



**YAMAHA**

**XV1100W**

**OWNER'S MANUAL**

**3EG-28199-20**

## IDENTIFICATION NUMBERS RECORD

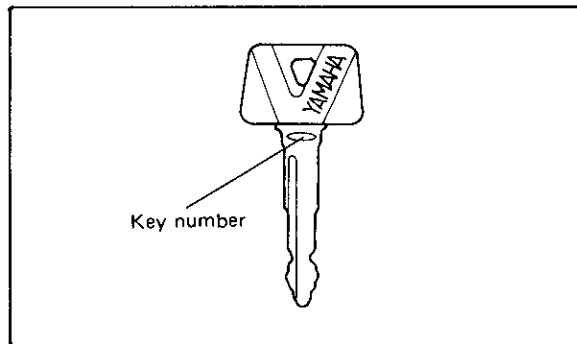
### 1. KEY NUMBER:

### 2. VEHICLE NUMBER (For Australia): FRAME NUMBER (Except for Australia):

### 3. ENGINE NUMBER:

Your key identification number is stamped on your key as shown in the following illustration.

Record this number in the space provided for reference if you need a new key



Record your vehicle (or frame) and engine number in the spaces provided to assist you in ordering spare parts from your Yamaha dealer or for reference in case your vehicle is stolen (See page 2-1)

A-001

**XV1100W**

**OWNER'S MANUAL**

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## INTRODUCTION

Congratulations on your purchase of the Yamaha XV1100W. This model is the result of Yamaha's vast experience in the production of fine sporting, touring, and pacesetting racing machines. It represents the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields. This manual will give you an understanding of the operation, inspection, and basic maintenance of this motorcycle. If you have any questions about the operation or maintenance of your motorcycle, please consult a Yamaha dealer.

**NOTE:** \_\_\_\_\_  
Some data in this manual may become outdated due to future improvement on this model. If you have any questions about this manual or your motorcycle, please consult a Yamaha dealer.

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**TECHNICAL PUBLICATIONS  
SERVICE DIVISION  
MOTORCYCLE GROUP  
YAMAHA MOTOR CO., LTD.**

**⚠ WARNING:**

**PLEASE READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE OPERATING THIS MOTORCYCLE.**

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

**NOTE:**

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

**⚠ CAUTION:**

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

**⚠ WARNING:**

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

U-000

**NOTE:**

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

**⚠ THINK OF YOUR SAFETY:**

Both motorcycles and mopeds are fascinating vehicles which give a tremendous feeling of freedom to their riders. They must be correctly maintained at all times in order to ensure optimum performance. However, as a rider you must also ensure that your physical condition is good, and that you are not tired, in order that you too can optimise your vehicle control. Medicines, drugs and alcohol should not be combined with riding, especially alcohol which increases the individual's likelihood of taking risks. Alcohol is dangerous, even in small quantities: Correct protective riding gear is just as much a part of motorcycling safety as the safety belt is in the car; a good leather suit and gloves, sturdy boots and a good quality, properly fitting crash helmet are ideal. But beware: good protective clothing can result in the individual being lulled into a false sense of security. When this happens more risks are taken and speeds increase... this particularly applies in wet weather. The good motorcyclist therefore rides defensively and protectively in order to minimise risks.



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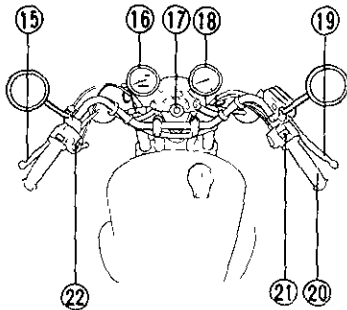
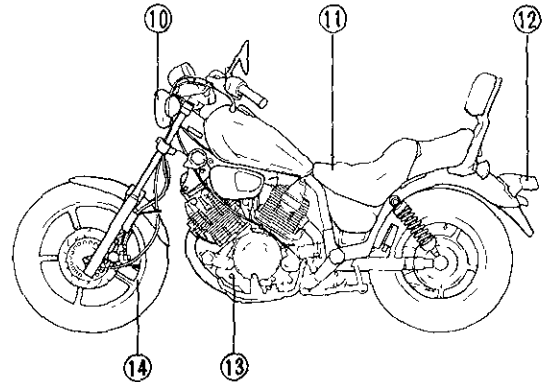
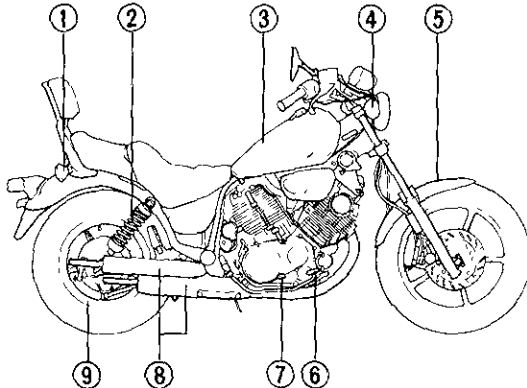
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## WIRING DIAGRAM

## DESCRIPTION



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

U-002

**NOTE:**

The motorcycle you have purchased may differ slightly from those shown in the photographs

A-600

## MOTORCYCLE IDENTIFICATION

A-602

### Frame serial number (Except for Australia)

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

A-800

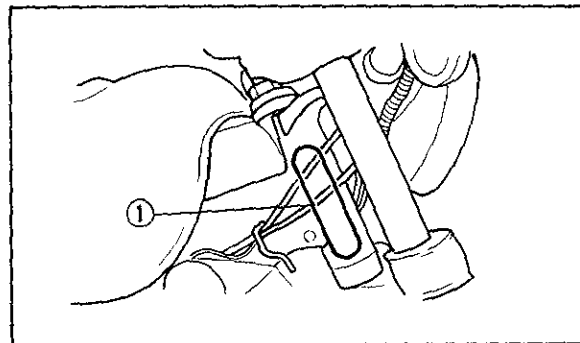
### Vehicle identification number (For Australia)

The vehicle identification number is stamped into the steering head pipe.

U-004

### NOTE:

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

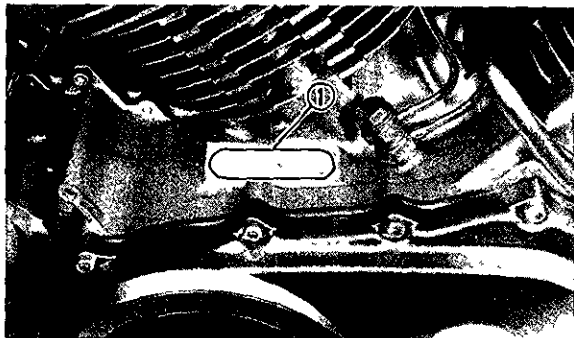


- 1 Frame serial number (Except for Australia)
- 1 Vehicle identification number (For Australia)

A-701

## Engine serial number

The engine serial number is stamped into the right side of the engine.



1 Engine serial number

U-003

### **NOTE:** \_\_\_\_\_

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

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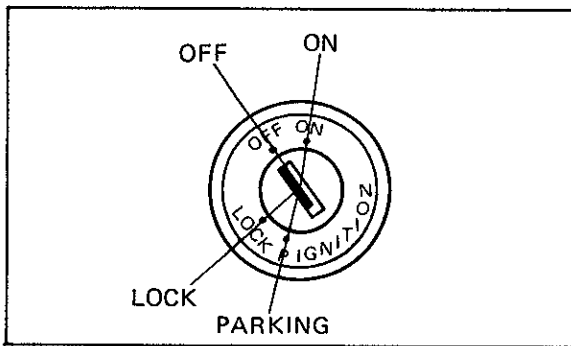
B-000

## CONTROL FUNCTIONS

B-001

### Main switch

The main switch controls the ignition and lighting systems, its operation is described below.



B-005

### ON

Electrical circuits are switched on. The engine can be started. The key cannot be removed in this position.

B 006

### OFF

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

B-007

### 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 3-11) for proper operation.

B-012

### PARKING:

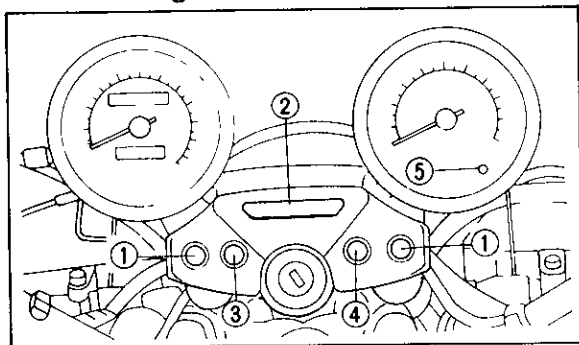
The steering is locked in this position, and the taillight and auxiliary light come on but all other circuits are off. The key can be removed in this position.

U-007

### NOTE:

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

## Indicator lights



- 1 "TURN" indicator light
- 2 "NEUTRAL" indicator light
- 3 "HIGH BEAM" indicator light
- 4 "OIL LEVEL" indicator light
- 5 "FUEL" warning light

B-101

"TURN" indicator light (orange)

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

B-102

"NEUTRAL" indicator light (green)

This indicator comes on when the transmission is in neutral.

B-103

"HIGH BEAM" indicator light (blue)

This indicator comes on when the headlight high beam is used

B-106

"OIL LEVEL" indicator light (red)

This indicator comes on when the oil level is low. This light circuit can be checked by the following procedure

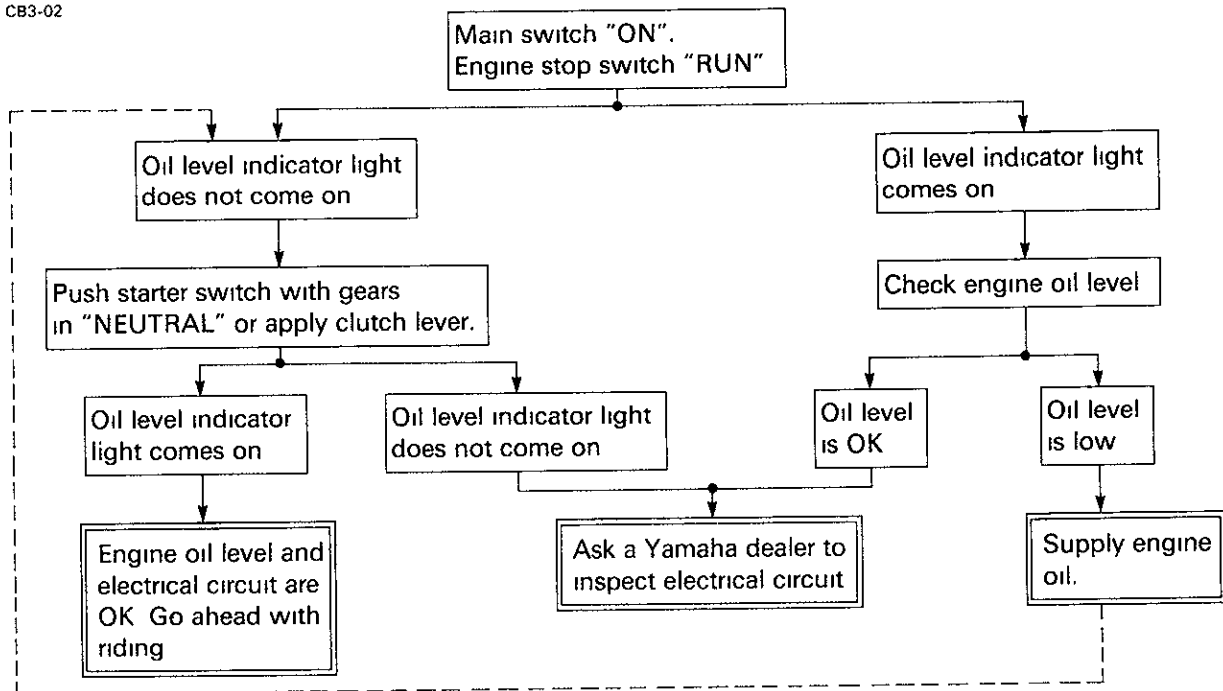
U-300

### **CAUTION:**

**Do not run the motorcycle until you know the motorcycle has enough engine oil.**

## Oil level indicator circuit check

CB3-02



B-112

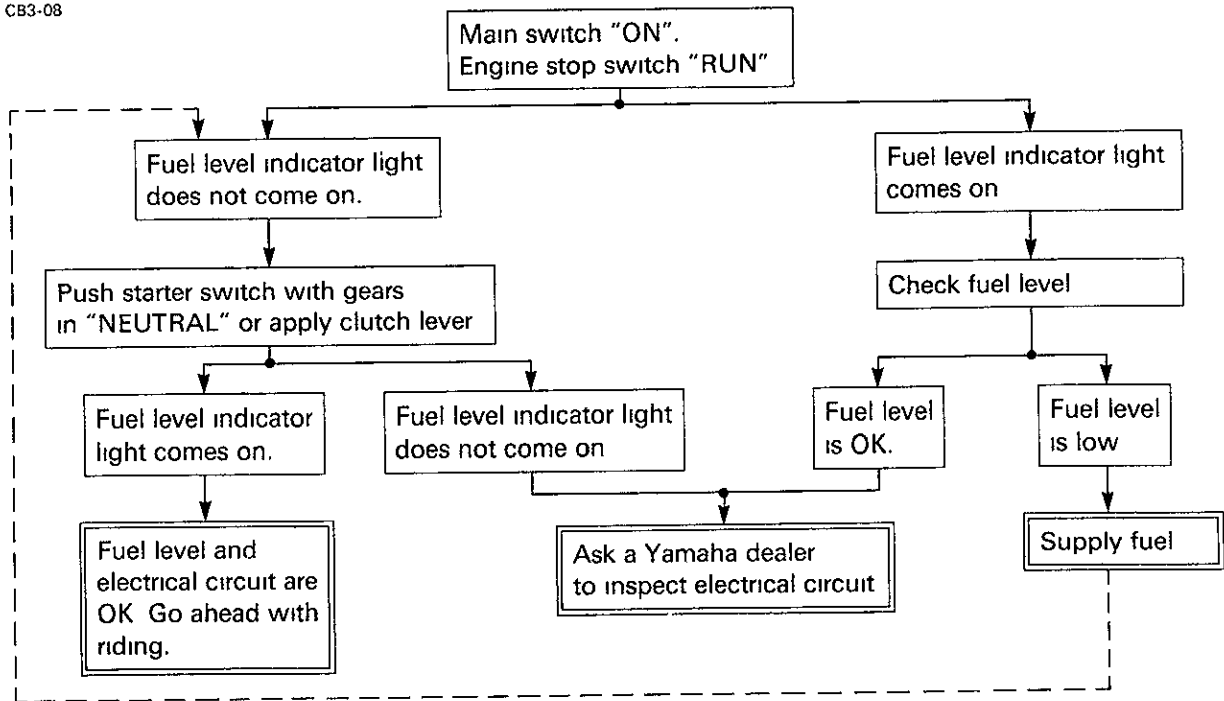
"FUEL" warning light (red)

When the fuel level drops below approximately 30 L(0.7 Imp gal, 0.8 US gal), this light will come on. When this light comes on, slide the "FUEL" (Reserve) switch to "RES " Then, fill the tank at the first opportunity.



