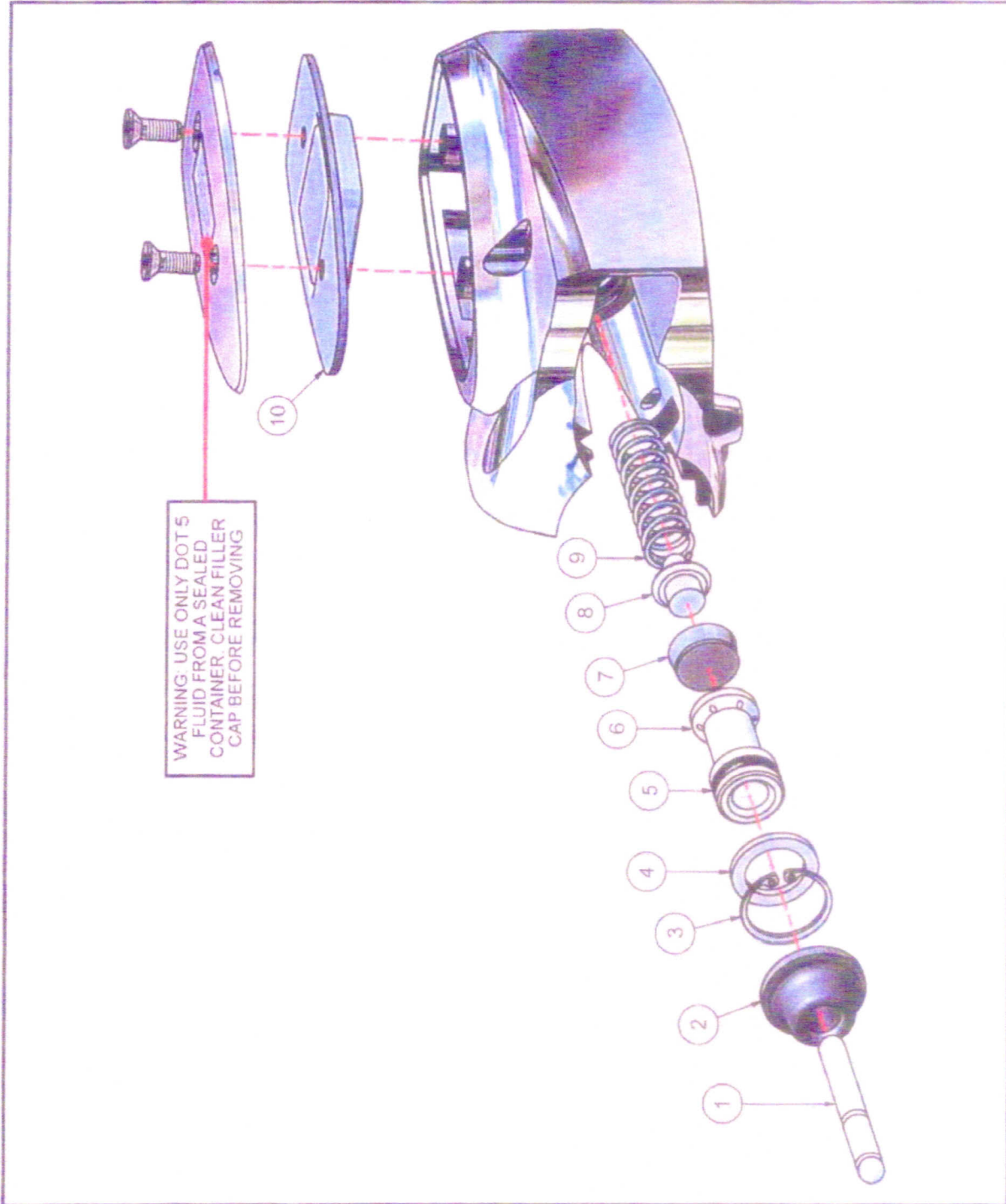


HANDLEBAR CONTROL MASTER CYLINDER ASSEMBLY



BIG DOG MOTORCYCLES SERVICE MANUAL

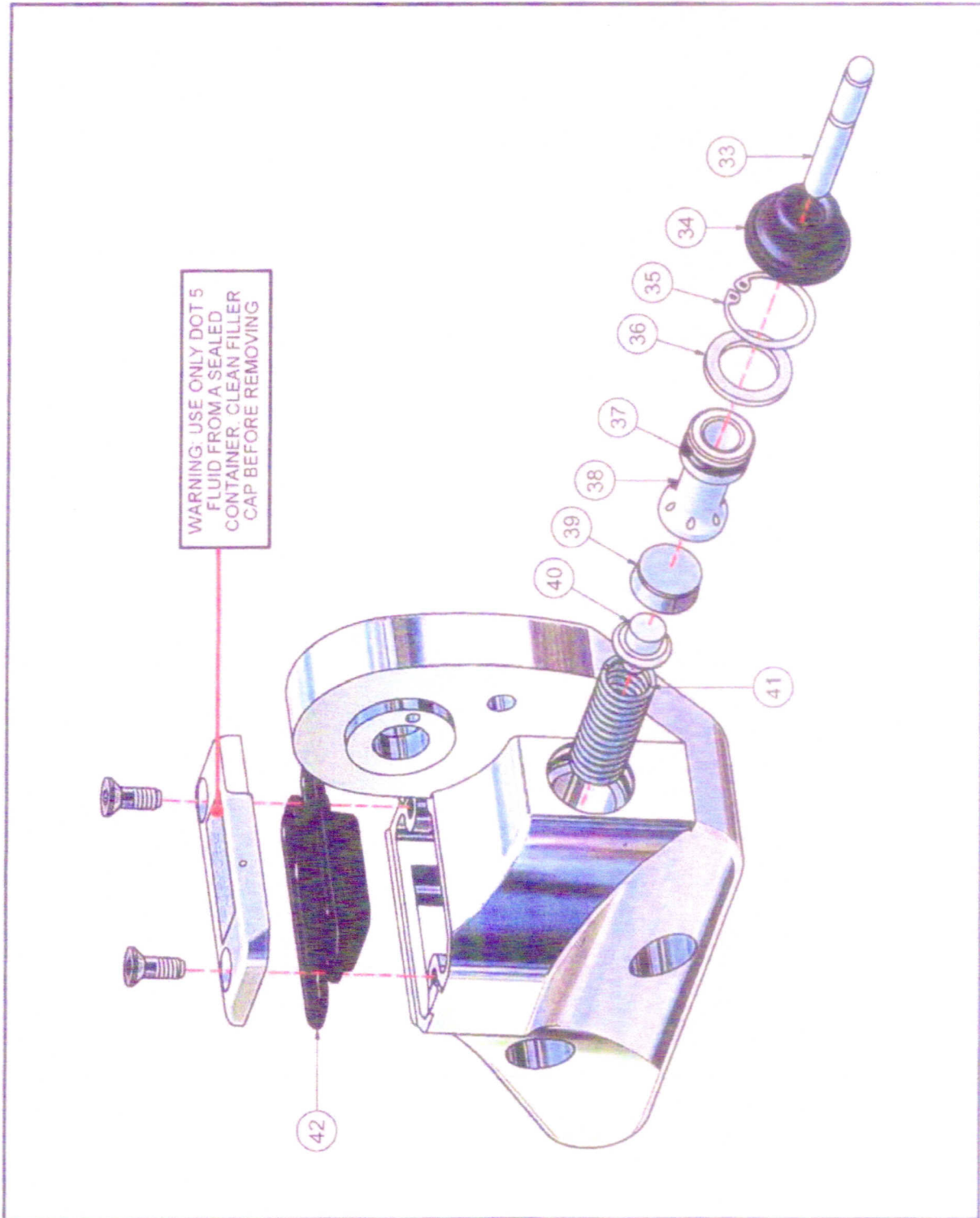
PARTS LIST – FRONT BRAKE ASSEMBLY

ITEM	DESCRIPTION	QTY
1	Pushrod, master cylinder	1
2	Boot, brake pushrod	1
3	Snap ring, internal, 13/16 x 0.042"	1
4	Washer, master cylinder piston retainer	1
5	O-ring, master cylinder piston	1
6	Piston, 5/8" master cylinder control	1
7	Cup, 5/8" master cylinder control	1
8	Spring, follower	1
9	Spring, master cylinder handlebar control	1
10	Gasket, handlebar master cylinder control	1
11	Brake line, front	1
12	3/8-24 banjo screw	1
13	Banjo screw fitting, front	1
14	Washer, crush, 10 mm	2
15	Assembly, front brake caliper	1
16	5/16-18 x 1" SHCS, chrome	2
17	Washer, flat, 3/8" AN, SS, polished	2
18	Shim kit, 3/8"	1 set
19	Caliper piston seal, 1-1/8 x 0.125"	2
20	Piston, 1.125 x 0.625", SS, regular caliper	2
21	Brake pads, 125 x 4R	2
22	Anti-rattle spring, 125 x 4R	1
23	Piston seal, caliper, 1-3/8 x 0.125"	2
24	Piston, 1.375 x 0.635 SS, regular caliper	2
