YAMAHA

XS500C

Supplementary Service Manual

1J3-28197-10

NOTICE

This manual has been written by Yamaha Motor Company for use by Authorized Yamaha Dealers and their qualified mechanics. In light of this purpose it has been assumed that certain basic mechanical precepts and procedures inherent to our product are already known and understood by the reader.
Without such basic knowledge, repairs or service to this model may reender the machine unsafe, and for this reason we must advise that all repairs and/or service be performed by an Authorized Yamaha Dealer who is in possession of the requisite basic product knowledge.
Other information is produced by the U.S. distributor, Yamaha International Corporation and is necessary to provide total technical coverage regarding the product.

* *

The Research, Engineering, and Overseas Service Departments of Yamaha are continually striving to further improve all models manufactured by the company. Modifications are therefore inevitable and changes in specifications or procedures will be forwarded to all Authorized Yamaha Dealers and will, where applicable, appear in future editions of this manual.

* *

YAMAHA
1976 XS500C
SUPPLEMENTARY SERVICE MANUAL
1st Edition FEB 1976
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FOREWORD

On the XS500C, both front and rear wheels are equipped with a disc brake and the aluminum rims are without spokes. The XS500C features aluminum wheels (spokeless) and disc brakes for both front and rear wheels. For additional riding safety, the flasher lights are provided with a self cancelling system.
These features and specifications pertaining to the XS500C model is covered within this Supplementary Service Manual.
For complete information on service procedures it is necessary to use this supplement together with the Service Manual for model XS500B.

XS 500C

OVERSEAS SERVICE DEPT.
YAMAHA MOTOR CO., LTD.

(PAGE 3)

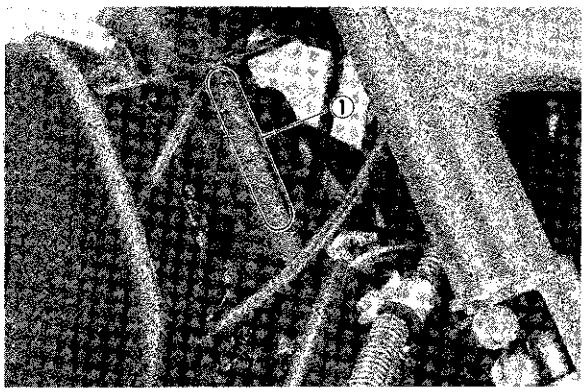
1-1. MACHINE IDENTIFICATION

The frame serial number is located on the right-hand side of the headstock assembly. The first three digits identify the model, this is followed by a dash. The remaining digits identify the production number of the unit. Yamaha production usually begins at 000101.

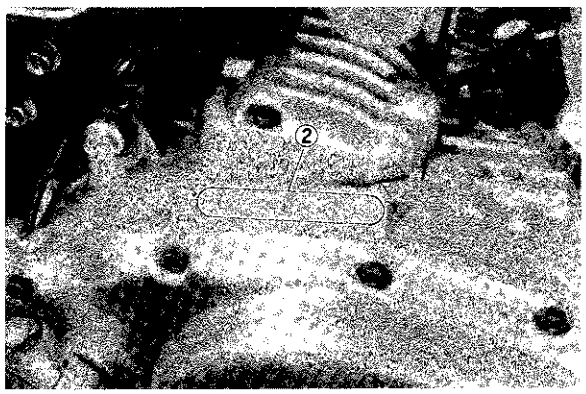
The engine serail number is located on a raised boss on the upper rear, right-hand side of the engine. Engine identification follows the same code as frame identification.

Normally, both serial numbers are identical: however, on occasion they may be two or three numbers off.

Starting Serail Number	
XS500C	1J3-000101



1. Frame serial number



2. Engine serial number

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1-2. FEATURES

A. Frame

1. Disc brake
   The disc brake features automatic adjustment as the pads wear. The pad is provided with a wear indicator so a glance tells you the condition of the brake without disassembly.
2. Cast aluminum wheels
   This model is equipped with new cast aluminum wheels which require no adjustment or tightening of spokes.
3. Rigid frame
   The high tensile strength steel tubing, double cradle frame is nearly identical to the frame used for road racers. It is light but very and provides excellent stability at high speeds.

B. Electrical

1. Flasher cancelling system
   This system automatically turns off the flasher lights depending on a lapse of certain time or certain distance travelled after flasher lights are applied. This is a very important device for the rider's safety.

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1-3. GENERAL SPECIFICATIONS

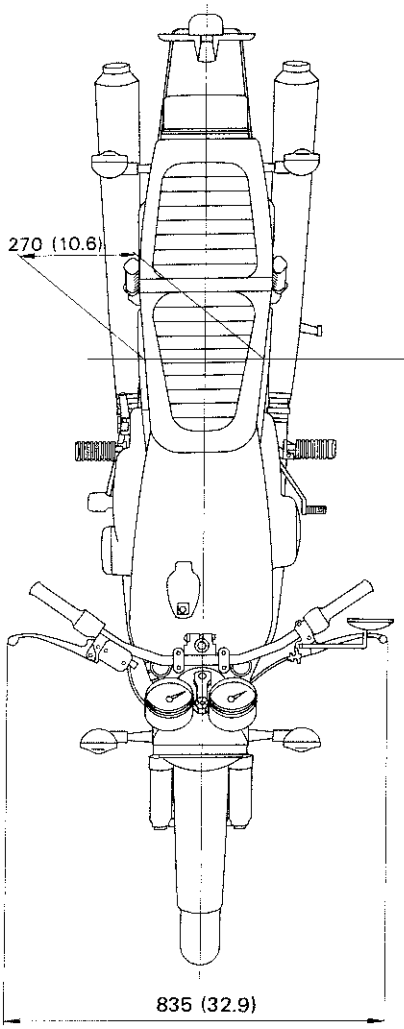
Dimensions:	
Overall length	2,100 mm (82.7 in)
Overall width	835 mm (32.9 in)
Overall height	1,120 mm (44.1 in)
Wheelbase	1,400 mm (55.1 in)
Min. ground clearance	192 kg (423 lb)
Performance:	
Max. speed	180 km/h (110 mph plus)
Fuel consumi/US.gal	35 km/lit/60 km/h
(on paved level road)	(82.3 mi/U.S. gal./37m.p.h.)
Climbing ability	26°
Minimum turning radius	2,500 mm (98.4 in)
Braking distance	14 m/50 km/h (46 ft/31 mph)
Engine:	
Type	4-cycle, air-cooled gasoline, DOHC, twin
Lubrication system	Two in parallel, forward inclined
Bore and stroke	73 mm × 59.6 mm (2.874 in × 2.346 in) × 2
Displacement	498 cc (30.39 cu.in)
Compression ratio	8.5 : 1
Valve clearance (cold)	IN. 0.15 ~ 0.20 mm (0.0059 ~ 0.0080 in)
	EX. 0.20 ~ 0.25 mm (0.0080 ~ 0.0098 in)
Piston clearance	0.050 ~ 0.055 mm (0.00197 ~ 0.00216 in)
Starting system	Electric and primary kick starter
Carburetor:	
Type	BS38 × 2
Manufacturer	MIKUNI
Main jet	#122.5
Needle jet	Y-6
Pilot fuel jet	#30
Starter jet	#45
Jet needle	4J24-3
Float level	25 ±2.5 mm (0.984 ±0.099 in)
Air screw	1-1/4 ±1/2
Air filter:	Dry foam robber
Clutch:	
Type	Wet, multi-disc
Primary drive:	
Type	Gear
Reduction ratio (gear and total)	79/26 3.038
Transmission:	
Type	Constant mesh, 5-speed forward
1st	35/15 2.333
2nd	31/20 1.550
3rd	31/26 1.192
4th	28/29 0.965
5th	25/31 0.806
Secondary reduction system:	
Type	Chain
Secondary reduction ratio:	42/16 2.625

Chassis:	
Frame type	Steel tubing, double-cradle
Fuel tank capacity	15 lit (4.0 US. gal)
Suspension system, rear	Swing arm
Caster	62°30′
Trail	117 mm (4.6 in)
Front tire: Size	3.25H 19—4PR
Rear tire: Size	4.00H 18—4PR
Front brake type	Disc brake
Rear brake type	Disc brake
Generator:	
System	A.C. generator
Model	LD115-04
Manufacturer	HITACHI
Rectifier:	
Model	DS10TEY or DE3804
Manufacturer	MITSUBISHI or STANLEY
Regulator:	
Model	TR1Z-31
Manufacturer	HITACHI
No load voltage rate	14.5V ±0.3V
Ignition system:	
Type	Battery ignition
Ignition timing (Advanced)	B.T.D.C. 10° (33°)
Breaker point gap	0.30 ~ 0.40 mm (0.012 ~ 0.018 in)
Spark plug: Manufacturer	NGK
Heat range	D-8ES-L
Ignition coil: Manufacturer	HITACHI
Type	CM11-52A
Battery:	
Model	12N 14-3A
Manufacturer	GS
Capacity	12V, 14AH
Flasher self canceling unit:	
Model	EVH-AC518
Voltage	DC 9V ~ 16V
Lighting system:	
Headlight	12V, 50W/40W
Taillight	12V, 8W
Stoplight	12V, 27W
Neutral light	12V, 3W
Flasher indicator	12V, 3W
Flasher light	12V, 27W
High beam indicator	12V, 3W
Speddometer light	12V, 3W
Tachometer light	12V, 3W
Oil pressure light	12V, 3W
Licence light	12V, 8W

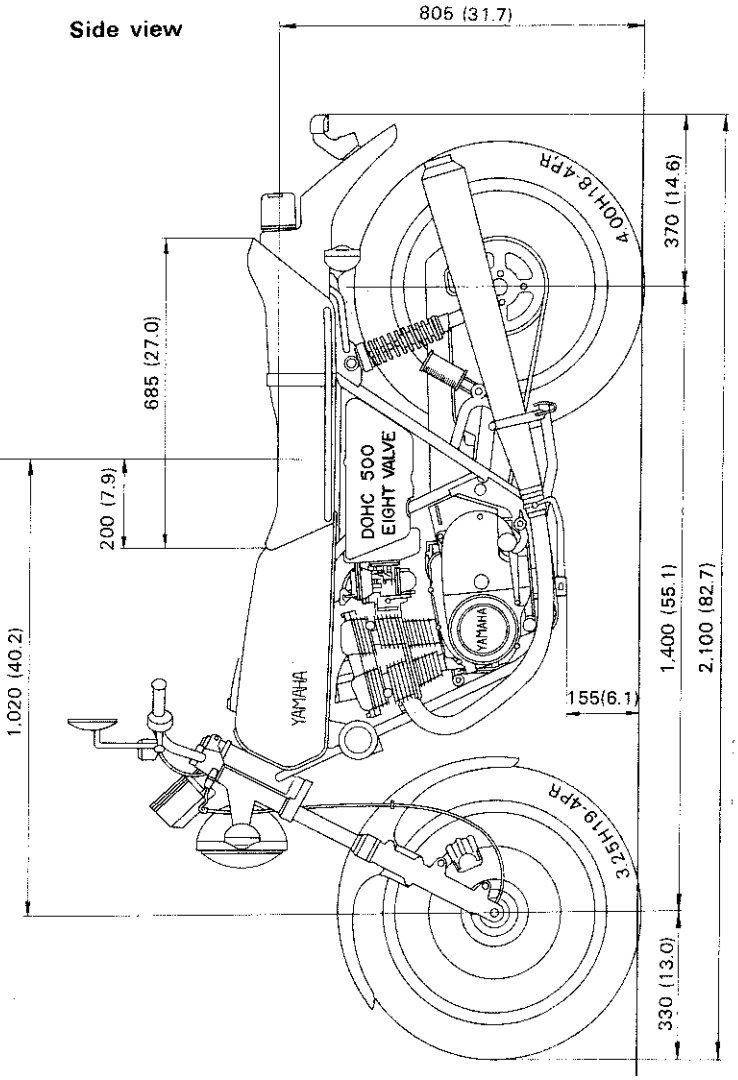
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1-4. EXTERNAL VIEW

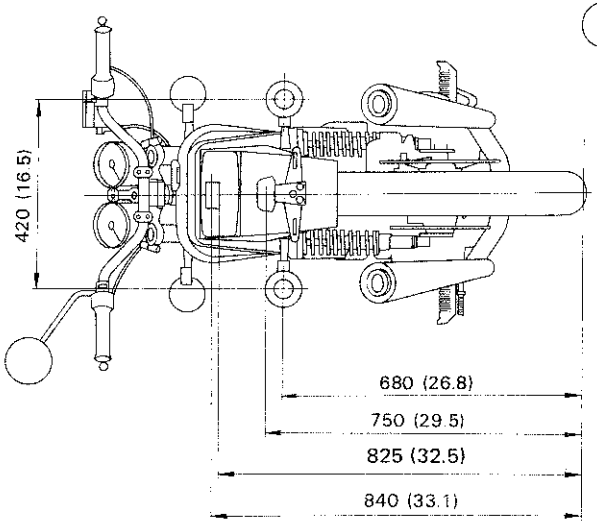
Unit: mm(in.)

Top view

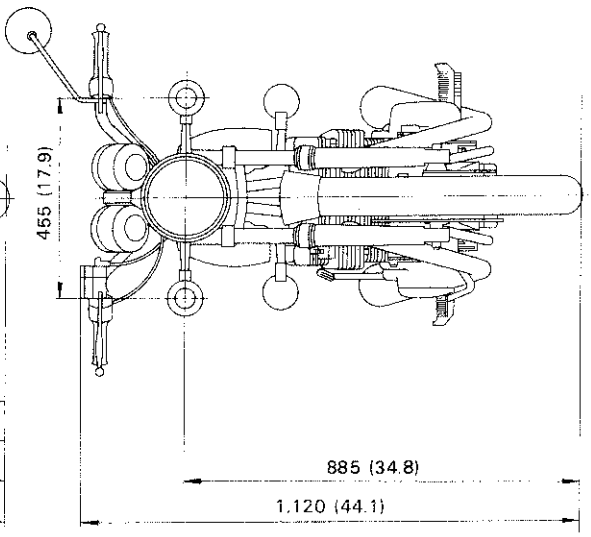


Side view





Rear view



Front view

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1-5. PERIODIC MAINTENANCE INTERVALS

Item	Remarks	Initial km(mile)				Thereafter every km(mile)	
		400 (250)	800 (500)	16,00 (1,000)	3,200 (2,000)	1,600 (1,000)	3,200 (2,000)
* Brake system (Complete)	Check/Adjust as required, repair as required		○	○	○		○
* Clutch	Check/Adjust as required		○	○	○		○
* Battery	Top-Off/Check spec. gravity as required 1/8W monthly or	○	○	○		○	
* Spark plug(s)	Inspect/Clean or replace as required	○	○	○		○	
* Wheels and tires	Pressure/Runout	○	○	○		○	
* Fittings and fasteners	Tighten before each trip and/or	○	○	○		○	
* Drive chain	Tension/Alignment (See "Service notes")	○	○	○		○	
* Engine oil level	Unit level or replace/Engine warm	○		○	○		○
Air filter	Cleaning (See "Service notes")				○		○
* Fuel petcock(s)	Clean/Flush tank as required	○		○	○		○
Ignition timing	Adjust/Clean or replace parts as required		○	○	○		○
Carburetor adjustment	Check operation/Synch./Fittings		○	○	○		○
Carburetor overhaul	Clean/Repair as required/ Refit/Adjust						6,400 (4,000)
Cylinder compression	Preventive maintenance check		○	○	○		○
Oil filter element	Replace	○			○		6,400 (4,000)
Valves	Adjust/Regrind per tests as required			○	○		○
Balancer chain	Adjust	○			○		○

* indicates pre-operational check items.

