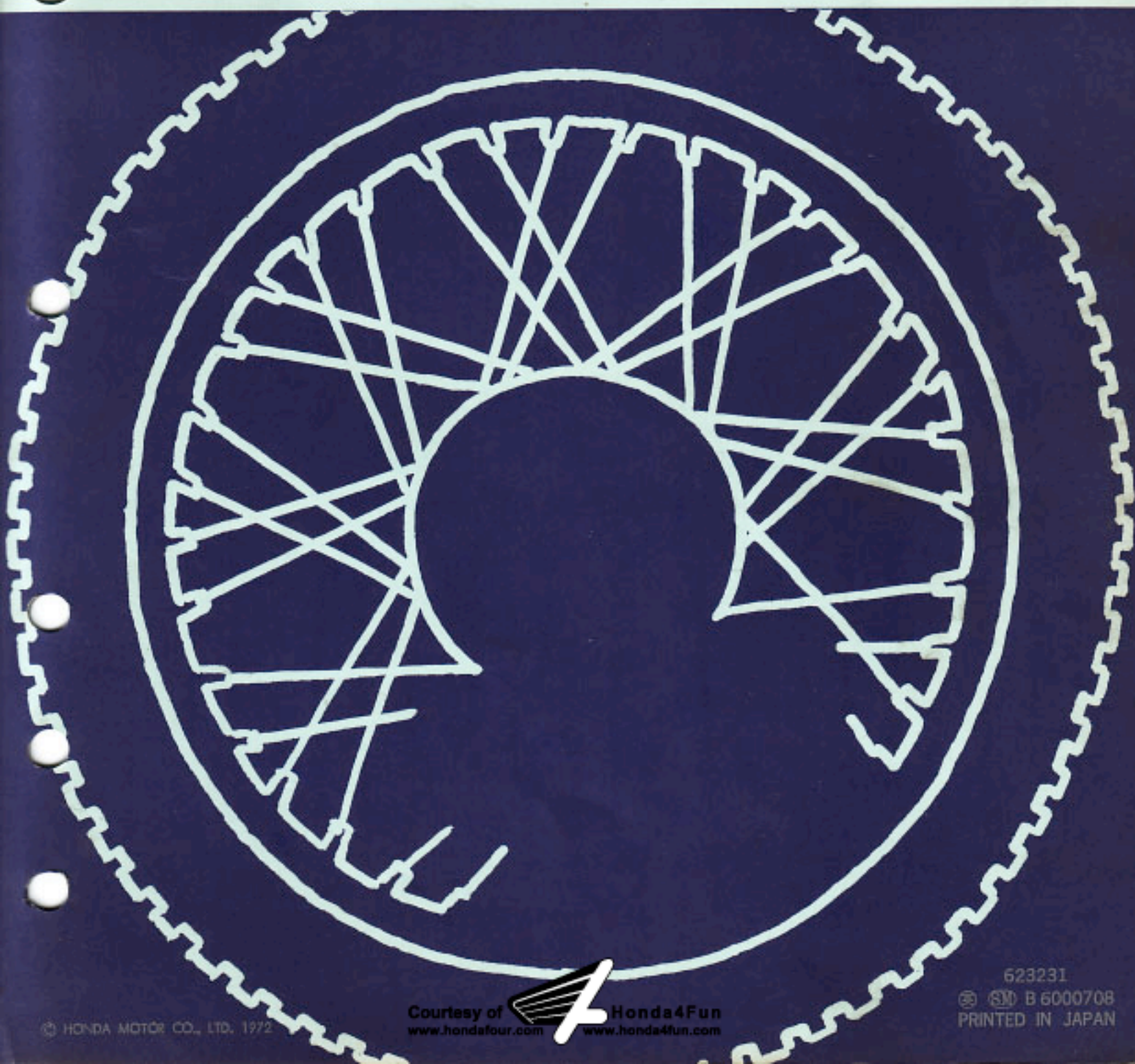


SHOP MANUAL

HONDA CB500



PREFACE

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This Shop Manual details the proper servicing and repairing procedures for mechanics working on the HONDA 500, Model CB500. Carefully reading the complete section before beginning the work and following the steps in the order given will result in better maintenance and repair with less trouble and time consumed.

