it is recommended that a thread-locker be applied to caliper hardware and torque to 25 ft. lbs.



**Note: DO NOT DISCARD ANY PARTS** until the installation is complete as the axle nuts, bearing caps etc. must be re-used.

STEP 8: You are now ready to repeat this procedure on the passenger side. Once completed you will be ready to bleed the system

STEP 9: To bleed the complete hydraulic system fill the brake fluid reservoir with fresh dot 3 disc brake fluid .

STEP 10: Start at the master cylinder loosening each metal brake line to bleed air there first - recheck the fluid level.

STEP 11: Do the final system bleed . Start with the passenger side rear then driver side rear. Move to the front and bleed the passenger side front, and finally the driver front. Do the final fill of the brake fluid.

### Note

When bleeding 4-Wheel disc Brakes it may be necessary to hold the rear Calipers onto the Rotor at the 12:00 – O'clock position to completely evacuate the system of air before installing them onto the Caliper Brackets. All Calipers must be bled properly regardless of the kit purchased.

Step 12: Rinse any spilled brake fluid off with water (brake fluid is water-soluble), be careful not to let brake fluid get on any painted surfaces.

Step 13: Re-install the rear tires and wheels, remove the jack stands and lower the vehicle to the ground. Give the lug nuts a final tightening and torque axle nuts to specification.

**When test driving, be sure to make a few slow short stops first, to familiarize yourself with the vehicles new braking power and making sure that everything is functioning properly.**