



## ***STOP! READ THIS FIRST!***

### **Installation Instructions for Bus Wide 5 Front Disc Brakes**

NOTE: This kit will work with wheels that are 14" or larger!

Thank you for purchasing an AC Industries Disc Brake Kit. All of our kits are designed with components that are easy to install and with regular maintenance, should last the rest of your car's life. **BUT** if you lack the knowledge and/or the proper tools to do this installation... **DO NOT** attempt to install this kit yourself, have it installed by a qualified mechanic. These step-by-step instructions should be read **COMPLETELY** before you start to do any work, and you should be able to understand it completely before you start! Failure to install this kit correctly and completely can result in damage to your car, injury to yourself and others and even death.

**BEFORE** disassembling your vehicle, remove all parts from their boxes, inspect your kit completely, because over the years many parts on cars have been interchanged, make sure that you have the correct parts for **YOUR** car. It is the **INSTALLERS** responsibility to **VERIFY** that the kit is correct **BEFORE** starting to do the work! Once the kit has been installed, modified or painted, the parts **CANNOT** be returned.

The AC Industries kit that you have purchased is specifically made for the year car interchange shown on the label of the master box. There is **NEVER** a reason to machine or grind on these components. If you are experiencing a fitment or caliper to rotor alignment issue and you chose to modify the components of this kit in any way you void the warranty. AC Industries will not replace any modified components.

**NOTE:** Heavy Duty Wheel Bearing Grease and Brake Fluid are not supplied in the kit. You will need to purchase these items before installing this kit.

#### **These instructions cover the following kits:**

##### **Standard Beetle and Thing**

498560 '64-'67 5 x 205mm lug pattern

498570 '68-'69 5 x 205mm lug pattern

498580 1970 5 x 205mm lug pattern

#### **This kit includes the following components:**

2 pcs Front rotors  
1 pair Front caliper adapter brackets  
2 pcs Front calipers with premium brake pads  
1 pcs Master cylinder, modified  
2 pcs Inner wheel bearings and races  
2 pcs Outer wheel bearings and races  
2 pcs Wheel bearing grease seals  
2 pcs Front brake hoses  
4 pcs Bolts, caliper to bracket  
8 pcs Bolts, bracket to spindle  
12 pcs Serrated lock washers for above bolts  
10 pcs 14mm screw in wheel studs  
10 pcs 14mm ball seat lug nuts

#### **Some of the tools required for the installation:**

7mm Allen wrench  
11mm Line wrench  
13, 15 & 17mm wrench  
15 & 17mm socket  
3/8" Drive ratchet  
Crescent wrench  
Lug nut wrench  
Torque Wrench (ft./lbs.)  
Bearing race install tool

#### **Additional items needed for the installation:**

Heavy duty wheel bearing grease (pt #000614)  
Brake fluid, DOT 3 is preferred (pt #000412)

**STEP 1** - To start, place the car on a level, hard surface, block the rear wheels and set the emergency brake.

**STEP 2** - Raise the complete Front Suspension off the ground and use jack stands to support the weight of the car. (Do not use the jack alone to support the car, jacks can lose pressure, allowing the car to drop.)

**STEP 3** - Remove both front wheels.

**STEP 4** – Remove the front brake drum on the Driver's (Left) side. Set the grease cap, thrust washer, nut, and speedometer cable clip aside, you will be using these again. Be sure to remove the inner wheel bearing and grease seal.

**STEP 5** – Loosen and remove the rubber brake hose from the metal line at the pan. Remove retaining clip.

**STEP 6** – Remove the bolts that hold the drum brake backing plate and wheel cylinders to the spindle. Remove the complete backing plate.

**STEP 7** – Clean and inspect your drum spindle, making sure that the spindle stub, where the bearing will ride, is in good condition (free of deep grooves or bluing from excessive bearing heat). If any of these signs exist, you **MUST** replace the spindle before you continue.

**STEP 8 – IMPORTANT!** The mounting surface of the spindle that will accept the new disc caliper bracket must be clean. This surface must be free of anything that will cause the bracket to not set flat against the spindle. Failure to perform this step may cause the caliper bracket to crack, bend, or break.

**STEP 9** - Install the caliper bracket using the supplied 10 x 25mm long bolts. Make sure the caliper is to the rear of the spindle and torque to 36 ft./lbs.

**STEP 10** - Install the wheel bearing races in the new rotor with a race install tool. Be careful not to damage the rotor when you install the bearing races during this procedure. The races **MUST** be installed straight or it can crack the rotor!! Pack the wheel bearings with a suitable SAE heavy duty wheel bearing grease (not supplied in kit). Install greased wheel bearings and inner grease seal into new rotor.

**STEP 11** - Install new rotor with greased wheel bearings and grease seal onto the existing drum brake spindles using the original thrust washer and adjuster nut. Adjust the wheel bearing preload to factory specifications. (Be careful not to over tighten the adjuster nut. This will cause overheating of the bearings, resulting in damage to the spindle, bearings and rotor.) Reinstall the grease cap and speedometer cable with clip. (**NOTE:** You must clean the rotor faces with a suitable cleaner to remove any oil and/or rust inhibitor before installing the calipers)

**STEP 12** - Install the brake caliper to adapter bracket using the supplied hardware and torque to 29 ft./lbs.

**STEP 13** Install the brake hose at the caliper first and tighten to 11-14 ft./lbs. Install the metal brake line to the opposite end of the brake hose remembering to feed the end of the brake hose thru the bracket mounted to the pan first. Tighten the brake hose to the brake line and install the retainer clip securing the hose to the bracket.

**STEP 14**- Repeat steps 4 through 13 on the passenger (right) side of the car.

**STEP 15**- Install the supplied master cylinder. This has been modified so that there are no residual check valves for the front disc brakes. Failure to do this will cause the front brake to drag and overheat! On the 498560 kits, you will be adapting a dual circuit 1967 Master to the Bus. This will take some adaptation.

**STEP 16** - With both sides completely installed, it's time to bleed the air from the entire braking system. Fill the brake fluid reservoir with new DOT 3 brake fluid. (Never use brake fluid from a container that has been standing open after the use. Brake fluid is hygroscopic and contaminates within days of exposure to ambient air.)

**STEP 17** - Bleed the complete system. Start with the passenger (right) side rear, then the driver (left) side rear, then the passenger (right) side front and finally the driver (left) side front. Finally top off the brake fluid reservoir with new DOT 3 brake fluid. **NOTE:** Allowing the reservoir to run empty at any time during the bleeding process will reintroduce air to the system and the process will have to start all over again.

**STEP 18** - Install the front wheels with the supplied screw in wheel studs and remove vehicle from jack stands.

**STEP 19** - With the vehicle on the ground & brake fluid reservoir topped off, sit in the driver seat and depress the brake pedal. Pedal should be firm without sponginess. Sponginess indicates air is in the hydraulic system and the bleeding process must be redone. For the best pedal angle, adjust the master cylinder push rod.

**STEP 20** - Confirm all previous steps are complete by rechecking your work. When satisfied take the car out for a test drive and make several test stops to seat the new brake pads with the new brake rotors. Once the disc brakes are seated, you will notice increased stopping performance.

**STEP 21** - Enjoy your new found stopping power.