## Fuel level indicator circuit check

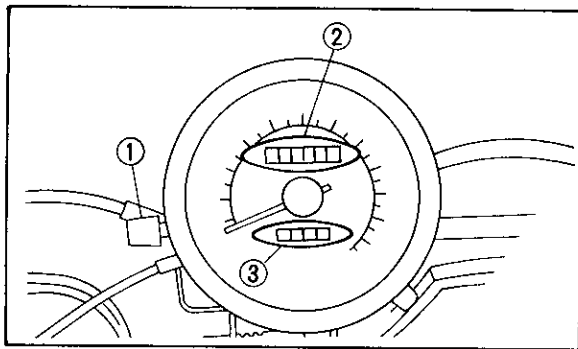
CB3-08



## Speedometer

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

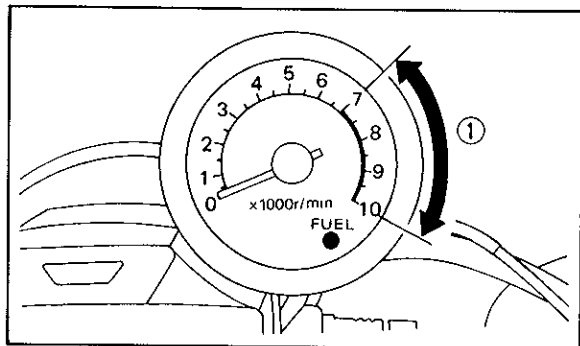
Use the odometer to estimate how far you can ride on a tank of fuel before going to "RESERVE". This information will enable you to plan fuel stops in the future.



1 Reset knob    2 Odometer    3 Trip odometer

## Tachometer

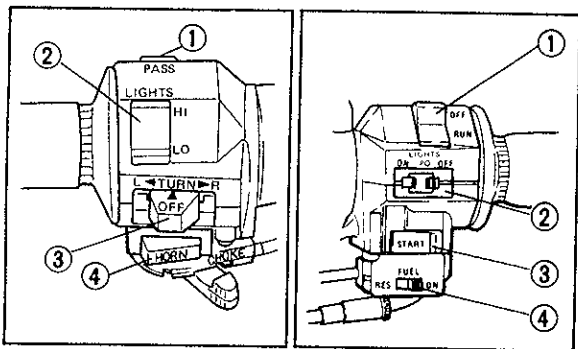
This model is equipped with an electric tachometer so the rider can monitor the engine speed and keep it within the ideal power range.



1 Red zone

### **CAUTION**

**Do not operate in the red zone**  
**Red zone: 7,000 r/min and above**

**Handlebar switches:**

- |                            |                           |
|----------------------------|---------------------------|
| 1 "PASS" switch            | 1 "ENGINE STOP" switch    |
| 2 "LIGHTS" (Dimmer) switch | 2 "LIGHTS" switch         |
| 3 "TURN" signal switch     | 3. "START" switch         |
| 4. "HORN" switch           | 4 "FUEL" (Reserve) switch |

**"PASS" switch**

When you are passing a vehicle ahead, the passing light switch should be depressed so that the headlight gives a signal to the rider

**"LIGHTS" (Dimmer) switch**

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

**"TURN" signal switch**

This model is equipped with self-cancelling turn signals. 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 for about 10 seconds or approximately 150 meters (490 feet) whichever is greater. The self-cancelling mechanism only operates when the motorcycle is moving, thus the signal will not self-cancel while you are stopped at an intersection.

B-602

### **"HORN" switch**

Press the switch to sound the horn.

B-612

### **"LIGHTS" switch**

Turn the light switch to "ON" to turn on the headlight, taillight, and meter lights. Turn the light switch to "PO" to turn on the auxiliary light, taillight, and meter lights

B-609

### **"ENGINE STOP" switch**

The engine stop switch is a safety device for use in an emergency such as when the motorcycle overturns or when trouble occurs in the throttle system. The engine will not run when the engine stop switch is turned to "OFF" In case of emergency, turn the switch to "OFF"

B-607

### **"START" switch**

To start the engine, push the starter.

U-307



---

**See starting instructions prior to starting engine.**

---

B-614

### **"FUEL" (Reserve) switch**

Usually run with this switch "ON." When the "FUEL" warning light comes on during a run, slide the switch to "RES" and refuel at the first opportunity. Then slide the switch to "ON"

B-700

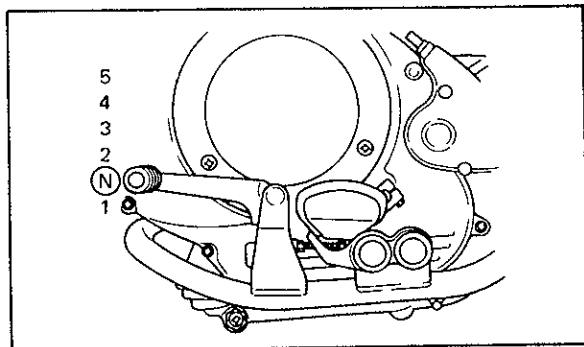
### Clutch lever

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

B-800

### 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

B-900

### Front brake lever

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

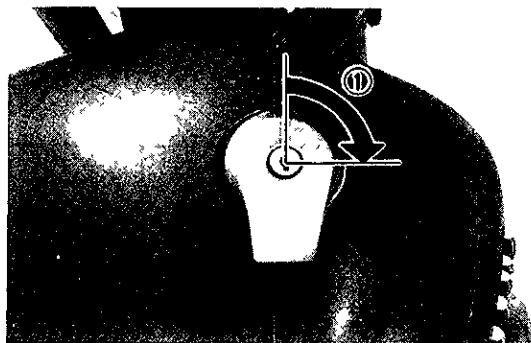
B-901

### 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****TO OPEN.**

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



1 Open

**TO CLOSE.**

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

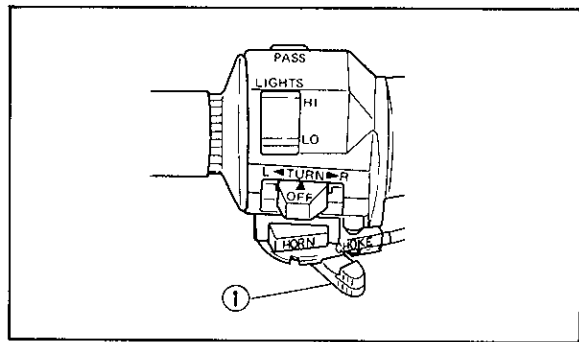
**NOTE:**

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

**Starter lever (CHOKE)**

The starter lever is located on the left handlebar

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



1 Starter lever

U-016

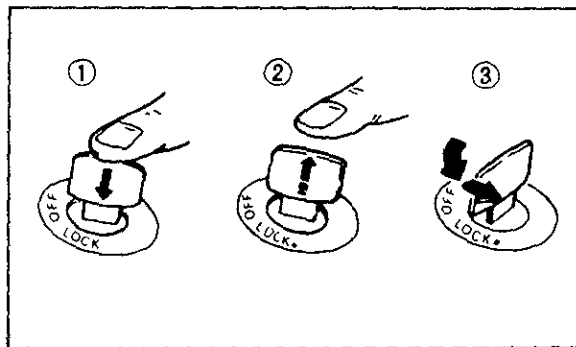
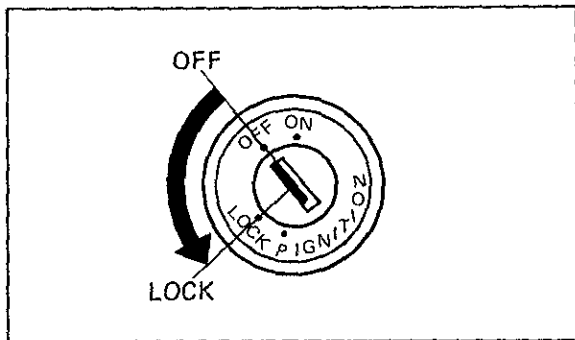
**NOTE:**

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

C-300

**Steering lock**

The steering is locked when the main switch is turned to "LOCK." To lock the steering, turn the handlebars all the way to the left or right. With the key at "OFF," push it into the main switch, turn the key counterclockwise to "LOCK," and remove the key. To release the lock, turn the key clockwise.



1 Push      2 Release      3 Turn

U-614

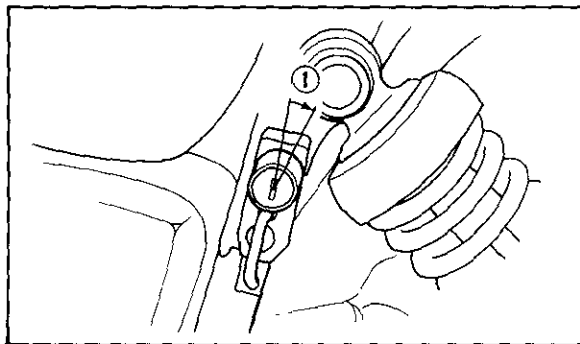
**WARNING:**

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

C-500

## Helmet holder

To open the helmet holder, insert the key in the lock and turn it as shown. To lock the helmet holder, replace the holder in its original position.



1 Open

U-615

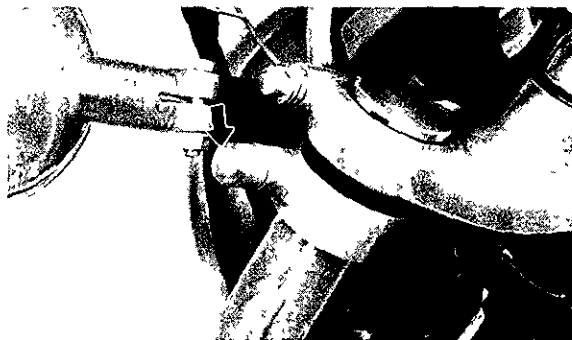
### **⚠ WARNING:**

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

C-800

## Front forks

The front forks of this model are pneumo-mechanical; namely, a combination air and mechanical coil spring in the inner tubes. By adjusting the air pressure, you can alter the suspension to suit the motorcycle's load and the operating conditions. Refer to page 6-25 for proper adjustment procedures.



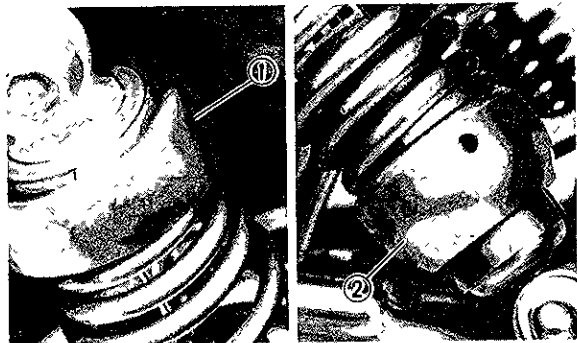
C-900

## Rear shock absorber

The spring preload and the damping of the rear shock absorber can be adjusted to suit



motorcycle's load (ex: optional accessories etc.) and riding conditions. Refer to page 6-26 for proper adjustment procedures.

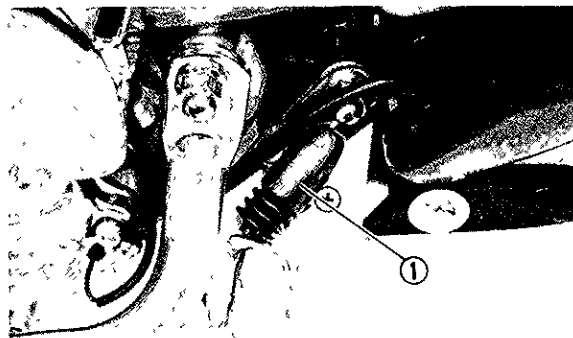


- 1 Damping adjuster
- 2 Spring preload adjuster

D-301

## Sidestand

This model is equipped with an ignition circuit cut-off system. The motorcycle must not be ridden when the sidestand is down. The sidestand is located on the left side of the frame. (Refer to page 5-1 for an explanation of this system )



- 1 Sidestand switch

U-689

### **⚠ WARNING:**

This motorcycle must not be operated with the sidestand in the down position. If the stand is not properly retracted, it could contact the ground and distract the operator resulting in a possible loss of control. Yamaha has designed into this motorcycle a lockout system to assist the operator in fulfilling his responsibility of retracting

the sidestand. Please check carefully the operating instructions listed below and if there is any indication of a malfunction, you must return the motorcycle to a Yamaha dealer immediately for repair.

