



BRAKE BLEEDER

USE AND CARE INSTRUCTIONS

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USE AND CARE INSTRUCTIONS

1. General Safety Precautions and Preparation

- a. Park your vehicle in a safe, well lit, level area.
- b. Shut the engine off and remove the key from the ignition switch.
- c. Make sure any remote start devices are properly disabled.
- d. Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- e. Use caution when working with brake fluid. Read and understand safety and emergency information for the brake fluid being used prior to beginning the bleeding process.
- f. Brake fluid is hygroscopic (absorbs water from the atmosphere), which will reduce its boiling point and reduce its effectiveness. It is very important to keep brake fluid containers sealed at all times and only open them when adding fluid.
- g. Brake fluid can damage paint, even if it only contacts the surface for a short while. Use protective covers over painted areas wherever possible. In the event that brake fluid contacts the paint on your vehicle, rinse it off immediately, followed by spraying a cleaner on the surface and wiping it clean with a soft rag.
- h. These instructions contain generalized procedures. Before beginning, always consult your vehicle manufacturer's procedures for bleeding the brakes to ensure that vacuum bleeding is an acceptable method. Always consult and follow any precautions and procedures from your vehicle's service and owner's manuals.
- i. Ensure that only the brake fluid type specified for your vehicle is used. It is not recommended to mix different brands of brake fluid.
- j. Speed Bleeders® and other devices that contain check valves will not open with vacuum pressure and should be replaced with conventional bleeder screws prior to using any vacuum bleeding device.



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- k. If it is the first time bleeding the brakes, it is recommended to remove the caliper bleeder screws and apply Teflon tape or other thread sealer suitable for brake systems. This will prevent air from being drawn in around the bleeder screw threads, giving a false indication of air in the brake lines during vacuum bleeding.

2. Brake Fluid Tester (Deluxe kit or sold separately)

- a. Remove the battery cover, insert a AAA battery, and replace the cover.
- b. Press the On-Off button on the top end of the tester and ensure the green light is illuminated.
- c. Remove the bottom cover to expose the test probes.
- d. Insert the probes into the brake fluid to be tested.
- e. Results
 - i. Green Light: 0% water- Fluid is good, no need to replace
 - ii. Yellow Light: <1% to 2% Water- Fluid is OK to continue use
 - iii. Red Light: 3%-4% or greater water content- Fluid should be replaced
- f. The tester will automatically shut off.
- g. Wipe off the probes with a paper towel or rag and replace the bottom cover.

3. Air Zapper Brake Bleeder preparation.

- a. Remove the tubing from inside of the fluid holding tank (square plastic jar) and replace the lid. Ensure the lid is tight.
- b. Connect the two sections of supplied tubing to the fluid holding tank lid using the quick connect fittings.
- c. Connect the hose with a plain end to the Air Zapper™ vacuum pump, by slipping the tubing over the blue outlet (on the end of the pump opposite the electrical cord).
- d. Plug the vacuum pump into a suitable electrical outlet.



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4. Simple Brake Bleeding- General Procedure for Air Removal

- a. Ensure preparation steps of Para 2. are complete.
- b. If necessary to access the bleeder screw, raise and secure the vehicle using a suitable device and remove the wheel using vehicle manufacturer's instructions for the first caliper to be bled (normally the furthest from the master cylinder).
- c. Remove the cap from the vehicle's bleeder screw (if present) and connect the Air Zapper™ Brake Bleeder tubing with the black rubber vacuum connector to the caliper brake bleeder screw.
- d. Remove the vehicle's brake fluid reservoir cap.
- e. Ensure that the brake fluid level is and remains between the "MIN" and "MAX" marks on the vehicle's brake fluid reservoir during the entire bleeding operation. Add fluid as necessary. This will prevent air from entering the brake system from the reservoir.
- f. Turn on the Air Zapper™ vacuum pump using the on-off switch.
- g. Using a suitable wrench, open the brake bleeder screw until fluid begins to flow towards the Air Zapper™ fluid holding tank.
- h. Ensure that the level in the Air Zapper™ fluid holding tank does not exceed $\frac{3}{4}$ full. If it does, stop the bleeding operation, remove the lid and empty into a suitable container. This will prevent brake fluid from being drawn into and damaging the vacuum pump.
- i. Continue bleeding until a solid column of fluid flows from the bleeder screw with no air bubbles. Close the bleeder screw using suitable wrench.
- j. Remove the vacuum connector from the bleeder screw to allow the fluid in the tubing to empty into the Air Zapper™ fluid holding tank and then turn off the vacuum pump.
- k. Replace the cap on the vehicle's bleeder screw (if removed).