Service notes:

#1. DRIVE CHAIN: In addition to tension and alignment, chain must be lubricated every 300 ~ 400 km (200 ~ 250 mi). If unit is subjected to extremely hard usage, such as racing or dirt riding, chain must be checked constantly. See "Lubrication intervals" for additional details.

#2. AIR FILTER: Must be clean at all times to function properly.
Remove and clean filter at least once per month or every 3,200 km (2,000 mi) more often if possible.

NOTE:
If unit is subjected to extremely hard usage, such as dirt riding, etc., clean filter daily.

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1-6. LUBRICATION INTERVALS

Item	Remarks	Type	Initial km (mile)				Thereafter every km (mile)		
			400 (250)	800 (500)	1,600 (1,000)	3,200 (2,000)	1,600 (1,000)	3,200 (2,000)	6,400 (4,000)
Engine oil	Replace/Warm engine before draining	1. Yamalube 4 cycle oil or SAE20W/"SE" motor oil (more than 15°C, 59°F) 2. SAE 10W/30 "SE" motor oil (below 15°C, 59°F)	○	Check	Check	○	Check	○	
Drive chain	Remove/Clean/Lube/ Adjust	YAMAHA CHAIN/CABLE LUBE or SAE 10/30 motor oil (See "NOTE")				○		○	
Control/Meter Cable	Apply thoroughly	YAMAHA CHAIN/CABLE LUBE or SAE 10W/30 motor oil			○	○		○	
Throttle Grip/ Housing	Apply lightly	Lithium base grease				○		○	
Speedometer gear housing	Inspect thoroughly/ moderately	Lithium base grease				○			○
Rear arm pivot shaft	Apply grease fully	Standard chassis lube grease				○		○	
Brake pedal shaft	Apply lightly	Lithium base grease				○		○	
Change pedal shaft	Apply lightly	Lithium base grease				○		○	
Stand shaft pivot(s)	Apply lightly	Lithium base grease				○		○	
Front forks	Drain completely-Check specifications	SAE 10W/30 motor oil		Check		○		Check	○
Steering ball race(s)	Inspect thoroughly/ Pack moderately	Medium-weight wheel bearing grease				○			○
Point cam lubrication wicks	Apply very lightly	Light-weight machine oil				○			○
Hydraulic brake fluid reserve	Use new fluid only—yearly or.....	DOT No. 3 Brake fluid	Check		Check		Check		12,800 (8,000)
Wheel bearings	Do not over-pack	Medium-weight wheel bearing grease				○			○

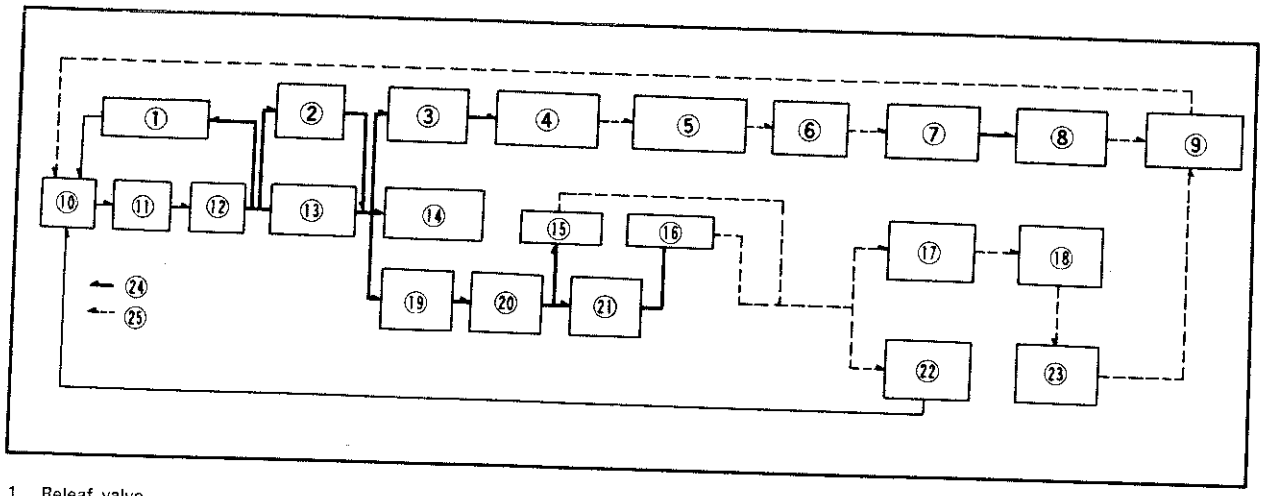
NOTE:

Drive chain must be lubricated every 300 ~ 400 km (200 ~ 250 mi). If unit is subjected to extremely hard usage, chain must be inspected constantly and serviced as required.

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2-3. WET SUMP LUBRICATION SYSTEM

OIL CIRCULATION



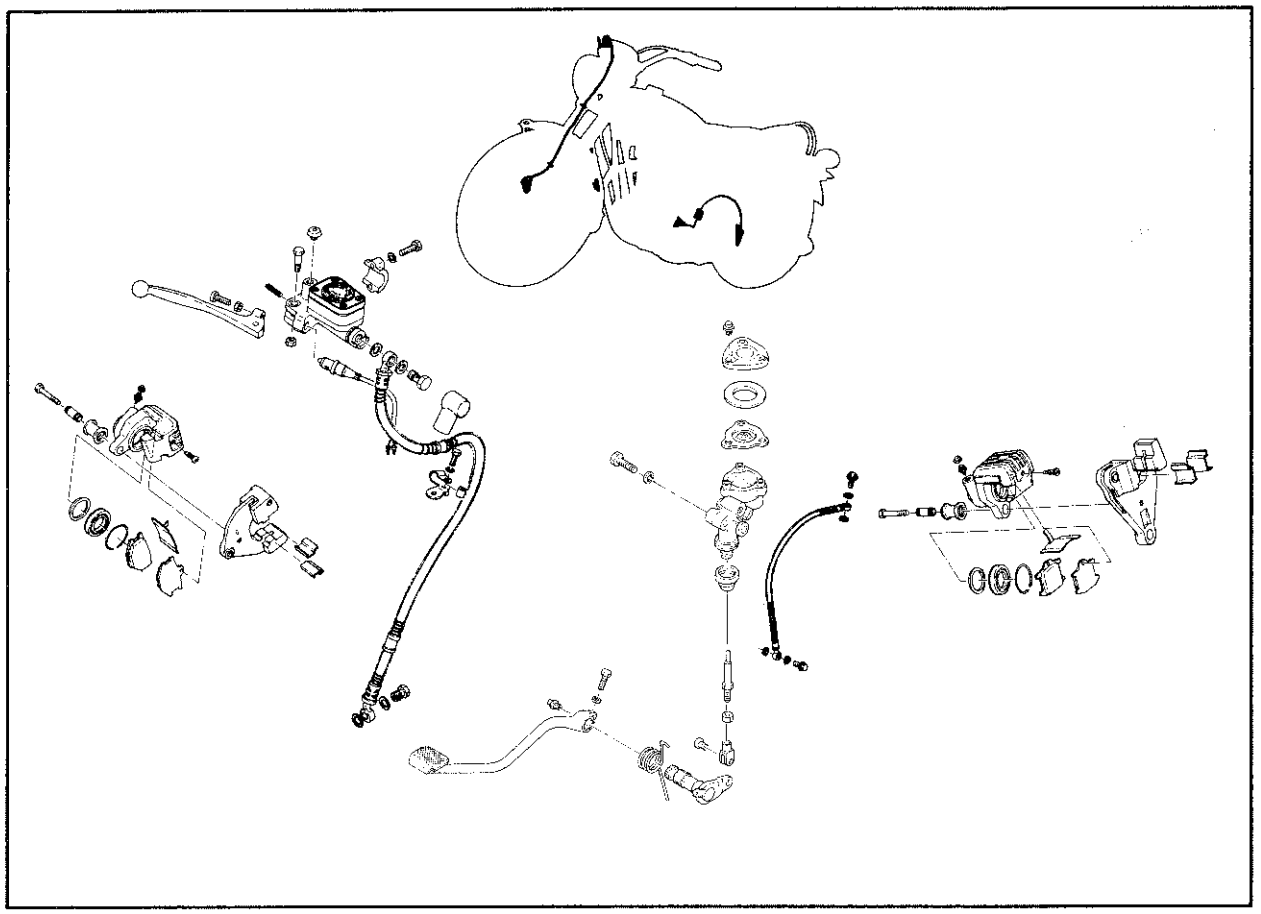
1. Releaf valve
2. Bypass valve
3. Crankshaft bearing
4. Connecting rod bearing
5. Cylinder wall piston
6. Crank chamber
7. Scavenger pump
8. Tachometer gear
9. Transmission
10. Oil pan
11. Oil strainer
12. Suction pump
13. Throw a way oil filter
14. Oil pressure warning switch
15. Rocker arm
16. Rocker arm
17. Cam chain tunnel
18. Crankcase cover (R)
19. Cylinder head
20. Camshaft IN
21. Camshaft EX
22. Generator chamber
23. Clutch
24. Pressure feed
25. Splash

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2-8. DISC BRAKE

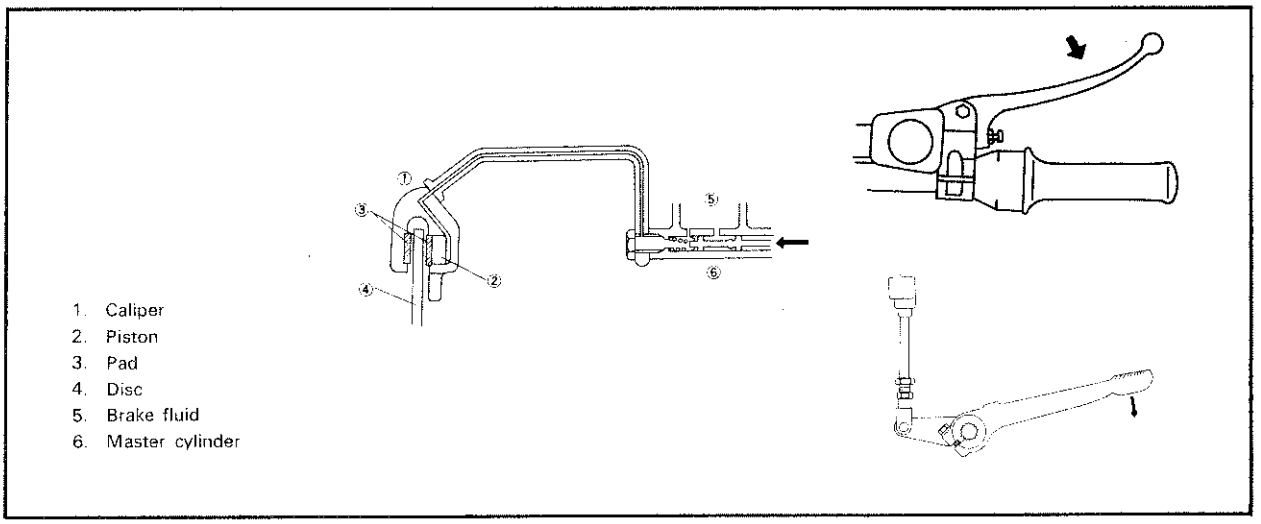
A. Construction

The floating-caliper disc (with a single piston) is actuated by hydraulic pressure back of the piston. This forces the pad against the disc. As the same time, the pressure of the pad against the disc causes the caliper to pivot inward so that the fixed brake shoe on the opposite pad is also brought into contact with the other pad of the disc. The XS500C uses this floating-caliper disc brake in the front and rear wheels.

The master cylinder is connected to the caliper by a brake hose.



B. Operation

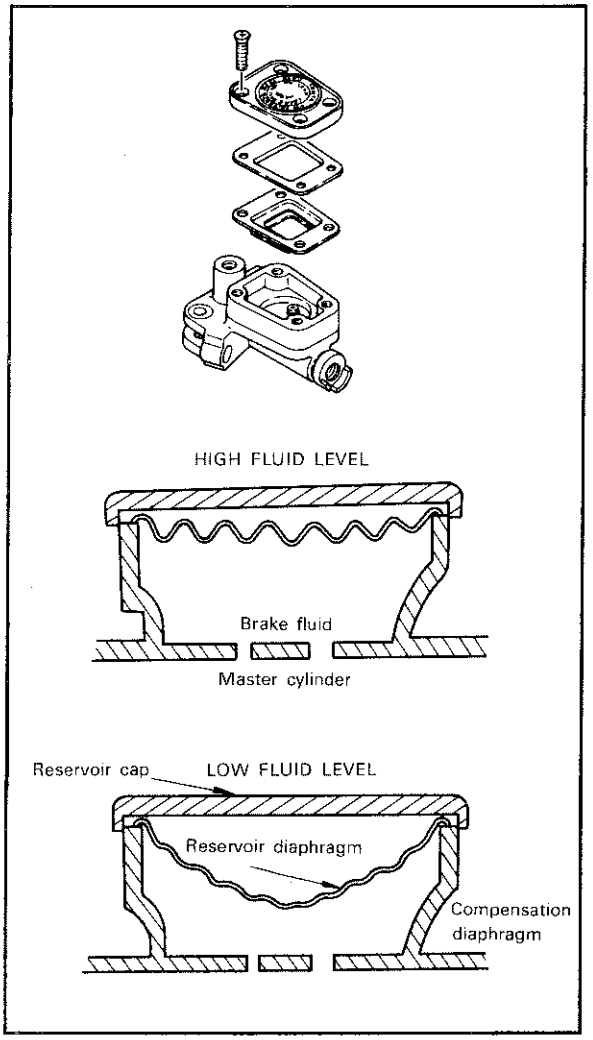


D. Master cylinder

The master cylinder piston is linked to the brake lever or brake pedal. When the brake lever or brake pedal is squeezed, the piston forces the brake fluid through the hose to the calipers.