Always keep the recommended special tools at the work bench when performing repairs. Use only genuine HONDA replacement parts.

Service data for individual parts is consolidated into a single section at the rear of the text, for quick reference.

The descriptions and specifications in this manual are those in effect at the time this manual was approved for printing.

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HONDA MOTOR CO., LTD.

HONDA CB500FOUR

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1. REPAIR PROCEDURE

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1. When performing an overhaul, all the disassembled parts should be separated in their respective groups so that they will not become mixed.
2. Replace all packings, gaskets and cotter pins with new items when reassembling. Always replace any deformed snap rings with new items.
3. Clean all engine parts after disassembly. Coat friction surfaces of metal parts and bearings with oil.
4. When repairing or replacing the parts, use the recommended special tools for better results.
5. Torque all nuts, bolts and screws, starting with those of large diameter, and from inside to outside symmetrically.
6. Refer to torque values shown in the following table.

ENGINE

	Item	Q'ty	Torque values	
			kg-m	ft-lbs
1.	Tappet adjusting nut	8	1.5-1.7	10.8-12.2
2.	Cam sprocket knock bolt, 7x12	2	1.8-2.0	11.5-14.5
3.	Cylinder head nut, 8mm	12	2.0-2.2	14.5-16.6
4.	A. C. generator rotor set bolt	1	4.0-4.2	28.8-30.3
5.	Starting clutch screw, 8x20 cross flat head screw	3	2.0-2.4	14.5-17.3
6.	Upper crankcase bolt, 8x100 hex bolt	2	2.3-2.5	16.6-18.0
7.	Upper crankcase bolt, 8x125 hex bolt	1	2.3-2.5	16.6-18.0
8.	Lower crankcase bolt, 8x100 hex bolt	10	2.3-2.5	16.6-18.0
9.	Connecting rod nut	8	2.0-2.2	14.5-15.9
10.	Oil pump screw, 6x35 cross flat head screw	5	0.8-1.2	5.7-8.6
11.	Clutch filter fixing bolt, 6x45 hex bolt	1	0.8-1.2	5.7-8.6
12.	Spark advancer bolt, 6x35 hex bolt	1	0.8-1.2	5.7-8.6
13.	Tachometer gear holder screw, 6x18 cross flat head screw	1	1.0-1.4	7.2-10.1
14.	Exhaust pipe flange nut, 6mm	8	0.8-1.2	5.7-8.6
15.	Oil pressure switch	1	1.5-2.0	10.8-14.5
16.	Gear shift lever bolt, 6x20 hex bolt	1	0.8-1.0	5.7-7.2
17.	Oil filter center bolt	1	2.7-3.3	19.5-23.8
18.	Spark plug	4	1.2-1.6	8.6-11.6
19.	Oil drain bolt	1	3.5-4.0	25.3-28.9
20.	Clutch spring, 6x20 hex bolt		0.8-1.2	5.7-8.6
21.	Exhaust flange, 6mm nut	8	0.8-1.2	5.7-8.6
22.	Oil filter center bolt	1	2.7-3.3	19.5-23.8
23.	Tappet hole cap	8	1.0-1.4	7.2-10.1
24.	Oil path cap	1	1.0-1.4	7.2-10.1
25.	Gear shift return spring, 8mm bolt	1	2.0-3.0	14.5-21.7
Standard parts				
	Bolt hex, 6mm		0.8-1.2	5.7-8.6
	Bolt hex, 8mm		2.0-2.4	14.5-17.3
	Screw cross, 6mm		0.8-1.2	5.7-8.6

