

## **124 Series II WHOA Brakes Installation Instructions** **04/07**

### **Disclaimer**

Congratulations on your purchase of the Whoa Brakes Series II set for the Fiat 124 series cars. The set uses modern, high quality components but in that some of the components are intended for off road or racing use only the kit should be considered for off road /racing use only. Any other use is the responsibility of the purchaser.

### **Component Set/Pre-Installation**

If you purchased the complete set of components for the 124 Series cars it will include; 2 calipers, 2 hoses, 1 pad kit, a pair of replacement backing plates, 1 hardware pack \*. If you ordered the 13 inch kit it will include 2 reduced diameter wheel spacers. If you ordered the 14 inch kit you will receive a caliper extension kit and (if ordered) 2 rotors. Rotors may be shipped in a separate container. Please check to see that the contents of this box match your invoice.

Check stock rotors before starting installation to insure they are free of groves or wear steps and replace them if necessary. Also you will need a 5/16 or 8mm Allen socket wrench to properly torque the calipers.

### **Installation**

The WHOA Brake set is a straight bolt on except for some modifications to the dust shield. Please follow the steps in the order listed below. Do not use original hardware if the kit provides replacements. Original hardware is the wrong length or thread pitch.

1. Jack up the vehicle and remove all 4 wheels. Remove the entire front brake assemblies including the hub, hose and backing plates. Keep the spindle bolt nut retainers, as they will be reused. The dust shield will require some minor modifications. Place the dust shield on the proper left or right backing plate with the caliper temporarily installed on it and use 4 short bolts to align it. Mark the area that contacts the backing plate and trim it accordingly. In some cases the raised lip of the shield will interfere with the bolt sitting flush. Bend the lip towards the center

opening with pliers just enough so the bolt will set flush. You could also mark and grind away the excess. Do this only where required. **Do this next step only if installing the larger PF rotors.** The dust shield also bulges outward around the 4 mounting bolts and will need to be pushed inward **slightly** to clear the rotor. Try to do some of this on the bench by flattening it 1/8 to 1/4 inch with a mallet.

2. Mount the appropriate left or right backing plate closest to the spindle with the new hardware provided. Assembly sequence is bolt, dust shield, backing plate, spindle, (steering arm,) nut retainer and nut. If you do not use the dust shield then a .040 thick washer has to be used in its place to maintain proper alignment of the caliper to the bracket. Exercise caution when holding the bolt heads. Do not mar any of the alloy surfaces. The hubs are a close fit in the backing plates and nicks or gouges may cause the hub to rub. **Do not** bend down the nut retainers at this time in case the backing plate has to be removed. If retainers are not available use lock washers provided. Torque to 30 foot-pounds if possible after installing. A 3/8-drive thin wall socket on the bolt head works best. Install the wheel hub but do not swage the lock nut.
3. Test fit the brake hose through the body mount bracket and enlarge the hole if necessary. Remove the "Wilwood fluid inlet" label from the side of the caliper and install the brake hose to the caliper after applying a small amount of thread sealer. This fitting is a tapered pipe fitting and will only screw in about half way.
4. For the large PF rotors remove any rust inhibitor from the rotor with solvent or brake parts cleaner. Do not install the stock spacer, as the rotor is as thick as the stock spacer and rotor combined. Lock in place with the stock bolts. Go to step 6.
5. If you are using used stock rotors they should be sanded to remove any pad material before installing. Fit the rotor and kit spacer to the hub and lock in place with the original locating pin bolts. The stock spacer is too large in diameter to clear the caliper. The standard kit has reduced diameter spacers included. They must be used when using the stock rotors with any diameter wheels. If you have custom alloy spacers they will need to be reduced to a diameter of 5.00 inches.



6. Spin the rotor by hand to make sure there is no contact with the dust shield and adjust the shield if necessary. For the PF rotor use a long feeler gauge, hacksaw blade or thin piece of metal to determine contact point(s) around the 4 mounting bolts. Remove the rotor and flatten the bulges with the shield in place using a mallet or small hammer. Repeat the process until you get it to clear.
- 7 Bolt the caliper to the hanger with the 5/16 Allen bolts and Belleville washers. Push inward on the caliper before tightening. If installing the PF rotors use the extension spacers between the caliper and the hanger.
- 8 Insert the brake pads and retainer clip. Turn the steering towards the opposite side of the vehicle and check the caliper from the rear to see that rotor is centered and turns freely. Torque the caliper bolts to 20 foot-pounds. Bend down the nut retainers on the 4 backing plate/ spindle bolts.
- 9 Connect the brake hose and re-install the retaining clip.
- 10 Test the steering from left to right to insure the hose moves freely and does not make contact. Set the proper pre-load on the front bearings, swage the spindle lock nut and install grease cap.
- 11 Complete the opposite side to this point.
- 12 Bleed the brakes starting with the top front out board bleed screw followed by the top inboard. Do not bleed the bottom screws. Use a ¼ inch socket to initially loosen the bleeder screws, as they are quite tight from the factory. When it appears that most of the air is out of the fronts then perform a regular 4 wheel brake bleeding starting with the far rear caliper. Test the brake pedal to insure that there is a firm pedal high enough for safe driving.

**Mount the wheels and make certain that you have 7 ½ to 8 full turns of thread engagement between the wheel bolt and the hub. This is critical**

- 13 Road test in a safe place
- 14 You should notice a reduction in braking effort and may notice an Increase in pedal height.
- 15 Break in is required and if you have favorite method use it.  
If not try looking at some of the more elaborate one's at [www.stoptech.com](http://www.stoptech.com) or [www.baer.com](http://www.baer.com)



\*Hardware Pack Contents

- 8 10mm lock washers
- 8 10 X 1.5 nuts
- 4 10 X 60 X 1.5mm hex bolts backing plate /steering arm
- 4 10 X 30 X 1.5mm hex bolts backing plate  
For 13" wheels
- 4 3/8 X 16 X 2 SHCS caliper mount bolts
- 4 3/8 Belleville locking washers  
Extension Kit for 14" wheels
- 4 Spacers
- 4 3/8 Belleville locking washers
- 4 3/8 X 16 X 2 1/2 SHCS caliper mount bolts