



YAMAHA

XJ1100J

OWNER'S MANUAL



YT-11626-02-78

10M-28199-1

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.

NOTE: This manual should be considered a permanent part of this motorcycle and should remain with it even if the motorcycle is subsequently sold.

SAFETY WARNINGS

1. Traffic regulations vary from state to state. Study the regulations in your state before riding this motorcycle.
2. This motorcycle is designed for on-road use only. It is not suitable for off-road use.
3. **GASOLINE IS HIGHLY FLAMMABLE:**
 - * Always turn off the engine when refuelling.
 - * Take care not to spill any gasoline on the engine or exhaust pipe(s)/muffler(s) when refuelling.
 - * Never refuel while smoking or in the vicinity of an open flame.
4. If you should swallow some gasoline, inhale a lot of gasoline vapor, or allow some gasoline to get in your eye(s), see your doctor immediately. If any gasoline spills on your skin or clothing, immediately wash it with soap and water and change your clothes.
5. Always turn off the engine before leaving the motorcycle unattended, and do not forget to remove the ignition key. When parking the motorcycle, note the following:
 - * The engine and exhaust pipe(s)/muffler(s) may be hot. Park the motorcycle in a place where pedestrians or children are not likely to touch the motorcycle.

- * Do not park the motorcycle on a slope or soft ground; the motorcycle may overturn.
6. When transporting the motorcycle in another vehicle, be sure it is kept upright and that the fuel cock(s) is turned to the "ON" or "RES" position (for vacuum type)/"OFF" position (for manual carburetor or fuel tank).
 7. Never start your engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate your motorcycle in an area with adequate ventilation.
 8. Always wear a helmet, gloves, trousers (tapered around the cuff and ankle so they do not flap), and a brightly colored jacket.
 9. This motorcycle is designed for use as a two-wheeled vehicle capable of carrying a rider and a passenger. The total weight of the rider, accessories, and cargo must not exceed the maximum load limit. (See page 29.)

INTRODUCTION

Congratulations on your purchase of the Yamaha XJ1100J. This model represents many years of Yamaha experience in the production of fine sporting, touring, and pace-setting racing machines. You can now appreciate the high degree of craftsmanship and reliability that have made Yamaha leader in these fields.

This manual will provide the owner with a good basic understanding of one operation, and basic maintenance of this vehicle. If you have any questions regarding the operation or maintenance of your motorcycle, please consult your Yamaha dealer.

NOTICE:

Some data in this manual may become outdated due to improvements made to this model in the future. If there is any question concerning this manual, consult your nearby Yamaha dealer.

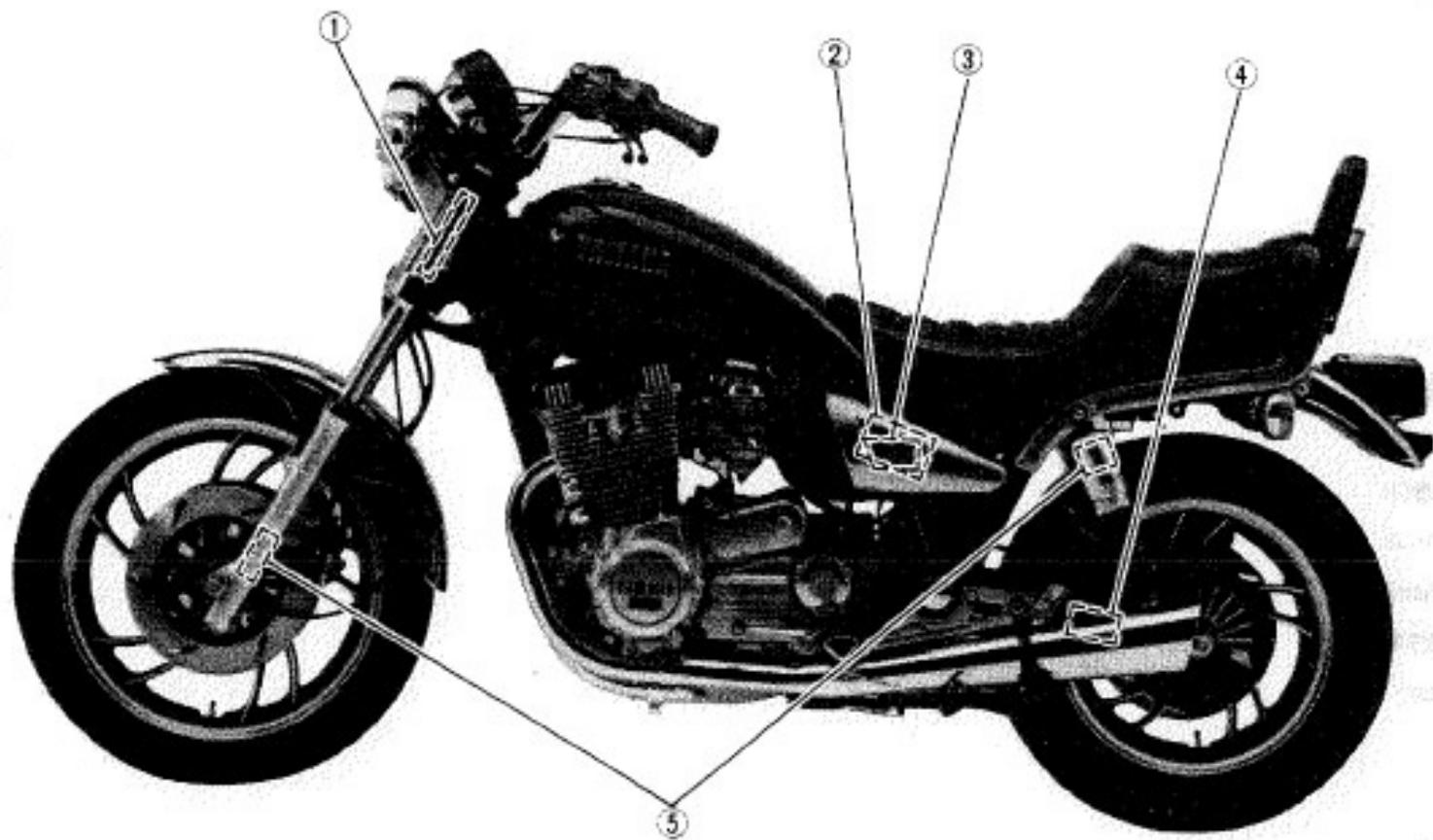
This Yamaha Motorcycle in its design and manufacture fully complies with the emissions standards for clean air applicable at the time of its manufacture. Yamaha has met these standards without reducing the motorcycle's performance or economy of operation. To maintain these high standards, it is important that you and your dealer pay close attention to the recommended maintenance schedules and operating instructions contained within this manual.

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

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LOCATION OF THE "CAUTION AND SPECIFICATION LABELS"



①

MFD. BY YAMAHA MOTOR CO., LTD., (Month/Year) GVWR xxx LBS.
 GAWR FRONT - xxx LBS. WITH xxxxx TIRE, xxxxx RIM,
 AT xx PSI COLD. REAR - xxx LBS. WITH xxxxx TIRE,
 xxxxx RIM, AT xx PSI COLD.
 THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE
 SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE
 SHOWN ABOVE.
 VEHICLE IN NO. xxxxx (17 digits)
 TYPE CLASSIFICATION . . . MOTORCYCLE

②

VEHICLE EMISSION CONTROL INFORMATION		THIS VEHICLE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1982 MODEL YEAR NEW MOTORCYCLES.
ENGINE FAMILY: CYA 1100MAB DISPLACEMENT: 1100 cc EXHAUST EMISSION CONTROL SYSTEM: EM		
ENGINE TUNE-UP SPECIFICATIONS AND ADJUSTMENTS AT NORMAL OPERATING TEMPERATURE. PUT VEHICLE IN THE UPRIGHT POSITION, TRANSMISSION IN NEUTRAL, AND WARM UP ENGINE.		
ITEM	SPEC	INSTRUCTIONS
1. IGNITION TIMING: 1° BTDC AT IDLE SPEED		NO ADJUSTMENT
2. IDLE SPEED (RPM): 1100		ADJUST THROTTLE STOP SCREW
3. IDLE MIXTURE		NO ADJUSTMENT
4. VALVE CLEARANCE (MM):	IN: 0.11 - 0.15 EX: 0.21 - 0.25	SEE SERVICE MANUAL
5. SPARK PLUG: NGK BPR5, NO ROSEFI, SPARK PLUG GAP (MM): 0.7 - 0.8		
FUEL SPECIFICATIONS		ENGINE LUBRICANT SPECIFICATIONS
GASOLINE GRADE: REGULAR (UNLEADED) RESEARCH OCTANE: 91 MIN		ENGINE OIL: SAE 20W/40 (ABOVE 8°) TYPE "SE" SAE 10W/30 (BELOW 15°)
YAMAHA MOTOR CO., LTD. ③		

③

CAUTION

(BATTERY REMOVAL AND INSTALLATION)

1. Disconnect breather pipe before removing battery.
2. After installing battery, be sure to connect breather pipe into place.

④

Keep oil between level-
gauge lines.

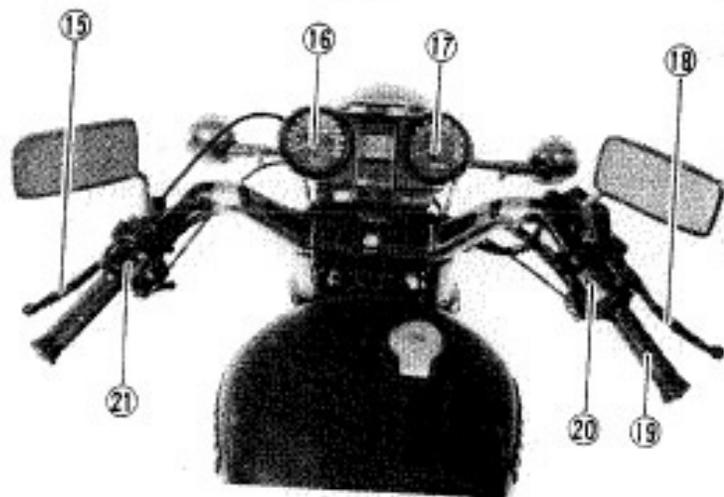
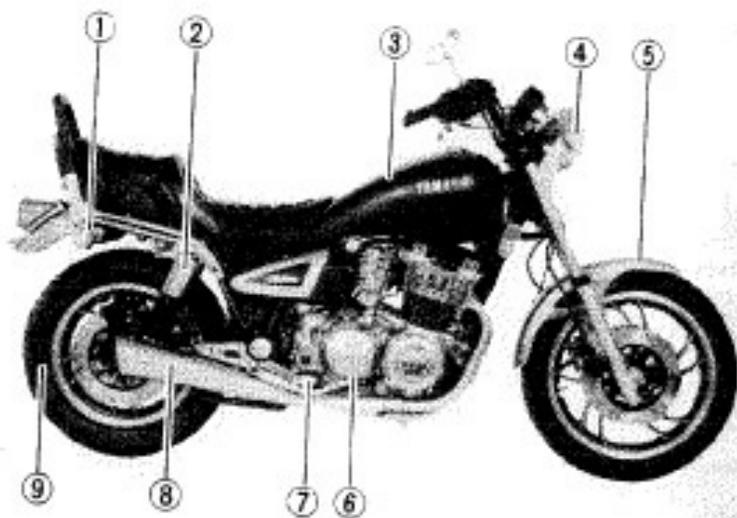
USE HYPOID GEAR OIL
 SAE #80
 YAMAHA MOTOR CO., LTD.

⑤

CAUTION (AIR SUSPENSION)

1. Containing highly compressed air.
2. Use only air or nitrogen gas, other gases may cause explosion.
3. Do not incinerate.
4. Refer to the Owner's Manual for regulating gas.

DESCRIPTION

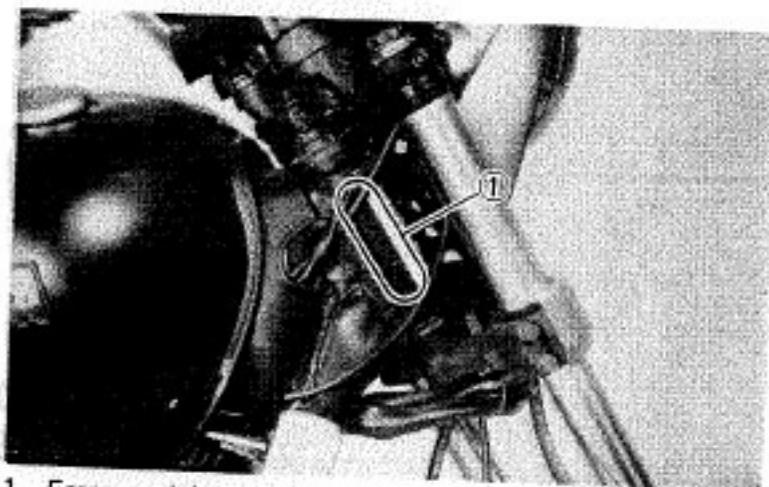


1. Rear flasher light
2. Rear shock absorber
3. Fuel tank
4. Front flasher light
5. Front fender
6. Brake pedal
7. Footrest
8. Silencer
9. Rear wheel
10. Headlight
11. Seat
12. Tail/brake light
13. Change pedal
14. Front wheel
15. Clutch lever
16. Speedometer
17. Tachometer
18. Brake lever
19. Throttle grip
20. Right handlebar switch
21. Left handlebar switch

MOTORCYCLE IDENTIFICATION

Frame serial number

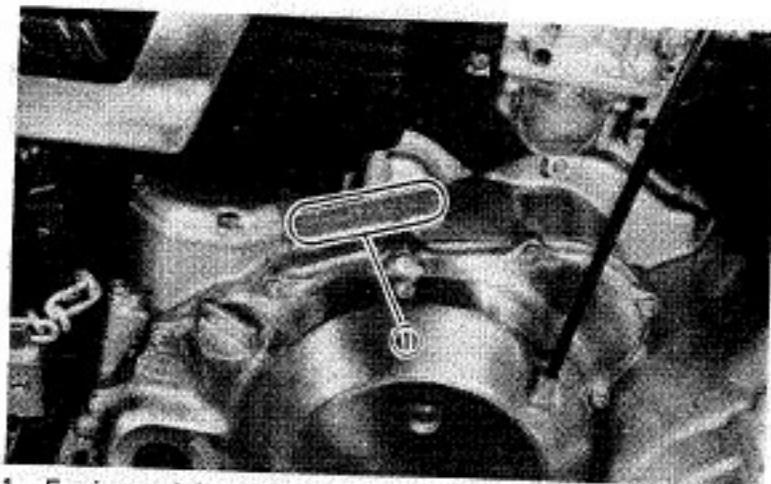
The frame serial number is stamped into the right side of the steering head pipe.



1. Frame serial number

Engine serial number

The engine serial number is stamped into the elevated part of the right rear section of the engine.



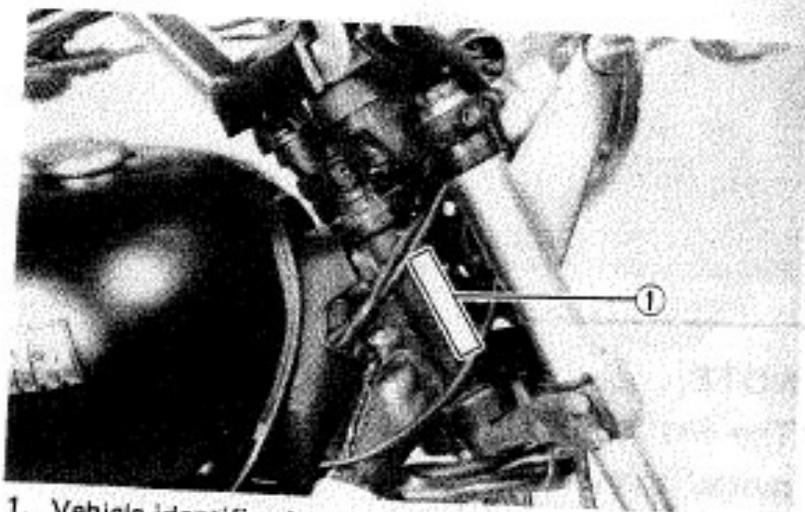
1. Engine serial number

NOTE:

The first three digits of these numbers are for model identification; the remaining digits are the unit production number. Keep a record of these numbers for reference when ordering parts from your Yamaha dealer.

Vehicle identification number

The vehicle identification number is stamped on the label attached to the steering head pipe.



1. Vehicle identification number

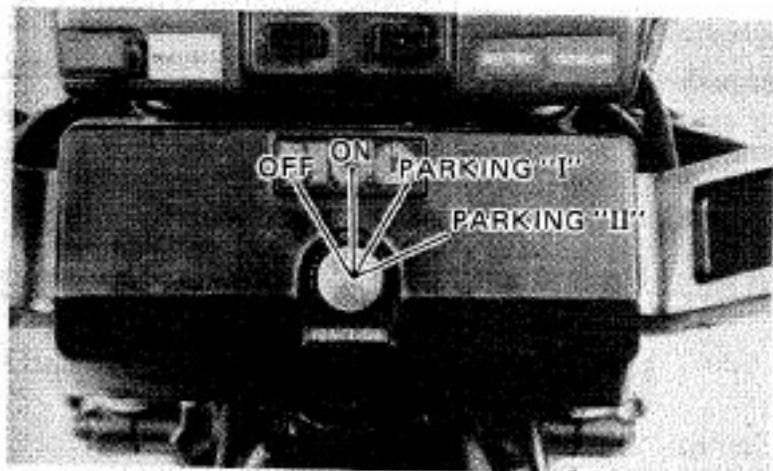
NOTE:

The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your state.

CONTROL FUNCTIONS

Main switch

Functions of the respective switch positions are as follows:



ON:

Electrical circuits are switched on, and the headlight, meter light, running light, and taillight/license light come on. The engine can be started. The key cannot be removed in this position. Refer to "Computerized monitor system" (page 7) for proper operation.

OFF:

All electrical circuits are switched off, but "HAZARD" switch can be used. The key can be removed in this position.

PARKING "I":

All electrical circuits are switched off. The key can be removed in this position.

NOTE:

"HAZARD" switch does not function at "PI".

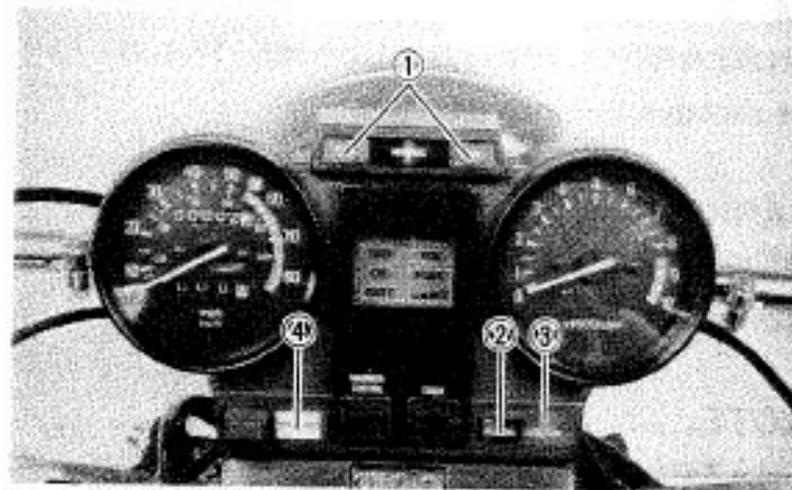
PARKING "II":

The taillight comes on and "HAZARD" switch can be used, but all other circuits are off. The key can be removed in this position.

NOTE:

Always turn the main switch to "OFF" or "PARKING" and remove the key when motorcycle is unattended.

Indicator lights



1. "TURN" indicator light
2. "NEUTRAL" indicator light
3. "HIGH BEAM" indicator light
4. "HEAD LAMP" failure indicator light

"TURN" indicator light (orange):

This indicator flashes when the turn switch is "ON".

"NEUTRAL" indicator light (green):

This indicator lights when the transmission is in neutral.

"HIGH BEAM" indicator light (blue):

This indicator lights when the headlight high beam is used.

"HEAD LAMP" failure indicator light (white):

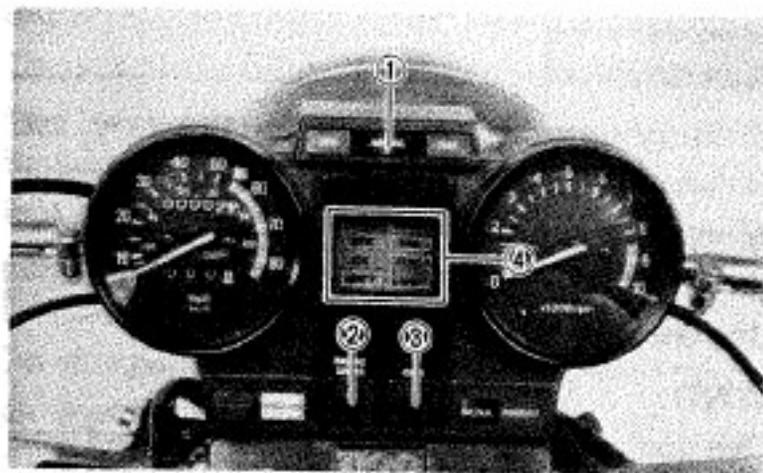
If either headlight filament burns out, the other filament will come on and the indicator will come on.

WARNING:

If the headlight failure indicator light comes on, be sure to replace the headlight bulb as soon as possible to avoid having no headlight at all if the remaining filament fails.

Computerized monitor system

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 | 3. Check switch |
| 2. Warning control switch | 4. Display panel |

Operation

NOTE:

Before starting out on the road, check the motorcycle conditions using computerized monitor system.

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. If the correction is beyond your capability, ask a Yamaha dealer or other qualified mechanic.

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.

WARNING:

If the system does not function properly, ask a Yamaha dealer or other qualified mechanic immediately.

Display panel

STND:

This indicator is displayed when the sidestand 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 or rear brake master cylinder. In this case, ask a Yamaha dealer or other qualified mechanic immediately.

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.

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 bulbs are 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:

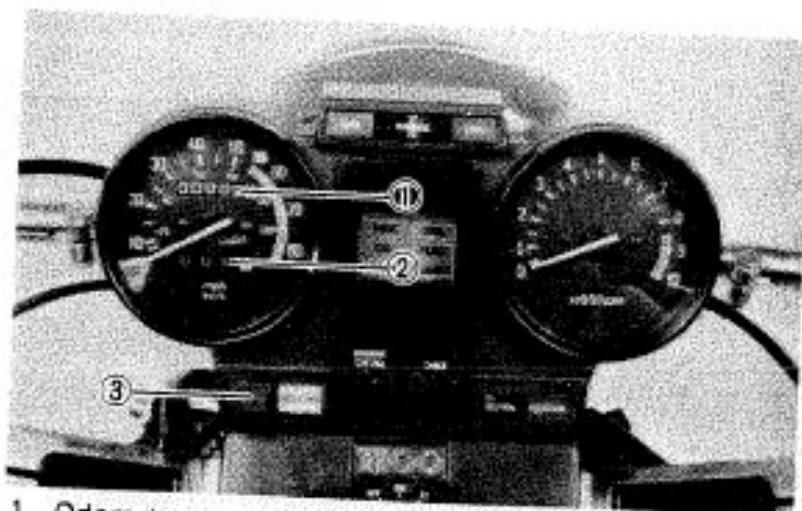
Failure to observe any of the following "mustn'ts" may result in malfunction of the electrical circuit.

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 objectes mustn't be put near the display panel.

