Bleeding — Components

Printable View (305 KB)

Special Tool(s)

 ST2332-A	Worldwide Diagnostic System (WDS) 418-F224, New Generation STAR (NGS) Tester 418-F052, or equivalent scan tool
 ST1270-A	NGS Flash Cable 418-F120 (007-00531) or Equivalent

Master Cylinder Priming — In-Vehicle or Bench

WARNING: Carefully read cautionary information on product label. For EMERGENCY MEDICAL INFORMATION seek medical advice. In the USA or Canada on Ford/Motorcraft products call: 1-800-959-3673. For additional information, consult the product Material Safety Data Sheet (MSDS) if available. Failure to follow these instructions may result in personal injury.

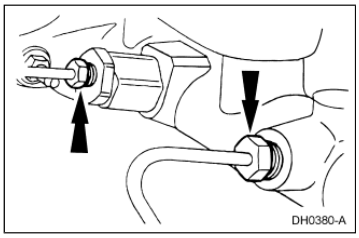
CAUTION: Do not allow the brake master cylinder reservoir to run dry during the bleeding operation. Keep the brake master cylinder reservoir filled with the specified brake fluid. Never reuse the brake fluid that has been drained from the hydraulic system.

CAUTION: Brake fluid is harmful to painted and plastic surfaces. If brake fluid is spilled onto a painted or plastic surface, immediately wash it with water.

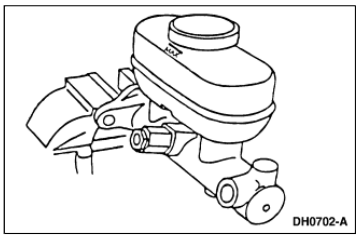
NOTE: When any part of the hydraulic system has been disconnected for repair or installation of new components, air can enter the system and cause spongy brake pedal (2455) action. This requires bleeding of the hydraulic system after it has been correctly connected. The hydraulic system can be bled manually or with pressure bleeding equipment.

NOTE: When a new brake master cylinder (2140) has been installed or the system has been emptied, or partially emptied, it should be primed to prevent air from entering the system.

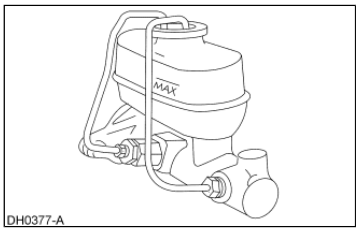
1. For in-vehicle priming, disconnect the brake lines.



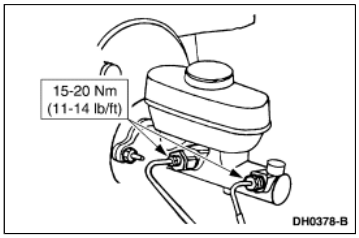
2. For bench priming, mount the brake master cylinder (2140) in a vise.



3. Install short brake tubes with the ends submerged in the brake master cylinder reservoir (2K478), and fill the brake master cylinder reservoir with High Performance DOT 3 Brake Fluid C6AZ-19542-AB or equivalent DOT 3 fluid meeting Ford specification ESA-M6C25-A.



4. Have an assistant pump the brake pedal (2455), or slowly depress the primary piston until clear fluid flows from both brake tubes, without air bubbles.
5. If the brake master cylinder has been primed at the bench, install it in the vehicle. For additional information, refer to Section 206-06.
6. Remove the short brake tubes, and install the brake outlet tubes.

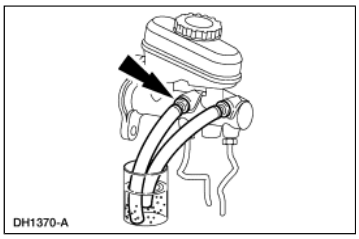


7. Bleed each brake tube at the brake master cylinder as follows:
    1. Have an assistant pump the brake pedal, and then hold firm pressure on the brake pedal.
    2. Loosen the rear most brake tube fittings until a stream of brake fluid comes out. While the assistant maintains pressure on the brake pedal, tighten the brake tube fitting.
    3. Repeat this operation until clear, bubble-free fluid comes out.
    4. Refill the brake master cylinder reservoir as necessary. Repeat the bleeding operation at the front brake tube.

