



**YAMAHA**

**XS1100H**  
**XS1100SH**

**OWNER'S MANUAL**

LIT-11625-02-48

689-29195-10

## INTRODUCTION

Congratulations on your purchase of the Yamaha XS1100H/XS1100SH. This model represents the product of many years of Yamaha experience in the production of fine sporting, touring, and pacesetting racing motorcycles. You can now appreciate the high degrees of craftsmanship and reliability that have made Yamaha a leader in these fields.

This manual will provide the owner with a good basic understanding of the operation, and basic maintenance and inspection items of this vehicle. PLEASE READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE OPERATING YOUR NEW MOTORCYCLE. 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Some data in this manual may become outdated due to improvements made to this model in the future.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 date of 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.

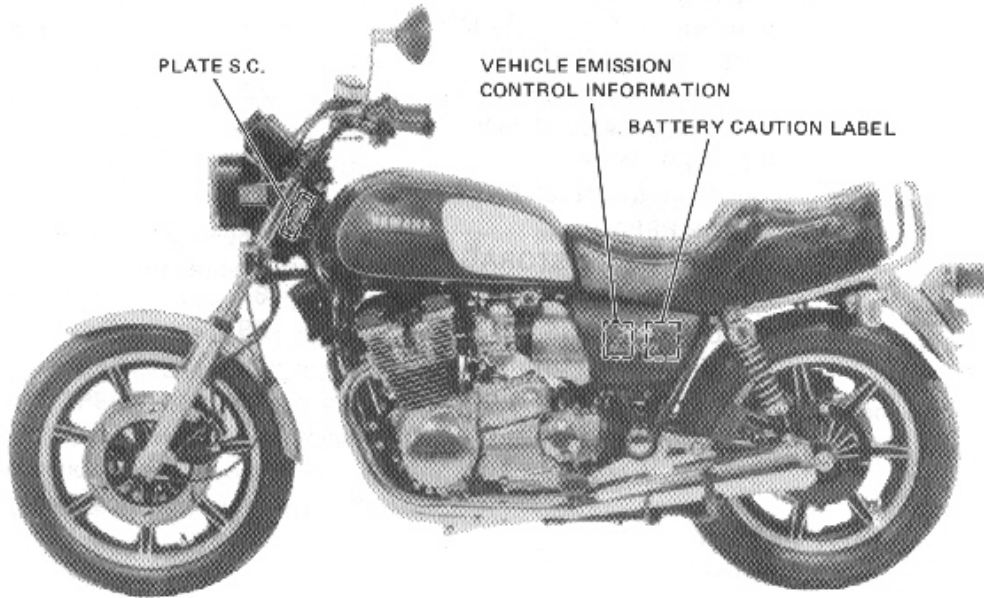
SERVICE DEPT.  
INTERNATIONAL DIVISION  
YAMAHA MOTOR CO., LTD.

## CONTENTS

LOCATION OF THE "CAUTION AND SPECIFICATION LABELS" .....	1
DESCRIPTION .....	3
MACHINE IDENTIFICATION .....	5
CONTROL FUNCTIONS .....	6
PRE-OPERATION CHECKS.....	22
OPERATION AND IMPORTANT RIDING POINTS.....	31
PERIODIC MAINTENANCE AND MINOR REPAIR .....	37
CLEANING AND STORAGE.....	84
MISCELLANEOUS.....	87
SPECIFICATIONS .....	89
WARRANTY INFORMATION .....	93
MAINTENANCE RECORD.....	94
WIRING DIAGRAM.....	96

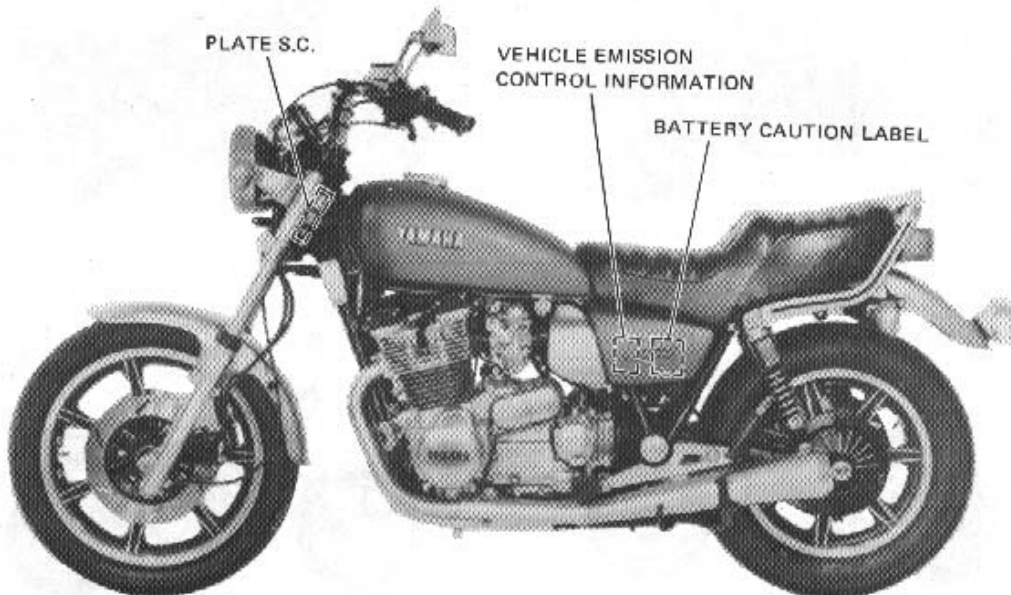
## LOCATION OF THE "CAUTION AND SPECIFICATION LABELS"

XS1100H



- 1 -

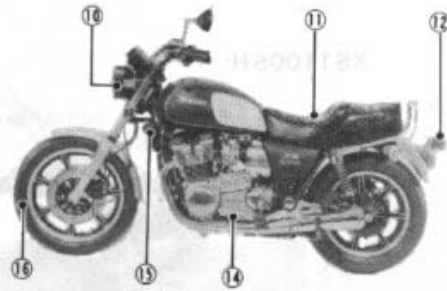
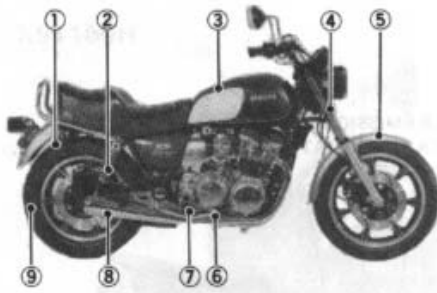
XS1100SH



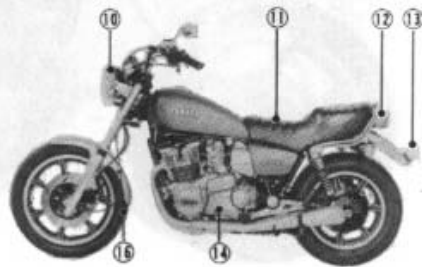
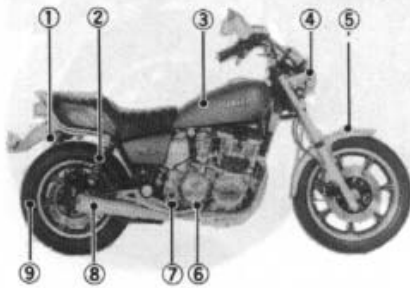
- 2 -

## DESCRIPTION

**XS1100H**

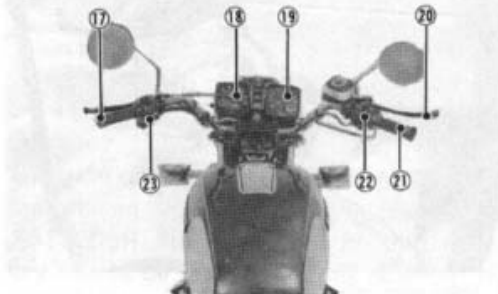


**XS1100SH**

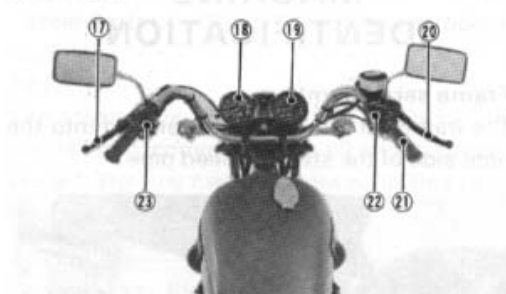


- 3 -

**XS1100H**



**XS1100SH**



- |                        |  |
|------------------------|--|
| 1. Rear flasher light  | 13. License light (Except for XS1100H) |
| 2. Rear shock absorber | 14. Change pedal                       |
| 3. Fuel tank           | 15. Oil cooler (Except for XS1100SH)   |
| 4. Front flasher light | 16. Front wheel                        |
| 5. Front fender        | 17. Clutch lever                       |
| 6. Brake pedal         | 18. Speedometer                        |
| 7. Footrest            | 19. Tachometer                         |
| 8. Silencer            | 20. Brake lever                        |
| 9. Rear wheel          | 21. Throttle grip                      |
| 10. Headlight          | 22. Right handlebar switch             |
| 11. Seat               | 23. Left handlebar switch              |
| 12. Tail/brake light   |  |

**NOTE:** \_\_\_\_\_  
 The design and specification of the motorcycle you have purchased may partly differ from those shown in the photos this manual carries.

- 4 -

## MACHINE IDENTIFICATION

### Frame serial number

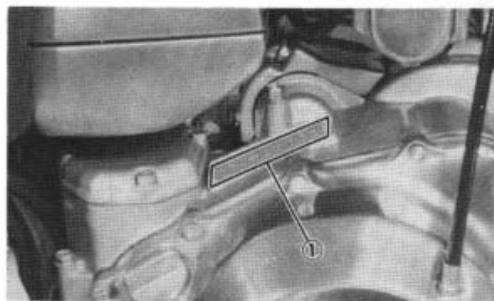
The frame serial number is stamped into the right side of the steering head pipe.



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. These identification numbers are used to register your motorcycle with the licensing authority in your state as well as with the manufacturer. Keep a record of these numbers for reference when ordering parts from your Yamaha dealer. In case of theft, the authorities will need these numbers and your model name for identification.

- 5 -

## CONTROL FUNCTIONS

### Main switch

Functions of the respective switch positions are as follows:

#### ON:

Electrical circuits are switched on. The parking/running light comes on. (Except for XS1100SH) The engine can be started. The key cannot be removed in this position. The taillight is on automatically.

#### NOTE:

When the engine is started, the headlight and meter lights come on automatically and the lights stay on until the main switch is turned to "OFF" even if the engine stalls.

#### OFF:

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

#### LOCK:

The steering is locked in this position, and all electrical circuits are switched off. The key

can be removed in this position. Refer to "Steering lock" (Page 15) for proper operation.

#### PARKING:

The steering is locked in this position, and the taillight comes on but all other circuits are off. The key can be removed in this position.

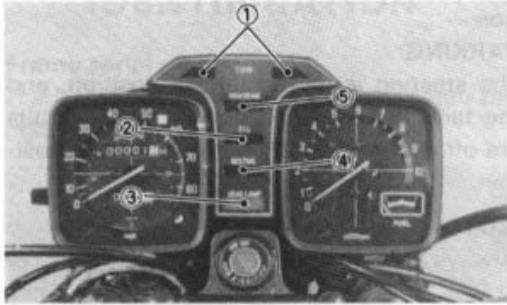
#### NOTE:

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



- 6 -

**Indicator lights  
XS1100H**

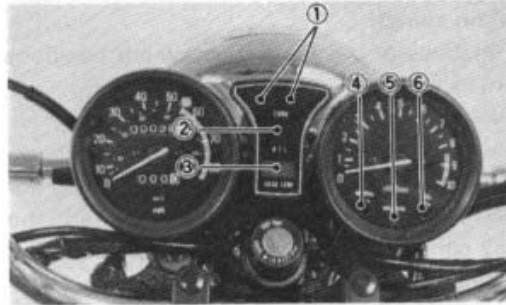


- |                                      |                              |
|--------------------------------------|------------------------------|
| 1. Turn indicator light              | 4. Neutral indicator light   |
| 2. Oil pressure indicator            | 5. High beam indicator light |
| 3. Headlight failure indicator light |                              |

**Turn indicator light "TURN" (orange):**  
This indicator flashes when the turn switch is "ON".

**Oil pressure indicator light "OIL" (red):**  
When oil pressure rises to operating pressure, the oil pressure indicator goes off, indicating proper operation of the lubrication system.

**XS1100SH**



- |                                      |                              |
|--------------------------------------|------------------------------|
| 1. Turn indicator light              | 4. Neutral indicator light   |
| 2. Oil pressure indicator            | 5. High beam indicator light |
| 3. Headlight failure indicator light | 6. Low fuel warning light    |

**WARNING:**  
If the indicator light comes on, stop the engine immediately. Do not operate the motorcycle until the exact problem has been taken care of. See your dealer or other qualified mechanics. This light indicates an unsafe condition.

