Front Disc Brake Installation Instructions

These instructionss are for a variety or EMPI Front disc brake conversion kits. Please read this entire set or instructions before proceeding with the installation. Any instructi ons that are Safety related are listed in ***Bold italic*** typeface and must be strictly adhered to. **This Brake Kit will not work with dropped spindles, will only work with stock style drum brake spindles and must be used with 15 inch or larger wheels.**

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 EMPJ 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 (Paruzzi Part # 3298), Dual Circuit - 20mm master Cylinder, for all Beetles and EMPI Part # I7-2808 (Paruzzi Part # 3243) for Super Beetles are available at your EMPI or Paruzzi dealer.

STEP I: To start. secure the vehicle on a level, hard surface. Block the rear wheels and set the emergency brake, loosen the front lug nuts while the front wheels are stilll on the ground. but do not remove yet.

STEP 2: Elevate the complete front 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 front wheels.

STEP 4A: If your vehicle is a I966 or older beetle you wil1 need to remove the existi ng master cylinder and bolts: install the newly supplied master cylinder with the new longer bolts and nuts supplied with this kit (always bench bleed a new master cylinder). Reinstall the master cyl inder stop llight switch and metal brake lines. Install billet aluminum reservoir adapter wi th the aluminum seal and reattach the rubber hose from the brake fluid reservoir.

STEP 4B: If you are working on a 1967 or newer beetle with a dual reservoir master cylinder. you will need to remove and replace master cylinder with the new unit furnished in the kit (always bench bleed a new master cylinder).

STEP 5: Remove the front brake drum on the dri ver's or left side, making sure you remove the inner wheel bearing and old grease seal.

STEP 6: Loosen and remove the flexible brake hoses from metal brake line at the pan.

STEP 7: Remove the 3 bolts that hold the drum brake backing plate to the spindle. Remove the complete backing plate (including brake shoes and wheel cylinder with hose).

STEP 8: Clean and inspect your drum spindle, making sure that the spindle stub is in good condition. *If the spindle is damaged or shows sign of excessive wear, you should replace it before you install your new brake kit.*

STEP 9: Clean the surface of the spindle before install ing the new caliper bracket . This surface must be free from anythi ng that will cause the bracket to bind or not set flat on the spindle. ***Bolting the bracket to an uneven surface will cause it to crack or break.***

STEP 10A: 1965 and older beetles with link pin front suspension will use the originall backing plate bolts to install the caliper brackets. ***If you do not have these bolts. You must use bolts with a hardness rating of 10.9.*** Install the bracket so that the caliper is at the rear of the spindle; the bracket should go on easily. ***DO NOT hammer or force the bracket in place. DO NOT use bolts to "pull" the bracket in place. Doing this will cause the bracket to crack or break.*** Torque the bolts to 25 ft.lbs.

STEP 10B: for 1966 and newer beetles with balljoint front suspension, install brackets with the 10 mm bolts (10 .9 grade) supplied with kit. Install the bracket so that caliper is the rear of the spindle. The bracket should go on easily, ***DO NOT hammer or force the bracket in place. DO NOT use bolts to "pull" the bracket in place. Doing this will cause the bracket to crack or break.*** Torque the bolts to 25 ft.lbs.

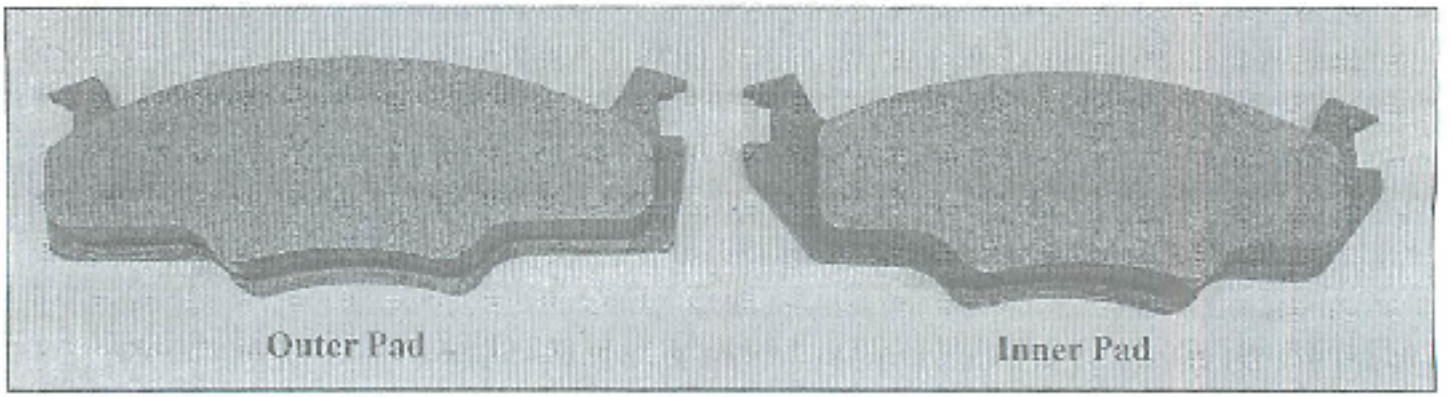
STEP 11: Install the supplied wheel bearing races in the new rotors. ***(Be careful not to damage the rotor or races by binding them)***. We suggest that the bearing races be pressed into the new rotors.

STEP 12: Pack the new bearings with suitable hi-temp wheel bearing grease.

STEP 13: Install greased wheel bearings and the inner seal in the new rotors.

STEP 14: Install the new rotors on the existing drum brake spindle - using existing thrust washer and adjuster nuts. Adjust to factory specifications. ***(Be careful not to over tighten adjuster nut. This will cause overheating of the bearings, resulting in damage to spindle, bearings and rotor)***. Install the grease cap and speedometer clip.

STEP 15: Install the inner and outer disc pad, into the caliper. Note: The Inner and Outer pads are different (See Below)



STEP 16: Install the caliper over the pads. (Making sure that you remove and discard the spacers in the caliper pinhole.) Install the mounting pins in the caliper and put thread locker on the treads and thread into the bracket then tighten. (NOTE: There is a right and left side caliper. The caliper bleeder valve must be towards the top and facing the rear of the vehicle to allow proper bleeding of the system).

STEP 17: Install the new hose at the caliper first. Tighten, now attach to the metal brake line at the pan, tighten. Install the clip into hose. securing it to the bracket. Once installed turn the steering right and left, lock to lock to ensure that the new brake hose does not interfere with any moving parts and that the line is long enough to aacheive lock to lock turns.

STEP 18: You are now ready to repeat this procedure on the passenger side. Once completed you will be ready to bleed the system.

STEP 19: To bleed the complete hydraulic system. Fill the brake fluid reservoir with fresh dot 3 disc brake fluid.

STEP 20: Start at the master cylinder loosening each metal brake line to bleed air there first, recheck the fluid level.

STEP 21: Bleed the passenger side caliper side caliper first and then driver's side, remembering to not allow the reservoir to run dry!

STEP 22: 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.

STEP 23: 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 24: Re-install the front tires and wheels, remove from the jack stands and lower the vehicle to the ground. Give the lug nuts a final tightening.

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.