INDEX

This manual has been combined with previous service manuals to provide complete service information for: **XJ750J**

Please read and give special consideration to the "NOTICE" on the preceding page for your safety.

XJ750J SUPPLEMENT	**J**
XJ650G SERVICE MANUAL	**G**

YAMAHA

XJ750J

J

Supplementary Service Manual

LIT-11616-02-84

15R-28197-10

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and new data for the XJ750J. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manual:

XJ650G Service Manual (LIT-11616-01-94)

SERVICE DEPT.
INTERNATIONAL DEVISION
YAMAHA MOTOR CO., LTD.

NOTICE

This manual was written by the Yamaha Motor Company primarily for use by Yamaha dealers and their qualified mechanics. It is not possible to put an entire mechanic's education into one manual, so it is assumed that persons using this book to perform maintenance and repairs on Yamaha motorcycles have a basic understanding of the mechanical concepts and procedures inherent to motorcycle repair technology. Without such knowledge, attempted repairs or service to this model may render it unfit for use and/or unsafe.

This model has been designed and manufactured to perform with certain specifications in regard to performance and emissions. Proper service with the correct tools is necessary to ensure that the motorcycle will operate as designed. If there is any question about a service procedures, it is imperative that you contact a Yamaha dealer for any service information changes that apply to this model. This policy is intended to provide the customer with the most satisfaction from his motorcycle and to conform with federal environmental quality objectives.

Yamaha Motor Company, Ltd. is continually striving to improve all models manufactured by Yamaha. Modifications and significant changes in specifications or procedures will be forwarded to all Authorized Yamaha dealers and will, where applicable, appear in future editions of this manual.

Particularly important information is distinguished in this manual by the following notations.

NOTE: A NOTE provides key information to make procedures easier or clearer.

CAUTION: A CAUTION indicates special procedures that must be followed to avoid damage to the motorcycle.

WARNING: A WARNING indicates special procedures that must be followed to avoid injury to a motorcycle operator or person inspecting or repairing the motorcycle.

Starting Serial Number

XJ750J	15R-000101



MAINTENANCE AND LUBRICATION CHART

Periodic maintenance emission control system

No.	Item	Remarks	Initial break-in		Thereafter every	
			1,000 km (600 mi) or 1 month	5,000 km (3,000 mi) or 7 months	4,000 km (2,500 mi) or 6 months	8,000 km (5,000 mi) or 12 months
1*	Valve clearance	Check and adjust valve clearance when engine is cold.		○		○
2	Spark plugs	Check condition. Adjust gap. Clean. Replace after intial 13,000 km (8,000 mi) or 18 months and thereafter every 12,000 km (7,500 mi) or 18 months.		○	○	Replace every 12,000 km (7,500 mi) or 18 months.
3*	Crankcase ventilation system	Check ventilation hose for cracks or damage. Replace if necessary.		○		○
4*	Fuel line	Check fuel hose and vacuum pipe for cracks or damage. Replace if necessary.		○		○
5*	Exhaust system	Check for leakage Retighten as necessary. Replace gasket(s) if necessary.		○	○	
6*	Carburetor synchronization	Adjust synchronization of carburetors.		○	○	
7*	Idle speed	Check and adjust engine idle speed. Adjust cable free play if necessary.		○	○	

* It is recommended that these items be serviced by a Yamaha dealer or other qualified mechanic.

General mainteance/lubrication

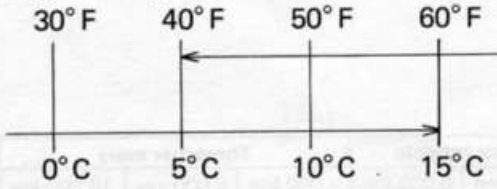
No.	Item	Remarks	Type	Initial break-in		Thereafter every		
				1,000 km (600 mi) or 1 month	5,000 km (3,000 mi) or 7 months	4,000 km (2,500 mi) or 6 months	8,000 km (5,000 mi) or 12 months	16,000 km (10,000 mi) or 24 months
1	Engine oil	Warm-up engine before draining.	Refer to NOTE.	○	○	○		
2	Oil filter	Replace.	–	○	○		○	
3	Final gear oil	Replace.	Refer to NOTE.	○			○	
4*	Air filter	Clean with compressed air.	–		○		○	
5*	Brake system	Adjust free play. Replace pads if necessary. (Front) Replace shoes if necessary. (Rear)	–	○	○	○		
6*	Clutch	Adjust free play.	–	○	○	○		
7*	Control and meter cable	Apply chain lube thoroughly	Yamaha chain and cable lube or SAE 10W30 motor oil	○	○	○		
8	Brake pedal and change pedal shaft pivots	Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		○	○		
9	Center and sidestand pivots	Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		○	○		
10*	Rear arm pivot bearing	Check bearings assembly for looseness. Moderately repack every 16,000 km (10,000 mi).	Medium weight wheel bearing grease					Repack
11*	Front fork oil	Drain completely. Refill to specification.	Yamaha fork oil 10wt or equivalent					○
12*	Steering ball bearing and races	Check bearing assembly for looseness. Moderately repack every 16,000 km (10,000 mi).	Medium weight wheel bearing grease		○	○		Repack

No.	Item	Remarks	Type	Initial break-in		Thereafter every		
				1,000 km (600 mi) or 1 month	5,000 km (3,000 mi) or 7 months	4,000 km (2,500 mi) or 6 months	8,000 km (5,000 mi) or 12 months	16,000 km (10,000 mi) or 24 months
13*	Wheel bearings	Check bearings for smooth rotation. Replace if necessary.	–		○	○		
14	Battery	Check specific Gravity. Check breather pipe for proper operation.	–		○	○		
15	Brake/Clutch lever pivot shaft	Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		○	○		
16*	A.C. Generator	Replace generator brushes. Replace at intial 13,000 km (8,000 mi) and thereafter every 16,000 km (10,000 mi).	–					Replace

* It is recommended that these items be serviced by a Yamaha dealer or other qualified mechanic.

NOTE:

Engine oil type:



YAMALUBE 4-cycle oil or SAE 20W40 type SE motor oil
SAE 10W30 type SE motor oil

Final gear oil type: SAE 80 API GL-4 Hypoid gear oil

* ENGINE

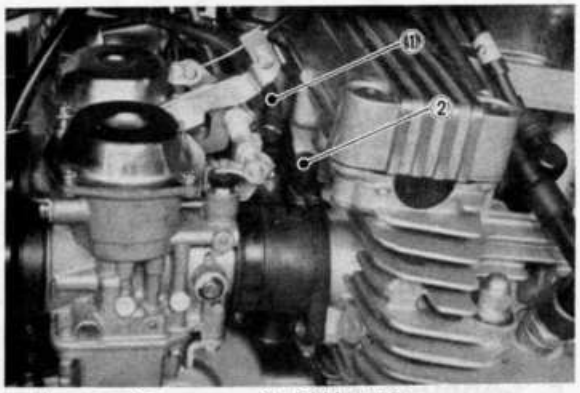
A. SYNCHRONIZATION

The seat must be opened and the rear of the tank elevated to gain access to the vacuum connections and synchronizing screw of the carburetors.

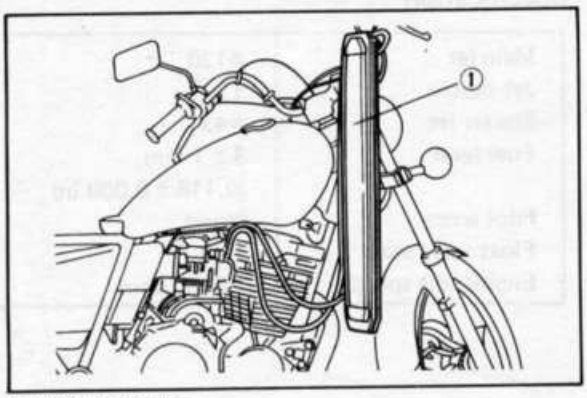
NOTE:

The valve clearances must be set properly before synchronizing the carburetors.

1. Remove the vacuum pipe from the carburetor manifold (No. 3 cylinder) and turn the fuel cock to "PRI".
2. Remove the rubber caps from the No. 1, 2, and 4 carburetor manifolds.
3. Remove either the left or right (but not both) blind plug at the end of the YICS (Yamaha Induction Control Sysmte) passage in the cylinder.
4. Insert the YICS shutoff tool (special tool) fully and flip the locking lever.
5. Connect each vacuum gauge hose to its proper carburetor.



1. Vacuum pipe 2. Rubber cap



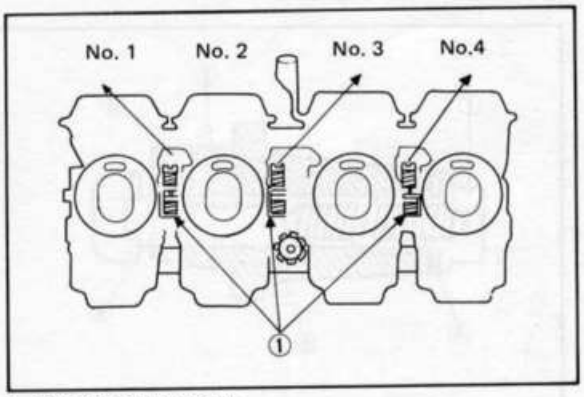
1. Vacuum gauge

6. Start the engine allow it to warm-up for a few minutes. The warm-up is complete when engine responds normally to the throttle opening.
7. Make sure the engine idle speed is 950 ~ 1,000 r/min. If it does not, adjust the idle speed with the throttle stop screw.

NOTE:

With the YICS shutoff tool fitted, the engine speed generally drops a little. Thus, continue with the following steps at idle speed of 950 ~ 1,000 r/min.

8. Each gauge reading will indicate the same if the carburetors are synchornized. The No. 3 carburetor has no synchronizing screw and the other carburetors are to be synchronized to it in order, one at a time.
   First, synchronize carburetor No. 1 to carburetor No. 2 by turning the No. 1 synchronizing screw until both gauges read the same.
   Second, in the same way synchronize carburetor No. 4 to carburetor No. 3.
   Third, by adjusting No. 2 screw to watch No. 3 carburetor reading, No. 1 and No. 2 carburetors will both change to match No. 3 carburetor.



1. Synchronizing screws

9. Remove the YICS shutoff tool and reinstall the blind plug.

Tightening torque:
22 Nm (2.2 m·kg, 16 ft·lb)

10. Check the idle speed.
    Adjust if necessary. (Refer to B. IDLE SPEED ADJUSTMENT).

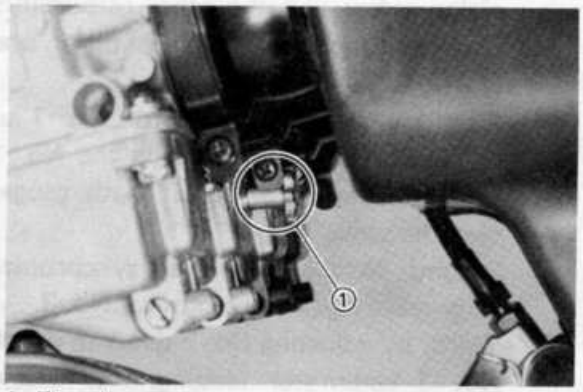
B. IDLE SPEED ADJUSTMENT

NOTE:

Carburetors must be synchronized before setting final idle speed. The idle speed adjustment is made by turning only one throttle stop screw.

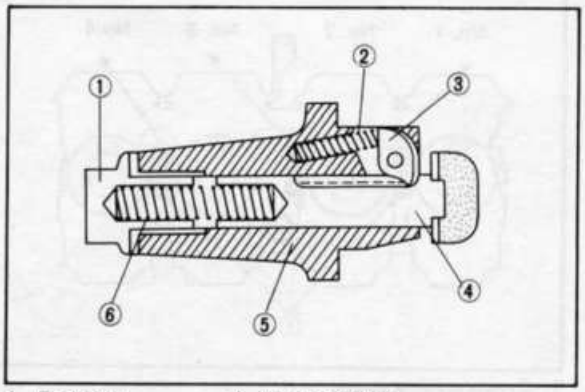
1. The engine must be warmed up before setting idle speed.
2. Set the engine idle speed by turning the throttle stop screw in (to increase engine speed) or out (to decrease engine speed).

Standard idle speed: 1,050 r/min



1. Throttle stop screw

C. CAM CHAIN TENSIONER



1. End plug
2. Spring
3. Oneway cam
4. Tensioner rod
5. Tensioner body
6. Spring

This model has been equipped the automatic cam chain tensioner. No adjustment is necessary.

When installing this tensioner onto the cylinder proceed as follows:

1. Remove the end plug and spring from the tensioner assembly.
2. Unlock the oneway cam by pushing it with your finger and push the tensioner rod into the tensioner body until it stops.
3. Install the tensioner to the cylinder and torque the bolts to the specification.

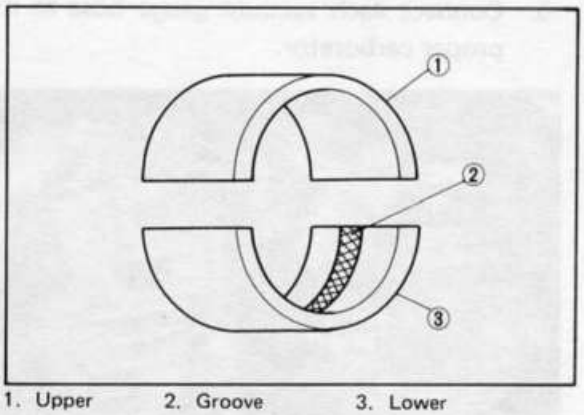
Tightening torque: 10 Nm (1.0 m·kg, 7.2 ft·lb)

4. Reinstall the spring and end plug with the gasket. Torque the end plug to the specification.

Tightening torque: 15 Nm (1.5 m·kg, 11 ft·lb)

D. CRANKSHAFT BEARING

The crankshaft main bearing which has no groove on the bearing surface should be installed in the upper crankcase.



1. Upper
2. Groove
3. Lower

E. CARBURETION

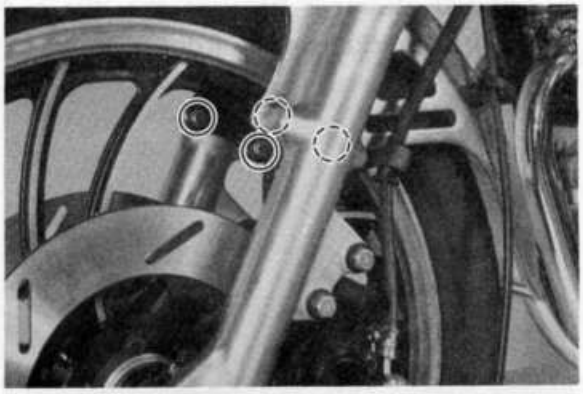
Specification

Main jet	#120
Jet needle	Y-13
Starter jet	#43
Fuel level	3 ± 1 mm (0.118 ± 0.039 in)
Pilot screw	Preset
Float valve seat	ϕ2.0
Engine idle speed	1,050 r/min

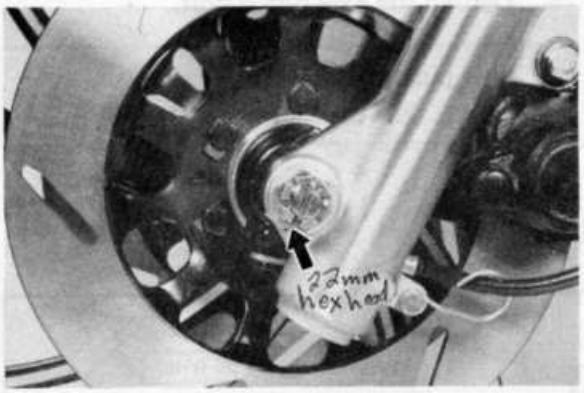
* CHASSIS

A. FRONT WHEEL

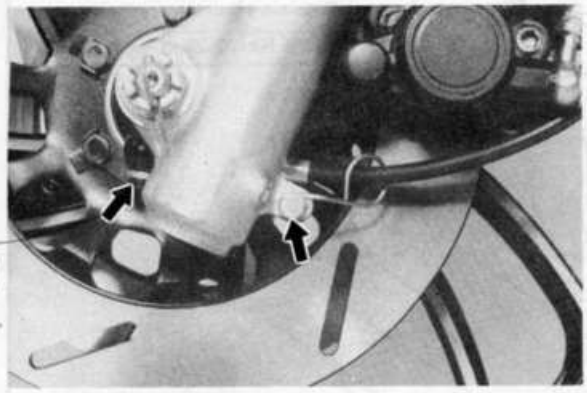
1. Place the motorcycle on the centerstand.
2. Remove the front fender securing bolts and remove the fender.



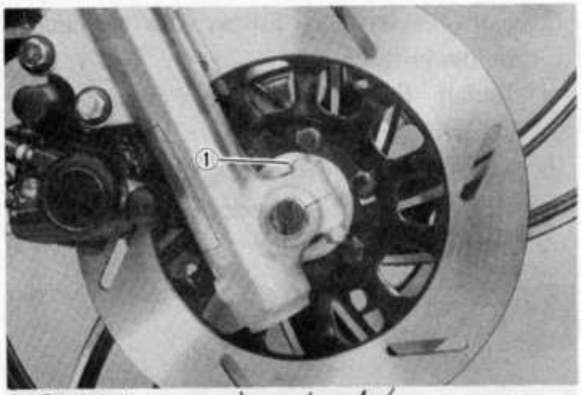
3. Remove the cotter pin and wheel axle nut.



4. Remove the speedometer cable holder securing bolt.



5. Loosen the pinch bolt securing the axle.

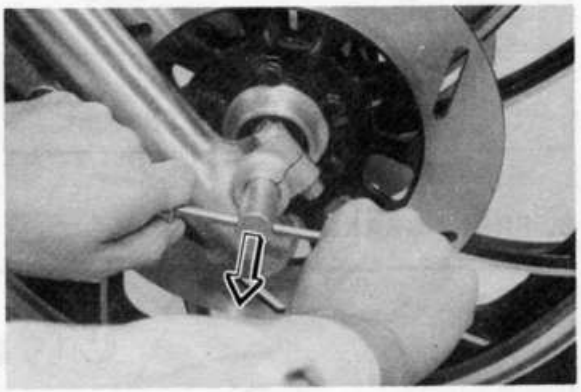


1. Pinch bolt 12mm hex head/12mm nut

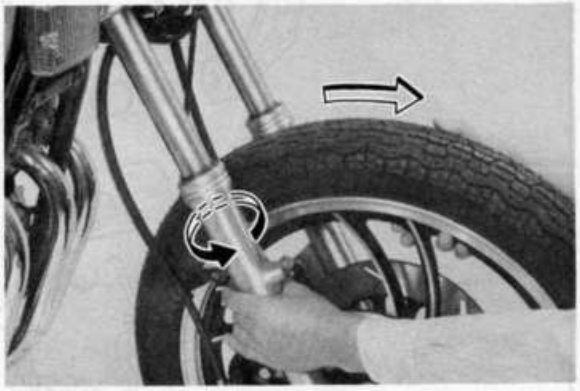
6. Remove the axle shaft and the front wheel. In this case, make sure the motorcycle is properly supported.

NOTE:

Do not depress the brake lever when the wheel is off the motorcycle as the brake pads will be forced to shut.



7. Lower the wheel until the brake discs come off the calipers. Turn the calipers outward so they do not obstruct the wheel and remove the wheel.



8. For reassembly, follow the procedure below with case;
   a. Install the speedometer cable holder securing bolt.
   b. Make sure the projecting portion (torque stopper) of the speedometer housing is positioned correctly.

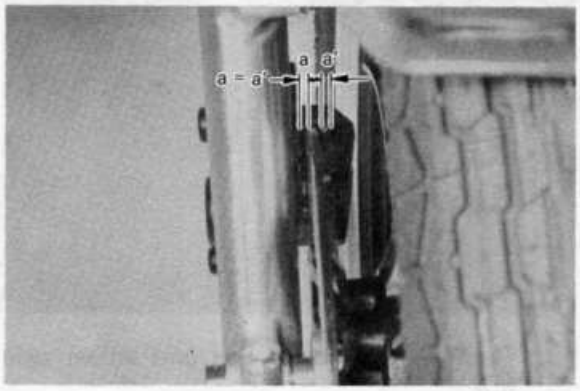


1. Torque stopper

   c. Tighten the axle nut and install a new cotter pin.

Axle nut torque:
107 Nm (10.7 m·kg, 78 ft·lb)

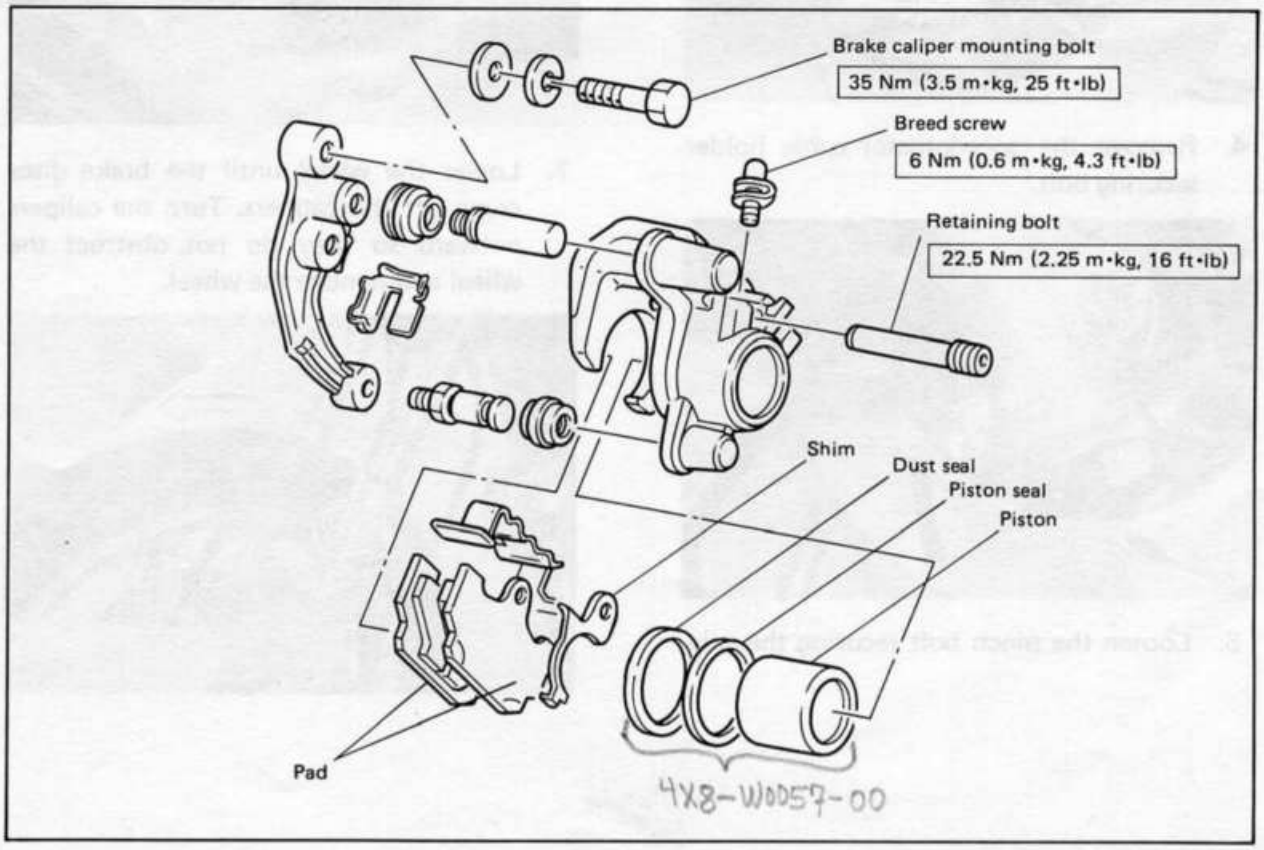
   d. Install the front fender.
   e. Before tightening the pinch bolt, compress the front forks several times to make sure of proper fork operation.
   With the axle pinch bolt loose, work the right fork leg back and forth until the proper clearance between the disc and caliper bracket on the front is obtained.



   f. Tighten the axle pinch bolt.