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- l. Replace the wheel and lower the vehicle using vehicle manufacturer's instructions.
- m. Repeat steps 3.a. thru m. above for the remaining wheels.
- n. Upon completion of the bleeding operation, ensure that the brake fluid level is between the "MIN" and "MAX" marks on the vehicle's brake fluid reservoir and replace the reservoir cap.

5. General Procedure for Complete Fluid Replacement

- a. Ensure preparation steps of Para 2. are complete.
- b. Fluid removal
 - i. If necessary to access the bleeder screw, raise and secure the vehicle using a suitable device and remove the wheel using vehicle manufacturer's instructions for the first caliper to be bled (normally the furthest from the master cylinder).
 - ii. Remove the cap from the vehicle's bleeder screw (if present) and connect the brake bleeder tubing with the black rubber vacuum connector to the caliper brake bleeder screw.
 - iii. Remove the vehicle's brake fluid reservoir cap.
 - iv. A syringe or other device may be used to remove fluid from the reservoir. This is not required but will speed up the removal of fluid from the system.
 - v. Turn on the Air Zapper™ vacuum pump using the on-off switch.
 - vi. Using a suitable wrench, open the brake bleeder screw until fluid begins to flow towards the Air Zapper™ fluid holding tank.
 - vii. Ensure that the level in the Air Zapper™ fluid holding tank does not exceed $\frac{3}{4}$ full. If it does, stop the bleeding operation and empty into a suitable container. This will prevent brake fluid from being drawn into and damaging the vacuum pump.
 - viii. Continue bleeding until all fluid is removed and air appears from the bleeder screw.



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c. Fluid Replenishment/ Bleeding

- i. Refill the vehicle's brake fluid reservoir to the "MAX" mark and ensure the brake fluid level is and remains between the "MIN" and "MAX" marks during the entire operation. Add fluid as necessary.
- ii. Turn on the Air Zapper™ vacuum pump using the on-off switch.
- iii. Ensure that the level in the Air Zapper™ fluid holding tank does not exceed $\frac{3}{4}$ full. If it does, stop the bleeding operation and empty into a suitable container. This will prevent brake fluid from being drawn into and damaging the vacuum pump.
- iv. Continue bleeding until a solid column of clean brake fluid (with no air bubbles) appears from the bleeder screw. Close the bleeder screw using suitable wrench.
- v. Remove the vacuum connector from the bleeder screw to allow the fluid in the bleeder tubing to empty into the Air Zapper™ fluid holding tank.
- vi. Upon completion start the engine and pump the brake pedal/lever until a firm pedal/ lever is felt, which means the brakes have been properly bled. If a firm pedal is not obtained, investigate and re-bleed as necessary.
- vii. Replace the cap on the vehicle's bleeder screw (if removed).
- viii. Replace the wheel and lower the vehicle using vehicle manufacturer's instructions.
- ix. Repeat steps 4.c.i. thru viii. above for the remaining wheels.

6. Cleaning and Care of your Air Zapper Brake Bleeder

- a. Upon completion of bleeding, disconnect all hoses, remove the fluid holding tank lid and pour the brake fluid into a suitable container for proper disposal.



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- b. Rinse the fluid holding tank, tank lid, and tubing with warm water and air dry.
- c. Once dry, the tubing may be coiled and stored inside of the fluid holding tank.
- d. Wipe the exterior of the vacuum pump with a damp rag to remove any brake fluid or other contamination.

7. Before Driving the Vehicle

- a. Start the vehicle and pump the brake pedal or lever to ensure there is a firm pedal or lever. Start slowly and ensure brakes are working correctly before resuming normal driving. If any abnormalities are observed, investigate cause and correct.

8. Contact Us

- a. If any questions or issues arise, feel free to contact us at info@airzapper.com via e-mail or call us at (240) 776-2280.