Speedometer

The odometer and trip odometer are built into the speedometer. The trip odometer can be reset to "0" with the reset knob.

Use the odometer to estimate how far you can ride on a tank of fuel before going to "RESERVE". This information will enable you to plan fuel stops in the future.



1. Odometer

2. Trip odometer

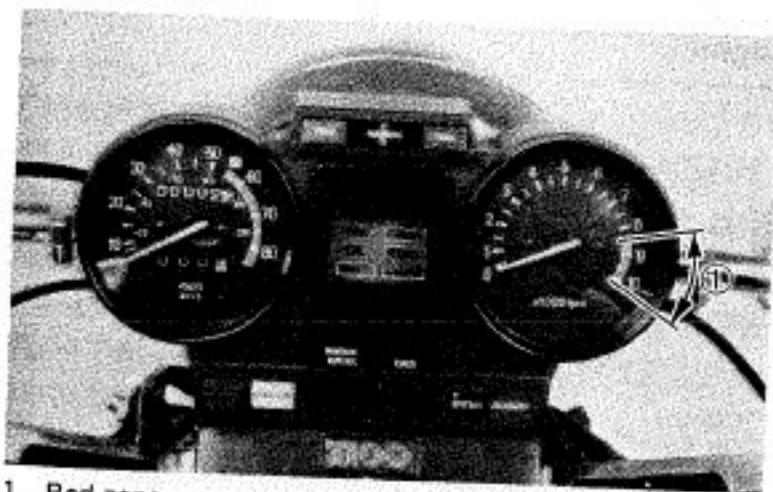
3. Reset knob

Tachometer

The tachometer is provided so the rider can keep engine revolutions within the ideal power range.

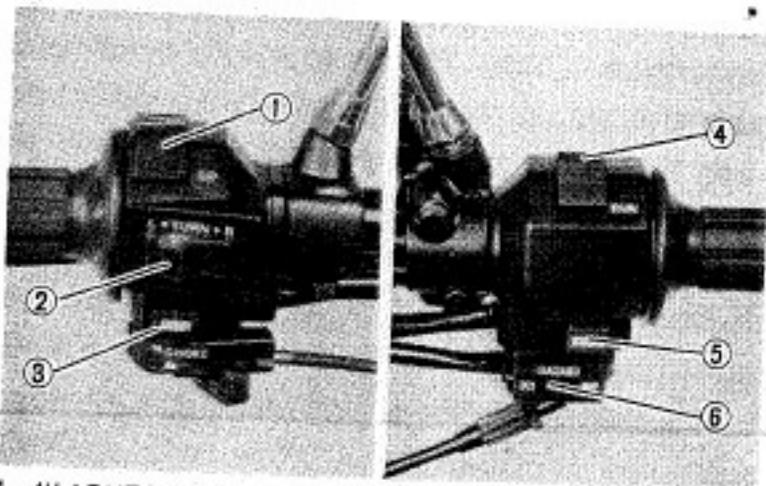
This model is provided with an electric type tachometer.

Do not operate in the red zone.
Red zone: 8,500 r/min and above.



1. Red zone

Handlebar switches:



- | | |
|-----------------------------|-------------------------|
| 1. "LIGHTS" (Dimmer) switch | 4. "ENGINE STOP" switch |
| 2. "TURN" switch | 5. "START" switch |
| 3. "HORN" switch | 6. "HAZARD" switch |

"LIGHTS" (Dimmer) switch

Turn to the "HI" for the high beam and to the "LO" for the low beam.

"HORN" switch

Press the switch to sound the horn.

"TURN" switch

This model is equipped with turn signals that are self cancelling. To signal a right hand turn push the switch to the right. To signal a left hand turn push the switch to the left.

Once the switch is released it will return to the center position. To cancel the signal push down the switch after it has returned to the center position. If the switch is not cancelled by hand it will self-cancel after the motorcycle has travelled for 10 seconds or 150 meters (490 feet), whichever is greater. The self-cancelling mechanism only operates when the motorcycle is moving; thus the signal will not self-cancel while you are stopped at an intersection.

"ENGINE STOP" switch

Make sure that the engine stop switch is on "RUN". The engine stop switch has been designed to ensure safety should trouble occur in the throttle system. In case of emergency,

push the stop switch to stop the engine. The engine will not start or run when the engine switch is turned to "OFF".

"START" switch

To start the engine, push the starter switch.

CAUTION:

See starting instructions prior to starting engine.

"HAZARD" switch

This switch should be used only when your motorcycle is stopped under emergency or hazardous conditions. To operate the switch, turn on the knob marked HAZARD, which is located on bottom of the left handlebar switch assembly. Both front and rear flasher lights will flash simultaneously.

CAUTION:

With the engine cut off, battery may discharge from extended "HAZARD" lighting, thereby, leading to difficult engine restarting.

NOTE:

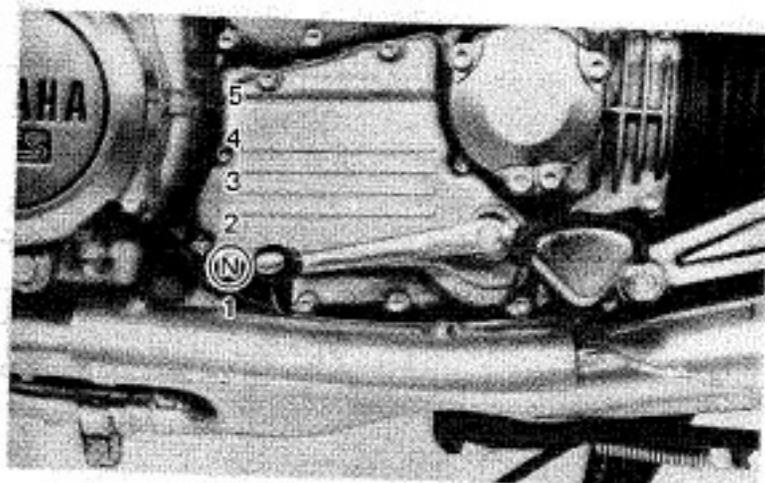
Turn on the emergency flashers to warn other drivers if your motorcycle must be stopped where it might be a traffic hazard.

Clutch lever

The clutch lever is located on the left handlebar and the starting circuit cut off switch is incorporated in the clutch lever holder. Pull the clutch lever to the handlebar to disengage the clutch, and release the lever to engage the clutch. The lever should be pulled rapidly and released slowly for smooth starts. (Refer to the engine starting procedures for the starting circuit cut off switch functions.)

Change pedal

The gear ratios of the constant-mesh 5-speed transmission are ideally spaced. The gears can be shifted by using the change pedal on the left side of the engine.

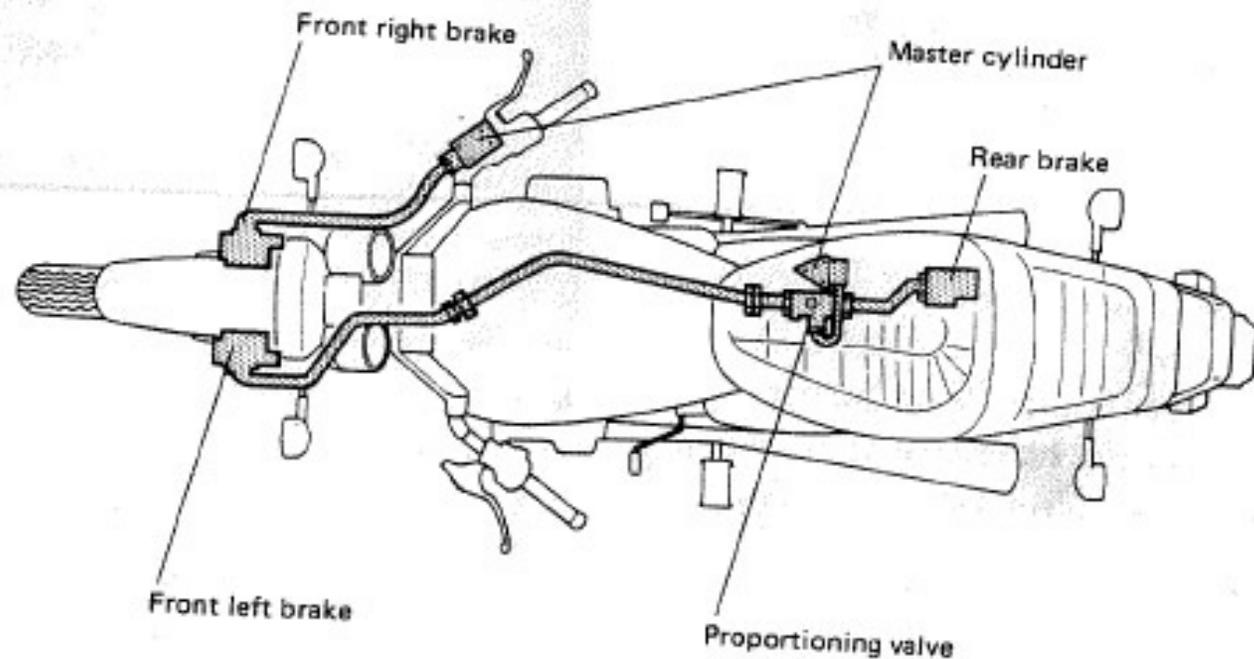


N. Neutral

Brake pedal and lever

The rear brake and the left-hand front brake are connected to the brake pedal; they are activated at the same time when the brake pedal is applied. The right-hand front brake operate independently; it is activated only by

the brake lever. The rear brake and the left hand front brake provide enough stopping ability for most conditions. However, for maximum stopping ability, apply the right hand front brake at the same time as the brake pedal is applied.



Fuel tank cap

To open:

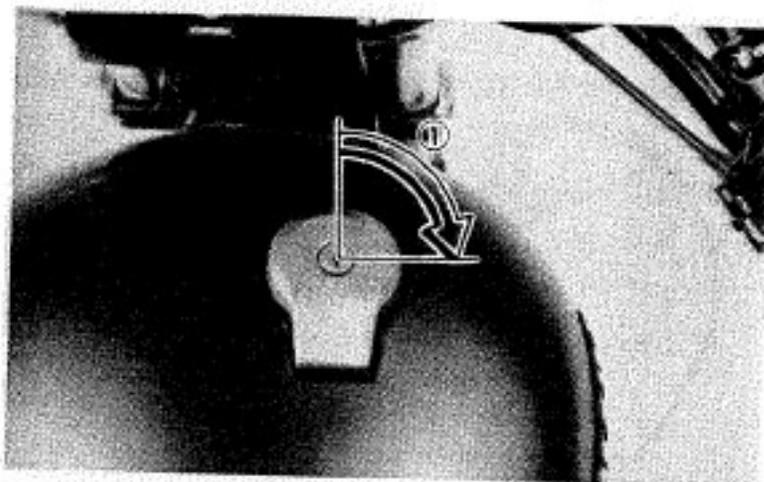
Insert the key and turn clockwise 1/4 turn. The lock will be released and the fuel tank cap can be opened.

To close:

Push the tank cap into position with the key inserted. To remove the key, turn it counter-clockwise to the original position.

NOTE:

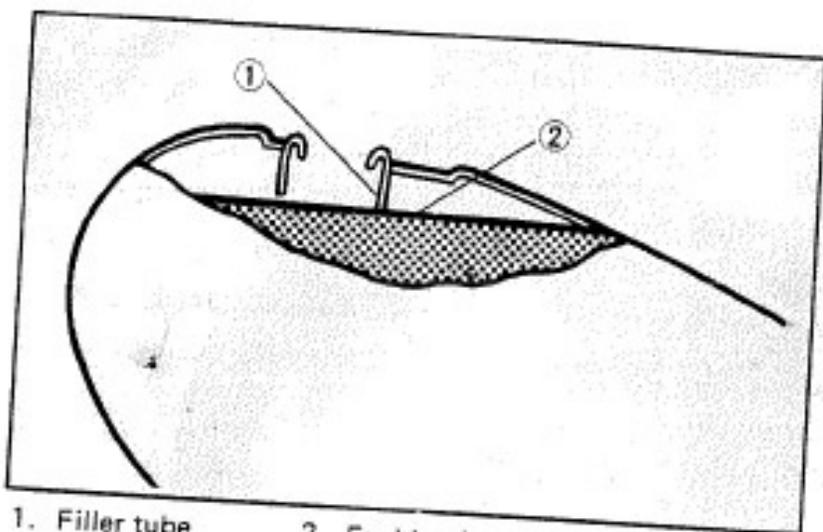
This tank cap cannot be closed unless the key is in the lock. The key cannot be removed if the cap is not locked properly.



1. Open

WARNING:

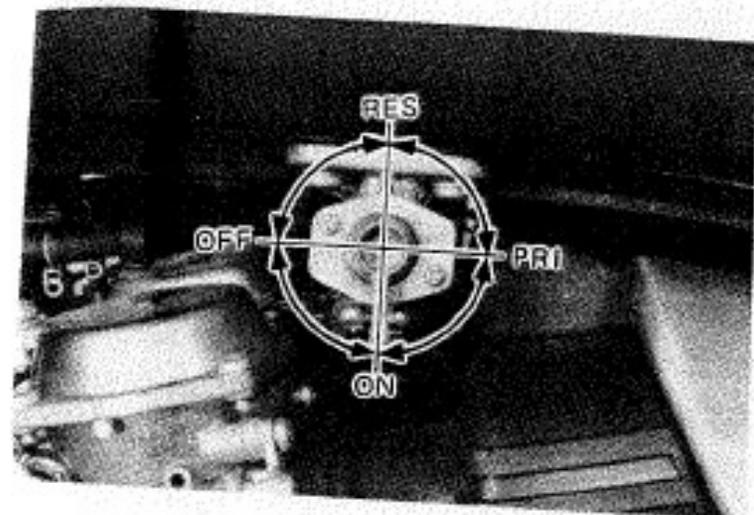
Do not overfill the tank. Avoid spilling fuel on the hot engine. Do not fill the fuel tank above the bottom of the filler tube as shown as illustration or it may overflow when the fuel heats up later and expands.



1. Filler tube 2. Fuel level

Fuel cock

The negative pressure fuel cocks supply fuel from the tank to the carburetors and also filter the fuel. The fuel cocks have the following four positions:



OFF: With the lever in this position fuel will not flow.

ON: With the lever in this position fuel flows if the engine is running but stops if the engine is not running.

RES: This indicates "RESERVE". If you run out of fuel while riding, move the lever to "PRI" and the switch to this position after starting the engine. **FILL THE TANK AT THE FIRST OPPORTUNITY.**

NOTE:

In the "ON" and "RES" positions the cock works on pressure from the engine turning over. If the line connecting the cock to the carburetor intake manifold is not connected or has a leak the cock will not function properly.

PR1: This indicates "PRIME". With the fuel cock in this position, fuel flows whether the engine is running or not. If the fuel tank is completely empty, refill the tank and prime the carburetor in this position and then switch to the "ON" position after starting the engine.

NOTE:

The fuel cocks are on the right and left sides of the fuel tank. Both cocks should be set to the same position.

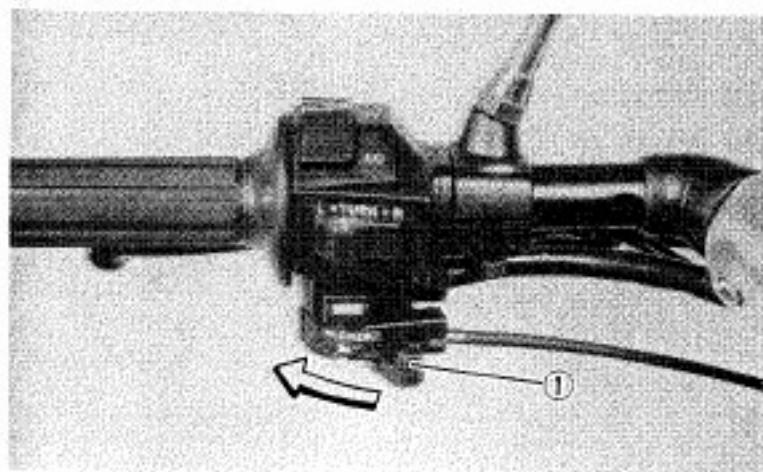
Starter lever (CHOKE)

The starter lever is located on the left handlebar.

Starting a cold engine requires a richer fuel mixture. In such a case, turn the starter lever in the left direction. After the engine is warm, turn the lever to its original position.

NOTE:

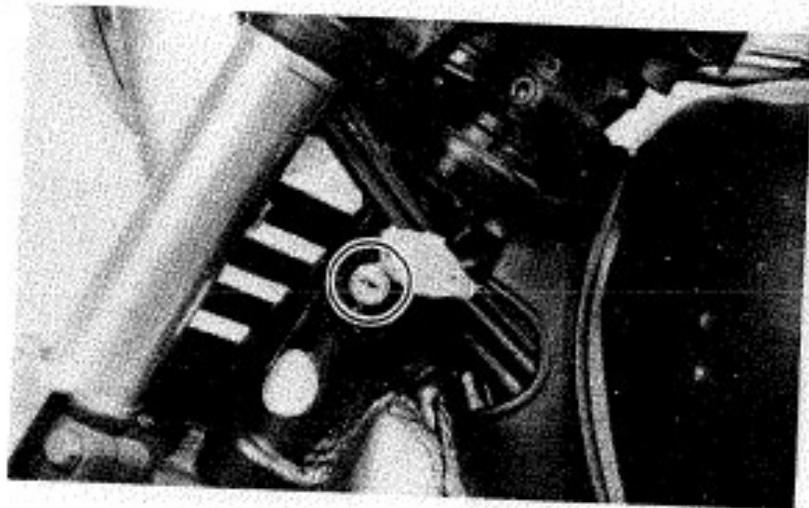
Refer to "Starting and warming up a cold engine" for proper operation.



1. Starter lever

Steering lock

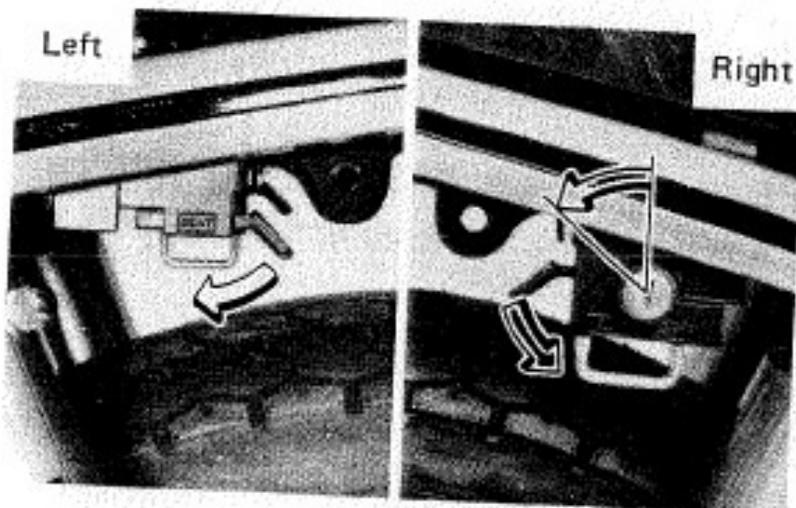
To lock the steering, turn the handlebars fully to the right, insert the key into the steering lock and turn the key about 1/8 turn counterclockwise; Then push the key in and turn it about 1/8 turn clockwise. After checking if the lock is engaged, remove the key from the lock. To release the lock, reverse the above steps.

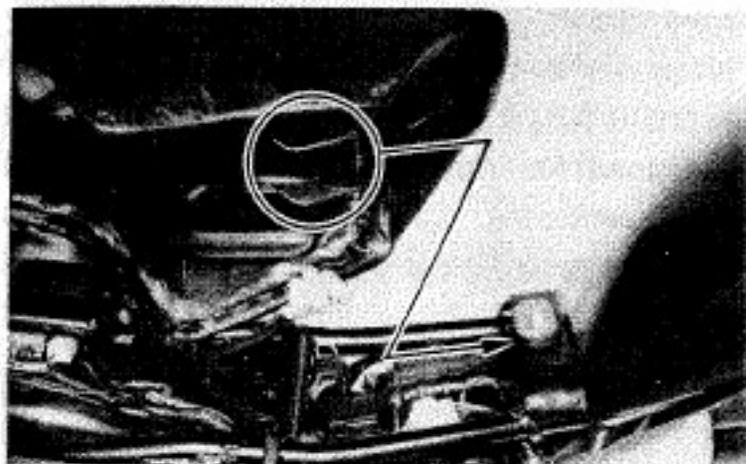


Seat lock

To open the seat lock, insert the key in the lock and turn it counterclockwise. Then push down the levers on both sides.

In reinstalling the seat, insert the lobes on the seat front into the receptacles on the frame, then push down the seat at the end. After making sure the seat is securely fitted, turn the key clockwise to the center position to lock.





Helmet holder

To open the helmet holder insert the key in the lock and turn it clockwise.

To lock the helmet holder, replace the holder in original position.

WARNING:

Never ride with a helmet in the helmet holder. It could interfere with rear wheel movement, causing loss of control and possibly an accident.



1. Helmet holder

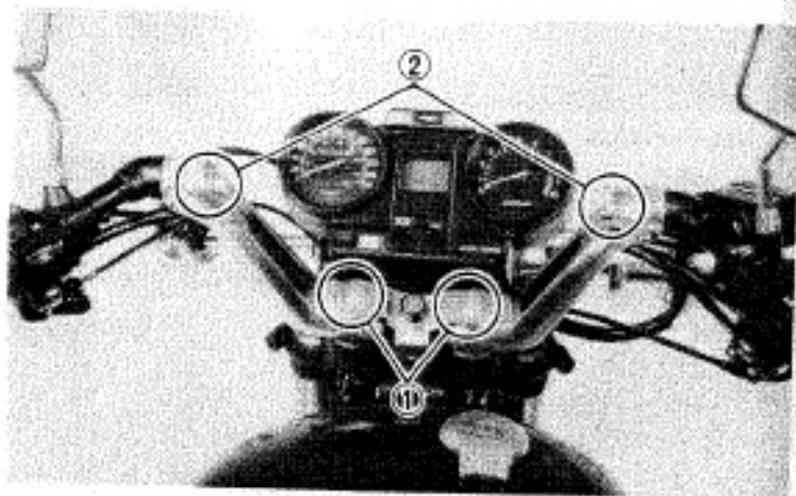
Side cover (left and right)

1. Remove the seat.
2. Remove the side cover securing screw.



Adjustable handlebars

This model is equipped with handlebars which are capable of vertical and horizontal adjustment to suit the rider's position and preference. For the adjustment procedure, see page 65.

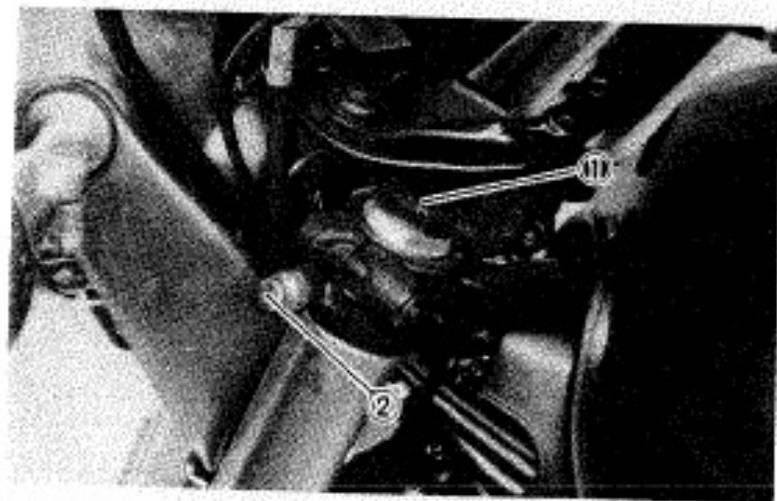


1. Horizontal adjustment 2. Vertical adjustment

Front forks

The air pressure preload and the damping of the front fork can be adjusted to suit motorcycle load (ex: optional accessories etc.) and riding conditions.