1. Reservoir tank

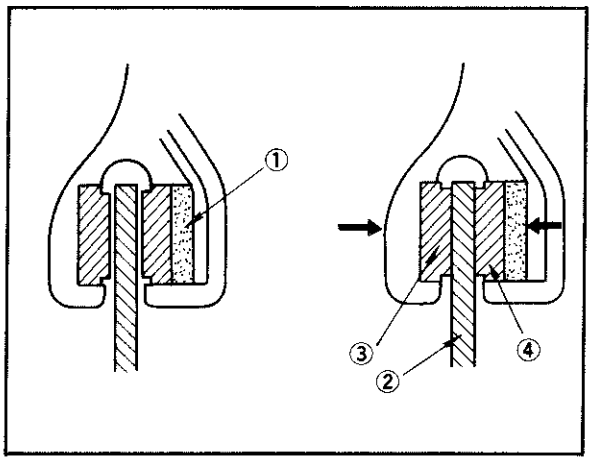
   As wear on the brake pads increases, the amount of brake fluid must be increased to maintain proper hydraulic pressure. The reservoir tank supplies this fluid (tank capacity is approximately 24 cc). To prevent air from entering the brake line when the brake fluid level lowers, especially on a rough road or in an inclined position, a compensating diaphragm is provided for the reservoir tank.



2. Caliper and pads

   The hydraulic pressure in the caliper causes the piston (of a single-caliepr type disc beake) to force the pad (1) against the disc.

   The caliper is held by the caliper holder, and when the pad (1) is moved inward, the fixed pad (2) on the opposite side is also moved toward the disc, and thus the disc is gripped by these two pads.



1. Piston
2. Disc
3. Pad (2)
4. Pad (1)

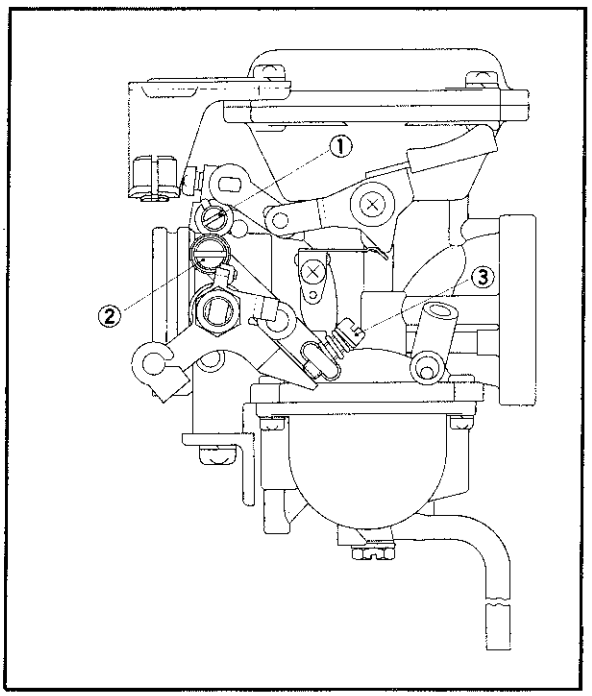
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3-1-4. CARBURETOR ADJUSTMENTS

If carburetor adjustments are not correct the mixture will be either on the sick spark plugs can become wet and oily, if lean, the engine can over heat, thus causing engine failures to keep the engine in top operating condition periodic is required.

A. Idle-speed adjustment

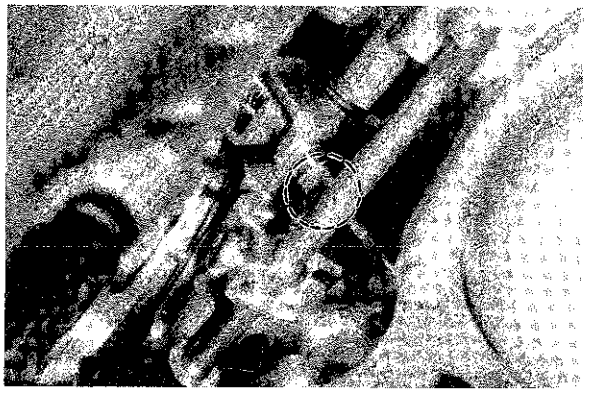
1. Before making an idle-speed adjustment, warm up the engine.
2. Make sure the throttle cable is released.
3. Install the vacuum gauge. To install, first remove the synchronization vacuum hole screws (for both carburetors), and install the vacuum gauge attachment into the holes, then install the vacuum gauge.



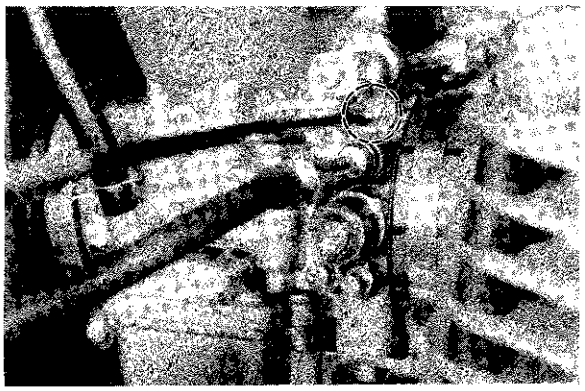
1. Pilot screw
2. Vacuum hole screw
3. Throttle stop screw



4. Start the engine, tighten the throttle stop screws so that the engine runs faster (about 1,500 rpm).
5. Turn the throttle valve synchronization screws so that the vacuum levels in both cylinders are about the same. (To access to the synchronization screws, open the rider's seat, and insert a screwdriver into the hole in the center of the plate between the carburetors.)



6. Adjust the engine speed to 1,200 rpm by turning the throttle stop screw, and adjust the concentration of CO (carbon monoxide) to 3% by turning the pilot screw. (A 1/8 turn of the pilot screw changes CO concentration by about 1%.)
   Repeat the operations in 5. and 6. above two or three times.
   To measure CO concentration, connect a hose to the muffler tail, and insert the probe into the hose more than 60 cm. (23.6 in).



If no measurement of CO concentration is required, turn both pilot screws so that the engine idles faster, and tighten them further about 1/4 turn. Then adjust the engine speed to 1,200 rpm by turning the throttle stop screw. (The idle limiter can be turned 120° at a maximum.)

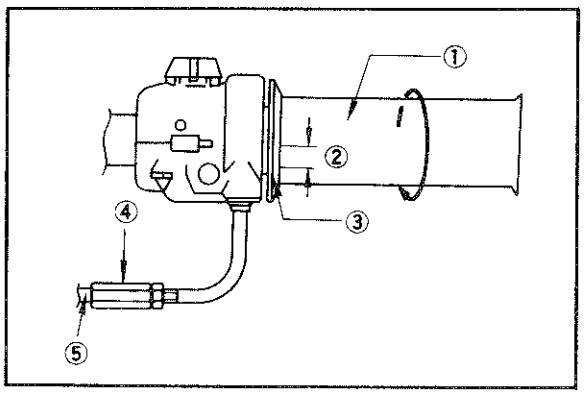
Vacuum gauge standard pressure:
15 ~ 20 cmHg at 1,200 rpm
Difference in boost between the cylinders should be 0

NOTE:

1) If the vacuum gauge needle deflects excessively, make the damper tight by tightening the serration. If the damper is too effective, the gauge readings will be incorrect, showing a rather low valve. Both dampers should be so adjusted that the both needles show the same degree of deflection.
2) When both vacuum gauge needles deflect evenly and the readings are the same, they are considered to be synchronized.
3) If the gauge readings are below 15 cmHg, check the ignition timing, tappet clearance, compression pressure and spark plugs.
4) After adjustment, firmly tighten the vacuum synchronizing screw. (Make sure that no air is leaking.)

B. Throttle wire adjustment

1. Check play in turning direction of throttle grip. The turning play must be in the range of 5 ~ 10 mm (0.2 ~ 0.39 in) at grip flange.
   (Measuring point is optional.)
2. If the turning play exceeds 10 mm (0.39 in) adjust with adjusting nut on throttle wire.



1. Throttle grip
2. Turning play
3. Grip flange
4. Adjusting nut
5. Throttle wire

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3-2-8. Disc brake (Rear) — Adjustment and inspection

The XS500C uses disc brakes and spokeless rims for both front and rear wheels. The adjustment and inspection of rear disc brake and aluminum wheels are detailed below:

1. Rear dis brake

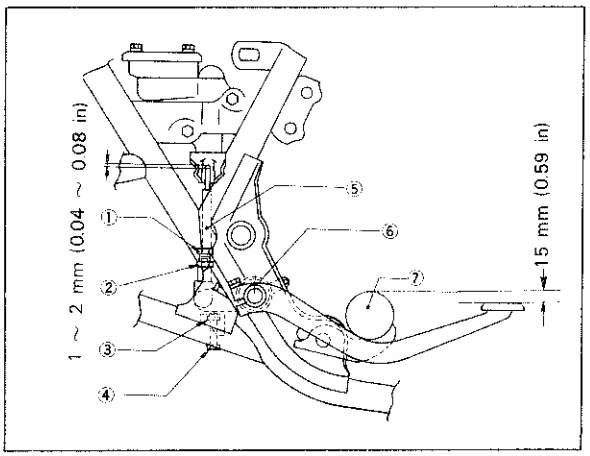
A. Adjustment

Rear brake pedal position adjustment
Set the pedal position as illustrated.

COUTION:
For the brake pedal position adjustment, be sure to proceed as follows.

1. Loosen the adjustor locknut (for pedal height).
2. By turning the adjustor bolt clockwise or counterclockwise, adjust the brake pedal position so that its top 15 mm (0.59 in) below footrest top end.
3. Secure the adjustor locknut.
4. Loosen the other adjustor locknut.
5. Turn in the brake rod until it lightly touches the master cylinder; then turn it out by approx. 1-1/2 turns.

NOTE:
See theat the punched mark on the brake rod is not above the top surface of the adjustor locknut in securing the brake rod adjustor locknut.

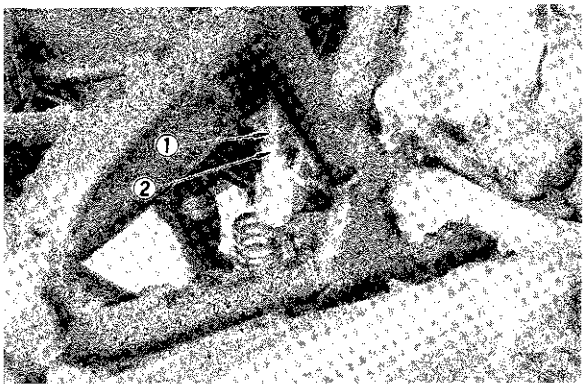


1. Adjustor
2. Adjustor locknut
3. Adjustor locknut (for pedal height)
4. Adjustor bolt
5. Brake rod
6. Punch mark
7. Footrest

Rear brake pedal adjustment

The rear brake pedal should be so adjusted that it has a freeplay of 20 ~ 30 mm (0.79 ~ 1.18 in) from when the brake pedal is trod to when the brake begins to be effected.

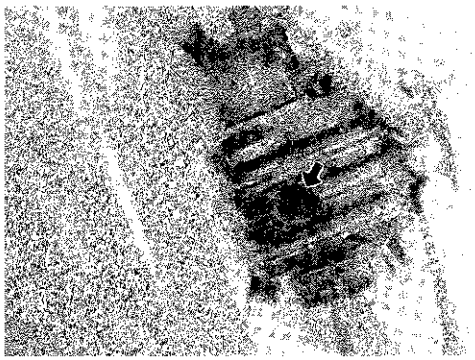
1. Loosen the adjustor locknut at the push rod.
2. Turn the adjustor so that the brake pedal moves 20 ~ 30 mm (0.79 ~ 1.18 in).
3. After adjusting, tighten the locknut. Check for correct play and make sure it is working properly.

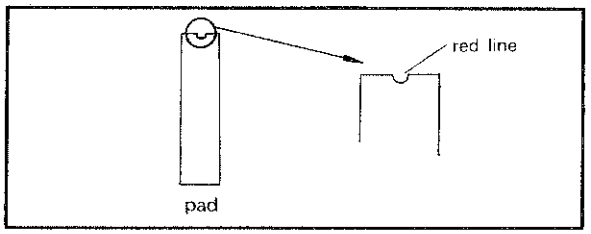


1. Adjustor 2. Adjustor locknut

B. Brake pad check

To check, open the wear indicator cap and if any pad is worn to the red line, replace pads as a set.

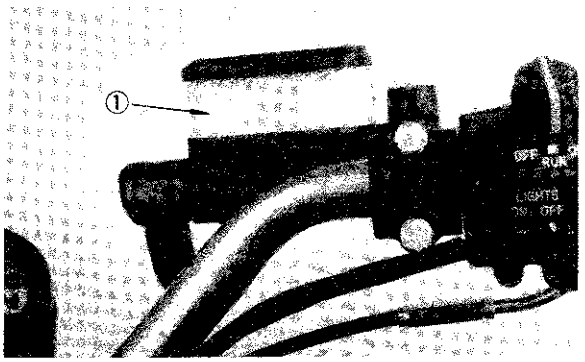




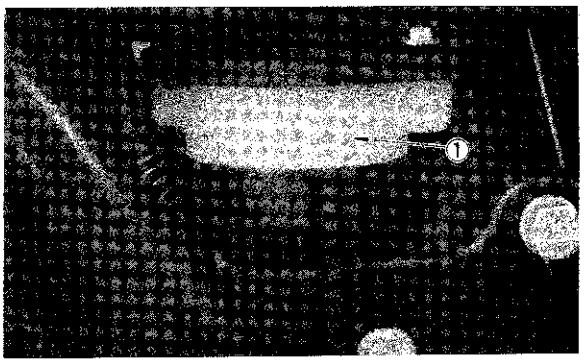
C. Check the brake fluid level

Insufficient brake fluid may allow air to enter the brake system, possibly causing the brake to become ineffective. Check the brake fluid level and replenish when necessary and observe these precautions.

1. Use only the designated quality brake fluid; otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.



1. Lower level



1. Lower level

Recommended brake fluids:
DOT #3 with 240°C (464°F) boiling point

2. Refill with the same type and brand of brake fluid; mixing fluids may result in a harmful chemical reaction and lead to poor performance.
3. Be careful that water or other contamination does not enter the master cylinder when refilling. Water will significantly lower the boiling point and may result in vapor lock.

D. Checking the aluminum wheels

1. Check for cracks, bends or warpage of the wheels. If a wheel is deformed or cracked, it must be replaced.

NOTE:

These aluminum wheels are not designed for use with tubeless tires.

2. Raise the wheel off the ground. Spin.

Rim runout limits:	
Vertical:	2 mm (0.08 in)
Lateral:	1 mm (0.04 in)

E. Front axle

1. Check axle nuts.

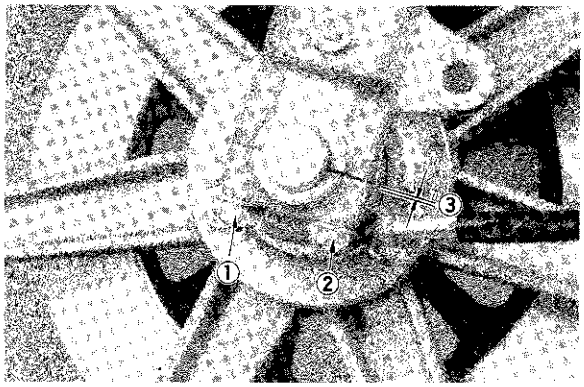
Front axle nut torque:
8.3 ~ 13 m-kg
(60 ~ 94 ft-lb)
Rear axle nut torque:

2. Check axle holder nuts (right side).

Front axle holder nut torque:
1.3 ~ 2.3 m-kg
(9.4 ~ 16.6 ft-lb)

CAUTION:

First tighten the nut on the front end of the axle holder, and tighten the nut on the rear end.