Axle pinch bolt torque:
20 Nm (2.0 m·kg, 14 ft·lb)

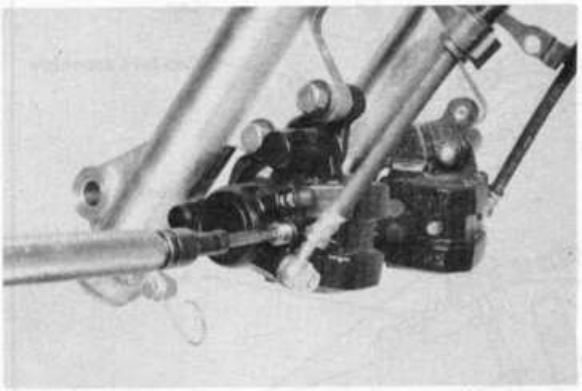
B. FRONT BRAKE



Caliper pad replacement

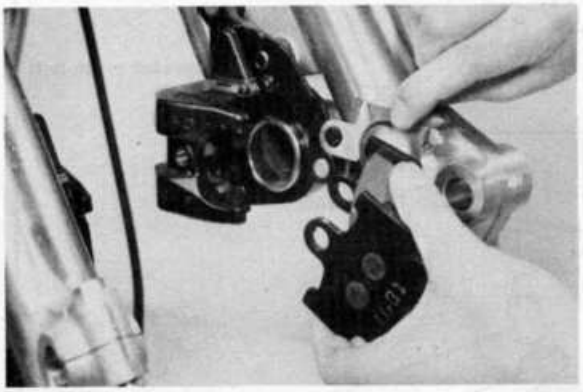
It is not necessary to disassembly the brake caliper and brake hose to replace the brake pads.

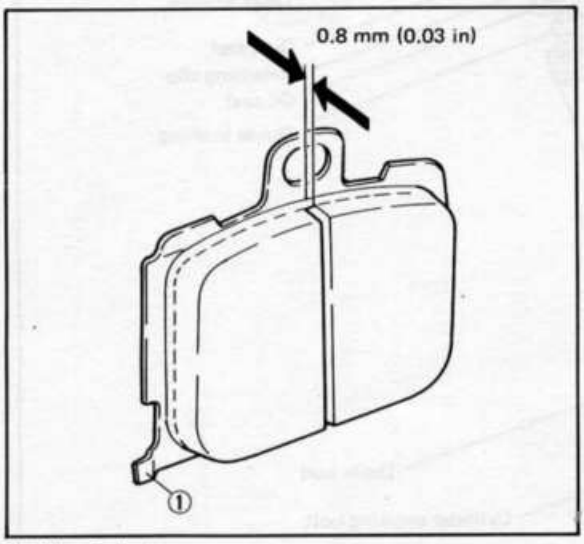
1. Remove the font fender and front wheel.
2. Screw out the pad retaining bolt.



3. Remove the pads.

Pad wear limit: 0.8 mm (0.03 in)





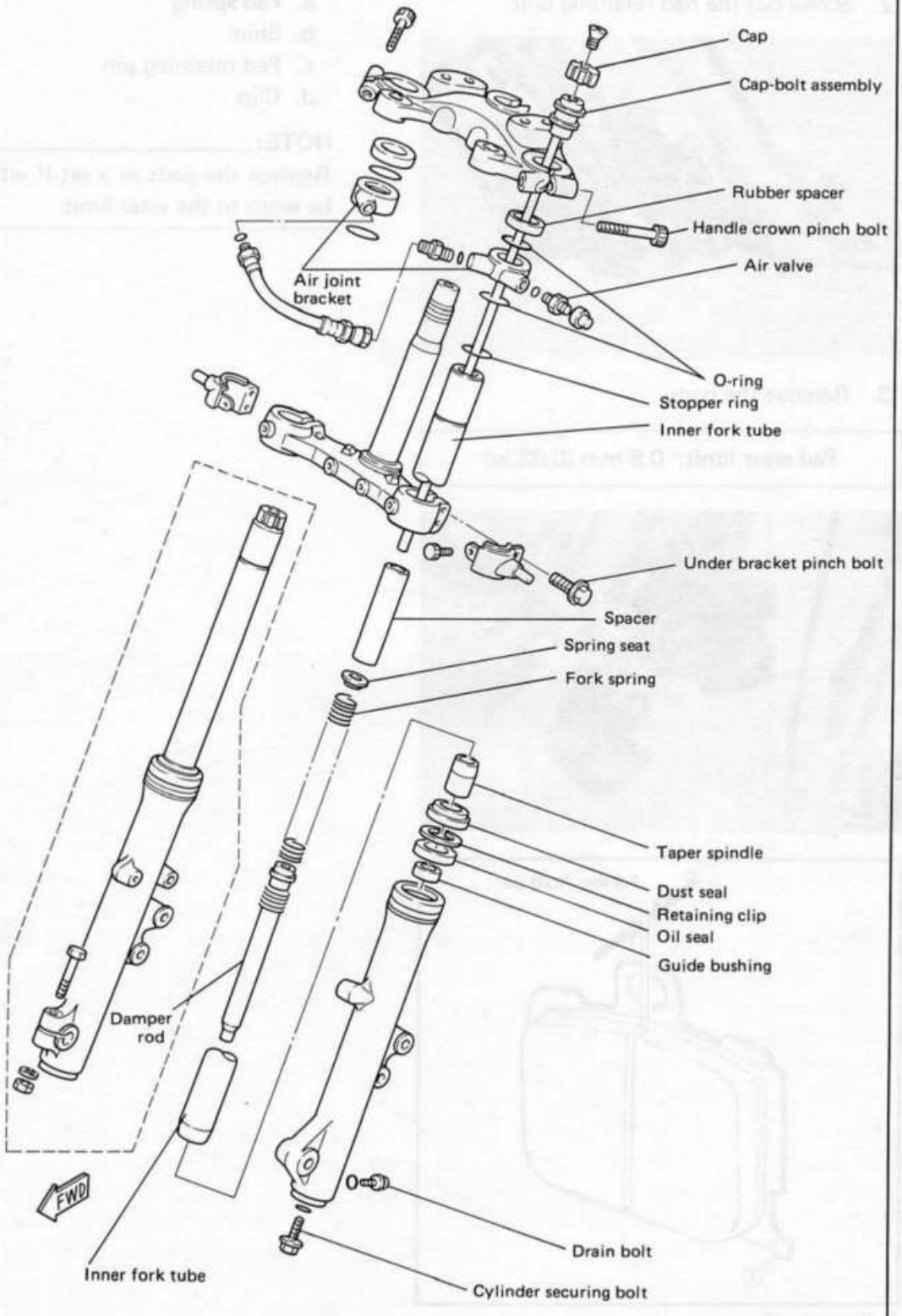
1. Wear indicator

4. Install the new brake pads and shims. Before installing the pads, install the shim on the back plate which faces the caliper piston, as shown. Also replace the following parts if pad replacement is required.
   a. Pad spring
   b. Shim
   c. Pad retaining pin
   d. Clip

NOTE:

Replace the pads as a set if either is found to be worn to the wear limit.

C. FRONT FORK


Cap
Cap-bolt assembly
Rubber spacer
Handle crown pinch bolt
Air valve
Air joint bracket
O-ring
Stopper ring
Inner fork tube
Under bracket pinch bolt
Spacer
Spring seat
Fork spring
Taper spindle
Dust seal
Retaining clip
Oil seal
Guide bushing
Damper rod
FWD
Drain bolt
Inner fork tube
Cylinder securing bolt

Front fork oil change

WARNING:

1. Fork oil leakage can cause loss of stability and safe handling. Have any problem corrected before operating the motorcycle.
2. Securely support the motorcycle so there is no danger of it falling over.

1. Raise the motorcycle so that there is no weight on the front end of the motorcycle.
2. Remove the handlebars.
3. Remove the air valve cap from the left fork.
4. Keep the valve open by pressing it for several seconds so that the air can be let out of the inner tube.



1. Push

5. Remove the air valve cap screw and remove the cap from the cap bolt.
6. Screw out the cap-bolt assembly from the inner tube.
7. Place an open container under each drain hole. Remove the drain screw from each outer tube.

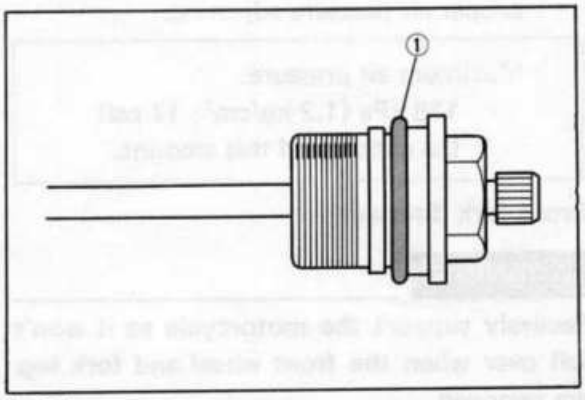
WARNING:

Do not allow oil to contact the disc brake components. If any oil should contact the brake components it must be removed before the motorcycle is operated. Oil will cause diminished braking capacity and will damage the rubber components of the brake assembly.

8. When most of the oil has drained, slowly raise and lower the outer tubes to pump out the remaining oil.
9. Inspect the drain screw gasket. Replace if damaged. Reinstall the drain screw.
10. Pour the specified amount of oil into the fork inner tube.

Front fork oil (each fork):
257 cm³ (9.0 Imp oz, 8.7 US oz)
SAE 10W30 type SE motor oil

11. After filling, slowly pump the forks up and down to distribute the oil.
12. Check the O-ring on the cap-bolt assembly for damage, and if necessary, replace it.



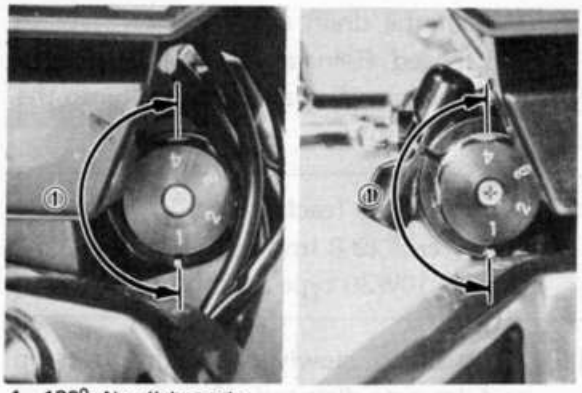
1. O-ring

13. Fit the end of cap-bolt assembly rod into the piston in the damper rod. Screw the cap bolt assembly into inner fork tube.

Tightening torque:
Cap-bolt assembly
30 Nm (3.0 m·kg, 22 ft·lb)

14. Install the cap on the cap-bolt assembly in the following manner:
a. Install the cap onto the cap bolt. Do not tighten it.
b. Turn the cap clockwise to find the No.1 setting:
The No.1 setting is the first click-stop encountered after the cap has been turned 180 degrees in a clockwise direction.
c. Remove the cap and align the No.1 position on the cap with the arrow mark on the handle crown.
d. Tighten the cap to the cap-bolt assembly.

NOTE:
Be sure that each number on the cap aligms with the arrow on the handle crown.



1. 180°: No clicks angle.

15. Fill the fork with air using a manual air pump or other pressurized air supply. Refer to "Front fork air adjustment" for proper air pressure adjusting.

Maximum air pressure: 118 kPa (1.2 kg/cm², 17 psi) Do not exceed this amount.

Front fork disassembly

WARNING:

Securely support the motorcycle so it won't fall over when the front wheel and fork legs are removed.

1. Remove the cap from the fork air valve and depress the valves until the air pressure escapes completely from both fork legs.
2. Disconnect the speedometer cable from the speedometer drive unit.
3. Remove the brake calipers from the fork legs.
4. Remove the front wheel.
5. Remove the front fender.
6. Loosen the fork pinch bolts in the handle crown and underbracket.
7. Remove the fork assembly from the handle crown and air valve bracket.
8. Remove the spring wire circlips from the outside of the fork legs, and remove the fork legs from the under bracket.

NOTE:

Perform the fork leg disassembly and reassembly procedures on one fork leg at a time.

9. Remove the cap bolt, and remove the spring seat and fork spring.
10. Inspect the o-ring on the cap bolt, and replace the o-ring if it is damaged.
11. Over a drain pan, turn the fork leg upside down and slowly pump the fork oil out of the fork leg.
12. Remove the damper rod bolt from the bottom the fork leg. (Using special tool)
13. Hold one hand over the top of the fork leg, and turn the leg upside down so the damping rod and rebound spring slide down and out of the fork leg; take care not to let the damper rod fall to the ground, as it may be damaged.
14. With the fork leg upright, use a propane torch to heat the top of the slider lightly, and remove the dust seal with a thin screwdriver. Take care not to scratch the inner tube. Discard the dust seal.

CAUTION:

Do not apply too much heat to the slider, as the paint will be damaged.

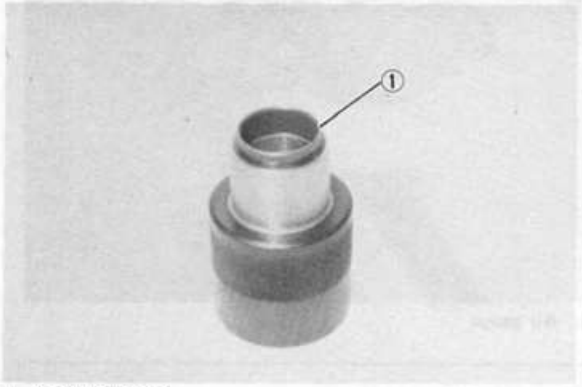
15. Remove the retaining clip.
16. Hold the fork leg horizontally, securely clamp the axle-mounting boss of the slider in a vise with soft jaws, and again heat the top of the slider.
17. Remove the oil seal and guide bushing from the outer fork tube.
18. Remove all components of the oil lock valve assembly and inspect them; replace the assembly if there are any damaged components.
19. Clean all components of the fork leg and inspect them; replace any worn or damaged components prior to reassembly.

Front fork reassembly

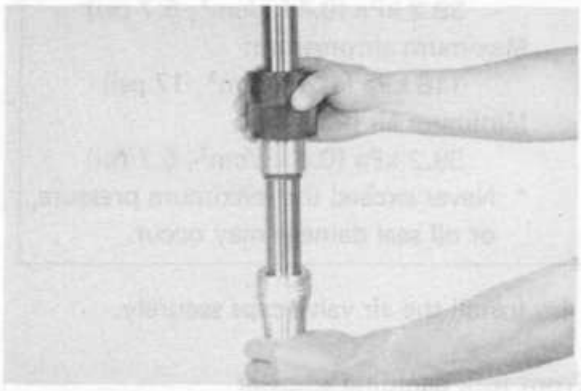
1. Install the rebound spring on the damper rod.
2. Install the damper rod in the inner fork tube, and allow it to slide slowly down the tube until it protrudes from the bottom.
3. Place the taper spindle over the end of the damper rod, and insert the inner fork tube into the outer fork tube.
4. Apply a thread-locking compound such as Loctite® to the threads of the cylinder securing bolt, install the bolt in the damper rod, and torque it to specification. (Using special tool 90890-04084.)

Tightening torque:
20 Nm (2.0 m·kg, 14 ft·lb)

5. Install the guide bushing in the special 36 mm (1.4 in) fork tool (TLM-11080-10-00 or YM-08010). Use the tool to align the bushing in the top of the slider.



1. Guide bushing



6. Remove the large part of the fork tool, place the small part (TLM-11080-10-01 or YM-08010-1) on the guide bushing, and use the large part of the tool to drive in the bushing.
7. Oil and install a new oil seal in the top of the slider with the special tool. Making sure the beveled edge faces upward.



8. Install the retaining clip, and gently tap the dust seal into place with the special tool.
9. Pour the specified amount of the recommended fork oil into the inner fork tube.

Fork oil capacity:
257 cm³, (9.0 Imp oz, 8.7 US oz)
Recommended oil:
Yamaha Fork Oil 10wt or
SAE 10W30 type SE motor oil

10. Place the fork spring, spring seat, and spacer in the inner fork tube. Install the cap bolt assembly and tighten to specification.

Tightening torque:
Cap bolt
30 Nm (3.0 m·kg, 22 ft·lb)

CAUTION:

To tighten the cap-bolt assembly first make sure the damper adjustment rod is fitted correctly in the semicircular hole in the top of the damper rod. If the adjusting rod is not put in this hole, the cap-bolt assembly will not touche the inner fork tube. If this is the case, turn the cap-bolt assembly until the adjusting rod falls into the hole in the damper rod; the cap-bolt assembly will then touch the inner fork tube so you will able to tighten the cap-bolt assembly. Do not force the cap-bolt assembly; you could damage the adjusting rod and ruin the unit.

11. Slide the fork into the underbracket, and install the stopper ring.
12. Apply a light coat of lithium soap base grease to the o-rings in the air joint bracket.
13. Push the fork assembly into the air joint bracket, rubber spacer and handle crown.

CAUTION:

When inserting the fork into the air joint bracket, grease the air joint bracket o-ring, and after insertion, make sure the o-ring fits correctly in the groove.

14. Torque the pinch bolts in the handle crown and underbracket.

Tightening torque:
20 Nm (2.0 m·kg, 14 ft·lb)

15. Install the cap onto the cap bolt. For the procedure, refer to "Front fork oil change".
16. Install the proper amount of air pressure in the fork legs. Take care not to exceed the maximum allowable air pressure.

Maximum fork air pressure:
245 kPa (2.5 kg/cm², 36 psi)

17. Install the air valve caps.

WARNING:

Make sure no oil has contacted any disc brake components; oil will cause diminished braking capacity and damage the rubber components of the brake assembly. Make sure all oil is removed from the brake and actuating piston assemblies before they are reassembled and the motorcycle is operated.

18. Install the front fender, handlebar front wheel, and brake calipers.
19. Connect the speedometer cable to the drive unit, and check the operation of the motorcycle.

D. FRONT FORK/REAR SHOCK ABSORBER ADJUSTMENT

Front fork air pressure

1. Elevate the front wheel by placing the motorcycle on the center stand.

NOTE:

When checking and adjusting the air pressure, there should be no weight on the front end of the motorcycle.

2. Remove the air valve cap from left fork.
3. Using the air gauge, check and adjust the air pressure.
   If the air pressure is increased, the suspension becomes stiffer and if decreased, it becomes softer.

To increase: Use a manual air pump or other pressurized air supply. **To decrease:** Replace the air by pushing the valve pin.



1. Air gauge

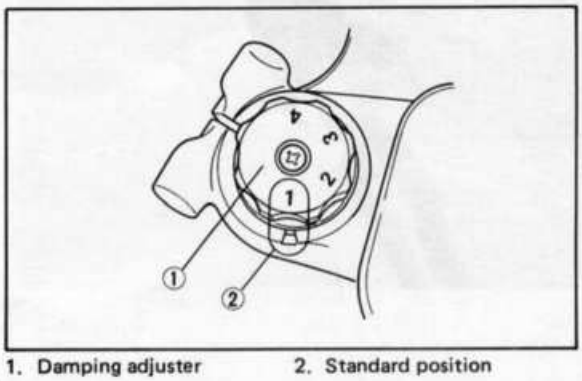
Standard air pressure: 39.2 kPa (0.4 kg/cm², 5.7 psi) Maximum air pressure: 118 kPa (1.2 kg/cm², 17 psi) Minimum air pressure: 39.2 kPa (0.4 kg/cm², 5.7 psi) * Never exceed the maximum pressure, or oil seal damage may occur.

4. Install the air valve caps securely.

Front fork damping adjuster

1. Turn the damping adjuster to increase or decrease the damping.
2. If the damping adjuster is turned toward the "4", the damping becomes harder; if the adjuster is turned toward the "1", damping becomes softer.

Standard position – No. 1 No. 1 – Minimum damping No. 4 – Maximum damping



1. Damping adjuster 2. Standard position

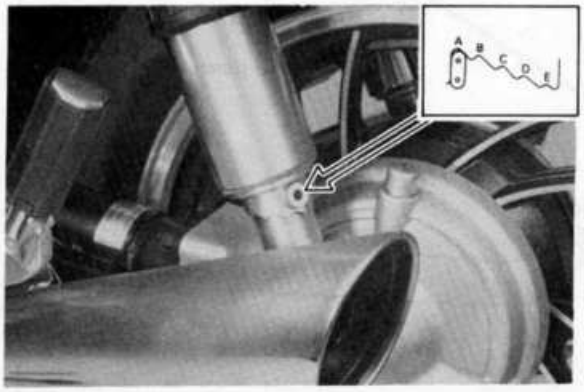
WARNING:

Always adjust the front forks on each side to the same position. Uneven adjustment will cause an improper riding position.

Rear shodk absorber adjustment

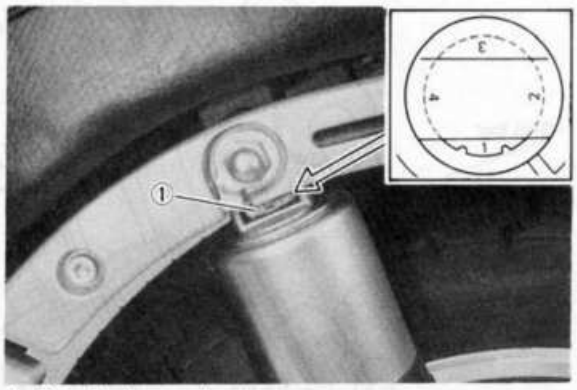
1. Spring preload
   If the spring seat is raised, the spring becomes stiffer and if lowered, it becomes softer.

Standard position – A
A. position – Softest
E. position – Stiffest



2. Damping force
   Turn the damping force adjuster by your fingers to increase or decrease the damping force. If it is difficult to turn it with your fingers, use a screw driver.