Refer to page 72 for proper adjustment procedures.

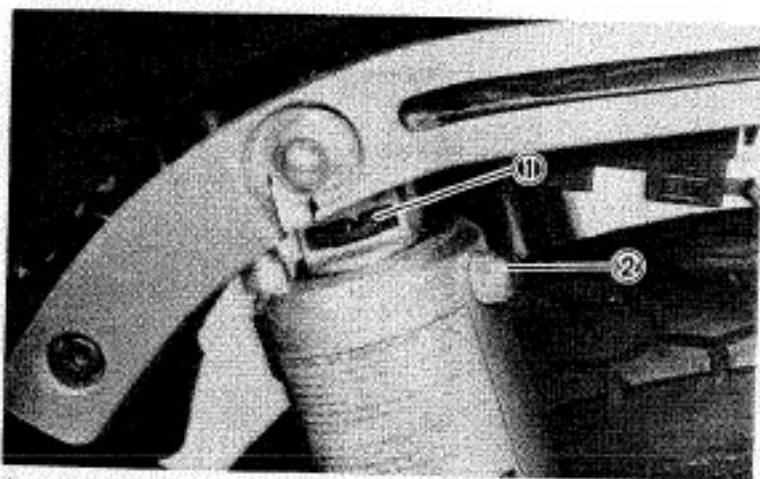


1. Damping adjuster 2. Air valve

Rear shock absorber

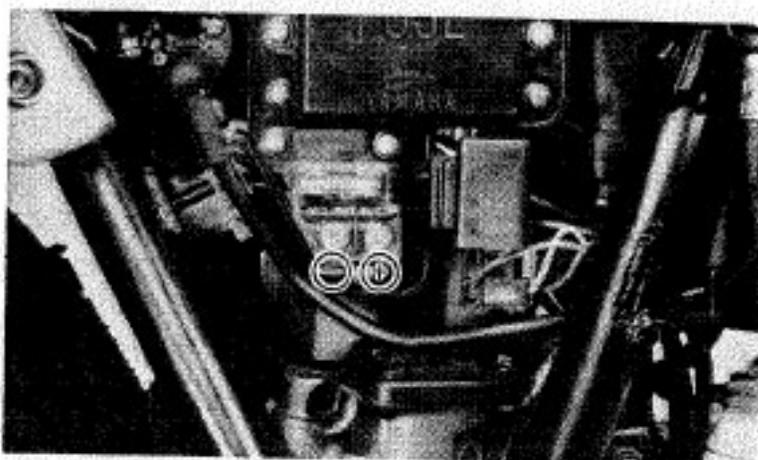
The air pressure preload and the damping of the rear shock absorber can be adjusted to suit motorcycle load (ex: optional accessories etc.) and riding conditions.

Refer to page 74 for proper adjustment procedures.



1. Damping adjuster 2. Air valve

Auxiliary D.C. Terminal



The fused Auxiliary D.C. Terminal is located under a plastic cap beneath the right side cover. This terminal must not be used for an accessory exceeding 50W. The terminal fuse is located directly above the terminal screws. Remove the fuse until accessory installation is complete. To prevent wiring damage never use a larger fuse than specified. Consult the accessory manufacturer for wire type and gauge. The + (voltage) and - (ground) marks on the terminal backing must be observed when connecting an accessory.

Auxiliary D.C. Terminal

Maximum accessory rating:

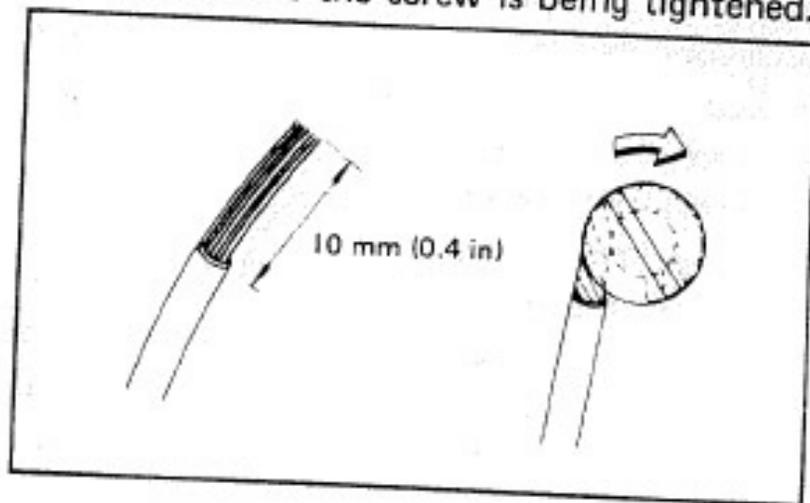
12V, 50W

Maximum fuse rating:

12V, 10A standard or "Slo-Blo" type

Connecting accessory wires

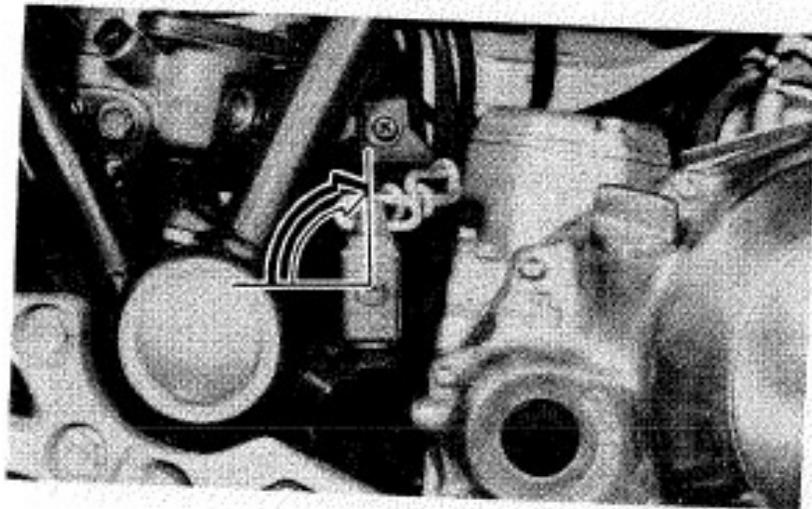
1. Strip 10 mm (0.4 in) of insulation from each wire. Twist (braid) the ends of the wires.
2. Make a hook in the end of the braided wire so that it will be drawn around the terminal as the screw is being tightened.



Theft-protection chain

This chain is designed for theft protection of your motorcycle and is placed under the left hand side cover. Take out and use the chain as follows:

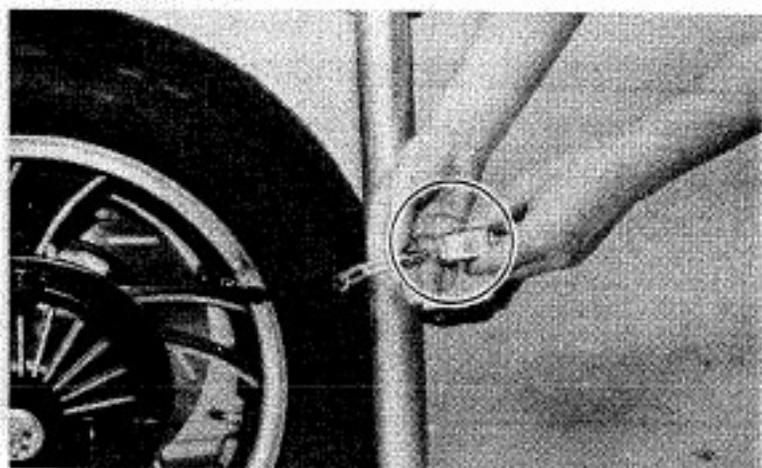
1. To remove the chain from the frame projection, insert the main switch key in the lock and turn it clockwise.



- of
ft-
ain
ro-
the
2. To lock the chain, insert one end into the other. The chain automatically locks.

NOTE: _____
Fasten the chain to an suitable fixed object.

3. To unfasten the chain, insert the main switch key in the lock and turn it clockwise.



NOTE: _____
To replace the chain, make sure that the chain lock is securely fitted over the frame projection.

WARNING: _____
Before starting, make sure that your motorcycle is unlocked.

Sidestand

This model is equipped with an ignition circuit cutoff system. The motorcycle can be ridden only when the sidestand is up. The sidestand is located on the left side of the frame.

(Refer to page 35 for an explanation of this system.)

PRE-OPERATION CHECKS (DAILY)

Before using this motorcycle check the following points:

No.	Item	Routine	Page
1	Brakes (Front and Rear)	Check operation, free play, fluid level, and fluid leakage. Top-up with DOT #3 brake fluid if necessary.	27 ~ 28, 57 ~ 62
2	Clutch	Check operation, condition and free play. Adjust if necessary.	28, 63 ~ 64
3	Engine Oil	Check engine oil level, add oil if necessary.	28, 51 ~ 53
4	Middle/Final Gear Oil	Check for leakage visually.	29, 53 ~ 55
5	Throttle	Check for smooth operation. Adjust if necessary.	28, 64
6	Battery	Check fluid level, top-up with distilled water if necessary.	34, 79 ~ 81
7	Lights/Signals	Check operation.	34, 82 ~ 84
8	Wheels/Tires	Check tire pressure, wear and damage.	29 ~ 33, 84 ~ 90
9	Fittings/Fasteners	Check all chassis fittings and fasteners. Adjust, if necessary.	34, 50

NOTE:

Pre-operation checks should be made each time the motorcycle is used. Such an inspection can be thoroughly accomplished in a very short time; and the added safety it assures is more than worth the time involved.

WARNING:

1. The engine, exhaust pipe(s), and muffler(s) will be very hot after the engine has been run. Be careful not to touch them or to allow any clothing item to contact them during inspection or repair.
2. If any item in the PRE-OPERATION CHECK is not working properly, have it inspected and repaired before operating the motorcycle.

Brakes (See page 57 for more detail)

1. Brake lever and brake pedal

Check for correct play in the front brake lever and rear brake pedal. Make sure they are working properly. Check the brakes at low speed shortly after starting out.

WARNING:

A soft, spongy feeling in the brake lever (and/or brake pedal) indicates a failure in the brake system. Do not operate the motorcycle until the failure in the brake system is corrected. Ask a Yamaha dealer or other qualified mechanic for immediate repairs. A soft, spongy feeling could indicate a hazardous condition in the brake system.

2. Brake fluid

Check the brake fluid level with the computerized monitor system. The BFI indicator is displayed, the brake fluid level is below specification in the brake master cylinder. Add fluid if necessary.

WARNING:

In this case, ask a Yamaha dealer or other qualified mechanic immediately. Do not run the motorcycle with a low brake fluid level for a long time or at high speeds.

Recommended brake fluid: DOT #3

3. Checking the disc brake pads

Refer to page 60.

NOTE:

When this brake service is necessary, have a Yamaha dealer or other qualified mechanic replace the pads.

Brake fluid leakage

Apply each brake for a few minutes. Check to see if any brake fluid leaks out from pipe joints or the master cylinder(s).

WARNING:

If brake fluid leakage is found, ask a Yamaha dealer or other qualified mechanic for immediate repairs. Such leakage could indicate a hazardous condition in the brake system.

Clutch lever (See page 63 for more detail)

Check for correct play in the clutch lever and make sure the lever operates properly. If the play is incorrect, make an adjustment.

Throttle grip (See page 64 for more detail)

Turn the throttle grip to see if it operates properly and if the play is normal. Make certain the throttle springs are closed when released.

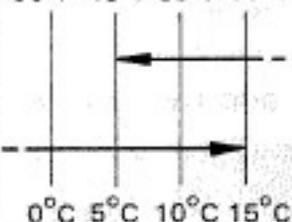
Engine oil (See page 51 for more detail)

Make sure the engine oil is at the specified level. Add oil as necessary.

Recommended oil:

2050

30°F 40°F 50°F 60°F



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

SAE 10W30 type SE motor oil

Middle gear/Final gear oil (See page 53 for more detail)

Make sure the middle gear/final gear oil is at the specified level. Add oil as necessary.

Recommended oil:
SAE 80 API GL-4 Hypoid gear oil

If desired, an SAE 80W90 hypoid gear oil may be used for all conditions.

NOTE:

"GL-4" is a quality and additive rating, "GL-5" or "GL-6" rated hypoid gear oils may also be used.

Tires

Check the tire pressure and check the tires wear.

	FRONT	REAR
XJ1100J WEIGHT with oil and full fuel tank	128 kg (282 lb)	149 kg (328 lb)
Standard tire	Bridgestone/ Dunlop 3.50H 19-4PR	Bridgestone Dunlop 130/90-16 61
Maximum load limit*	234 kg (516 lb)	307 kg (677 lb)
Cold tire pressure		
Up to 90 kg (198 lb) load**	177 kPa (1.8 kg/cm ² , 26 psi)	196 kPa (2.0 kg/cm ² , 28 psi)
90 kg (198 lb) load ~ 213 kg (407 lb) load** (Maximum load)	196 kPa (2.0 kg/cm ² , 28 psi)	275 kPa (2.8 kg/cm ² , 40 psi)
High speed riding	225 kPa (2.3 kg/cm ² , 32 psi)	245 kPa (2.5 kg/cm ² , 36 psi)
Minimum tire tread depth	08 mm (0.03 in)	0.8 mm (0.03 in)

* Total weight of motorcycle with accessories, etc.

** Total weight of accessory, etc. excepting motorcycle.

for

Tubeless tires and aluminum wheels

This motorcycle is equipped with aluminum wheels designed to be compatible with either tube or tubeless tires.

Tubeless tires are installed as standard equipment.

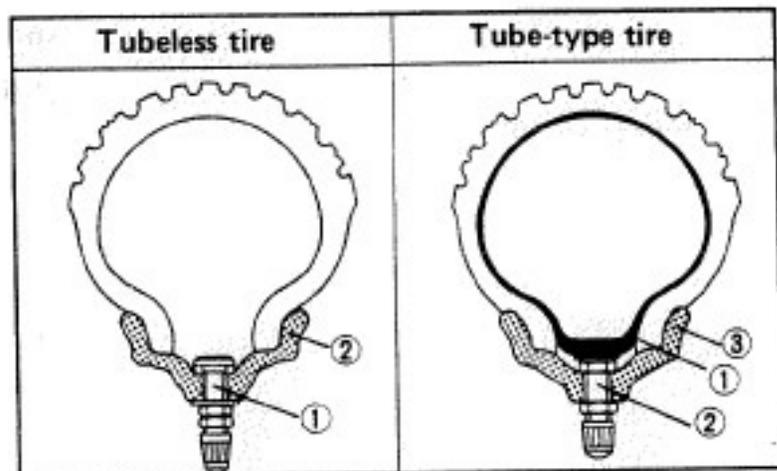
WARNING:

Do not attempt to use tubeless tires on a wheel designed for use only with tube-type tires. Tire failure and personal injury may result from sudden deflation.

Tube-type Wheel → Tube-type Tire Only
Tubeless-type Wheel → Tube-type or Tubeless Tires

WARNING:

When using tube-type tires, be sure to install the proper tube also.



1. Air valve
2. Aluminum wheel (Tubeless wheel)

1. Tube
2. Air valve
3. Aluminum wheel



To ensure maximum performance, long service, and safe operation, note the following precautions:

1. Always maintain proper air pressure as described in the Chart on page 29.
2. Check tire pressure daily, before riding, and adjust as necessary.
3. Before operation, always check the tire surfaces for wear and/or damage; for example, cracks, glass, nails, metal fragments, stones, etc. Correct any such hazard before riding.
4. Always inspect the aluminum wheels before a ride. Place the motorcycle on the centerstand and check for cracks, bends or warpage of the wheels. If any abnormal condition exists in a wheel, consult a Yamaha dealer or other qualified mechanic. Do not attempt even small repairs to the wheel. If a wheel is deformed or cracked, it must be replaced.
5. Tires and wheels should be balanced whenever either one is changed or replaced. Failure to have a wheel assembly balanced can result in poor performance, adverse handling characteristics, and shortened tire life.
6. After installing a tire, ride conservatively to allow the tire to seat itself on the rim properly. Failure to allow proper seating may cause tire failure resulting in damage to the motorcycle and injury to the rider.
7. After repairing or replacing a tire, check to be sure the valve stem lock nut is securely fastened. If not, torque it as specified.

Tightening torque:

1.5 Nm (0.15 m·kg, 1.1 ft·lb)

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The standard equipment tires originally fitted to the XJ1100J are suited to normal riding and touring. They are not suited to sustained high speed running or racing and must not be used for such purposes. Consider your riding skill, road and weather conditions, and correct weight distribution when loading your motorcycle. Securely pack your heaviest items close to the center of the motorcycle.

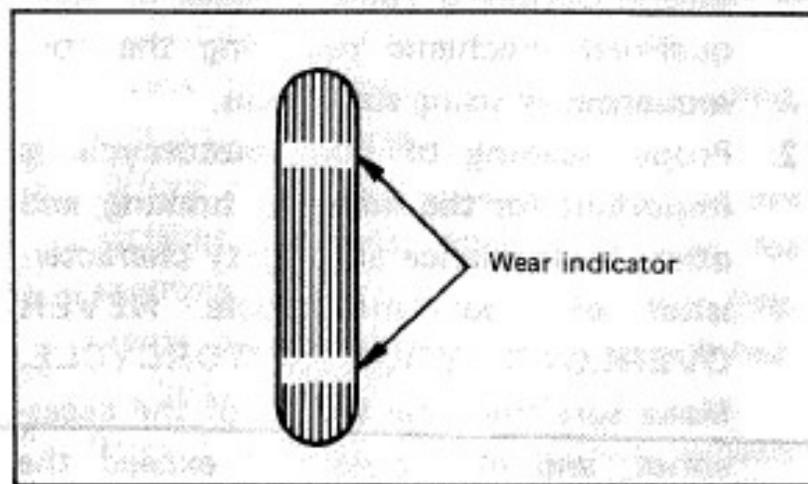
WARNING:

1. This motorcycle is not designed to pull a trailer or to be attached to a sidecar. The accessories you choose for your motorcycle should be designed specifically for it and should be securely mounted in such a fashion as to maintain the inherent stability of the original design as much as possible. Yamaha has a full line of sport and touring accessories designed specifically for this motorcycle. Please

consider them before making a purchase. Use of non-approved accessories may cause loss of handling stability and riding safety. Consult a Yamaha dealer or other qualified mechanic regarding the consequences of using such items.

2. Proper loading of your motorcycle is important for the handling, braking, and other performance and safety characteristics of your motorcycle. **NEVER OVERLOAD YOUR MOTORCYCLE.** Make sure the total weight of the accessories, and etc., does not exceed the maximum load limits. Operation of an overloaded motorcycle could cause tire damage, and accident, and injury.

If a tire tread shows crosswise lines, it means that the tire is worn to its limit. Replace the tire.



WARNING:

If it dangerous to ride with a worn-out tire. When a tire tread begins to show lines, have a Yamaha dealer or other qualified mechanic replace the tire immediately. Brake pad replacement, tire, and related wheel parts replacement should be left to a Yamaha Service Technician or other qualified mechanic. If you must change your own tire, be sure to use proper tools and procedures as described in the Tubeless Tire and Wheel Manual available from a Yamaha dealer.

Fitting/Fasteners

Always check the tightness of chassis fittings and fasteners before a ride. Use the chart on page 50 to find the correct torque.

Lights and signals

Check the headlight, flasher lights, taillight, brake light, and meter lights, and all the indicator lights to make sure they are in working condition.

Switches

Check the operation of the headlight switch, the turn switch, brake light switch, horn switch, starter switch, main switch, etc.

Battery (See page 79 for more detail)

Check the battery fluid level with the computerized monitor system. The BATT indicator is displayed, the battery fluid level is low. Add distilled water at the first opportunity.

CAUTION:

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

Fuel (See page 7 for more detail)

Check the fuel level with the computerized monitor system. If this indicator is displayed, the fuel level is low. Add fuel at the first opportunity.

Recommended gasoline:

Regular gasoline

Fuel tank capacity:

Full:

19 L (4.18 Imp gal, 5.02 US gal)

Empty (displayed):

4.1 L (0.9 Imp gal, 1.09 US gal)

OPERATION AND IMPORTANT RIDING POINTS

WARNING:

Before riding this motorcycle, become thoroughly familiar with all operating controls and their function. Consult a Yamaha dealer or other qualified mechanic regarding any control or function you do not thoroughly understand.

CAUTION:

1. Be careful where you store personal items on the motorcycle. Avoid blocking the air cleaner intake or performance will suffer.
2. Be careful not to put anything near the battery and its terminals. Electrical failure and acid corrosion may result.

WARNING:

Never start your engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and can cause loss of consciousness and death within a short time. Always operate your motorcycle in an area with adequate ventilation.

Starting and warming up a cold engine

NOTE:

This motorcycle is equipped with a starting and an ignition circuit cutoff switch.

1. The engine can be started only under the following conditions:
 - a. The transmission is in neutral.
 - b. The sidestand is up, the transmission is in gear, and the clutch is disengaged.
2. The motorcycle can be ridden only when the sidestand is up.

TURN MAIN SWITCH TO "ON" AND
ENGINE STOP SWITCH TO "RUN".

IF TRANSMISSION IS IN NEUTRAL
AND SIDESTAND IS DOWN.

PUSH STARTER SWITCH.
ENGINE WILL START.

RETRACT SIDESTAND AND PUT
TRANSMISSION IN GEAR.

MOTORCYCLE CAN BE RIDDEN.

IF TRANSMISSION IS IN GEAR
AND SIDESTAND IS UP.

PULL IN CLUTCH LEVER AND
PUSH STARTER SWITCH.
ENGINE WILL START.

MOTORCYCLE CAN BE RIDDEN.

1. Turn the fuel cock to "ON".
2. Turn the ignition key to the "ON" position and the engine stop switch to "RUN".
3. Shift transmission into neutral.

NOTE: _____
When the transmission is in neutral, the neutral indicator light (green) should be on. If the light does not come on, ask a Yamaha dealer or other qualified mechanic to inspect it.

4. Move the starter (CHOKE) lever fully to the left and completely close the throttle grip.
5. Start the engine by pushing the starter switch.

NOTE: _____

If the engine fails to start, release the starter switch, then push the starter switch again. Pause a few seconds before the next attempt. Each cranking should be as short as possible to preserve battery energy. Do not crank the engine more than 10 seconds on each attempt.

6. After starting the engine, move the starter lever back. The starter operation periods differ with the ambient temperature, so refer to the following notes.

NOTE: _____

To see whether or not the engine is warm, see if engine responds normally to throttle with the starter moved back completely. To avoid the possibility of excessive exhaust emissions, never leave the starter circuit on longer than necessary.

The length of time the starter is used to start a cold engine depends upon the ambient temperature.

Warm ambient temperatures (above 10°C ~ 50°F) require about 25 seconds of starter use. Cold ambient temperatures (below 10°C ~ 50°F) require about 35 seconds with the starter fully open, then about 2.5 minutes with the starter in the half-open position.

To get maximum engine life, always "warm up" the engine before starting off. Never accelerate hard with a cold engine!

Starting a warm engine

The starter lever (CHOKE) is not required when the engine is warm.

CAUTION:

See "Break-in section" prior to operating engine for the first time.