1. 1st 2. 2nd 3. Gap

(PAGE 70 ~ 71)

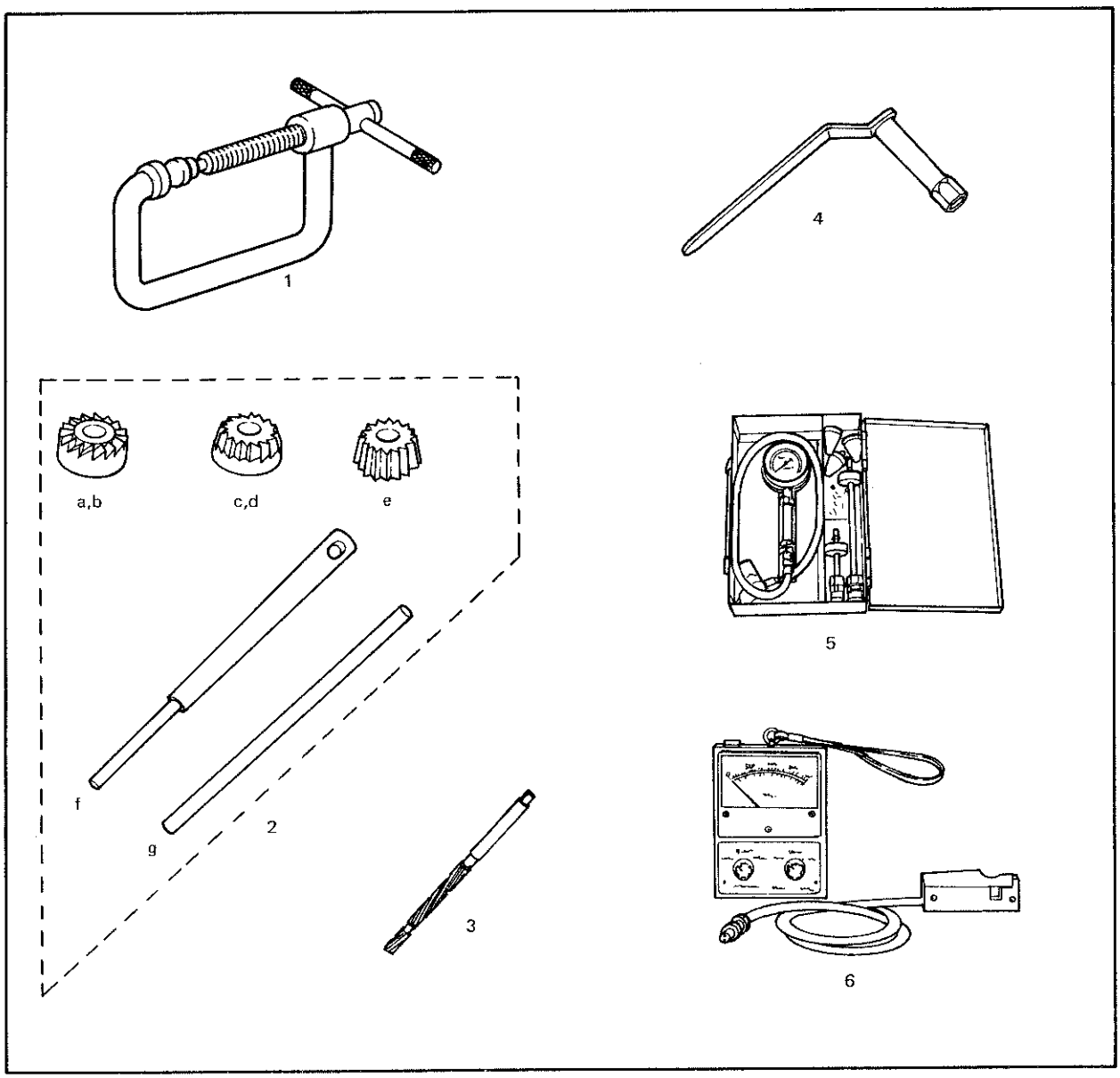
XS500C Additional special tool and tester

Ref. No.	Tool No.	Name of tool and tester	Ref. No.	Tool No.	Name of tool and tester
1	90890-01220	Valve spring compressor	f	90890-01121	Seat cutter drive shaft
2	90890-01217	Valve seat cutter set	g	90890-01061	Drive handle
a	90890-01116	Valve seat cutter IN Flat	3	90890-01196	Valve guide reamer 5.530ϕ
b	90890-01119	Valve seat cutter EX Flat	4	9089001204	Clutch adjusting tool 12ϕ
*c	90890-01118	Valve seat cutter 45° IN	5	90890-03081	Compression gauge
d	90890-01215	Valve seat cutter 45° EX	6	90890-03082	Engine tachometer
e	90890-01216	Valve seat cutter 30° IN EX			

NOTE:

Specifications are subject to change without prior notice.

* In the XS500B, 45° valve seat cutters used for both intake and exhaust valves.

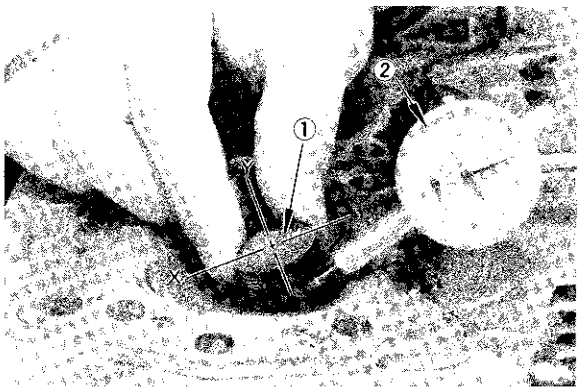


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4-2-4. Valves, valve springs, valve guides and valve seats

3. Measuring the clearance between valve and valve guide

a. Insert the valve into the valve guide in the cylinder head and measure the clearance in both the X and Y axes, using a small dial gauge.



1. Valve
2. Dial gauge

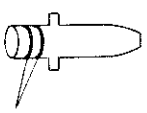
If the measured clearance is greater than 0.08 mm (0.003 in) for the inlet valve or 0.1 mm (0.004 in) for the exhaust valve, both the valve and valve guide should be replaced. The replacement valve guide should be one that is oversize.

	Standard
Guide diameter (I.D.)	5.530 ~ 5.540 mm (0.2177 ~ 0.2181 in)

Valve guide over size (O.D.):

Part No.	Size
371-11733-12 (IN)	$11\phi\ ^{+0.096}_{+0.078}$
371-11734-12 (EX)	$11\phi\ ^{+0.096}_{+0.078}$

Identification method



There are two grooves around the upper part of the valve guide.

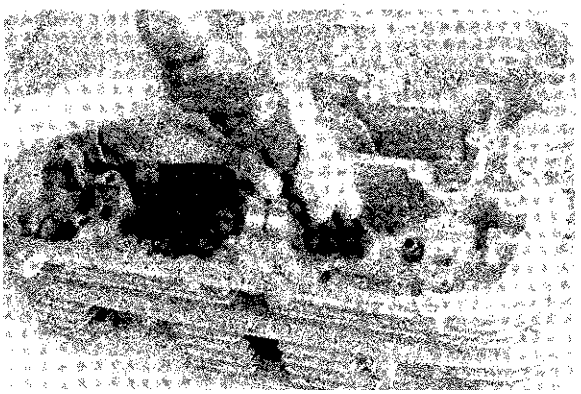
b. To ease guide removal and reinstallation, and to maintain the correct interference fit, heat the head to 100°C (212°F).
If possible, use an oven to avoid any possibility of head warpage due to uneven heating.



c. Use the appropriate shouldered drive (special tool) to drive the old guide out and the new guide in.

NOTE:

1) When a valve guide is replaced, the O-ring should also be replaced.
2) Before driving a new valve guide into the cylinder head, finish the valve guide hole using a reamer.



d. After installing the valve guide, use 8 mm reamer (special tool) to obtain the proper valve clearance.

e. After fitting the valve guide into the cylinder head, be sure to grind the valve seat, and perform valve lapping. The valve must be replaced by a new one.

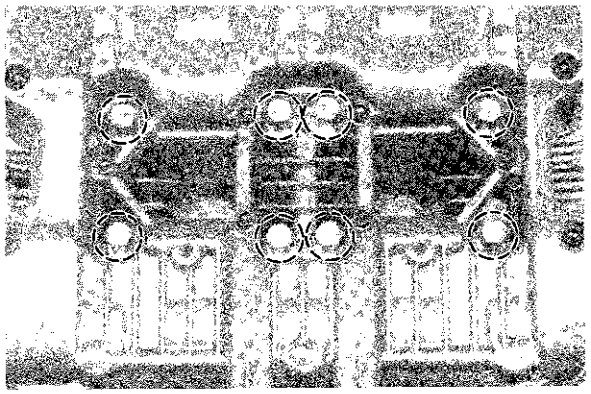
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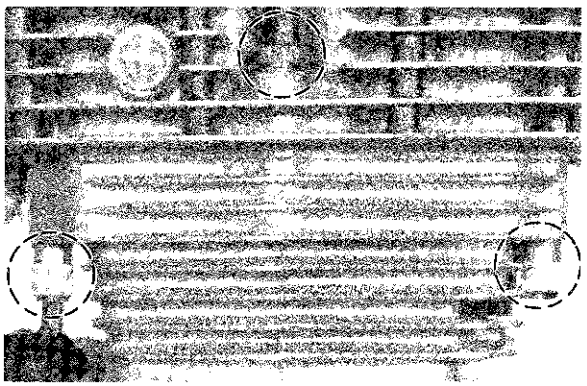
4-3-1. Retightening cylinder holding nuts

The cylinder holding nuts should be retightened at the time of 400 km (250 mi) check. On this XS500C, retightening of the cylinder holding nuts is possible without removing the cylinder head cover.

Retightening

1. Remove the fuel tank.
   a. Place both fuel petcock in stop, and pull off the fuel pipes.
   b. Open the rider's seat, and remove the fuel tank.
2. Remove the air induction cover and bracket.
3. Tighten the cylinder holding nuts.





Tightening torque for 8 nuts:
3.5 ~ 4.0 m-kg
(25.3 ~ 28.9 ft-lb)

Tightening torque for 2 nuts and a bolt:
Nuts: 2.1 ~ 2.5 m-kg
(15.2 ~ 18.1 ft-lb)
Bolt: 2.1 ~ 2.5 m-kg
(15.2 ~ 18.1 ft-lb)

Tightening torque for engine and frame parts

Engine section

Parts to be tightened	Part name	Q'ty	Tightening torque
Valve clearance adjustment	6 mm locknut	8	1.2 ~ 1.5 m-kg (8.7 ~ 10.8 ft-lb)
Camshaft cap tightening	6 mm nut	12	0.8 ~ 1.2 m-kg (5.8 ~ 8.7 ft-lb)
Camshaft cap tightening	6 mm stud bolt	12(a)	0.8 ~ 1.2 m-kg (5.8 ~ 8.7 ft-lb)
Cylinder head cover	6 mm	18	0.8 ~ 1.2 m-kg (5.8 ~ 8.7 ft-lb)
Cylinder head tightening	10 mm nut	8(b)	3.5 ~ 4.0 m-kg (25.3 ~ 28.9 ft-lb)
Cylinder head tightening	8 mm bolt	1(b)	2.1 ~ 2.5 m-kg (15.2 ~ 18.1 ft-lb)
Cylinder head tightening	8 mm nut	2(b)	2.1 ~ 2.5 m-kg (15.2 ~ 18.1 ft-lb)
Connecting rod	8 mm locknut	4(c)	3.5 ~ 4.0 m-kg (25.3 ~ 28.9 ft-lb)
Crankshaft oil hole	1/8 in tape plug	2	3.7 ~ 4.0 m-kg (26.8 ~ 28.9 ft-lb)
Oil warning switch	1/8 in tape	1	2.0 ~ 2.5 m-kg (14.5 ~ 18.1 ft-lb)
Oil filter	22 mm oil cleaner assembly	1	1.0 ~ 1.5 m-kg (7.2 ~ 10.8 ft-lb)
Strainer housing	6 mm pan head screw	4	0.8 ~ 1.2 m-kg (5.8 ~ 8.7 ft-lb)
Delivery pipe	10 mm banjo bolt	2	2.0 ~ 2.2 m-kg (14.5 ~ 15.9 ft-lb)
Drain plug	30 mm	1	3.5 ~ 4.0 m-kg (25.3 ~ 28.9 ft-lb)
	14 mm	1	3.5 ~ 4.0 m-kg (25.3 ~ 28.9 ft-lb)
Pump cover	6 mm Allen screw	3	0.7 ~ 0.9 m-kg (5.1 ~ 6.5 ft-lb)
Strainer cover	6 mm Allen screw	11	0.7 ~ 0.9 m-kg (5.1 ~ 6.5 ft-lb)
Kick crank	8 mm bolt	1	1.5 ~ 2.5 m-kg (10.8 ~ 18.1 ft-lb)
A.C. generator, rotor	10 mm bolt	1	3.5 ~ 4.0 m-kg (25.3 ~ 28.9 ft-lb)
A.C. generator, armature coil	6 mm Allen screw	3	0.7 ~ 0.9 m-kg (5.1 ~ 6.5 ft-lb)
A.C. generator, field coil	6 mm Allen screw	3	0.8 ~ 1.0 m-kg (5.8 ~ 7.2 ft-lb)
Clutch spring	6 mm cross recess hexagon screw	6	0.8 ~ 1.2 m-kg (5.8 ~ 8.7 ft-lb)
Clutch boss tightening	18 mm locknut	1	5.0 ~ 8.0 m-kg (36.2 ~ 51.9 ft-lb)
Change stopper screw	8 mm stopper screw	1(a)	1.2 ~ 2.0 m-kg (8.7 ~ 14.5 ft-lb)
Change adjusting screw	6 mm adjusting screw	1(a)	0.8 ~ 1.2 m-kg (5.8 ~ 8.7 ft-lb)
Neutral switch	5 mm flat-head screw	3	0.25 ~ 0.45 m-kg (1.8 ~ 3.25 ft-lb)
Change pedal	6 mm bolt	1	0.8 ~ 1.2 m-kg (5.8 ~ 8.7 ft-lb)
Drive sprocket	18 mm locknut	1	4.0 ~ 6.0 m-kg (28.9 ~ 43.4 ft-lb)
Crankcase tightening	10 mm stud bolt	6	1st 1.0 m-kg (7.2 ft-lb) 2nd 2.0 m-kg (14.5 ft-lb) Final 3.5 m-kg (25.3 ft-lb)
Crankcase tightening	6 mm bolt	14	1st 0.5 m-kg (3.6 ft-lb) Final 1.0 m-kg (7.2 ft-lb)
Primary drive gear	10 mm bolt	1	3.5 ~ 4.0 m-kg (25.3 ~ 28.9 ft-lb)
Spark plug	12 mm hexagon	2(c)	1.5 ~ 2.0 m-kg (10.8 ~ 14.5 ft-lb)
Primary gear	6 mm nut	1(a)	0.8 ~ 1.2 m-kg (5.8 ~ 8.7 ft-lb)