**Headlight failure indicator light "HEAD LAMP" (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.

**NOTE:**  
If you are planning on a long trip it may be a good idea to carry a spare headlight bulb.

**Neutral indicator light "NEUTRAL" (green):**  
This indicator lights when the transmission is in neutral.

**High beam indicator light "HIGH BEAM" (blue):**

This indicator lights when the headlight high beam is used.

**Low fuel warning light "FUEL" (red) (Except for XS1100H):**

When the fuel level drops below approximately 2.5 liters (0.66 US gal), this light will come on.

When this light comes on, switch the fuel petcocks (left and right) to "RES" position. Then, fill the tank at the first opportunity.

**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.

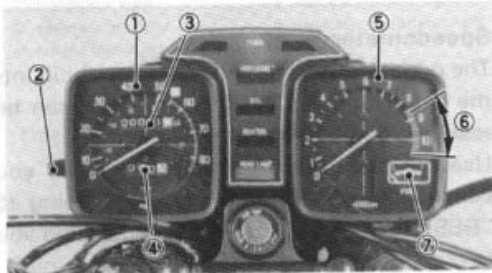
### Tachometer

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.

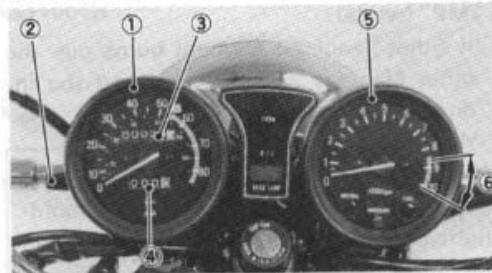
**Do not operate in the red zone.  
Red zone: 8,500 r/min and above**

### XS1100H



1. Speedometer
2. Reset knob
3. Odometer
4. Trip odometer
5. Tachometer
6. Red zone
7. Fuel gauge

### XS1100SH



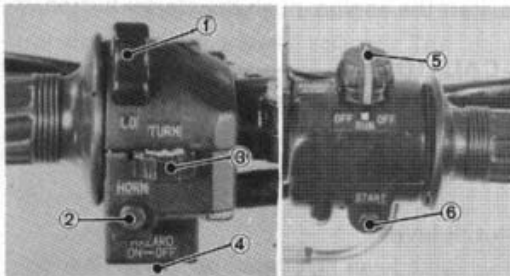
1. Speedometer
2. Reset knob
3. Odometer
4. Trip odometer
5. Tachometer
6. Red zone

### Fuel gauge (Except for XS1100SH)

The fuel gauge is built into the tachometer. For accurate readings, the motorcycle should be on level ground and either stopped or at a constant speed. When the needle indicates "E" (Empty), about 4 lit (1.1 US gal) remains in the fuel tank.

- 9 -

### Handlebar switches:



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

### "LIGHTS" (Dimmer) switch

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

### "HORN" switch

Press button to sound the horn.

### "TURN" switch

This model is equipped with a turn indicator system that is 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 the switch "in" 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 about 10 seconds or approximately 150 meters (490 feet) whichever is greater.

### "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.

- 10 -

**CAUTION:**

Never fail to turn the main switch to "OFF" or "PARKING" position while the "HAZARD" switch is on.  
Battery discharged may result from long use of flasher lights, thereby loading to difficult starting.

**NOTE:**

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

**"ENGINE STOP" switch**

Make sure that the engine stop switch is on "RUN". The engine stop switch has been equipped to ensure safety in an emergency such as when the motorcycle is upset or trouble takes place in the throttle system. The engine will not start or run when the engine switch is turned to "OFF".

**"START" switch**

To start the engine, push the starter button.

**CAUTION:**

See starting instructions prior to starting engine.

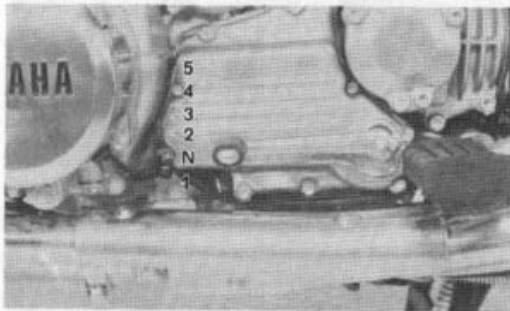
**Clutch lever**

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 release slowly for smooth starts. (Refer to the engine starting procedures for the starting circuit cut off switch functions.)

-11-

**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

**Front brake lever**

The front brake lever is located on the right handlebar. Pull it toward the handlebar to activate the front brake.

**Rear brake pedal**

The rear brake pedal is on the right side of the motorcycle. Press down on the brake pedal to activate the rear brake.

**Fuel tank cap**

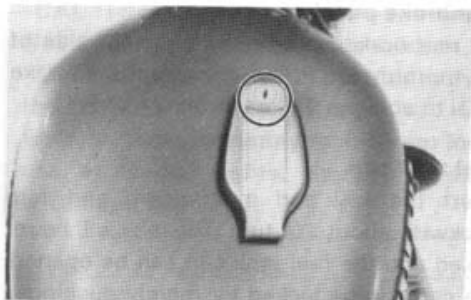
Insert the key and push down and turn clockwise about 1/4 turn. The lock will be released and the fuel tank cap can be opened. The cap can be locked by merely pushing it into position.

**WARNING:**

Do not overfill the fuel tank. Avoid spilling fuel on the hot engine. Do not fill the fuel tank all the way to the top or it may overflow when the fuel heats up later and expands.

-12-





### Fuel petcock

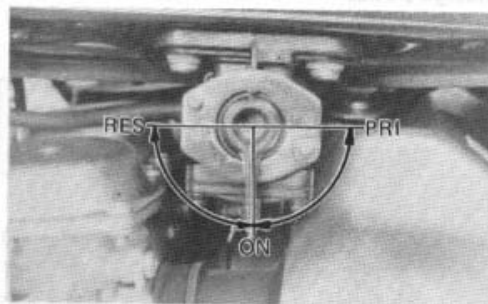
The negative pressure fuel petcocks supply fuel from the tank to the carburetors and also filter the fuel. The fuel petcocks have the following positions:

**OFF** (Except for XS1100H):

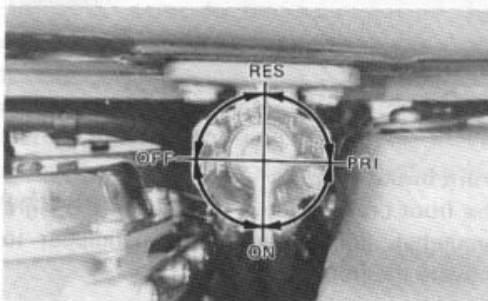
With the lever in this position fuel will not flow.

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

XS1100H



XS1100SH



-13-

**RES:** This indicates "RESERVE". If you run out of fuel while riding, move the lever to "PRI", and switch to "RES" position after starting the engine. Then, fill the tank at the first opportunity.

**BE SURE TO SET THE LEVER TO THE "ON" POSITION AFTER REFUELING.**

### NOTE:

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

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

### NOTE:

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

### Starter lever (CHOKE)

When cold, the engine requires a richer fuel mixture for starting. A separate starter circuit, which is controlled by the starter, supplies this mixture.

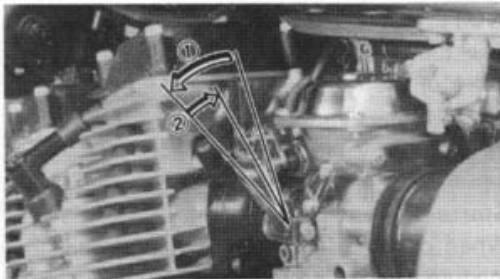
The starter on this model is a 2-position type as follows:

1. Pull the lever fully toward you.  
—When starting a cold engine.
2. Push back the lever half-way.  
—When warming up the engine.

### NOTE:

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

-14-



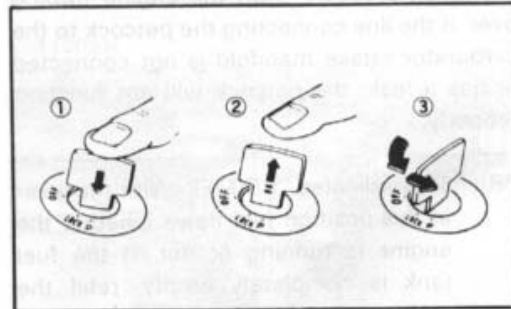
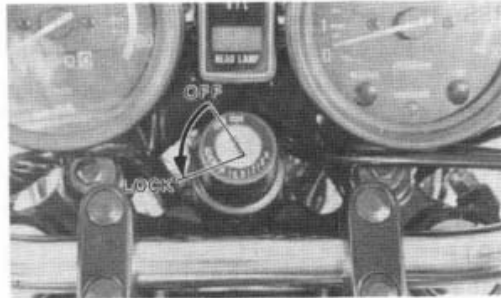
1. Cold engine starting 2. Warming up

### Steering lock

The steering is locked when the main switch is in the "LOCK" position. To lock the steering, turn the handlebars fully to the right or left. Give one push to the key at the "OFF" position; then turn it counterclockwise to the "LOCK" position and remove the key. To release the lock, turn the key clockwise.

**WARNING:**

Never turn the key to "LOCK" when the motorcycle is moving.

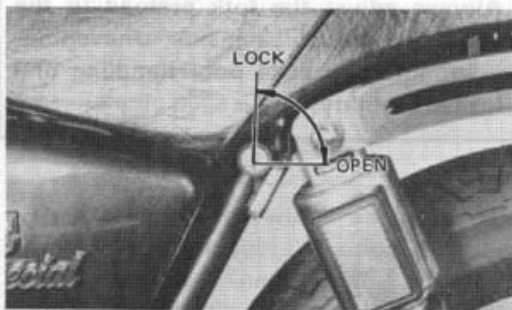


### Helmet holder

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

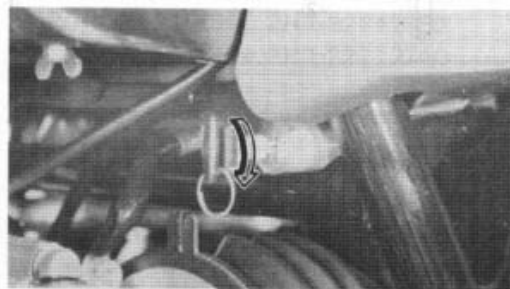


### Left side cover (For XS1100H)

To open the side cover lock, insert the key in the lock and turn it clockwise. To reinstall the side cover, the rubber-covered hinge which hooks on the frame must be slipped through the slots in the cover. Make sure the top of the cover is securely seated on the hooks, then push the cover into the lock at the bottom.

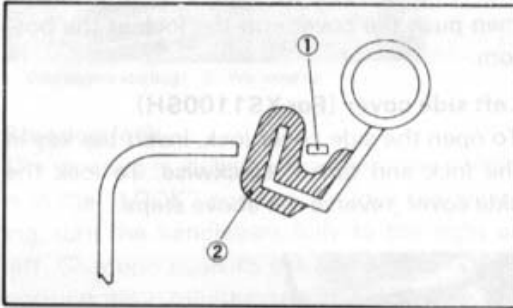
### Left side cover (For XS1100SH)

To open the side cover lock, insert the key in the lock and turn it clockwise. To lock the side cover, reverse the above steps.



### Right side cover (Except for XS1100SH)

To remove the right side cover, pull out the bottom of the cover. To reinstall the cover, make sure the top of the cover is securely seated on the hinge hooks, then push the bottom of the cover into its snap fitting.



1. Side cover
2. Rubber-covered hinge

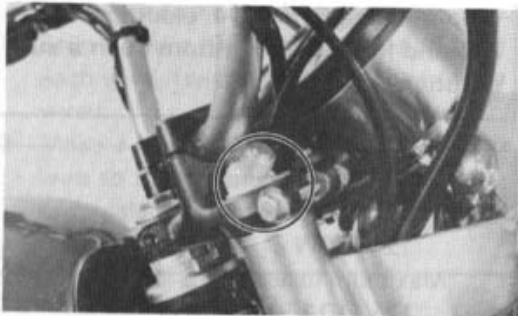
### Front forks

The front fork of this model is pneumomechanical; namely, a combination air and mechanical coil spring in the inner tube provides suspension best suited to the motorcycle's load (ex: optional accessories etc.) and riding conditions by the adjustment of the air pressure. Refer to page 61 for proper adjustment procedures.

#### WARNING:

Always adjust the fork preload to the same position on each side. Uneven adjustment can cause poor handling and loss of stability.

-17-

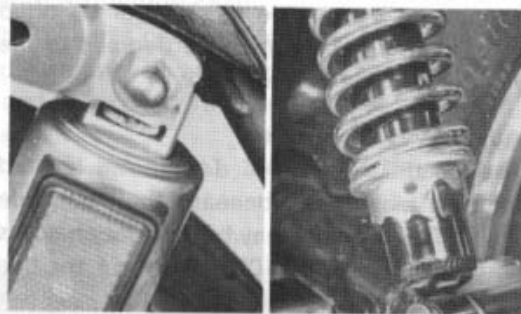


### Rear shock absorber

The spring preload and the damping force can be adjusted to suit motorcycle's load (ex: optional accessories etc.) and riding conditions. Refer to page 63 for proper adjustment procedures.