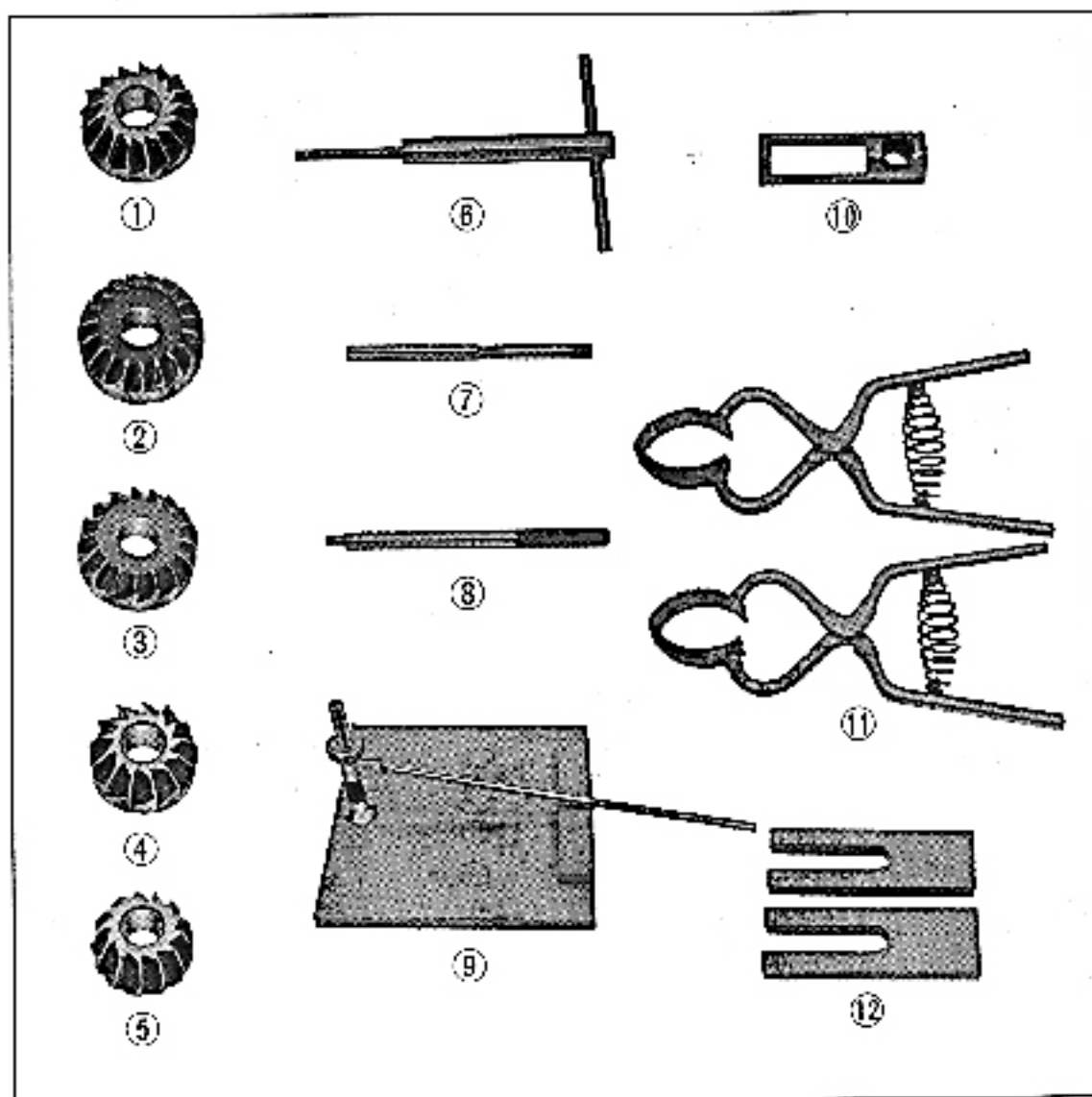
CHASSIS

	Item	Qty	Torque values	
			kg-m	ft-lbs
1.	Rear brake pedal bolt, 8x32 hex bolt	1	1.8-2.5	13.0-18.1
2.	Step bar nut, 12mm	2	5.0-6.0	35.2-43.4
3.	Engine hanger bolt A	5	3.0-4.0	21.7-28.9
4.	Engine hanger plate	6	1.0-2.5	13.0-18.1
5.	Rear fork pivot nut, 14mm	1	5.5-7.0	39.8-50.6
6.	Rear suspension upper nut, 10mm cap nut	2	3.0-4.0	21.7-28.9
7.	Rear suspension lower bolt, 10x32 hex bolt	2	3.0-4.0	21.7-28.9
Front brake				
8.	Oil bolt	3	3.4-4.0	24.6-28.9
9.	Brake stop switch	1	3.4-4.0	24.6-28.9
10.	Front brake disc nut, 8mm	6	1.6-2.3	13.0-16.6
11.	Brake oil joint, 6x28 hex bolt	1	0.8-1.0	5.8-7.2
12.	Brake base joint	1	0.6-1.0	4.3-7.2
13.	Master cylinder bolt, 6x28 hex bolt	2	0.8-1.0	5.7-7.2
14.	Caliper set bolt	2	3.4-4.0	24.6-28.9
15.	Holder joint bolt, 8x40, 8x50 hex bolt	3	1.8-2.3	13.0-16.6
16.	Front fork bolt	2	5.5-6.5	39.8-47.0