a: Use LOCK-TITE
b: Use MOLYBDENUM oil
c: Use MOLYBDENUM grease

Chassis section

Part to be tightened	Part name	Q'ty	Tightening torque
Front wheel shaft nut	14 mm nut	1	8.3 ~ 13.0 m-kg (60 ~ 94 ft-lb)
Handle crown and steering shaft	8 mm bolt	4	0.8 ~ 1.25 m-kg (5.8 ~ 9.0 ft-lb)
Handle crown and steering shaft	14 mm bolt	1	6.55 ~ 10.5 m-kg (47.4 ~ 75.9 ft-lb)
Handle crown and handle upper holder	8 mm bolt	8	1.8 ~ 2.5 m-kg (13.0 ~ 18.1 ft-lb)
Caliper and bleed screw	8 mm bolt	1	0.4 ~ 0.7 m-kg (2.9 ~ 5.1 ft-lb)
Master cylinder and brake hose	10 mm bolt	1	2.3 ~ 2.8 m-kg (16.6 ~ 20.3 ft-lb)
Front caliper and brake hose	10 mm bolt	1	2.3 ~ 2.8 m-kg (16.6 ~ 20.3 ft-lb)
Front caliper and front fork	10 mm bolt	2	4.0 ~ 5.0 m-kg (28.9 ~ 36.2 ft-lb)
Front caliper and support bracket	8 mm bolt	1	1.5 ~ 2.0 m-kg (10.8 ~ 14.5 ft-lb)
Disc brake and hub	8 mm bolt	6	1.7 ~ 2.2 m-kg (12.3 ~ 15.9 ft-lb)
Axle holder and fron fork	8 mm bolt	2	1.3 ~ 2.3 m-kg (9.4 ~ 16.6 ft-lb)
Engine (Front, upper)	10 mm bolt	1	2.7 ~ 3.4 m-kg (19.5 ~ 24.6 ft-lb)
Engine (Front, under)	10 mm bolt	1	2.7 ~ 3.4 m-kg (19.5 ~ 24.6 ft-lb)
Engine (Rear, upper)	10 mm bolt	1	2.7 ~ 3.4 m-kg (19.5 ~ 24.6 ft-lb)
Engine (Rear, under)	12 mm bolt	1	5.0 ~ 7.0 m-kg (36.2 ~ 50.6 ft-lb)
Engine fron stay and frame	8 mm bolt	2	1.4 ~ 2.2 m-kg (10.1 ~ 15.9 ft-lb)
Engine rear stay and frame	8 mm bolt	4	1.4 ~ 2.2 m-kg (10.1 ~ 15.9 ft-lb)
Pivot shaft and frame	14 mm bolt	1	5.0 ~ 8.0 m-kg (36.2 ~ 57.9 ft-lb)
Rear master cylinder and frame	8 mm bolt	2	1.4 ~ 2.2 m-kg (10.1 ~ 15.9 ft-lb)
Rear master cylinder and brake hose	10 mm bolt	1	2.3 ~ 2.8 m-kg (16.6 ~ 20.3 ft-lb)
Rear caliper and brake hose	10 mm bolt	1	2.3 ~ 2.8 m-kg (16.6 ~ 20.3 ft-lb)
Rear caliper and rear arm	8 mm bolt	2	1.4 ~ 2.2 m-kg (10.1 ~ 15.9 ft-lb)
Rear caliper and support bracket	8 mm bolt	1	1.5 ~ 2.0 m-kg (10.8 ~ 14.5 ft-lb)
Rear disc brake and hub	8 mm bolt	6	1.7 ~ 2.2 m-kg (12.3 ~ 15.9 ft-lb)
Rear wheel shaft nut	14 mm bolt	1	11 ~ 17 m-kg (79.6 ~ 123 ft-lb)
Muffler and frame	8 mm bolt	2	0.8 ~ 1.25 m-kg (5.8 ~ 9.0 ft-lb)
Frame and rear cushion (Upper)	10 mm bolt	2	2.3 ~ 3.7 m-kg (16.6 ~ 26.8 ft-lb)
Rear arm and rear cushion (Upper)	10 mm bolt	2	2.3 ~ 3.7 m-kg (16.6 ~ 26.8 ft-lb)
Brake pedal mounting bolt	6 mm bolt	1	0.6 ~ 1.0 m-kg (4.3 ~ 7.2 ft-lb)

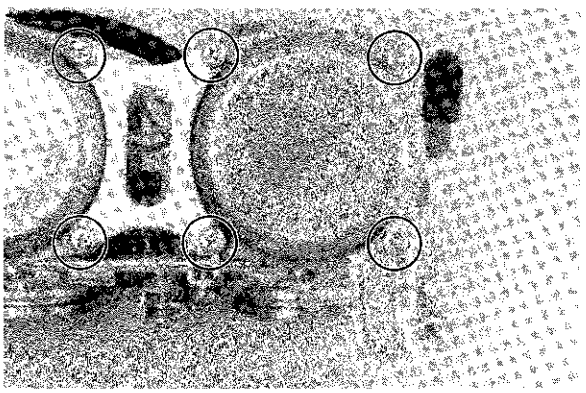
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4-3-26. SU carburetor — Disassembly (for replacement or cleaning)

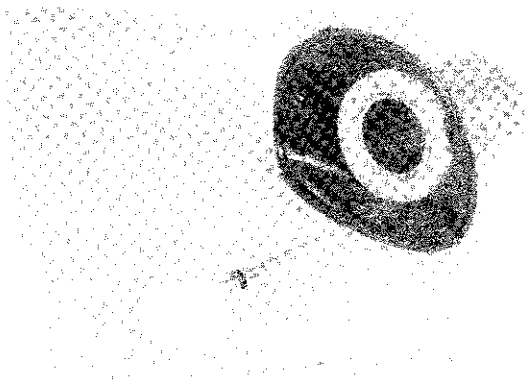
The XS500C uses an SU carburetor as in the XS650.

1. The vacuum chamber cover on top is held in place by six screws. Remove these screws and lift off the chamber cover.

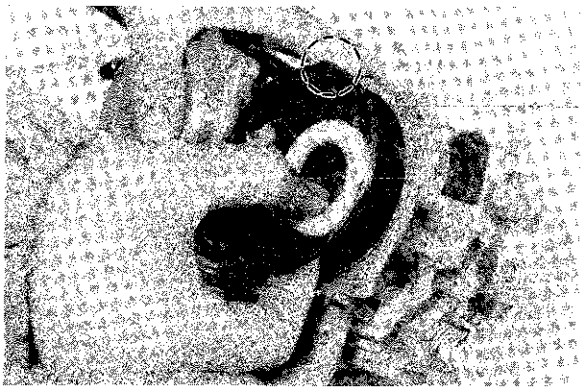
   NOTE:
   When installing the set screws, be sure to correctly position the throttle cable anchor braket.



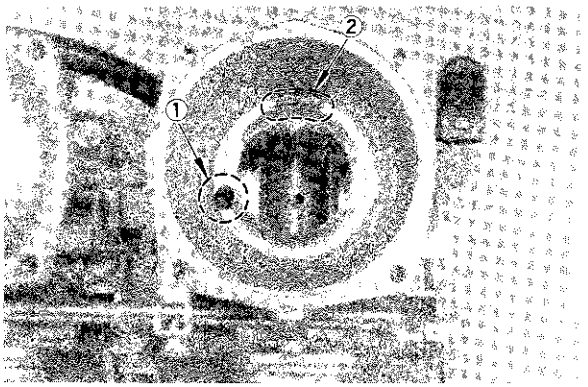
2. Once the cover has been removed, the spring, jet needle retainer, jet needle, and vacuum piston can be removed.



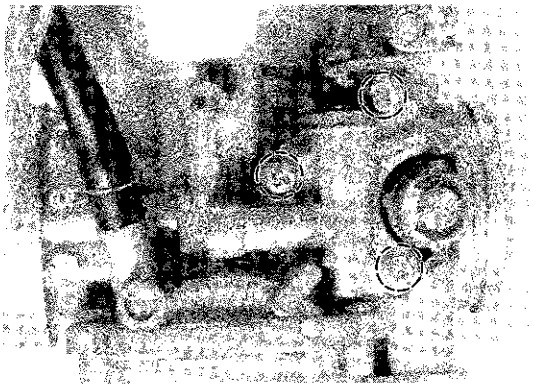
3. Installation of the vacuum piston is accomplished by inserting it into the carburetor body and lining up the small projection on the outer edge of the rubber diaphragm. With the corresponding notch in the outer edge of the carburetor top mating surface.



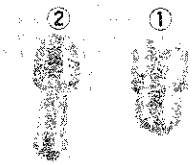
4. With the top removed the inlet passage (1) and air passage to the starter jet (2) are visible.



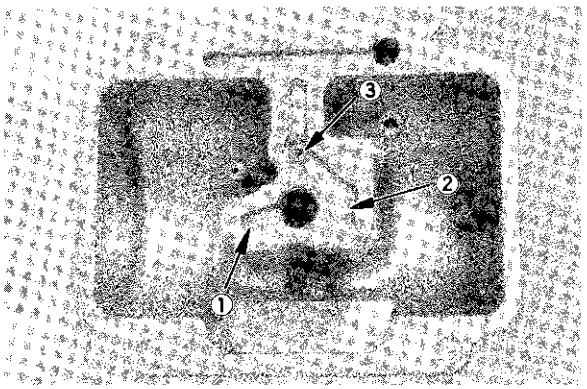
5. The starter jet housing mounts to the left side of the carburetor. It is held by three screws. A gasket fits between the starter jet housing and main housing.



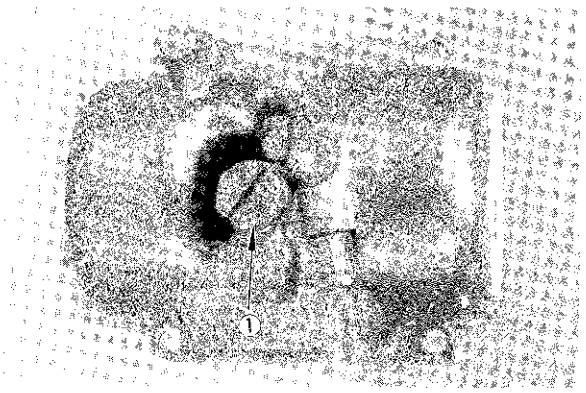
6. The float bowl mounts to the bottom of the main housing. Remove the four retaining screws and then remove the float bowl.
7. Both the pilot jet and main jet are screwed into orifices in the float bowl. The pilot jet is removed from the inside, the main jet is removed from the bottom, after first removing the cover screw.



1. main jet 2. Pilot jet

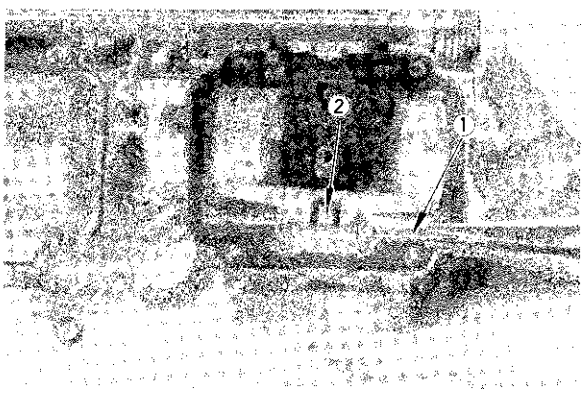


1. Primary air passage to needle jet 3. Pilot jet
2. Pilot air passage to pilot jet



1. main jet cover

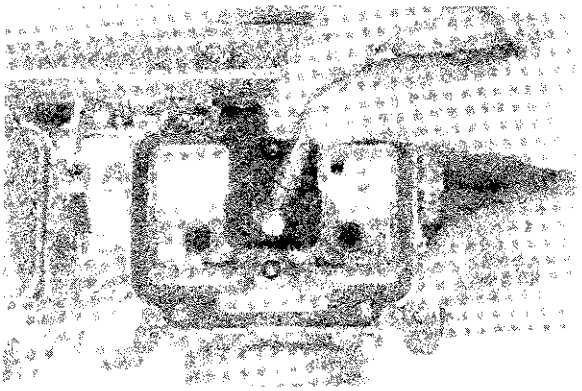
8. Turn the carburetor upside down, pull out the float pivot pin, and remove the float.



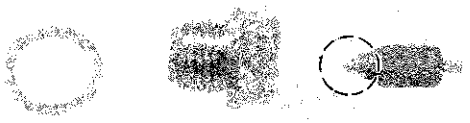
1. Pivot pin 2. Float level adjustment tongue

CAUTION:
Directly beneath the float adjustment tang is the float valve. Remove this part immediately its loss.

9. The needle jet fits into the main housing from the bottom. If removal is required, pull it down and out by hand. Pressure this procedure to install the needle jet.



10. Inspect needle and seat for signs of excessive wear or foreign particles. Replace as requied, always replace inlet needle and valve seat as an assembly.



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4-4. CHASSIS

4-4-1. Front wheel

A. Removal

1. Remove cotter pin from front axle nut.
2. Remove the front axle nut.
3. Loosen the two axle nut holder nuts at the bottom of the fork leg.
4. Raise the front wheel of the machine by placing a suitable stand under the engine.
5. Remove the front wheel axle by simultaneously twising and pulling out

on the axle. Then remove the wheel assembly. In this case, the speedometer gear unit housing must be removed.

B. Front axle

Remove any corrosion from axle with emery cloth. Place the axle on a surface plate and check for bends. If bent, replace.