#### WARNING:

Always adjust the shock absorbers on each side to the same position. Uneven adjustment can cause poor handling and loss of stability.



An optional heavy duty rear shock absorber spring is available for this model.

\* Heavy duty rear shock absorber spring:  
P/No. XS1100H : 2H7-22212-E0  
XS1100SH: 3H3-22212-A0

Please ask your nearby Yamaha dealer for further details.

### Emergency stop switch

This switch has been included to ensure that the engine will be stopped automatically

-18-

should the motorcycle fall over or be tilted more than approximately 60 degrees to the right or left side from vertical.

#### Auxiliary D.C. Terminal

The fused Auxiliary D.C. Terminal is located under a plastic cap beneath the right side cover. This terminal may be used for an accessory not exceeding 50W. The fuse for this terminal is located directly above the terminal's screws. To prevent wiring damage, never use a fuse larger than the specified amperage rating. Remove the fuse until accessory installation is complete. 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.

#### WARNING:

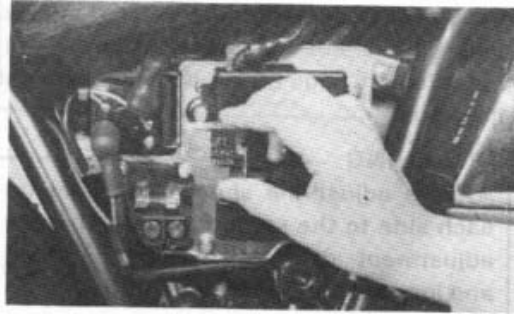
Do not use a fuse of improper rating or other object as a substitute for the

proper fuse. Extensive electrical damage and fire can result from such a substitution.

#### Auxiliary D.C. Terminal

Maximum accessory rating:  
12V, 50W

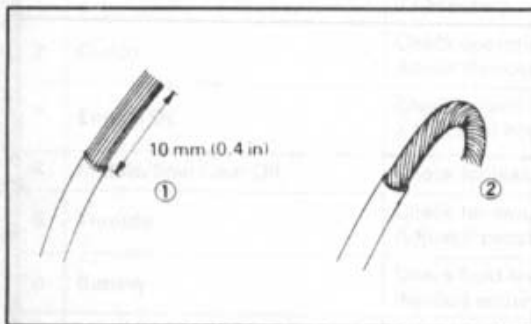
Maximum fuse rating:  
12V, 10A, standard or  
"Slo-Blo" type



-19-

#### Connecting accessory wires

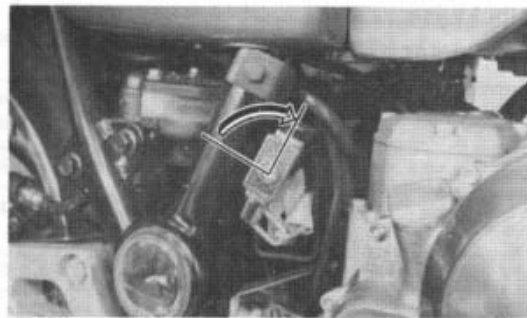
1. Strip 10 mm (0.4 in) of insulation from each wire. Twist (braid) the ends of the wires.
2. Make a hook in the end of the braided wire so that it will be drawn around the terminal as the screw is being tightened.



#### Theft protection chain

This chain is designed for theft protection of your motorcycle and is placed under the right-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.

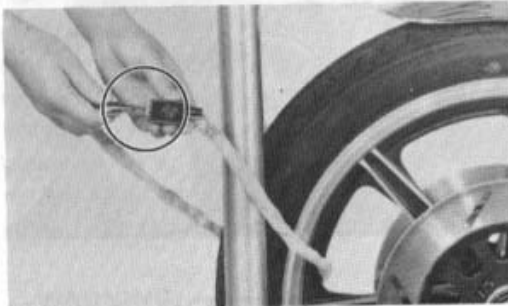


-20-

2. Fasten the chain to an suitable fixed object.

**CAUTION:**

To lock the chain, insert one end into the other. The chain automatically locks. 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.



## 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 and fluid level. Top-up with DOT. #3 brake fluid if necessary.	24~25, 51~56
2.	Clutch	Check operation, condition and free play. Adjust if necessary.	25, 56~57
3.	Engine Oil	Check engine oil level, top up with a specified engine oil.	25, 45~47
4.	Middle/final Gear Oil	Check for leakage visually.	25~26, 47~49
5.	Throttle	Check for smooth operation. Adjust if necessary.	25, 58
6.	Battery	Check fluid level, top-up with distilled water if necessary.	30, 66~68
7.	Lights/Signals	Check operation.	30
8.	Wheels/Tires	Check tire pressure, wear and damage.	26~30
9.	Fittings/Fasteners	Check all chassis fittings and fasteners. Adjust, if necessary.	44

**NOTE:**

Pre-operation checks should be made each time the motorcycle is used. Such an inspection can be 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 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 51 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 your Yamaha dealer or other qualified mechanic for immediate repairs. Such a soft, spongy feeling could indicate a hazardous condition in the brake system.

2. Brake fluid  
Check the brake fluid level.  
Add fluid if necessary

Recommended brake fluid: DOT #3

3. Checking the disc pads.  
Refer to page 53.

**NOTE:**

When this brake service is necessary, have your 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 your Yamaha dealer or other qualified

mechanic for immediate repairs. Such leakage could indicate a hazardous condition in the brake system.

**Clutch (See page 56 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.

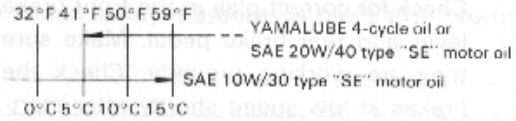
**Throttle grip (See page 58 for more detail)**

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

**Engine oil (See page 45 for more detail)**

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

**Recommended oil:**



**Middle gear/Final gear oil (See page 47 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 80W/90 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 for wear.

**For XS1100H**

	FRONT	REAR
BASIC WEIGHT with oil and full fuel tank	126 kg (278 lb)	151 kg (333 lb)
Standard tire	Bridgestone 3.50H19-4PR	Bridgestone 4.50H17-4PR
Maximum load limit*	190 kg (420 lb)	304 kg (670 lb)
Cold tire pressure		
Up to 90 kg (198 lb) load**	1.8 kg/cm <sup>2</sup> (26 psi)	2.0 kg/cm <sup>2</sup> (28 psi)
90 kg (198 lb) load ~ 150 kg (331 lb) load**	2.0 kg/cm <sup>2</sup> (28 psi)	2.5 kg/cm <sup>2</sup> (36 psi)
150 kg (331 lb) load ~ 217 kg (478 lb) load** (Maximum load)	2.0 kg/cm <sup>2</sup> (28 psi)	2.8 kg/cm <sup>2</sup> (40 psi)
High speed riding	2.6 kg/cm <sup>2</sup> (36 psi)	2.8 kg/cm <sup>2</sup> (40 psi)
Minimum tire tread depth	0.8 mm (0.03 in)	0.8 mm (0.03 in)

\* Total weight of motorcycle with accessories, etc.

\*\* Total weight of accessories, etc. excepting motorcycle.



## For XS1100SH

	FRONT	REAR
BASIC WEIGHT with oil and full fuel tank	124 kg (273 lb)	145 kg (320 lb)
Standard tire	Bridgestone 3.50H19-4PR Tubeless tire	Bridgestone 130/90-16 67H Tubeless tire
Maximum load limit*	190 kg (420 lb)	304 kg (670 lb)
Cold tire pressure Up to 90 kg (198 lb) load** 90 kg (198 lb) load ~ 150 kg (331 lb) load** 150 kg (331 lb) load ~ 217 kg (478 lb) load** (Maximum load) High speed riding	1.8 kg/cm <sup>2</sup> (26 psi) 2.0 kg/cm <sup>2</sup> (28 psi) 2.0 kg/cm <sup>2</sup> (28 psi) 2.0 kg/cm <sup>2</sup> (28 psi) 2.6 kg/cm <sup>2</sup> (36 psi)	2.0 kg/cm <sup>2</sup> (28 psi) 2.5 kg/cm <sup>2</sup> (36 psi) 2.8 kg/cm <sup>2</sup> (40 psi) 2.8 kg/cm <sup>2</sup> (40 psi)
Minimum tire tread depth	0.8 mm (0.03 in)	0.8 mm (0.03 in)

\* Total weight of motorcycle with accessories, etc.

\*\* Total weight of accessories, etc. excepting motorcycle.

## 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.

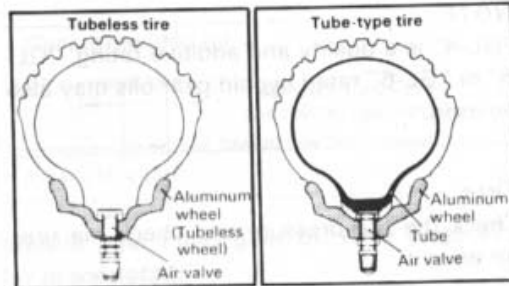
**WARNING:**

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

**WARNING:**

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



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

1. Always maintain proper tire pressure as described in the Chart on page 26.
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.

-27-

4. Always inspect the aluminum wheels before a ride. Place the motorcycle on the center stand and check for cracks, bends or warpage of the wheels. If any abnormal condition exists in a wheel, consult your 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 injury to the motorcycle and injury 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: 0.15 m·kg (1.1 ft·lb)

The standard equipment tires originally fitted to the XS1100H/XS1100SH are suited to normal riding and touring. They are not suited for 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 de-

-28-

signed 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 your 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, an accident, and injury.

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



-29-

#### WARNING:

It is dangerous to ride with a worn-out tire. When a tire tread begins to show lines. Have your 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 your Yamaha dealer.

#### Fittings/Fasteners

Always check the tightness of chassis fittings and fasteners before a ride. Use the chart on page 44 to find the correct torque.

#### Lights and signals

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

#### Switches

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

#### Battery (See page 66 for more detail)

Check fluid level and top-up if necessary. Use only distilled water if refilling is necessary.

#### Fuel

Make sure there is sufficient fuel in the tank.

#### Recommended gasoline:

Regular gasoline

#### Fuel tank capacity:

XS1100H: 24 liter (6.3 US gal)

XS1100SH: 15 liter (4.0 US gal)

-30-

## OPERATION AND IMPORTANT RIDING POINTS

### CAUTION:

1. Before riding this motorcycle, become thoroughly familiar with all operating controls and their function. Consult your Yamaha dealer or other qualified mechanic regarding any control or function you do not thoroughly understand.
2. Be careful where you store personal items on the motorcycle. Avoid blocking the air cleaner intake or performance will suffer.
3. Be careful not to put anything near the battery and its terminals. Electrical failure and acid corrosion may result.

### WARNING:

1. 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.
2. Before starting out, always be sure the side stand is up. Failure to retract the side stand completely can result in a serious accident when you try to turn a corner.

### Starting and warming up a cold engine

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

-31-

### NOTE:

A starting circuit cut off switch has been provided on this model.

The engine can be started by the following conditions:

- a. When the transmission is in neutral. At this time the neutral indicator light (green) should be on.  
If the light does not come on ask your Yamaha dealer or other qualified mechanic to inspect.
- b. When the clutch is disengaged with the transmission in any gear.

4. Pull the carburetor starter lever (CHOKE) fully toward you and completely close the throttle grip.
5. Start the engine by pushing the starter button.

### NOTE:

If the engine fails to start, release the starter button, then push the starter button 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.

### CAUTION:

The oil pressure indicator light should go off after the engine is started.

If the indicator light flickers or remains on, immediately stop the engine and check the engine oil level and for oil leakage.

If necessary, replenish oil, restart the engine, and check to see that the oil pressure indicator light goes off.

If the light does not go off even with sufficient oil in the crankcase, consult your Yamaha dealer or other qualified mechanic.

-32-

6. After starting the engine, push the starter lever half-way back (warm up position).

**NOTE:**

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

7. After warming up the engine, turn off the starter (push the lever back completely).

**NOTE:**

To see whether or not the engine is warm, see if engine responds to throttle normally with the starter turned off 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 jet 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.

**Starting a warm engine**

To start a warm engine, the starter lever (CHOKE) is not required.

**CAUTION:**

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

-33-

**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 12)

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 speed 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. To accelerate use the same procedure to shift into the next higher gear according to the Recommended Shift Point Chart below.

**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 into neutral. The green neutral indicator light should come on.

-34-

### 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.

-35-

### 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 ~ 90 mi):  
Avoid operation 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 (90 ~ 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:

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

### Parking

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

#### NOTE:

Select a parking place where the motorcycle is not apt to fall.

-36-

## 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)."**

### CAUTION:

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 SERVICES 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.

-37-

### 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 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, and render it unsafe for use. Consult your Yamaha dealer or other qualified mechanic before attempting any changes.