Standard position – No. 1
No. 1 – Minimum damping force
No. 4 – Maximum damping force



1. Damping force adjuster

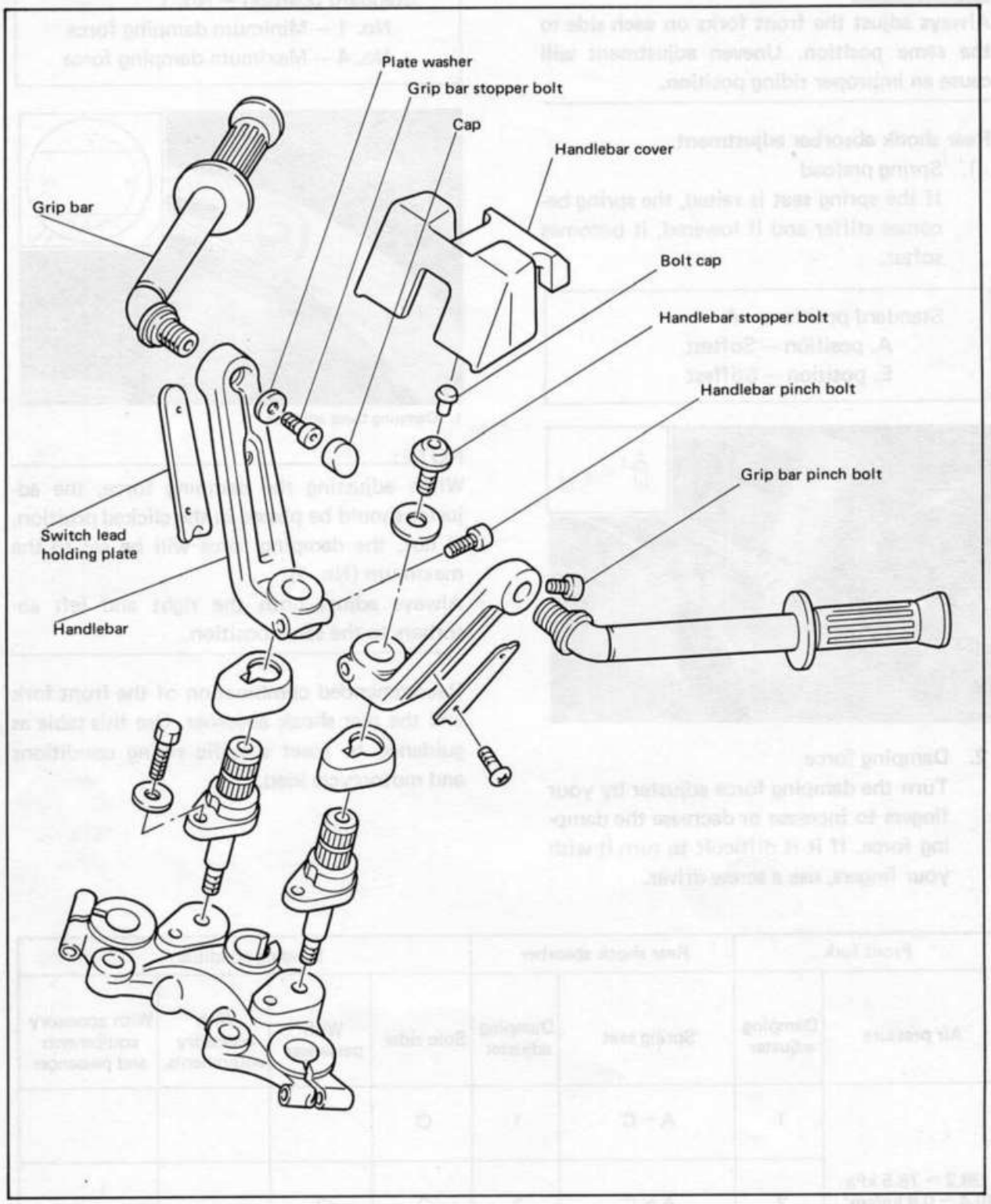
NOTE:

When adjusting the damping force, the adjuster should be placed in the clicked position. If not, the damping force will be set to the maximum (No. 4).
Always adjust both the right and left absorbers to the same position.

Recommended combination of the front fork and the rear shock absorber. Use this table as guidance to meet specific riding conditions and motorcycle load.

Front fork		Rear shock absorber		Loading condition			
Air pressure	Damping adjuster	Spring seat	Damping adjuster	Solo rider	With passenger	With accessory equipments	With accessory equipments and passenger
39.2 ~ 78.5 kPa (0.4 ~ 0.8 kg/cm², 5.7 ~ 11 psi)	1	A ~ C	1	○			
	2	A ~ C	2	○	○		
	3	C ~ E	3		○	○	
78.5 ~ 118 kPa (0.8 ~ 1.2 kg/cm², 11 ~ 17 psi)	4	E	4			○	○

E. ADJUSTABLE HANDLEBAR



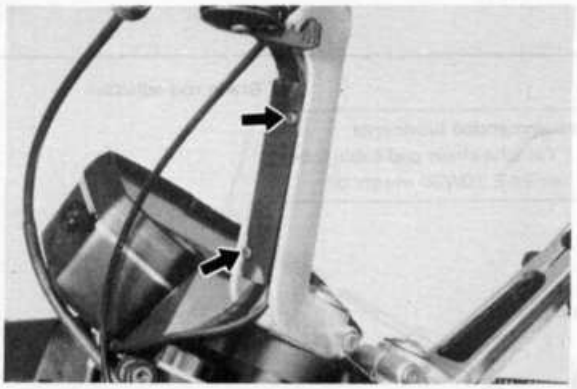
Handlebar adjustment

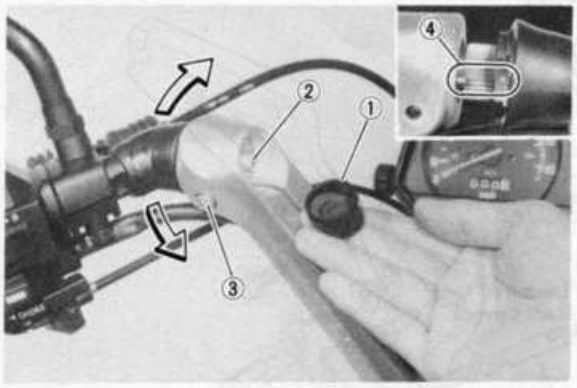
1. Vertical adjustment

a. Remove the switch lead holding plate, cap, two bolts and pull the grip bar as far either up or down by one notch from the standard position. (Three possible positions only)

b. Tighten the handlebar grip pinch bolt and stopper bolt.

Tightening torque:
Grip bar stopper bolt:
16 Nm (1.6 m·kg, 11 ft·lb)
Grip bar pinch bolt:
16 Nm (1.6 m·kg, 11 ft·lb)





1. Cap
2. Grip bar stopper bolt
3. Grip bar pinch bolt
4. Standard position

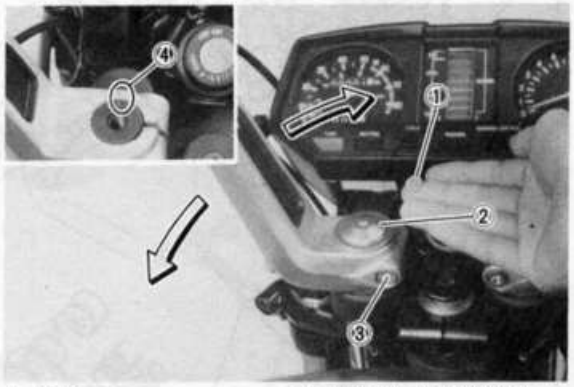
2. Horizontal adjustment

a. Remove the handlebar cover, bolt cap, handlebar stopper bolt, and pinch bolt. Next pull the handlebar as far away from the handle crown as necessary to permit adjustment. Adjust the handlebar either back or forward by one notch from the standard position. (Three possible positions only)



b. Tighten the handlebar pinch bolt and stopper bolt.

Tightening torque:
Handlebar stopper bolt:
23 Nm (2.3 m·kg, 17 ft·lb)
Handlebar pinch bolt:
30 Nm (3.0 m·kg, 22 ft·lb)

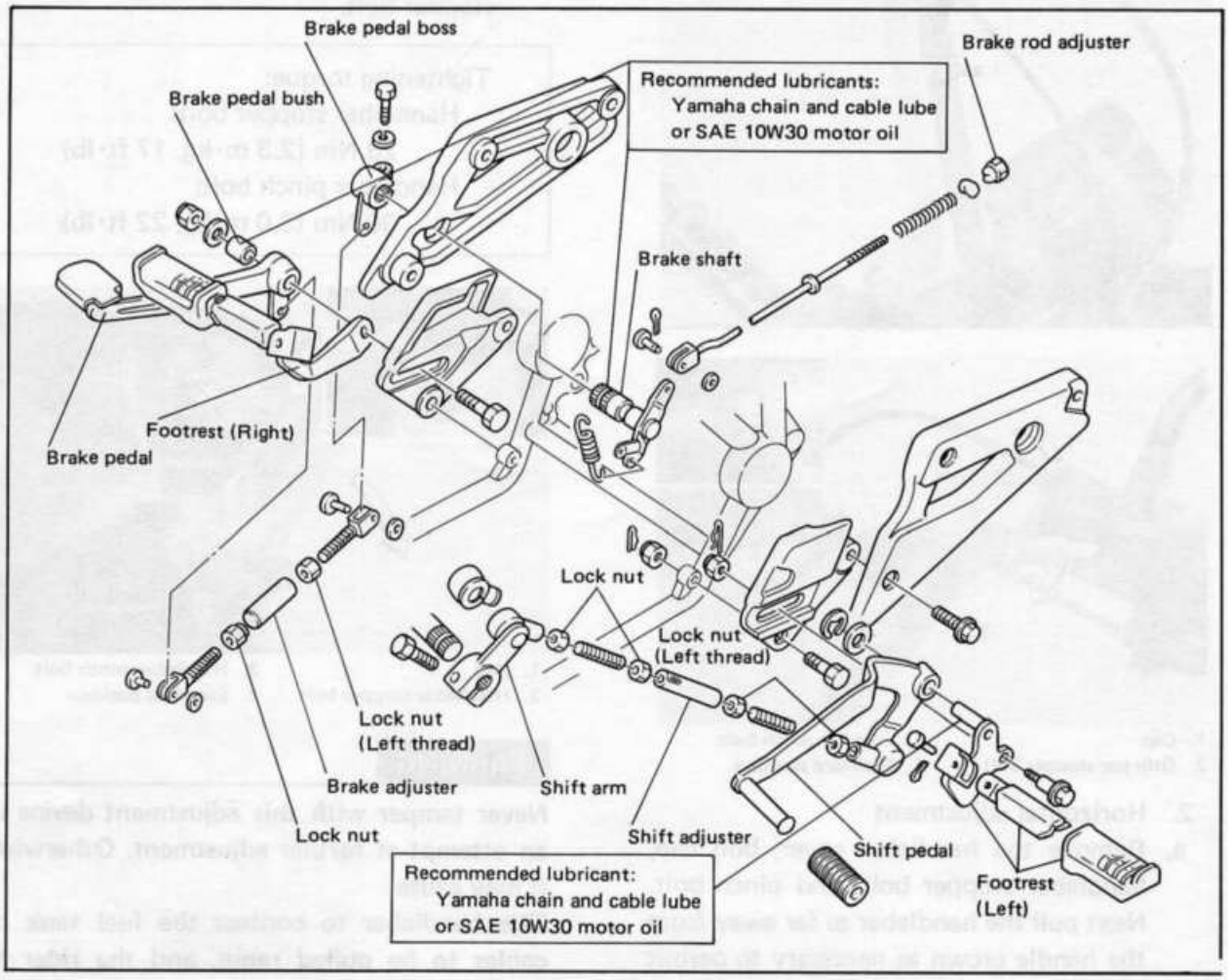


1. Cap
2. Handlebar stopper bolt
3. Handlebar pinch bolt
4. Standard position

WARNING:

Never tamper with this adjustment device in an attempt at further adjustment. Otherwise, it may cause:
The handlebar to contact the fuel tank or cables to be pulled rense, and the rider to assume an inappropriate riding position. Always adjust the handlebars on each side to the same position. Uneven adjustment will cause an improper riding position.

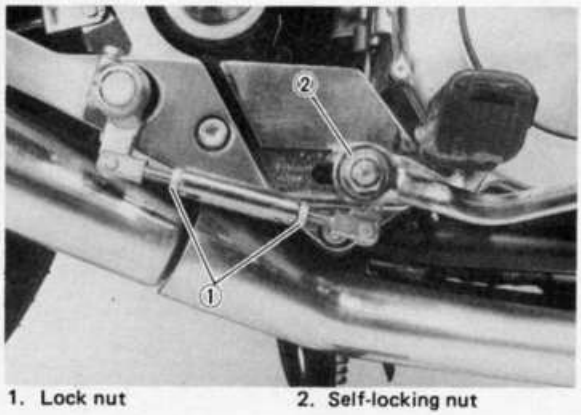
F. ADJUSTABLE FOOTREST



Footrest adjustment

Right

1. Loosen the lock nuts and self-locking nut.

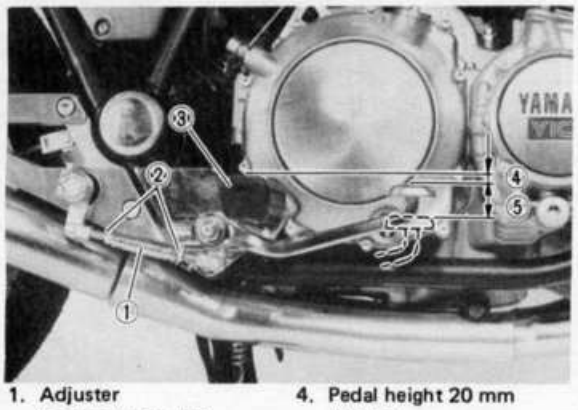


1. Lock nut
2. Self-locking nut

2. Move the footrest either way to suit the rider's preference. (Six possible positions only) Then secure the self-locking nut.

Tightening torque:
55 Nm (5.5 m·kg, 40 ft·lb)

3. By turning the adjuster clockwise or counterclockwise, adjust the brake pedal position so taht its top end is approx. 20 mm (0.8 in) below the top of the footrest.
4. Secure the lock nuts.



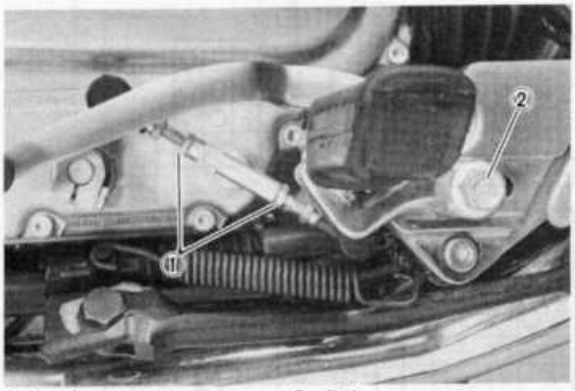
1. Adjuster (For pedal height)
2. Lock nut
3. Footrest
4. Pedal height 20 mm (0.8 in)
5. Free play 20 ~ 30 mm (0.8 ~ 1.2 in)

WARNING:

After adjusting the pedal height, the brake pedal free play should be adjusted.

Left

1. Loosen the lock nuts and bolt.



1. Lock nut 2. Bolt

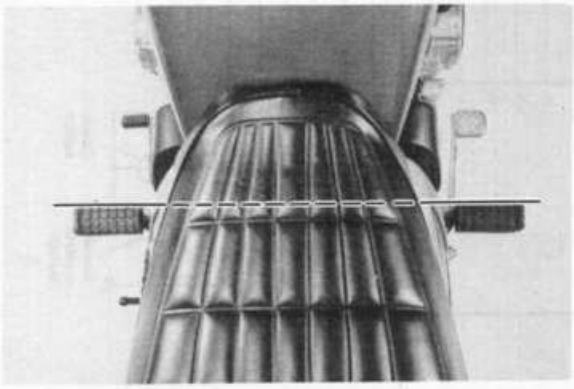
2. Move the footrest either way to suit the rider's preference. Then secure the bolt.

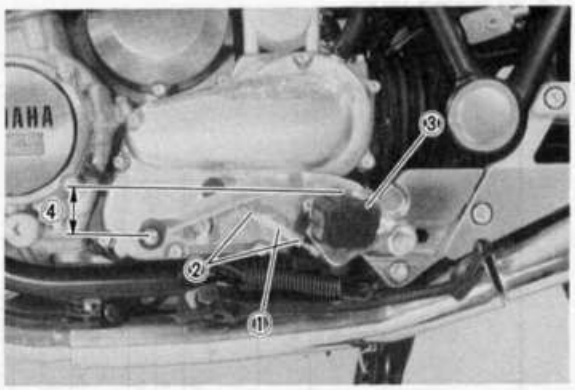
Tightening torque:
55 Nm (5.5 m·kg, 40 ft·lb)

3. By turning the adjuster clockwise or counterclockwise, adjust the position of the change pedal so that its peg center is approx. 20 mm (0.8 in) below the top of the footrest.
4. Secure the lock nuts.

NOTE:

Viewed from the top, both adjusted footrests must be in line with each other.

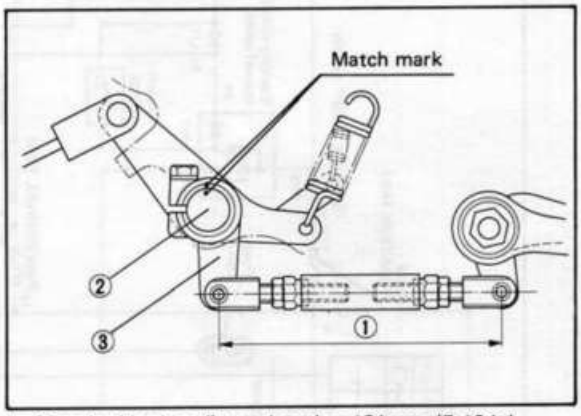




1. Adjuster (For pedal height)
2. Lock nut
3. Footrest
4. Pedal height 20 mm (0.8 in)

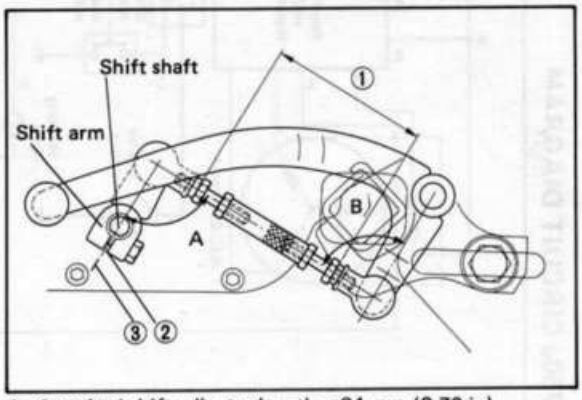
Overhauling

1. When installing the brake pedal onto the brake shaft, be sure to align their marks. The brake adjuster should be positioned as shown below.



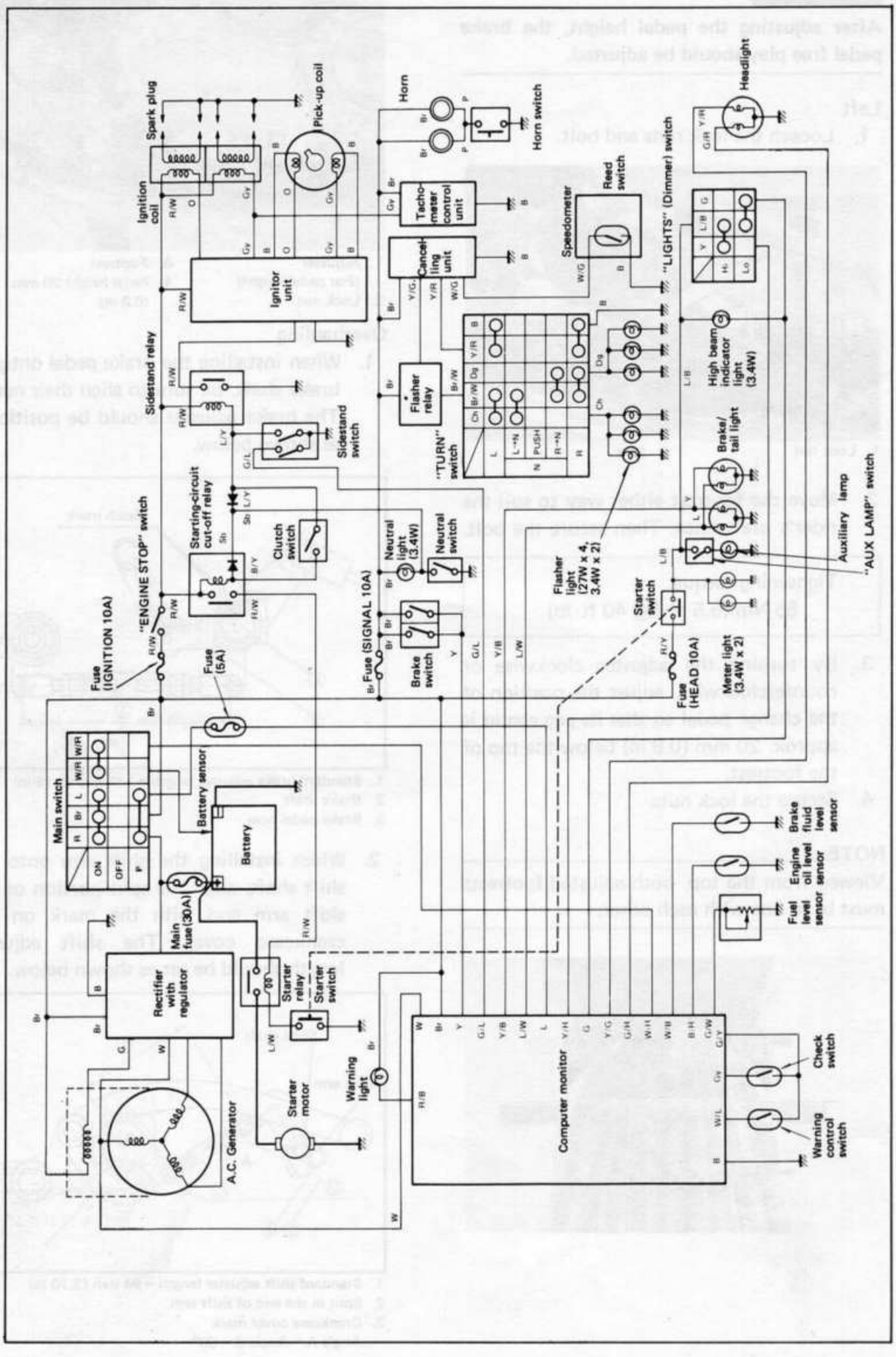
1. Standard brake adjuster length = 131 mm (5.16 in)
2. Brake shaft
3. Brake pedal boss

2. When installing the shift arm onto the shift shaft, align the split portion of the shift arm end with the mark on the crankcase cover. The shift adjuster length should be set as shown below.