17.	Steering stem nut	1	8.0-12.0	57.8-86.7
18.	Steering stem bolt, 10x40 hex bolt	2	3.0-4.0	21.7-28.9
19.	Rear wheel axle nut	1	8.0-10.0	57.8-72.3
20.	Front axle holder nut, 8mm	4	1.8-2.3	13.0-16.6
21.	Handlebar holder bolt, 8x40 hex bolt	4	1.8-2.3	13.0-16.6
22.	Front wheel axle nut	1	5.5-6.5	39.8-47.0
23.	Rear brake stopper arm bolt and nut, 8mm	1	1.6-2.3	13.0-16.6
24.	Fork top bridge bolt, 6x58 hex bolt	2	1.8-2.3	13.0-16.6
25.	Drive chain adjuster bolt and nut, 8mm hex bolt	2	1.5-2.0	10.8-14.5
26.	Drive chain adjuster stopper bolt	2	1.8-2.3	13.0-16.6
27.	Main stand pivot pipe bolt, 8x40 hex bolt	2	1.5-2.0	10.8-14.5
28.	Pillion step nut, 12mm	2	4.5-6.0	32.5-43.4
29.	Caliper joint pin	1	1.8-3.6	13.0-18.1
30.	Bottom bridge	2	3.0-4.0	21.7-28.9
31.	Final driven sprocket	4	3.0-4.0	21.7-28.9
Standard parts				
Bolt hex. 6mm			0.6-1.2	5.8-8.7
Bolt hex. 8mm			1.5-2.3	13.8-16.6