-38-

## 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 after initial 13,000 km (8,000 mi).		○	○	Replace. Every 12,000 km or 18 months (7,500 mi)
4*	Crankcase ventilation system	<b>Check fuel hose and vacuum pipe for cracks or damage. Replace if necessary.</b>		○		○
5*	<b>Fuel line</b>	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 your Yamaha dealer or other qualified mechanic.

-39-

### 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.

Normally, all spark plugs from the same engine should have the same coloration on the white porcelain insulator around the center electrode. The ideal coloration at this point is a medium to light tan color for a motorcycle that is being ridden normally. If one spark plug shows a distinctly different color, there could be something wrong with 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 your 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 type.

Standard spark plug:  
BP6ES (NGK) or N-8Y (CHAMPION)

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

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

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

-40-



Spark plug torque:  
2.0 m·kg (14.5 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 turns 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 25	○	○	○		
2	Oil filter	Replace.	—	○	○		○	
3	Middle/Final gear oil	Replace.	Refer to page 25	○			○	
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 10W/30 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
9*	Drive shaft joint	Apply 25 ~ 30 cc of specified grease	Molybdenum disulfide grease NLGI-2M		○	○		

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
10	Brake pedal shaft	Apply grease lightly.	Lithium soap base grease		○	○		
11	Change pedal shaft/Brake and clutch lever pivot	Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W/30 motor oil		○	○		
12	Center and side stand pivots	Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W/30 motor oil		○	○		
13*	Front fork oil	Drain completely. Refill to specification.	Yamaha fork oil 10Wt or equivalent					○
14+	Steering bearing	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.	—		○	○		
16	Battery	Check specific gravity. Check breather pipe for proper operation.	—		○	○		

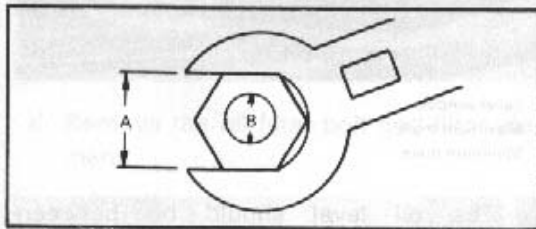
\* It is recommended that these items be serviced by your Yamaha dealer or other qualified mechanic.

-43-

### 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 checked occasionally, especially before a long trip. Always check the tightness of



A (Nut)	B (Bolt)	General torque specifications	
		m kg	ft-lb
10 mm	6 mm	0.6	4.5
12 mm	8 mm	1.5	11
14 mm	10 mm	3.0	22
17 mm	12 mm	5.5	40
19 mm	14 mm	8.5	61
22 mm	16 mm	13.0	94

these items whenever they are loosened for any reason.

Item	Torque
Spark plug	2.0 m-kG (14.5 ft-lb)
Engine drain plug	4.3 m-kG (31.0 ft-lb)
Middle gear drain plug	4.3 m-kG (31.0 ft-lb)
Oil filter bolt	3.2 m-kG (23.1 ft-lb)
Change pedal	1.0 m-kG ( 7.0 ft-lb)
Front engine mount bolts (XS1100H)	6.7 m-kG (48.5 ft-lb)
Front engine mount bolts (upper) (XS1100SH)	5.5 m-kG (40.0 ft-lb)
Front engine mount bolts (lower) (XS1100SH)	6.7 m-kG (48.5 ft-lb)
Rear engine mount bolts	10.0 m-kG (72.5 ft-lb)
Steering pinch bolts (8 mm stud)	2.0 m-kG (14.5 ft-lb)
Shock absorber (top) (XS1100H)	3.2 m-kG (23.0 ft-lb)
Shock absorber (bottom-left) (XS1100H)	3.2 m-kG (23.0 ft-lb)
Shock absorber (bottom-right) (XS1100H)	4.2 m-kG (30.5 ft-lb)
Shock absorber (top) (XS1100SH)	3.9 m-kG (28.0 ft-lb)
Shock absorber (bottom) (XS1100SH)	3.9 m-kG (28.0 ft-lb)
Front wheel axle	10.7 m-kG (77.5 ft-lb)
Front axle holder (XS1100H)	2.0 m-kG (14.5 ft-lb)
Front axle pinch bolt (XS1100SH)	2.0 m-kG (14.5 ft-lb)
Rear wheel axle	15.0 m-kG (108.5 ft-lb)
Rear axle pinch bolt	0.6 m-kG ( 4.5 ft-lb)
Final gear drain plug	2.3 m-kG (16.5 ft-lb)

-44-

## Engine oil

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

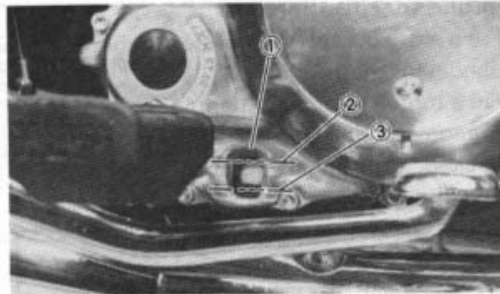
### NOTE:

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.

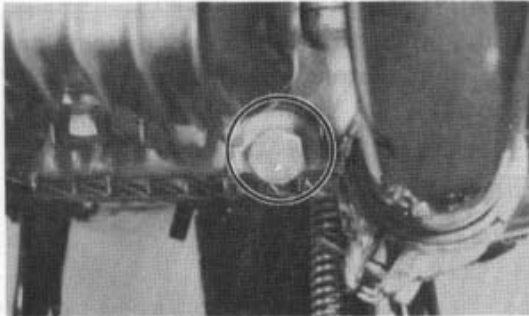


1. Level window
2. Maximum mark
3. Minimum mark

- c. The oil level should be between maximum and minimum marks. If the level is lower, add sufficient oil to raise it 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 cover.
  - c. Remove the drain plug and drain the oil.

-45-



- d. Remove the oil filter bolt and filter element.

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

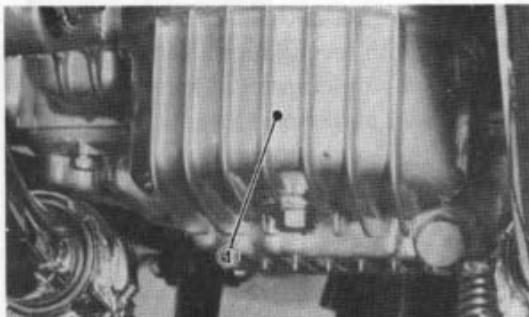
Drain plug torque: 4.3 m·kg (31.0 ft·lb)

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

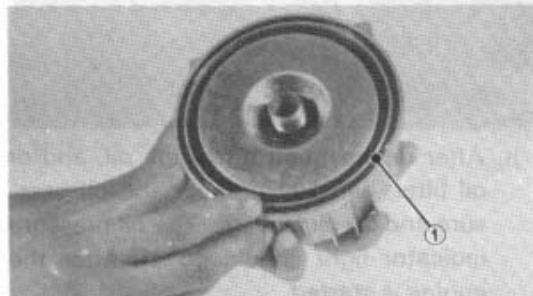
Oil filter bolt: 3.2 m·kg (23.1 ft·lb)

### NOTE:

Make sure the "O" ring is positioned properly.



1. Oil filter cover

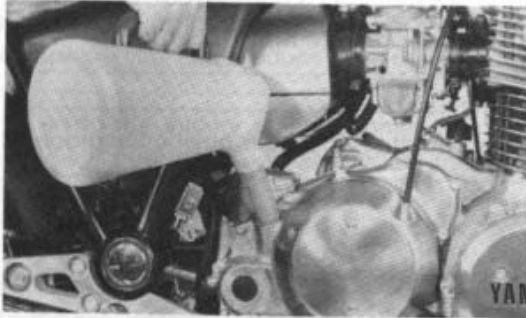


1. Proper O-ring position

-46-

g. Add oil through the oil filler hole.

Periodic oil change:  
3.0 lit (3.20 US qt)  
With oil filter replacement:  
3.5 lit (3.70 US qt)  
Recommended oil: See page 25.



h. After replacement of engine oil, and/or oil filter, be sure to check the oil pressure and for oil leakage. The oil pressure indicator light should go off after the engine is started.

**CAUTION:**

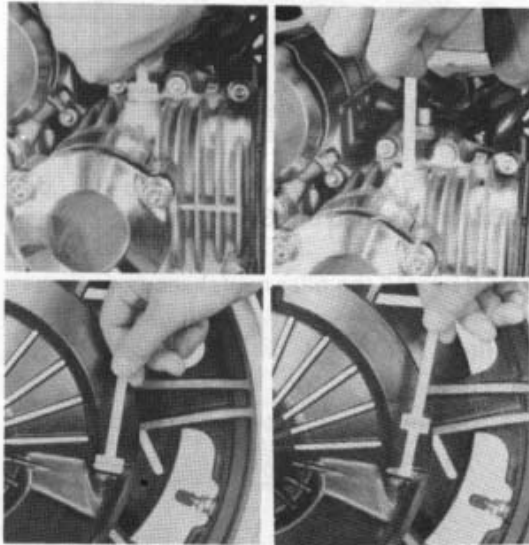
If the indicator light flickers or remains on, immediately stop the engine and consult your Yamaha dealer or other qualified mechanic.

**Middle gear/Final gear oil**

1. Oil level measurement
  - a. Place the motorcycle on a level place and place it on the center stand. 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.

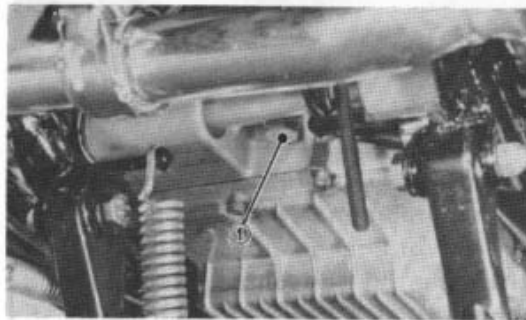
**NOTE:**

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

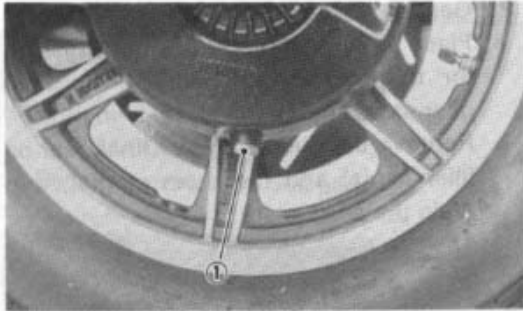


2. Gear oil replacement

- a. Place an oil pan under the transmission for the middle gear and/or 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 44 for torque specifications.)
- d. Fill the gear case(s) to the specified level.

Oil capacity:

Middle gear case:  
0.375 lit (0.40 US qt)

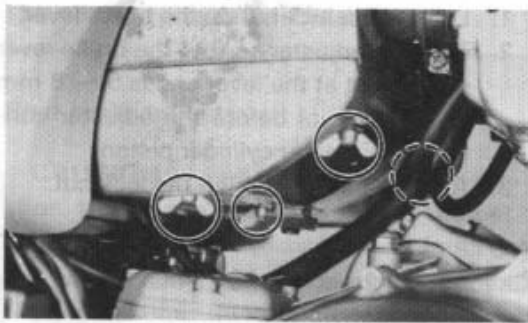
Final gear case:  
0.30 lit (0.32 US qt)

Recommended oil: See page 25.

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

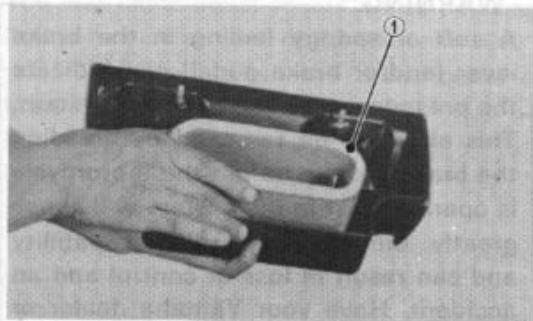
**Air filter**

- 1. Removal
  - a. Remove the air filter case cap by loosening the wing bolt.

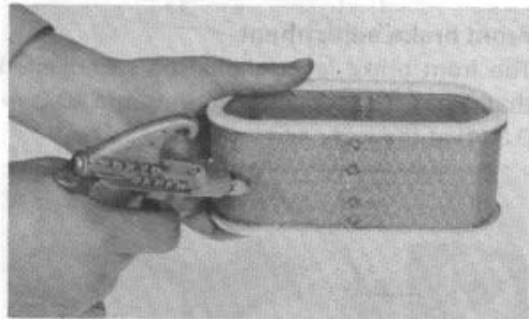


b. Pull out the element.

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



1. Air filter element



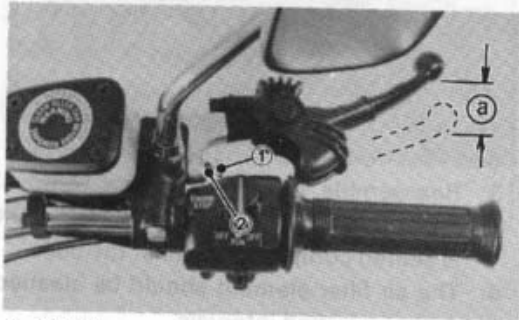
- 3. Reassemble by reversing the removal procedure. Check whether the element is seated completely against the case.
- 4. The air filter element should be cleaned at the specified intervals.