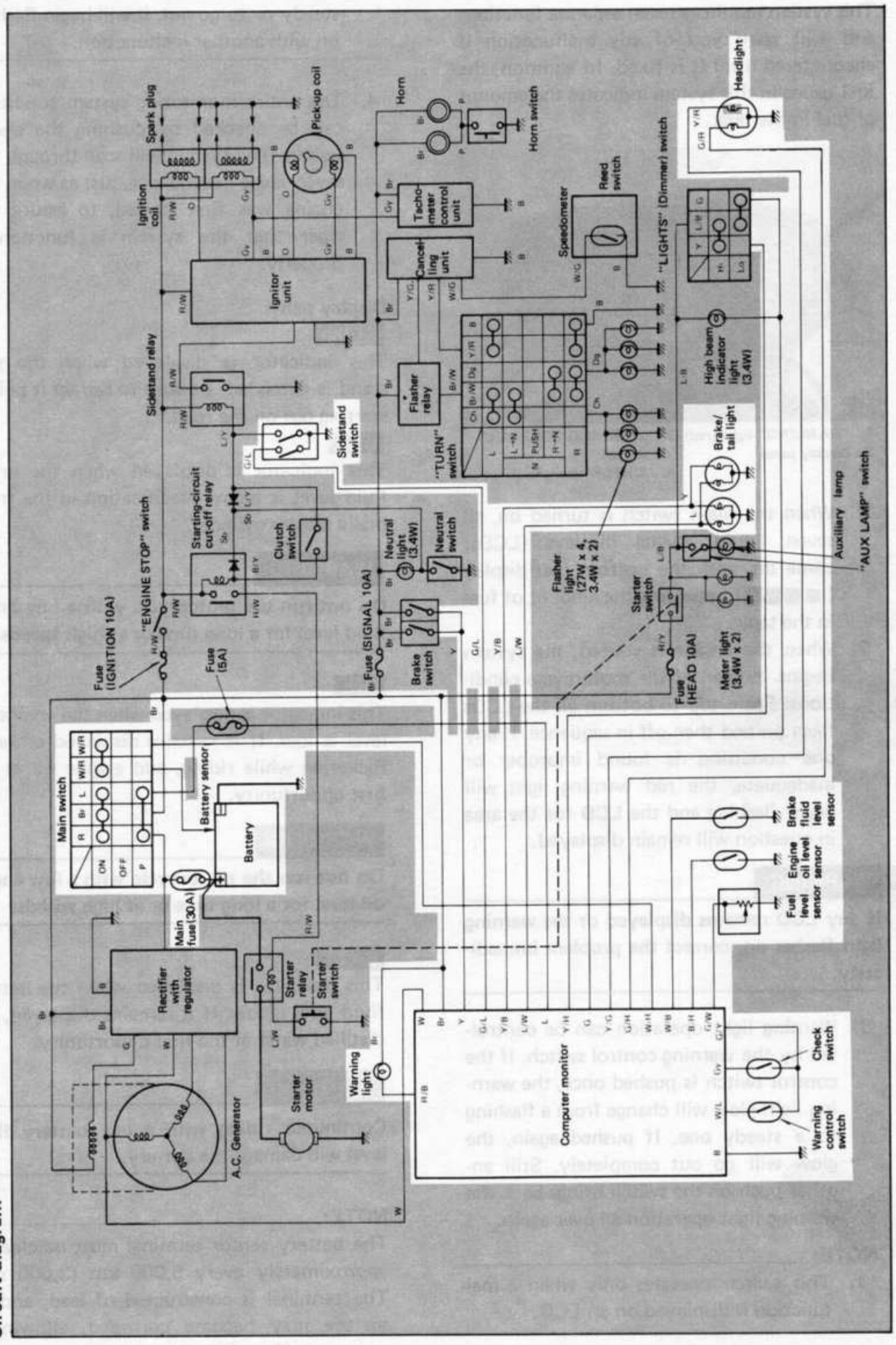
1. Standard shift adjuster length = 94 mm (3.70 in)
2. Split in the end of shift arm
3. Crankcase cover mark
   Angle A = Angle B = 90°

A. XJ750J CIRCUIT DIAGRAM



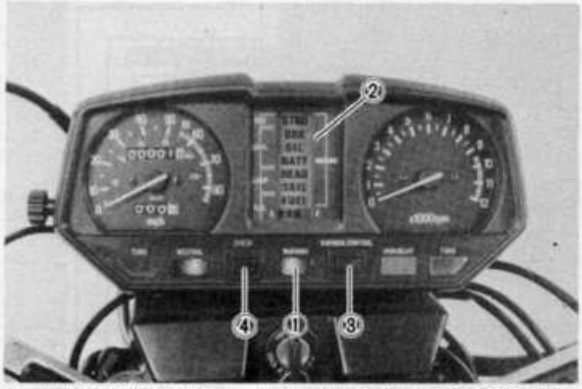
B. COMPUTERIZED MONITOR SYSTEM

Circuit diagram



Operation

This system monitors seven separate functions and will warn you of any malfunction if encountered until it is fixed. In addition, the fuel gauge in this system indicates the amount of fuel in the tank.



1. "WARNING" light (red)
2. Display panel
3. "WARNING CONTROL" switch
4. "CHECK" switch

1. When the main switch is turned on, all seven liquid crystal displays (LCDs) come on, with the bottom fuel display (■■■■) indicating the amount of fuel in the tank.
2. When the engine is started, the system begins its scan of the motorcycle conditions. From top to bottom all the LCDs flash on and then off in sequence. If any one condition is found improper or inadequate, the red warning light will begin flashing and the LCD for the area in question will remain displayed.

WARNING:

If any LCD remains displayed or the warning light flashes on, correct the problem immediately.

3. Warning light operation can be controlled by the warning control switch. If the control switch is pushed once, the warning light glow will change from a flashing to a steady one. If pushed again, the glow will go out completely. Still another push on the switch brings back the warning light operation all over again.

NOTE:

1. This switch operates only when a malfunction is displayed on an LCD.
2. Even if the warning light is made to glow steady or to go out, it will begin flashing on with another malfunction.

4. The entire monitoring system condition can be checked by pushing the check switch. The system will scan through the seven areas in sequence, just as when the engine was first started, to assure the rider that the system is functioning properly.

Display panel

STND

This indicator is displayed when the side stand is extended. Be sure to retract it before starting out on the road.

BRK

This indicator is displayed when the brake fluid level is below specification in the front brake master cylinder.

WARNING:

Do not run the motorcycle with a low brake fluid level for a long time or at high speeds.

OIL

This indicator is displayed when the engine oil level is low. If it remains displayed or keeps flickering while riding, add engine oil at the first opportunity.

WARNING:

Do not run the motorcycle with a low engine oil level for a long time or at high speeds.

BATT

This indicator is displayed when the battery fluid level is low. If it remains displayed, add distilled water at the first opportunity.

CAUTION:

Continuous riding with a low battery fluid level will damage the battery.

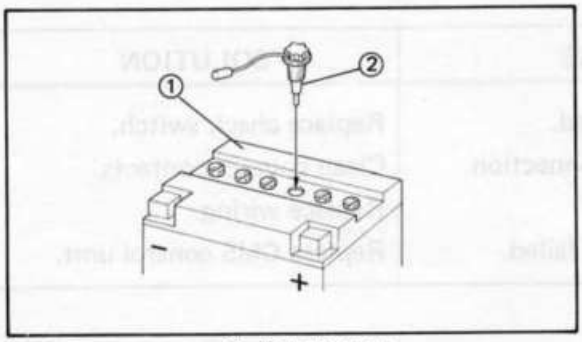
NOTE:

The battery sensor terminal must be cleaned approximately every 5,000 km (3,000 mi). The terminal is constructed of lead, and its surface may become corroded, allowing a system malfunction. Also, the terminal must

be installed in the fourth cell from the negative terminal on the battery, as the sensor must pick up a specified voltage.

CAUTION:

Make sure that the connection to the battery is correct; otherwise, damage to the microcomputer may occur.



1. Battery 2. Battery sensor

HEAD

This indicator is displayed when the headlight bulb is burned out. If it remains displayed, have it replaced and correctly adjusted at the first opportunity.

TAIL

This indicator is displayed when the taillight and/or brake light bulb is burned out. If it remains displayed, have it replaced at the first opportunity.

FUEL

This indicator is displayed when the fuel level is low. If it remains displayed or keeps flickering while riding, add fuel at the first opportunity.

GENERAL CAUTION:

Failure to observe any of the following "mustn'ts" may result in malfunction of the microcomputer or damage to the electrcical circuit.

1. **Taillight, brake light and other bulbs of wattage other than specified mustn't be used.**
2. **Extra electric accessories mustn't be connected to the computerized monitor system circuit (ex: taillight, headlight, etc.)**
3. **The instrument panel mustn't be subjected to any water splashes or steam from underneath.**
4. **The display panel mustn't be pressed hard or given any shock.**
5. **A magnet or other magnetized objects mustn't be put near the display panel.**

Troubleshooting

1. After the main switch is turned on:

PROBLEM	CAUSE	SOLUTION
a. Warning light doesn't come on.	Bulb is burned out.	Replace bulb.
	Low battery charge.	Recharge battery.
	Faulty coupler connection.	Clean coupler contacts.
	Broken wire.	Replace wiring.
	CMS control unit failed.	Replace CMS control unit.
b. Liquid crystal display (LCD) flashes on and off.	CMS control unit failed.	Replace CMS control unit.
c. LCD does not function.	LCD connectors incorrectly installed.	Reinstall connectors.
	Broken wire.	Replace wiring.
	Faulty contact between LCD panel and control unit.	Clean contacts.
	LCD panel failed.	Replace LCD panel.
	CMS control unit failed.	Replace CMS control unit.
d. LCD only partially displays.	LCD panel failed.	Replace LCD panel.

2. After the engine is started.

PROBLEM	CAUSE	SOLUTION
a. LCD does not cycle.	Faulty coupler connection. Broken wire. CMS control unit failed.	Clean coupler contacts. Replace wiring. Replace CMS control unit.

3. After the check switch is pushed:

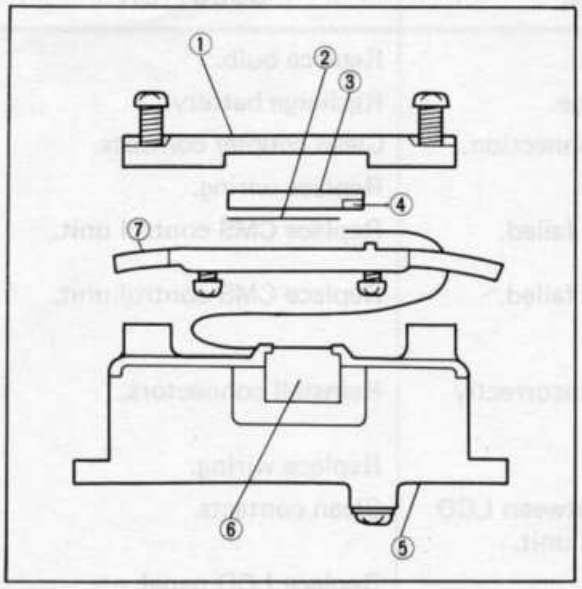
PROBLEM	CAUSE	SOLUTION
a. LCD does not cycle.	Check switch failed. Faulty coupler connection. Broken wire. CMS control unit failed.	Replace check switch. Clean coupler contacts. Replace wiring. Replace CMS control unit.

4. After the warning control switch is pushed:

PROBLEM	CAUSE	SOLUTION
a. Warning light continues to flash.	Warning control switch failed. Faulty coupler connection. Broken wire. CMS control unit failed.	Replace warning control switch. Clean coupler contacts. Replace wiring. Replace CMS control unit.

Cleaning and replacement

Use the following procedure to replace the LCD unit or the microcomputer unit.



1. Display holder
2. LCD reflector
3. LCD unit
4. LCD connector
5. Microcomputer
6. Wire connector
7. Display plate

1. Remove the headlight lens and the two headlight-body holding bolts. This will give you easy access to the instrument-panel holding nuts.
2. Disconnect the wire connectors in the headlight assembly that lead to the instrument panel.
3. Disconnect the speedometer cable.
4. Disconnect the instrument-panel holding nuts, and remove the panel.
5. Remove the three nuts which secure the instrument-panel mounting bracket, and remove the bracket.
6. Place the instrument panel assembly on a clean work surface, and remove the back panel.
7. Remove the four phillips-head screws which secure the LCD/microcomputer, and remove the unit.

8. Remove the four screws which hold the LCD display holder.
9. Very carefully turn the display holder over, and completely remove the five display plate holding screws. Remove the LCD reflector and the display plate.
10. Detach the wire connector from its indexing points.

CAUTION:

Disconnect the wire connector carefully. Do not pull on the wire connector. It is indexed and could be damaged if you pull on it. Do not touch the connector contacts. They are gold plated.

11. Remove the display plate and the LCD unit.
12. Clean the display plate and the LCD unit.

CAUTION:

a. **Use compressed-air lens cleaner (as used on cameras) to clean the display and the LCD unit. Do not use shop air for this purpose.**
b. **Use a soft cloth. Do not use cotton. It will leave lint deposits which will interfere with the delicate contacts.**
c. **Very carefully clean the LCD unit because it is possible to generate enough static electricity to damage it.**

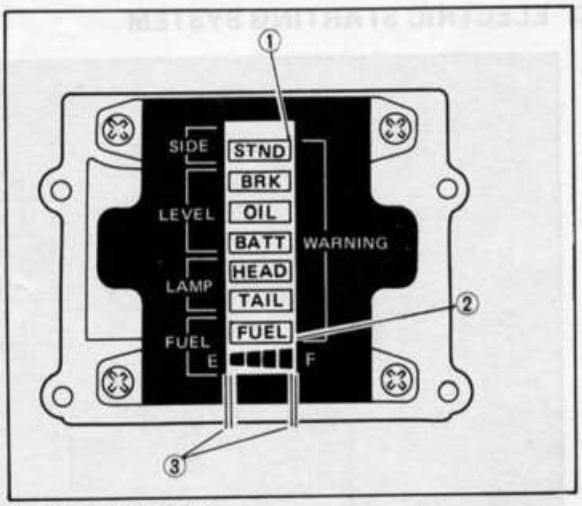
13. Reinstall the LCD unit into the display holder.

CAUTION:

Do not touch the LCD connector with bare hands.

IMPORTANT NOTE:

The LCD unit must line up as shown in the illustration to seal the LCD unit properly.



1. Line up these lines
2. Line up these lines
3. Spacing must be even on both sides.

14. Reinstall the LCD reflector so that the shiny surface faces toward the LCD unit.
15. Carefully place the wire connector on the LCD connector and seat it on its two indexing points. Install the display plate and carefully screw in the wire connector indexing screw first. Then screw in the remaining four holding screws. Do not overtighten the screws.

Tightening torque:
3 mm: 1 Nm (0.1 m·kg, 0.7 ft·lb)
4 mm: 2.4 Nm (0.24 m·kg, 1.7 ft·lb)

16. Reinstall the display holder on the microcomputer.

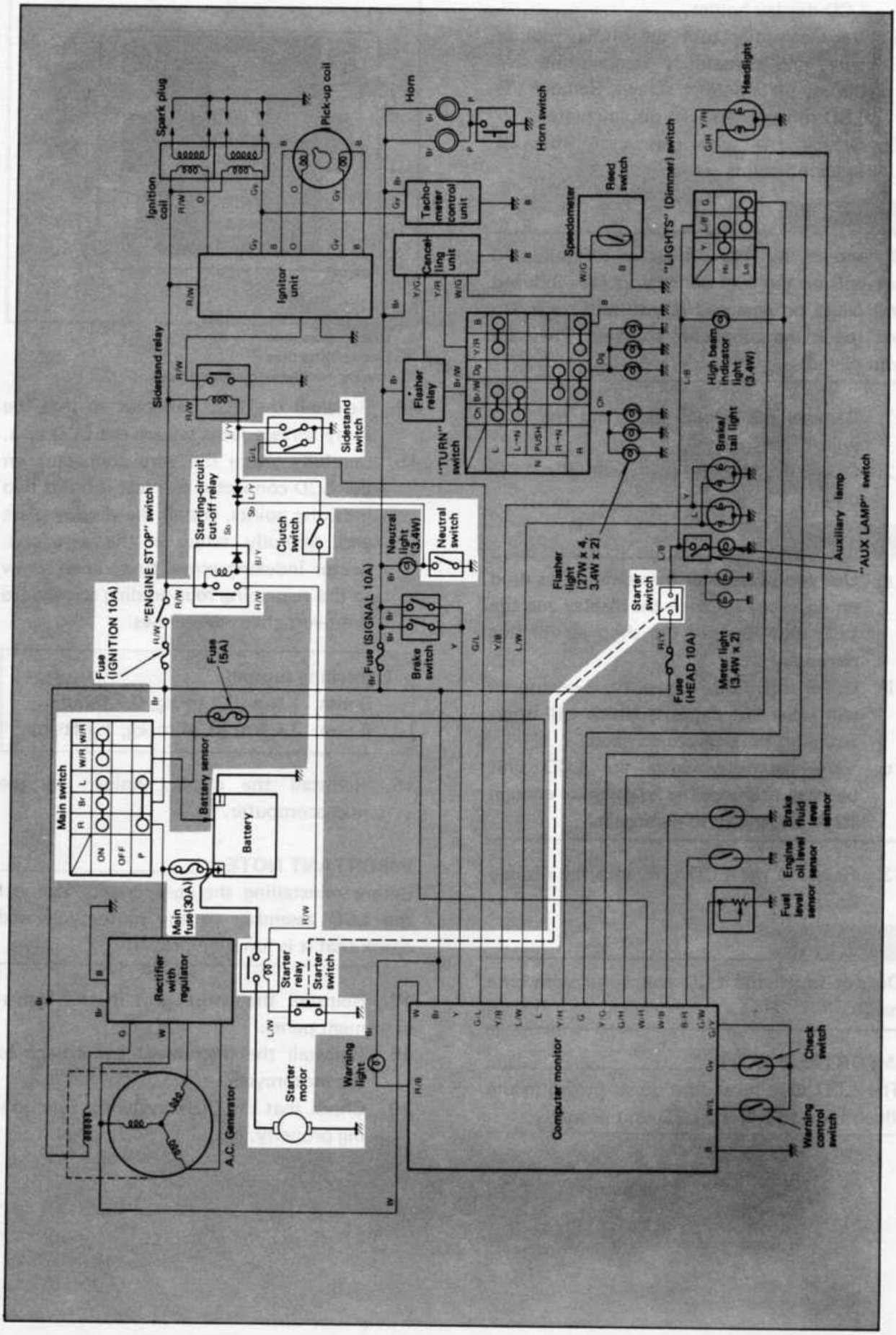
IMPORTANT NOTE:

Before reinstalling the components, connect the LCD assembly to the motorcycle and check that it is function properly.

17. Reinstall the entire unit in the instrument panel.
18. Reinstall the instrument panel back to the motorcycle.
19. Check that the COM system is functioning properly.

C. ELECTRIC STARTING SYSTEM

Circuit diagram



Starting circuit operation

The starting circuit on this model consists of the stater motor, starter relay, and the starting-circuit cut-off relay. If the engine stop switch and the main switch are both on, the starter motor can operate only if:

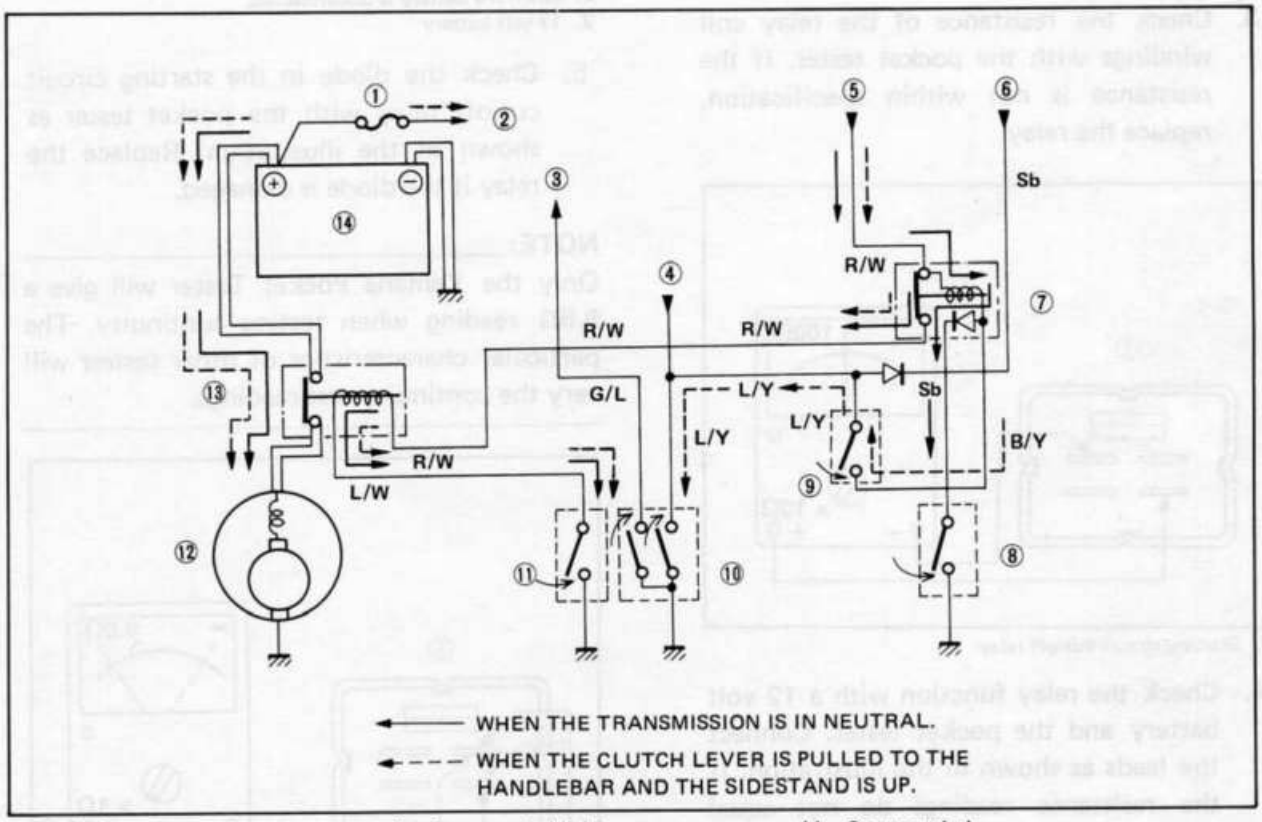
a. The transmission is in neutral (the neutral switch is on).

or if

b. The clutch lever is pulled to the handlebar (the clutch switch is on) and the sidestand is up (the sidestand switch is on.)

The starting-circuit cut-off relay prevents the starter from operating when neither of these conditions has been met. In this instance, the starting-circuit cut-off relay is off so current cannot reach the starter motor.

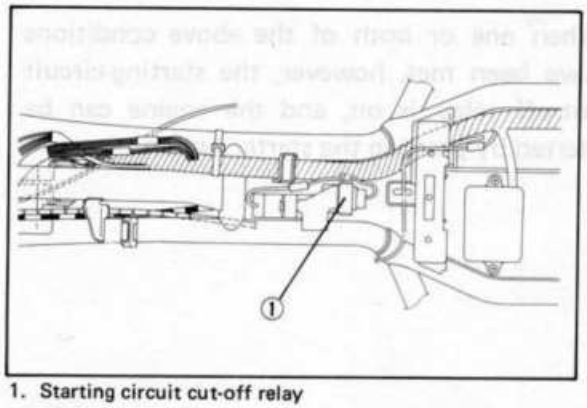
When one or both of the above conditions have been met, however, the starting-circuit cut-off relay is on, and the engine can be started by pressing the starter switch.