---

D-302

### Sidestand/clutch switch operation check

Check the operation of the sidestand switch and clutch switch against the information below

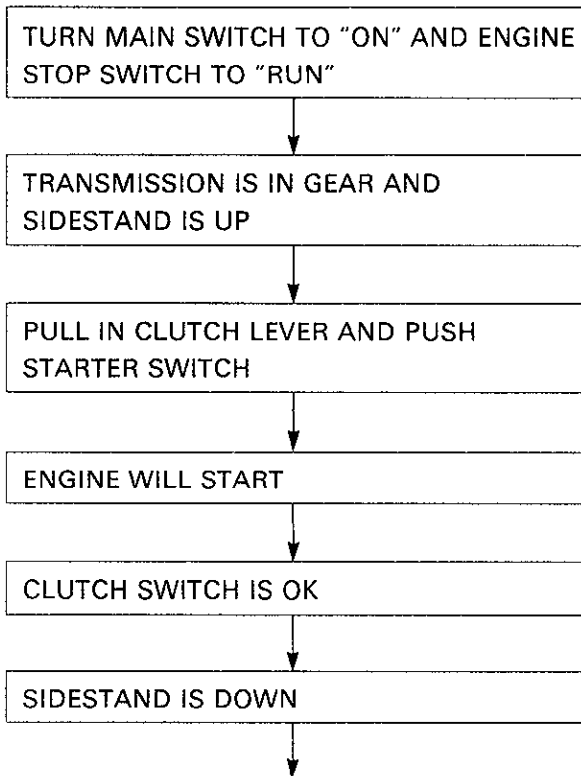
U-690

**⚠ WARNING:**

Be sure to use the centerstand during this inspection.

---

CD3-01



ENGINE WILL STALL



SIDESTAND SWITCH IS OK

U-691

**⚠ WARNING:**

**If improper operation is noted, consult  
a Yamaha dealer immediately.**

# PRE-OPERATION CHECKS

Before using this motorcycle, check the following points

Item	Routine	Page
Front brake	Check operation, free play and fluid level and fluid leakage Top-up with DOT#4 (or DOT#3) brake fluid if necessary	4-3~4-4, 6-15~6-20
Rear brake	Check operation, condition and free play Adjust if necessary	
Clutch	Check operation, condition and free play Adjust if necessary	4-4, 6-21~6-22
Throttle grip/Housing	Check for smooth operation Lubricate/Adjust if necessary.	4-4, 6-13~6-14, 6-23
Engine oil	Check oil level/add oil as required	4-4, 6-6~6-8
Final gear oil	Check for leakage visually	4-5, 6-9~6-10
Wheels/Tires	Check tire pressure, wear, damage	4-5~4-9, 6-35~6-39
Control/Meter cables	Check for smooth operation Lubricate if necessary	6-22
Brake and change pedal shafts	Check for smooth operation Lubricate if necessary	6-23
Brake and clutch lever pivots	Check for smooth operation Lubricate if necessary	6-23
Center and sidestand pivots	Check for smooth operation Lubricate if necessary	6-23
Fittings/fasteners	Check all chassis fittings and fasteners Tighten/Adjust, if necessary	4-10, 6-5
Fuel tank	Check fuel level/top-up as required	4-10~4-11

Item	Routine	Page
Lights and signals	Check for proper operation	4-10, 6-33~6-35
Battery	Check fluid level, top-up with distilled water if necessary.	4-10, 6-29~6-31

**NOTE:**

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

**⚠ WARNING:**

If any item in the Pre-Operation Check is not working properly, have it inspected and repaired before operating the motorcycle.

**Brakes (See page 6-15 for more detail)****1 Brake lever and brake pedal**

Check for correct free 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. If the free play is incorrect, adjust it.

U-023

**⚠ WARNING:**

**A soft, spongy feeling in the brake lever indicates a failure in the brake system. Do not operate the motorcycle until the failure in the brake system is corrected. Ask a Yamaha dealer for immediate repairs. 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#4
--------------------------------

**NOTE:**

If DOT#4 is not available, #3 can be used

**3. Check the disc pads**

Refer to page 6-18

**4 Check the brake shoes**

Refer to page 6-18

U-022

**NOTE:**

When this brake service is necessary, ask a Yamaha dealer

E-113

**Brake fluid leakage (Front)**

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

U-625

**⚠ WARNING:**

If brake fluid leakage is found, ask a Yamaha dealer for immediate repairs. Such leakage could indicate a hazardous condition.

E-200

**Clutch (See page 6-21 for more detail)**

Check the free play in the clutch lever, and make sure the lever operates properly. If the free play is incorrect, adjust it.

E-301

**Throttle grip (See page 6-13 for more detail)**

Turn the throttle grip to see if it operates properly, and check the free play. Make sure the grip returns by spring force when released. Ask a Yamaha dealer to make any necessary adjustments.

E-401

**Engine oil (See page 6-6 for more detail)**

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

CE4-02

**Recommended oil:**

30°F 40°F 50°F 60°F  
0°C 5°C 10°C 15°C

SAE 20W40 type SE motor oil  
SAE 10W30 type SE motor oil

**Oil quantity**

Total amount:  
3.6 L (3.2 Imp qt, 3.8 US qt)

Periodic oil change:  
3.0 L (2.6 Imp qt, 3.2 US qt)

With oil filter replacement  
3.1 L (2.7 Imp qt, 3.3 US qt)

U-080

**NOTE:**

Recommended engine oil classification; API Service "SE", "SF" type or equivalent (e.g. "SF-SE", "SF-SE-CC", "SF-SE-SD" etc.)

## Final gear oil (See page 6-9 for more detail)

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

### Recommended oil.

SAE 80 API GL-4 Hypoid gear oil  
If desired, an SAE 80W90 hypoid gear oil may be used for all conditions.

### NOTE:

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

## Tires

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

### 1. Tire air pressure

Always check and adjust the tire pressure before operating the motorcycle

### **WARNING:**

Tire inflation pressure should be checked and adjusted when the temperature of the tire equals the ambient air temperature. Tire inflation pressure must be adjusted according to total weight of cargo, rider, passenger, and accessories (fairing, saddlebags, etc. if approved for this model), and vehicle speed.



Basic weight With oil and full fuel tank	239 kg (527lb)	
Maximum load*	231 kg (509 lb)	
Cold tire pressure	Front	Rear
Up to 90 kg (198 lb) load*	180 kPa (1.8 kg/cm <sup>2</sup> , 26 psi)	200 kPa (2.0 kg/cm <sup>2</sup> , 28 psi)
90 kg (198 lb) ~ 160 kg (353 lb) load*	200 kPa (2.0 kg/cm <sup>2</sup> , 28 psi)	230 kPa (2.3 kg/cm <sup>2</sup> , 32 psi)
160 kg (353 lb) ~ Maximum load*	200 kPa (2.0 kg/cm <sup>2</sup> , 28 psi)	280 kPa (2.8 kg/cm <sup>2</sup> , 40 psi)
High speed riding	230 kPa (2.3 kg/cm <sup>2</sup> , 32 psi)	250 kPa (2.5 kg/cm <sup>2</sup> , 36 psi)

\* Load is the total weight of cargo, rider, passenger, and accessories

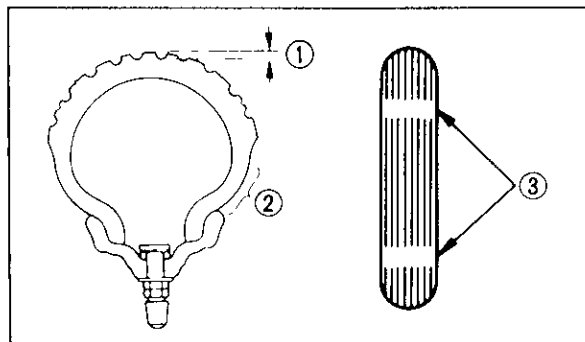
**⚠ WARNING:**

Proper loading of your motorcycle is important for the handling, braking, and other performance and safety characteristics of your motorcycle. Do not carry loosely packed items that can

shift. Securely pack your heaviest items close to the center of the motorcycle, and distribute the weight evenly from side to side. Properly adjust the suspension for your load, and check the condition and pressure of your tires. **NEVER OVERLOAD YOUR MOTORCYCLE.** Make sure the total weight of the cargo, rider, passenger, and accessories (fairing, saddlebags, etc. if approved for this model) does not exceed the maximum load of the motorcycle. Operation of an overloaded motorcycle could cause tire damage, an accident, or even injury.

## 2 Tire inspection

Always check the tires before operating the motorcycle. If a tire tread shows crosswise lines (minimum tread depth), if the tire has a nail or glass fragments in it, or if the side wall is cracked, contact a Yamaha dealer immediately and have the tire replaced.



1 Tread depth 2 Side wall 3 Wear indicator

CE9-02

FRONT

Manufacture	Size	Type
Bridgestone	100/90-19 57H	G535W
Dunlop	100/90-19 57H	F17

REAR

Manufacture	Size	Type
Bridgestone	140/90-15M/C 70H	G536W
Dunlop	140/90-15M/C 70H	K425

Minimum tire tread depth (front and rear)	1.0 mm (0.04 in)
---	------------------

U 679

**⚠ WARNING:**

It is dangerous to ride with a worn-out tire. When a tire tread begins to show lines. Have a Yamaha dealer replace the tire immediately. Brakes, tires, and related wheel parts replacement should be left to a Yamaha Service Technician.

## Tubeless tires and cast wheels

This motorcycle is equipped with cast wheels designed for 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

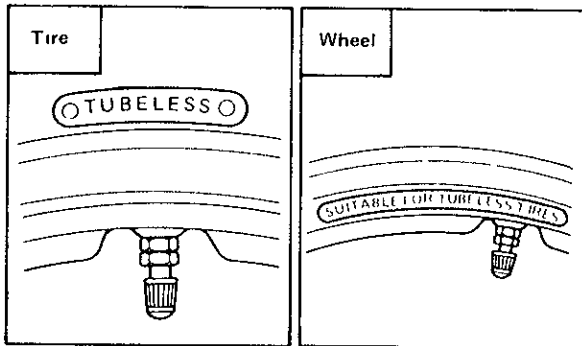
→ Tube-type Tires only

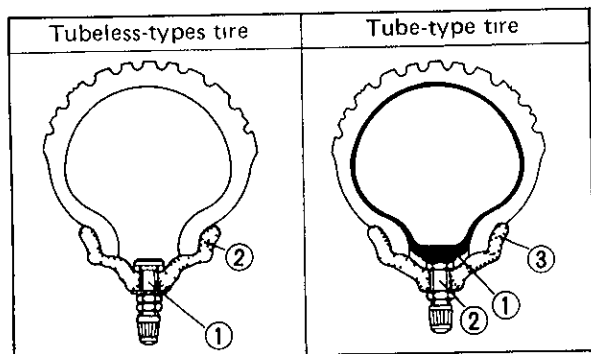
Tubeless-type Wheel

→ Tube-type or Tubeless tires

### **⚠ WARNING:**

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





- 1 Air valve  
2 Cast wheel

- 1 Tube  
2 Air valve  
3 Cast wheel

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

- 1 Always inspect the wheels before a ride  
Check for cracks, bends, or warpage of the wheels. If any abnormal condition exists in a wheel, consult a Yamaha dealer. Do not attempt even small repairs to the wheel. If a wheel is deformed or cracked, it must be replaced.

- 2 Tires and wheels should be balanced whenever either one is changed or replaced. Failure to have a wheel balanced can result in poor performance, adverse handling characteristics, and shortened tire life.
- 3 After installing a tire, ride conservatively to allow the tire to seat itself on the rim properly. Failure to allow proper seating may cause tire failure, resulting in damage to the motorcycle and injury to the rider.
4. After repairing or replacing a tire, check to be sure the valve stem lock nut is securely fastened. If not, torque it as specified.

Tightening torque

1.5 Nm (0.15 m·kg, 1.1 ft·lb)

E-850

## Fittings/Fasteners

Always check the tightness of chassis fittings and fasteners before a ride. Use the chart on page 6-5 to find the correct torque

E-700

## 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.

E-707

## Switches

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

E-705

## Battery (See page 6-29 for more detail)

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

E-800

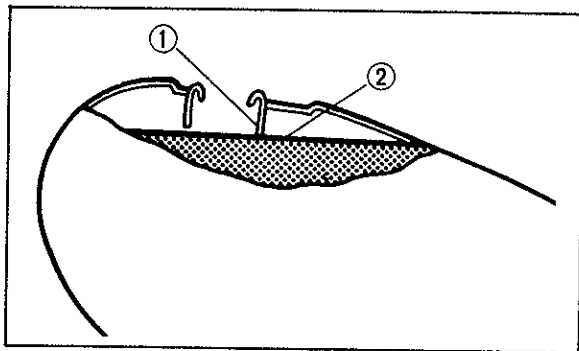
## Fuel

Make sure there is sufficient fuel in the tank

U-610

### **⚠ WARNING:**

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



1 Filler tube

2 Fuel level

Recommended fuel. Regular gasoline

For Australia Unleaded fuel only

Fuel tank capacity

Total

16.8 L (3.7 Imp gal, 4.4 US gal)

Reserve

3.0 L (0.7 Imp gal, 0.8 US gal)

## OPERATION AND IMPORTANT RIDING POINTS

U-672

### **⚠ WARNING:**

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

U-628

### **⚠ 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 sidestand is up. Failure to retract the sidestand completely can result in a serious accident when you try to turn a corner.

