

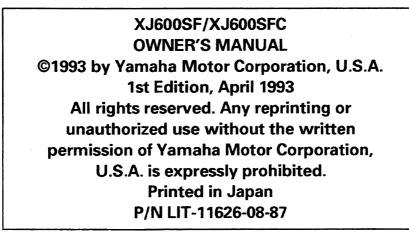
# **OWNER'S MANUAL**

# XJ600SF XJ60SFC

4DU-28199-12

LIT-11626-08-87





# INTRODUCTION

Congratulations on your purchase of the Yamaha XJ600SF/XJ600SFC. 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.

The design and manufacture of this Yamaha motorcycle fully comply 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.

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

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- The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!
- A WARNING Failure to follow WARNING instructions <u>could result in severe injury</u> or death to the motorcycle operator, a bystander or a person inspecting or repairing the motorcycle.
- **CAUTION:** A CAUTION indicates special precautions that must be taken to avoid damage to the motorcycle.
- **NOTE:** A NOTE provides key information to make procedures easier or clearer.

EUU00000

## NOTE:

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

EUU13800

# NOTE:\_

Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your machine and this manual. If there is any question concerning this manual, please consult your Yamaha dealer.

EUU60000

# **WARNING**

PLEASE READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE OPERATING THIS MOTORCYCLE. DO NOT ATTEMPT TO OPERATE THIS MOTORCYCLE UNTIL YOU HAVE ATTAINED A SATISFACTORY KNOWLEDGE OF ITS CONTROLS AND OPERATING FEA-TURES AND UNTIL YOU HAVE BEEN TRAINED IN SAFE AND PROPER RIDING TECH-NIQUES. REGULAR INSPECTIONS AND CAREFUL MAINTENANCE, ALONG WITH GOOD RIDING SKILLS, WILL ENSURE THAT YOU SAFELY ENJOY THE CAPABILITIES AND THE RELIABILITY OF THIS MOTORCYCLE.

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YAMAHA EXTENDED SERVICE......15-1

WIRING DIAGRAM

#### EAL00900

# **REPORTING SAFETY DEFECTS**

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying YAMAHA MOTOR CORP. U.S.A.. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or YAMAHA MOTOR CORP. U.S.A..

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in Washington, D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from the Hotline.

# ▲ SAFETY INFORMATION

TWO-WHEELED MOTORCYCLES ARE SINGLE TRACK VEHICLES. THEIR SAFE USE AND OPERATION ARE DEPENDENT UPON THE USE OF PROPER RIDING TECHNIQUES AS WELL AS THE EXPERTISE OF THE OPERATOR. EVERY OPERATOR SHOULD KNOW THE FOLLOWING REQUIREMENTS BEFORE RIDING.

HE OR SHE SHOULD:

- 1. OBTAIN THOROUGH INSTRUCTIONS FROM A COMPETENT SOURCE ON ALL AS-PECTS OF MOTORCYCLE OPERATION.
- 2. OBSERVE THE WARNINGS AND MAINTENANCE REQUIREMENTS IN THE OWNER'S MANUAL.
- 3. OBTAIN QUALIFIED TRAINING IN SAFE AND PROPER RIDING TECHNIQUES.
- 4. OBTAIN PROFESSIONAL TECHNICAL SERVICE AS INDICATED BY THE OWNER'S MANUAL AND/OR WHEN MADE NECESSARY BY MECHANICAL CONDITIONS.

# SAFE RIDING

- 1. Always make pre-operation checks. Careful checks may help prevent an accident.
- 2. This motorcycle is designed to carry the operator and a passenger.
- 3. The failure of motorists to detect and recognize motorcycles in traffic is the predominating cause of automobile/motorcycle accidents. Many accidents have been caused by an automobile driver who did not see the motorcycle. Making yourself conspicuous appears to be very effective in reducing the chance of this type of accident.

**Therefore:** 

- a. Wear a brightly colored jacket.
- b. Use extra caution when you approach and pass through intersections, since intersections are the most likely places for motorcycle accidents.
- c. Ride where other motorists can see you. Avoid riding in another motorist's "blind spot."
- 4. Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current motorcycle license.
  - a. Make sure you are qualified. Also, only lend your motorcycle to experienced operators.
  - b. Know your skills and limits. Staying within your limits may help you to avoid an accident.