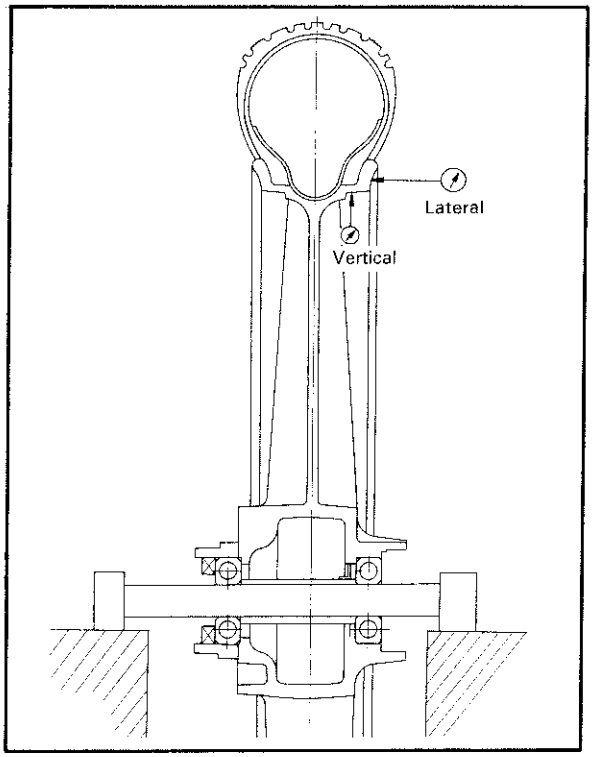
C. Front wheel inspection

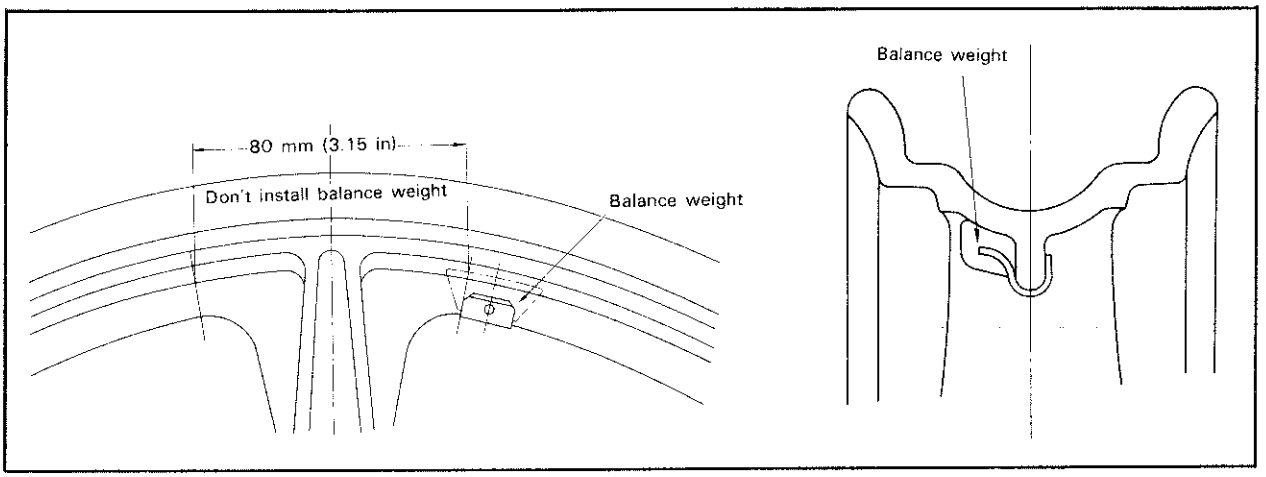
1. Check for cracks, bends or warpage of wheels. If a wheel is deformed or cracked, it must be replaced.
2. Check wheel run-out
   If deflection exceeds tolerance, check wheel bearing or replace wheel as required.

   Rim run-out limits:
   Vertical: 2 mm (0.08 in)
   Lateral: 1 mm (0.04 in)

3. Check wheel balance
   Rotate wheel lightly several times and observe resting position.
   If wheel is not statically balanced, wheel will come to rest at the same position.
   Install balance weight at lighter position (at top) as illustrated.

   NOTE:
   The wheel should be balanced with brake disc installed.





D. Replacing wheel bearings

If the bearings allow play in the wheel hub or if wheel does not turn smoothly, replace the bearings as follows:

1. First clean the outside of the wheel hub.
2. Drive the bearing out by pushing the spacer aside (the spacer "floats" between the bearings) and tapping around the perimeter of the bearing inner race with a soft metal drift pin and hammer. Both bearings can be removed in this manner.
3. To install the wheel bearing, reverse the above sequence. Be sure to grease the bearing before installation. Use a socket that matches the outside race of the bearing as a tool to drive in the bearing.

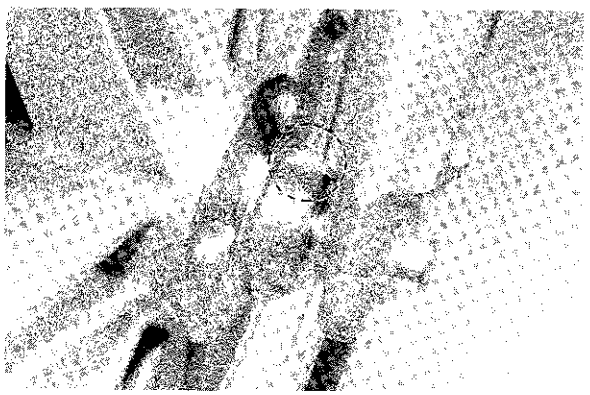
CAUTION:

Do not strike the center race or balls of the bearing. Contact should be made only with the outer race.

E. Installing front wheel

When installing front wheel, reverse the removal procedure taking care of the following points:

1. Lightly grease lips of front wheel oil seals and gear teeth of speedometer drive and deiven gears. Use light--weight lithium soap base grease.
2. Make sure there is an enough gap between disc pads.
3. Check for proper engagement of the boss on the outer fork tube with the locating slot on speedometer gear unit housing.

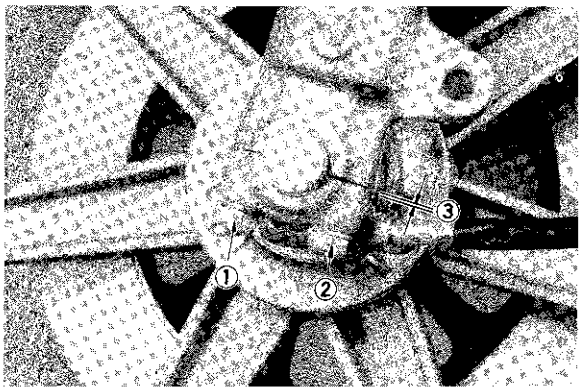


4. Always secure the front wheel axle as follows:

a. Torque the front axle nut.

Axle nut torque:
8.3 ~ 13 m-kg
(60 ~ 94 ft-lb)

b. Torque axle holder nuts. First tighten nut on front end of axle holder, and tighen nut on rear end.



1. 1st 2. 2nd 3. Gap

Holder nut torque:
1.3 ~ 2.3 m-kg
(9.4 ~ 16.6 ft-lb)

c. Install a new cotter pin.

4-4-2. Front and rear disc brake disassembly

Avoid disassembling the disc brake whenever possible. Trouble that has nothing to do with the brake cam and should be fixed without disassembling the brake.

CAUTION:

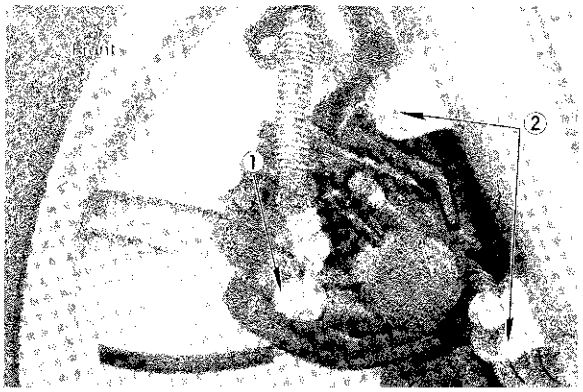
Brake fluid will damage painted and other surfaces. Use caution whenever working with brake fluid.

1. Caliper assembly.

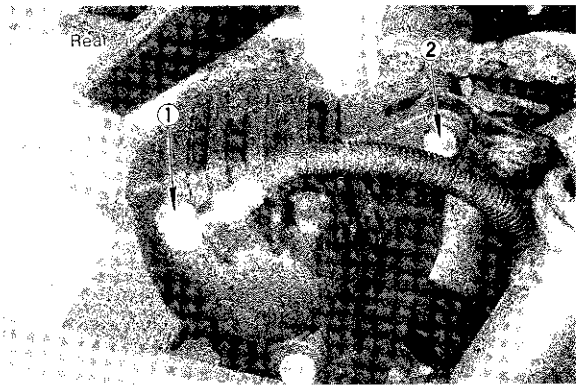
a. Removing caliper assembly

1) Remove brake hoses from caliper.

2) Wrap up brake hose with clean vinyl sheet or clean cloth.
3) Keep front brake lever or brake pedal pulled in. This prevents fluid from dripping.
4) Remove caliper securing bolts and remove caliper.

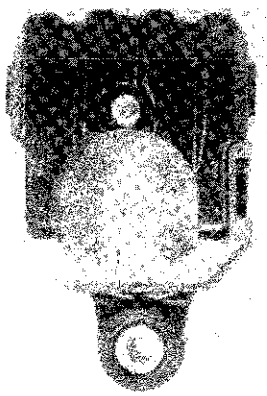


1. Union bolt 2. Securing bolt

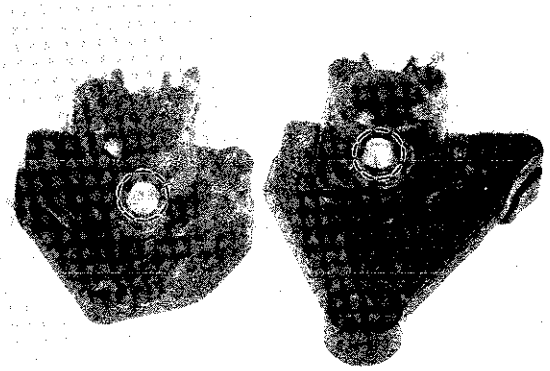


1. Union bolt 2. Securing bolt

b. Removing the pads
Remove the pads from the caliper. If difficult to remove, push the piston to the bottom of the cylinder using the piston pushing tool, and remove.



c. Removing the piston seal
1) Remove the support bolt.



Tightening torque:
Support bolt:
1.5 ~ 2.0 m-kg
(10.8 ~ 14.5 ft-lb)

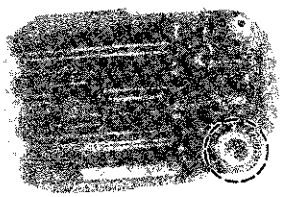
2) Remove the Phillips-head screw and pad spring:

Tightening torque:
0.2 ~ 0.4 m-kg
(1.45 ~ 2.89 ft-lb)

3) Remove the retaining ring and dust seal.

CAUTION:
The heads of support bolt and Phillips head screw are locked with a yellow paint. Instruct the user not to turn these fasteners.

4) Feed compressed air into the brake fluid inlet to force out the piston. Never attempt to pry it out with a screwdriver.



CAUTION:

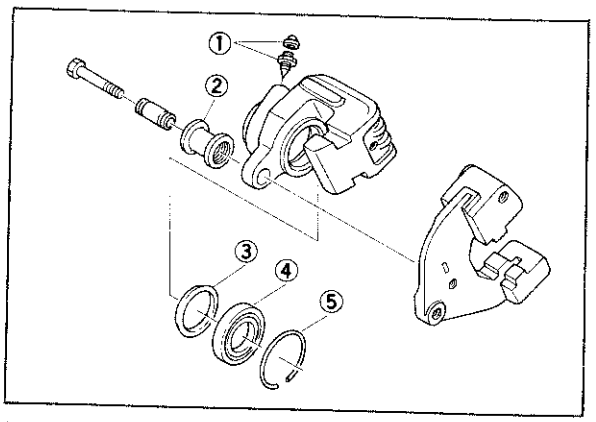
When doing above procedure care should be taken so that piston does not hit your face or body.

5) Remove the piston seal from the caliper body.

CAUTION:

Keep the removed parts free from gasoline, kerosene and engine oil. Otherwise, all seals will swell up and deteriorate. The piston seals and dust seals should be replaced every two years.

6) When disassembling or checking the brake calipers on the front and rear wheels, replace the following parts as an assembly.

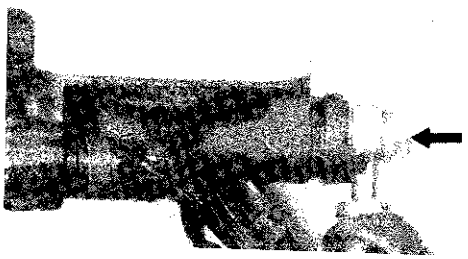


1. Bleed screw (with cap)
2. Bush boot
3. Piston seal
4. Dust seal
5. Retaining ring

2. Master cylinder

a. Master cylinder (Front)

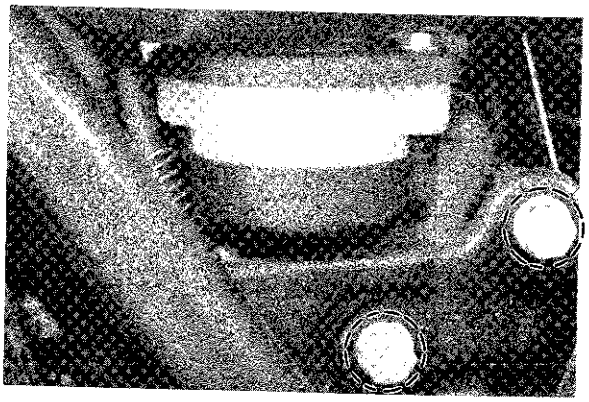
1) Disconnect front stop switch lead wire.
2) Remove the brake lever. (Be careful not to lose the brake lever return spring.)
3) Remove the brake hose.



4) Remove the two bolts securing the master cylinder, and remove the master cylinder from the handlebar. Remove the reservoir cap, and remove the diaphragm. Drain the brake fluid.

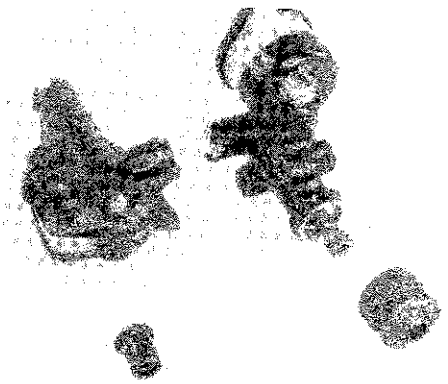
b. Master cylinder (Rear)

1) Remove brake hose.
2) Remove two bolts securing master cylinder. Remove reservoir cap. Drain off brake fluid.

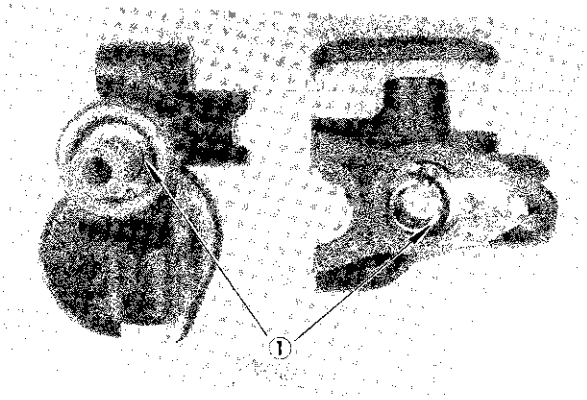


c. Master cylinder (front and rear brakes) disassembly

1) Remove master cylinder boot.

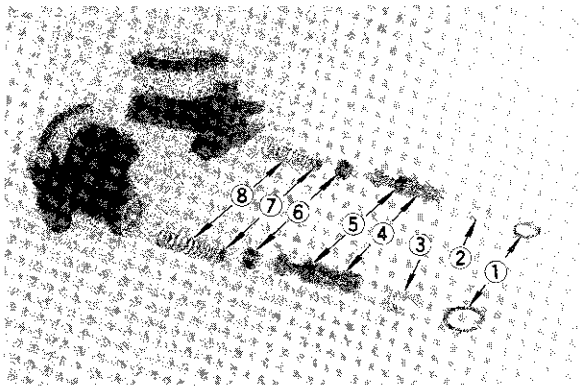


2) Remove snap ring using circlip pliers.