1. Main fuse
2. To main switch
3. To computer monitor
4. From sidestand relay
5. From engine stop switch
6. From neutral light
7. Starting-circuit cut-off relay
8. Neutral switch
9. Clutch switch
10. Sidestand switch
11. Starter switch
12. Starter motor
13. Starter relay
14. Battery

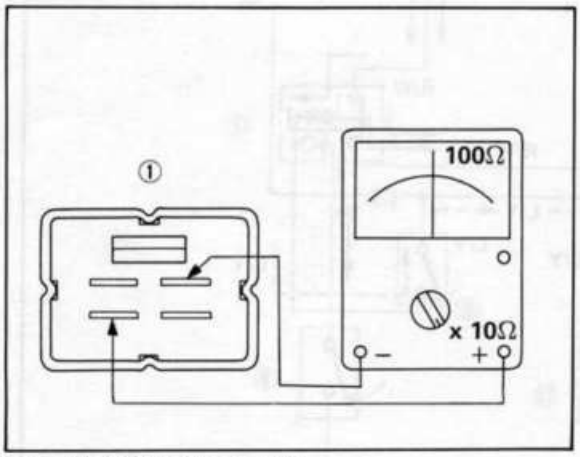
Starting-circuit cut-off relay inspection

1. Open the seat, and remove the fuel tank.
2. Remove the starting-circuit cut-off relay from the frame, and disconnect the connector.



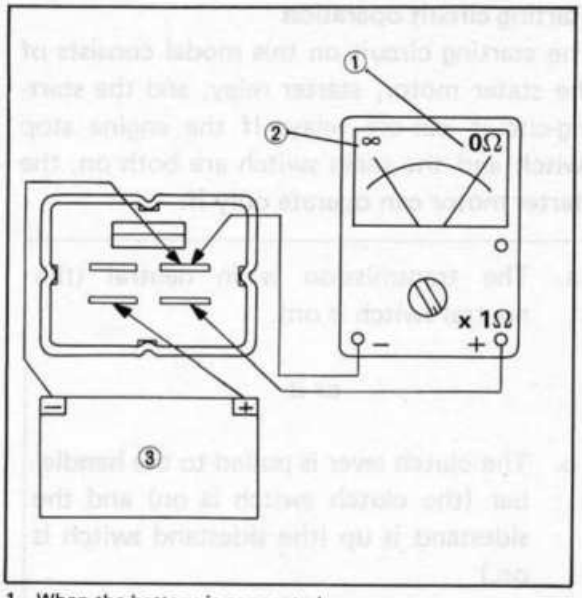
1. Starting circuit cut-off relay

3. Check the resistance of the relay coil windings with the pocket tester. If the resistance is not within specification, replace the relay.



1. Starting circuit cut-off relay

4. Check the relay function with a 12 volt battery and the pocket tester. Connect the leads as shown in the illustration. If the resistance readings do not equal those shown in the illustration, replace the relay.

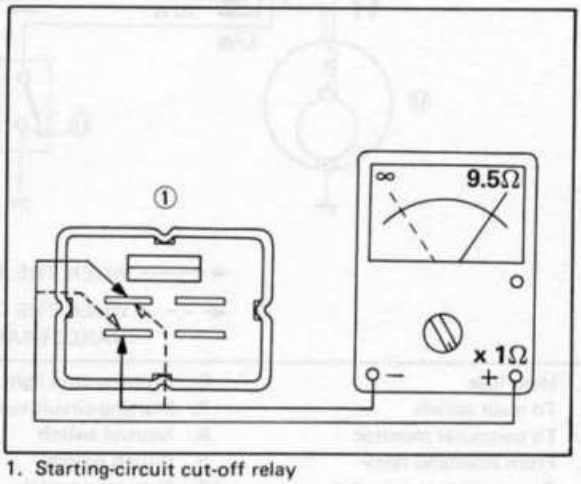


1. When the battery is connected.
2. When the battery is disconnected.
3. 12 volt battery

5. Check the diode in the starting circuit cut-off relay with the pocket tester as shown in the illustration. Replace the relay if the diode is damaged.

NOTE:

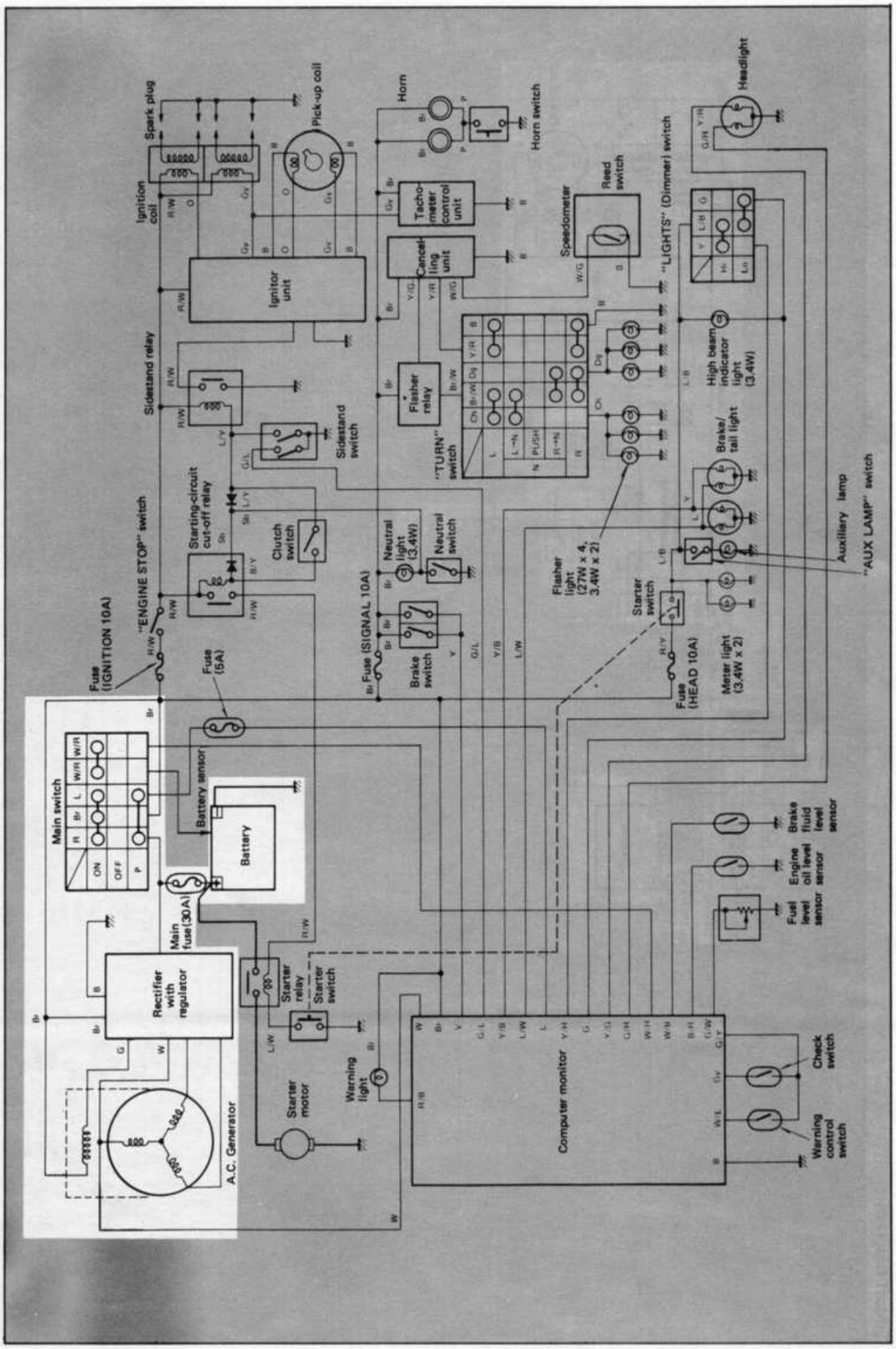
Only the Yamaha Pocket Tester will give a 9.5Ω reading when testing continuity. The particular characteristics of other testesr will very the continuity test readings.



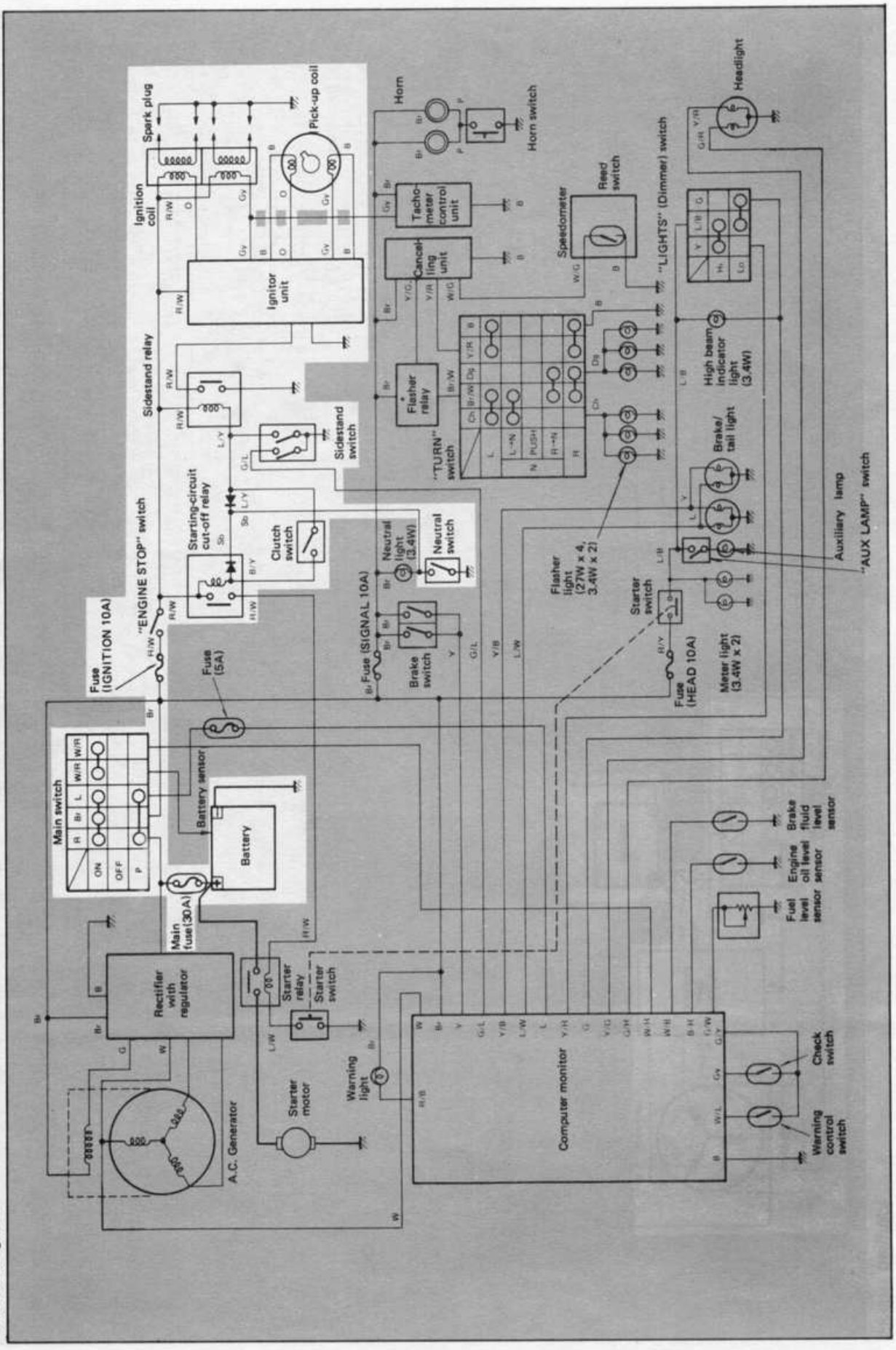
1. Starting-circuit cut-off relay

D. CHARGING SYSTEM

Circuit diagram



Circuit diagram



Description

This model is equipped with a battery operated, fully transistorized, breakerless ignition system. By using magnetic pickup coils, the need for contact breaker points is eliminated. This adds to the dependability of the system by eliminating frequent cleaning and adjustment of points and ignition timing. The TCI (Transistor Control Ignition) unit incorporates an automatic advance circuit controlled by signals generated by the pickup coil. This adds to the dependability of the system by eliminating the mechanical advancer. This TCI system consists of two units; a pickup unit and an ignitor unit.

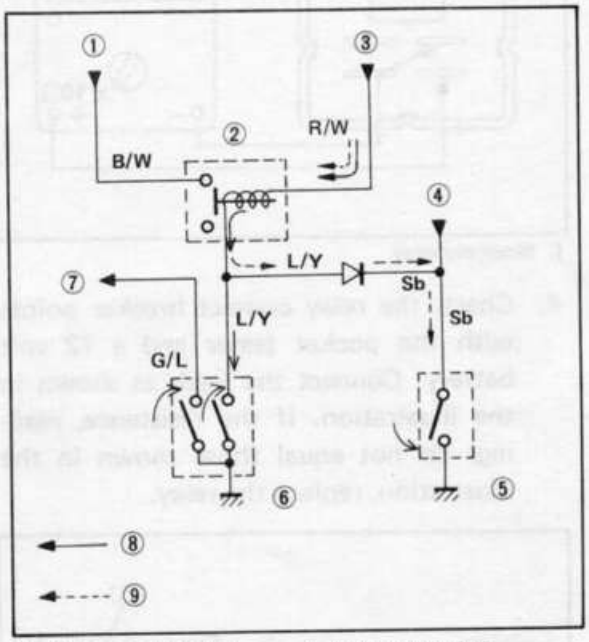
NOTE:

The ignition circuit can be operated only when the sidestand is up (the sidestand switch is on) or the transmission is in neutral.

Operation

The TCI functions to the same principle as a conventional DC ignition system with the exception of using magnetic pickup coils and a transistor control box (TCI) in place of contact breaker points.

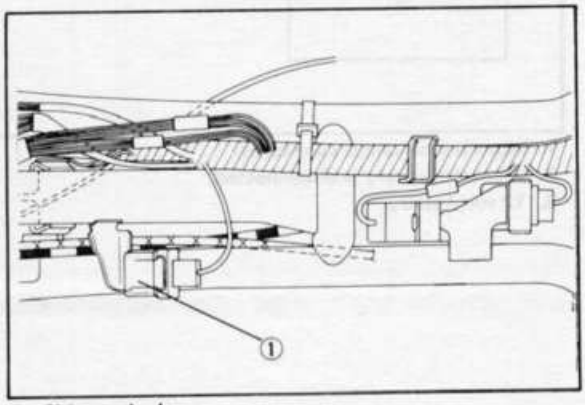
1. Pickup unit
   The pickup consists of two pickup coils and a flywheel mounted onto the crankshaft. When the projection on the flywheel passes a pickup coil, a signal is generated and transmitted to the ingitor unit. The width of the projection on the flywheel determines the ignition advance.
2. Ignitor unit
   This unit controls when form, duty control, switching, electronic ignition advance, etc. They duty control circuit reduces electrical consumption by controlling the duration of the primary ignition current.
   The ignitor unit also has a protective circuit for the ignition coil. If the ignition switch is on and the crankshaft is not turning, the protective circuit interrupts the current flow to the primary coil after a few seconds. Whe the crankshaft is turning, however, the ignitor unit sends current to the primary coil.
3. Sidestand relay
   The sidestand relay operates by shorting the TCI control current. When the sidestand is down, the sidestand relay is closed, and the TCI control current is grounded through the sidestand relay. Thus, the engine will not run with the sidestand down unless the transmission is in neutral.



1. TCI control current from TCI unit
2. Sidestand relay
3. From engine stop switch
4. From clutch switch
5. Neutral switch
6. Sidestand switch
7. To computer monitor
8. When the sidestand is up.
9. When the transmission is in neutral and the sidestand is up down.

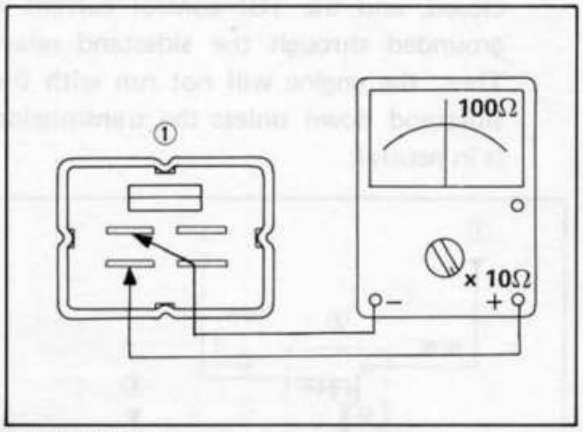
Sidestand relay inspection

1. Open the seat, and remove the fuel tank.
2. Remove the sidestand relay from the frame, and disconnect the connector.



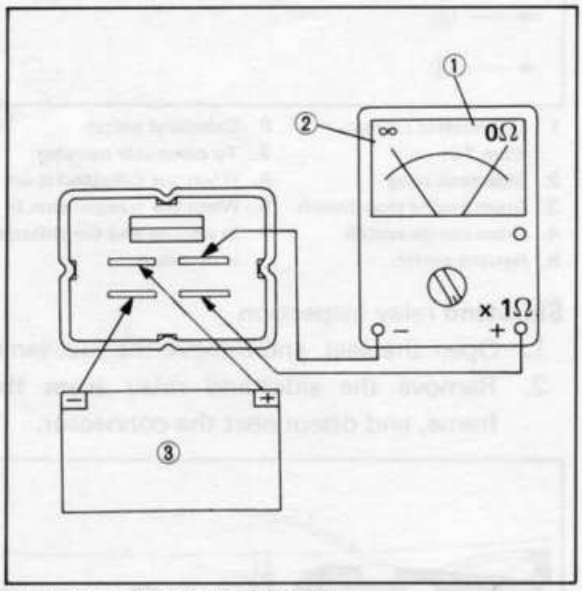
1. Sidestand relay

3. Check the resistance of the relay coil windings with the pocket tester. If the resistance is not within specification, replace the relay.



1. Sidestand relay

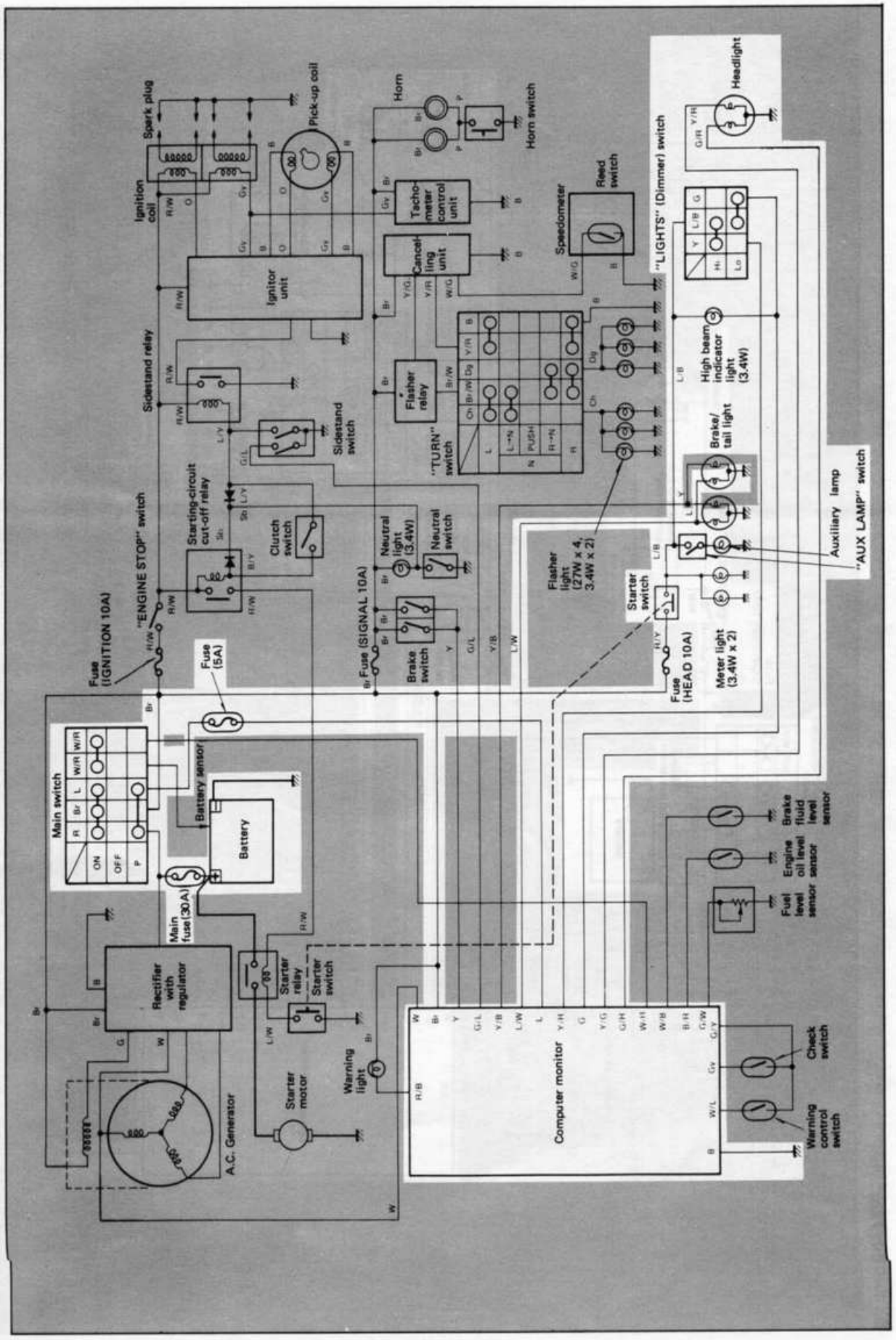
4. Check the relay contact breaker points with the pocket tester and a 12 volt battery. Connect the leads as shown in the illustration. If the resistance, readings do not equal those shown in the illustration, replace the relay.