- c. We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with your motorcycle and all of its controls.
- 5. Many motorcycle accidents have been caused by motorcycle operator errors. A typical error made by the operator is veering wide on a turn due to EXCESSIVE SPEED or undercornering (insufficient lean angle for the speed).
  - a. Always obey the speed limits and never travel faster than warranted by road and traffic conditions.
  - b. Always signal before turning or changing lanes. Make sure other motorists see you.
- 6. The operator's and passenger's posture are important for proper control.
  - a. The operator should keep both hands on the handlebars and both feet on the operator footrests during operation to maintain control of the motorcycle.
  - b. The passenger should always hold on to the operator, or the seat strap or grab bar if the motorcycle is so equipped, with both hands and keep both feet on the passenger footrests.
  - c. Never carry a passenger unless he or she can firmly place both feet on the passenger footrests.
- 7. Never ride under the influence of alcohol or drugs.
- 8. This motorcycle is designed for on-road use only. It is not suitable for off-road use.

# PROTECTIVE APPAREL

The majority of fatalities from motorcycle accidents are the result of head injuries. The use of a safety helmet is the single most critical factor in the prevention or reduction of head injuries.

- 1. Always wear an approved helmet.
- 2. Wear a face shield or goggles. Wind on your unprotected eyes could contribute to an impairment of vision which could delay seeing a hazard.
- 3. The use of heavy boots, jacket, trousers, gloves, etc. is effective in preventing or reducing abrasions or lacerations.
- 4. Never wear loose fitting clothing. It could catch on the control levers, footrests, or wheels and cause injury or accident.
- 5. Never touch the engine or exhaust system during or after operation. They become very hot and can cause burns. Always wear protective clothing that covers your legs, ankles, and feet.
- 6. A passenger should also observe the above precautions.

# MODIFICATION

Modifications made to the motorcycle not approved by Yamaha, or the removal of original equipment, may render your motorcycle unsafe for use and may cause severe personal injury. Modifications may also make your motorcycle illegal to use.

# LOADING AND ACCESSORIES

Adding accessories or cargo to your motorcycle can adversely affect stability and handling if the weight distribution of the machine is changed. To avoid the possibility of an accident, extreme caution should be used if adding cargo or accessories to your motorcycle. Use extra care if riding a motorcycle which has added cargo or accessories. Here are some general guidelines to follow if loading cargo or adding accessories to your motorcycle:

# LOADING

The total weight of the operator, passenger, accessories and cargo must not exceed the maximum load limit of 434 lbs. (197 kg): XJ600SF/432lbs. (196kg): XJ600SFC

When loading within these weight limits, keep the following in mind:

- 1. Cargo and accessory weight should be kept as low and close to the motorcycle as possible. Be sure to distribute the weight as evenly as possible on both sides of the machine to minimize imbalance or instability.
- 2. Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the motorcycle before riding. Recheck accessory mounts and cargo restraints frequently.

3. Never attach any large or heavy items to the handlebars, front forks, or front fender. These items, including such cargo as sleeping bags, duffle bags, or tents, can create unstable handling or slow steering response.

# ACCESSORIES

Genuine Yamaha accessories have been specifically designed for use on this motorcycle. Since Yamaha cannot test all other accessories which may be available, you must personally be responsible for the proper selection, installation and use of non-Yamaha accessories. You should use extreme caution when selecting and installing any accessories.

Keep in mind these guidelines for mounting accessories in addition to those provided under "LOADING."

- 1. Never install accessories or carry cargo that would impair the performance of your motorcycle. Carefully inspect the accessory before using it to make sure it does not in any way reduce ground clearance or cornering clearance, limit suspension travel, steering travel or control operation, or obscure lights or reflectors.
  - a. Accessories fitted to the handlebar or the front fork area can create instability due to improper weight distribution or aerodynamic changes. If accessories are added to the handlebar or front fork area, they must be as lightweight as possible and should be kept to a minimum.