1 Snap ring

3) Remove piston. (Note that spring remains in master cylinder.)
4) Remove stopper plate.
5) Remove cylinder cup.



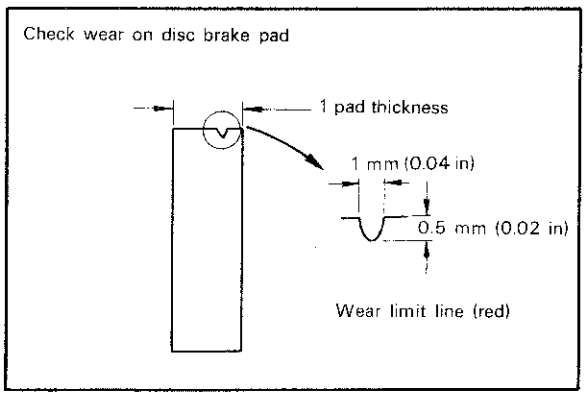
1. Snap ring
2. Shim
3. Stopper plate
4. Piston
5. Cylinder cup 2
6. Cylinder cup 1
7. Piston cup spacer
8. Return spring

4-4-3. Disc brake inspection

A. Caliper

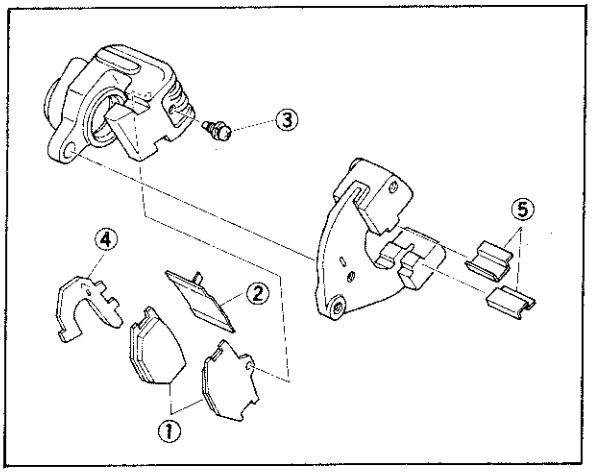
1. Piston
   If the piston has scratches on its outer surface, it should be replaced.
2. Pads

a. If any pad is worn beyond limits, it should be replaced.



	Front	Rear
Wear limit	5.5 mm (0.18 in)	5.5 mm (0.18 in)

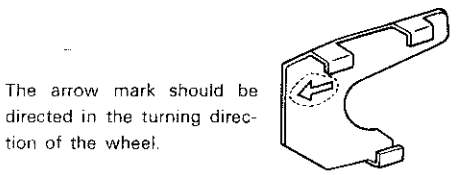
b. When replacing a brake pad, be sure to replace the following four parts as an assembly.



1. Pad
2. Pad spring
3. Pan head and spring washer
4. Shim
5. Retainer

NOTE:

Grease the contact surface of the shim with the pad, and as illustrated, bend each tab of the shim over the brake pad (attached to the piston), and install the shim to the brake pad.



3. Piston seal and dust seal
   If piston seal or dust seal is scratched or damaged, it should be replaced. Whether or not it is scratched or damaged, it should be replaced every two years.
4. Bridge bolts
   Bridge bolts should be replaced every time the caliper is removed, whether damaged or not.

B. Master cylinder

1. Master cylinder body

a. If the master cylinder has scratches or worn spots, replace it.
b. If the outlet edge is scratches or damaged, replace it.
c. Check parts for clogging, clean as required.
d. Check the cylinder and breather for excessive wear.

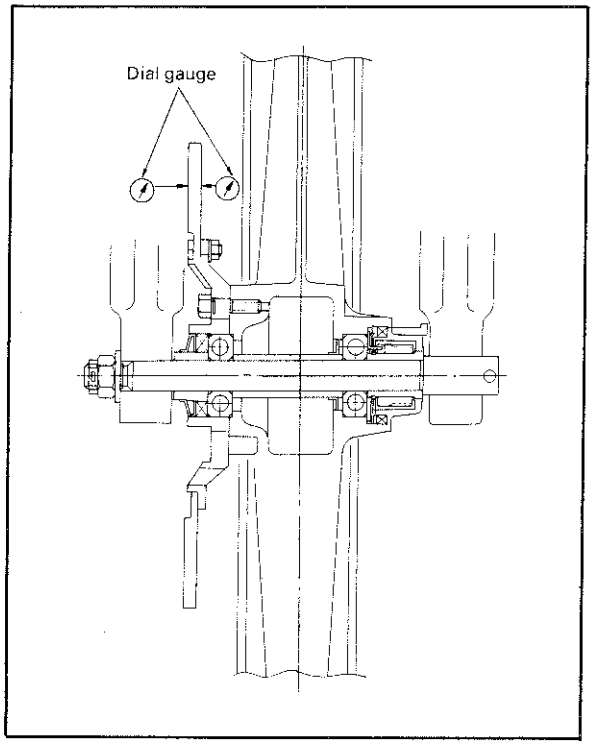
C. Brake hose

a. Check the brake hose and if damaged or leaking, replace.

b. Replace brake hose every four year.

D. Disc

1. The deflection of the disc assembly should be less than 0.15 mm.
   If deflection exceeds 0.15 mm. Check the deflection of the disc and the wheel bearing.



2. If the disc is worn excessively or damaged, replace it.

	Front	Rear
Standard	7 mm (0.28 in)	7 mm (0.28 in)
Wear limit	6.5 mm (0.26 in)	6.5 mm (0.26 in)

4-4-4. Disc brake assembly

Cleaning

All disassembly parts should be washed in the following manner before they are assembled.

1. Be sure to used new brake fluid for washing. (Do not use mineral oil, it will case rubber parts to swell up. Also avoid using alcohol.
2. If any other mineral oil other than brake fluid is used on rubber parts, they should be replaced. Metallic parts should also be washed in brake fluid.

A. Caliper

1. Installing the piston

a. It the piston seal in the groove in the caliper cylinder.

b. Coat at caliper cylinder and piston with new brake fluid.

c. Insert the piston into the caliper cylinder. Take care not to twist the piston.

2. Installation of caliper and support bracket.

a. Install the dust seal in the groove around the piston and caliper, and install the retaining ring over it.

b. Install the pad spring, and tighten the Phillips-head screw.

> Phillips head screw tightening torque:
> 0.2 ~ 0.4 m-kg
> (1.45 ~ 2.89 ft-lb)

c. Secure the caliper and support bracket with the support bolt.

NOTE:
In this operation, you may install the pad.

> Support bolt tightening torque:
> 1.5 ~ 2.0 m-kg
> (10.8 ~ 14.5 ft-lb)

NOTE:
The heads of the Phillips-head screw and support bolt are painted yellow. Instruct the user not to turn these fasteners.

3. Pad installation

a. The pads may be installed when the caliper or bridge bolts are tightened.

b. When the pads alone are to be replaced, it is necessary to push the piston so that the pads can be placed in position.

When the piston is pushed back, the brake fluid level in the master cylinder reservoir increases. It may be necessary to loosen the bleed screw to let out some of the brake fluid.

4. Caliper installation

a. The caliper can be installed by reversing the removal procedure. Install caliper (front and rear).

Tightening torque:
4.5 ~ 5.0 cm-kg
(2.89 ~ 36.2 in-lb)

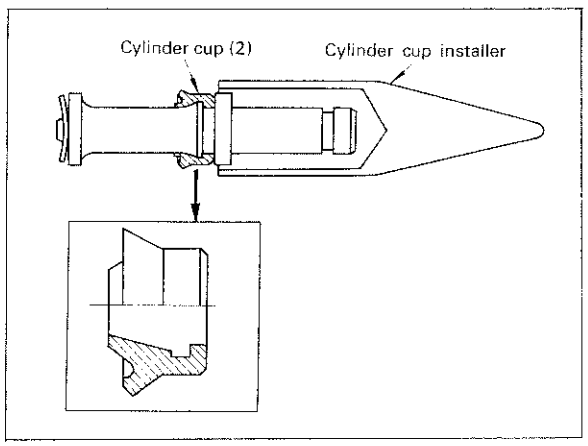
b. Install the brake hoses (front and rear).

Tightening torque:
Front caliper:
2.3 ~ 2.8 m-kg
(16.6 ~ 20.3 ft-lb)
Rear caliper:
2.3 ~ 2.8 m-kg
(16.6 ~ 20.3 ft-lb)

B. Master cylinder

1. Cylinder cup installation

a. After soaking the cup in new brake fluid, assemble the cup and piston. Take care not to scratch the cup or piston. (Use cylinder cup installer.)



b. Install the stopper plate.

c. Insert the spring and valve into the master cylinder body.

2. Piston installation

a. Check the outer surface of the piston for scratches. Carefully insert the piston into the cylinder. Take care not to scratch the inner wall of the cylinder. If scratched, fluid leakage may result.

b. Install the snap ring.

c. Firmly fit the boot in the grooves of the master cylinder and piston.

3. Installing the master cylinder on the handlebar

a. Install the master cylinder on the handlebar.

b. Connect brake hose to master cylinder with union bolt.

Tightening torque:
(front and rear master cylinder)
2.3 ~ 2.8 m-kg
(16.6 ~ 20.3 ft-lb)

NOTE:
If gasket is damaged, replace it.

c. Connect reservoir hose to rear master cylinder.

d. Fill the reservoir with brake fluid (DOT #3) and air. (Refer to "Air bleeding".)

4. Front brake hose
The brake hose should be tightened.

Tightening torque:
2.3 ~ 2.8 m-kg
(16.6 ~ 20.3 ft-lb)

5. Disc

a. The disc bolts should be tightened to specification.

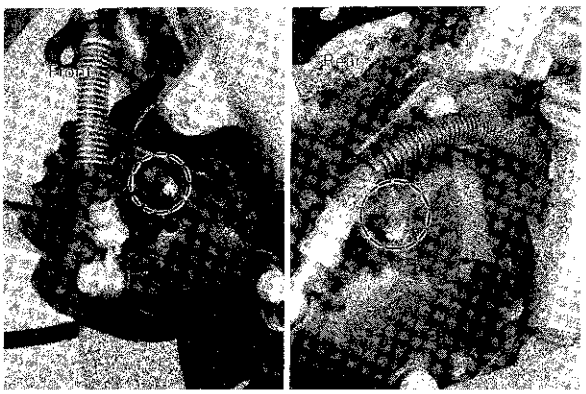
Tightening torque:
1.7 ~ 2.2 m-kg
(12.3 ~ 15.9 ft-lb)

b. The deflection of the disc assembly should be within limits.

Deflection limit:
0.15 mm (0.006 in)

6. Air bleeding
If any of the parts relating to the brake fluid have been removed, air must be bled after reassembly.

a. Add brake fluid (DOT #3) to the reservoir.
b. Install the diaphragm. Be careful not to loose brake fluid because of overflow.
c. Connect a vinyl tube tightly to the caliper bleed screw.
d. Put the end of the vinyl tube into a container.
e. Apply the brake lever and pedal several times. With the brake lever drawn in, loosen the bleed screw.

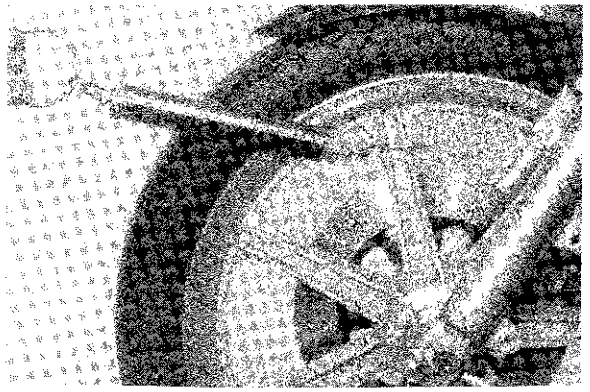


NOTE:
The brake lever should be squeezed gently; otherwise, air will form very small bubbles, and air bleeding will become difficult.

f. When the brake lever and pedal comes in contact with the handlebar grip and foot rest arm, tighten the bleed screw.
g. Continue operations from e. and f. until air bubbles disappear completely.

Bleed screw tightening torque:
0.4 ~ 0.7 m-kg
(2.9 ~ 5.1 ft-lb)

h. Add brake fluid to the level line on the reservoir.
i. The reservoir is air-tight. When the brake pads are worn, the fluid level will lower, but it is automatically adjusted by the shift of the diaphragm. Therefore, when the brake fluid is added, the diaphragm must be set in its original position.
j. The disc trailing torque should be within the specified amount after it is assembled.



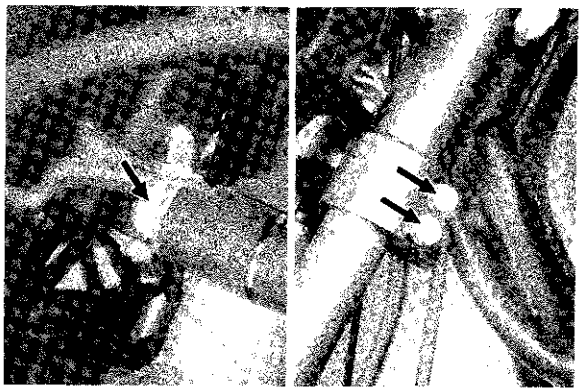
Torque:
1.0 kg (2.2 lb) or less

If torque exceeds this limit, check the disc run-out.

NOTE:
A slight drag on the disc is normal and will not develop into a worse condition.

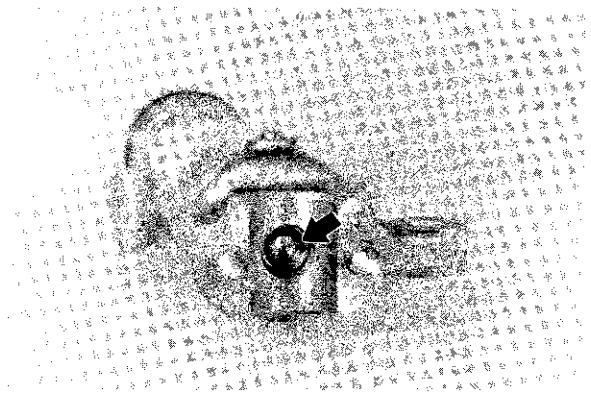
4-4-5. Front fork — Inspection and assembly

B. Front fork disassembly
1. With the front wheel and front fender removed, the fork legs can be removed from the upper and lower brackets by loosening upper and lower pinch bolts.