F-131

### Starting and warming up a cold engine

U-028

### **NOTE:**

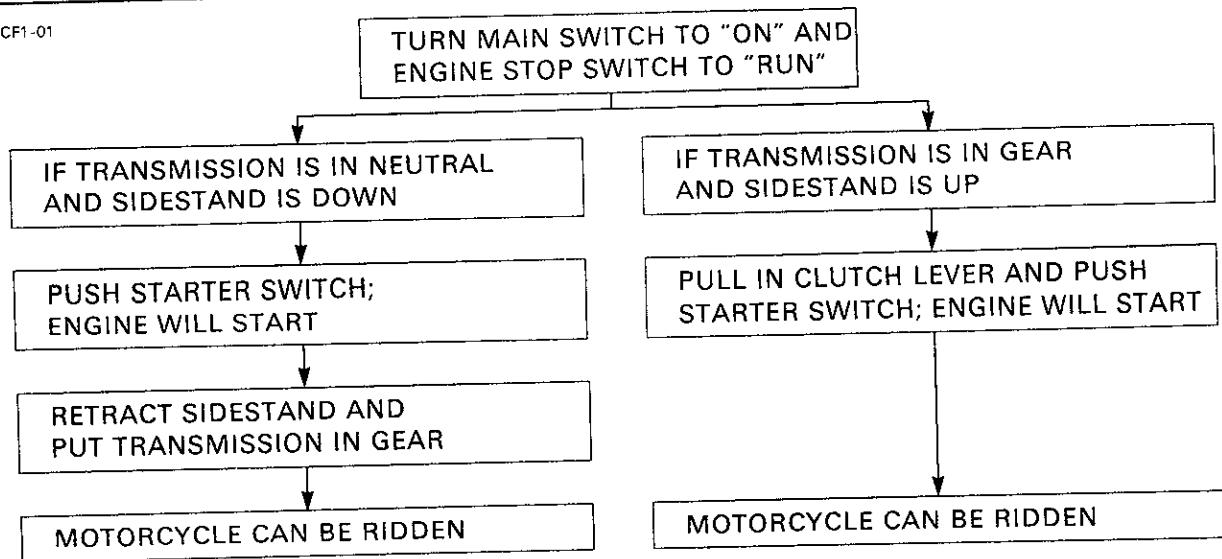
This motorcycle is equipped with a starting and an ignition circuit cut-off switch.

1. The engine can be started only under the following conditions.
  - a. The transmission is in neutral.
  - b. The sidestand is up, the transmission is in gear, and the clutch is disengaged
2. The motorcycle must not be ridden when the sidestand is down

**⚠ WARNING:**

Before going through the following steps, check the function of the side-stand switch and clutch switch. (Refer to page 3-14.)

CF1-01





- 1 Turn the ignition key to "ON" and the engine stop switch to "RUN."

U-399

**CAUTION:**

**If the fuel level indicator light comes on, check the fuel level. If necessary, add sufficient fuel.**

- 2 Shift transmission into neutral

U-030

**NOTE:**

When the transmission is in neutral, the neutral indicator light (green) should be on. If the light does not come on, ask a Yamaha dealer to inspect it.

- 3 Fully open the starter (CHOKE) and completely close the throttle grip
- 4 Start the engine by pushing the starter switch.

U-025

**NOTE:**

If the engine fails to start, release the starter switch, wait a few seconds, then try again. Each attempt should be as short as possible to preserve the battery. Do not crank the engine more than 10 seconds on any one attempt.

U-398

**CAUTION:**

**The oil level indicator light and fuel level indicator light should come on when the starter switch is pushed and should go off when the starter switch is released. If the oil level indicator light flickers or remains on, immediately stop the engine and check for the engine oil level and for oil leakage. If necessary, replenish oil and check to see that the oil level indicator light goes off. If not, consult a Yamaha dealer.**

- 5 After starting the engine, turn back the starter (CHOKE) to warming up position (about halfway)

U-026

**NOTE:** \_\_\_\_\_

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

---

6. After warming up the engine, turn off the starter completely.

U-027

**NOTE:** \_\_\_\_\_

The engine is warm when it responds normally to the throttle with the starter turned off

---

F-108

**Starting a warm engine**

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

U-314

**CAUTION:** \_\_\_\_\_

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

---

F-200

**Shifting**

The transmission lets you control the amount of power you have available at a given speed for starting, accelerating, climbing hills, etc. The use of the change pedal is shown in the illustration (Page 3-9)

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

**CAUTION**

1. **Do not coast 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 of forced shifting and can be damaged by shifting without the clutch.**
- 

**Engine break-in**

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

1. 0 ~ 150 km (0 ~ 90 mi)

Avoid operation above 5,000 r/min. Stop the engine and let it cool for 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 6,000 r/min. Rev the motorcycle 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 7,000 r/min.

U-318

**⚠ CAUTION:**

**After 1,000 km (600 mi) of operation, be sure to replace the engine oil, oil filter element, and final gear oil.**

4. 1,000 km (600 mi) and beyond  
Full throttle can be used.

U-387

**⚠ CAUTION:**

**Never let engine speeds enter the red zone.**

U-322

**⚠ CAUTION:**

**If any engine trouble should occur during the break-in period, consult a Yamaha dealer immediately.**

F-400

**Parking**

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

U-630

**⚠ WARNING:**

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

**Do not park the motorcycle on a slope or soft ground; the motorcycle may overturn.**

## 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 maintenance and lubrication schedule chart should be considered strictly as a guide to general maintenance and lubrication intervals. YOU MUST TAKE INTO CONSIDERATION THAT WEATHER, TERRAIN, GEOGRAPHICAL LOCATIONS, AND A VARIETY OF INDIVIDUAL USES ALL TEND TO DEMAND THAT EACH OWNER ALTER THIS TIME SCHEDULE TO SHORTER INTERVALS TO MATCH HIS ENVIRONMENT. The most important points of motorcycle inspection, adjustment, and lubrication are explained in the following pages

### **WARNING:**

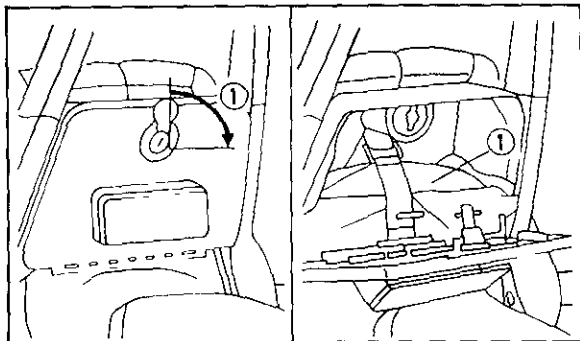
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If you are not familiar with motorcycle service, this work should be done by a Yamaha dealer.

---

### **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; however a torque wrench is also necessary to properly tighten nuts and bolts.



1 Open

1 Tool kit

U-060

**NOTE:**

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

U-671

**⚠ WARNING:**

Modifications to this motorcycle not approved by Yamaha may cause loss of performance, and render it unsafe for use. Consult a Yamaha dealer before attempting any changes.

# PERIODIC MAINTENANCE/LUBRICATION

Unit km (miles)

ITEM	REMARKS	BRAK-IN 1,000 (600)	EVERY	
			6,000 (4,000) or 6 months	12,000 (8,000) or 12 months
Valve(s)*	Check valve clearance Adjust if necessary	○	○	○
Spark plug(s)	Check condition Clean or replace if necessary	○	○	○
Air filter	Clean Replace if necessary		○	○
Carburetor*	Check idle speed/synchronization/starter operation Adjust if necessary	○	○	○
Fuel line*	Check fuel hose and vacuum pipe for cracks or damage Replace if necessary		○	○
Engine oil	Replace (Warm engine before draining)	○	○	○
Engine oil filter*	Replace	○		○
Final gear oil	Check oil level/oil leakage Replace every 24,000 (16,000) or 24 months	Replace	○	○
Front brake*	Check operation/fluid leakage/See NOTE Correct if necessary		○	○
Rear brake	Check operation Adjust if necessary		○	○
Clutch	Check operation Adjust if necessary		○	○
Rear arm pivot*	Check rear arm assembly for looseness Correct if necessary Moderately repack every 24,000 (16,000) or 24 months **			○
Wheels*	Check balance/damage/runout Repair if necessary		○	○
Wheel bearings*	Check bearings assembly for looseness/damage Replace if damaged		○	○

ITEM	REMARKS	BRAK-IN 1,000 (600)	Unit km (miles)	
			EVERY	
			6,000 (4,000) or 6 months	12,000 (8,000) or 12 months
Steering bearing*	Check bearings assembly for looseness Correct if necessary Moderately repack every 24,000 (16,000) or 24 months **	○		○
Front forks*	Check operation/oil leakage Repair if necessary		○	○
Rear shock absorber*	Check operation/oil leakage Repair if necessary		○	○
Fittings/Fasteners*	Check all chassis fittings and fasteners Correct if necessary	○	○	○
Center and sidestand*	Check operation Repair if necessary	○	○	○
Sidestand switch*	Check operation Clean or replace if necessary	○	○	○
Battery*	Check specific gravity Check breather pipe for proper operation Correct if necessary		○	○

\* It is recommended that these items be serviced by a Yamaha dealer

\*\* Medium weight wheel bearing grease

\*\*\* Lithium soap base grease

#### NOTE:

##### Brake fluid replacement:

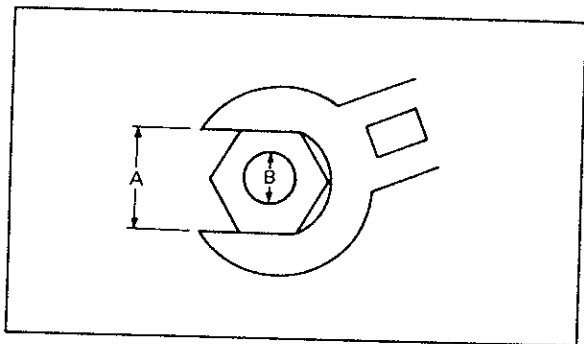
- 1 When disassembling the master cylinder or caliper cylinder, replace the brake fluid. Normally check the brake fluid level and add the fluid as required.
- 2 On the inner parts of the master cylinder and caliper cylinder, replace the oil seals every two years
- 3 Replace the brake hoses every four years, or if cracked or damaged



## Torque specifications

Use a torque wrench to tighten these items. It is recommended that these items be checked occasionally, especially before a long trip.

Always check the tightness of these items whenever they are loosened for any reason.



A (Nut)	B (Bolt)	General torque specifications		
		Nm	m·kg	ft·lb
10 mm	6 mm	6	0.6	4.3
12 mm	8 mm	15	1.5	11
14 mm	10 mm	30	3.0	22
17 mm	12 mm	55	5.5	40
19 mm	14 mm	85	8.5	61
22 mm	16 mm	130	13.0	94

Item	Torque		
	Nm	m·kg	ft·lb
Spark plug	20	2.0	14
Engine drain plug	43	4.3	31
Oil filter bolt	10	1.0	7.2
Front axle pinch bolt	20	2.0	14
Front axle	105	10.5	75
Rear wheel axle	105	10.5	75
Rear axle pinch bolt	20	2.0	14
Final gear drain plug	23	2.3	17

## Engine oil

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

U-039

### NOTE:

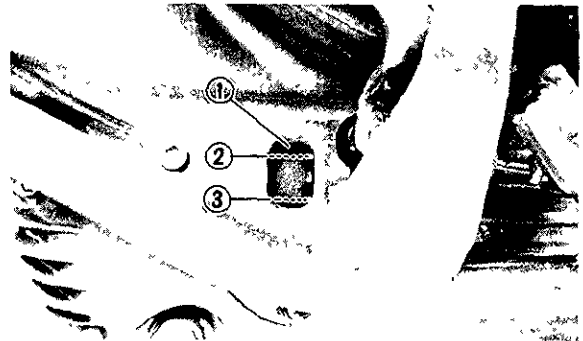
Be sure the motorcycle is positioned straight up when checking the oil level, a slight tilt toward the side can produce false readings

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

U-040

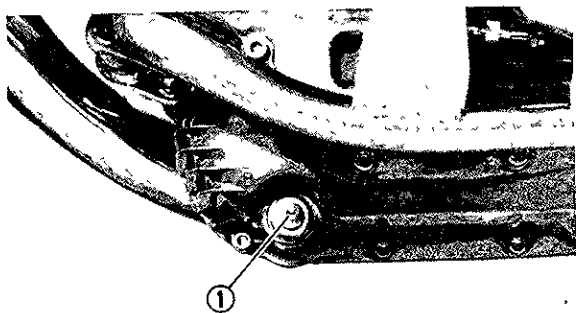
### NOTE:

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 low, add sufficient oil to raise it to the proper level
  - 2 Engine oil and oil filter replacement
    - a Warm-up the engine for a few minutes.
    - b Stop the engine. Place an oil pan under the engine, and remove the oil filler cap
    - c Remove the drain plug and drain the oil



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

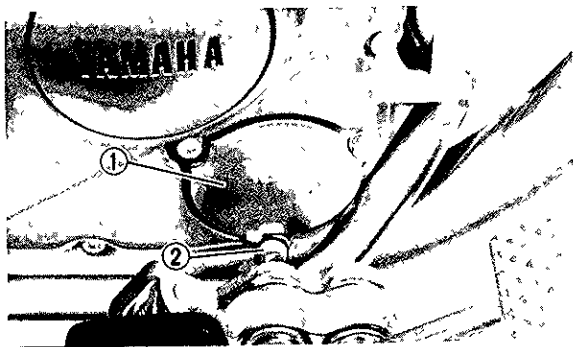
Drain plug torque  
43 Nm (4.3 m·kg, 31 ft·lb)

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

Oil filter bolt.  
10 Nm (1.0 m·kg, 7.2 ft·lb)

1 Drain plug

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

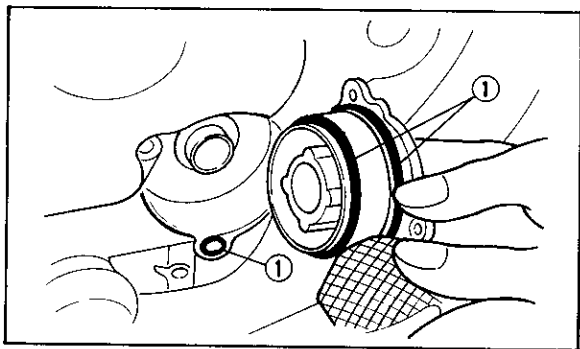


1 Oil filter cover

2 Oil filter bolt

U-041

**NOTE:** \_\_\_\_\_  
Make sure the O-ring is positioned properly



1 Proper O-ring position

g Add oil through the oil filler hole.