Shifting and acceleration

This model has a 5-speed transmission. The transmission allows you to control the amount of power you have available at a given speed or while accelerating, climbing hills, etc. The use of the change pedal is shown in the illustration. (Page 14)

To shift into NEUTRAL, repeatedly depress the change pedal to the end of its travel (you will feel a stop when you are in first gear), then raise it slightly.

To start out and accelerate:

1. Pull the clutch lever to disengage the clutch.
2. Shift into FIRST gear. The green neutral indicator light should go out.
3. Open the throttle gradually, and at the same time, release the clutch lever slowly.
4. At the recommended shift point shown in the table below, close the throttle, and at the same time, pull in the clutch lever quickly.
5. Shift into SECOND gear. (Be careful not to shift into neutral.)
6. Open the throttle part way and gradually release the clutch lever.
7. Follow the same procedure when shifting to the next higher gear. Always shift gears at the recommended shift points.

To decelerate:

1. Apply front and/or rear brakes to slow the motorcycle.
2. When the motorcycle reaches 20 km/h (12.5 mi/h), shift to first gear.
Any time the engine appears about to stall or runs very roughly, pull in the clutch and use the brakes to stop.
3. When motorcycle is almost completely stopped, shift to neutral.
The green neutral indicator light should come on.

Recommended shift point

	Acceleration shift point km/h (mi/h)	Deceleration shift point km/h (mi/h)
1st → 2nd	23 (14)	20 (12.5)
2nd → 3rd	36 (22)	20 (12.5)
3rd → 4th	50 (31)	20 (12.5)
4th → 5th	60 (37)	20 (12.5)

CAUTION:

1. Do not glide for long periods with the engine off, and do not tow the motorcycle a long distance. Even with gears in neutral, the transmission is only properly lubricated when the engine is running. Inadequate lubrication may damage the transmission.
2. Always use the clutch when changing gears. The engine, transmission, and driveline are not designed to withstand the shock load of forced shifting and can be damaged by shifting without the clutch.

Engine break-in

There is never a more important period, in the life of your motorcycle, than the period between zero and 1,000 km (600 mi). For this reason we ask that you carefully read the following material. Because the engine is brand new, you must not put an excessive load on it for the first 1,000 km (600 mi). The various parts in the engine wear and polish themselves to the correct operating clearances. During this period prolonged full throttle operation, or any condition which might result in excessive heating of the engine, must be avoided.

1. 0 ~ 150 km (0 ~ 100 mi):

Avoid operating above 4,000 r/min.

Allow a cooling off period of 5 to 10 minutes after every hour of operation.

Vary the speed of the motorcycle from time to time. Do not operate it at one, set throttle position.

2. 150 ~ 500 km (100 ~ 300 mi):

Avoid prolonged operation above 5,000 r/min. Allow the motorcycle to rev freely through the gears but do not use full throttle at any time.

3. 500 ~ 1,000 km (300 ~ 600 mi):

Avoid prolonged full throttle operation. Avoid cruising speeds in excess of 6,000 r/min.

4. 1,000 km (600 mi) and beyond:

Avoid prolonged full throttle operation. Avoid engine speeds in excess of 7,000 r/min. Vary speeds occasionally.

CAUTION:

After 1,000 km (600 mi) of operation, be sure to replace the engine oil and filter element. If any engine trouble should occur during the break-in period, consult a Yamaha dealer or other qualified mechanic immediately.

Parking

When parking, stop the engine and remove the ignition key.

WARNING:

The muffler and exhaust pipe become hot. Park the motorcycle in a place where pedestrians or children are not likely to touch the motorcycle.

Do not park the motorcycle on a slope or soft ground; the motorcycle can easily overturn.

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PERIODIC MAINTENANCE AND MINOR REPAIR

Periodic inspection, adjustment and lubrication will keep your motorcycle in the safest and most efficient condition possible. Safety is an obligation of the motorcycle owner.

The most important points of motorcycle inspection, adjustment, and lubrication are explained in the following pages.

"Maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual using any part which is certified (if applicable)".

WARNING:

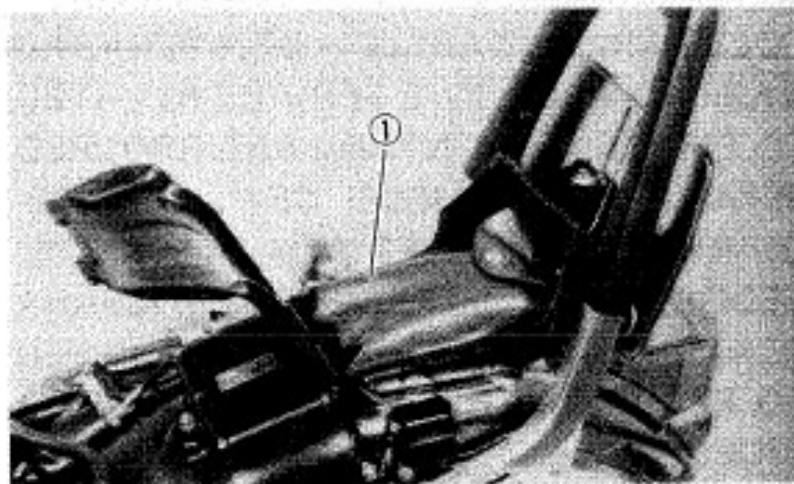
If the owner is not familiar with motorcycle service, this work should be done by a Yamaha dealer or other qualified mechanic.

PERIODIC MAINTENANCE

PROPER PERIODIC MAINTENANCE OF YOUR MOTORCYCLE IS IMPORTANT TO ITS GIVING YOU LONG, PLEASURABLE SERVICE: ESPECIALLY IMPORTANT ARE THE MAINTENANCE SERVICES RELATED TO EMISSIONS CONTROL. THESE CONTROLS NOT ONLY FUNCTION TO ENSURE CLEANER AIR BUT ARE ALSO VITAL TO PROPER ENGINE OPERATION AND MAXIMUM PERFORMANCE. IN THE FOLLOWING TABLES OF PERIODIC MAINTENANCE, THE SERVICE RELATED TO EMISSIONS CONTROL ARE GROUPED SEPARATELY. THESE SERVICES REQUIRE SPECIALIZED DATA, KNOWLEDGE, AND EQUIPMENT. YAMAHA DEALERS ARE TRAINED AND EQUIPPED TO PERFORM THESE PARTICULAR SERVICES.

Tool kit

The service information included in this manual is intended to provide you, the owner, with the necessary information for completing some of your own preventive maintenance and minor repairs. The tools provided in the owner's tool kit are sufficient for most of these purposes, except that a torque wrench, however is also necessary to properly tighten nuts and bolts.



1. Tool kit

NOTE:

If you do not have a torque wrench available during a service operation requiring one, take your motorcycle to a Yamaha dealer or other qualified mechanic to check the torque settings and adjust them as necessary.

WARNING:

Modifications to this motorcycle not approved by Yamaha may cause loss of performance. Excessive emissions can render it unsafe for use. Consult a Yamaha dealer or other qualified mechanic before attempting any changes.

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*	Cam chain	Adjust chain tension	○	○		○
2*	Valve clearance	Check and adjust valve clearance when engine is cold.		○		○
3	Spark plugs	Check condition. Adjust gap/Clean. Replace at 13,000 km (or 18 months) and thereafter every 12,000 km (or 18 months)		○	○	Replace every 12,000 km or 18 months
4*	Crankcase ventilation system	Check ventilation hose for cracks or damage. Replace if necessary.		○		○
5*	Fuel line	Check fuel hose for cracks or damage. Replace if necessary.		○		○
6*	Exhaust system	Check for leakage. Retighten as necessary. Replace gasket(s) if necessary.		○	○	
7*	Carburetor synchronization	Adjust synchronization of carburetors.		○	○	
8*	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.

Spark plug inspection

The spark plug is an important engine component and is easy to inspect. The condition of the spark plug can indicate something of the condition of the engine.

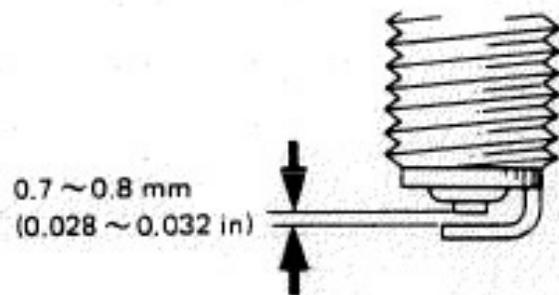
For example; a very white center electrode porcelain color could indicate an intake tract air leak or carburetion problem for that cylinder. Do not attempt to diagnose such problems yourself. Instead, take the motorcycle to a Yamaha dealer or other qualified mechanic.

You should periodically remove and inspect the spark plug because heat and deposits will cause any spark plug to slowly break down and erode. If electrode erosion becomes excessive or if carbon and other deposits are excessive, you should replace the spark plug with one of the proper types.

Standard spark plug:
BP6ES (NGK) or
W20EP-U (NIPPONDENSO)

Before installing any spark plug, measure the electrode gap with a wire thickness gauge and adjust it to specification.

Spark plug gap:
0.7 ~ 0.8 mm (0.028 ~ 0.032 in)



When installing the plug, always clean the gasket seat surface and use a new gasket. Wipe off any grime from the threads, and torque the spark plug properly.

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

NOTE:

If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 to 1/2 turn past finger-tight. Have the spark plug torqued to the correct value as soon as possible with a torque wrench.

GENERAL MAINTENANCE/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 page 28	○	○	○		
2	Oil filter	Replace	—	○	○		○	
3	Middle/Final gear oil	Replace	Refer to page 29	○			○	
4	Air filter	Dry type filter. Clean with compressed air	—		○		○	
5*	Brake system	Adjust free play. Replace pads if necessary	—	○	○	○		
6*	Clutch	Adjust free play	—	○	○	○		
7*	Control and meter cable	Apply cable lube thoroughly	Yamaha chain and cable lube or SAE 10W30 motor oil	○	○	○		
8*	Rear arm pivot bearings	Check bearings 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 (6,000 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
9*	Drive shaft joint	Apply 25 ~ 30 cc of specified grease	Molybdenum disulfide grease NLGI-2M		○	○		
10	Brake pedal shaft	Apply grease lightly	Lithium soap base grease		○	○		
11	Change pedal shaft/Brake and clutch lever pivots	Apply chain lube lightly	Yamaha chain and cable lube or SAE 10W30 motor oil		○	○		
12	Center and sidestand pivots	Apply chain lube lightly	Yamaha chain and cable lube or SAE 10W30 motor oil		○	○		
13*	Front fork oil	Drain completely. Refill to specification	Yamaha fork oil 10wt or equivalent					○
14*	Steering ball bearing and races	Check bearings assembly for looseness. Moderately repack every 16,000 km (10,000 mi)	Medium weight wheel bearing grease		○	○		Repack
15*	Wheel bearings	Check bearings for smooth rotation. Replace if necessary	—		○	○		

No.	Item	Remarks	Type	Initial break-in		Thereafter every		
				1,000 km (6,000 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
16	Battery	Check specific gravity. Check breather pipe for proper operation	-		○	○		
17*	A.C. Generator	Replace generator brushes. Replace at initial 13,000 km (8,000 mi) and thereafter every 16,000 km (10,000 mi).	-					Replac

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

100 km
100 mi
months

place

Torque specifications

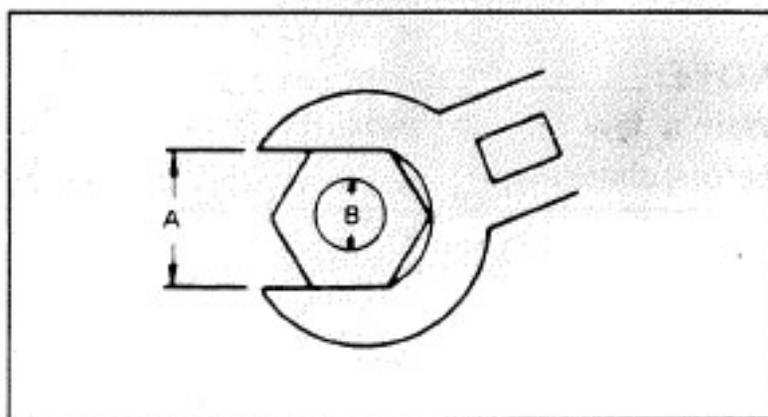
(For a more complete list, refer to the Service Manual for this model.)

Use a torque wrench to tighten these items. It is recommended that these items should be

Item	Torque		
	Nm	m·kg	ft·lb
Spark plug	20	2.0	14.0
Engine drain plug	43	4.3	31.0
Middle gear drain plug	43	4.3	31.0
Oil filter bolt	32	3.2	23.0
Change pedal	10	1.0	7.2
Front engine mount bolts: (upper)	55	5.5	40.0
Front engine mount bolts: (under)	67	6.7	48.0
Rear engine mount bolts:	100	10.0	72.0
Steering pinch bolts (8 mm stud)	20	2.0	14.0
Shock absorber: (top)	39	3.9	28.0
Shock absorber: (bottom)	39	3.9	28.0
Front wheel axle	107	10.7	77.5
Front axle pinch bolt	20	2.0	14.0
Rear wheel axle	150	15.0	110.0
Rear axle pinch bolt	6	0.6	4.3
Final gear drain plug	23	2.3	17.0

checked occasionally, especially before a long tour. Always check the tightness of these items whenever they are loosened for any reason.

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	61
22 mm	16 mm	130	13.0	94



Engine oil

1. Oil level measurement
 - a. Place the motorcycle on the centerstand. Warm up the engine for several minutes.

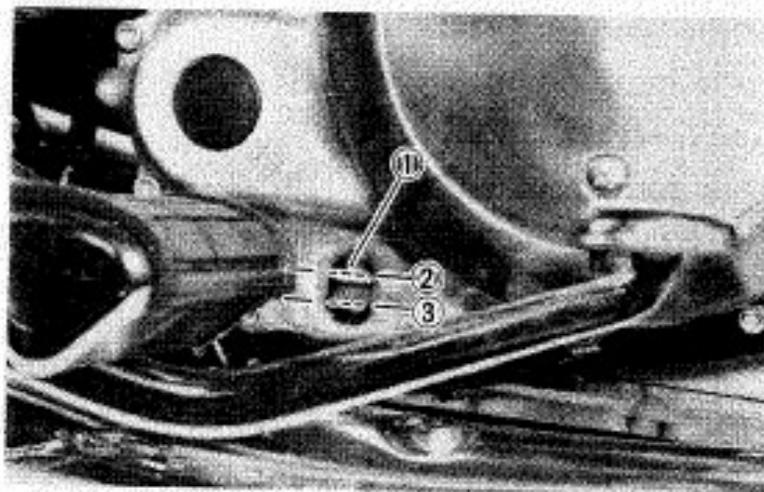
NOTE:

Be sure the motorcycle is positioned straight up when checking the oil level; a slight tilt toward the side can produce false readings.

- b. With the engine stopped, check the oil level through the level window located at the lower part of the right side crankcase cover.

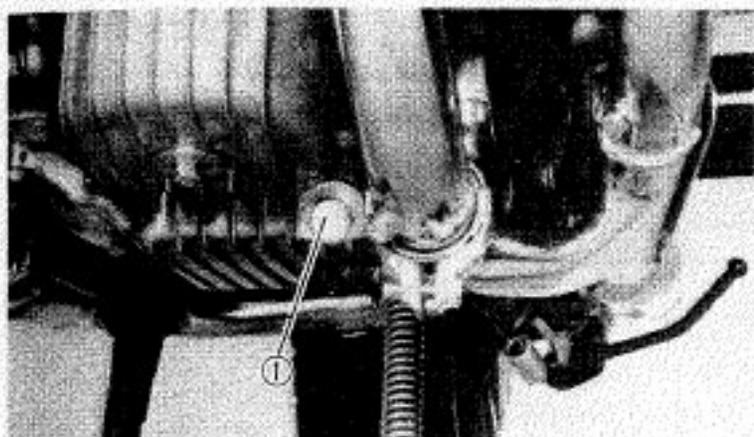
NOTE:

Wait a few minutes until the oil level settles before checking.



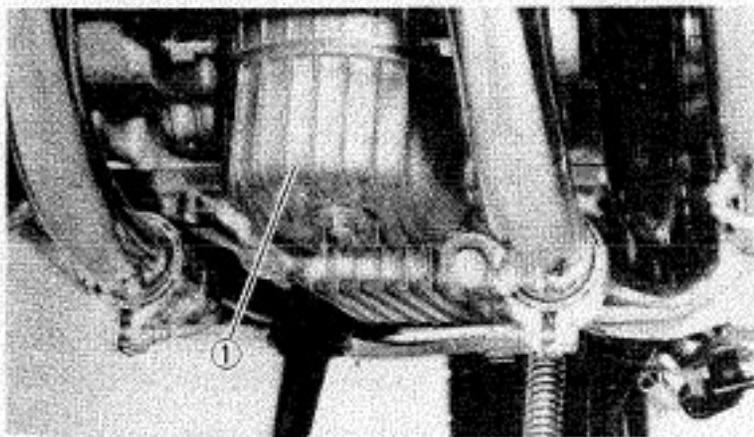
1. Level window
2. Maximum mark
3. Minimum mark

- c. The oil level should be between the maximum and minimum marks. If the level is lower, add sufficient oil to raise to the proper level.
2. Engine oil and oil filter replacement
 - a. Start the engine and stop it after a few minutes of warm-up.
 - b. Place an oil pan under the engine and remove the oil filler cap.
 - c. Remove the drain plug and drain the oil.



1. Drain plug

d. Remove the oil filter bolt and filter element.



1. Oil filter cover

e. Re-install the drain plug (make sure it is tight).

Drain plug torque:

43.0 Nm (4.3 m·kg, 31.0 ft·lb)

f. Install the new oil filter element, new "O-ring" and filter cover, tighten the oil filter bolt.

Oil filter bolt:

32 Nm (3.2 m·kg, 23.0 ft·lb)

NOTE:

Make sure the "O-ring" is positioned properly.



1. Paper O-ring position

- g. Add oil through the oil filler hole.

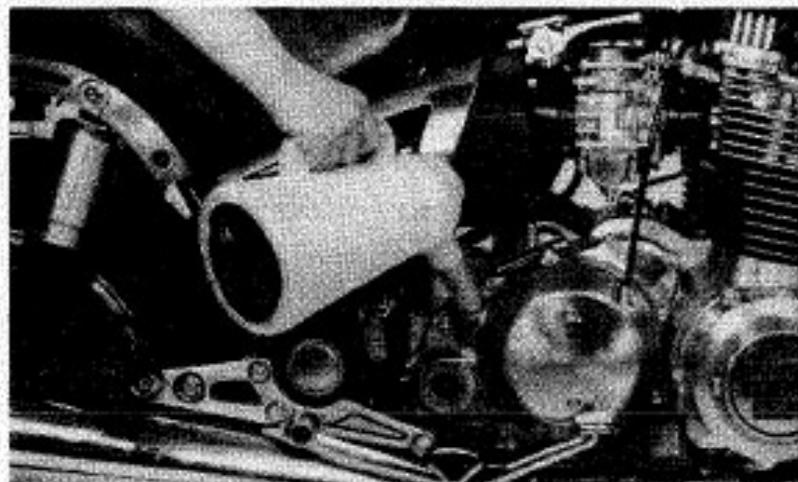
Periodic oil change:

3.0 L (2.64 Imp qt, 3.17 US qt)

With oil filter replacement:

3.5 L (3.08 Imp qt, 3.70 US qt)

Recommended oil: See page 28



- h. After replacement of engine oil, and/or oil filter, be sure to check for oil leakage. The oil level indicator should go off.

CAUTION:

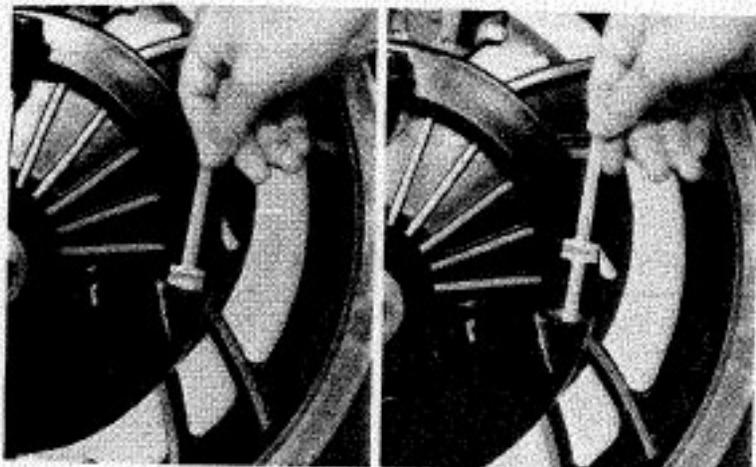
If the indicator remains on, immediately stop the engine and consult a Yamaha dealer or other qualified mechanic.

Middle gear/Final gear oil

1. Oil level measurement
 - a. Place the motorcycle on a level place and place it on the centerstand. The engine should be cool (at atmospheric temperature).
 - b. Remove the oil filler cap. Check the oil level with level gauge (from tool kit) as shown. The correct oil level is between the two marks on each end of the level gauge. Use the tool end marked "REAR" for measuring the rear (final) gear case. Use the end marked "MIDDLE" for measuring the middle gear case.

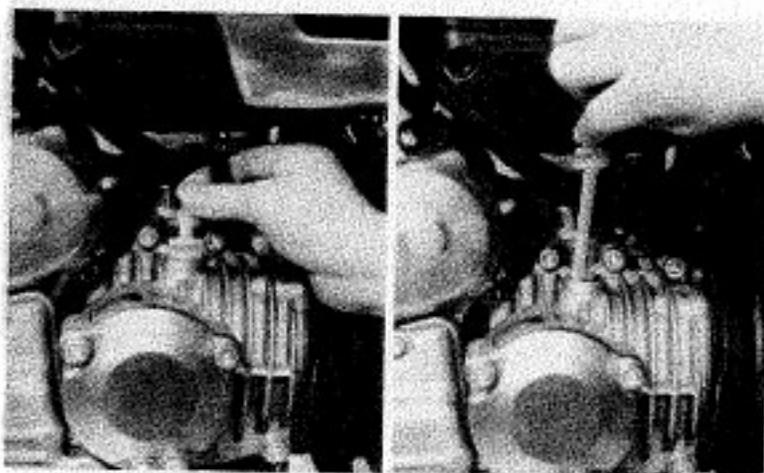
NOTE:

Middle gear and final gear oil can be checked with same level gauge, which is in the owners tool kit.