1. When the battery is connected.
2. When the battery is disconnected.
3. 12 volt battery

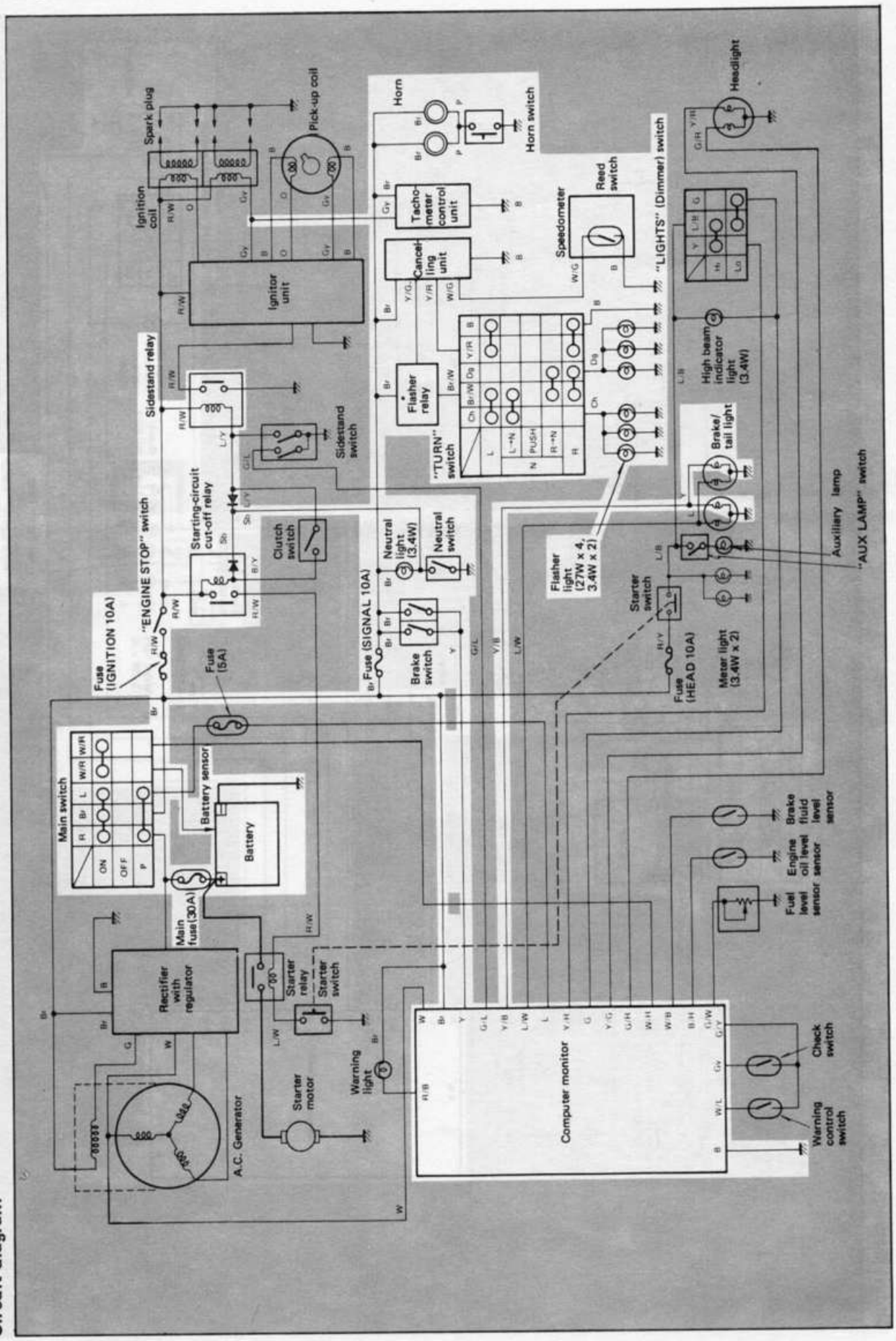
F. LIGHTING SYSTEM

Circuit diagram



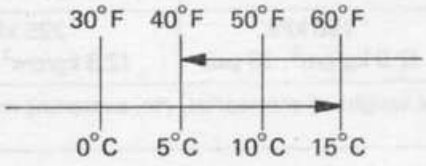
G. SIGNAL SYSTEM

Circuit diagram



SPECIFICATIONS

GENERAL SPECIFICATIONS

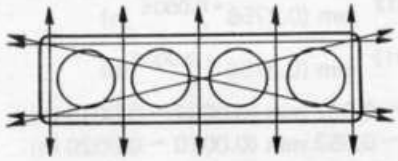
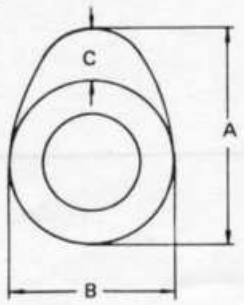
Item \ Model	XJ750J
Model:	
IBM Number	15R
Frame Starting Number	15R-000101
Engine Starting Number	15R-000101
Dimensions:	
Overall Length	2,145 mm (84.4 in)
Overall width	830 mm (32.7 in)
Overall Height	1,175 mm (46.3 in)
Seat Height	780 mm (30.7 in)
Wheelbase	1,445 mm (56.9 in)
Minimum Ground Clearance	135 mm (5.3 in)
Basic Weight:	
With Oil and Full Fuel Tank	236 kg (520 lb)
Minimum Turning Radius:	2,600 mm (102.4 in)
Engine:	
Engine Type	Air cooled 4-stroke, gasoline, DOHC
Cylinder Arrangement	4-cylinder parallel
Displacement	748 cm^3 (45.64 cu.in)
Bore x Stroke	65.0 x 56.4 mm (2.559 x 2.220 in)
Compression Ratio	9.2 : 1
Compression Pressure	1,078 kPa (11kg/cm^2, 156 psi) at 300 r/min
Starting System	Electric starter
Lubrication System:	Pressure lubricated, wet sump
Oil Type or Grade:	
Engine oil	 Yamalube 4-cycle oil or SAE 20W40 type SE motor oil (If temperature does not go below 5°C (40°F).) SAE 10W30 type SE motor oil (If temperature does not go above 15°C (60°F).)
Final Gear Oil	SAE 80 API "GL-4" Hypoid gear oil
Oil Capacity:	
Engine Oil:	
Periodic Oil Change	2.5 L (3.17 Imp qt, 3.81 US qt)
With Oil Filter Replacement	2.8 L (2.46 Imp qt, 2,64 US qt)
Total Amount	3.5 L (3.17 Imp qt, 3.81 US qt)
Final Gear Case Oil Amount	0.2 L (0.18 Imp qt, 0.21 US qt)
Air Filter	Dry type element
Fuel:	
Type	Regular gasoline
Tank Capacity	17 L (3.74 Imp gal, 4.49 US gal)
Reserve Amount	4.1 L (0.9 Imp gal, 1.08 US gal)
Carburetor:	
Type	HSC32
Manufacturer	HITACHI

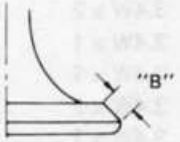
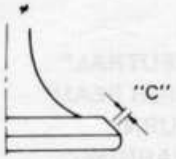
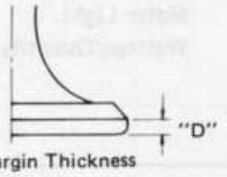
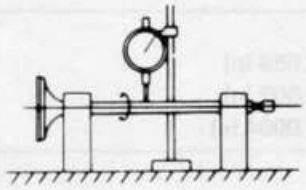
Item \ Model	XJ750J	
Spark plug:		
Type/Manufacturer	BP7ES/NGK or W22EP/CHANPION	
Gap	0.7 ~ 0.8 mm (0.028 ~ 0.031 in)	
Clutch Type:	Wet, multiple-disc	
Transmission:		
Primary Reduction System	Spur gear	
Primary Reduction Ratio	97/58 (1.672)	
Secondary Reduction System	Shaft drive	
Secondary Reduction Ratio	48/37 x 19/18 x 32/11 (3.983)	
Transmission Type	Constant- mesh, 5-speed	
Operation	Left foot operation	
Gear Ratio 1st	35/16 (2.188)	
2nd	30/20 (1.500)	
3rd	30/26 (1.154)	
4th	28/30 (0.933)	
5th	26/32 (0.813)	
Chassis:		
Frame Type	Tubular steel, double cradle	
Caster Angle	29°00′	
Trail	124 mm (4.88 in)	
Tire:		
Type	Tubeless	
Size (F)	3.25 H19-4PR	
Size (R)	130/90 -16 67H	
Tire Pressurer (Cold tire):	FRONT	REAR
Up to 90 kg (198 lb) load*	177kPa (1.8 kg/cm², 26 psi)	196kPa (2.0 kg/cm², 28 psi)
90 kg (198 lb) load ~ 230 kg (507 lb) load*	196 kPa (2.0 kg/cm², 28 psi)	225 kPa (2.3 kg/cm², 32 psi)
High Speed Riding	196 kPa (2.0 kg/cm², 28 psi)	225 kPa (2.3 kg/cm², 32 psi)
	*Total weight of accessories, etc. excepting motorcycle.	
Brake:		
Front Brake Type	Dual disc brake	
Operation	Right hand operation	
Rear Brake Type	Drum brake	
Operation	Right foot operation	
Suspension:		
Front Suspension	Telescopic fork	
Rear Suspension	Swingarm	
Shock Absorber:		
Front Shock Absorber	Air, coil spring, oil damper	
Rear Shock Absorber	Coil spring, oil damper	
Wheel Travel:		
Front Wheel Travel	150 mm (5.9 in)	
Rear Wheel Travel	96 mm (3.8 in)	
Electrical:		
Ignition System	T.C.I.	
Generator System	A.C. Generator	
Battery Type or Model	YB14L	
Battery Capacity	12V 14AH	

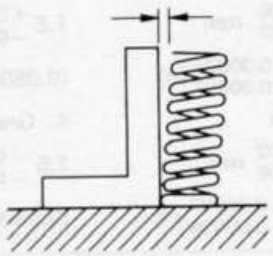
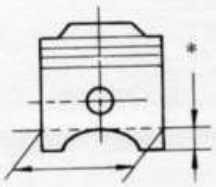
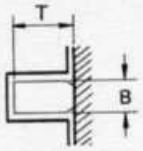
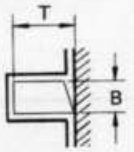
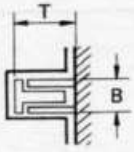
Item \ Model		XJ750J
Headlight Type:		Semi-sealed beam, (Quartz bulb)
Bulb Wattage/Quantity:		
Headlight		60W/55W
Tail/Brake Light		8W/27W x 2
Flasher Light		27W x 4
Auxiliary Light		35W x 1
Indicator Light:		
Meter Light		3.4W x 2
Wattage/Quantity:	"NEUTRAL"	3.4W x 1
	"HIGH BEAM"	3.4W x 1
	"TURN"	3.4W x 2
	"WARNING"	3.4W x 1

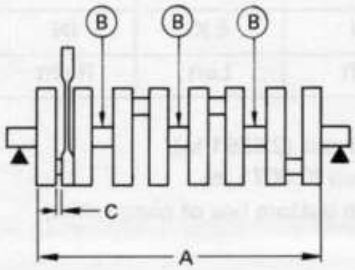
MAINTENANCE SPECIFICATIONS

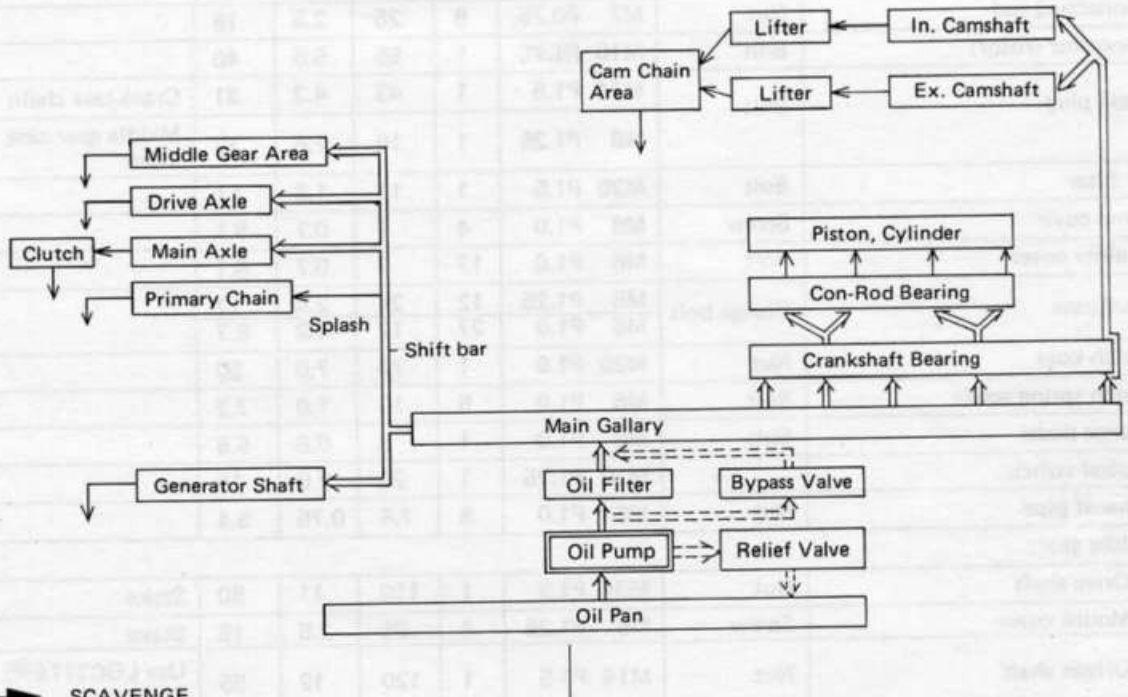
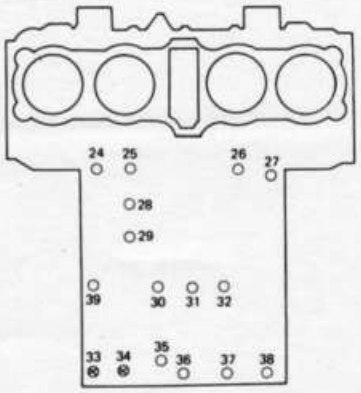
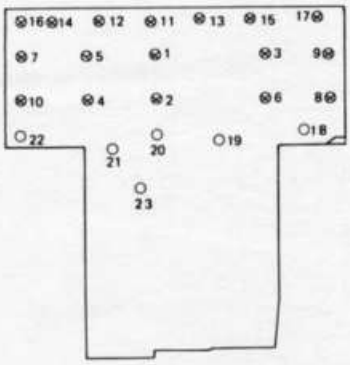
A. Engine

Item \ Model		XJ750J
Cylinder Head:		
Warp Limit		0.03 mm (0.001 in)
		* Lines indicate straightedge measurement.
		
Cylinder:		
Bore Size		65.0 mm (2.559 in)
Taper Limit		0.05 mm (0.002 in)
Out-of round Limit		0.01 mm (0.0004 in)
Camshaft:		
Drive Method		Chain drive (Center)
Cam Cap Inside Diameter		$25^{+0.021}_{0}$ mm ($0.9448^{+0.0008}_{0}$ in)
Camshaft Outside Diameter		$25^{-0.020}_{-0.033}$ mm ($0.9448^{-0.0008}_{-0.0013}$ in)
Shaft-to cap Clearance		0.020 ~ 0.054 mm (0.0008 ~ 0.0021 in)
Cam Dimensions:		
	Intake "A"	36.80 mm (1.449 in)
	< Limit >	36.65 mm (1.443 in)
	"B"	28.00 mm (1.102 in)
	< Limit >	27.85 mm (1.096 in)
	"C"	8.80 mm (0.346 in)
	Exhaust "A"	35.80 mm (1.409 in)
	< Limit >	35.65 mm (1.404 in)
	"B"	28.00 mm (1.102 in)
	< Limit >	27.85 mm (1.096 in)
	"C"	7.80 mm (0.307 in)

Item	Model	XJ750J
Camshaft Runout Limit		0.06 mm (0.002 in)
Cam Chan Type/Number of Links		BF05M/120
Cam Chain Adjustment Method		Automatic
Valve, Valve Seat, Valve Guide:		
Valve Clearance (Cold)	IN.	0.11 ~ 0.15 mm (0.004 ~ 0.006 in)
	EX.	0.16 ~ 0.20 mm (0.006 ~ 0.008 in)
Valve Dimensions		
  Face Width  Seat Width  Margin Thickness		
"A" Head Dia.	IN.	33 ± 0.1 mm (1.2992 ± 0.004 in)
	EX.	28 ± 0.1 mm (0.1024 ± 0.004 in)
"B" Face Width	IN.	2.3 mm (0.0906 in)
	EX.	2.3 mm (0.0906 in)
"C" Seat Limit Width	IN.	1.0 ± 0.1 mm (0.0394 ± 0.004 in)
	EX.	1.0 ± 0.1 mm (0.0394 ± 0.004 in)
"D" Margin Thickness Limit	IN.	1.2 ± 0.2 mm (0.0472 ± 0.008 in)
	EX.	1.0 ± 0.2 mm (0.0394 ± 0.008 in)
Stem Outside Diameter	IN.	$7\ ^{-0.010}_{-0.025}$ mm ($0.2756\ ^{-0.0004}_{-0.0010}$ in)
	EX.	$7\ ^{-0.025}_{-0.040}$ mm ($0.2756\ ^{-0.0010}_{-0.0016}$ in)
Guide Inside Diameter	IN.	$7\ ^{+0.012}_{0}$ mm ($0.2756\ ^{+0.0005}_{0}$ in)
	EX.	$7\ ^{+0.012}_{0}$ mm ($0.2756\ ^{+0.0005}_{0}$ in)
Stem-to guide Clearance	IN.	0.010 ~ 0.037 mm (0.0004 ~ 0.0015 in)
	EX.	0.025 ~ 0.052 mm (0.0010 ~ 0.0020 in)
Stem Runout Limit		0.03 mm (0.001 in)
		
Valve Spring:		
Free Length		
Inner Spring	IN.	35.9 mm (1.413 in)
	EX.	35.9 mm (1.413 in)
Outer Spring	IN.	39.5 mm (1.555 in)
	EX.	39.5 mm (1.555 in)
Installed Length (Valve Closed)		
Inner Spring	IN.	31.0 mm (1.220 in)
	EX.	31.0 mm (1.220 in)
Outer Spring	IN.	34.0 mm (1.339 in)
	EX.	34.0 mm (1.339 in)

Item	Model	XJ750J
Tilt Limit		
Inner Spring	IN. & EX.	2.5°, 1.6 mm (0.063 in)
Outer Spring	IN. & EX.	2.5°, 1.6 mm (0.063 in)
		
Direction of Winding		Inner Spring: IN — Left; EX — Left. Outer Spring: IN — Right; EX — Right
Piston:		
Piston Size/ Measuring Point*		65.00 mm (2.5591 in)/ 7.8 mm (0.3071 in) (From bottom line of piston skirt)
Clearance Between Piston & Cylinder		0.030 ~ 0.050 mm (0.0012 ~ 0.0020 in)
Oversize:	1st	65.25 mm (2.57 in)
	2nd	65.50 mm (2.58 in)
	3rd	65.75 mm (2.59 in)
	4th	66.00 mm (2.60 in)
Piston Ring:		
Sectional Sketch	Top Ring	Barrel B = 1.2 mm (0.05 in) T = 2.7 mm (0.11 in)
	2nd Ring	Taper B = 1.2 mm (0.05 in) T = 2.7 mm (0.11 in)
	Oil Ring	Expander B = 2.5 mm (0.10 in) T = 2.8 mm (0.11 in)
		
End Gap (Installed):	Top Ring	0.15 ~ 0.35 mm (0.0059 ~ 0.0318 in)
	< Limit >	1.0 mm 0.0394 in)
	2nd Ring	0.15 ~ 0.35 mm (0.0059 ~ 0.0318 in)
	< Limit >	1.0 mm (0.0394 in)
	Oil Ring	0.3 ~ 0.9 mm (0.012 ~ 0.035 in)
	< Limit >	1.5 mm (0.0591 in)
Side Clearance:	Top Ring	0.03 ~ 0.07 mm (0.0012 ~ 0.0028 in)
	< Limit >	0.15 mm (0.0059 in)
	2nd Ring	0.02 ~ 0.06 mm (0.0008 ~ 0.0024 in)
	< Limit >	0.15 mm (0.0059 in)
	Oil Ring	0 mm (0 in)

Item \ Model	XJ750J
Connecting Rod:	
Oil Clearance	0.016 ~ 0.040 mm (0.0006 ~ 0.0016 in)
Color Code (Corresponding Size)	1. Blue: $1.5\ ^{+0.006}_{+0.002}$ mm ($0.0591^{+0.00024}_{+0.00007}$ in)
	2. Black: $1.5\ ^{+0.002}_{-0.002}$ mm ($0.0591^{+0.00007}_{-0.00007}$ in)
	3. Brown: $1.5\ ^{-0.002}_{-0.006}$ mm ($0.0591^{-0.00007}_{-0.00024}$ in)
	4. Green: $1.5\ ^{-0.006}_{-0.010}$ mm ($0.0591^{-0.00024}_{-0.00039}$ in)
Crankshaft:	
	
Crank Width "A"	341.4 ± 0.1 mm (13.44 ± 0.0039 in)
Rounout Limit "B"	0.04 mm (0.0002 in)
Big End Side Clerance"C"	0.16 ~ 0.262 mm (0.063 ~ 0.010 in)
Clutch:	
Friction Plate Thickness/Quantity	3.0 mm (0.12 in) x 8
Wear Limit	2.8 mm (0.11 in)
Clutch Plate Thickness/Quantity	1.6 mm (0.063 in) x 7
Warp Limit	0.05 mm (0.0020 in)
Clutch Spring Free Length/Quantity	41.2 mm (1.622 in) x 5
Clutch Spring Minimum Length	40.2 mm (1.583 in)
Clutch Release Method	Outer Pull
Transmission:	
Main Axle Deflection Limit	0.08 mm (0.0031 in)
Drive Axle Deflection Limit	0.08 mm (0.0031 in)
Shifter:	
Shifter Type	Guide bar
Carburetor:	
Type/Manufacturer/Quantity	HSC32/HITACHI/4
I.D. Mark	15R-00
Main Jet (M.J.)	#120
Main Air Jet (M.A.J.)	#80
Jet Needle-clip Position (J.N.)	Y-13
Throttle Valve (Th.V.)	13°
Pilot Jet (P.J.)	#40
Pilot Outlet Size (P.O.)	φ0.9
Pilot Air Jet (P.A.J.)	#225
Pilot Screw (P.S.)	Preset
Valve Seat Size (V.S.)	φ2.0
Starter Jet (G.S.)	#43 (φ0.9)
Bypath Size (B.P.)	φ0.9
Fuel Level (F.L.)	3.0 ± 1 mm (0.118 ± 0.039 in) below from the carburetor mixing chamber body edge.