25	Caliper housing, 137 x 4B, inner	1
26	Caliper housing, 137 x 4B, outer	1
27	O-ring, 0.375 x 1/16" caliper	2
28	Cotter pin, 3/32 x 1/2"	1
29	Clevis pin, 1/4 x 1-3/8 x 0.222, chrome	1
30	Bleeder screw, 1/4-28	1
31	SHCS, 5/16-18 x 1", chrome	4
32	Washer, 0.316 x 0.440 x 0.060"	4

TORQUES - BRAKES

DESCRIPTION	ITEM	TORQUE	LOCTITE
Brake line banjo screws	(12)	18 ft•lbs	None
Brake caliper bracket mounting screws (front and rear)	(16, 43)	25 ft•lbs	2760
Brake caliper screws	(31, 59)	25 ft•lbs	2440
Brake switch cable assembly (rear)	(44)	18 ft•lbs	None

FORWARD CONTROL MASTER CYLINDER ASSEMBLY



BIG DOG MOTORCYCLES SERVICE MANUAL

PARTS LIST – REAR BRAKE ASSEMBLY

ITEM	DESCRIPTION	QTY
33	Pushrod, master cylinder	1
34	Boot, brake pushrod	1
35	Snap ring, internal, 13/16 x 0.042"	1
36	Washer, master cylinder piston retainer	1
37	O-ring, master cylinder piston	1
38	Piston, 5/8" master cylinder control	1
39	Cup, 5/8" master cylinder control	1
40	Spring, follower	1
41	Spring, master cylinder, forward control	1
42	Gasket, master cylinder, forward control	1
43	5/16-18 x 1" BHCS, chrome	2