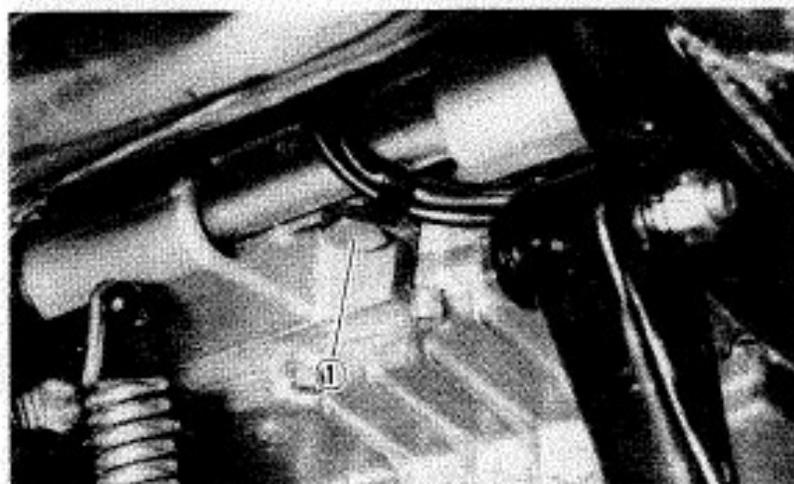


CAUTION:

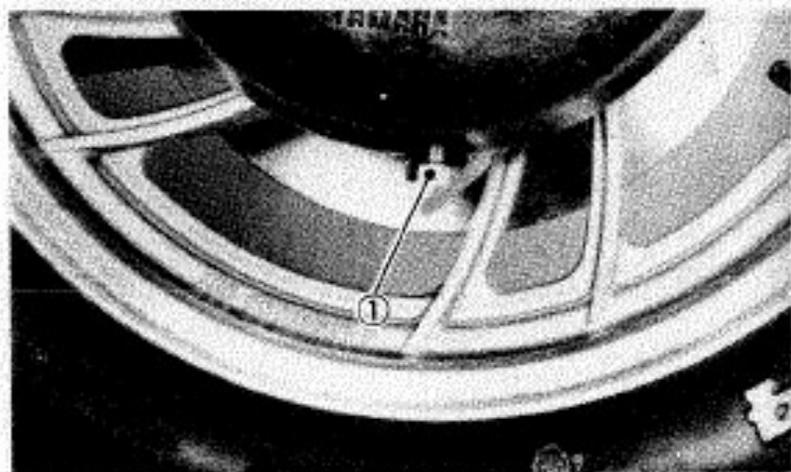
Take care not to allow foreign material to enter the middle and/or final gear case.



2. Gear oil replacement
 - a. Place an oil pan under the transmission for the middle gear and under the final gear case.
 - b. Remove the middle and/or final gear oil filler cap(s) and the drain plug(s), and drain the oil.



1. Middle gear drain plug



1. Final gear drain plug

WARNING:

When draining or filling, take care not to allow foreign material to enter the middle and/or final gear case. Do not allow the gear oil to contact the tire and wheel.

- c. Reinstall and tighten the middle and/or final drain plug(s). (See page 50 for torque specifications.)
- d. Fill the gear case(s) to the specified level.

Oil capacity:

Middle gear case:

0.375 L (0.33 Imp qt, 0.40 US qt)

Final gear case:

0.30 L (0.26 Imp qt, 0.32 US qt)

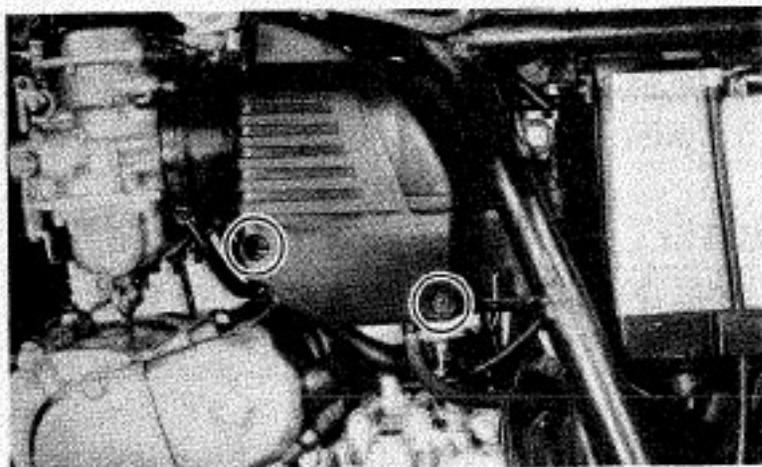
Recommended oil: See page 29.

- e. Reinstall the filler cap(s) securely.

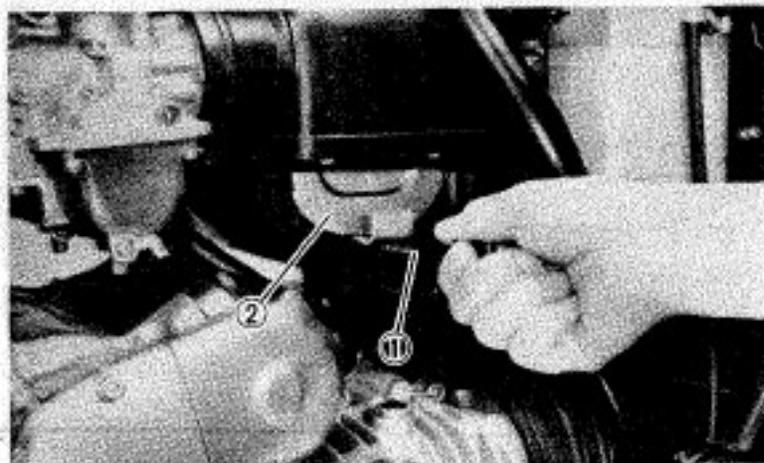
Air filter

1. Removal

- a. Remove the seat.
- b. Remove the left side cover.
- c. Remove the air filter case cover by removing the two screws.



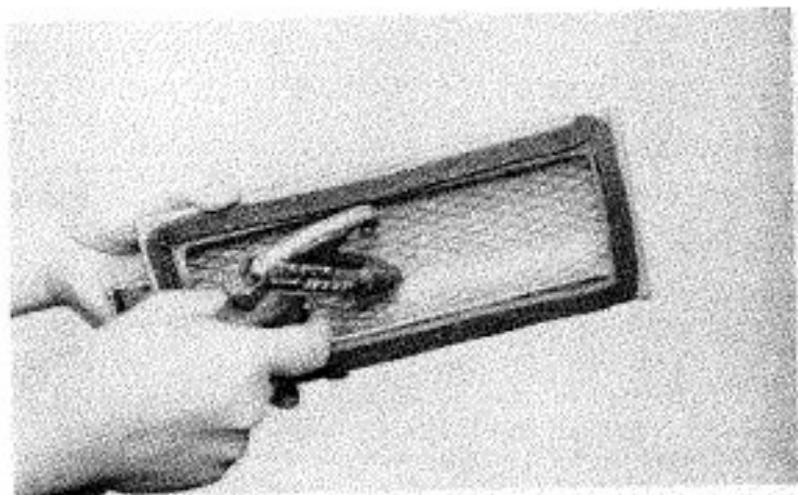
- d. Pull out the element set plate.
- e. Pull out the element.



1. Element set plate 2. Air filter element

2. Cleaning method

Tap the element lightly to remove most of the dust and dirt; then blow out the remaining dirt with compressed air from the inner surface of the element. If element is damaged, replace it.



3. Reassemble by reversing the removal procedure. Check whether the element is seated completely against the case.
4. The air filter element should be cleaned at the specified intervals.

CAUTION: _____

The engine should never be run without the air cleaner element installed; excessive piston and/or cylinder wear may result.

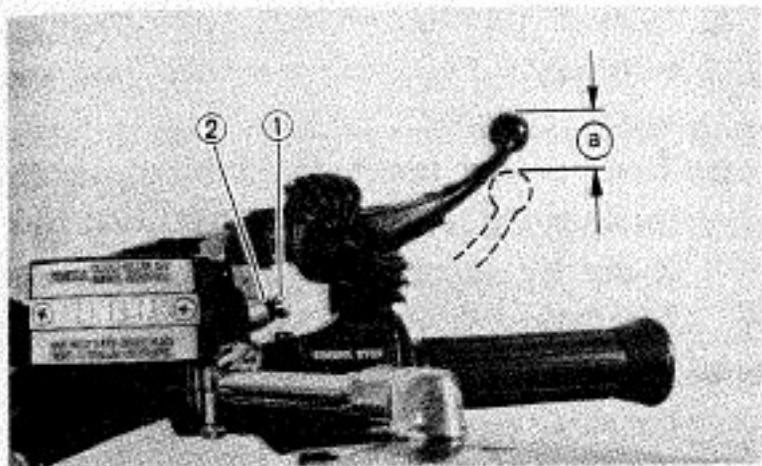
Front brake adjustment

The front brake lever should be so adjusted that it has a free play of 5 ~ 8 mm (0.2 ~ 0.3 in) at the lever end.

1. Loosen the lock nut on the brake lever.
2. Turn the adjuster so that the brake lever movement at the lever end is 5 ~ 8 mm (0.2 ~ 0.3 in) before the adjuster contacts the master cylinder piston.
3. After adjusting, tighten the lock nut.

NOTE: _____

Check for correct play and make sure it is working properly.



1. Adjuster 2. Lock nut a. 5 ~ 8 mm (0.2 ~ 0.3 in)

WARNING:

A soft or spongy feeling in the brake lever can indicate the presence of air in the brake system. This air must be removed by bleeding the brake system before the motorcycle is operated. Air in the system will result in greatly diminished braking capability and can result in loss of control and an accident. Have a Yamaha dealer or other qualified mechanic inspect and bleed the system if necessary.

Rear brake adjustment

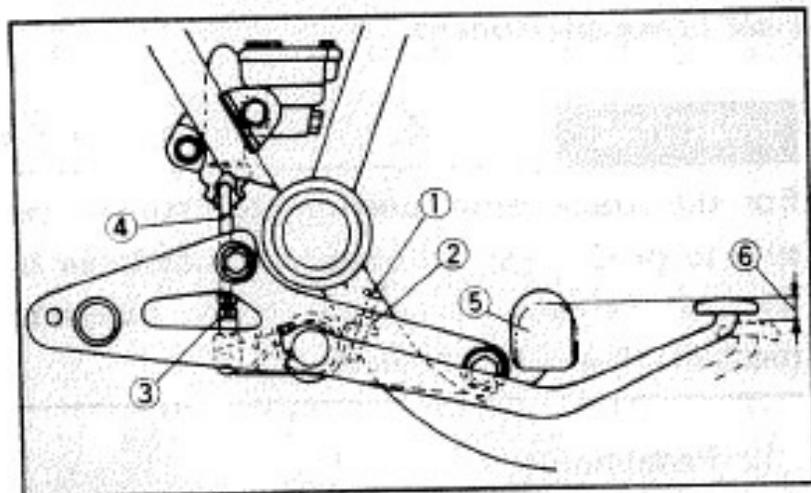
WARNING:

For the brake pedal position adjustment, be sure to proceed as follows: (It is advisable to have a Yamaha dealer or other qualified mechanic make this adjustment.)

1. Pedal height
 - a. Loosen the adjuster lock nut (for pedal height).
 - b. By turning the adjuster clockwise or counterclockwise adjust the brake pedal position so that it stop end is flush with the top of the footrest.
 - c. Secure the adjuster lock nut.

WARNING:

After adjusting the pedal height, adjust the brake pedal free play.



- | | |
|-----------------------------------|--|
| 1. Adjust bolt (for pedal height) | 4. Brake rod |
| 2. Lock nut | 5. Footrest |
| 3. Lock nut | 6. Freeplay 13 ~ 15 mm
(0.51 ~ 0.59 in) |

2. Free play

The rear brake pedal should be so adjusted that it has a free play of 13 ~ 15 mm (0.51 ~ 0.59 in) from when the pedal is trod to when the brake begins to be effected.

- Loosen the brake rod until there is noticeable free play between rod and master cylinder.
- Turn in the brake rod until it lightly touches the master cylinder, then turn it out by approx. 2/5 turns (for proper free play).
- Tighten the brake rod adjuster lock nut.

CAUTION:

See that the punched mark on the brake rod is not above the top surface of the adjuster lock nut in securing the brake rod adjuster lock nut.

WARNING:

Check the operation of the brake light after adjusting the rear brake.

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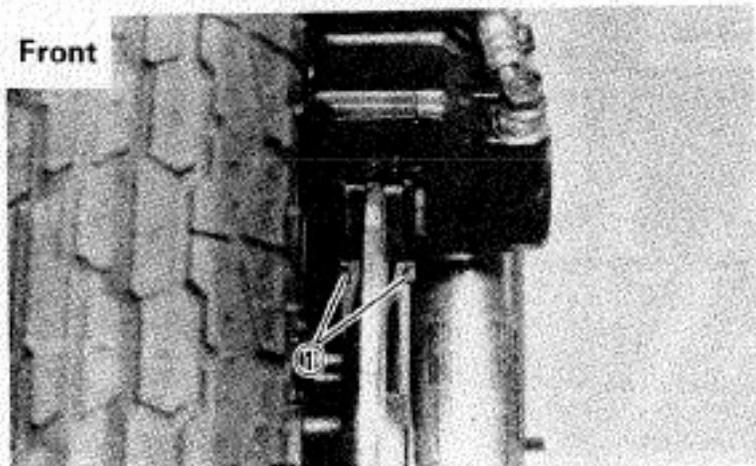
Checking the front and rear pads

For easy checking of wear on the disc brake pads, a wear indicator is attached to each brake pad.

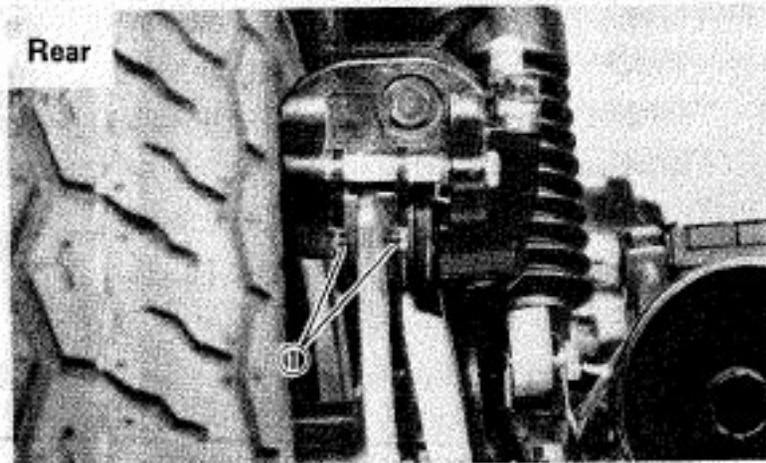
This indicator permits a visual check without disassembling the pads.

Front and Rear:

To check, look at the pad wear indicator in back of the caliper. If any pad is worn to the wear limit, ask a Yamaha dealer or other qualified mechanic to replace the pads.



1. Wear indicator



1. Wear indicator

Inspecting the brake fluid level

Insufficient brake fluid may allow air to enter the brake system, possibly causing the brakes to become ineffective.

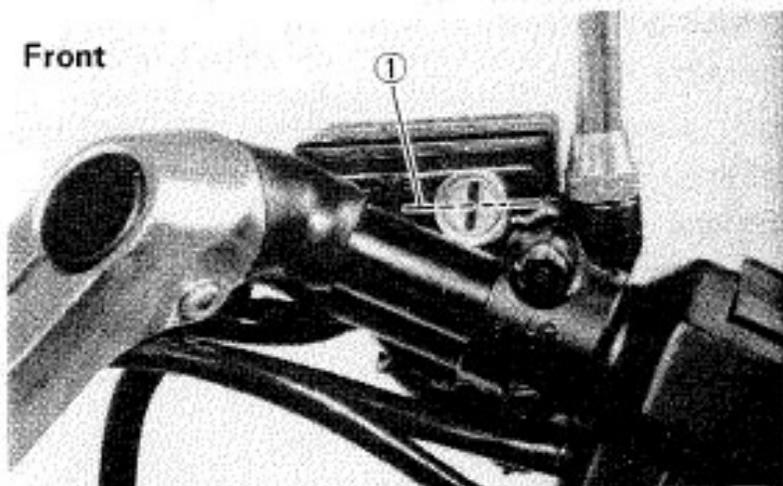
Before riding, check the brake fluid level with computerized monitor system and replenish when necessary, and observe these precautions:

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

Recommended brake fluids: DOT # 3

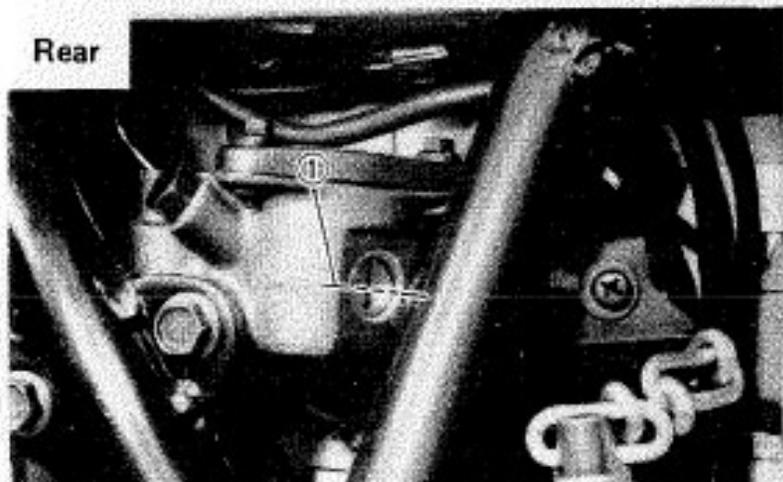
2. Refill with the same type of brake fluid; mixing fluids may result in a harmful chemical reaction and lead to poor performance.
3. Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point and may result in vapor lock.
4. Brake fluid may erode painted surfaces or plastic parts. Always clean up spilled fluid immediately.
5. Have a Yamaha dealer or other qualified mechanic check the cause if the brake fluid level goes down.

Front



1. Lower level

Rear



1. Lower level

Brake fluid replacement

1. Complete fluid replacement should be done only by trained Yamaha service personnel.
2. Complete fluid replacement should be done whenever the caliper cylinder or master cylinder is disassembled, or the fluid becomes seriously contaminated.
3. Have a Yamaha dealer or other qualified mechanic replace the following components whenever damaged or leaking.

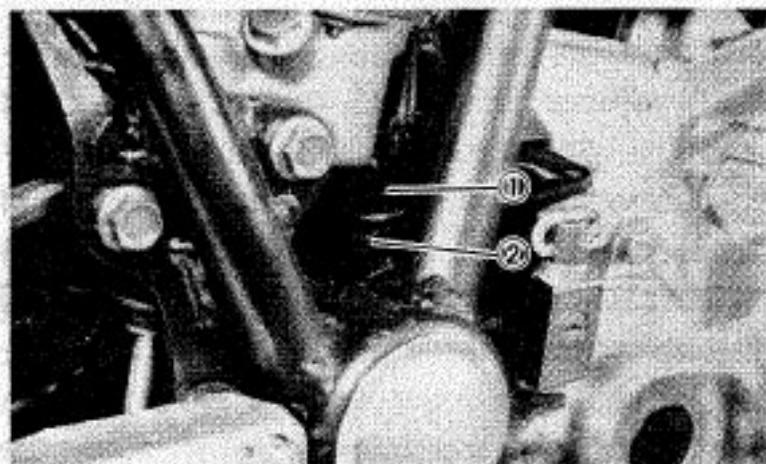
Also:

- a. Replace all brake seals every two years.
- b. Replace all brake hoses every four years.

Brake light switch adjustment

The brake light switch is operated by movement of the brake pedal.

To adjust, hold the main body of the switch with the hand so it does not rotate and turn the adjusting nut. Proper adjustment is achieved when the brake light comes on slightly before the brake begins to take effect.



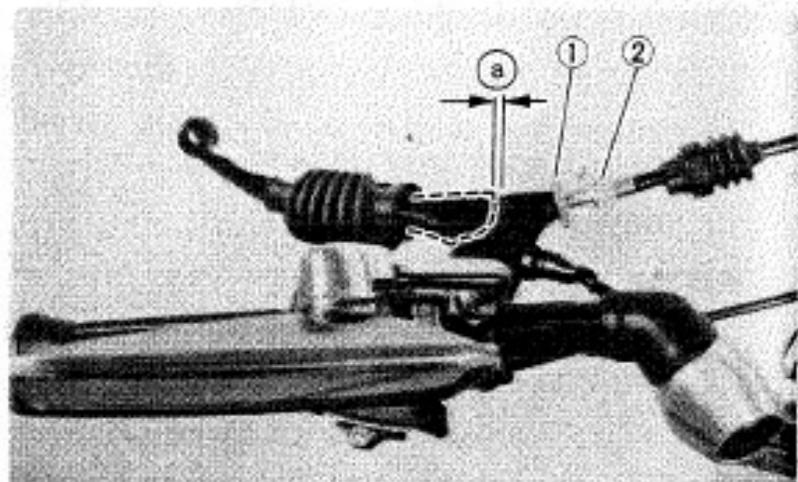
1. Main body 2. Adjusting nut

Clutch adjustment

This model has a clutch cable length adjuster and a clutch mechanism adjuster. The cable length adjuster is used to take up slack from cable stretch and to provide sufficient free play for proper clutch operation under various operating conditions. The clutch mechanism adjuster is used to provide the correct amount of clutch "throw" for proper disengagement. Normally, once the mechanism is properly adjusted, the only adjustment required is maintenance of free play at the clutch handlebar lever.

1. Free play adjustment

The clutch should be adjusted to suit the rider's preference, but free play at the lever pivot should be 2 ~ 3 mm (0.08 ~ 0.12 in). Loosen the handlebar lever adjuster lock nut. Next turn the length adjuster either in or out until proper lever free play is achieved.

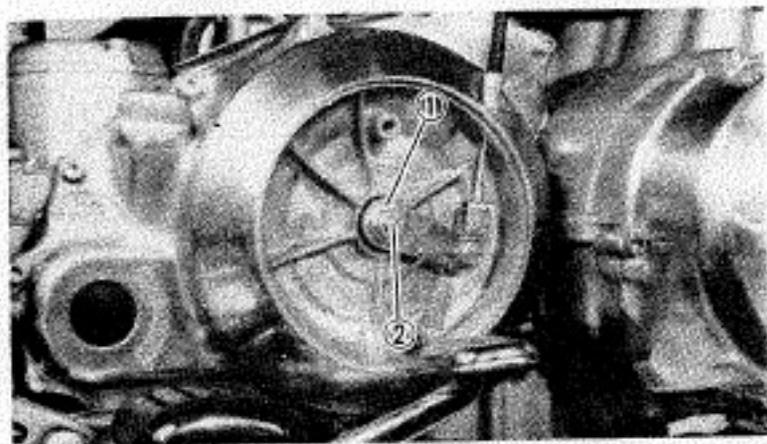


- | | |
|-------------|------------------|
| 1. Lock nut | a. 2 ~ 3 mm |
| 2. Adjuster | (0.08 ~ 0.12 in) |

2. Mechanism adjustment

The second adjustment is located behind the adjusting cover. Removing the cover will expose the adjuster and lock nut. Loosen the lock nut, rotate the adjuster in until it lightly seats against the clutch push rod that works with the adjuster to operate the clutch. Back the adjuster out 1/4 turn and tighten the lock nut. This adjustment must be checked because heat and clutch wear will affect this free

play, possibly enough to cause incompletely clutch operation. Recheck clutch cable adjustment at handlebar after adjusting.



1. Lock nut 2. Adjuster

Cable inspection and lubrication

WARNING:

Damage to the outer housing of the various cables may cause corrosion and often free movement will be obstructed. An unsafe condition may result so replace such cables as soon as possible.

Lubricate the inner cable and cable end. If they do not operate smoothly, ask a Yamaha dealer or other qualified mechanic to replace them.

Recommended lubricants:

Yamaha chain and cable lube or
SAE 10W30 motor oil

Throttle cable and grip lubrication

The throttle twist grip assembly should be greased at the time that the cable is lubricated, since the grip must be removed to get at the end of the throttle cable. Two screws clamp the throttle housing to the handlebar. Once these two are removed, the end of the cable can be held high to pour in several drops lubricant. With the throttle grip disassembled, coat the metal surfaced of the grip assembly with a suitable all-purpose grease to cut down friction.

Rear arm pivot bearings

The swing arm must pivot freely on its bearings but not have any excess play. Have a Yamaha dealer or other qualified mechanic check rear arm pivot bearing operation according to the General Maintenance Schedule.