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

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.

**WARNING:**

A soft or spongy feeling in the brake lever (and/or brake pedal) 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 cause greatly diminished braking capability and can result in loss of control and an accident. Have your Yamaha dealer or other qualified mechanic inspect and

-51-

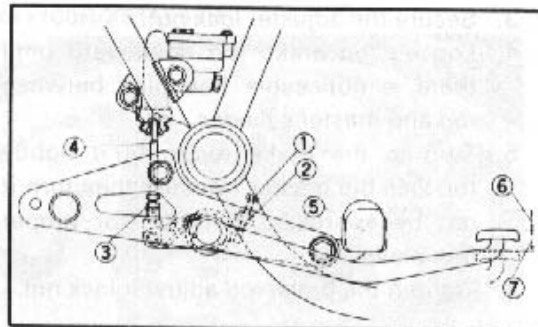
bleed the system if necessary.

**Rear brake adjustment**

**CAUTION:**

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

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 brake pedal is stepped on to when the brake begins to be effected.



- 1. Adjuster bolt (for pedal height)
- 2. Lock nut
- 3. Lock nut
- 4. Brake rod
- 5. Footrest
- 6. Pedal height 17~23 mm (0.67~0.91 in)
- 7. Free play 13~15mm (0.51~0.59 in)

1. Loosen the adjuster lock nut (for pedal height).
2. By turning the adjuster bolt clockwise or counterclockwise, adjust the brake pedal position so that its top end is approx. 17 ~ 23 mm (0.67 ~ 0.91 in) below the footrest top end.

-52-

3. Secure the adjuster lock nut.
4. Loosen the brake rod downward until there is noticeable free play between rod and master cylinder.
5. 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).
6. 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.

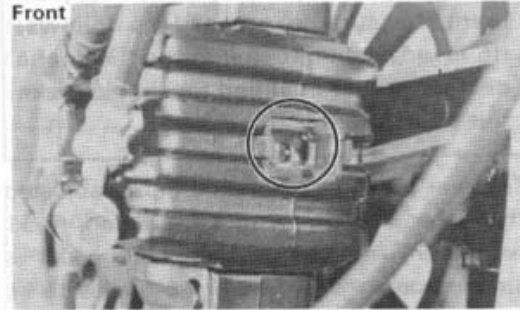
**Checking the front and rear brake pads**

A wear indicator is attached to each brake pad to facilitate disc brake pad checks. This indicator permits a visual check without disassembling the pads.

**FRONT (For XS1100H):**

To check, open the wear indicator cap. If any pad is worn to the red line, ask a Yamaha dealer or other qualified mechanic to replace the pads.

**XS1100H**  
Front

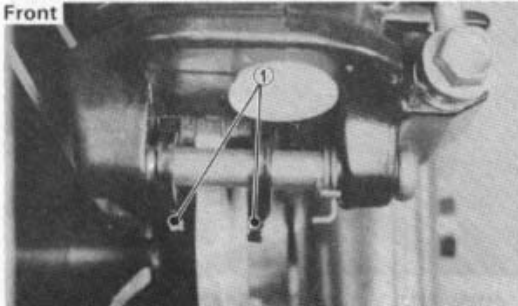


**FRONT (For XS1100SH):**

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

**XS1100SH**

Front



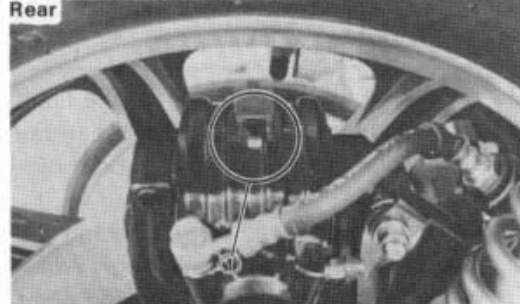
1. Wear indicator

**REAR (For XS1100H/XS1100SH):**

To check, open the wear indicator cap. If any pad is worn to the red line, ask a Yamaha dealer or other qualified mechanic to replace the pads.

**XS1100H/XS1100SH**

Rear



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.

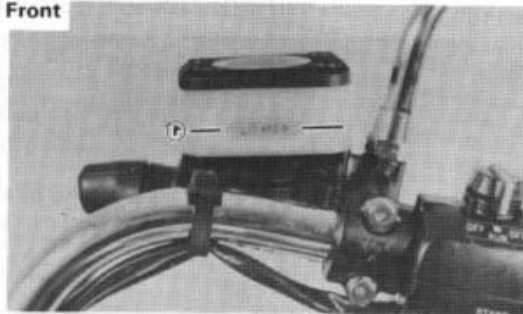
Before riding, check the brake fluid level and replenish when necessary, and observe these precautions:

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

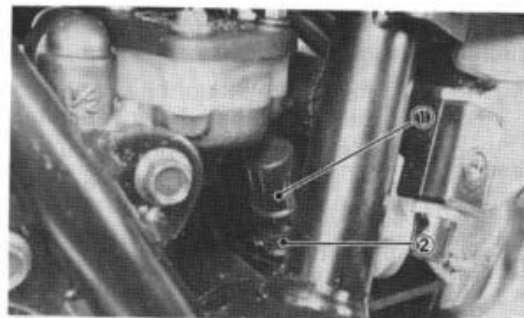
-55-

### Brake fluid replacement

1. Complete fluid replacement should be done only by trained Yamaha service personnel or other qualified mechanic.
2. Complete fluid replacement should be done whenever the caliper cylinder or master cylinder is disassembled, or the fluid becomes seriously contaminated.
3. 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

-56-



required is maintenance of free play at the clutch handlebar lever.

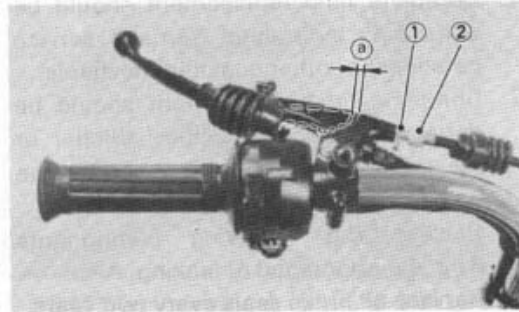
1. Free play adjustment

Loosen the handlebar lever adjuster lock nut. Next turn the length adjuster either in or out until proper lever free play is achieved.

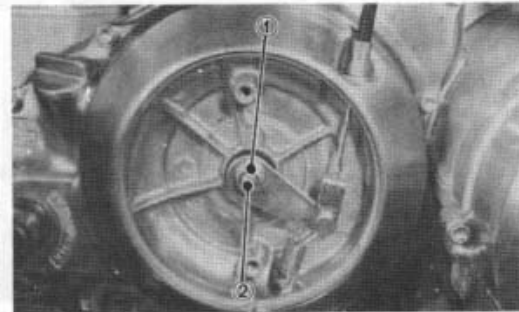
2. Mechanism adjustment

The second adjustment is located behind the adjusting cover. Removing the cover will expose the adjuster and lock nut. Before making the mechanism adjustment, loosen the clutch cable length adjuster. 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 incomplete clutch operation. Recheck clutch cable adjust-

ment at the handlebar after adjusting.



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



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.

If the inner cables do not operate smoothly, lubricate or replace them.

Recommended lubricant:

Yamaha Chain and Cable Lube or  
SAE 10W/30 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 of lubricant. With the throttle grip dis-

assembled, coat the metal surface 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 your Yamaha dealer or other qualified mechanic check rear arm pivot bearing operation according to the General Maintenance Schedule.

### Brake pedal

1. Remove the grease fitting cover on the brake pedal shaft.
2. Apply lithium base lightly.
3. Reinstall the grease fitting cover.

### Change pedal/Brake and clutch lever

Lubricate the pivoting parts of each lever and pedal.

Recommended lubricant:

Yamaha Chain and Cable Lube or  
SAE 10W/30 motor oil

### Center and side stand pivots

Lubricate the center and side stands at their pivot points.

#### Recommended lubricants:

Yamaha Chain and Cable Lube or  
SAE 10W/30 motor oil

### Front fork oil change

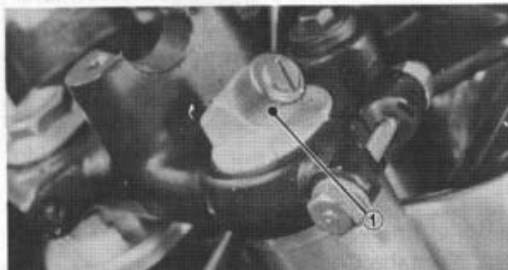
#### WARNING:

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

1. Raise the motorcycle or remove the front wheel so that there is no weight on the front end of the motorcycle.  
Remove the handlebar.
2. Remove the air valve caps from the left

and right fork cap bolts.

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



4. Loosen the front fork pinch bolts and remove the cap bolts from the inner fork tubes.
5. Place an open container under each drain hole. Remove the drain screw from each outer tube.



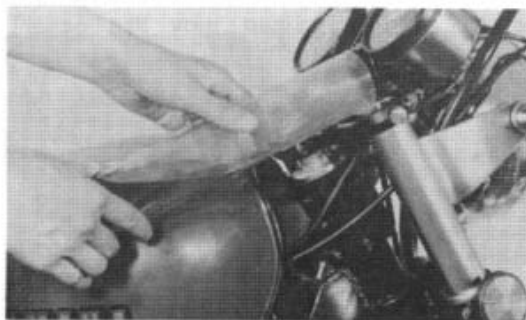
1. Drain screw

#### 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 brak-

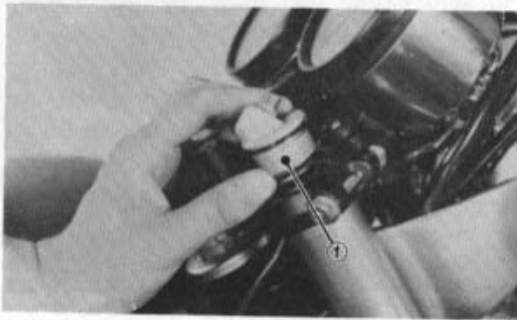
ing capacity and will damage the rubber components of the brake assembly.

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 screw gasket. Replace if damaged. Reinstall the drain screw.
8. Pour specified amount of oil into the fork inner tube.



Front fork oil (each fork):  
 XS1100H : 241 cc (8.15 oz)  
 XS1100SH: 210 cc (7.10 oz)  
 Yamaha Fork Oil 10Wt or equivalent

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



1. Cap bolt

11. Reinstall the cap bolt and fill the fork with air using a manual air pump or other pressurized air supply. Refer to "Front fork and rear shock absorber adjustment" for proper air pressure adjusting.

Cap bolt torque: 2.3 m·kg (16.5 ft·lb)  
 Pinch bolt torque: 2.0 m·kg (14.5 ft·lb)  
 Maximum air pressure:  
 2.5 kg/cm<sup>2</sup> (36 psi)  
 Do not exceed this amount.

### Front fork and rear shock absorber adjustment

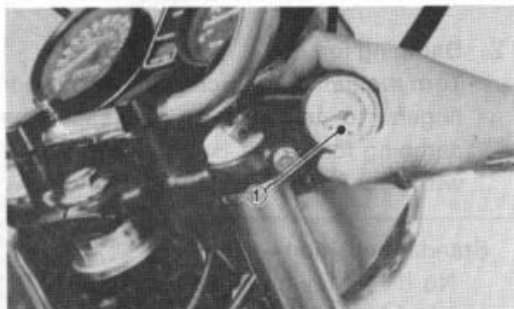
#### Front fork:

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

#### NOTE:

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

2. Remove the air valve caps from the left and right fork cap bolts.
3. Using the air check gauge, check and adjust the air pressure.



1. Air check gauge

If the air pressure is increased, the suspension becomes stiffer and if decreased, it becomes softer.

To increase:

Use a manual air pump or other pressurized air supply.

To decrease:

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:

0.4 kg/cm<sup>2</sup> (5.7 psi)

Maximum air pressure:

2.5 kg/cm<sup>2</sup> (36 psi)

Minimum air pressure: Zero

- \* Never exceed the maximum pressure, or oil seal damage may occur.
- \* The difference between both the left and right tubes should be 0.1 kg/cm<sup>2</sup> (1.4 psi) or less.