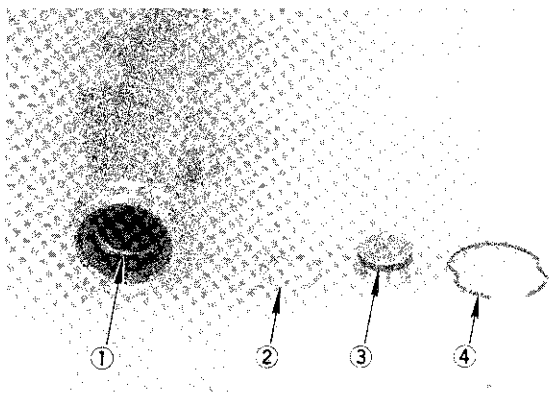


NOTE:
When remove right fork leg, brake hose must be removed at front fork and top of caliper.

2. Remove the rubber cap from the front fork, and push down the plug cap using a screwdriver, then remove the ring clip.
3. Remove the internal hexagonal bolt from bottom of the outer tubes.

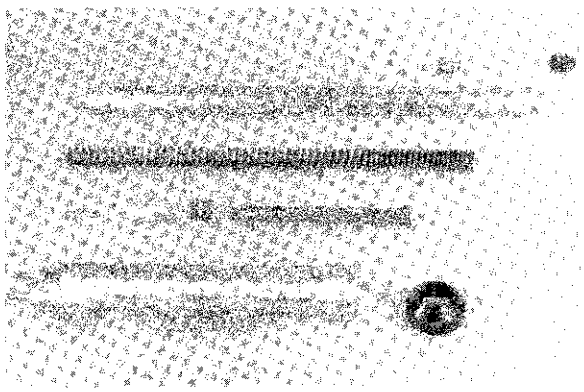


4. Removed inner tube and piston assembly from outer tube.
5. To replace for oil real, remove wire clip from outer tube.
6. The following parts should be replaced with new ones when the front forks are disassembled.



1. Oil seal
2. Stopper ring
3. O-ring
4. Oil seal washer

7. Component parts of front forks.



C. Assembly

When assembling the front fork, reverse the order of disassembly.

NOTE:

Fork springs must be installed with greater pitch.

Installing the front forks

1. Insert the front fork tubes to the correct position and partially tighten the under bracket mounting bolt.
2. Pour specified amount of oil into the inner tube through the upper end opening. Use Yamaha fork oil 10W, 20W, 30W.

Oil quantity:	160 ±3cc (5.41±0.1 oz)

NOTE:

Specialty type fork oils of quality manufacture may be used.

3. Install the inner tube cap plug.
4. Tighten all pinch bolts.

Pinch bolt torque:	
Upper:	0.8 ~ 1.25 m-kg (5.8 ~ 9.0 ft-lb)
Lower:	1.3 ~ 2.3 m-kg (9.4 ~ 16.6 ft-lb)

5. Install brake hose and bleed air. (Refer to 5-3-c-3-f)

4-4-6. Rear wheel

A. Removal

1. Place machine on center stand.
2. Disconnect the drive chain. (Refer to 3-1-H.)
3. Remove cotter pin from rear axle.
4. Remove the rear axle nut.
5. Remove the rear axle by simultaneously twising and pulling out.
6. Remove the rear wheel assembly.

B. Rear axle

See front wheel section, paragraph "Front axle".

C. Replacing wheel bearings

See front wheel section, paragraph "Replacing wheel bearings".

D. Rear wheel inspection

See front wheel section, paragraph "Front wheel inspection".

E. Installing rear wheel

When installing rear wheel, reverse removal procedure taking care of following points:

1. Lightly grease lip of rear wheel oil seals.
2. Make sure there is an enough gap between disc puds.
3. Install wheel assembly and axle.
4. Connect drive chain.
5. Adjust drive chain.

(PAGE 195)

4-5-5. Flasher self cancelling system

A. Description

This system automatically turns the flasher light off after you have changed course or turned corner so you can safely forget about turning off the signal. It is electronically operated depending on the time lapsed or the distance travelled after the handle switch has been applied.

In other words, the signal is automatically turned off when the vehicle has travelled over a certain distance at low speeds or while the signal light at an intersection is "red", or after a short lapse of time from when you changed course at high speeds.

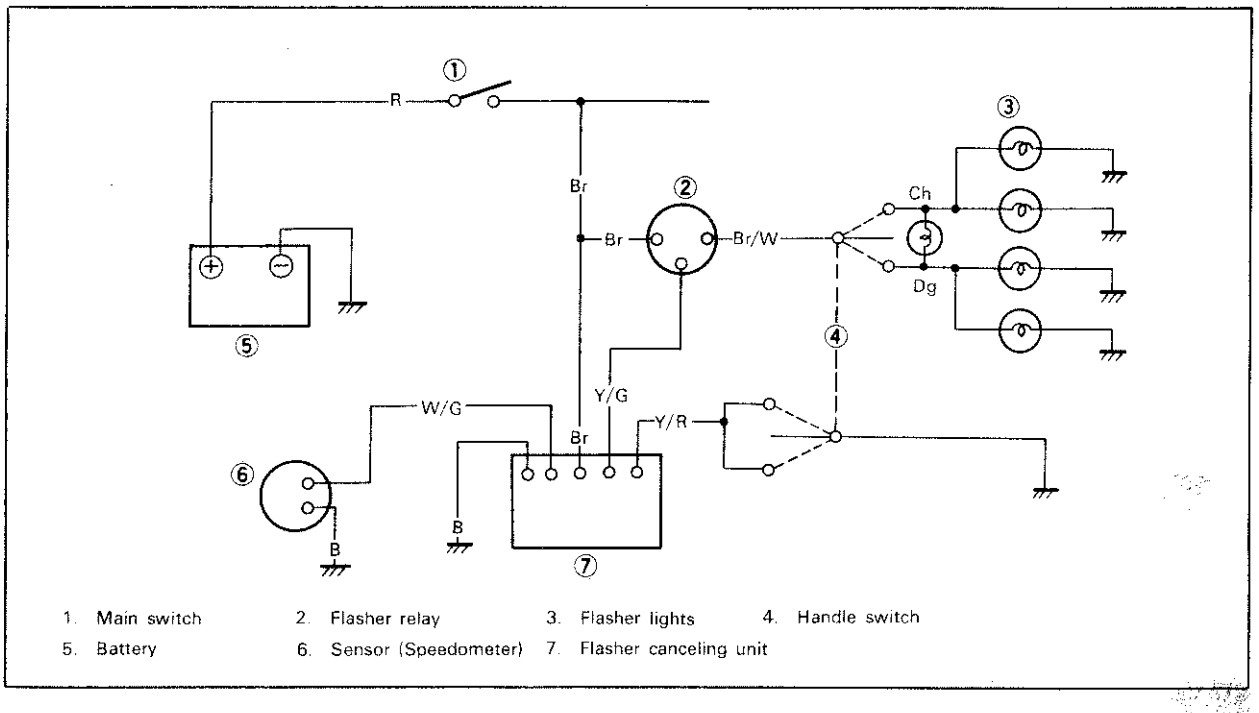
B. Operation

The handle switch lever has the following three positions; L (left), OFF and R (right). The switch lever is pushed back to its home position by spring force when it is released from your finger, but the signal continues to light up over a certain time or distance as noted already.

If the switch lever is depressed into OFF, the signal will turn off quickly, independent of the flasher cancelling unit. At normal operation, therefore, the switch lever should be pushed into OFF as soon as you have turned a corner or changed course.

The flasher cancelling unit is reset each time the switch lever is turned to R or L and begins to count time or distance. If the turn signal is required to continue turning on more than 150 meters (492 ft) or 10 seconds, the switch lever must be kept in the position to which it is turned or repeatedly turned to the same position.

In other words, both time and distance are calculated from the moment that the handle switch lever is applied, and therefore, the handle switch can be turned on and off as often as possible.



1. Main switch
2. Flasher relay
3. Flasher lights
4. Handle switch
5. Battery
6. Sensor (Speedometer)
7. Flasher canceling unit

C. Inspection

If the flasher auto cancelling system should become inoperative, proceed as follows:

1. Pull off the 6-p connector from the flasher cancelling unit, and operate the handle switch.

If the signal operates normally in L, R and OFF:

a. Flasher unit
b. Bulb
c. Lighting circuit
d. Handle switch light circuit

} are in good condition

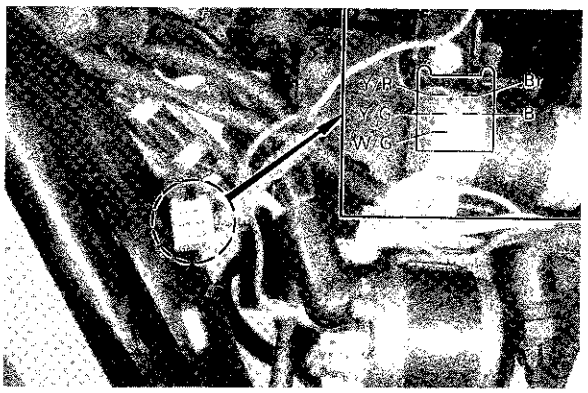
Therefore, any one of the following is considered to be defective:

a. Flasher cancelling unit
b. Handle switch reset circuit
c. Speedometer sensor circuit

2. Pull off the 6-p connector from the flasher cancelling unit, and connect a tester ($\Omega \times 100$ range) across the white/green and the black lead wires on the wire harness side. Turn the speedometer shaft, and if the tester needle swings back and forth four times between 0 and $\infty\Omega$, the speedometer sensor circuit is in good condition. If not, check the sender and wireharness, and replace any of these as necessary.
3. Pull off the 6-p connector from the flasher cancelling unit, and check if there is continuity between the yellow/red lead wire on the wireharness side and the chassis.

Flasher switch OFF..... $\infty\Omega$
Flasher switch L or R..... 0Ω

If the tester needle does not swing as indicated above, check the handle switch circuit and wire harness.

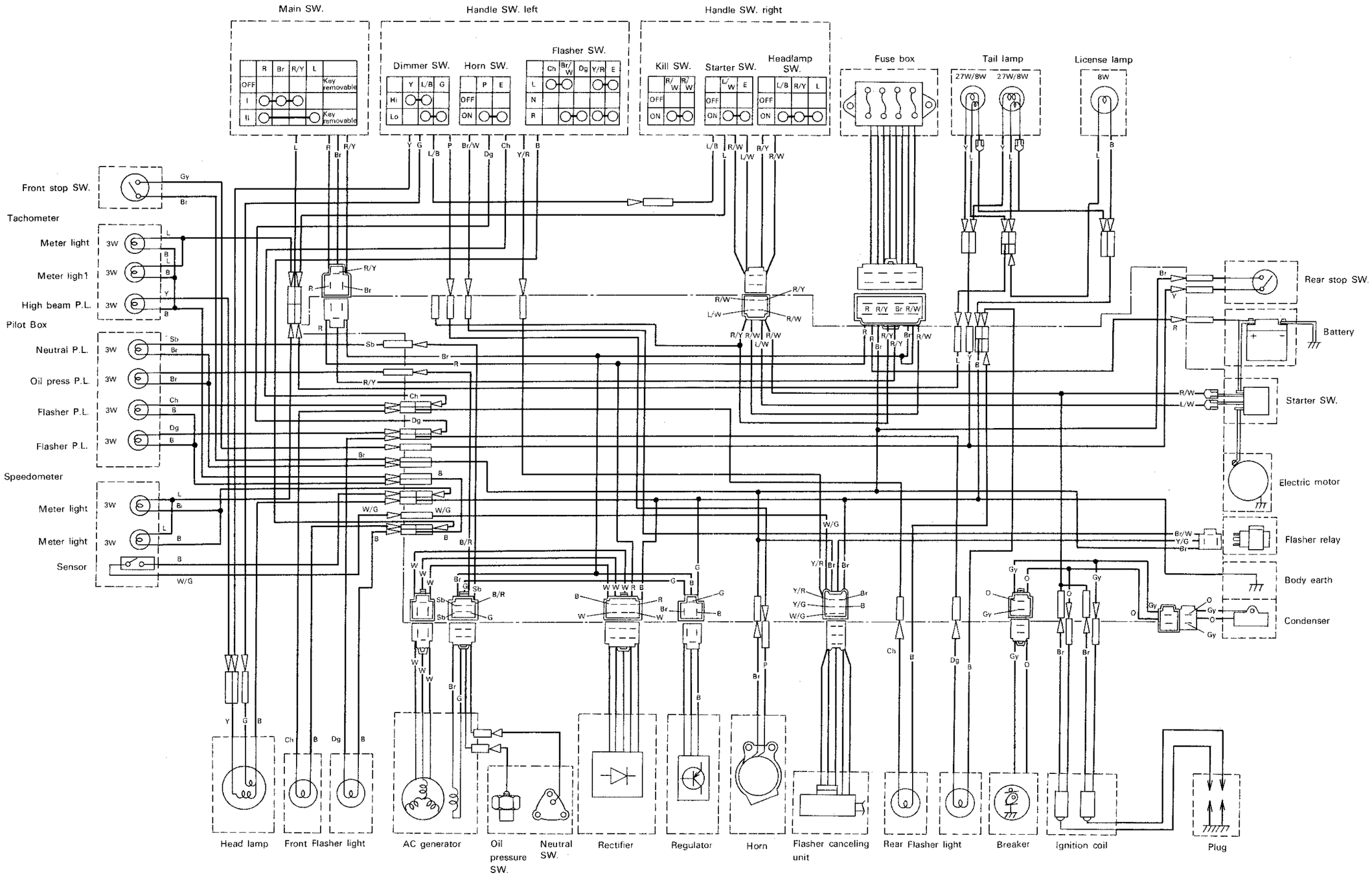


B: Black
Br: Brown
W/G: White/Green
Y/G: Yellow/Green
Y/R: Yellow/Red

4. If no defect is found with the above three check-ups and the flasher cancelling systems is still inoperative, replace the flasher cancelling unit.
5. If the signal flashers only when the handle switch lever is turned to L or R and it turns off immediately when the handle switch lever is turned to OFF, replace the flasher cancelling unit.

D. Notes on handling

1. The flasher cancelling system does not always operate at a proper time, because it is so designed that only when the requirements of both time and distance are met, it functions. It is advisable to make it a habit to turn the handle switch to OFF with your finger each time it is used.
2. Current continues to flow through the flasher relay after the signal is turned off automatically, therefore, it should preferably be turned off manually each time.
3. If the handle switch is turned on with wrong wiring, the system may become inoperative. Check for correct wiring after it is re-connected.
4. The signal can be used with the flasher cancelling unit being disconnected. It can be operated manually. Should the system fail to operate, pull off the connector and the turn signal can be operated manually.


Main SW.
Handle SW. left
Handle SW. right
Dimmer SW.
Horn SW.
Flasher SW.
Kill SW.
Starter SW.
Headlamp SW.
Fuse box
Tail lamp
License lamp
27W/8W
8W
Front stop SW.
Tachometer
Meter light
Meter ligh1
High beam P.L.
Pilot Box
Neutral P.L.
Oil press P.L.
Flasher P.L.
Speedometer
Sensor
Rear stop SW.
Battery
Starter SW.
Electric motor
Flasher relay
Body earth
Condenser
Head lamp
Front Flasher light
AC generator
Oil pressure SW.
Neutral SW.
Rectifier
Regulator
Horn
Flasher canceling unit
Rear Flasher light
Breaker
Ignition coil
Plug

SINCE 1887

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