Brake pedal shaft

Apply Yamaha chain and cable lube or SAE 10W30 motor oil to the brake pedal shaft.

Change pedal/Brake and clutch lever

Lubricate the pivoting parts of each lever and pedal.

Recommended lubricants:

Yamaha chain and cable lube or
SAE 10W30 motor oil

Center and sidestand pivots lubrication

Lubricate the center and sidestands at their pivot points.

Recommended lubricants:

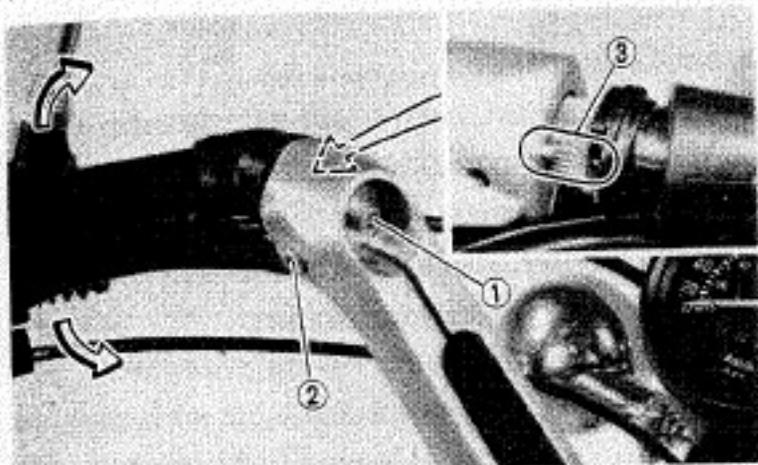
Yamaha chain and cable lube or
SAE 10W30 motor oil

Handlebar adjustment

1. Vertical adjustment

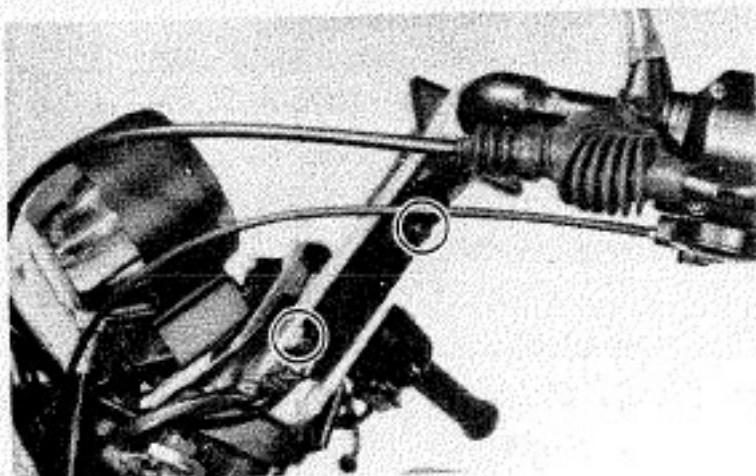
After removing the cap, two bolts, and switch lead holding plate, pull the grip bar as far away from the handlebar as to permit adjustment. Then move the grip bar either up or down by one notch from the standard position (3-stage adjustment being possible).

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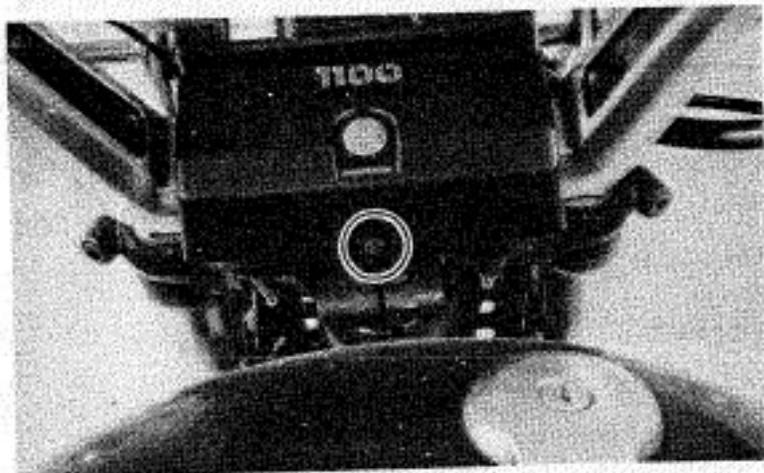
1. Grip bar stopper bolt 2. Grip bar pinch bolt
3. Standard position

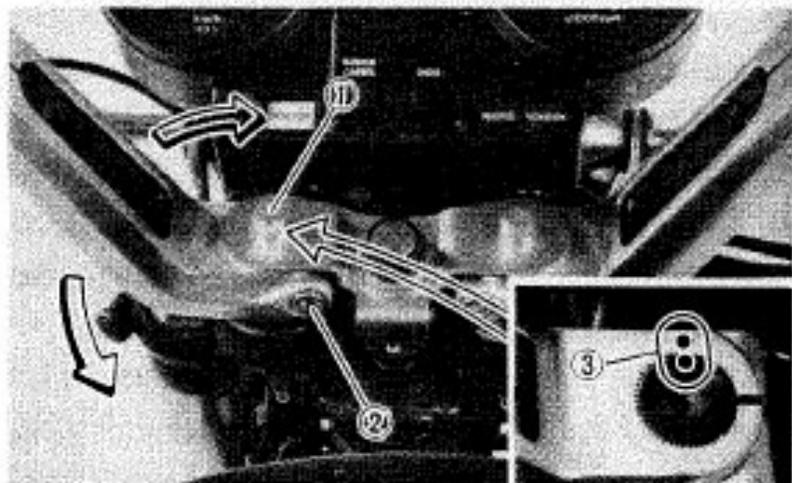
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2. Horizontal adjustment

Remove the handlebar cover, handlebar stopper bolt, and pinch bolt. Likewise adjust the handlebar either back or forth by one notch from the standard position (3-stage adjustment being also possible.)





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

The structural design calls for handlebars adjustment, either vertical or horizontal, by not more than 3-stages. Thus, make the adjustment with these 3-stages.

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 tense, 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.

3. Reinstall the handlebars.

Tightening torque:

Grip bar stopper bolt:

13 Nm (1.3 m·kg, 9.4 ft·lb)

Grip bar pinch bolt:

13 Nm (1.3 m·kg, 9.4 ft·lb)

Handlebar stopper bolt:

19 Nm (1.9 m·kg, 13 ft·lb)

Handlebar pinch bolt:

30 Nm (3.0 m·kg, 22 ft·lb)

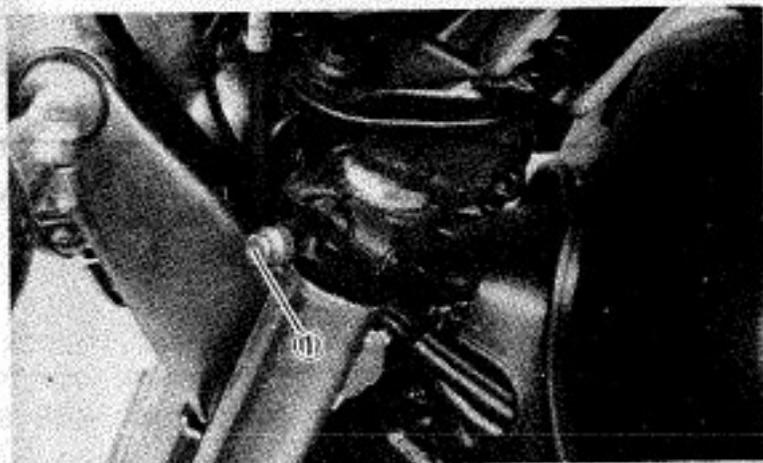
WARNING:

After the above adjustment, tighten all bolts using a torque wrench. If a torque wrench is not available, have a Yamaha dealer or other qualified mechanic adjust and torque the handlebars to specification.

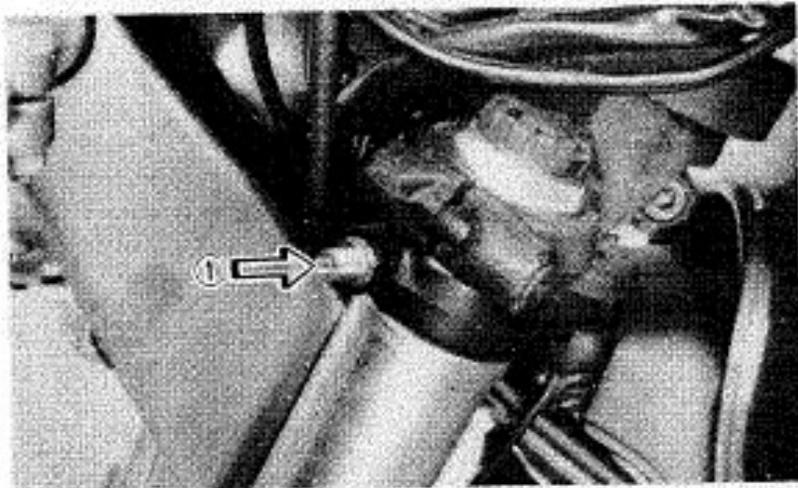
Front fork oil change**WARNING:**

1. Fork oil leakage can cause loss of stability and unsafe 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 or remove the front wheel so that there is no weight on the front end of the motorcycle.
2. Remove the air valve cap from the left fork.
3. Keep the valve open while pressing it for several seconds so that the air can be let out of the inner tube.



1. Air valve cap



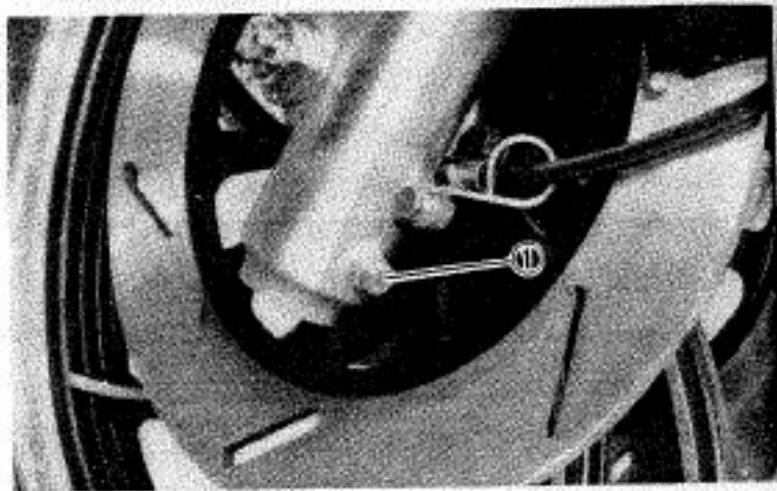
1. Push

4. Loosen the pinch bolts and remove the cap-bolt assemblies from inner fork tubes.

WARNING:

The cap-bolt assembly is furnished with a damping adjustment knob. When removing and reinstalling the cap-bolt assembly, take care not to bend or otherwise damage the adjusting rod; otherwise, it may cause faulty front fork operation.

5. Place an open container under each drain hole. Remove the drain bolt from each outer tube.



1. Drain bolt

WARNING:

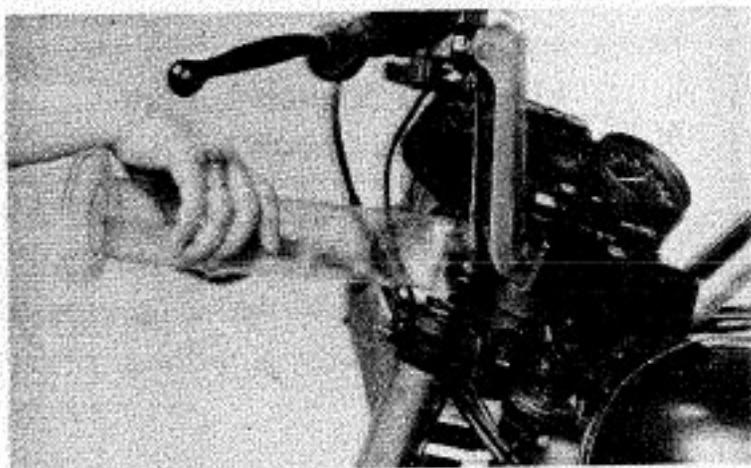
Do not allow oil to contact the disc brake components. If any oil should contact the brake components, it must be removed before the motorcycle is operated. Oil will cause diminished braking capacity and will damage the rubber components of the brake assembly.

Drain
each

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

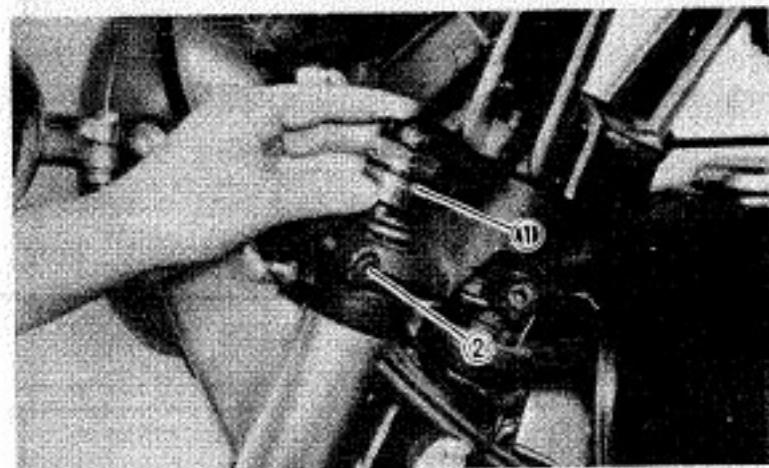
Front fork oil (each fork):

250 cm³ (8.81 Imp oz, 8.45 US oz)
Yamaha Fork Oil 10wt or equivalent



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9. After filling, slowly pump the forks up and down to distribute the oil.
10. Inspect the "O-ring" on the cap-bolt assembly. Replace "O-ring" if damaged.

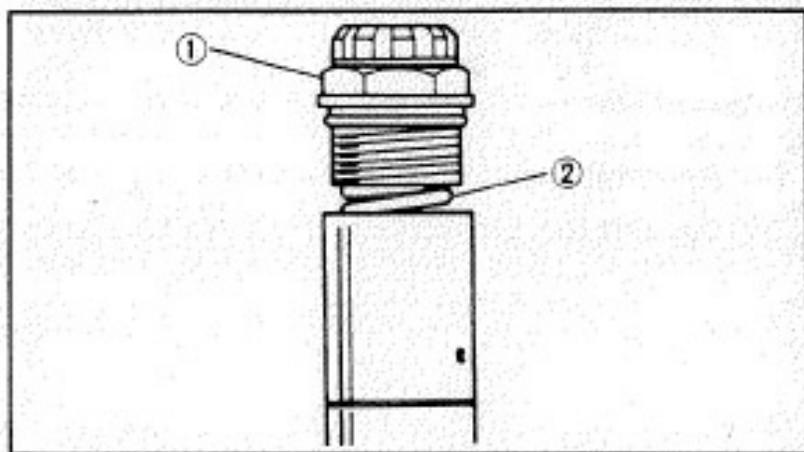


1. Cap-bolt assembly 2. Pinch bolt

11. Reinstall the cap-bolt assemblies and tighten the pinch bolts.

CAUTION:

To tighten the cap-bolt assembly, first make sure the damper adjusting rod fits correctly in the semicircular hole in the top of the damper rod. If the adjusting rod is put in the wrong way, the cap-bolt assembly will not touch the fork spring. If so, turn the cap-bolt assembly until it falls and touches the spring, then you will be able to screw the cap-bolt assembly on. Do not force the cap-bolt assembly, you may damage the adjusting rod and ruin the unit.



1. Cap-bolt assembly

2. Spring

Tightening torque:

Cap-bolt assembly:

30 Nm (3.0 m·kg, 22 ft·lb)

Pinch bolt:

20 Nm (2.0 m·kg, 14 ft·lb)

12. Fill the fork with air using a manual pump or other pressurized air supply. Refer to "Front fork and rear shock absorber adjustment" for proper air pressure adjusting.

Maximum air pressure:

118 kPa (1.2 kg/cm², 17 psi)

Do not exceed this amount.

Front fork and rear shock absorber adjustment

CAUTION:

Don't dent the air chamber nor damage the air hose. It will result in an air leakage.

WARNING:

Any adjustment except for air pressure and damping, or any replacement must be performed by a Yamaha dealer or other qualified mechanic.

Front fork:

NOTE:

Since the right and left front forks are connected by an air hose, there is only one valve where the air pressure is measured and adjusted.

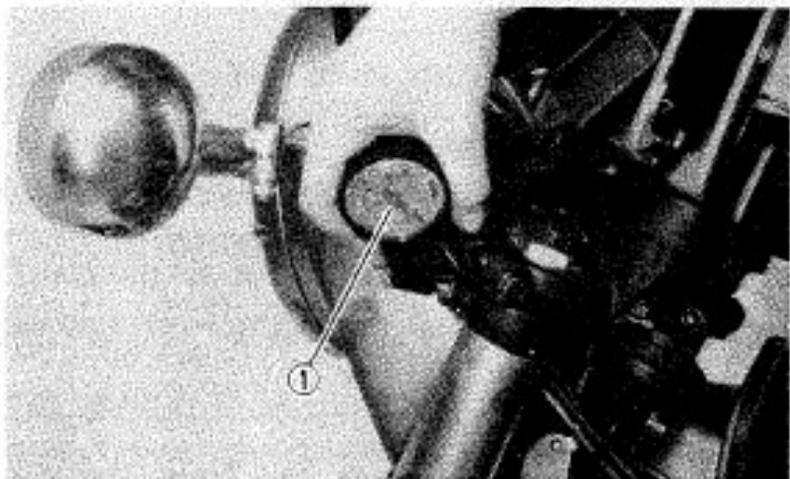
1. Air pressure

- a. Elevate the front wheel by placing the motorcycle on the centerstand.

NOTE:

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

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



1. Air check gauge

To increase:

Use a manual air pump or other pressurized air supply.

To decrease:

Release the air by pushing the valve pin.

NOTE:

An optional air check gauge is available. Please ask a nearby Yamaha dealer.

P/No. 2X4-2811A-00

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)

WARNING:

Never pressurize the front fork above the maximum or below the minimum air pressure. It will cause damage to front fork and/or loss of motorcycle control.

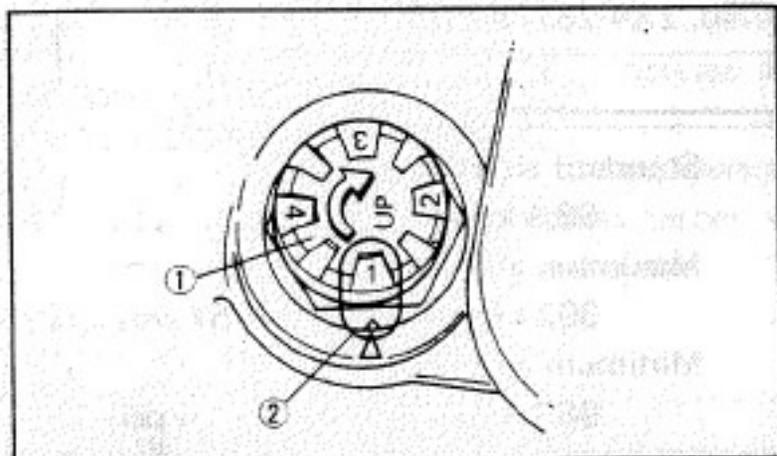
- d. Install the air valve cap.
2. Damping
 - a. Turn the damping adjuster to increase or decrease the damping.

- b. 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 shock absorber:

NOTE:

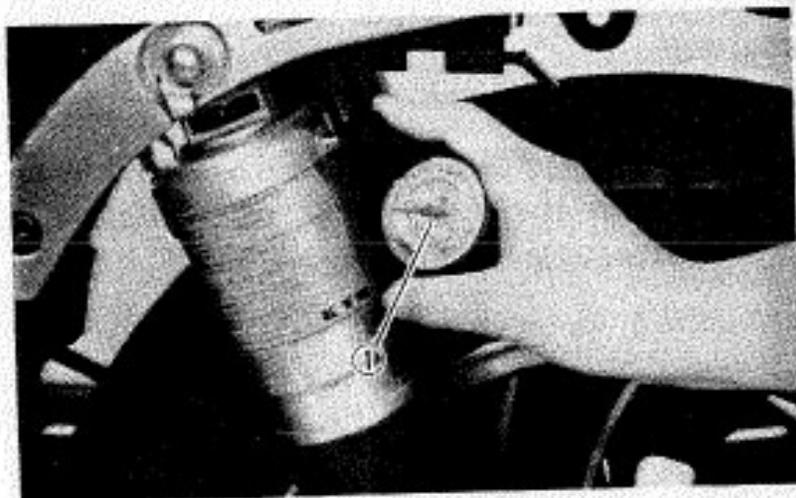
Since the right and left rear shock absorber are connected by air hose, there is only one valve where the air pressure is measured and adjusted.

1. Air pressure preload
 - a. Elevate the rear wheel by placing the motorcycle on the centerstand.

NOTE:

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

- b. Remove the air valve cap.
- c. Using the air check gauge, check and adjust the air pressure. If the air pressure is increased, the suspension becomes stiffer, and if decreased, it becomes softer.



1. Air check gauge

To increase:

Use a manual air pump or the pressurized air supply.

To decrease:

Release the air by pushing the valve pin.

NOTE:

An optional air check gauge is available. Please ask your nearby Yamaha dealer.

P/No. 2X4-2811A-00

Standard air pressure:

98.1 kPa (1.0 kg/cm², 14 psi)

Maximum air pressure:

392 kPa (4.0 kg/cm², 57 psi)

Minimum air pressure:

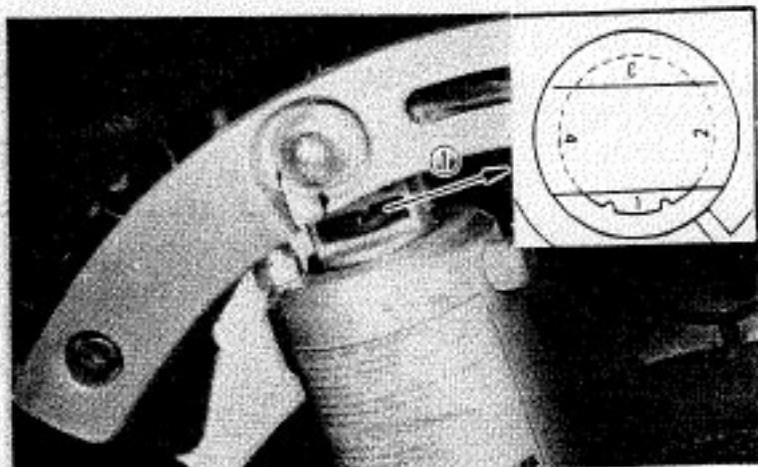
98.1 kPa (1.0 kg/cm², 14 psi)

WARNING:

Never pressurize the shock absorber above the maximum or below the minimum air pressure. It will cause damage to rear shock absorber and/or loss of motorcycle control.