- b. Bulky or large accessories may seriously affect the stability of the motorcycle due to aerodynamic effects. Wind may attempt to lift the motorcycle, or the motorcycle may become unstable in cross winds. These accessories may also cause instability when being passed by or passing large vehicle.
- c. Certain accessories can displace the operator from his or her normal riding position. This improper position limits the freedom of movement of the operator and may limit control ability. Therefore such accessories are not recommended.
- 2. Caution must be used if adding electrical accessories. If these accessories exceed the capacity of the motorcycle's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

# GASOLINE AND EXHAUST GAS

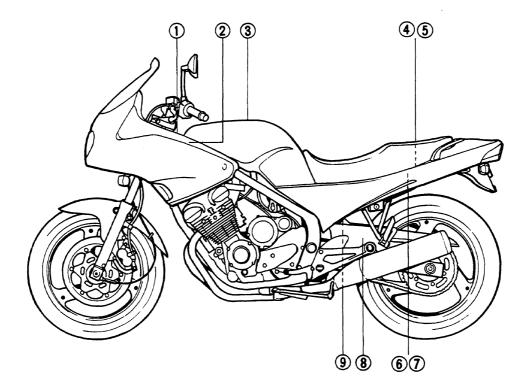
- **1. GASOLINE IS HIGHLY FLAMMABLE:** 
  - a. Always turn off the engine when refueling.
  - b. Take care not to spill any gasoline on the engine or exhaust pipe(s)/muffler(s) when refueling.
  - c. Never refuel while smoking or in the vicinity of an open flame.
- 2. Never start the engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate your motorcycle in an area that has adequate ventilation.

- 3. Always turn off the engine before leaving the motorcycle unattended and remove the ignition key. When parking the motorcycle, note the following:
  - a. The engine and exhaust pipe(s)/muffler(s) may be hot. Park the motorcycle in a place where pedestrians or children are not likely to touch these hot areas.
  - b. Do not park the motorcycle on a slope or soft ground; the motorcycle may fall over.
  - c. Do not park the motorcycle near a flammable source, e.g. a kerosene heater, or near an open flame. The motorcycle could catch fire.
- 4. When transporting the motorcycle in another vehicle, be sure it is kept upright and that the fuel cock(s) is turned to "ON" or "RES" (for vacuum type)/"OFF" (for manual type). If it should lean over, gasoline may leak out of the carburetor or fuel tank.
- 5. If you should swallow any gasoline, inhale a lot of gasoline vapor, or allow gasoline to get in your eye(s), see your doctor immediately. If any gasoline spills on your skin or clothing, immediately wash it off with soap and water and change your clothes.

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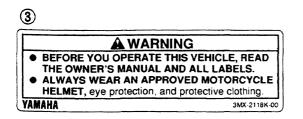
# LOCATION OF THE IMPORTANT LABELS

Please read the following labels carefully before operating this motorcycle.

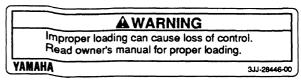


$(\mathbf{I})$	
MFD. BY YAMAHA MOTOR CO., LTD.	••••
GVWR ** lbs	
GAWR F ** Ibs WITH ***** TIRE, *** RIM. AT ** psi COL	LD
GAWR R ** Ibs WITH ***** TIRE, *** RIM. AT ** psi COI	LD
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDER	
STANDARDS IN EFFECT ON THE DATE OF MANUFACTU	IRE SHOWN ABOVE.
MOTOR CYCLE	
YAMAHA	

C	AUTION
Cleaning with alk gasoline or solve Use neutral dete	aline or acid cleaner, nt will damage windshield rgent.
AMAHA	3JJ-2835Y-



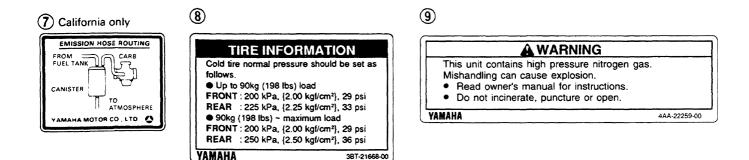
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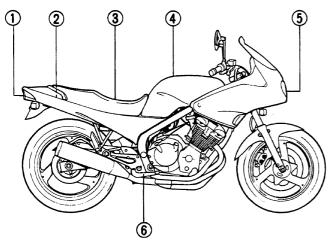


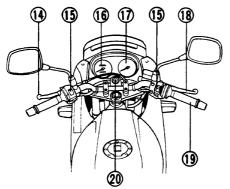
DISPLACEMENT: +++ c	m <sup>3</sup> VALVE LA	SH (mm) IN: ++++	EX: •	***	
IGNITION TIMING & IDL	E MIXTURE	NO OTHER ADJUS	TMENTS NEEDED		
IDLE SPEED **** r/mir	IN NEUTRAL	ADJUST THROT	ILE STOP SCREW AT	NORMAL OPERATING	TEMPERATURE.
SPARK PLUG & GAP	*****		***** mm		
FUEL: ALL GASOLINE 9	1 RON MIN.	ENGINE OIL: ***	***	TYPE SE	
HIS VEHICLE CONFORI	NS TO US EPA	REGULATIONS AP	PLICABLE TO ++++	MODEL YEAR NEW MOT	ORCYCLES.