Item \ Model	XJ750J
Engine Idling Speed	1,050 r/min
Vacuum Pressure at Idling Speed	24.7 ± 1.3 kPa (185 ± 10 mmHg, 7.30 ± 0.4 inHg)
Vacuum Synchronous Difference	Below 10 kPa (10 mmHg, 0.4 inHg)
Lubrication System:	
Oil Filter Type	Paper
Oil Pump Type	Trochoid pump
Tip Clearance <Limit>	0.03 ~ 0.09 mm (0.0012 ~ 0.0035 in)
Side Clearance <Limit>	0.03 ~ 0.08 mm (0.0012 ~ 0.0031 in)
Bypass Valve Setting Pressure	98.0 ± 20 kPa (1.0 ± 0.2 kg/cm^2, 14.2 ± 2.8 psi)
Relief Valve Operating Pressure	490 ± 49 kPa (5.0 ± 0.5 kg/cm^2, 71 ± 7.1 psi)
Lubrication Chart	
Middle Gear Backlash:	0.1 ~ 0.2 mm (0.004 ~ 0.008 in)
Final Gear Backlash:	0.25 ~ 0.50 mm (0.010 ~ 0.020 in)
Crankcase Tightening Sequence:	
Upper case	
Lower case	

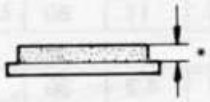
⊗.....8 mm bolt

○.....6 mm bolt

Tightening torque

Part to be tightened	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m-kg	ft-lb	
ENGINE:							
Cylinder head	Nut	M10 P1.25	12	32	3.2	23	Apply oil.
Cylinder head cover	Bolt	M6 P1.0	20	10	1.0	7.2	100 cm-kg / 86.4 in-lb.
Spark plug	–		4	20	2.0	14	
Cylinder	Nut	M8 P1.25	2	20	2.0	14	Cam chain case Front & Rear
Cam shaft cap	Bolt	M6 P1.0	20	10	1.0	7.2	Tighten in 3-stages.
Cam sprocket	Bolt	M7 P1.0	4	20	2.0	14	
Cam chain tensioner adjustment lock nut	Nut	M8 P1.25	1	9	0.9	6.5	
Cam chain tensioner end plug	Bolt	M8 P1.25	1	15	1.5	11	
Connecting rod	Nut	M7 P0.75	8	25	2.5	18	
Generator (rotor)	Bolt	M10 P1.25	1	55	5.5	40	
Drain plug	Bolt	M14 P1.5	1	43	4.3	31	Crankcase chain
		M8 P1.25	1	16	1.6	17	Middle gear case drain
Oil filter	Bolt	M20 P1.5	1	15	1.5	11	
Pump cover	Screw	M6 P1.0	4	7	0.7	5.1	
Strainer cover	Bolt	M6 P1.0	13	7	0.7	5.1	
Crankcase	Flange bolt	M8 P1.25	12	24	2.4	17	
		M6 P1.0	27	12	1.2	8.7	
Clutch boss	Nut	M20 P1.0	1	70	7.0	50	
Clutch spring screw	Bolt	M6 P1.0	5	10	1.0	7.2	
Change pedal	Bolt	M6 P1.0	1	8	0.8	5.8	
Neutral switch	–	M10 P1.25	1	20	2.0	14	
Exhaust pipe	Nut	M6 P1.0	8	7.5	0.75	5.4	
Middle gear:							
Drive shaft	Nut	M34 P1.5	1	110	11	80	Stake
Mount cover	Screw	M8 P1.25	4	25	2.5	18	Stake
Driven shaft	Nut	M14 P1.5	1	120	12	85	Use LOCTITE®: Stake
Bearing cap	Flange bolt	M8 P1.25	4	25	2.5	18	

B. Chassis

Item		Model XJ750J
Steering System:		
Steering Bearing Type		Ball Bearing
No./Size of Steel Balls:	Upper	19 pcs/1/4 in
	Lower	19 pcs/1/4 in
Front Suspension:		
Front Fork Travel		150 mm (5.9 in)
Fork Spring Free Length		458.5 mm (18.05 in)
Spring Rate/Stroke		K_1 = 7.6 N/mm (0.76 kg/mm, 43.4 lb/in)
		0 ~ 97 mm (0 ~ 3.84 in)
		K_2 = 9.8 N/mm (0.98 kg/mm, 55.9 lb/in)
		97 ~ 150 mm (3.87 ~ 5.9 in)
Optional Spring		No
Oil Capacity		257 cm^3 (9.0 Imp oz, 8.7 US oz)
Oil Grade		SAE 10W30 type SE motor oil
Rear Suspension:		
Shock Absorber Travel		80 mm (3.1 in)
Spring Free Length		227.8 mm (9.0 in)
Spring Rate/Stroke		K_1 = 17 N/mm (1.7 kg/mm, 97.0 lb/in)
		0 ~ 55 mm (0 ~ 2.2 in)
		K_2 = 21 N/mm (2.1 kg/mm, 119.9 lb/in)
		55 ~ 80 mm (2.2 ~ 3.1 in)
Optional Spring		No
Rear Arm:		
Swingarm Free Play Limit:	End	0 mm (0 in)
	Side	0 mm (0 in)
Wheel:		
Front Wheel Type		Cast Wheel
Rear Wheel Type		Cast Wheel
Front Rim Size/Material		MT1.85 x 19/Aluminum
Rear Rim Size/Material		MT3.00 x 16/Aluminum
Rim Runout Limit:	Vertical	2.0 mm (0.08 in)
	Lateral	2.0 mm (0.08 in)
Disc Brake:		
Type	Front	Dual disc
Outside Dia. x Thickness		267 x 5 mm (10.5 x 0.2 in)
Pad Thickness:	Inner	6.0 mm (0.2 in)
	< Limit >*	0.8 mm (0.03 in)
	Outer	6.0 mm (0.2 in)
	< Limit >*	0.8 mm (0.03 in)
Master Cylinder Inside Dia.		15.87 mm (0.62 in)
Caliper Cylinder Inside Dia.		38.18 mm (1.50 in)
Brake Fluid Type		DOT #3
Drum Brake:		
Type	Rear	Leading trailing
Drum Inside Dia.		200 mm (7.87 in)
	< Limit >	201 mm (7.91 in)
Lining Thickness		4 mm (0.16 in)
	< Limit >	2 mm (0.08 in)
Shoe Spring Free Length		68 mm (2.7 in)

Item \ Model	XJ750J
Brake Lever & Brake Pedal:	
Brake Lever Free Play	5 ~ 8 mm (0.2 ~ 0.3 in)
Brake Pedal Position	20 mm (0.8 in) below the top of the footrest
Brake Pedal Free Play	20 ~ 30 mm (0.8 ~ 0.12 in)
Clutch Lever Free Play:	2 ~ 3 mm (0.08 ~ 0.12 in)

Recommended combinations of the front fork and rear shock absorber.
Use this table as guidance to meet specific riding condition and motorcycle load.

Front fork		Rear shock absorber		Loading condition			
Air pressure	Damping adjuster	Spring seat	Damping adjuster	Solo rider	With passenger	With accessory equipments	With accessory equipments and passenger
39.2 ~ 78.5 kPa (0.4 ~ 0.8 kg/cm², 5.7 ~ 11 psi)	1	A ~ C	1	○			
	2	A ~ C	2	○	○		
	3	C ~ E	3		○	○	
78.5 ~ 118 kPa (0.8 ~ 1.2 kg/cm², 11 ~ 17 psi)	4	E	4			○	○

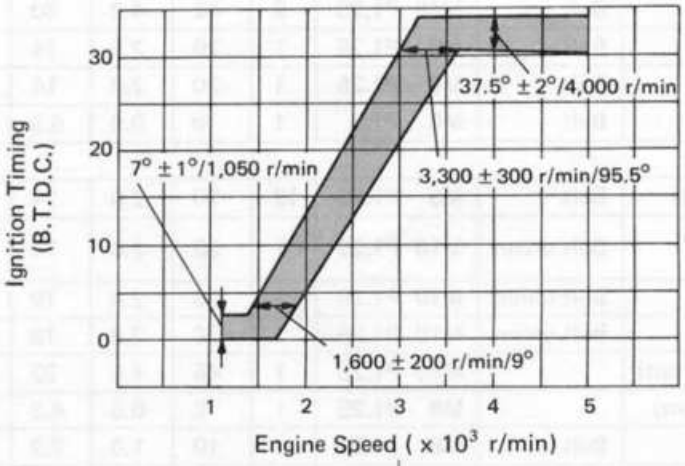
Tightening torque

Part to be tightened	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m-kg	ft-lb	
CHASSIS:							
Final gear:							
Drive shaft	Nut	M14 P1.5	1	110	11	80	
Bearing housing	Flange bolt	M10 P1.25	2	23	2.3	17	
Bearing housing	Nut	M8 P1.25	6	23	2.3	17	
Oil mount screw	Plug	M14 P1.5	1	23	2.3	17	
Oil drain screw	Plug	M14 P1.5	1	23	2.3	17	
Bearing retainer	—	M65 P1.5	1	110	11	80	Left hand screw
Engine mounting bolt:							
Front, upper	Nut	M10 P1.25	1	42	4.2	30	
Front, upper	Nut	M10 P1.25	2	42	4.2	30	
Rear	Nut	M10 P1.25	2	70	7.0	50	
Engine mounting stay:							
Front	Nut	M8 P1.25	4	20	2.0	14	
Handle crown & Steering shaft	Bolt Nut	M14 P1.25 M8 P1.25	1 1	54 20	5.4 2.0	39 14	
Handle crown & Inner tube	Nut	M8 P1.25	1	20	2.0	14	
Handle crown & Handle holder	Bolt	M8 P1.25	2	20	2.0	14	
Front fork:							
Under bracket & Inner tube	Bolt	M8 P1.25	4	20	2.0	14	
Front wheel shaft	Nut castle	M14 P1.5	1	107	10.7	77	

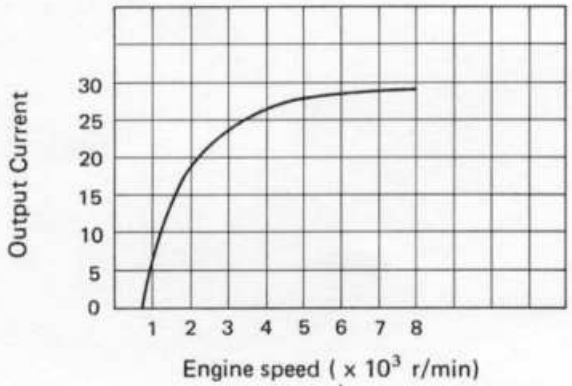
Part to be tightened	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m-kg	ft-lb	
Front wheel axle pinch bolt	Nut salf locking	M8 P1.25	2	20	2.0	14	
Pivot shaft	Bolt	M22 P1.5	1	5.5	0.55	4.0	Taper roller bearing
Rear wheel shaft	Nut castle	M14 P1.5	1	107	10.7	77	
Rear shock absorber (Upper)	Nut cap	M10 P1.25	2	30	3.0	22	
Rear shock absorber (Lower)	L Nut cap R Bolt	M10 P1.25	2	30	3.0	22	
Footrest	Bolt	M10 P1.25	2	42	4.2	30	
Tension bar & Brake plate	Bolt	M8 P1.25	1	20	2.0	14	
Tension bar & Rear arm	Bolt	M8 P1.25	1	20	2.0	14	
Camshaft lever & Camshaft	Bolt	M6 P1.0	1	9	0.9	6.5	
Disc brake section:							
Brake disc & Hub (Front)	Bolt	M8 P1.25	12	20	2.0	14	Lock washer
Master cylinder & Brake hose (Front)	Bolt union	M10 P1.25	1	20	2.0	14	
Brake hose & Joint	Bolt union	M10 P1.25	1	26	2.6	19	
Caliper & Brake hose	Bolt union	M10 P1.25	1	26	2.6	19	
Caliper & Front fork (Front)		M10 P1.25	1	45	4.5	32	
Caliper bleed screw (Front)		M8 P1.25	1	6	0.6	4.3	
Front fender	Bolt	M8 P1.25	4	10	1.0	7.2	
Pivot shaft	Bolt	M22 P1.5	1	100	10.0	72	Lock washer
Final gear & Rear arm	Nut	M10 P1.25	4	42	4.2	30	
Cross joint	Hexagon bolt with washer	M8 P1.25	4	44	4.4	32	
Muffler bracket & Frame	Bolt	M10 P1.25	3	43	4.3	31	
Rear fender	Bolt	M10 P1.25	2	32	3.2	23	
Muffler bracket & Muffler	Bolt	M10 P1.25	2	25	2.5	18	

C. Electrical

Item \ Model	XJ750J
Voltage:	12V
Ignition System:	
Ignition Timing (B.T.D.C.)	7° at 1,050 r/min
Advanced Timing (B.T.D.C.)	30° at 4,000 r/min
Advancer Type	Electrical



T.C.I.:	
Pick-up Coil Resistance (Color)	650Ω ± 20% at 20°C (68°F) (Black – Gray) (Black – Orange)
T.C.I. Unit– Manufacturer	HITACHI
Ignition Coil:	
Model/Manufacturer	CM12-09/HITACHI
Minimum Spark Gap	6mm (0.24 in)or more at 500 r/min
Primary Winding Resistance	2.5Ω ± 15% at 20°C (68°F)
Secondary Winding Resistance	11 kΩ ± 15% at 20°C (68°F)
Charging System:	
Type	A.C. Generator
A.C. Generatory:	
Model/Manufacturer	LD119/HITACHI
Nominal Output	14V, 19A at 5,000 r/min

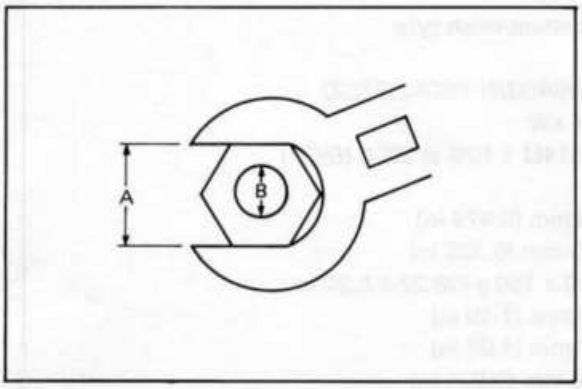


Armature Coil Resistance	0.46Ω ± 10% at 20°C (68°F)

Item \ Model	XJ750J
Voltage Regulator:	
Type	Semi Conductor, Field control
Model/Manufacturer	S8534/TOSHIBA
No Load Regulated Voltage	14.5 ± 0.5V
Rectifier:	
Model/Manufacturer	S8534/TOSHIBA
Capacity	15A
Battery:	
Capacity	12V 14 AH
Specific Gravity	1.280
Electric Starter System:	
Type	Constant-mesh type
Starter Motor:	
Model/Manufacturer	ADB4D2/NIPPONDENSO
Output	0.6 kW
Armature Coil Resistance	0.014Ω ± 10% at 20°C (68°F)
Brush:	
Overall Length	12 mm (0.472 in)
< Limit >	8.5 mm (0.335 in)
Spring Pressurer	800 ± 150 g (28.22 ± 5.29 oz)
Commutator Dia.	28 mm (1.10 in)
Wear Limit	27 mm (1.06 in)
Mic Undercut	0.6 mm (0.024 in)
Starter Switch:	
Amperage Rating	150A
Horn:	
Type/Quantity	Eddy type x 2
Model/Manufacturer	YPH, YPL/NIKKO
Maximum Amperage	2.0 ± 0.5A
Flasher Relay:	
Type	Condenser type
Model/Manufacturer	FU257CD/NIPPONDENSO
Self Cancelling Device	Yes
Flasher Frequency	85 ± 10 cycle/min
Wattage	27W x 2 pcs + 3.4W
Self Cancelling Unit:	
Model/Manufacturer	YH-001/MATSUSHITA
Oil level Switch:	
Model/Manufacturer	10L/NIPPONDENSO
Circuit Breaker:	
Type	Fuse
Amperage for individual Circuit/Quantity:	
MAIN	30A x 1
HEADLIGHT	10A x 1
SIGNAL	10A x 1
IGNITION	10A x 1
TAIL	5A x 1

GENERAL TORQUE SPECIFICATIONS

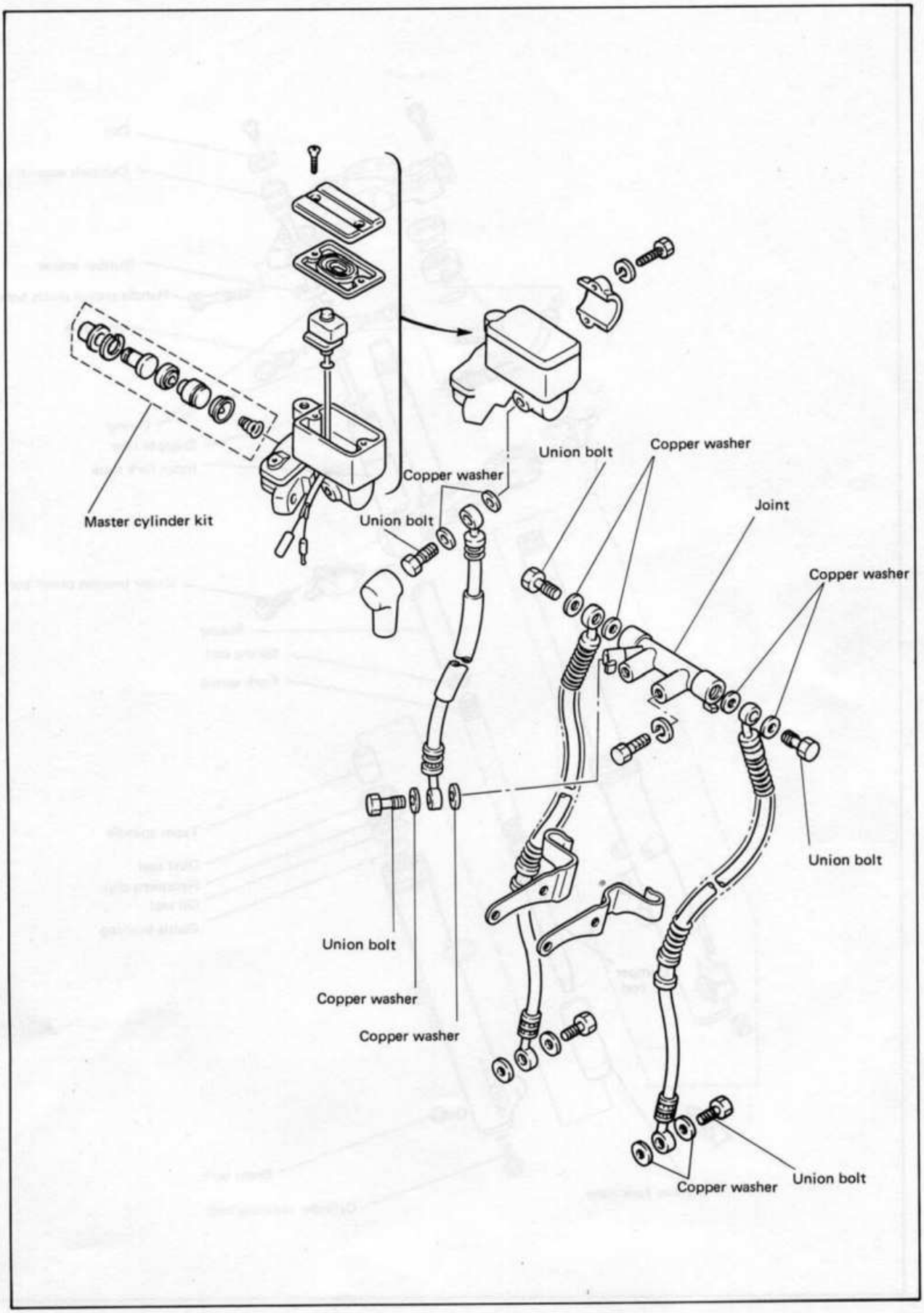
This chart specifies torque for standard fasteners with standard I.S.O. pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multi-fastener assemblies in a criss-cross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

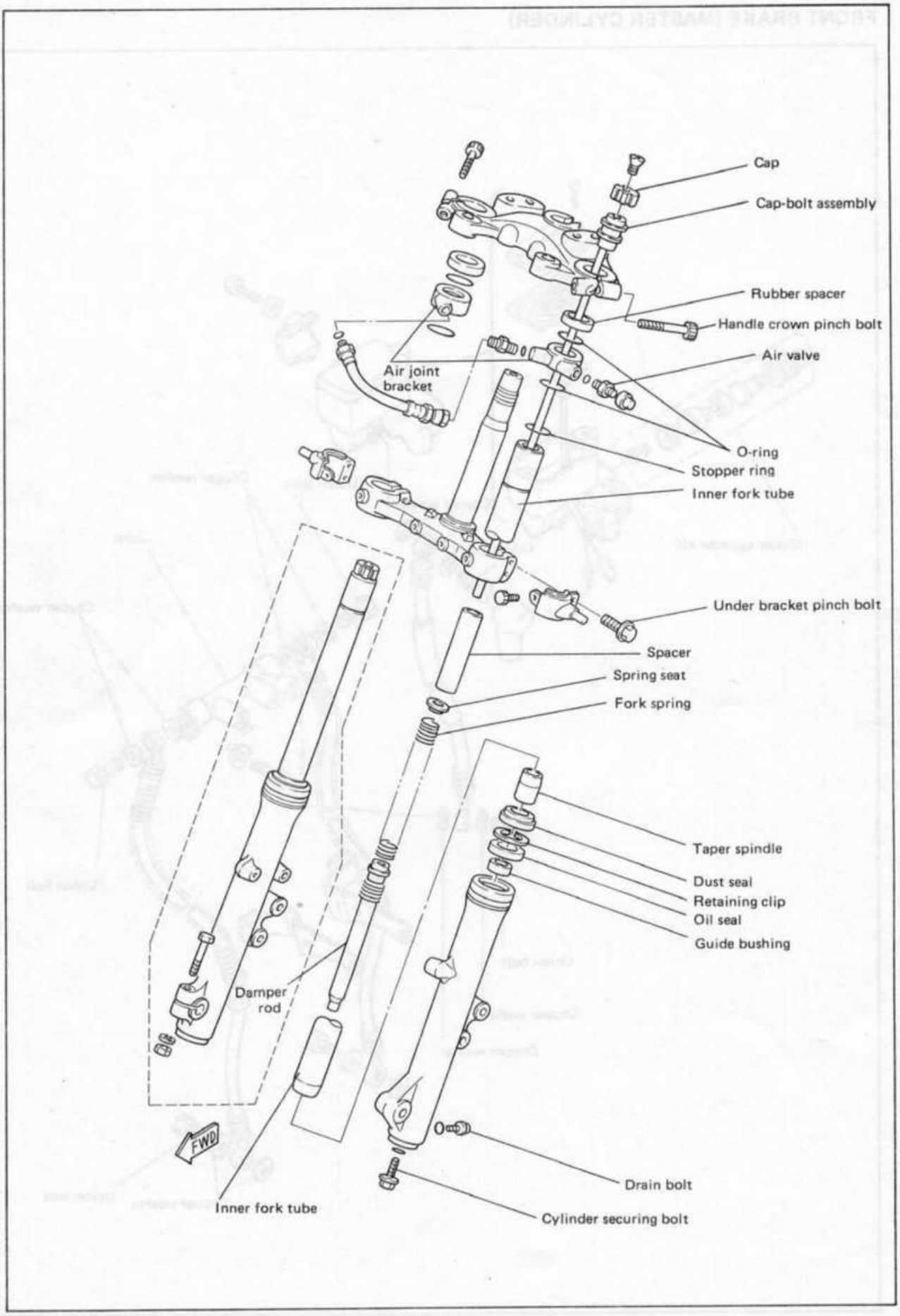


A (Nut)	B (Bolt)	General torque specifications		
		Nm	m·kg	ft·lb
10 mm	6 mm	6	0.6	4.3
12 mm	8 mm	15	1.5	11
14 mm	10 mm	30	3.0	22
17 mm	12 mm	55	5.5	40
19 mm	14 mm	85	8.5	51
22 mm	16 mm	130	13.0	94