- d. Install the air valve cap.
2. Damping
 - a. Turn the damping adjuster to increase or decrease the damping.
 - b. 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

WARNING:

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

Recommended combinations 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	Air pressure	Damping adjuster	Solo rider	With passenger	With accessory equipments	With accessory equipments and passenger
39.2 kPa (0.4 kg/cm ² , 5.7 psi)	1	98.1 kPa (1.0 kg/cm ² , 14 psi)	1	○			
58.8 kPa (0.6 kg/cm ² , 8.5 psi)	2	196 kPa (2.0 kg/cm ² , 28 psi)	2	○	○		
78.5 kPa (0.8 kg/cm ² , 11 psi)	3	294 kPa (3.0 kg/cm ² , 43 psi)	3		○	○	
118 kPa (1.2 kg/cm ² , 17 psi)	4	392 kPa (4.0 kg/cm ² , 57 psi)	4			○	○

Steering inspection

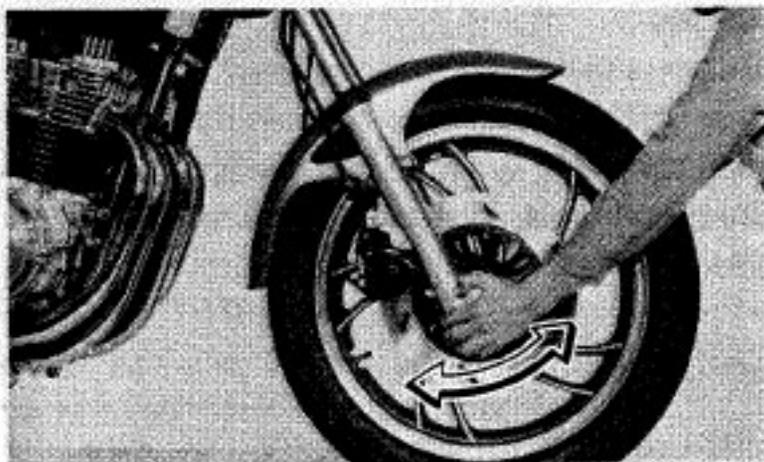
Periodically inspect the condition of the steering. Worn out or loose steering bearings may be dangerous.

Place a block under the engine to raise the front wheel of the motorcycle off the ground; then hold the lower end of the front fork and try to move forwards and backwards. If any free play can be felt, ask a Yamaha dealer or other qualified mechanic to inspect and adjust the steering assembly.

Inspection is easier if the front wheel is removed.

WARNING:

Securely support the motorcycle so there is no danger of it falling over.



Wheel bearings

If the wheel bearings in the front or rear wheel allow play in the wheel hub, or if the wheel does not turn smoothly, have a Yamaha dealer or other qualified mechanic inspect the wheel bearings. The wheel bearings should be inspected according to the General Maintenance Schedule.

Battery

This model has been equipped with a long life type battery, however, the battery fluid should be checked at least once a month.

The fluid level should be between the upper and the lower level marks.

CAUTION:

When inspecting the battery, be sure the breather pipe is routed correctly. If the vent tube touches the frame or exits in such a way as to cause battery electrolyte or gas to exit onto the frame, structural and cosmetic damage to the motorcycle can occur.

Replenishing the battery fluid

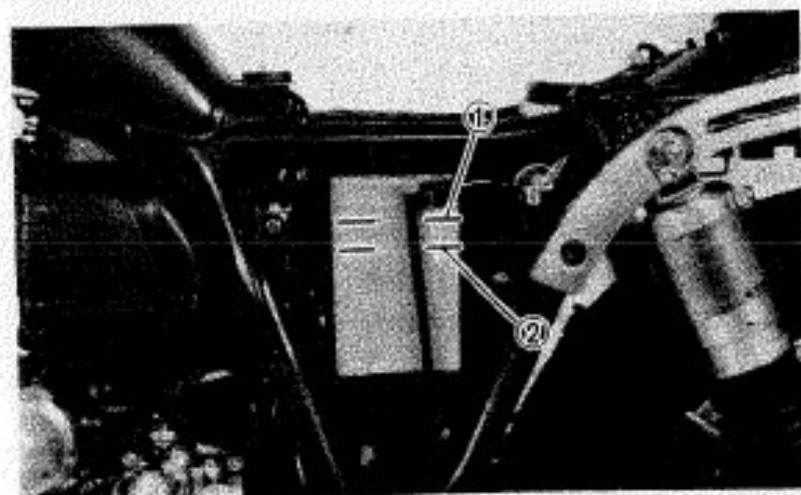
1. Remove the filling plug and slowly put in distilled water. Each cell will be filled automatically. Fill only to the UPPER LEVEL mark.

CAUTION:

Normal tap water contains minerals which are harmful to a battery; therefore, refill only with distilled water.

CAUTION:

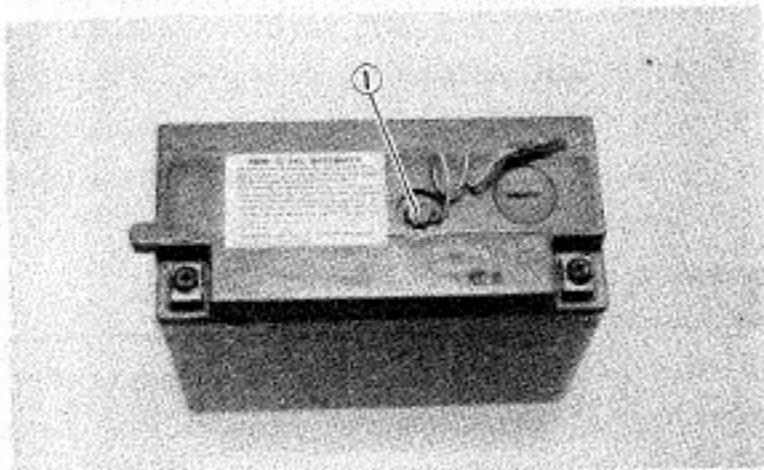
Do not overfill! If any excess fluid flows from the breather hose, stop filling and rinse affected areas thoroughly with a solution of 1 tablespoon baking soda in a cup of water.



1. Upper level 2. Lower level

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1. Battery sensor

2. Securely tighten the filling plug.
3. Always make sure the connections are correct when putting the battery back in the motorcycle. Make sure the breather pipe is properly connected and is not damaged or obstructed.

CAUTION:

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

WARNING:

Battery electrolyte is poisonous and dangerous, causing severe burns, etc. Contains sulfuric acid. Avoid contact with skin, eyes, or clothing. Antidote: **EXTERNAL**—Flush with water. **INTERNAL**—Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call physician immediately.

EYES: Flush with water for 15 minutes and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc., away. Ventilate when charging or using in enclosed space. Always shield your eyes when working near batteries. **KEEP OUT OF REACH OF CHILDREN.**

4. When the motorcycle is not to be used for a month or longer, remove the battery and store it in a cool, dark place. Completely recharge the battery before reusing.
5. If the battery is to be stored for a longer period than the above, check the specific gravity of the fluid at least once a month and recharge the battery when it is too low.

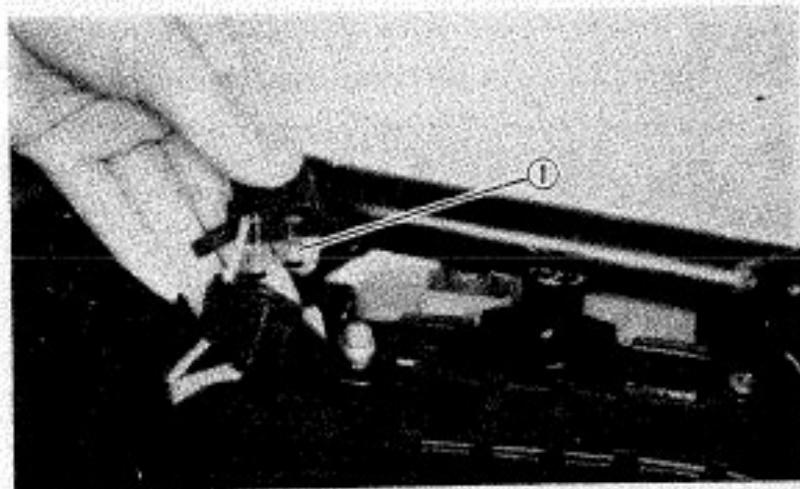
Fuse replacement

1. There are two fuse blocks on this motorcycle. The main fuse block is located under the seat. The other fuse block is located inside the right side cover.
2. If any fuse is blown, turn off the ignition switch and the switch in the circuit in question and install a new fuse of proper amperage.

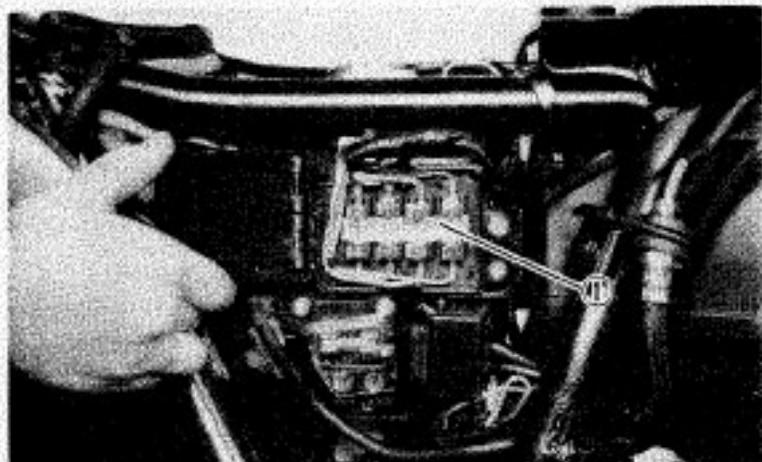
Then turn on the switches, see if the electrical device operates. If the fuse immediately blows again, consult a Yamaha dealer or other qualified mechanic.

WARNING:

Do not use fuses of a higher amperage rating than those recommended. Substitution of a fuse of improper rating can cause extensive electrical system damage and possible fire.



1. Main fuse

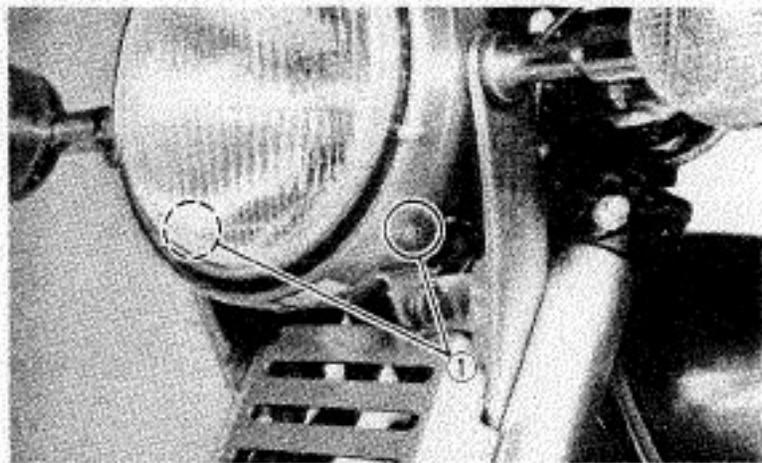


1. Other fuse block

Headlight

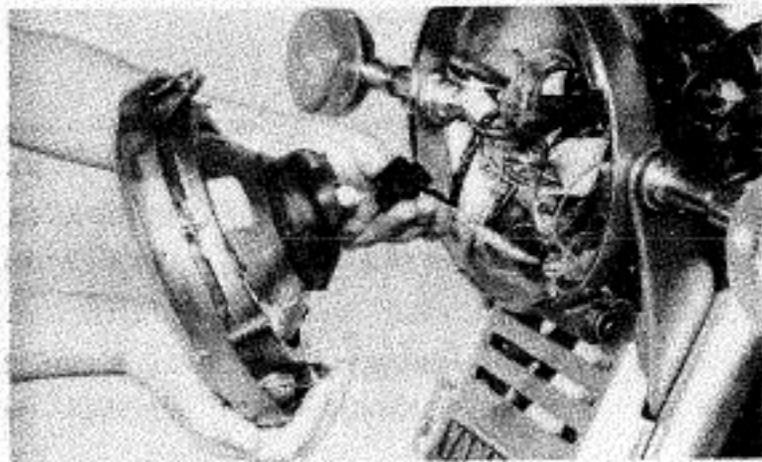
This motorcycle is equipped with a quartz bulb headlight. If the headlight bulb burns out, replace the bulb as follows:

1. Headlight bulb replacement
 - a. Remove the 2 screws holding the light unit assembly to the headlight body.

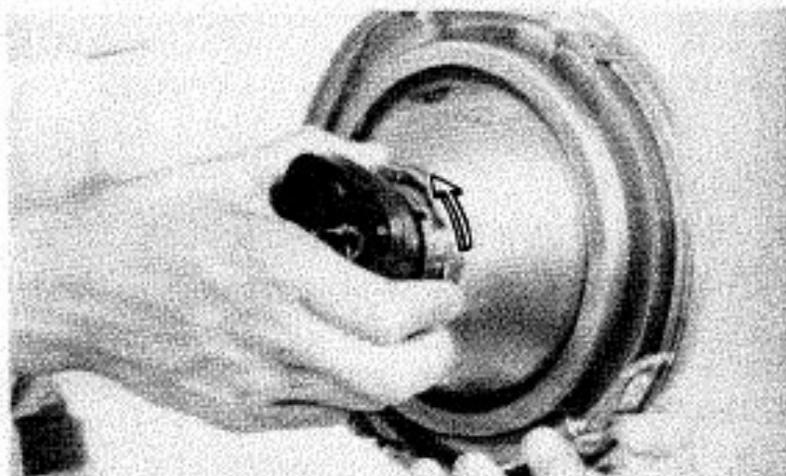


1. Holding screw

- b. Disconnect the lead wires and remove the light unit assembly.



- c. Turn the bulb holder counterclockwise and remove the defective bulb.



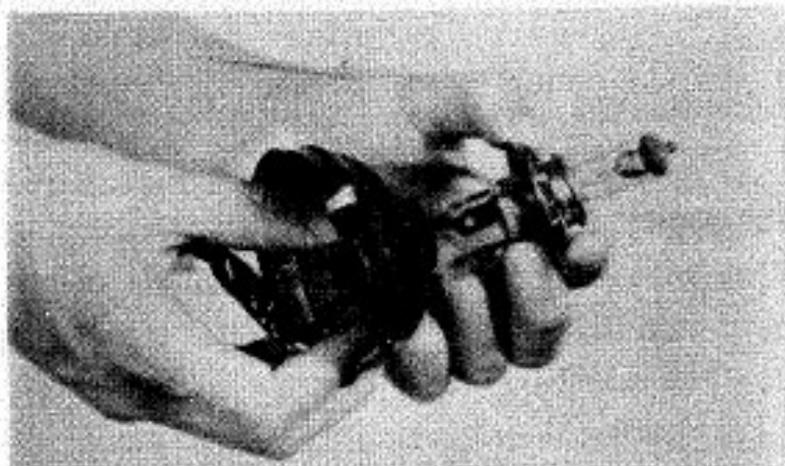
- d. Slip a new bulb into position and secure it with the bulb holder.

CAUTION:

Avoid touching the glass part of the bulb. Also keep it free from oil stains; otherwise, the transparency, of the glass, life of the bulb and illuminous flux will be adversely affected. If the glass is oil stained, thoroughly clean it with a cloth moistened with alcohol or lacquer thinner.

WARNING:

Keep flammable products or your hands away from the bulb while it is on, because it heats up. Do not touch the bulb until it cools down.



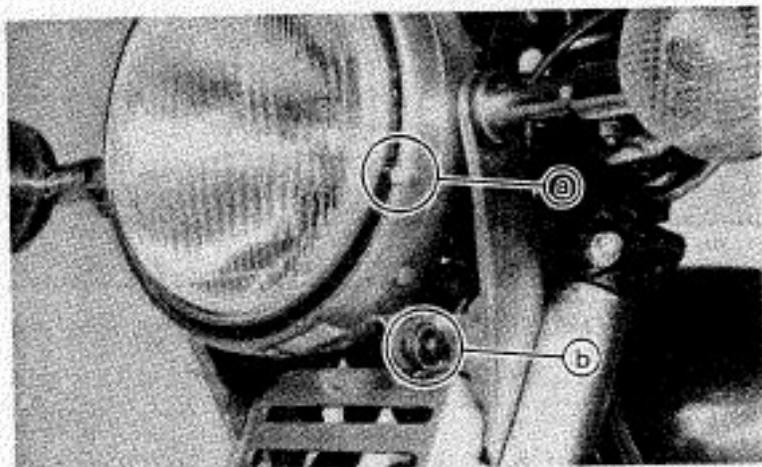
- e. Reinstall the light unit assembly to the headlight body. Adjust the headlight beam if necessary.

2. Headlight beam adjustment

a. Horizontal adjustment:

To adjust the beam to the right, turn the adjusting screw clockwise.

To adjust the beam to the left, turn the screw counterclockwise.



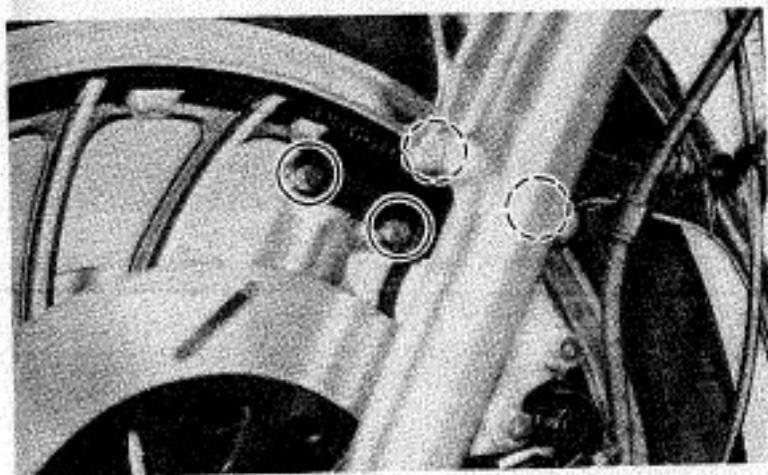
a. Horizontal adjusting screw b. Vertical adjusting screw

b. Vertical adjustment:

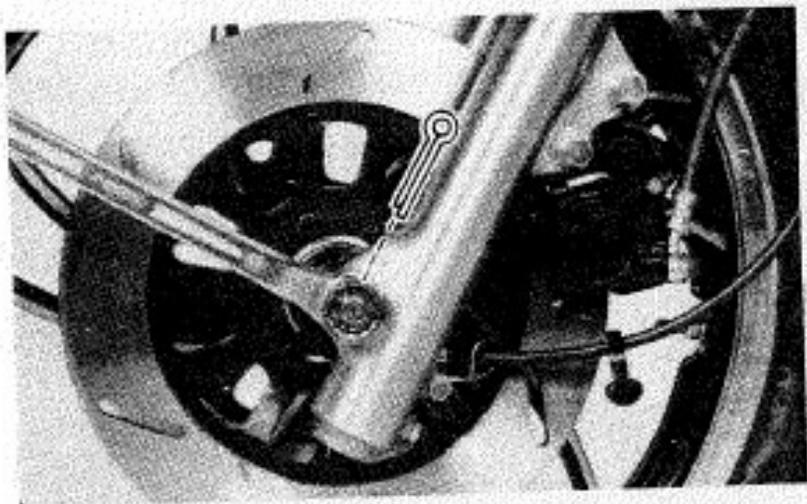
Loosen the adjusting screw under the headlight body. Adjust vertically by moving the headlight body. When proper adjustment is determined, retighten the adjusting screw.

Front wheel removal

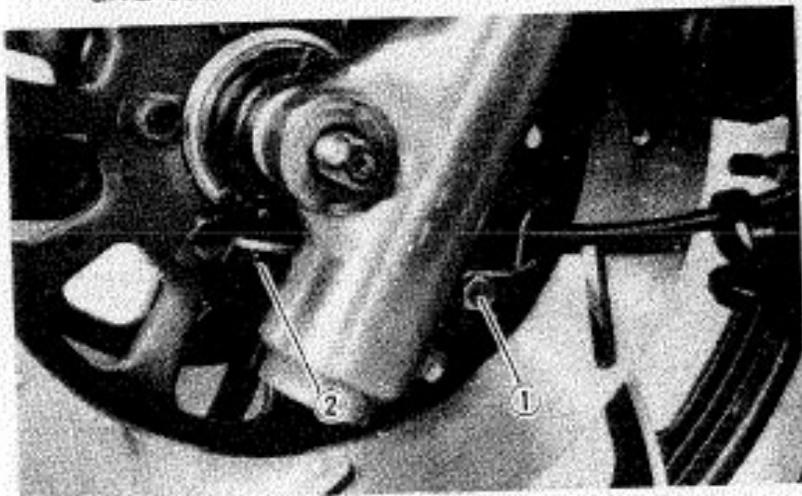
1. Place the motorcycle on the center-stand.
2. Remove the front fender securing bolts and remove the fender.



3. Remove the cotter pin and wheel axle nut.

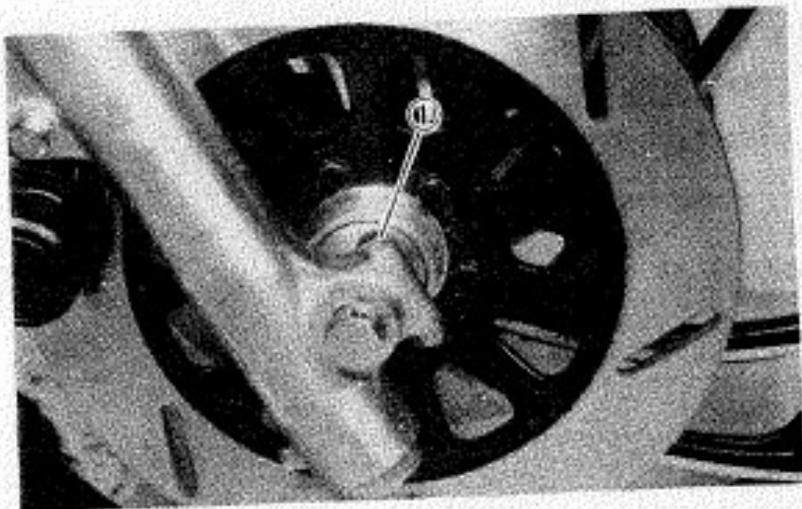


4. Remove the speedometer cable holder and cable securing bolts.



1. Cable holder securing bolt 2. Cable securing bolt

5. Loosen the pinch bolt securing the axle.



1. Pinch bolt

6. Remove the axle. Make sure the motorcycle is properly supported.

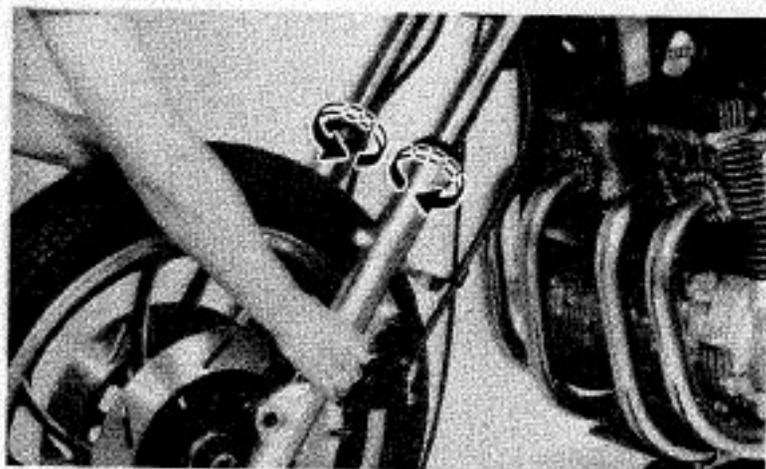
axle.



NOTE:

Do not depress the brake lever when the wheel is off the motorcycle so that the caliper pistons are not forced out of the cylinders.