4. Install the air valve caps securely.

#### Rear shock absorber:

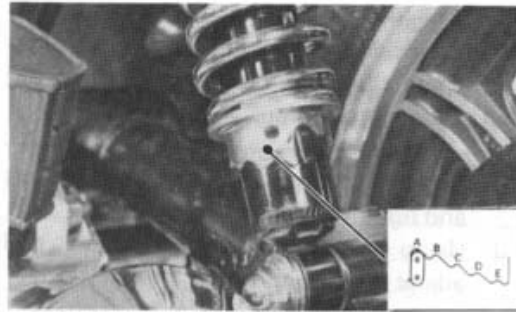
1. Spring preload

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

Standard position — A

A. position — Softest

E. position — Stiffest



2. Damping force

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

Standard position — No. 1

No. 1 — Minimum damping force

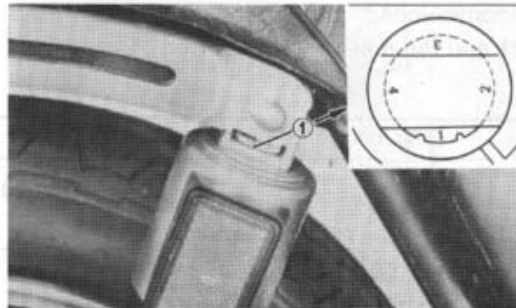
No. 4 — Maximum damping force

-63-

#### NOTE:

When adjusting the damping force, the adjuster should be placed in the clicked position. If not, the damping force will be set to the maximum (No. 4).

Always adjust both the right and left absorbers to the same position.



1. Damping force adjuster

-64-

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	Spring seat	Damping adjuster	Solo rider	With passenger	With accessory equipments and/or passenger
1.	0.4~1.0 kg/cm <sup>2</sup> (5.7~14 psi)	A~E	1	○		
2.	0.4~1.0 kg/cm <sup>2</sup> (5.7~14 psi)	A~E	2	○	○	
3.	1.0~1.5 kg/cm <sup>2</sup> (14~21 psi)	C~E	3		○	○
4.	1.5 kg/cm <sup>2</sup> (21 psi)	E	4			○

-65-

### Steering inspection

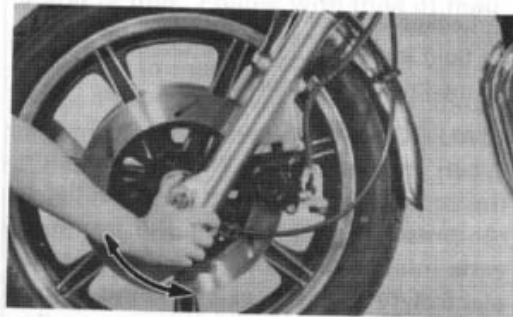
Periodically inspect the condition of the steering. Worn out or loose steering bearings may be dangerous.

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 it forward and backward. 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 your Yamaha dealer or a 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

-66-

be checked at least once a month. The fluid level should be between the upper and the lower level marks.

**CAUTION:**

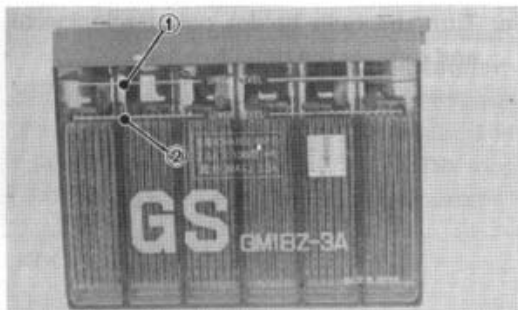
When inspecting the battery, be sure the breather pipe is routed correctly. If the breather pipe touches the frame or exits in such a way as to cause battery electrolyte or gas to exit onto the frame, structural and cosmetic damage to the motorcycle can occur.

**NOTE:**

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

Refill the battery as follows:

1. Loosen the 2 nuts that hold the seat to the frame. Slide the bolts in the seat to the front (out of the slots in the frame) and remove the seat.

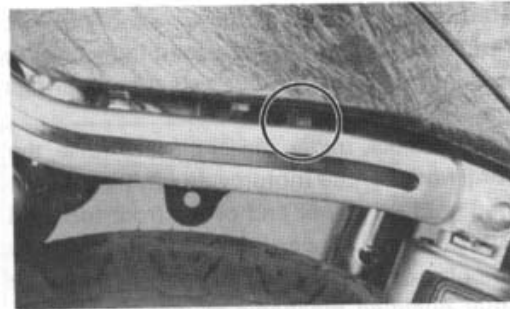


1. Upper level 2. Lower level

3. Securely tighten the filling plug.
4. Install the seat. Slide the seat bolts into the frame slots and tighten the nuts securely.

**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



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

**CAUTION:**

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

-67-

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 eyes when working near batteries.

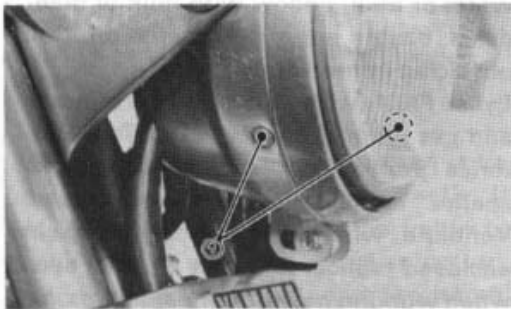
**KEEP OUT OF REACH OF CHILDREN.**

**Headlight**

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

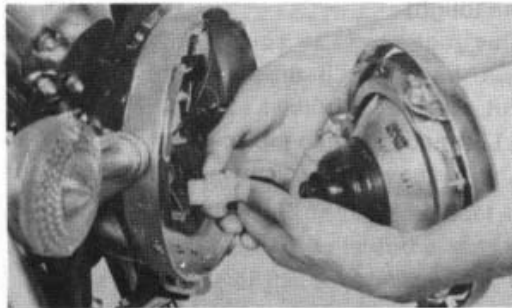
1. Headlight bulb replacement
  - a. Remove the 2 screws holding the light unit assembly to the headlight body.

-68-

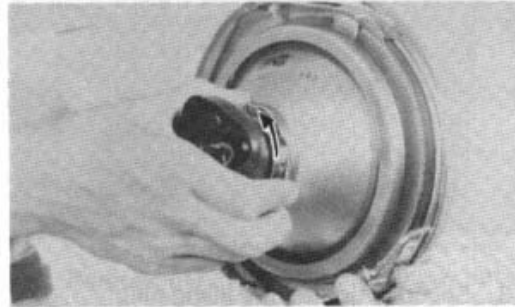


1. Holding screw

- 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:**

1. 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.

2. 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 (For XS1100H)

- a. Horizontal adjustment:

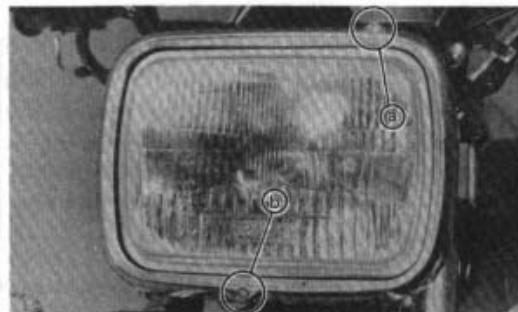
To adjust the beam to the right, turn the adjusting screw clockwise.

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

- b. Vertical adjustment:

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

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



a. Horizontal adjusting screw  
b. Vertical adjusting screw

3. Headlight beam adjustment (for XS1100SH)

a. Horizontal adjustment:

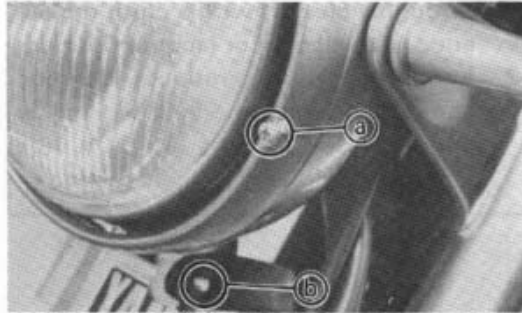
To adjust the beam to the right, turn the adjusting screw clockwise.

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

b. Vertical adjustment:

Vertical adjustment is made at the screw beneath the headlight body.

To adjust, loosen the screw and tilt the headlight body up or down by pushing it with your hands. Tighten the screw securely after the adjustment is completed.

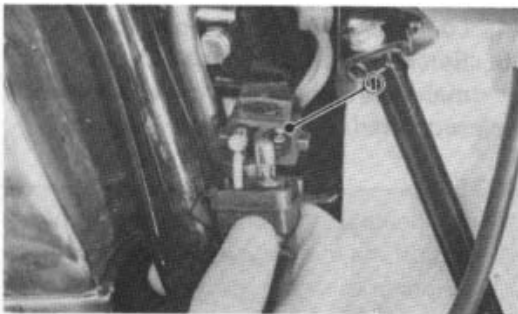


a. Horizontal adjusting screw    b. Vertical adjusting screw

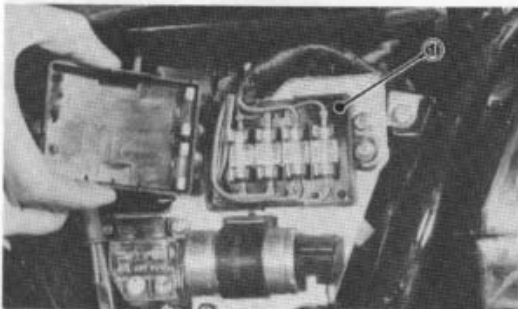
### Fuse replacement

1. There are two fuse blocks on this motorcycle. The main fuse block is located inside the left side cover. The other fuse block is located inside the right side cover.

-71-



1. Main fuse block



1. Other fuse block

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, and see if the electrical device operates. If the fuse immediately blows again, consult your Yamaha dealer or other qualified mechanic.

**WARNING:**

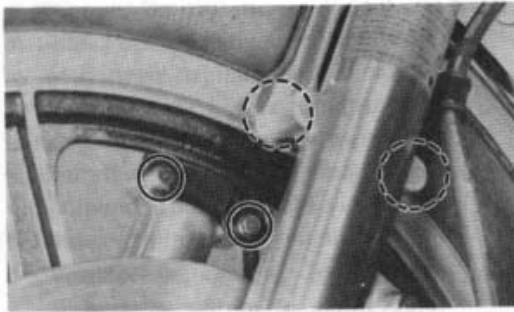
Do not use fuses of a higher amperage rating than those recommended. Substitution of a fuse of improper rating can cause extensive electrical system damage and possible fire.

### Front wheel removal (For XS1100H)

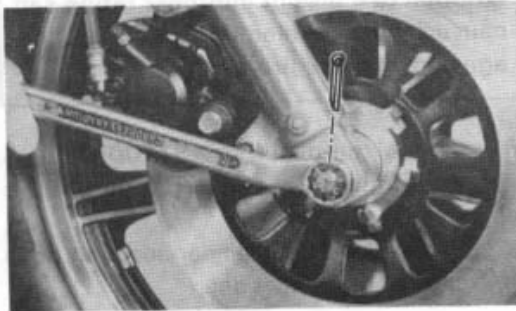
1. Place the motorcycle on the center stand.
2. Remove the front fender securing bolts and remove the fender.

-72-





3. Remove the cotter pin and wheel axle nut.



4. Loosen the wheel axle holder nuts.
5. Remove the axle shaft. In this case, make sure the motorcycle is properly supported.

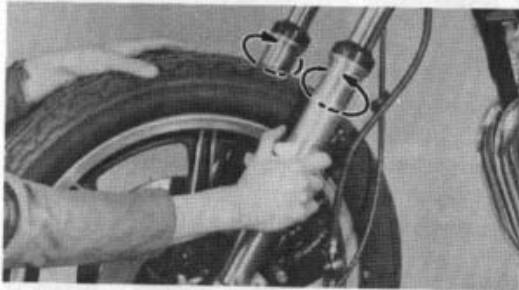
**NOTE:**

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

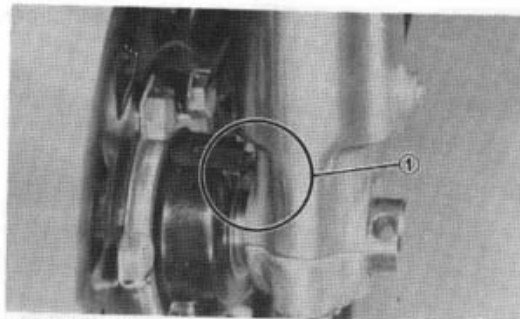


-73-

6. Lower the wheel until the discs come off the calipers. Then turn the calipers outward to the extent of causing no obstacle to wheel removal and remove the wheel.



7. During reassembly, check the following:
  - a. Make sure the projecting portion (torque stopper) of the speedometer housing is positioned correctly.



1. Torque stopper

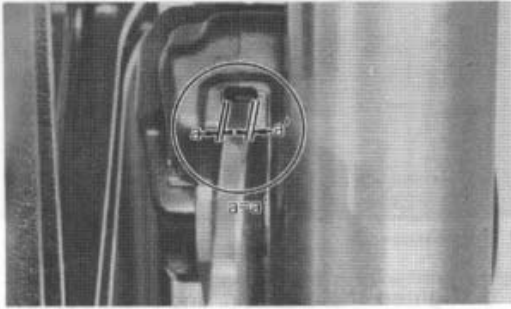
- b. Tighten the axle nut and install a new cotter pin.