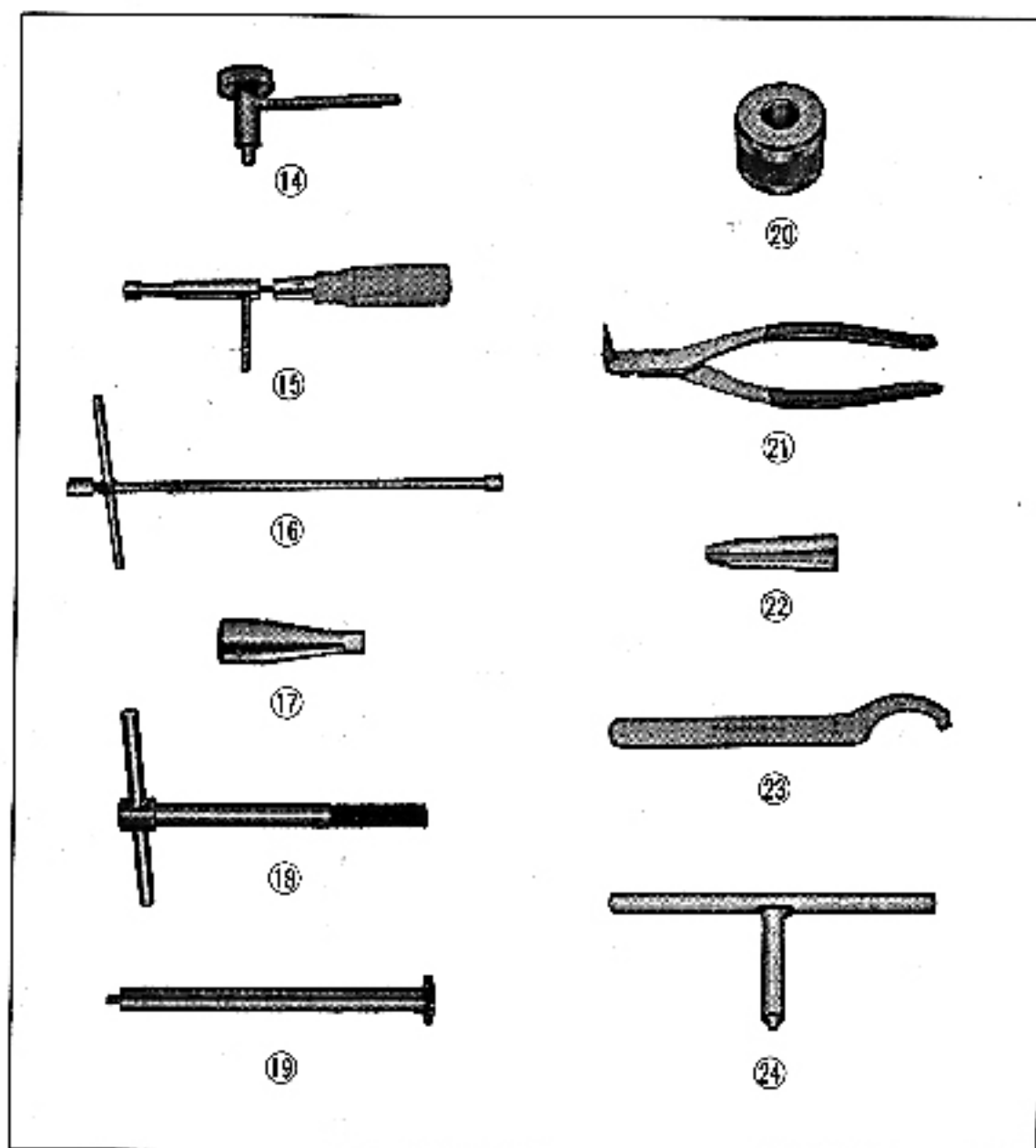
2. SPECIAL TOOLS

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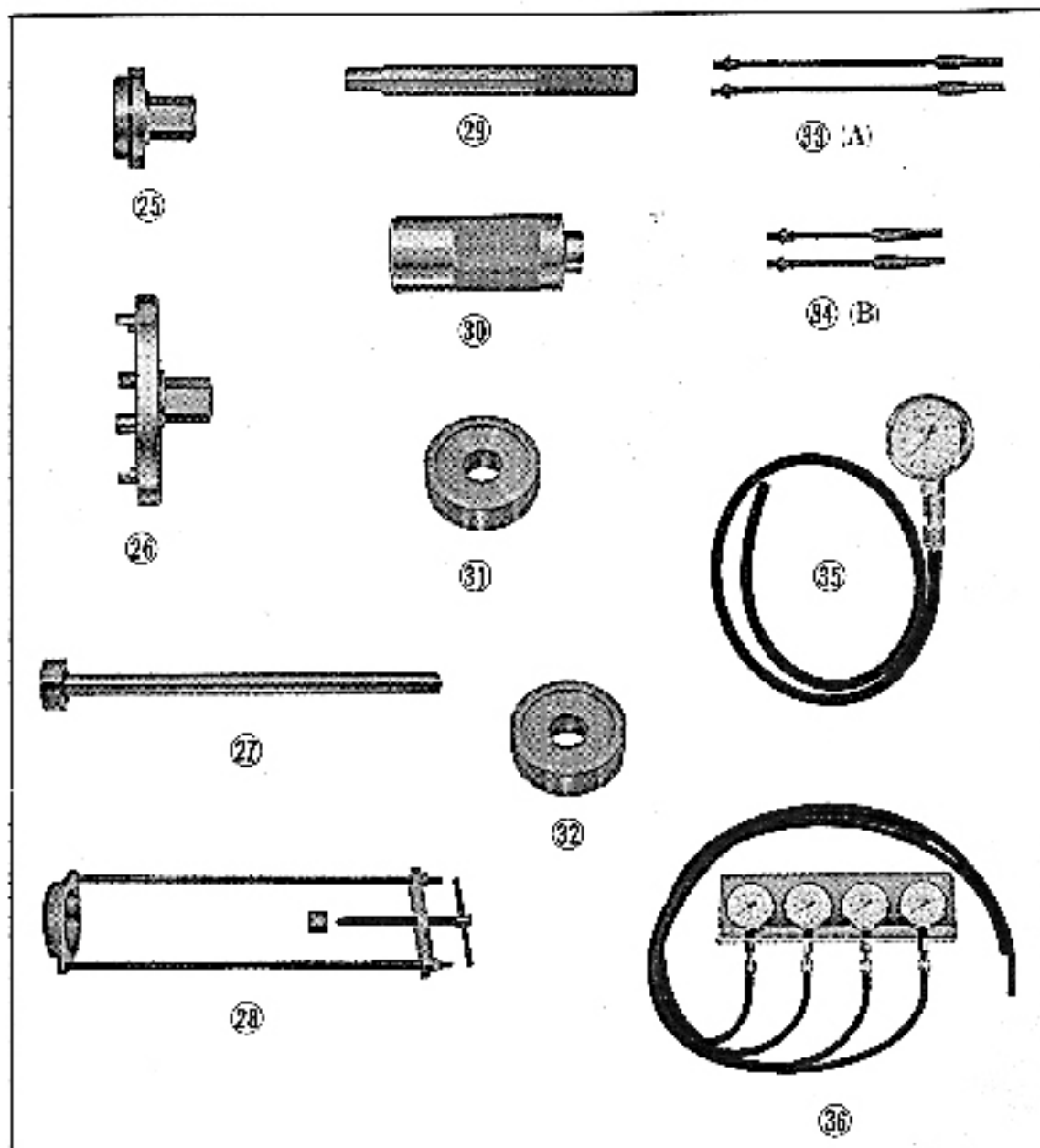
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Ref. No.	Tool No.	Description
	07000-32301	Special Tool Set for CB 500
①	07001-32301	Valve seat 90° cutter
②	07003-32301	Inlet valve seat top cutter
③	07004-32301	Exhaust valve seat top cutter
④	07005-32301	Inlet valve seat interior cutter
⑤	07006-32301	Exhaust valve seat interior cutter
⑥	07007-32301	Valve seat cutter holder
⑦	07008-32301	Valve guide reamer
⑧	07046-32301	Valve guide driving and removing tool
⑨	07031-30011	Valve spring compressor
⑩	07031-92301	Valve spring compressor attachment
⑪	07032-32301	Piston ring compressor (2 pcs)
⑫	07033-55101	Piston base (2 pcs)
—	07001-32301	Valve seat cutter set
—	07997-05101	Valve seat cutter case



Ref. No.	Tool No.	Description
⑭	07061-32301	Valve tappet lock nut wrench
⑮	07087-32301	Carburetor synchronization adjusting wrench
⑯	07078-32301	12 mm cylinder head nut wrench
⑰	07094-32301	Spark plug wrench
⑱	07011-21601	AC generator rotor puller