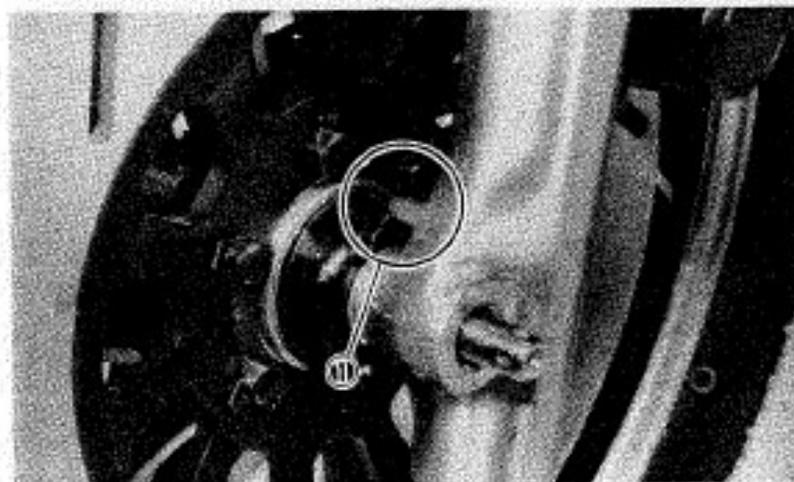
7. Lower the wheel until the discs come off the calipers. Turn the calipers outward, so they do not obstruct the wheel and remove the wheel.



Front wheel installation

When installing the front wheel, reverse the removal procedure. Pay attention to the following points.

1. Install the speedometer cable holder securing bolt.
2. Make sure the projection portion (torque stopper) of the speedometer housing is positioned correctly.



1. Torque stopper

3. Make sure the axle nut is properly torqued, and a new cotter pin is installed.

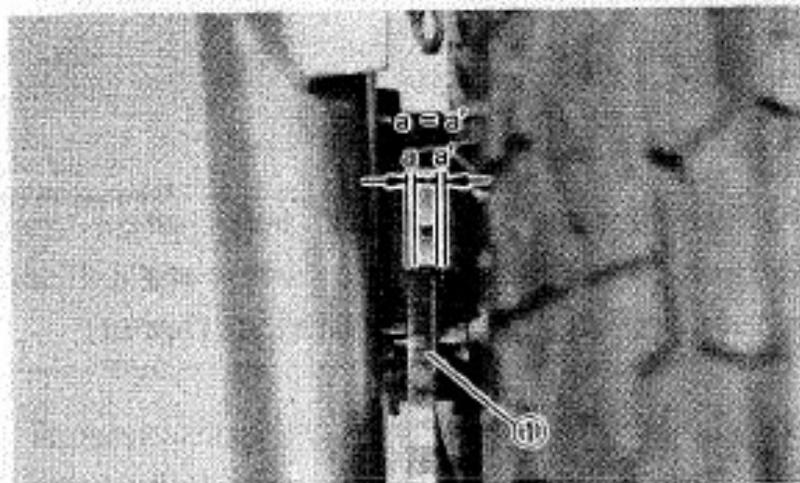
WARNING:

Always use a new cotter pin on the axle nut.

Axle nut torque:
107 Nm (10.7 m·kg, 77.5 ft·lb)

4. Install the front fender.

5. Before tightening the pinch bolt, stroke 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 are obtained.



1. Brake disc

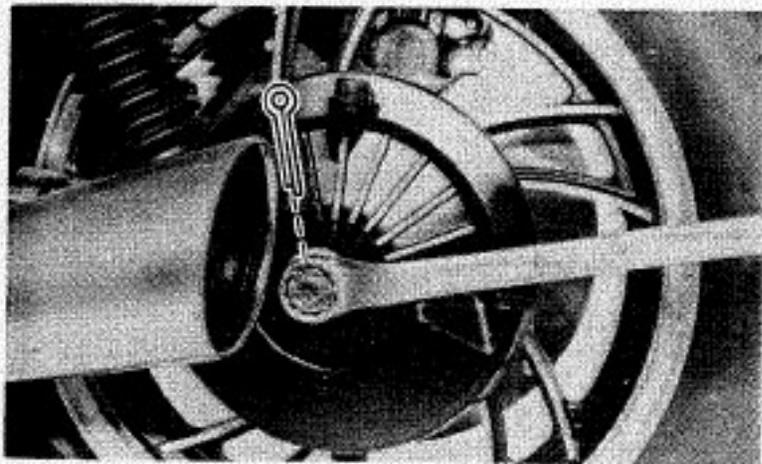
6. Tighten the axle pinch bolt:

Axle pinch bolt torque:
20 Nm (2.0 m·kg, 14.0 ft·lb)

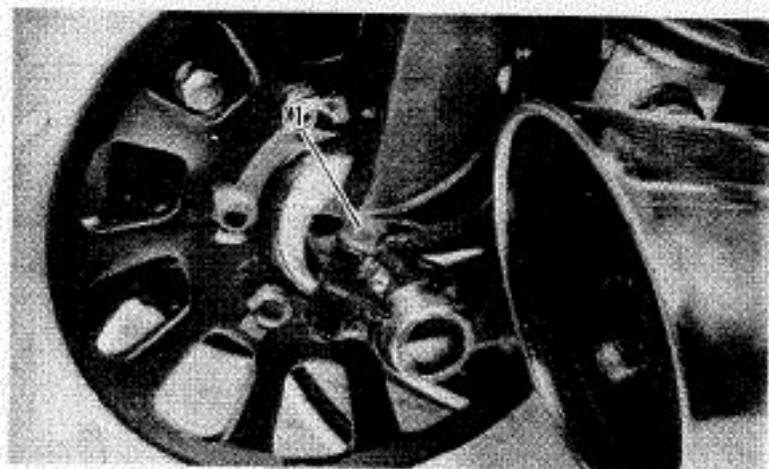
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Rear wheel removal

1. Place the motorcycle on the center-stand.
2. Remove the axle nut cotter pin and axle nut.

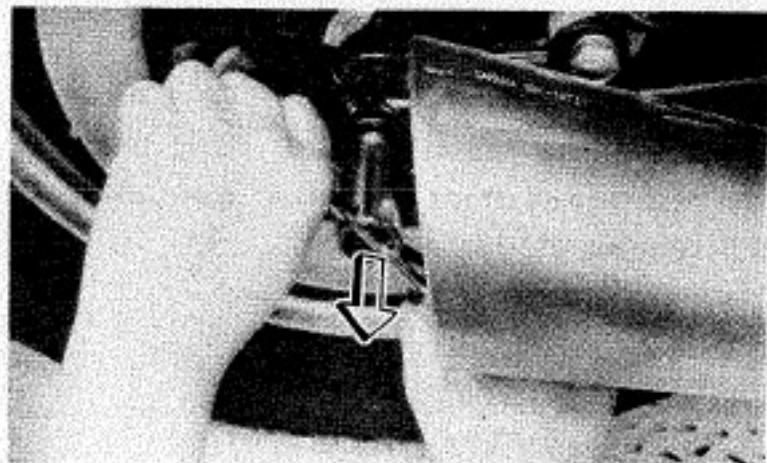


3. Loosen the rear axle pinch bolt.

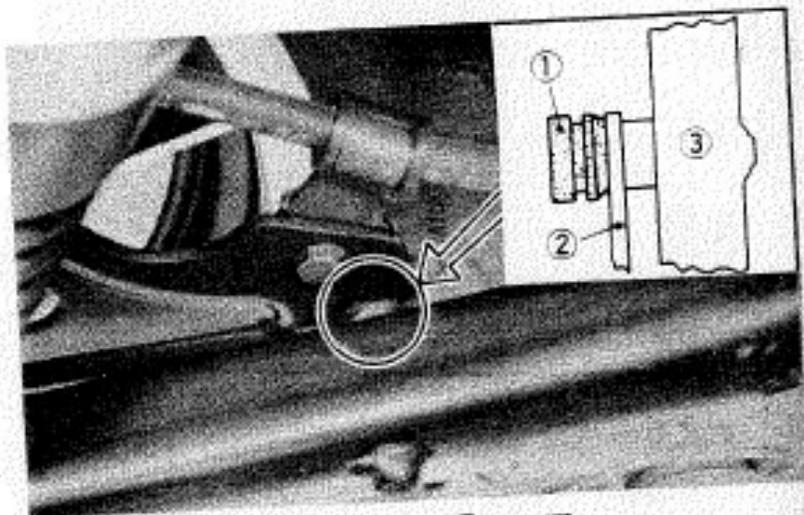


1. Pinch bolt

4. While supporting the brake caliper, pull out the rear axle.

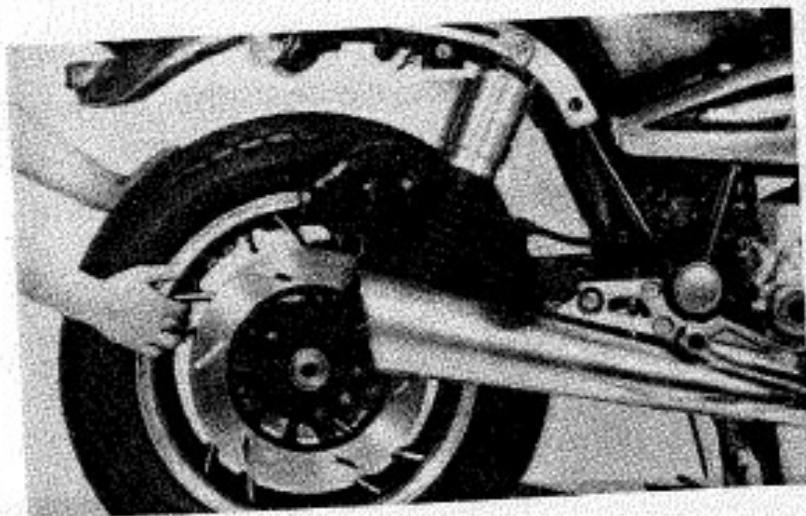


5. Pull out the rear brake torque stopper plate from where it is retained on the rear arm.



1. Rubber retainer
2. Torque stopper plate
3. Rear arm

6. Move the wheel to the right side to separate it from the final gear case and remove the rear wheel.



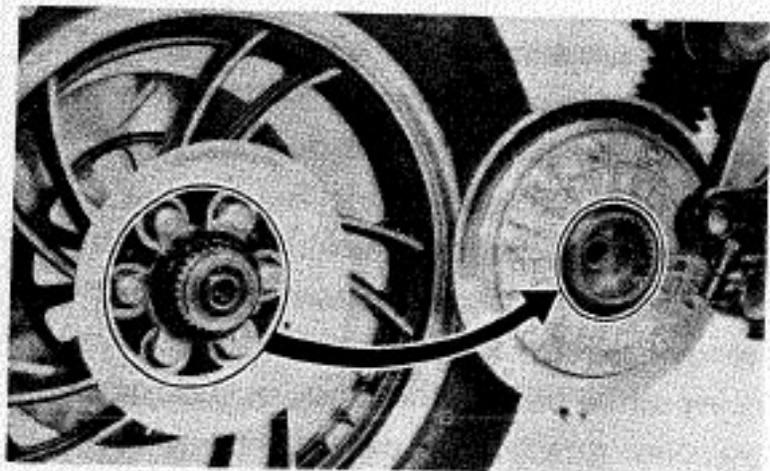
NOTE:

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

Rear wheel installation

When installing the rear wheel, reverse the removal procedure. Pay attention to the following points.

1. Apply a light coating of lithium base grease to the final gear case splines and rear wheel hub splines.
2. Make sure the splines on the wheel hub fit into the final gear case.
3. Make sure there is enough gap between the brake pads before inserting the brake disc.



4. Make sure the axle nut is properly torqued, and a new cotter pin is installed.

WARNING:

Always use a new cotter pin on the axle nut.

Tightening torque:

150 Nm (15.0 m·kg, 110 ft·lb)

Axle pinch bolt:

6 Nm (0.6 m·kg, 4.3 ft·lb)

Carburetor adjustment:

The carburetor is a vital part of the engine and its emission control system. Adjustment should be left to a Yamaha dealer or other qualified mechanic with the professional knowledge, specialized data and equipment to do so properly.

Troubleshooting

Although Yamaha motorcycles are given a rigid inspection before shipment from the factory, trouble may occur in operation. If this happens, check the motorcycle in accordance with the procedures given in the following chart. If repair is necessary, ask a qualified mechanic such as a Yamaha dealer for assistance. The skilled technicians at a Yamaha dealer provide excellent service. For replacement parts, parts, Yamaha recommends you use Genuine Yamaha Parts or parts you know are equivalent in quality.

Any problem in the fuel, compression or ignition system can cause poor starting, excessive emissions, engine damage, or loss of power while riding. The troubleshooting chart describes quick and easy series of system checks to locate the problem.

5. Rinse the motorcycle off immediately with clean water and dry all surfaces with a chamois, clean towel, or soft absorbent cloth.
6. Chrome-plated parts such as handlebars, front and rear fenders, forks, may be further cleaned with automotive chrome cleaner.
7. Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.
8. Automotive-type wax may be applied to all painted and chrome-plated surfaces. Avoid combination cleaner-waxes. Many contain abrasives which may mar paint or protective finish on the fuel tank and side covers.
9. After finishing, start the engine immediately and allow to idle for several minutes.

B. STORAGE

Long term storage (60 days or more) of your motorcycle will require some preventive procedures to insure against deterioration. After cleaning motorcycle thoroughly, prepare for storage as follows:

1. Drain the fuel tank, fuel lines, and carburetor float bowl(s).
2. Remove empty fuel tank, pour a cup of SAE 10W30 or SAE 20W40 motor oil in tank, shake the tank to coat inner surfaces thoroughly and drain off excess oil. Reinstall the tank.
3. Remove the spark plug, pour about one tablespoonful of SAE 10W30 or 20W40 motor oil in the spark plug holes and reinstall the spark plugs. Crank the engine several times (ground spark plug lead wires) to coat the cylinder walls with oil.

WARNING:

When using starter motor to crank the engine, remove spark plug wire(s) and ground them to prevent sparking.

4. Lubricate all control cables.
5. Block up frame to raise both wheels off ground.
6. Tie a plastic bag over exhaust pipe outlet(s) to prevent moisture from entering.
7. If storing in humid or salt-air atmosphere, coat all exposed metal surfaces with a light film of oil. Do not apply oil to rubber parts or seat cover.

8. Remove battery and charge. Store in a dry place and recharge once a month. Do not store battery in an excessively warm or cold place (less than 0°C (30°F) or more than 30°C (90°F)).

NOTE:

Make any necessary repairs before storing the motorcycle.

MISCELLANEOUS

Consumer information

STOPPING DISTANCE

These figures indicate braking performance that can be met or exceeded by the vehicles to which they apply, without locking the wheels, under different conditions of loading and with partial failures of the braking system. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

Description of vehicles to which this table applies: Yamaha motorcycle XJ1100J

A. Fully Operational Service Brake

Load

Light

174

Maximum

187

NOTE:

The statement above is required by U.S. Federal law. "Partial failures" of the braking system do not apply to this chart.

0 100 200 300 (Feet)

Stopping distance in feet from 60 mi/h

SPECIFICATIONS

General specifications

MODEL	XJ1100J
Dimensions: Overall length Overall width Overall height Wheelbase Minimum road clearance	2,250 mm (88.6 in) 870 mm (34.3 in) 1,195 mm (47.0 in) 1,545 mm (60.8 in) 155 mm (6.1 in)
Basic weight: With oil and full fuel tank	277 kg (610 lb)
Performance: Minimum turning radius	2,700 mm (106.3 in)
Engine: Type Engine model Cylinder Displacement Bore x Stroke Compression ratio Starting system Ignition system Fuel tank capacity	4 stroke, gasoline, air-cooled, DOHC 10M Forward incline 4 cylinder 1101 cm ³ (67.18 cu.in) 71.5 x 68.6 mm (2.815 x 2.701 in) 9.0 : 1 Electric starter Battery ignition (Full transistor ignition) Full: 19 L (4.18 Imp gal, 5.02 US gal)

MODEL	XJ1100J
<p>Engine oil quantity</p> <p>Lubrication system</p> <p>Battery type/capacity</p> <p>Generator</p> <p>Spark plug</p> <p>Carburetor</p> <p>Air cleaner</p> <p>Clutch type</p>	<p>Empty (displayed): 4.1 L (0.9 Imp gal, 1.08 US gal)</p> <p>Total amount: 4.0 L (3.52 Imp qt, 4.23 US qt)</p> <p>Periodic oil change: 3.0 L (2.64 Imp qt, 3.17 US qt)</p> <p>With oil filter replacement: 3.5 L (3.08 Imp qt, 3.70 US qt)</p> <p>Wet sump</p> <p>GM18Z-3A/12V, 20AH</p> <p>LD125-03</p> <p><u>BP6ES</u> (NGK), W20EP-U (NIPPONDENSO)</p> <p>BS34 x 4</p> <p>Dry type element</p> <p>Wet, multiple-disc</p>
<p>Transmission:</p> <p>Primary reduction system</p> <p>Primary reduction ratio</p> <p>Secondary reduction system</p> <p>Secondary reduction ratio</p> <p>Gear box type</p> <p>Operation system</p> <p>Gear ratio: First</p> <p> Second</p> <p> Third</p> <p> Fourth</p> <p> Fifth</p>	<p>Gear</p> <p>58/35 (1.657)</p> <p>Shaft drive</p> <p>44/47 x 19/18 x 33/10 = 3.260</p> <p>Constant mesh, 5-speed forward</p> <p>Left foot operation</p> <p>38/17 (2.235)</p> <p>39/24 (1.625)</p> <p>36/28 (1.285)</p> <p>32/31 (1.032)</p> <p>30/34 (0.882)</p>

MODEL		XJ1100J
Chassis:		
Frame type		Tubular steel, double cradle
Steering:	Caster	29°30'
	Trail	130 mm (5.12 in)
Tire size:	Front	3.50H19-4PR Tubeless tire
	Rear	130/90-16 67H Tubeless tire
Braking system:	Front	Disc brake/Right hand operation
	Rear	Disc brake/Right foot operation
Suspension:	Front	Telescopic fork
	Rear	Swing arm
Shock absorber:	Front	Coil/air spring, oil damper
	Rear	Coil/air spring, oil damper
Electrical:		
Headlight		12V, 60W/55W (Quartz bulb)
Tail/brake light		12V, 8W/27W x 2
Flasher light		12V, 27W x 4
Pilot lights:	TURN	12V, 3.4W x 2
	WARNING	12V, 3.4W x 1
	NEUTRAL	12V, 3.4W x 1
	HIGH BEAM	12V, 3.4W x 1
	HEAD LAMP	12V, 3.4W x 1
Meter light		12V, 3.4W x 3

WARRANTY INFORMATION

Please refer to your copy of the Yamaha Owner's Warranty Guide* for details of the warranty offered on your new Yamaha.

The Warranty Guide contains the warranty policy, an explanation of the warranty, and other important information. Becoming familiar with these policies will be to your advantage in making the best use of Yamaha's warranty programs.

There are certain requirements which you must meet in order to qualify for warranty coverage. FIRST, your new Yamaha must be operated and maintained properly, as, explained in this manual. If you have any questions about any procedure in this manual, please consult your dealer. ABUSE AND NEGLECTED MAINTENANCE MAY LEAD TO MECHANICAL FAILURES WHICH CANNOT BE COVERED UNDER WARRANTY.

SECOND, IF ANY PROBLEMS OCCUR WHICH YOU FEEL SHOULD BE COVERED UNDER WARRANTY, NOTIFY YOUR DEALER IMMEDIATELY. Don't delay, as small problems left unrepaired can become large problems which may not be covered under warranty.

We recommend that the Warranty Guide be used as a folder in which you may keep your registration and other important documents related to your new Yamaha.

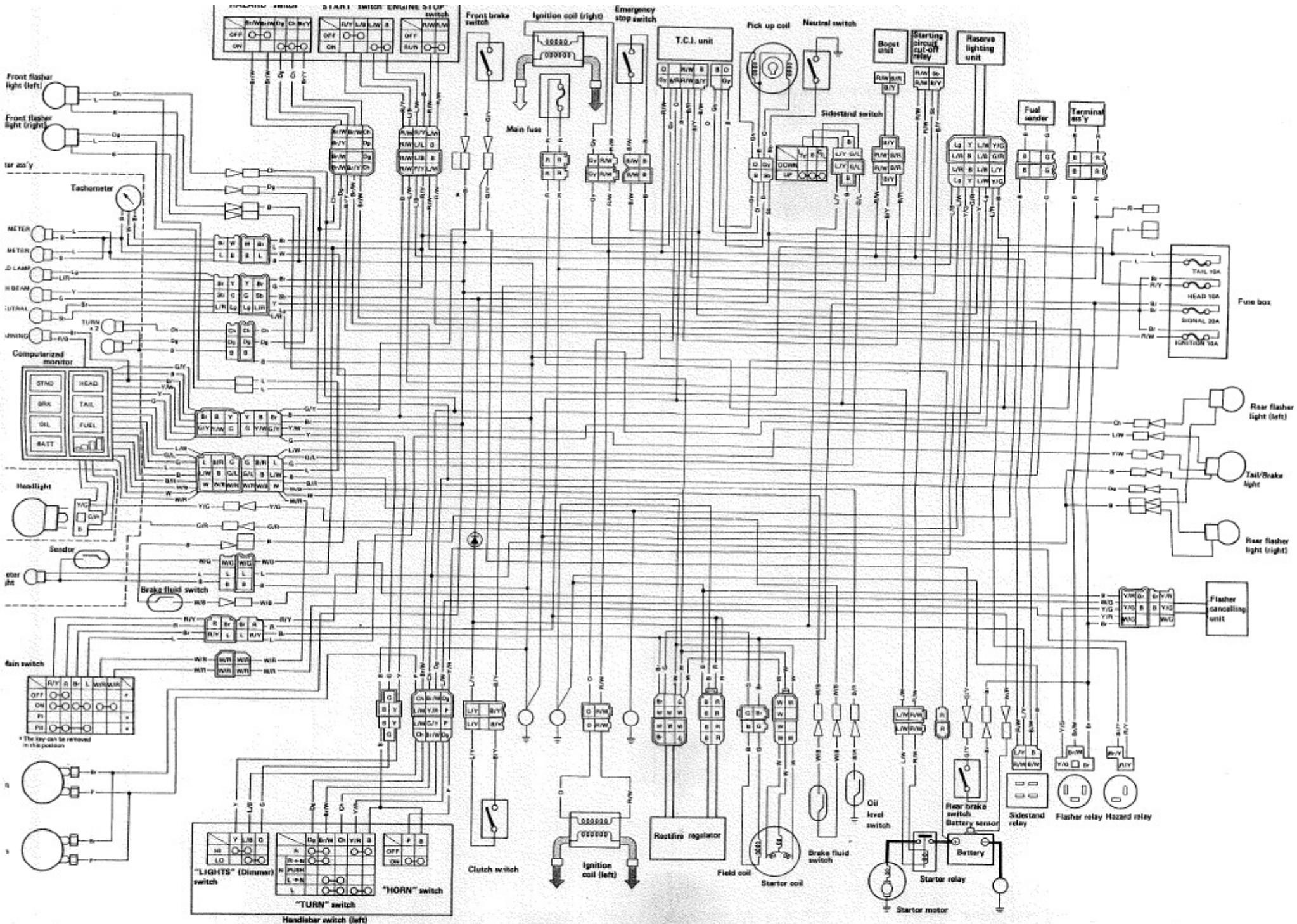
* The Yamaha Owner's Warranty Guide is to be supplied by your Yamaha dealer at the time of purchase. If you did not receive one, or have lost yours, you may obtain extra copies upon request from your Yamaha dealer or by writing to:

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555, Katella Avenue
Cypress, California 90603
Attn: Warranty Department

WIRING DIAGRAM

COLOR CODE

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



* The key can be removed in this position