Axle nut torque: 10.5 m·kg (76.0 ft·lb)

- c. Install the front fender.
- d. Before tightening the holder nuts, stroke the front forks several times to make sure of proper fork operation. With the axle holder nuts loose, work the left fork leg back and forth until the proper

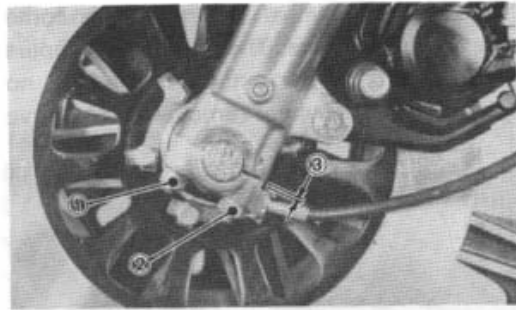
-74-

clearance between the disc and caliper bracket are obtained.



- e. Tighten the axle holder nuts. First tighten the nut on the front end of the axle holder, then tighten the nut on the rear end.

Axle holder nut torque:  
2.0 m-kg (14.5 ft-lb)

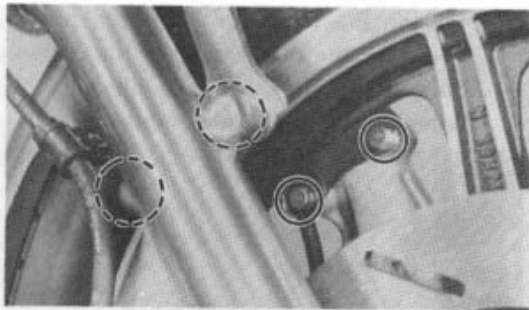


1. 1st 2. 2nd 3. Gap

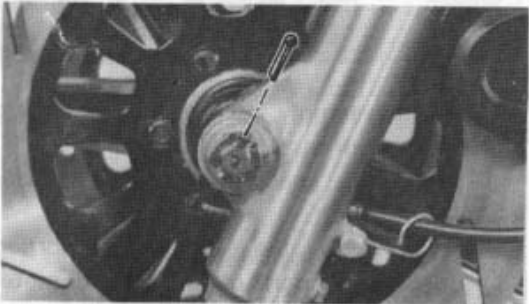
#### Front wheel removal (For XS1100SH)

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

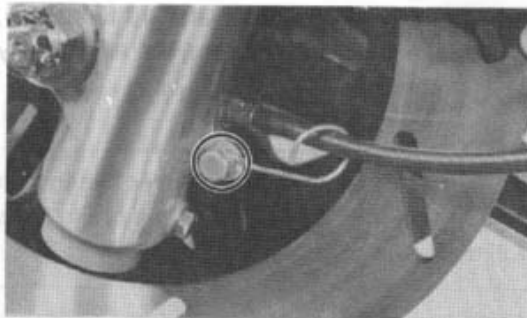
-75-



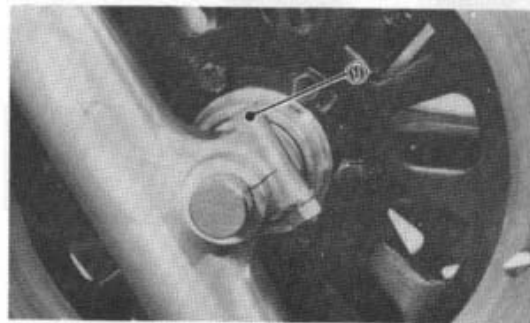
3. Remove the cotter pin and wheel axle nut.



4. Remove the speedometer cable holder securing bolt.



5. Loosen the pinch bolt securing the axle.



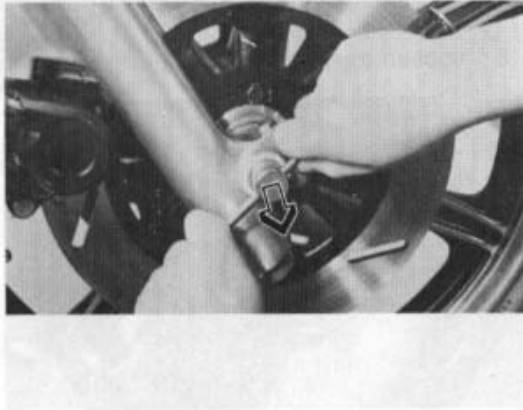
1. Pinch bolt

-76-

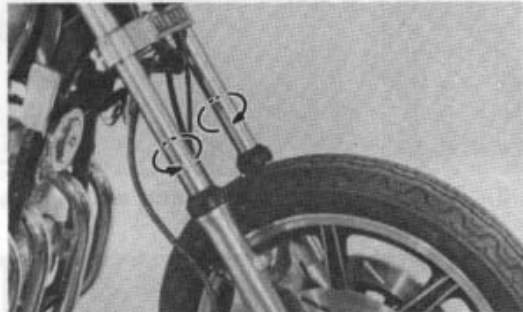
6. Remove the axle shaft. In this case, make sure the motorcycle is properly supported.

**NOTE:**

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

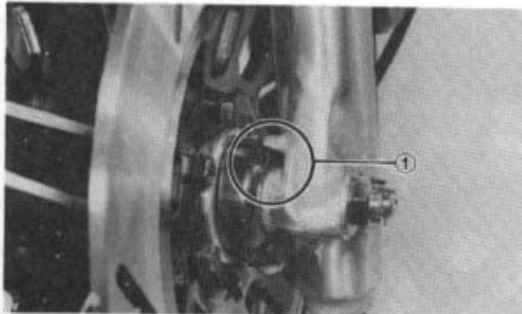


7. Loosen the wheel until the brake discs come off the calipers. Turn the calipers outward so they do not obstruct the wheel and remove the wheel.



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

-77-



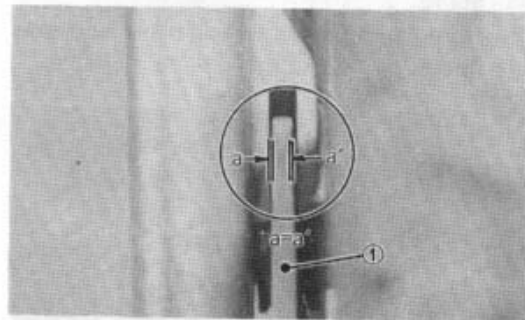
1. Torque stopper

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

Axle nut torque: 10.7 m-k<sub>g</sub> (77.4 ft-lb)

- d. Install the front fender.
- e. Before tightening the pinch bolt, compress the front forks several times to make sure of proper fork operation. With the axle pinch bolt loose, work the right fork leg back and forth until the

proper clearance between the disc and caliper bracket on the front is obtained.



1. Brake disc

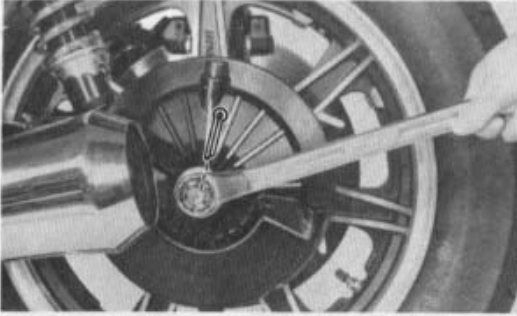
- f. Tighten the axle pinch bolt.

Axle pinch bolt torque:  
2.0 m-k<sub>g</sub> (14.5 ft-lb)

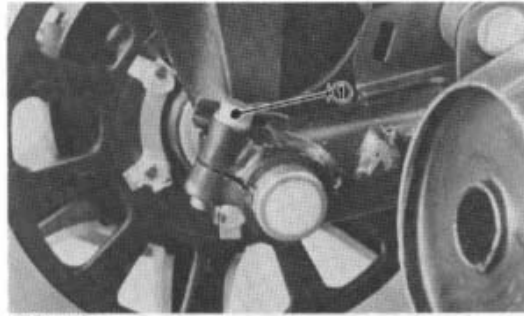
-78-

### Rear wheel removal

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

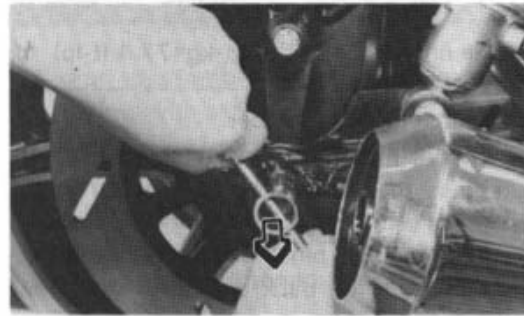


3. Loosen the rear axle pinch bolt.



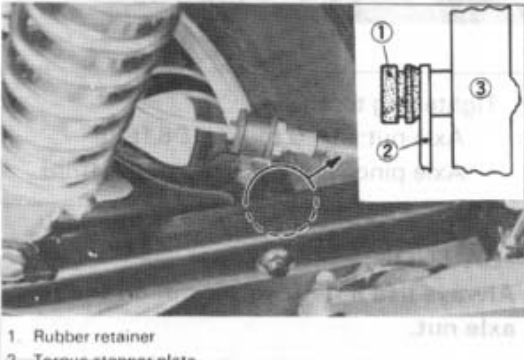
1. Pinch bolt

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

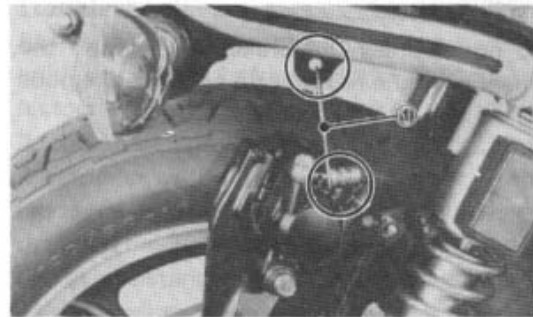


-79-

5. Pull out the rear brake torque stopper plate from where it is retained on the rear arm. Next, suspend the caliper assembly with the big end of the wire tool (contained in the owner's tool kit) hanging on the rear stay and the small end on the metal area of the brake caliper hose joint.

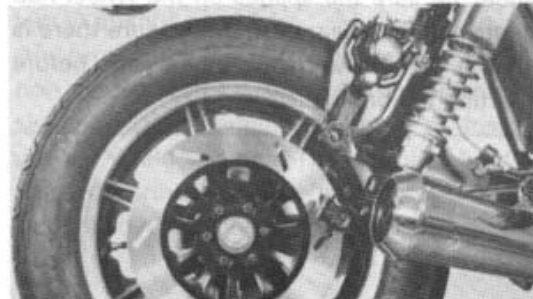


- 1 Rubber retainer
- 2 Torque stopper plate
- 3 Rear arm



- 1 Wire tool

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



-80-

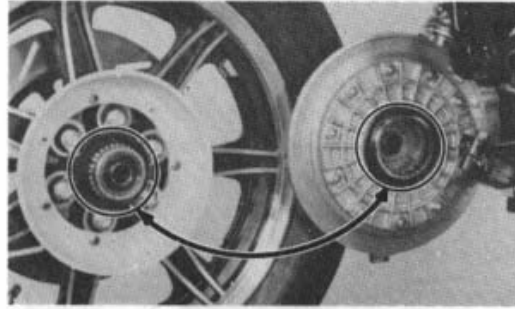
**NOTE:**

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

7. To install the rear wheel, reverse the removal procedure.

**NOTE:**

Before installing the rear wheel, apply a light coating of lithium base grease to the final gear case splines. When installing the rear wheel, be sure the splines on the wheel hub fit into the final gear case. Make sure there is enough gap between the brake pads before inserting the brake disc.



**Tightening torque:**

- Axle nut: 15.0 m·kg (108 ft·lb)
- Axle pinch bolt: 0.6 m·kg (4.5 ft·lb)

**CAUTION:**

Always use a new cotter pin on the rear axle nut.

**Carburetor adjustment:**

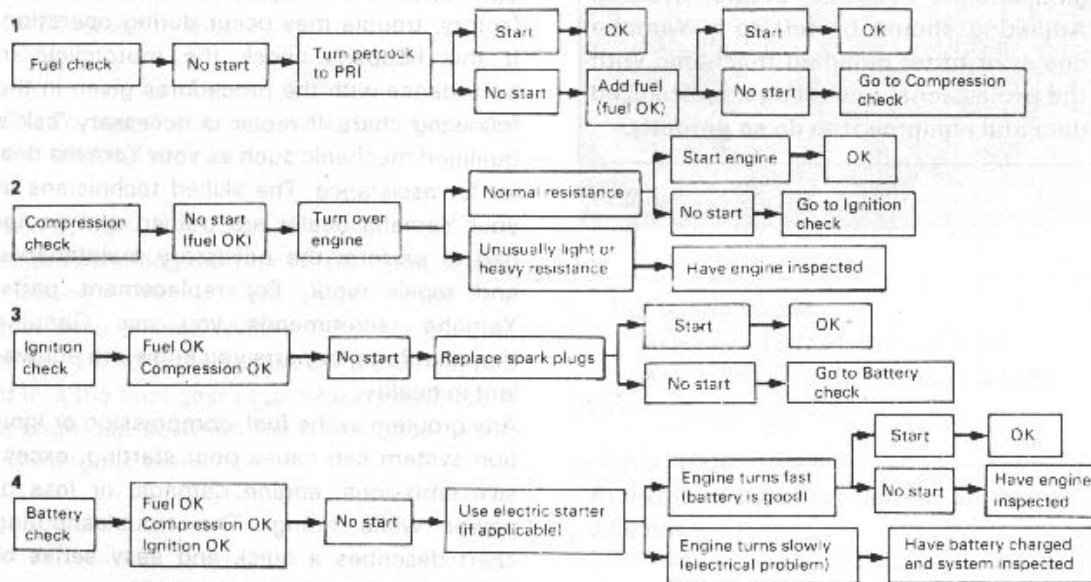
The carburetor is a vital part of the engine and its emission control system. Adjusting should be left to a Yamaha dealer or other qualified mechanic with the professional knowledge, specialized data and equipment to do so properly.