Periodic oil change.

3.0 L (2.6 Imp qt, 3.2 US qt)

With oil filter replacement

3.1 L (2.7 Imp qt, 3.3 US qt)

Recommended oil See page 4-4

U-323

**CAUTION:**

Do not add any chemical additives. Engine oil also lubricates the clutch and additives could cause clutch slippage.

U-324

**CAUTION:**

Be sure no foreign material enters the crankcase.

h After replacement of engine oil and/or oil filter, be sure to check for oil leaks. The oil level indicator should go off after the oil is filled.

U-351

**CAUTION:**

If the indicator light flickers or remains on, immediately stop the engine and consult a Yamaha dealer.

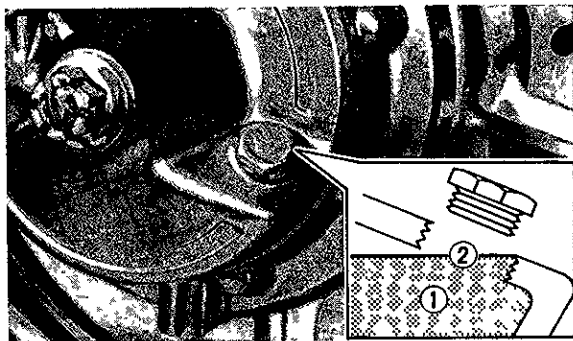
## Final gear oil

U-634

### **⚠ WARNING:**

**Do not let foreign material enter the final gear case. Be sure oil does not get on the tire or wheel.**

1. Oil level measurement
  - a. Place the motorcycle on a level place, and place it on the centerstand. The engine should be cool (at atmospheric temperature)
  - b. Remove the oil filler cap and check the oil level. The oil level should be at the brim of the hole. Add oil as necessary



1 Final gear oil

2 Correct oil level

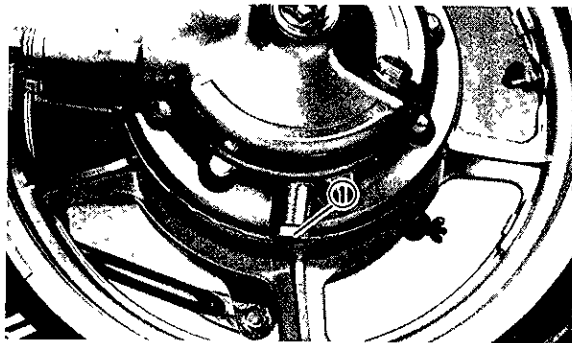
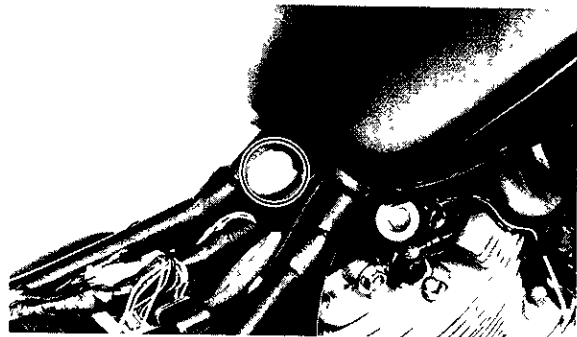
2. Gear oil replacement
  - a. Place an oil pan under the final gear case
  - b. Remove the final gear oil filler cap and the drain plug; drain the oil

**Air filter**

- 1 Remove the seat



2. Remove the fuel tank.



- 1 Final gear drain plug

- c Reinstall and tighten the final gear case drain plug (See page 6-5 for torque specifications )
- d Fill the gear case to the specified level

**Oil capacity**

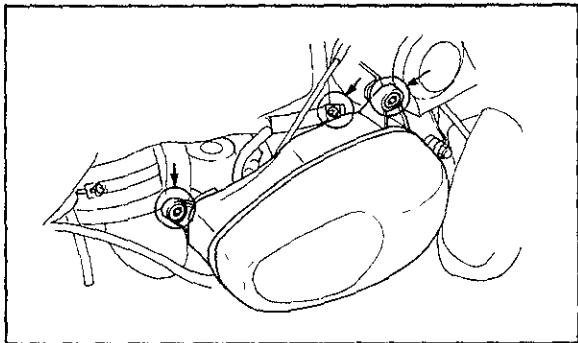
Final gear case.

0.2 L (0.18 Imp qt, 0.21 US qt)

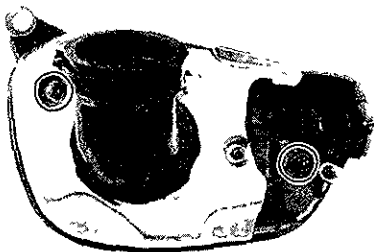
Recommended oil See page 4-5

- e Reinstall the filler cap

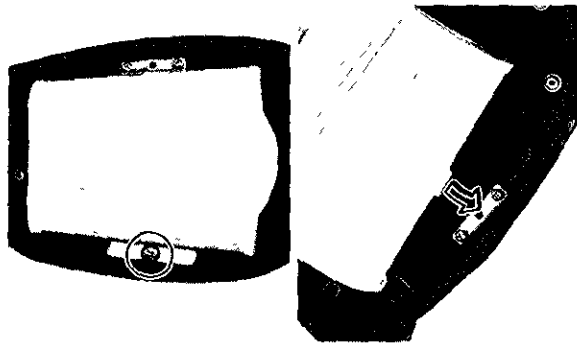
3. Remove the air filter case assembly.



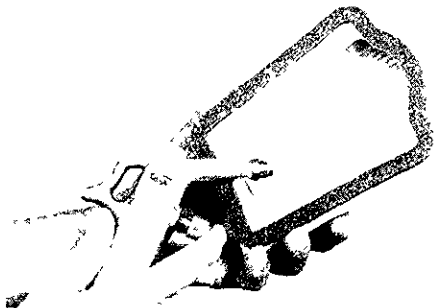
4. Remove the air filter case cover.



5. Remove the element.



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



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

U-326

**CAUTION:**

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

H-900

### **Carburetor adjustment**

The carburetor is a vital part of the engine and requires very sophisticated adjustment. Most adjustments should be left to a Yamaha dealer who has the professional knowledge and experience to do so. However, the following point may be serviced by the owner as part of this routine maintenance.

U-330

**CAUTION:**

**The carburetor was set at the Yamaha factory after many tests. If the settings are disturbed, poor engine performance and damage may result.**

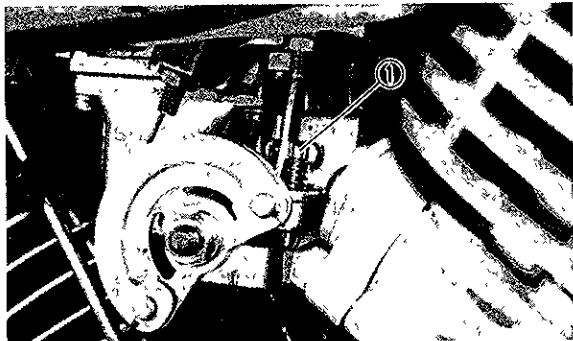
H-901

### **Idle speed adjustment**

- 1 Start the engine and warm it up for a few minutes (normally, 1 or 2 minutes) at approximately 1,000 to 2,000 r/min. Occasionally rev the engine to 4,000 to 5,000 r/min. The engine is warm when it quickly responds to the throttle



2. Set the idle to the specified engine speed by adjusting the throttle stop screw; turn the screw in to increase engine speed, turn the screw out to decrease engine speed.



1 Throttle stop screw

Standard idle speed.  
950 ~ 1,050 r/min

U-045

**NOTE:** \_\_\_\_\_  
If the specified idle speed cannot be obtained by performing the above adjustment, consult a Yamaha dealer

H-903

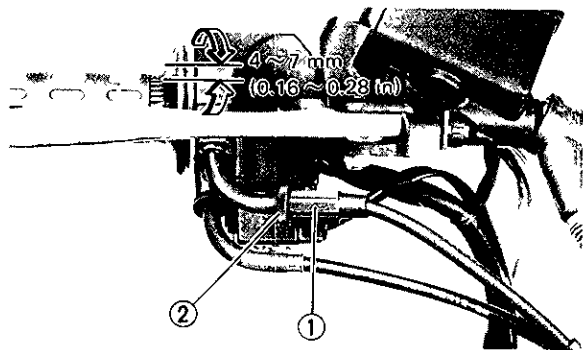
### Throttle cable adjustment

U-064

**NOTE:** \_\_\_\_\_  
Before adjusting the throttle cable free play, the engine idling speed should be adjusted

The throttle cable should have a specified free play in the turning direction at the grip flange. If the play is incorrect, take the following steps for adjustment.

Free play.  
4 ~ 7 mm (0.16 ~ 0.28 in)



1 Adjuster

2. Lock nut

1. Loosen the lock nut
2. Turn the adjuster in or out until the adjustment is suitable.
3. Tighten the lock nut

H-908

### Valve clearance adjustment

The valve clearance becomes larger with use, resulting in improper fuel/air supply and engine noise. To prevent this, the valve clearance must be adjusted regularly. This adjustment, however, should be left to a professional Yamaha service technician.

H-201

### 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.

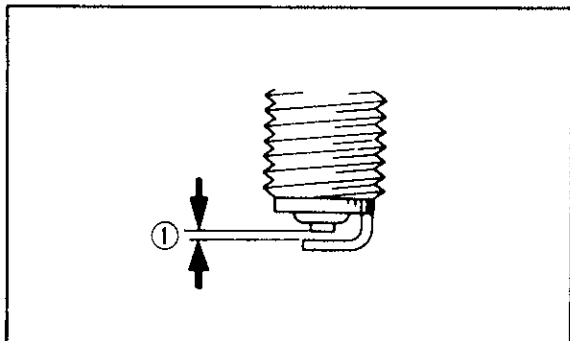
Normally, all spark plugs from the same engine should have the same color on the white porcelain insulator around the center electrode. The ideal color at this point is a medium to light tan color for a motorcycle that is being ridden normally. If one spark plug shows a distinctly different color, there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

Do not attempt to diagnose such problems yourself. Instead, take the motorcycle to a Yamaha dealer.

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 a proper type plug.

Standard spark plug  
BP7ES (NGK) or W22EP-U (N.D.)

Before installing any spark plug, measure the electrode gap with a wire thickness gauge; adjust the gap to specification as necessary.



1 Spark plug gap

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.

Spark plug torque.  
20 Nm (2.0 m·kg, 14.0 ft·lb)

U-038

**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.

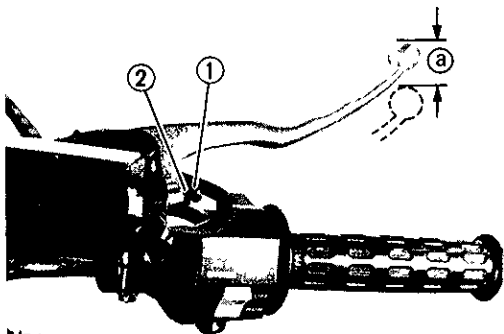
H-801

### Front brake adjustment

The free play at the end of the front brake lever should be 2 ~ 5 mm (0.08 ~ 0.2 in).

1. Loosen the lock nut

- Turn the adjuster so that the brake lever movement at the lever end is 2 ~ 5 mm (0.08 ~ 0.2 in) before the adjuster contacts the master cylinder piston
- After adjusting, tighten the lock nut



1 Adjuster 2 Lock nut a 2 ~ 5 mm (0.08 ~ 0.2 in)

U-636

**⚠ WARNING:**

Check the brake lever free play. Be sure the brake is working properly.

U-641

**⚠ WARNING:**

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

H-845

**Rear brake adjustment**

U-643

**⚠ WARNING:**

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

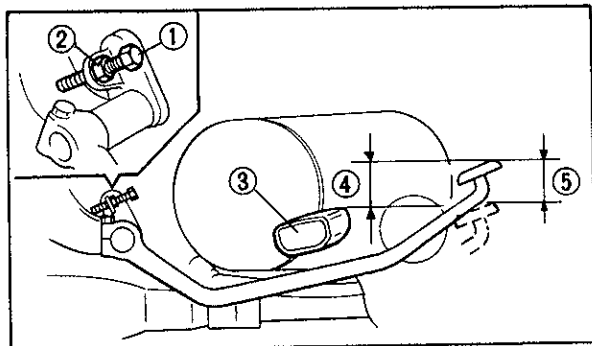
## 1. Pedal height

- a. Loosen the adjuster lock nut (for pedal height).
- b. By turning the adjuster clockwise or counterclockwise, adjust the brake pedal position as shown below.
- c. Secure the adjuster lock nut.