44	Assembly, rear brake switch cable	1
45	Brake line, rear	1
46	Brake line fitting, elbow, rear	1
47	Assembly, rear brake caliper	1
48	Bracket, rear brake caliper assembly	1
49	125 x 4R caliper housing, inner	1
50	125 x 4R caliper housing, outer	1
51	Piston seal, 1-1/4 x 1/8"	4
52	Piston, 1-1/4 x 5/8" SS, regular caliper	4
53	Brake pads, 125 x 4R, EBC, SB101C	2
54	Spring, anti-rattle, 125 x 4R	1
55	O-ring, 3/8 x 1/16"	2
56	Pin, clevis, 1/4 x 1-1/2 x 1-15/32"	1
57	Pin, cotter, 3/32 x 1/2"	1
58	Bleeder screw, 3/8-24	1
59	SHCS, 5/16-18 x 1-1/4"	4
60	Washer, 0.316 x 0.440, x 0.06", steel	4

TORQUES - BRAKES

DESCRIPTION	ITEM	TORQUE	LOCTITE
Brake line banjo screws	(12)	18 ft•lbs	None
Brake caliper bracket mounting screws (front and rear)	(16, 43)	25 ft•lbs	2760
Brake caliper screws	(31, 59)	25 ft•lbs	2440
Brake switch cable assembly (rear)	(44)	18 ft•lbs	None

MASTER CYLINDER REBUILD - REMOVAL AND DISASSEMBLY

1. Drain brake fluid from master cylinder.
2. Remove front brake controls (see **Chapter 3, Controls**).
3. Remove rear brake controls (see **Chapter 3, Controls**).