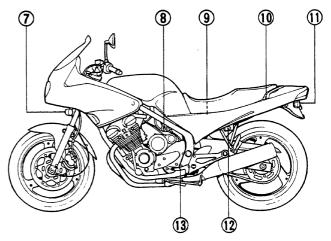
6



# DESCRIPTION







- 1. Tail/brake light
- 2. Storage compartment
- 3. Seat
- 4. Fuel tank
- 5. Headlight
- 6. Rear brake pedal
- 7. Front flasher light
- (Front position light)
- 8. Fuel cock
- 9. Heimet holder
- 10. Grab bar

- 11. Rear flasher light
- 12. Seat lock
- 13. Shift pedal
- 14. Clutch lever
- 15. Handlebar switch
- 16. Speedometer
- 17. Tachometer
- 18. Front brake lever
- 19. Throttle grip
- 20. Main switch

# MOTORCYCLE IDENTIFICATION

EAA60401

# Identification numbers record

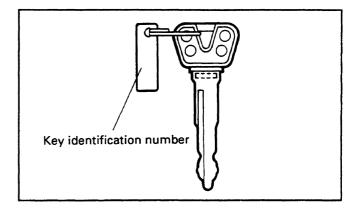
1. KEY IDENTIFICATION NUMBER:

2. VEHICLE IDENTIFICATION NUMBER:

3. ENGINE SERIAL 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.



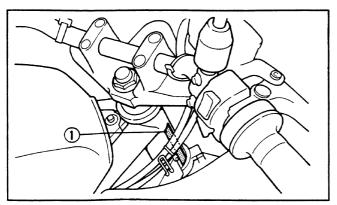
Record your vehicle identification number and engine serial number in the spaces provided to assist you in ordering spare parts from your Yamaha dealer or for reference in case your vehicle is stolen.

## Vehicle identification number

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

### 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.

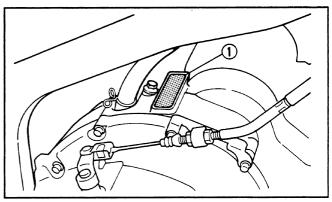


1. Vehicle identification number

#### EAA70100

## Engine serial number

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



1. Engine serial number

EUU00300

## NOTE:

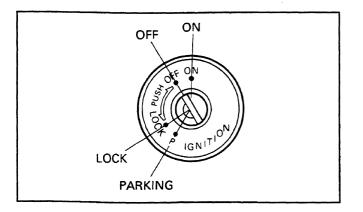
The first three digits of these numbers are for model identification; the remaining digits are the unit production number. Keep a record of these numbers for reference when ordering parts from a Yamaha dealer.

# **CONTROL FUNCTIONS**

EAB00100

# Main switch

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



EAB01501

# ON:

Electrical circuits are switched on, and the headlight, meter light, taillight, and front position light come on. The engine can be started. The key cannot be removed in this position.

EAB00600

# 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 6-9) for operation instructions.

## EAB01700

# PARKING:

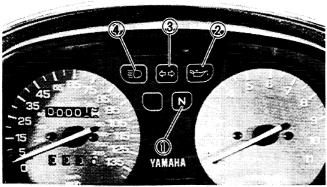
The steering is locked in this position. The taillight and front position light come on but all other circuits are off. The key can be removed in this position.

EUU00700

# NOTE:

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

## EAB10000 Indicator lights



- 1. "NEUTRAL" indicator light
- 2. "OIL LEVEL" indicator light
- 3. "TURN" indicator light
- 4. "HIGH BEAM" indicator light

#### EAB12200

"TURN" indicator light (green):

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

EAB10200

"NEUTRAL" indicator light (green):

This indicator comes on when the transmission is in neutral.

EAB10300

"HIGH BEAM" indicator light (blue):

This indicator comes on when the headlight high beam is used.