U-644

### **⚠ WARNING:**

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



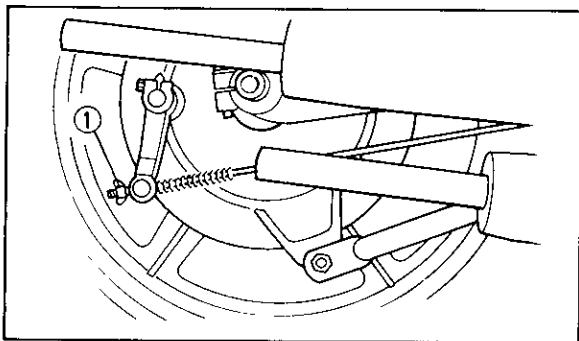
- 1 Adjuster bolt (for pedal height)
- 2 Lock nut
- 3 Footrest
- 4 Pedal height 20 mm (0.8 in)
- 5 Free play 20 ~ 30 mm (0.8 ~ 1.2 in)

## 2. Free play

The rear brake should be adjusted to suit the rider's preference; but free play at the brake pedal end must be 20 ~ 30 mm (0.8 ~ 1.2 in). Turn the adjuster on the brake rod clockwise to reduce play, turn the adjuster counterclockwise to increase play.

**⚠ WARNING:**

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



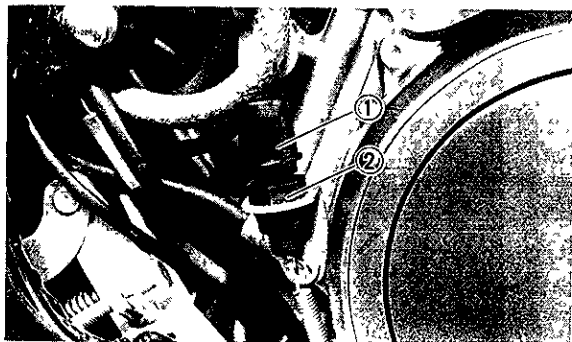
1 Adjuster

H-833

### **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 your hand so it does not rotate and turn the adjusting nut

Proper adjustment is achieved when the brake light comes on just before the brake begins to take effect.



1 Main body

2 Adjusting nut

H-814

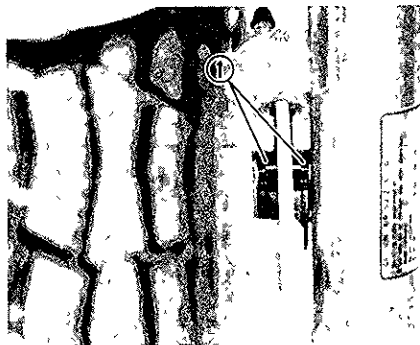
### **Checking the front brake pads and rear brake shoes**

A wear indicator is attached to each brake to facilitate brake pad and shoe check. This indicator permits a visual check without disassembling the brake

H-821

## FRONT

To check, depress the brake and inspect the wear indicator. If the wear indicator is ALMOST in contact with the disc plate, ask a Yamaha dealer to replace the pads.

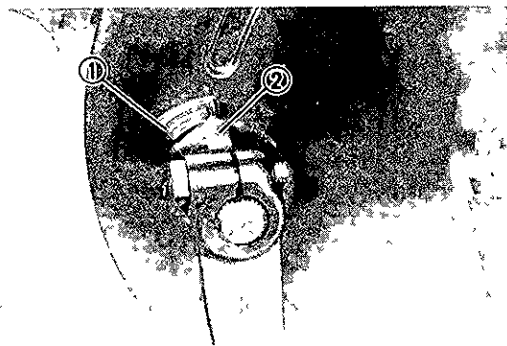


1 Wear indicator

H-826

## REAR

To check, look at the wear indicator while depressing the brake pedal. If the indicator reaches the wear limit line, ask a Yamaha dealer to replace the shoes.



1 Wear limit

2 Wear indicator

H-828

## Inspecting the brake fluid level

Insufficient brake fluid may let air enter the brake system, possibly causing the brakes to become ineffective. Before riding, check the brake fluid level and replenish when necessary, observe these precautions:

- 1 When checking the fluid level, make sure the master cylinder top is horizontal by turning the handlebars.

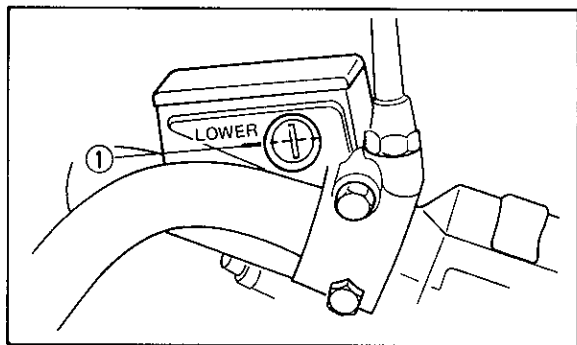
2. Use only the designated quality brake fluid: otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.

Recommended brake fluids DOT #4

**NOTE:** \_\_\_\_\_

If DOT #4 is not available, #3 can be used

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



1 Lower level

H-835

### Brake fluid replacement

- 1 Complete fluid replacement should be done only by trained Yamaha service personnel
- 2 Have a Yamaha dealer replace the following components when indicated in the schedule or when they are damaged or leaking.
  - a. Replace all rubber seals every two years.
  - b. Replace all hoses every four years



I-000

## Clutch adjustment

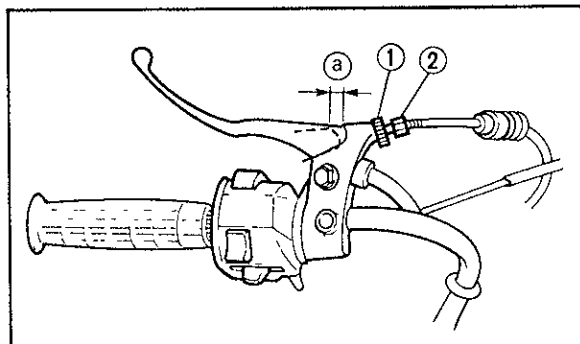
This model has a clutch cable length adjuster and a clutch mechanism adjuster. The cable length adjuster is used to take up slack from cable stretch and to provide sufficient free play for proper clutch operation

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 necessary adjustment involves maintaining the proper free play at the clutch lever.

I-002

## Free play adjustment

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



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

## Clutch lever free play\*

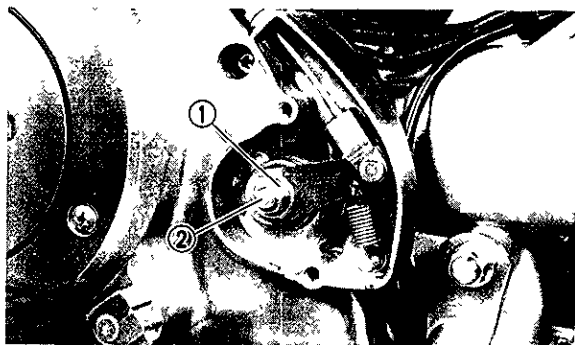
2~3 mm (0.08~0.12 in)

I-003

## 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. Back the adjuster out 1/4 turn and tighten the lock nut. This adjustment must be checked because heat and clutch wear can cause incomplete clutch operation. Check the clutch cable adjustment at the handlebar after adjusting.



1 Lock nut

2 Adjuster

I-107

## Cable inspection and lubrication

U-646

### **⚠ WARNING:**

**Damage to the outer housing of the various cables may cause corrosion and interfere with the movement of the cable. An unsafe condition may result so replace such cables as soon as possible.**

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

Recommended lubricant.  
SAE 10W/30 motor oil

I-102

### 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 disassembled, coat the metal surface of the grip assembly with a suitable all-purpose grease

I-306

### Brake and change pedals

Lubricate the pivoting parts.

Recommended lubricant:  
SAE 10W30 motor oil

I-307

### Brake and clutch levers

Lubricate the pivoting parts.

Recommended lubricant  
SAE 10W30 motor oil

I-308

### Center and sidestand

Lubricate the pivoting parts. Check to see that the center and sidestand move up and down smoothly.

Recommended lubricant.  
SAE 10W30 motor oil

U-693

**⚠ WARNING:**

**If the center and/or sidestand movement are not smooth, consult a Yamaha dealer.**

I-314

### Rear suspension

Lubricate the pivoting parts

Recommended lubricant:

Swingarm pivots: Bearing grease

Other pivots: Lithium soap base grease

I-205

## Front fork inspection

U-657

### **⚠ WARNING:**

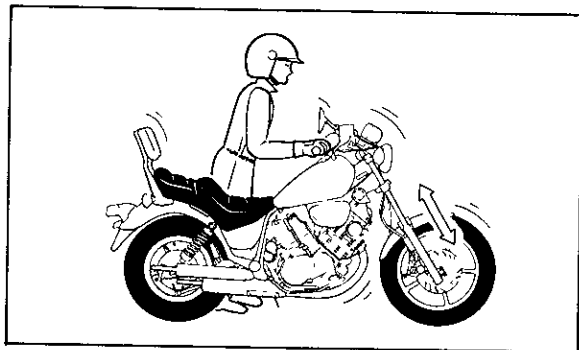
**Securely support the motorcycle so there is no danger of it falling over.**

- 1 Visual check  
Check any scratch/damage on the inner tube and excessive oil leakage with the front fork.
- 2 Operation check  
Place the motorcycle on a level place
  - a Hold the motorcycle on an upright position with a rider's hands on the handlebar and apply the front brake
  - b Pump the front fork up and down for several times.

U-121

### **⚠ CAUTION:**

**If any damage or unsmooth movement is found with the front fork, consult a Yamaha dealer.**



## Front fork and rear shock absorber adjustment

Front fork:

U-086

### NOTE:

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

1. Elevate the front wheel by placing the motorcycle on the centerstand.

U-050

### NOTE:

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

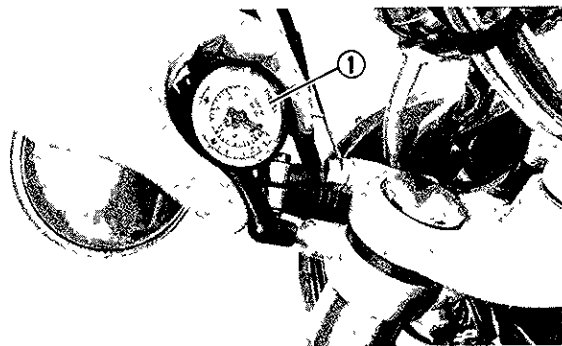
- 2 Remove the valve cap from the left fork
- 3 Using the air check gauge, check and adjust the air pressure. If the air pressure is increased, the suspension becomes stiffer, and if decreased, it becomes softer.

To increase:

Use an air pump or pressurized air supply

To decrease:

Release the air by pushing the valve.



1 Air check gauge

U-051

### NOTE:

An optional air check gauge is available  
Please ask a nearby Yamaha dealer  
P/No. 2X4-2811A-00

Standard air pressure.

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

Maximum air pressure

120 kPa (1.2 kg/cm<sup>2</sup>, 17.1 psi)

Minimum air pressure

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

U-334

**CAUTION**

**Never exceed the maximum pressure, or oil seal damage may occur.**

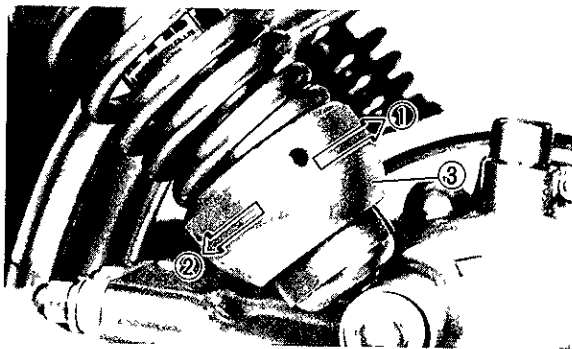
- 4 Install the valve cap securely

I-508

### Rear shock absorber adjustment

- 1 Spring preload

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



- 1 Increase
- 2 Decrease
- 3 Spring preload adjuster

Standard position 1

1 — Softest

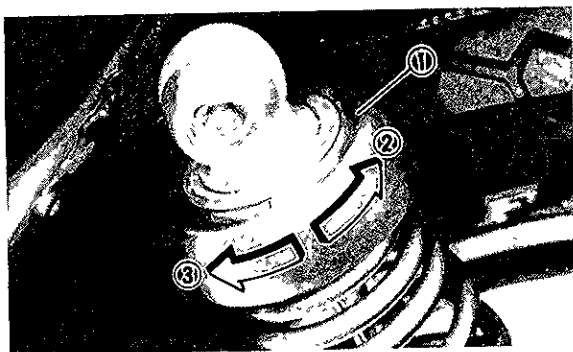
5. — Stiffest

- 2 Damping

Turn the damping adjuster to increase or decrease the damping.

**⚠ WARNING:**

Always adjust each shock absorber to the same setting. Uneven adjustment can cause poor handling and loss of stability.



1 Damping adjuster    2 Increase    3 Decrease

Standard position. 1

No. 1 — Minimum damping

No. 4 — Maximum damping

**NOTE:**

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

**Recommended combinations of the front fork and the rear shock absorber settings.**  
Use this table as a guide for specific riding and motorcycle load conditions.