㉑	07009-32301	Sliding hammer shaft (primary shaft remover)
㉒	07009-32305	Sliding weight
㉓	07073-32301	Master cylinder snap ring pliers
㉔	07043-32301	Piston cup guide
㉕	07072-20001	48 mm steering stem top thread wrench
㉖	07085-32301	6 mm fork bottom case bolt wrench
—	07043-32305	Master cylinder piston guide



Ref. No.	Tool No.	Description
—	07028-32301	Bearing retainer wrench A (front)
—	07028-32305	Bearing retainer wrench B (rear)
—	07034-32301	Front fork assembling bar
—	07035-30001	Rear cushion disassembling and assembling tool
—	07048-32301	Bearing driver A
—	07048-32320	Bearing driver B
—	07048-33305	Bearing driver attachment A
—	07048-32315	Bearing driver attachment B
—	07068-30307	Vacuum gauge attachment (A) (2 pcs)
—	07068-30310	Vacuum gauge attachment (B) (2 pcs)
—	07064-30312	Vacuum gauge (1 pc)
—	07064-30301	Vacuum gauge set
—	07793-29201	Tool case
—	07065-30001	Pressure gauge
—	07065-30001	Oil pressure gauge attachment

- Remove any brake fluid which may become spilled on the painted surface, rubber parts, and meter as it will produce chemical action and cause damage to these parts.

