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## WH Power Brake Kit

Date 11/10/14

### WARNING

Proper operation of your brakes is essential for your safety and the safety of others. All brake service should be performed ONLY by technicians experienced in the installation and proper operation of brake systems. It is the responsibility of the technician installing any brake component or kit to determine the suitability of the component or kit for the particular application. After installation and before operating your vehicle, be sure to test the function of the brakes under controlled conditions.

#### **DO NOT DRIVE WITH UNTESTED BRAKES!**

Thoroughly read and understand the instructions before proceeding with the installation of the Power Brake Kit. Brake function should be thoroughly checked and any problems corrected **before** the Power Brake Kit is installed. Pulling under braking, one wheel lockup, premature rear wheel lockup are indications of brake problems. The Power brake Kit will not fix these conditions. The primary function of the Power Brake Kit is to provide power assist to the existing braking system.

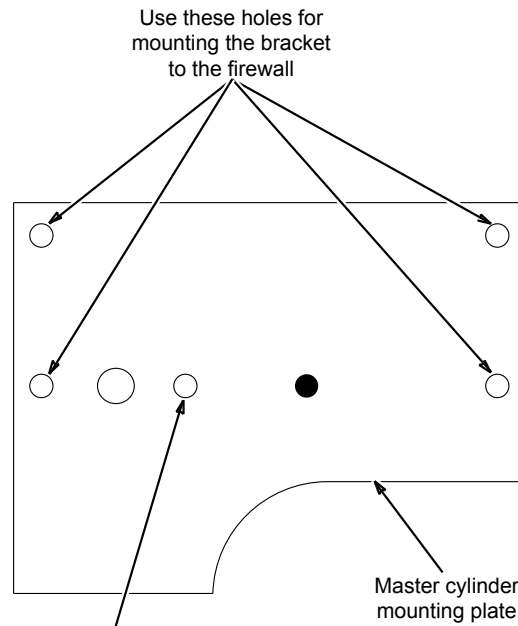
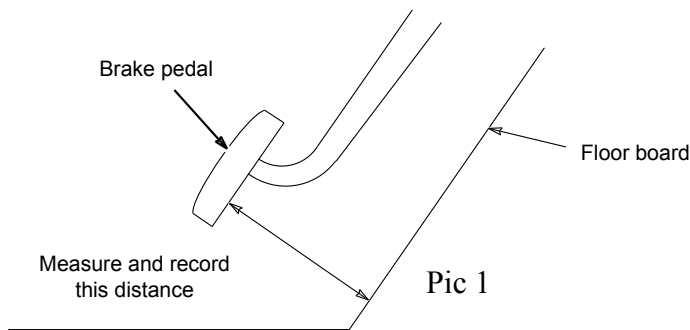
***The booster operates by manifold vacuum. Adequate manifold vacuum is required for proper function of the booster. With engine at normal operating temperature test the manifold vacuum. You need at least 18 inches of vacuum.***

**BRAKE HOSES** (from the master cylinder to valve): These do not come with the Power Brake Kit. They are optional. Some customers make their own. WH has available separately rubber hoses or Stainless steel braided hose kits to work with the Power Brake Kit. If you want WH to supply rubber or stainless steel hoses for you, call and ask for part #3077.

Required additional hardware not included in kit: A vacuum port is required for the brake booster to operate. If your engine does not have a manifold vacuum port at the rear of the intake manifold, one will need to be installed.

1. Measure the height of the brake pedal from the floor and record it here: \_\_\_\_\_ inches. Pic 1.
2. From under the dash, disconnect the master cylinder push rod, bushing and brake light switch from the brake pedal noting how it went together. Use the factory-retaining clip when you reinstall the push rod, bushing and brake light switch.
3. Disconnect the brake lines/hoses from the master cylinder.
4. Remove the two bolts holding the master cylinder to the firewall and remove the master cylinder. Replace the bolt on the right side (closest to the driver side fender) of the master cylinder and tighten. The use of this bolt is not necessary for the installation of the Power Brake Kit. See Pic 2.
5. Install the brake push rod and seal through the large hole in the bracket. The seal has a groove that will slip into the hole in the bracket and hold it in place. The push rod will thread into the push rod clevis. Thread the push rod into the clevis. From the back of the bracket to the center of the hole in the push rod should be approximately 7". See pic 3. The clevis pin attaches the push rod clevis to the bracket. Don't put the cotter pin in yet.
6. Remove the four firewall bolts shown in Pic 2 and position the booster bracket on the firewall. Insert the assembly through the hole in the firewall and loosely thread the bolts through the booster bracket.
7. Four screws hold the steering column boot to the firewall. The top two may interfere with the bottom of the bracket. If the bracket does not sit flush against the firewall, remove the top two screws.
8. Once the booster bracket sits flat on the firewall tighten the four mounting bolts.
9. Reinstall the two screws removed in Step 7. In some cases, relocating these screws may be necessary. Drill the mounting holes slightly lower to clear bottom of brake bracket if necessary.

10. Position pedal at height recorded in step #1. The push rod should be close to the 7" measurement from step #5. If necessary adjust brake push rod in order to attach it at your recorded pedal height. Attach the push rod to the pedal with original bushing, clip and brake light switch. Remove clevis pin. Bring the push rod through the firewall into the engine compartment far enough to allow tightening of jam nut on the push rod.
11. Make sure the push rod is threaded far into the clevis. Now reinstall the clevis pin and use cotter pin to secure.
12. Install the vacuum hose from the check valve on the booster to manifold vacuum source.
13. Using a master cylinder bench bleed kit, or hoses that can be routed back into top of the master cylinder, bleed the master cylinder. Make sure you use plenty of rags to catch any brake fluid that may splash during the bleed. **Do not skip this step.** Bench bleeding the master cylinder will ensure all the small pockets of air are purged from the cylinder before bleeding the complete brake system. As long as you can see air coming up inside the master cylinder keep bleeding. Light tapping on the master cylinder with a soft rubber hammer will assist in getting the trapped air out of the new master cylinder.
14. Install hoses from master cylinder to valve.
15. Bleed the whole brake system. After bleeding, check that all bolts, nuts, pins, clips, cotter pins and flare nuts are tight.
16. Top off brake fluid, making sure the cap is seated properly. Check that brake lights are working properly. If you have any doubts about the installation, **DO NOT** drive the Bronco until the braking system has been checked and is determined to be working properly.
17. **BE VERY CAUTIOUS** on the first test drive. Test the brakes thoroughly, test and retest again.
18. Recheck that all bolts, nuts, pins, clips, cotter pins and flare nuts are tight and check for any leaks. Fix as necessary and test again.



The use of this bolt is not necessary for installation but should be installed to reinstalled to plug the hole.