C15-10

	Front fork  Air pressure	Rear shock absorber		Loading condition			
		Spring seat	Damping adjuster	Solo rider	With passenger	With accessories and equipment	With accessories, equipment, and passenger
1	40 ~ 80 kPa (0.4 ~ 0.8 kg/cm <sup>2</sup> , 5.7 ~ 11.4 psi)	1 ~ 2	1	○			
2	40 ~ 80 kPa (0.4 ~ 0.8 kg/cm <sup>2</sup> , 5.7 ~ 11.4 psi)	3 ~ 5	2		○		
3	40 ~ 80 kPa (0.4 ~ 0.8 kg/cm <sup>2</sup> , 5.7 ~ 11.4 psi)	3 ~ 5	3			○	
4	80 ~ 120 kPa (0.8 ~ 1.2 kg/cm <sup>2</sup> , 11.4 ~ 17.1 psi)	5	4				○



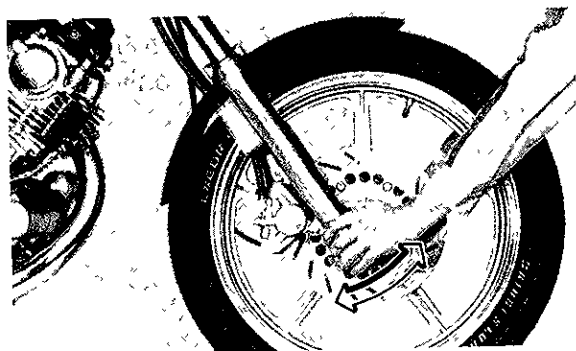
I-603

## 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 off the ground

Hold the lower end of the front forks and try to move them forward and backward. If any free play can be felt, ask a Yamaha dealer to inspect and adjust the steering. Inspection is easier if the front wheel is removed.



U-657

## **⚠ WARNING:**

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

I-602

## Wheel bearings

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

I-700

## Battery

Check the level of the battery electrolyte and see that the terminals are tight. Add distilled water if the electrolyte level is low.

**⚠ 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.

**⚠ WARNING:**

Battery electrolyte is poisonous and dangerous, causing severe burns, etc. It contains sulfuric acid. Avoid contact with skin, eyes or clothing.

Antidote: EXTERNAL-Flush with water. INTERNAL-Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call a physician immediately.

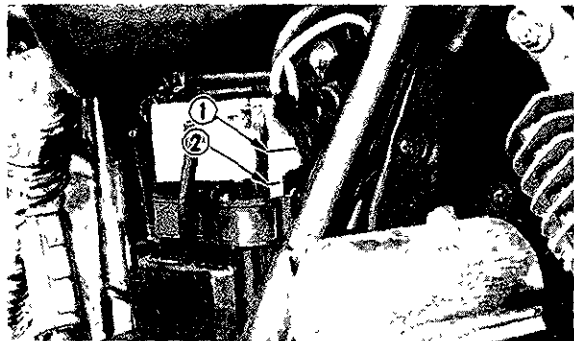
Eyes: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flame, cigarettes etc., away. Ventilate when charging or using in an enclosed space. Always shield your eyes when working near batteries. **KEEP OUT OF REACH OF CHILDREN.**

**Replenishing the battery fluid**

A poorly maintained battery will deteriorate quickly. The battery fluid should be checked at least once a month.

1. The level should be between the upper and lower level marks. Use only distilled water if refilling is necessary.



1 Upper level

2 Lower level

U-338

**⚠ CAUTION:**

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

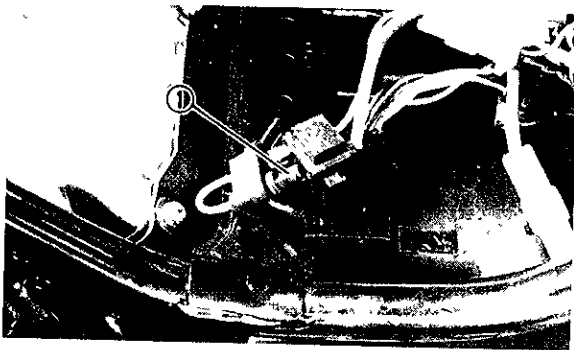
- 2 When the motorcycle will not be used for a month or longer, remove the battery and store it in a cool, dark place. Completely recharge the battery before reusing.

- 3 If the battery will be stored for a longer period than the above, check the specific gravity of the fluid at least once a month and recharge the battery when it is too low.
- 4 Always make sure the connections are correct when putting the battery back in the motorcycle. Make sure the breather pipe is properly connected and is not damaged or obstructed.

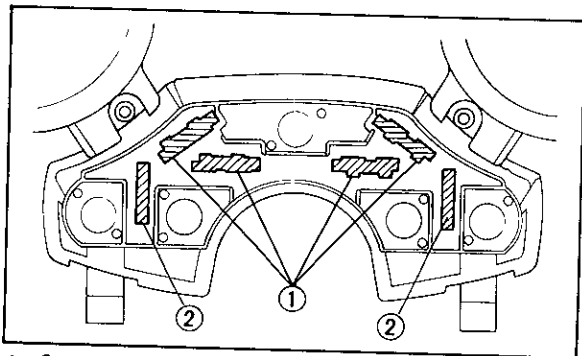
I-909

### Fuse replacement

1. There are two fuse blocks on this motorcycle. The main fuse block is located under the seat. The other fuse block is located under the indicator lights panel.



1 Main fuse



1 Other fuse block

2 Spare fuse

2. If any fuse is blown, turn off the ignition switch and the switch in the circuit in question. Install a new fuse of proper amperage.

Turn on the switches, and see if the electrical device operates. If the fuse immediately blows again, consult a Yamaha dealer

U-344

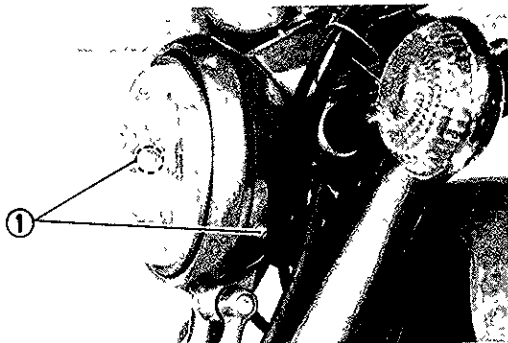
#### **CAUTION**

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

## Replacing the headlight bulb

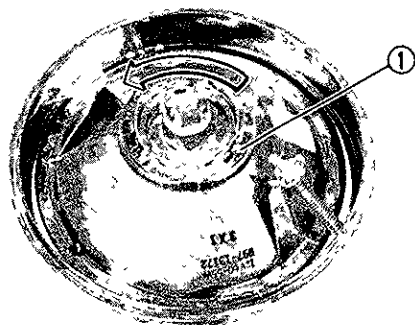
This motorcycle is equipped with a quartz bulb headlight. If the headlight bulb burns out, replace the bulb as follows:

1. Remove the 2 screws holding the light unit assembly.



1 Holding screw

2. Disconnect the lead wires, and remove the light unit assembly.
3. Turn the bulb holder counterclockwise and remove the defective bulb



1. Bulb holder

U-660

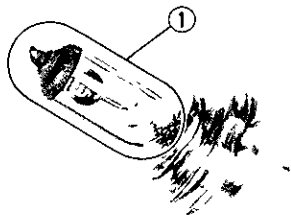
### **⚠ WARNING:**

**Keep flammable products or your hands away from the bulb while it is on, it will be hot. Do not touch the bulb until it cools down.**

- 4 Slip a new bulb into position and secure it in place with the bulb holder.

**CAUTION:**

Avoid touching the glass part of the bulb. Keep it free from oil; otherwise, the transparency of the glass, life of the bulb, and illuminous flux will be adversely affected. If oil gets on the bulb, throughly clean it with a cloth moistened with alcohol or lacquer thinner.



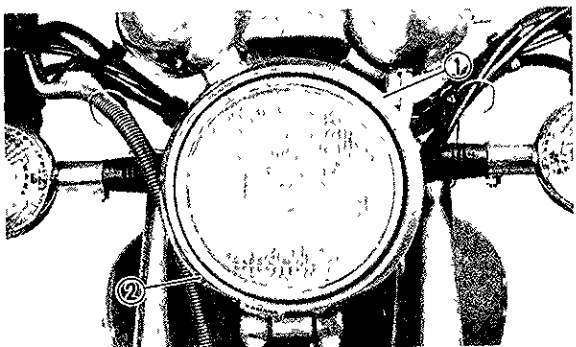
1 Don't touch

- 5 Reinstall the light unit assembly Adjust the headlight beam if necessary

**Headlight beam adjustment****CAUTION:**

For the headlight beam adjustment, be sure to proceed as follows; (It is advisable to have a Yamaha dealer make this adjustment.)

- 1 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
- 2 Vertical adjustment  
To raise the beam, turn the adjusting screw clockwise  
To lower the beam, turn the screw counterclockwise

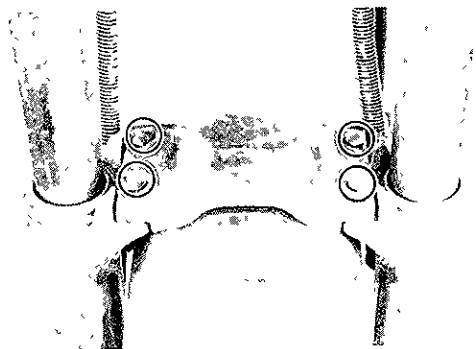


1. Horizontal adjusting screw
2. Vertical adjusting screw

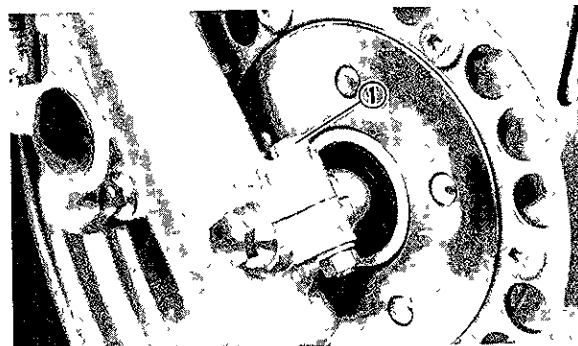
J-219

## Front wheel removal

1. Place the motorcycle on the centerstand
2. Remove the speedometer cable at the speedometer gear housing
3. Remove the front fork brace securing bolts and remove the brace with fender.



4. Loosen the pinch bolt



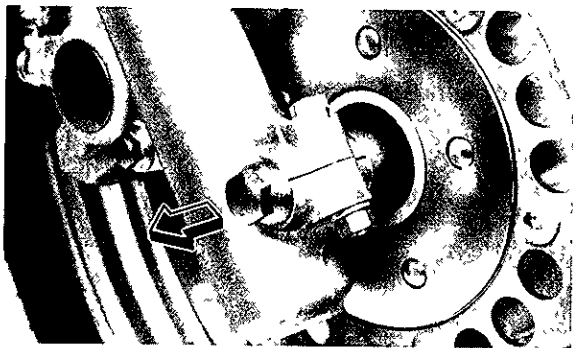
1. Pinch bolt

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

U-054

**NOTE:**

Do not depress the brake lever when the disc is off the caliper as the brake pads will be forced shut.



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



J-217

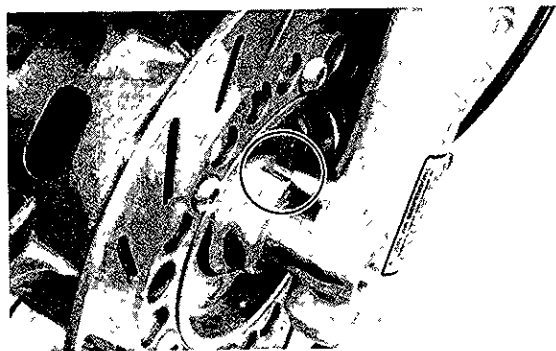
**Front wheel installation**

When installing the front wheel, reverse the removal procedure.

Pay attention to the following points:

1. Make sure the wheel hub and the speedometer clutch assembly are installed with the projections meshed into the slots.
2. Make sure the projecting portion (torque stopper) of the speedometer housing is positioned correctly.





3. Make sure the axle is properly torqued.

Tightening torque  
105 Nm (10.5 m·kg, 75 ft·lb)

4. Before tightening the pinch bolt, compress the front forks several times to check for proper fork operation
5. Tighten the axle pinch bolt.

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

J-315

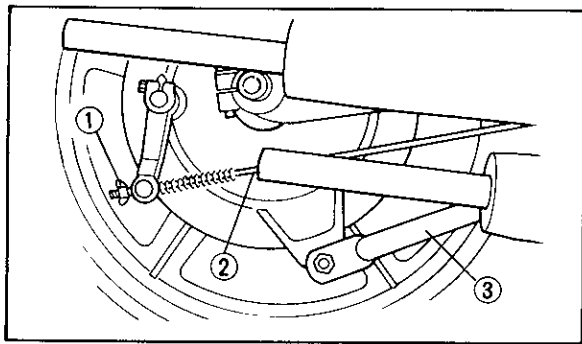
## Rear wheel removal

U-662

### **⚠ WARNING:**

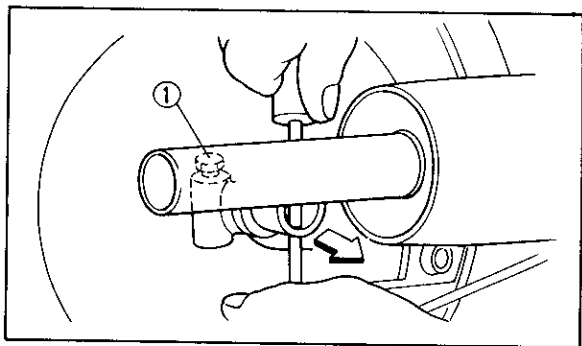
**It is advisable to have a Yamaha dealer service the rear wheel.**

1. Place the motorcycle on the centerstand.
2. Remove the tension bar and the brake rod from the brake shoe plate. The tension bar can be removed by removing the cotter pin and nut from the tension bar bolt. The brake rod can be removed by removing the adjuster



1 Adjuster      2 Brake rod      3 Tension bar

- 3 Remove the axle nut cotter pin and the axle nut
- 4 Loosen the rear axle pinch bolt and pull out the rear axle



1 Pinch bolt

- 5 Move the wheel to the right to separate it from the final gear case and remove the rear wheel

J-306

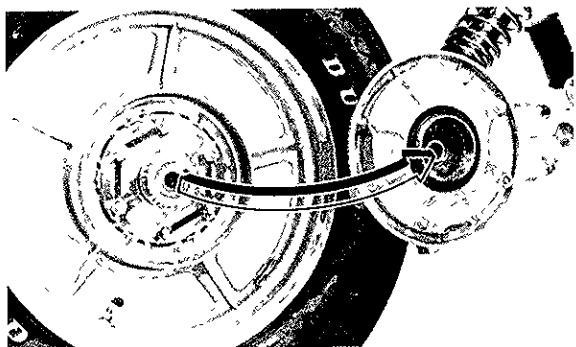
### **Rear wheel installation**

When installing the rear wheel, reverse the removal procedure

Pay attention to the following points

- 1 Apply light coating of lithium base grease to final gear case splines and rear wheel hub splines

2. Make sure the splines on the wheel hub fit into the final gear case



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

U-647

**⚠ WARNING:**

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

Tightening torque

Axle nut

105 Nm (10.5 ·kg, 75 ft·lb)

Axle pinch bolt.