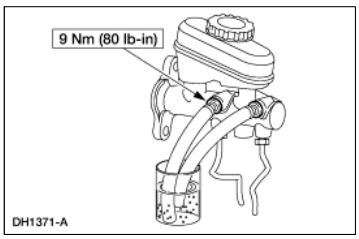
Master Cylinder Priming — 4.6L

1. **CAUTION: Use only bleed screws on the engine side of the brake master cylinder (2140). The hydro-boost bleed screw, located near the dash on the hydro-booster casting, is for the booster cavity filled with power steering fluid, not brake fluid.**

   Connect a clear waste line to the bleed screw closet to the booster first and the other end in a container partially filled with recommended brake fluid.



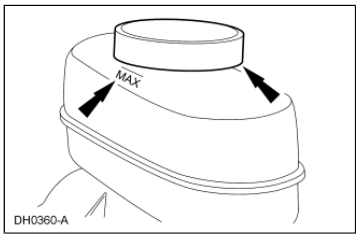
2. Open the bleeder screw, have an assistant push the brake pedal down slowly through full travel, close the bleeder screw, then return brake pedal slowly to full released position. Wait five seconds, then repeat operation until air bubbles cease to appear.
3. Repeat Step 2 for bleeder screw farthest from hydro-booster.



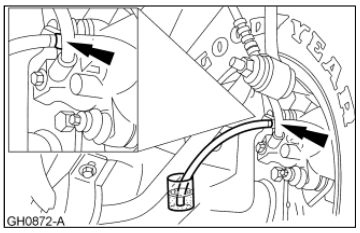
Four Wheel Anti-Lock Brake System (4WABS) Hydraulic Control Unit (HCU)

NOTE: This procedure only needs to be performed if the 4-wheel anti-lock brake (4WABS) hydraulic control unit (HCU) has been installed new or if the HCU lines have been opened.

1. Clean all dirt from and remove the brake master cylinder filler cap (2162), and fill the brake master cylinder reservoir (2K478) with the specified brake fluid.

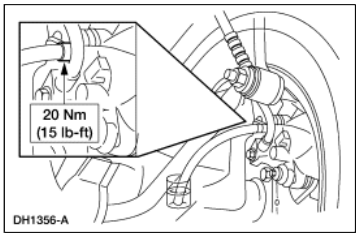


2. Connect a clear waste line to the RH rear bleeder screw (2208) and the other end in a container partially filled with recommended brake fluid.

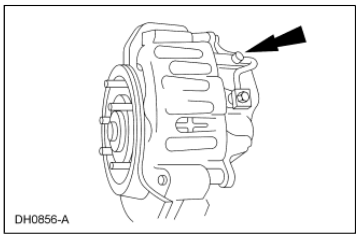


3. Loosen the RH rear bleeder screw until a stream of brake fluid comes out. While the assistant maintains pressure on the brake pedal (2455), tighten the RH rear bleeder screw.
   - Repeat until clear, bubble-free fluid comes out.
   - Refill the brake master cylinder reservoir as necessary.

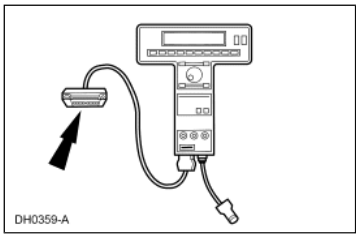
4. Tighten the RH rear bleeder screw, and disconnect the waste line.



5. Repeat Steps 2, 3 and 4 for the LH rear bleeder screw, the RH front disc brake caliper (2B120) bleeder screw, and the LH front disc brake caliper bleeder screw, in that order.



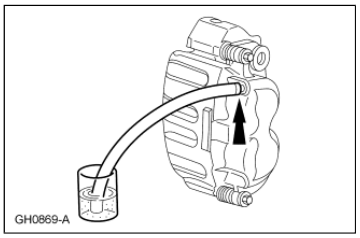
6. Connect the scan tool DCL cable adapter into the vehicle data link connector (DLC) under the dash, and follow the scan tool instructions.



Caliper

1. **NOTE:** It is not necessary to do a complete brake system bleed if only the disc brake caliper (2B120) was disconnected.

   Place a box end wrench on the disc brake caliper bleeder screw (2208). Attach a rubber drain tube to the disc brake caliper bleeder screw, and submerge the free end of the tube in a container partially filled with clean brake fluid.



2. Have an assistant pump the brake pedal (BP) (2455) and then hold firm pressure on the brake pedal.
3. Loosen the disc brake caliper bleeder screw until a stream of brake fluid comes out. While the assistant maintains pressure on the brake pedal, tighten the disc brake caliper bleeder screw.
   - Repeat until clear, bubble-free fluid comes out.
   - Refill the brake master cylinder reservoir (2K478) as necessary.
4. Tighten the disc brake caliper bleeder screw. Refer to Specifications.