**Troubleshooting**

Although Yamaha motorcycles are given a rigid inspection before shipment from the factory, trouble may occur during 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 your Yamaha dealer for assistance. The skilled technicians at your Yamaha dealer are trained and equipped to perform the necessary maintenance and repair work. For replacement 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 a quick and easy series of system checks to locate the problem.

## Troubleshooting chart



-83-

## CLEANING AND STORAGE

### A. CLEANING

Frequent thorough cleaning of your motorcycle will not only enhance its appearance but will improve general performance and extend the useful life of many components.

1. Before cleaning the motorcycle:
  - a. Block off end of exhaust pipe to prevent water entry; a plastic bag and strong rubber band may be use.
  - b. Make sure spark plug and gas cap are properly installed.
2. If engine case is excessively greasy, apply degreaser with a paint brush. Do not apply degreaser to wheel axles.
3. Rinse dirt and degreaser off with a garden hose, using only enough hose pressure to do the job. Excessive hose pressure may cause water seepage and contamination of wheel bearings, front

forks, brake calipers, and transmission seals. Many expensive repair bills have resulted from improper use of high pressure detergent applications such as those available in coin-operated car washes.

4. Once the majority of the dirt has been hosed off, wash all surfaces with warm water and mild, detergent-type soap. An old tooth brush or bottle brush is handy to reach hard-to-get-to places.
5. Rinse 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, fenders, forks, etc., may be further cleaned with automotive chrome cleaner.
7. Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.

-84-

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 the motorcycle thoroughly, prepare for storage as follows:

1. Drain fuel tank, fuel lines, and carburetor float bowl.
2. Remove empty fuel tank, pour a cup of SAE 10W/30 or 20W/40 motor oil in tank, shake the tank to coat the inner surfaces thoroughly and drain off excess the oil. Reinstall the tank.

3. Remove the spark plug, pour about one tablespoon of SAE 10W/30 or 20W/40 motor oil in the spark plug hole and re-install the spark plug. Turn the engine over several times to coat the cylinder walls with oil.

### WARNING:

When using starter motor to crank the engine, remove spark plug wires and ground them to prevent sparking.

4. Lubricate all control cables.
5. Block up the frame to raise both wheels off the ground.
6. Tie a plastic bag over the exhaust pipe outlet to prevent moisture 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 any rubber parts or the seat cover.
8. Remove the battery and charge it. Store it in a dry place and recharge it once a

-85-

month. Do not store the battery in an excessively warm or cold place (less than 0°C (32°F) or more than 30°C (90°F)).

### NOTE:

Make any necessary repairs before storing the motorcycle.

-86-

## SPECIFICATIONS

### General specifications

MODEL	XS1100H	XS1100SH
Dimension:		
Overall length	2,260 mm (89.0 in)	2,275 mm (89.6 in)
Overall width	920 mm (36.2 in)	855 mm (33.7 in)
Overall height	1,175 mm (46.3 in)	1,230 mm (48.4 in)
Wheelbase	1,545 mm (60.8 in)	1,545 mm (60.8 in)
Minimum road clearance	150 mm ( 5.9 in)	155 mm ( 6.1 in)
Weight:		
Net	255 kg (562 lb)	252 kg (556 lb)
Performance:		
Minimum turning radius	2,600 mm (102.4 in)	2,700 mm (106.3 in)
Climbing capacity	28.5°	←
Engine:		
Type	4 stroke, gasoline, air-cooled, DOHC	←
Engine model	4R1	4R0
Cylinder	4-cylinder in-line, Forward inclined	←
Displacement	1,101 cc (67.18 cu.in)	←
Bore x stroke	71.5 x 68.6 mm (2.815 x 2.70 in)	←
Compression ratio	9.0 : 1	←
Starting system	Electric starter	←

-89-

MODEL	XS1100H	XS1100SH
Ignition system	Battery ignition (Full transistor ignition)	←
Fuel tank capacity Total	24 lit (6.3 US gal)	15 lit (4.0 US gal)
Engine oil quantity		
Total amount	4.2 lit (4.4 US qt)	4.0 lit (4.2 US qt)
Periodic oil change	3.0 lit (3.2 US qt)	←
Lubricating system	Wet sump	←
Battery type/capacity	GM18Z-3A/12V, 20AH	←
Generator	A.C. generator	←
Spark plug	BP6ES (NGK) or N-8Y (CHAMPION)	←
Carburetor	BS34-III (SU type) x 4	←
Air cleaner	Dry foam rubber	←
Clutch type	Wet, multiple disc	←
Transmission:		
Primary reduction system	HY-VO chain + gear	←
Primary reduction ratio	25/25 x 58/35 = 1.657	←
Secondary reduction system	Shaft drive	←
Secondary reduction ratio	44/47 x 19/18 x 33/10 = 3.261	←
Gear box type	Constant mesh, 5-speed forward	←
Operation system	Left foot operation	←
Gear ratio:		
First	38/17 (2.235)	←
Second	39/24 (1.625)	←
Third	36/28 (1.285)	←

-90-



MODEL	XS1100H	XS1100SH
Fourth	32/31 (1.032)	←
Fifth	30/34 (0.882)	←
<b>Chassis:</b>		
Frame type	Tubular, double-cradle	←
Steering: Caster	29°30'	←
Trail	130 mm (5.12 in)	←
Tire size: Front	3.50H19-4PR Tubeless tire	←
Rear	4.50H17-4PR Tubeless tire	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 spring, oil damper	←
Rear	Coil spring, oil damper	←
<b>Electrical:</b>		
Headlight	12V, 60W/55W (Quartz bulb)	←
Tail/brake light	12V, 8W (3CP)/27W (32CP) x 2	←
Flasher light	12V, 27W (32CP) x 4	←
Pilot lights: Flasher	12V, 3.4W x 2	←
High beam	12V, 3.4W x 1	←
Neutral	12V, 3.4W x 1	←
Headlight outage	12V, 3.4W x 1	←
Oil pressure	12V, 3.4W x 1	←

-91-

MODEL	XS1100H	XS1100SH
Low fuel gauge	—	12V, 3.4W x 1
Meter light	12V, 3.4W x 4	←
Parking light (Running light)	12V, 8W (3CP) x 2	—
Licence light	—	12V, 3.8W x 2

-92-

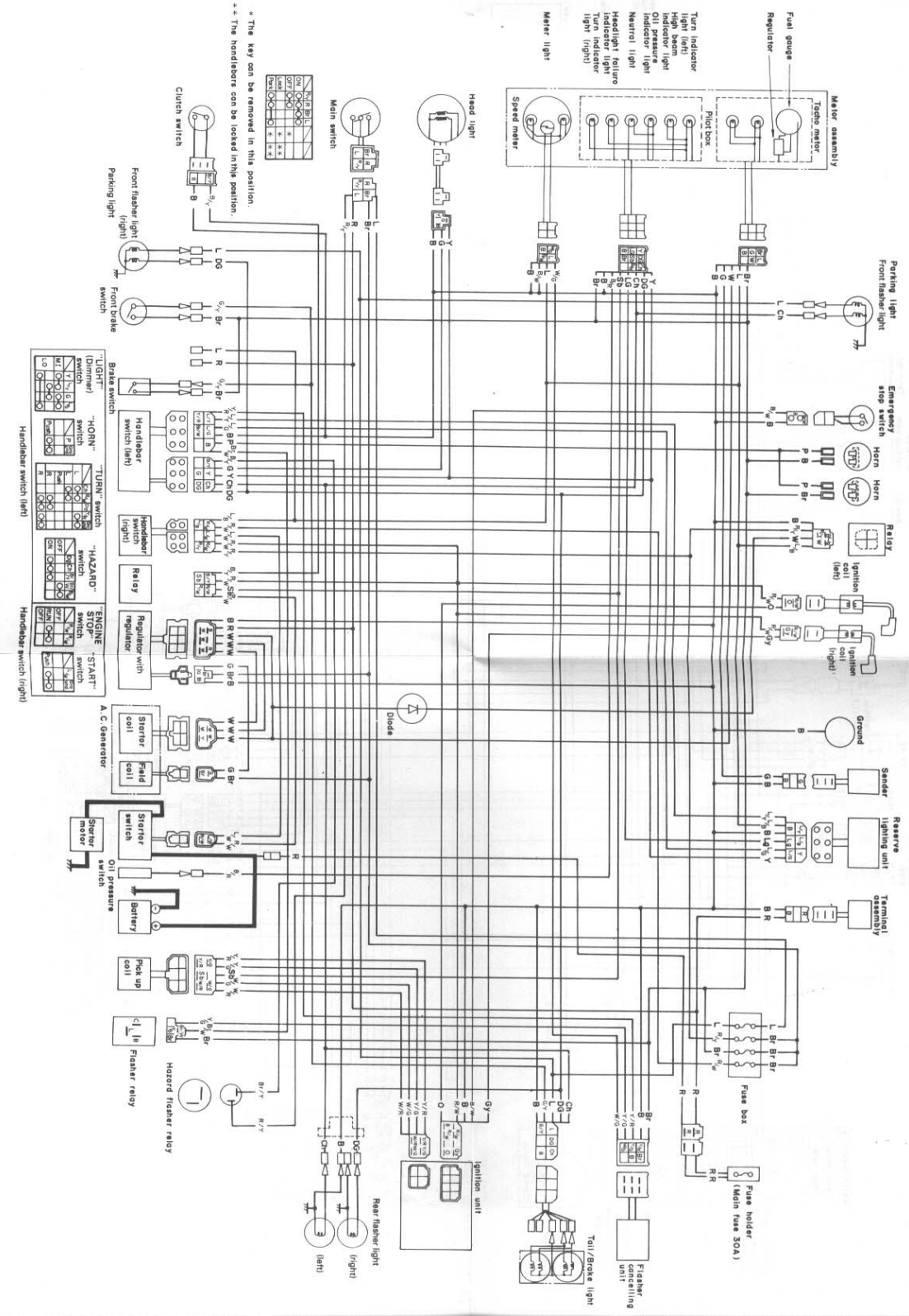
# WIRING DIAGRAM

## COLOR CODE

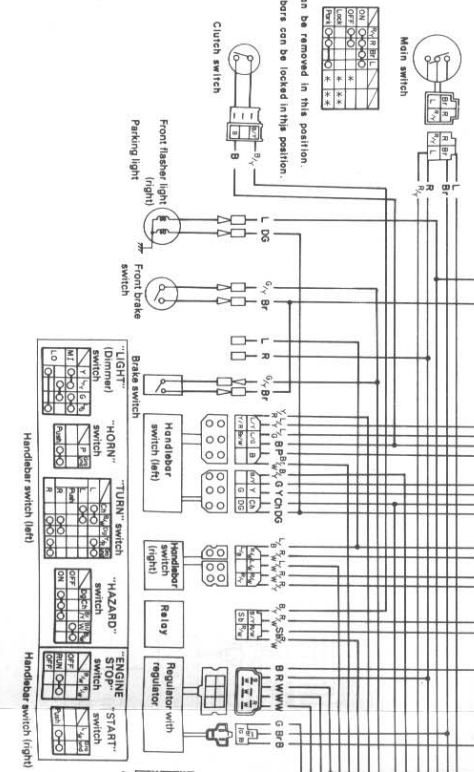
R.....Red	G.....Green
B.....Black	W.....White
Sb.....Sky blue	P.....Pink
Br.....Brown	Gy.....Gray
Ch.....Chocolate	O.....Orange
Dg.....Dark green	B/W.....Black/White
L.....Blue	G/Y.....Green/Yellow
Y.....Yellow	L/W.....Blue/White
Lg.....Light green	Br/W.....Brown/White
Y/R.....Yellow/Red	L/Y.....Blue/Yellow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

\*\*The few pages left out were the Stopping Distances and Acceleration and Passing Ability B.S. Info!! Also the actual wiring diagrams are large and an attempt to include them was done, not sure how the PDF file will turn out!

Hope this helps someone. "T.C." aka TopCatG...."Godzilla-SuperRat!"



\* The key can be removed in this position.  
\*\* The handbrake can be locked in this position.



# XS1100SH