20 Nm (2.0 ·kg, 14 ft·lb)

- 4 Adjust the rear brake (See page 6-16 )

U-645

**⚠ WARNING:**

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

## **Troubleshooting**

Although Yamaha motorcycles receive a rigid inspection before shipment from the factory, trouble may occur during operation. Any problem in the fuel, compression, or ignition systems can cause poor starting and a loss of power. The troubleshooting chart describes a quick, easy procedure for checking these systems.

If your motorcycle requires any repair, bring it to a Yamaha dealer. The skilled technicians at a Yamaha dealer have the tools, experience, and know-how to properly service your motorcycle. Use only genuine Yamaha parts on your motorcycle. Imitation parts may look like Yamaha parts, but they are often inferior. Consequently, they have a shorter service life and can lead to expensive repair bills.

# Troubleshooting chart

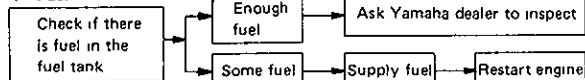
U-663

## ⚠ WARNING:

Never check the fuel system while smoking or in the vicinity of an open flame.

CJ5-06

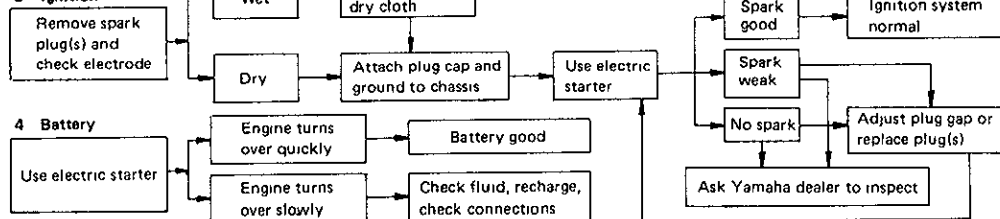
### 1 Fuel



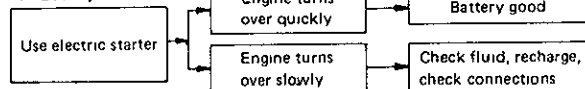
### 2 Compression



### 3 Ignition



### 4 Battery



## CLEANING AND STORAGE

K-011

### A. CLEANING

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

- 1 Before cleaning the motorcycle
  - a Block off the end of exhaust pipe to prevent water entry, a plastic bag and strong rubber band may be used
  - b Make sure the spark plug(s) and all filler caps are properly installed
- 2 If the engine case is excessively greasy, apply degreaser with a paint brush. Do not apply degreaser to wheel axles
- 3 Rinse the dirt and degreaser off with a garden hose, use only enough pressure to do the job

### **CAUTION**

**Excessive hose pressure may cause water seepage and contamination of wheel bearings, front forks, brakes and transmission seals. Many expensive repair bills have resulted from improper high pressure detergent applications such as those available in coin-operated car washers.**

- 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 for hard-to-get-to places.
- 5 Rinse the motorcycle off immediately with clean water and dry all surfaces with a chamois, clean towel, or soft absorbent cloth
- 6 Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy

7. Automotive-type wax may be applied to all painted and chrome-plated surfaces. Avoid combination cleaner-waxes. Many contain abrasives which may mar the paint or protective finish. When finished, start the engine and let it idle for several minutes.

K-004

## B. STORAGE

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

1. Drain the fuel tank, fuel lines, and carburetor float bowl(s)
2. Remove empty fuel tank, pour a cup of SAE 10W30 or 20W40 motor oil in tank, shake the tank to coat the inner surfaces thoroughly and drain off the excess oil. Reinstall the tank.

3. Remove the spark plug, pour about one tablespoon of SAE 10W30 or 20W40 motor oil in the spark plug hole and reinstall the spark plug. Turn the engine over several times (ground spark plug lead wires) to coat the cylinder walls with oil.

U-664

### **WARNING:**

**When using the starter motor to crank the engine, remove the 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 from entering.

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

U-058

**NOTE:** \_\_\_\_\_

Make any necessary repairs before storing the motorcycle

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# SPECIFICATIONS

Model	XV1100W
Dimension.	
Overall length	2,285 mm (90 0 in)
Overall width	840 mm (33 1 in)
Overall height	1,190 mm (46 9 in)
Seat height	715 mm (28 1 in)
Wheel base	1,525 mm (60 0 in)
Minimum ground clearance	145 mm ( 5 7 in)
Basic weight.	
With oil and full fuel tank	239 kg (527 lb)
Minimum turning radius.	2,740 mm (107.9 in)
Engine	
Type	Air cooled 4-stroke, gasoline, SOHC
Model	3EG2
Cylinder arrangement	V-2 cylinder
Displacement	1,063 cm <sup>3</sup>
Bore x Stroke	95 0 x 75 0 mm (3 74 x 2 95 in)
Compression ratio	8 3 1
Starting system	Electric starter
Lubrication system	Wet sump

Model	XV1100W
<p>Engine oil (4-cycle) Type</p> <p>Capacity Periodic oil change With oil filter replacement Total amount</p>	<p>SAE 20W40 type SE motor oil (If temperature does not go below 5°C/40°F)</p> <p>SAE 10W30 type SE motor oil (If temperature does not go above 15°C/60°F)</p> <p>3.0 L (2.6 Imp qt, 3.2 US qt) 3.1 L (2.7 Imp qt, 3.3 US qt) 3.6 L (3.2 Imp qt, 3.8 US qt)</p>
<p>Final gear oil Type Capacity</p>	<p>SAE 80 API GL-4 Hypoid gear oil 0.2 L (0.18 Imp qt, 0.21 US qt)</p>
<p>Air filter</p>	<p>Dry type element</p>
<p>Fuel Type  Tank capacity Reserve amount</p>	<p>Regular gasoline For Australia Unleaded fuel only 16.8 L (3.7 Imp gal, 4.4 US gal) 3.0 L (0.7 Imp gal, 0.8 US gal)</p>
<p>Carburetor Type/Manufacturer</p>	<p>BST40/MIKUNI</p>
<p>Spark plug Type/Manufacturer Gap</p>	<p>BP7ES (NGK) or W22EP-U (N D) 0.7 ~ 0.8 mm (0.028 ~ 0.031 in)</p>

Model	XV1100W
Clutch type	Wet, multi-disc
Transmission Primary reduction system Primary reduction ratio Secondary reduction system Secondary reduction ratio Transmission type Operation Gear ratio           1st 2nd 3rd 4th 5th	Gear 78/47 (1 659) Shaft drive 45/46 x 19/18 x 32/11 (3 003) Constant mesh 5-speed Left foot operation 39/17 (2 294) 40/24 (1 666) 36/28 (1 285) 32/31 (1 032) 29/34 (0 852)
Chassis. Frame type Caster angle Trail	Pressed backbone 32° 129 mm (5 1 in)
Tire Type Size                   Front Rear	Tubeless 100/90-19 57H 140/90-15 M/C 70H
Brake Front brake type Operation Rear brake type Operation	Dual, Disk brake Right hand operation Drum brake Right foot operation

Model		XV1100W
Suspension	Front Rear	Telescopic fork Swingarm
Shock absorber	Front Rear	Air/Coil spring, Oil damper Coil spring, Oil damper
Wheel travel	Front Rear	150 mm (5 9 in) 97 mm (3 8 in)
Electrical		
Ignition system		TCI
Generator system		AC magneto
Battery type/Capacity		GM18Z-3A/12V 20AH
Headlight type		Quarz bulb
Bulb wattage/Quantity		
Headlight		60W/55W
Tail/Brake light		5W/21W x 2
Flasher light		21W x 4
Meter light		3W x 4
Auxiliary light		3 4W
Indicator light wattage/Quantity		
"NEUTRAL"		3W
"HIGH BEAM"		3W
"OIL LEVEL"		3W
"TURN"		3W x 2
"FUEL"		3W

## **NOISE REGULATION (For Australia)**

### **"TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED"**

Owners are warned that the law may prohibit:

- (a) The removal or rendering inoperative by any person other than for purposes of maintenance, repair or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use; and
- (b) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.















**YAMAHA MOTOR CO.,LTD.**

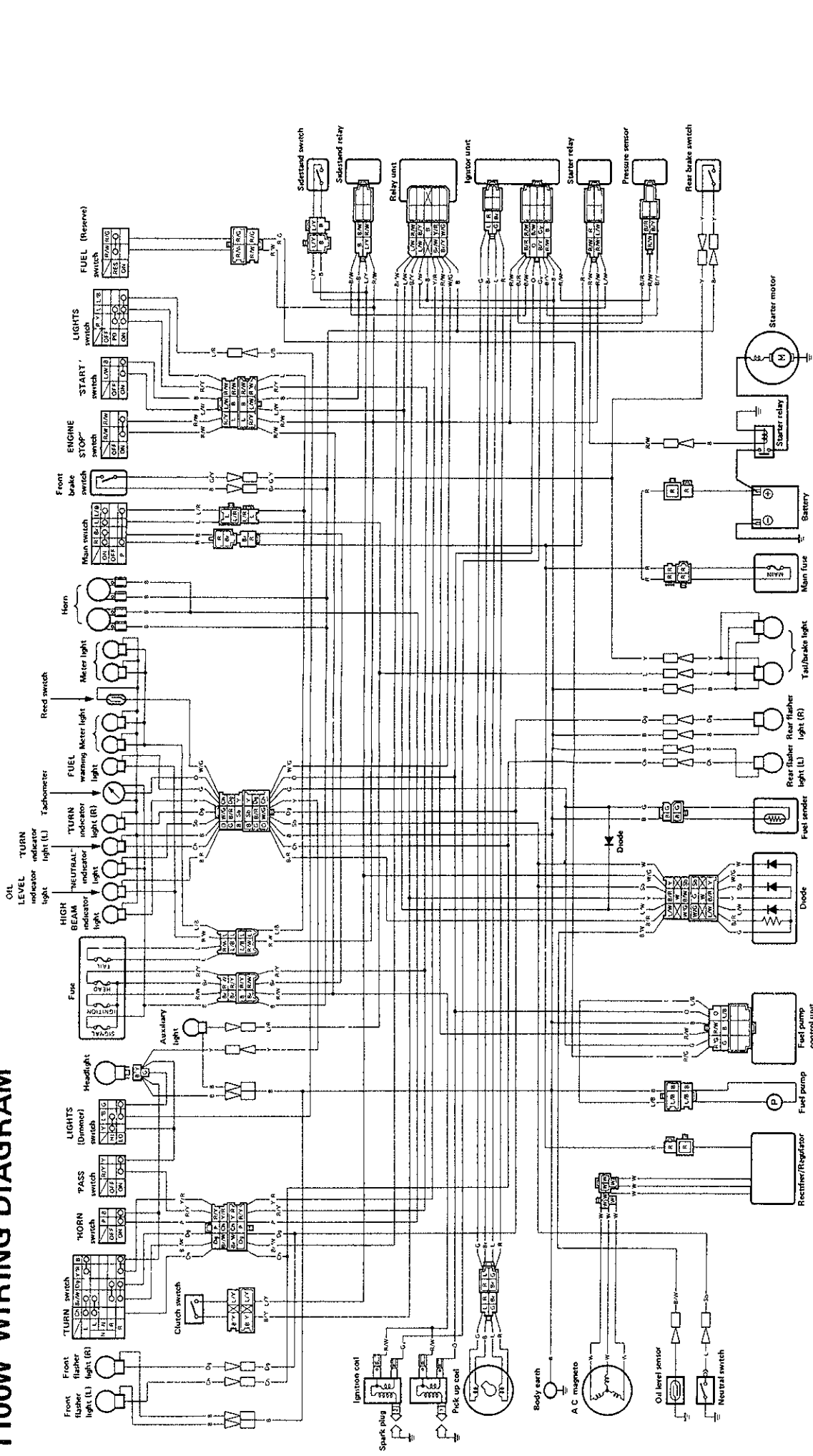
IWATA, JAPAN

PRINTED IN JAPAN

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# XV1100W WIRING DIAGRAM



## COLOR CODE

B	.....	Black	L/R	.....	Blue/Red	R/B	.....	Red/Black
L	.....	Blue	L/W	.....	Blue/White	R/G	.....	Red/Green
G	.....	Green	G/L	.....	Green/Blue	R/Y	.....	Red/Yellow
Y	.....	Yellow	G/Y	.....	Green/Yellow	R/W	.....	Red/White
R	.....	Red	G/R	.....	Green/Red	W/B	.....	White/Black
O	.....	Orange	G/W	.....	Green/White	W/G	.....	White/Green
P	.....	Pink	Y/B	.....	Yellow/Black	W/R	.....	White/Red
Br	.....	Brown	Y/G	.....	Yellow/Green	Br/Y	.....	Brown/Yellow
Ch	..	Chocolate	Y/R	.....	Yellow/Red	Br/W	.....	Brown/White
Gy	.....	Gray	Y/W	.....	Yellow/White			