

DRAIN AND FILL

PART NUMBER	TOOL NAME
BB200A	SNAP-ON BASIC VACUUM BRAKE BLEEDER

⚠ WARNING

Be sure no clutch fluid gets on tires, wheels or brakes when adding fluid. Traction can be adversely affected, which could result in loss of control and death or serious injury. (00294a)

⚠ CAUTION

Direct contact of D.O.T. 4 brake fluid with eyes can cause irritation. Avoid eye contact. In case of eye contact flush with large amounts of water and get medical attention. Swallowing large amounts of D.O.T. 4 brake fluid can cause digestive discomfort. If swallowed, obtain medical attention. Use in well ventilated area. KEEP OUT OF REACH OF CHILDREN. (00240a)

NOTICE

D.O.T. 4 brake fluid will damage painted and body panel surfaces it comes in contact with. Always use caution and protect surfaces from spills whenever brake work is performed. Failure to comply can result in cosmetic damage. (00239b)

- If DOT 4 brake fluid contacts painted surfaces, IMMEDIATELY flush area with clear water.

NOTICE

Do not allow dirt or debris to enter the master cylinder reservoir. Dirt or debris in the reservoir can cause improper operation and equipment damage. (00205c)

Drain

1. See Figure 2-109. Remove outer transmission side cover (7).
2. Place a pan under the secondary clutch actuator (6) to catch excess clutch fluid.
3. Remove plastic cap (9) and loosen bleeder valve (8).
4. Run hose from bleeder valve to pan.
5. Loosen the clutch master cylinder/reservoir cover (1).
6. Allow clutch fluid to drain into pan.
7. Hand-tighten bleeder valve and replace cap.

Fill

NOTE

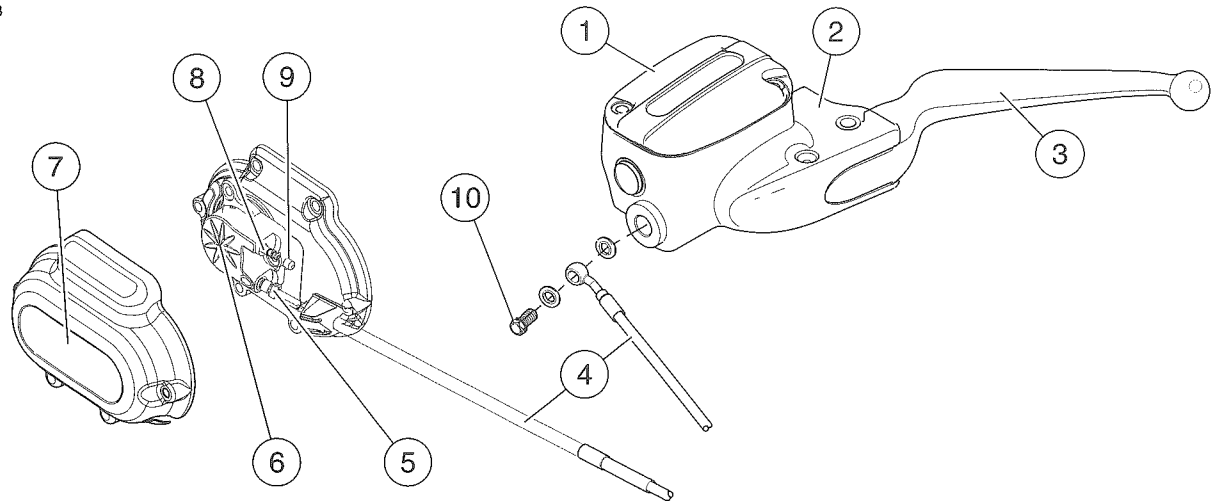
When filling an empty clutch fluid line, a SNAP-ON BASIC VACUUM BRAKE BLEEDER (Part No. BB200A) connected to the bleeder valve can be used for initial bleeding.

1. Position motorcycle and handlebar so that master cylinder reservoir is level.
2. Fill clutch master cylinder/reservoir with DOT 4 BRAKE FLUID. Initial fluid level should not exceed FILL level with reservoir in a level position.

NOTE

The shelf life of an unopened bottle of DOT 4 BRAKE FLUID is one year. Discard any opened bottle after one week.

3. Bleed clutch fluid line and secondary clutch actuator. See 2.27 BLEEDING CLUTCH CONTROL SYSTEM, Bleed Fluid Line and Secondary Clutch Actuator.



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|---------------------------------|----------------------------------|
| 1. Cover | 6. Secondary clutch actuator |
| 2. Clutch master cylinder | 7. Outer transmission side cover |
| 3. Clutch hand lever | 8. Bleeder valve |
| 4. Clutch fluid line | 9. Bleeder cap |
| 5. Clutch line fitting w/O-ring | 10. Banjo bolt |

Figure 2-109. Clutch Hydraulics

BLEED FLUID LINE AND SECONDARY CLUTCH ACTUATOR

FASTENER	TORQUE VALUE	
Clutch actuator bleeder screw	31-41 in-lbs	3.5-4.6 Nm
Clutch reservoir cover screws	12-15 in-lbs	1.4-1.7 Nm
Outer transmission cover screws	100-120 in-lbs	11.2-13.6 Nm

1. Place vehicle on a flat level surface.
2. Position motorcycle and handlebar so that master cylinder reservoir is level.
3. See Figure 2-109. Add DOT 4 BRAKE FLUID to clutch master cylinder/reservoir (2). Do not exceed FILL level.
4. Remove bleeder cap (9) and run clear hose from bleeder valve (8) to suitable container.
5. While holding reservoir cover (1) in place:
 - a. Pump clutch hand lever (3) five times.
 - b. Hold clutch hand lever against handlebar.
 - c. Loosen bleeder screw.
 - d. Watch hose for air bubbles.
 - e. Tighten bleeder screw.
 - f. Release clutch hand lever.

NOTE

Clutch fluid volume increases with clutch wear. Do NOT overfill clutch reservoir.

6. Fill reservoir with DOT 4 brake fluid.
7. Repeat bleed procedure three times or more until only a steady flow of clutch fluid escapes bleeder valve.
8. Tighten bleeder screw to 31-41 in-lbs (3.5-4.6 Nm).
9. Verify that reservoir is at FILL level.
10. Install reservoir cover. Tighten screws to 12-15 in-lbs (1.4-1.7 Nm).
11. Measure release plate movement. See 5.8 HYDRAULIC CLUTCH RELEASE BEARING AND PUSHROD.
12. Install outer transmission side cover. Tighten to 100-120 in-lbs (11.2-13.6 Nm).
13. Test ride motorcycle. Incorrect pressure or fluid level can cause a dragging clutch or hard shifting.