*NOTE: The following instructions cover both the front and rear brake master cylinders. Callouts reference the handlebar brake master cylinder **only**.*

4. Remove brake lever.
5. Remove master cylinder pushrod (1).
6. Remove brake pushrod boot (2).
7. Remove snap ring (3).
8. Remove the master cylinder piston washer (4).
9. Remove master cylinder O-ring and piston assembly (5, 6).
10. Remove master cylinder control cup (7), spring follower and spring (8, 9).
11. Remove master cylinder piston O-ring (5) from piston (6).

INSPECTION

1. Clean master cylinder reservoir and bore with brake cleaner.
2. Inspect master cylinder bore for pits, burrs or abrasions.

NOTE: Master cylinder bores are roller burnished, which provides a fine grained, work-hardened surface which should last the life of the motorcycle. Big Dog Motorcycles does not recommend honing the master cylinders.

3. Blow compressed air through all openings.

ASSEMBLY

1. Lubricate master cylinder bore with clean brake fluid.
2. Lubricate piston O-ring (5) with brake fluid and install on piston (6).
3. Install spring (9) into bore.
4. Lubricate master cylinder control cup (7) with brake fluid and install spring follower (8) and cup (7) into master cylinder bore.
5. Install piston and piston O-ring assembly into master cylinder bore with O-ring facing outward.
6. Install master cylinder retainer washer (4) and snap ring (3) into bore. Fully seat the snap ring into groove.
7. Install brake pushrod boot (2) into recessed area of master cylinder bore.
8. Lightly lubricate master cylinder pushrod (1) and install through boot (2) and into piston (6).
9. Install brake control lever and install forward control.
10. Install brake line using new washers and tighten to 18 ft•lbs.
11. Bleed brakes following procedures outlined in this chapter.

NOTE: Before assembly, thoroughly clean threads of all removed screws. Thoroughly clean internal threads at all screw locations. Use Loctite products as indicated. Use torque values specified.

BRAKE SYSTEM BLEEDING

1. Remove the two screws attaching the master cylinder cover and remove the cover.
2. Fill the syringe from the Brake Bleed Kit, 263-000004-00, with brake fluid, using **only** DOT 5 brake fluid from a clean, sealed container.
3. Place a 1/4" wrench on the front bleeder screw (30) [3/8" for the rear bleeder screw (58)].
4. Attach appropriate tip on syringe, connect to bleeder screw and loosen.
5. With bleeder screw loosened, inject brake fluid from syringe into brake system, being careful not to overfill, or inject air into the system.
6. After fluid has been injected, tighten the bleeder screw and remove syringe, hose and wrench.

CAUTION: DO NOT REMOVE BRAKE KIT SYSTEM BEFORE TIGHTENING THE BLEEDER SCREW (30, 58), OR AIR WILL BE PUSHED INTO THE SYSTEM AND THE PROCEDURE WILL HAVE TO BE REPEATED.

7. Check the fluid level in the master cylinder and top off as needed.
8. Replace cap on master cylinder and tighten screws securing cap.
9. Use the brake lever for the appropriate system (front or rear), and cycle lever several times to properly seat brake pads. Check for proper lever travel and brake engagement.
10. Thoroughly clean brake fluid from all components.

MASTER CYLINDER FILL PROCEDURE

1. Rotate handlebar until the master cylinder lid is horizontal.
2. Remove the two screws attaching the master cylinder cover and remove the cover (see **Chapter 3, Controls**).
3. Remove master cylinder gasket (10, 42).
4. Check fluid level. Fill as needed using **only** DOT 5 brake fluid from a clean, sealed container. Do not allow fluid to get into the master cylinder cover mounting holes, as clean fluid from holes will look like seepage.
5. Replace gasket (10, 42) and cover. Reinstall cover screws.