Brake Pad Inspection

Replace both pads A and B with new one when either of the pads is worn to the red serviceable limit mark around the pad.

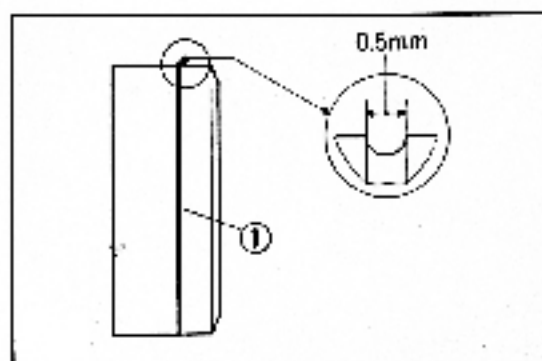


Fig. 31 ① Red line

Brake Bleeding

Bleed brakes to remove the air from the brake system when the brake lever action feels spongy.

- Fill the reservoir of the master cylinder with brake fluid to the height of the level line.
- Connect a hose to the bleeder on the caliper and prepare a vessel to catch the fluid.
- Pump the brake lever several times until pressure can be felt. With the brake lever held against the pressure, open the bleeder about half a turn, and when the lever bottoms against the handle bar, immediately close the bleeder. Repeat this operation several times until air bubbles no longer flow out with the fluid from the bleeder hose.

Note:

The fluid in the reservoir must be replenished and not be allowed to become exhausted during the bleeding operation.

- The reservoir must be capped when pumping the brake lever.

Rear Brake Adjustment

- Normal play at the end of the brake pedal is 2-3 cm ($\frac{3}{4}$ ~ $1\frac{1}{16}$ in.).

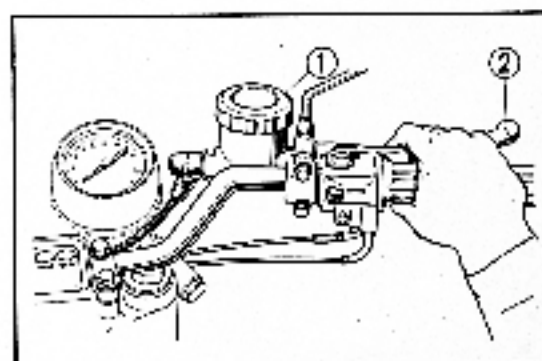


Fig. 32 ① Brake fluid reservoir ② Brake lever

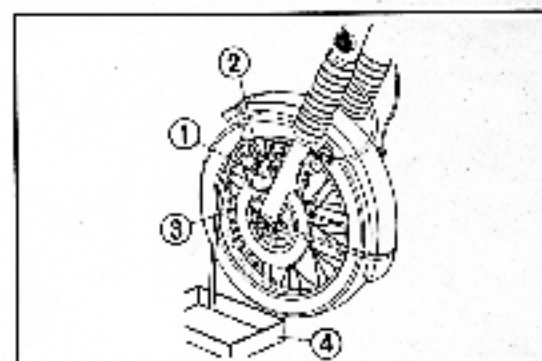


Fig. 33 ① Caliper ② Bleeder ③ Bleeder hose ④ Vessel

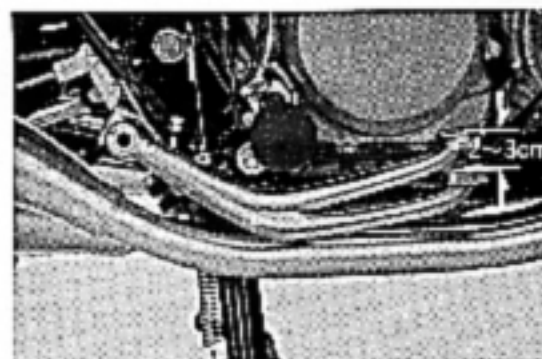


Fig. 34