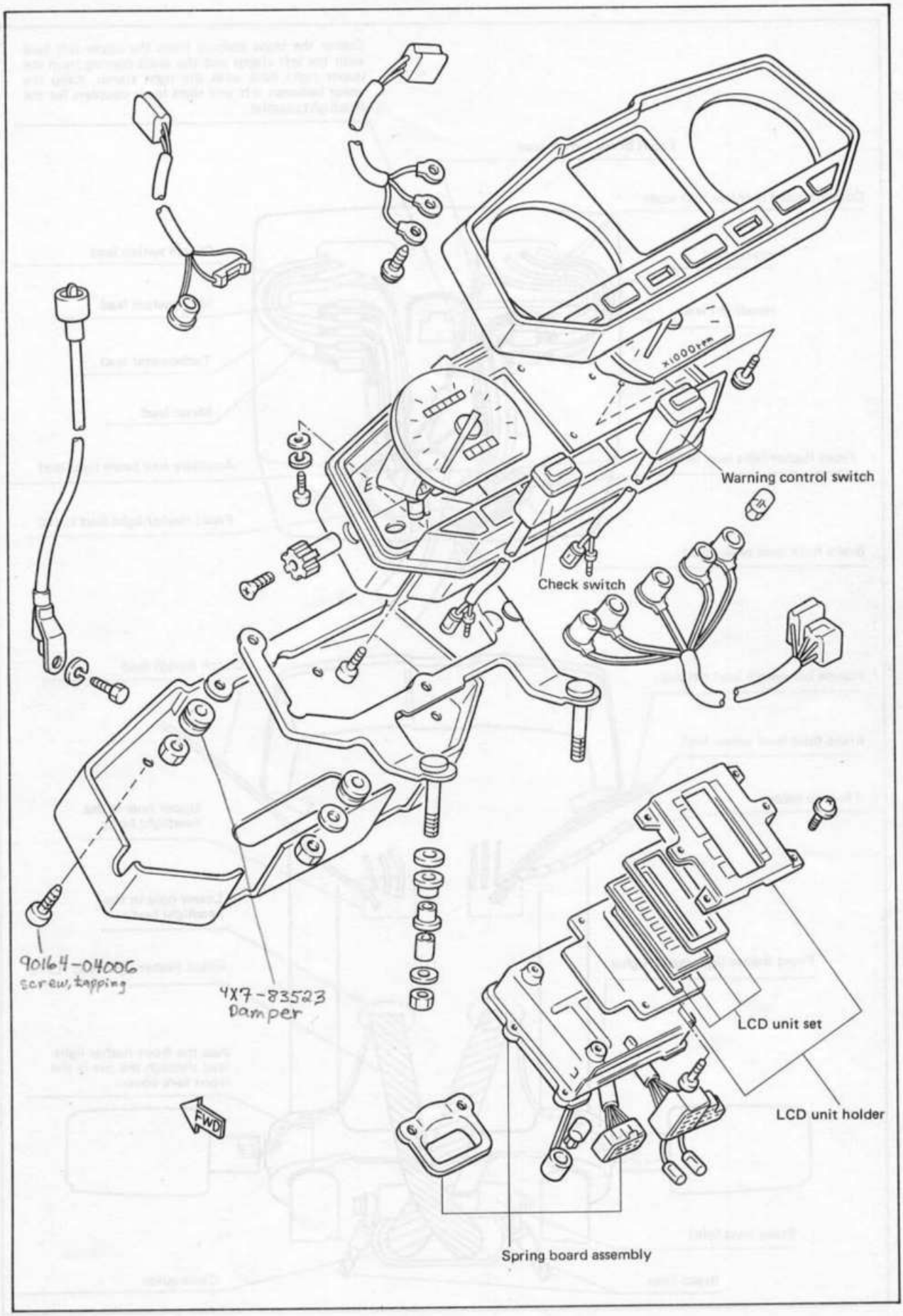
PARTS ILLUSTRATIONS

FRONT BRAKE (MASTER CYLINDER)

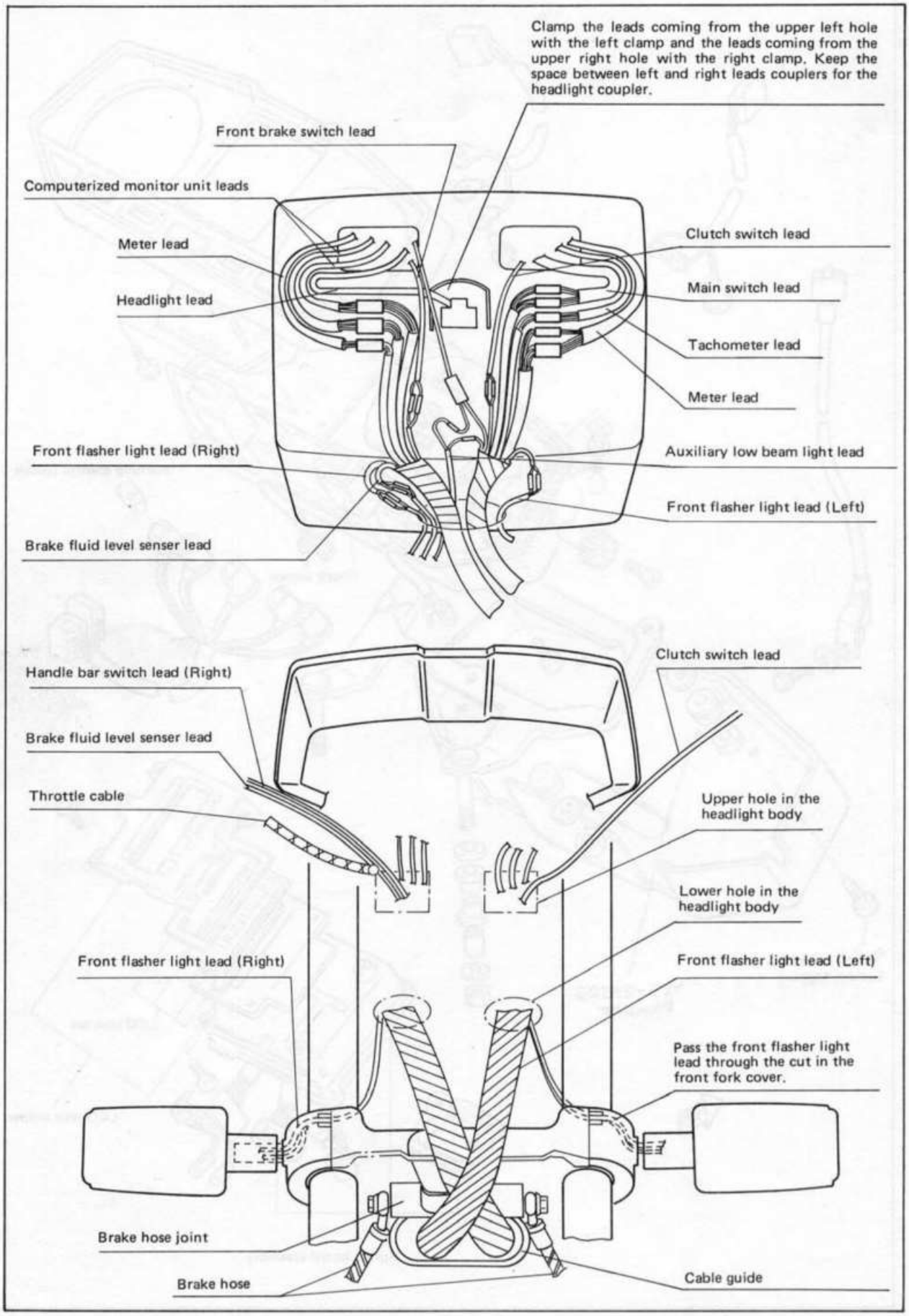


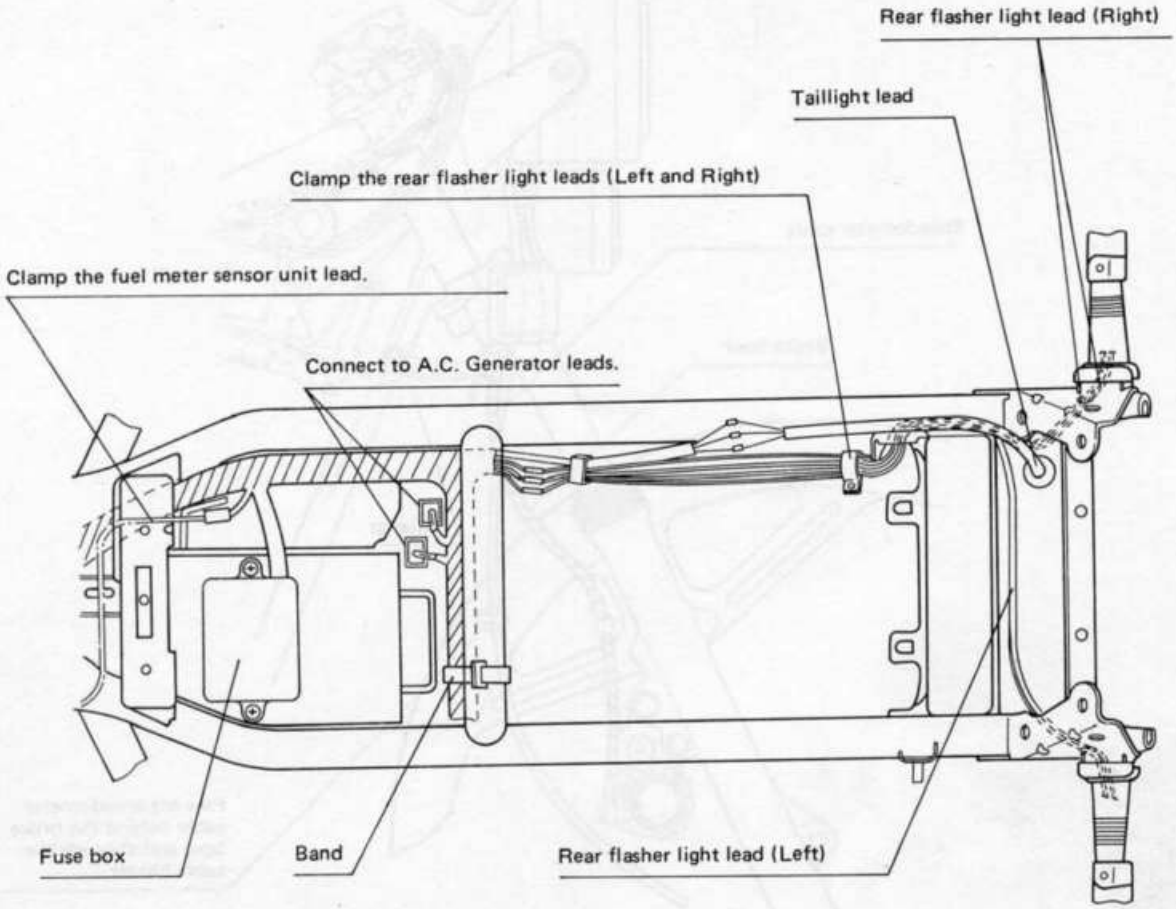

Cap
Cap-bolt assembly
Rubber spacer
Handle crown pinch bolt
Air valve
Air joint bracket
O-ring
Stopper ring
Inner fork tube
Under bracket pinch bolt
Spacer
Spring seat
Fork spring
Taper spindle
Dust seal
Retaining clip
Oil seal
Guide bushing
Damper rod
FWD
Inner fork tube
Drain bolt
Cylinder securing bolt

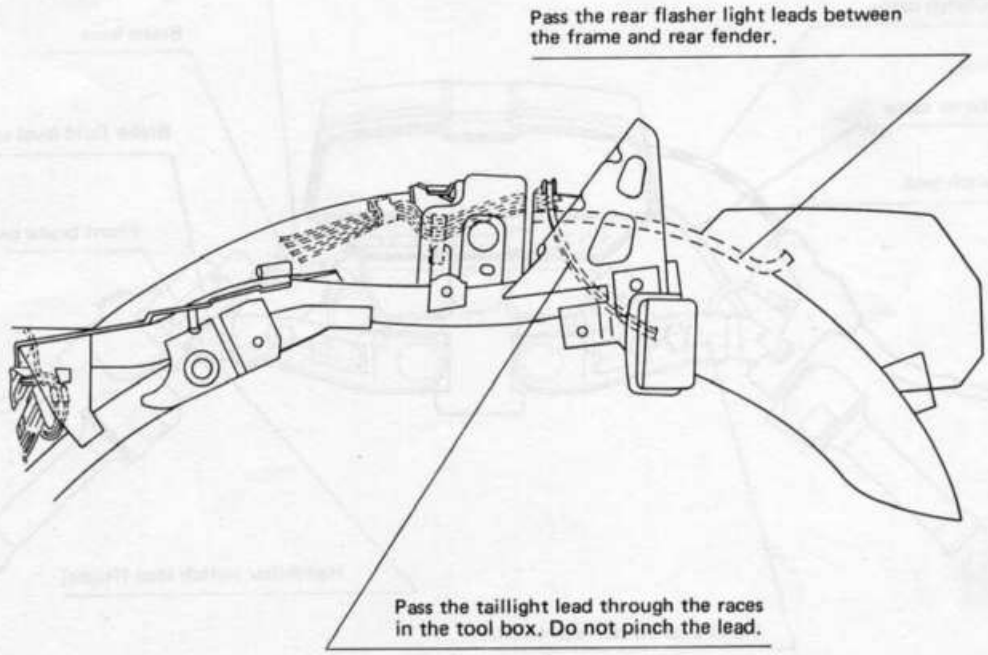
METER

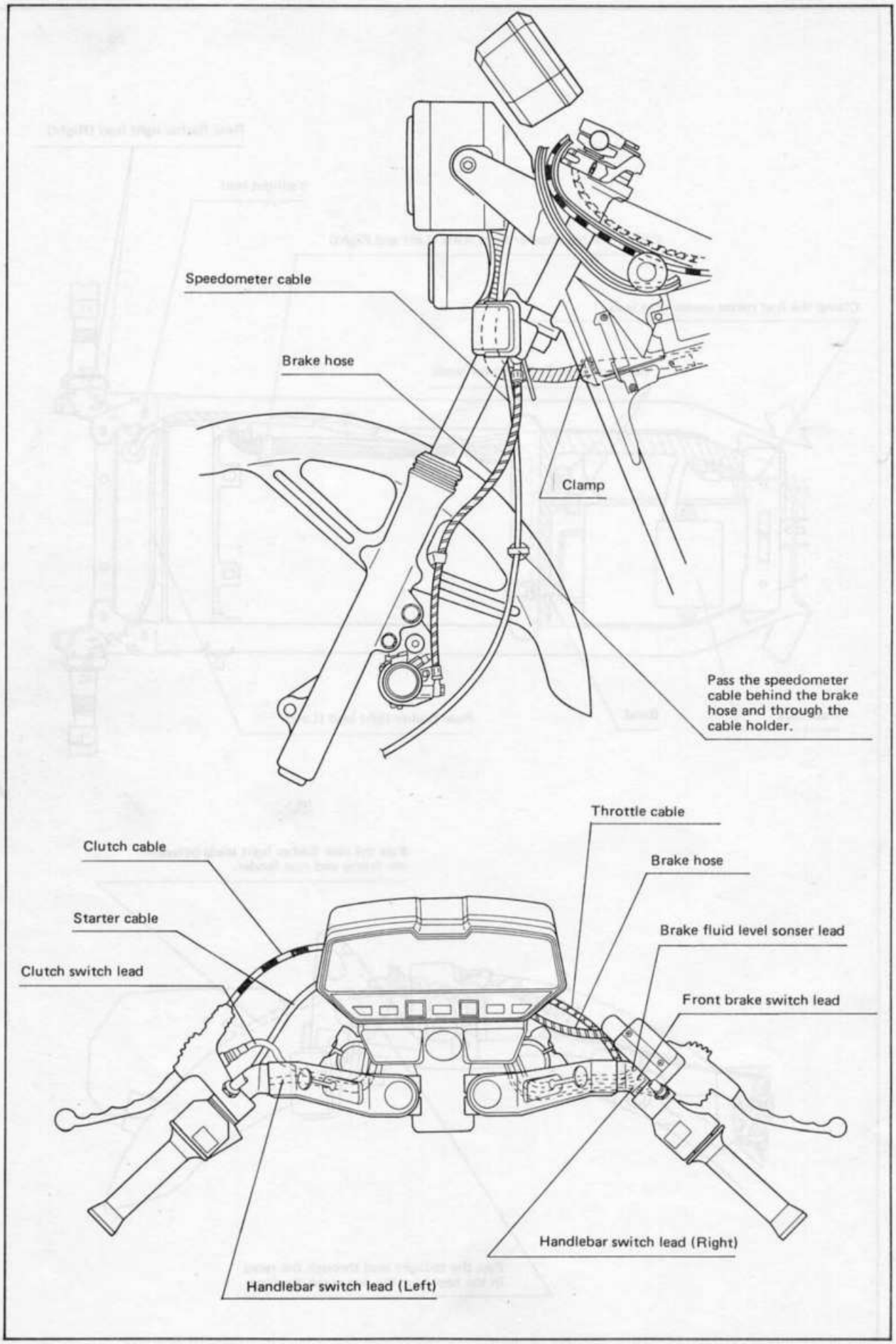

Warning control switch
Check switch
90164-04006
screw, tapping
4X7-83523
damper
FWD
LCD unit set
LCD unit holder
Spring board assembly

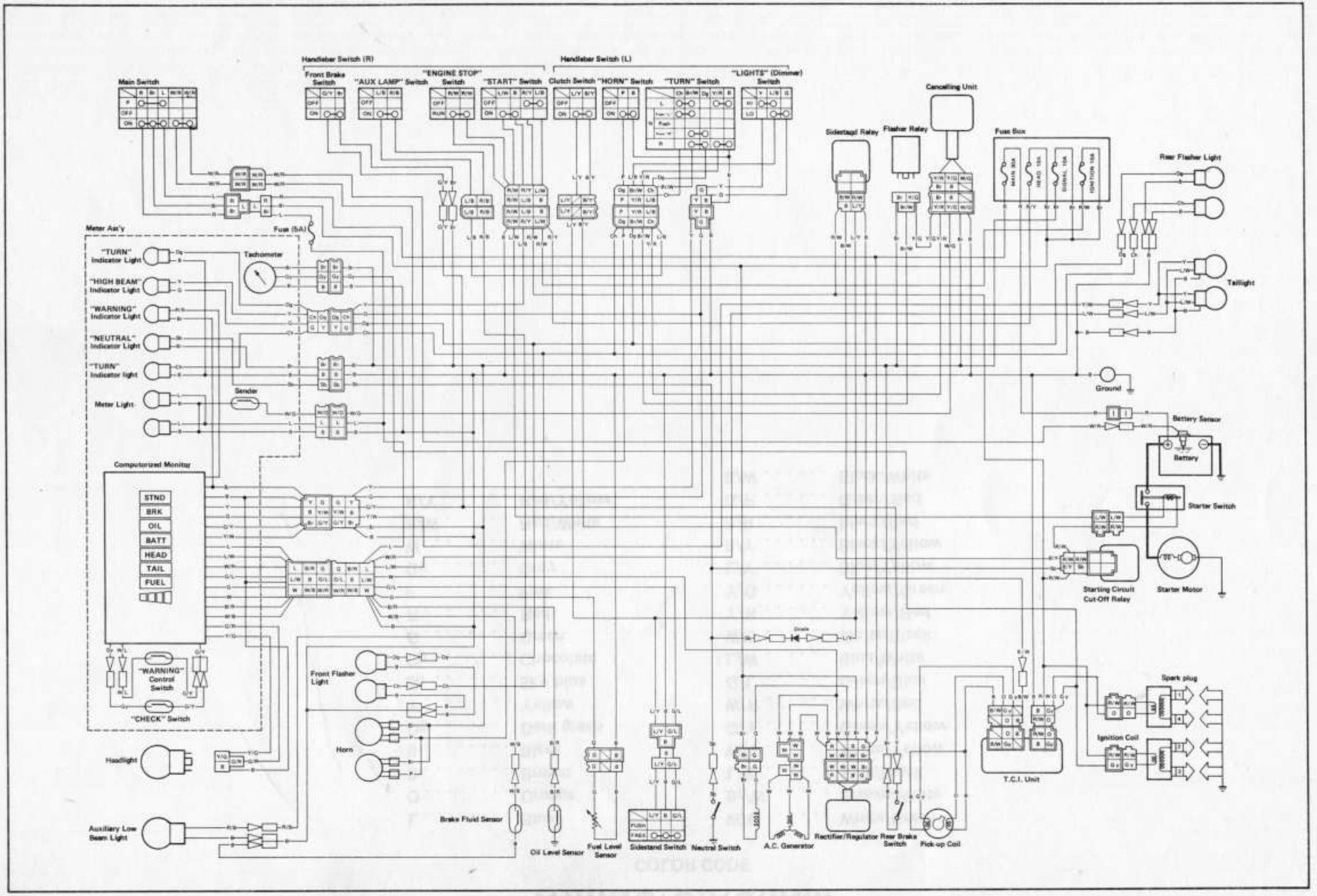
CABLE ROUTING




Rear flasher light lead (Right)
Taillight lead
Clamp the rear flasher light leads (Left and Right)
Clamp the fuel meter sensor unit lead.
Connect to A.C. Generator leads.
Fuse box
Band
Rear flasher light lead (Left)


Pass the rear flasher light leads between the frame and rear fender.
Pass the taillight lead through the races in the tool box. Do not pinch the lead.


Speedometer cable
Brake hose
Clamp
Pass the speedometer cable behind the brake hose and through the cable holder.
Throttle cable
Clutch cable
Brake hose
Starter cable
Brake fluid level sonser lead
Clutch switch lead
Front brake switch lead
Handlebar switch lead (Right)
Handlebar switch lead (Left)


Handlebar Switch (R)
Handlebar Switch (L)
Main Switch
Front Brake Switch
"AUX LAMP" Switch
"ENGINE STOP" Switch
"START" Switch
Clutch Switch
"HORN" Switch
"TURN" Switch
"LIGHTS" (Dimmer) Switch
Cancelling Unit
Sidestand Relay
Flasher Relay
Fuse Box
Rear Flasher Light
Taillight
Meter Ass'y
Fuse (5A)
"TURN" Indicator Light
Tachometer
"HIGH BEAM" Indicator Light
"WARNING" Indicator Light
"NEUTRAL" Indicator Light
"TURN" Indicator light
Meter Light
Sender
Ground
Battery Sensor
Battery
Starter Switch
Starting Circuit Cut-Off Relay
Starter Motor
Computerized Monitor
STND
BRK
OIL
BATT
HEAD
TAIL
FUEL
"WARNING" Control Switch
"CHECK" Switch
Front Flasher Light
Horn
Headlight
Auxiliary Low Beam Light
Brake Fluid Sensor
Oil Level Sensor
Fuel Level Sensor
Sidestand Switch
Neutral Switch
A.C. Generator
Rectifier/Regulator
Rear Brake Switch
Pick-up Coil
T.C.I. Unit
Ignition Coil
Spark plug

WIRING DIAGRAM

COLOR CODE

L	Blue	W/G	White/Green
O	Orange	Br/W	Brown/White
Br	Brown	L/B	Blue/Black
B	Black	W/Y	White/Yellow
Dg	Dark green	G/Y	Green/Yellow
Y	Yellow	W/R	White/Red
Sb	Sky blue	G/L	Green/Blue
Ch	Chocolate	L/W	Blue/White
G	Green	W/B	White/Black
R	Red	Y/R	Yellow/Red
P	Pink	Y/G	Yellow/Green
Gy	Gray	L/Y	Blue/Yellow
W	White	B/Y	Black/Yellow
R/W	Red/White	B/R	Black/Red
R/Y	Red/Yellow	G/R	Green/Red
		B/W	Black/White