EAB10600

"OIL LEVEL" indicator light (red):

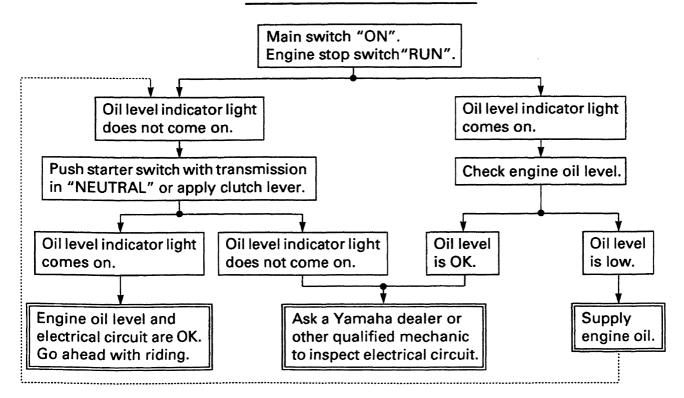
This indicator comes on when the oil level is low. This light circuit can be checked by the following procedure.

EUU30000

# CAUTION

Do not run the motorcycle until you know it has sufficient engine oil.

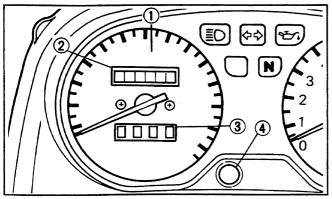
## **Oil level indicator circuit check**



#### EAB40001

## Speedometer

The speedometer shows riding speed. This speedometer is equipped with an odometer and trip odometer. The trip odometer can be reset to "O" 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. Speedometer

2. Odometer

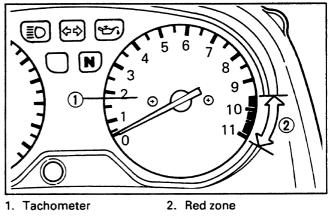
3. Trip odometer

Reset switch

#### EAB40200

## 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.

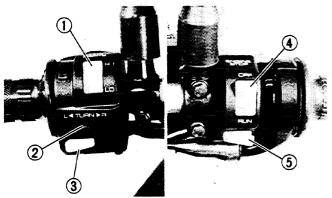


EUU30400

# CAUTION:

# Do not operate in the red zone Red zone: 9,500 r/min and above

## EAB60000 Handlebar switches:



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

#### EAB60100

# "LIGHTS" (Dimmer) switch

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

#### EAB62101

# "TURN" signal switch

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.

EAB60200

# "HORN" switch

Press the switch to sound the horn.

EAB60901

# "ENGINE STOP" switch

The engine stop switch is a safety device for use in an emergency such as when the motorcycle overturns or if trouble occurs in the throttle system. Turn the switch to "RUN" to start the engine. In case of emergency, turn the switch to "OFF" to stop the engine.

EAB60701

# "START" switch

The starter motor cranks the engine when pushing the starter switch.

EUU30700

# CAUTION:

See starting instructions prior to starting the engine.

#### EAB70001

## **Clutch lever**

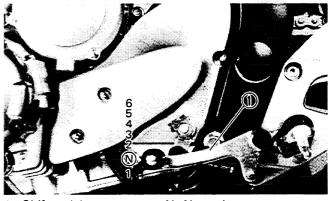
The clutch lever is located on the left handlebar, and the starting circuit cutoff switch is incorporated in the clutch lever holder. Pull the clutch lever to the handlebar to disengage the clutch, and release the lever to engage the clutch. The lever should be pulled rapidly and released slowly for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

#### EAB80001 Shift ne

# Shift pedal

This motorcycle is equipped with a constant-mesh 6-speed transmission.

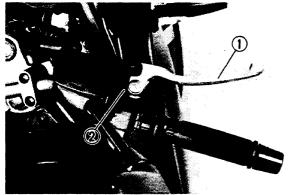
The shift pedal is located on the left side of the engine and is used in combination with the clutch when shifting.



1. Shift pedal EAB90401 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. The front brake lever is equipped with a lever position adjuster. Refer to page 9-18 for adjustment.



1. Front brake lever

2. Lever position adjuster

#### EAB90101

# Rear brake pedal

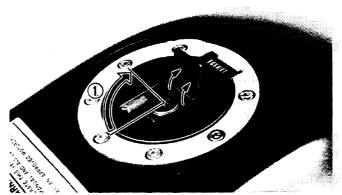
The rear brake pedal is on the right side of the motorcycle. Press down on the brake pedal to apply the rear brake.

EAC00501

## Fuel tank cap

# TO OPEN:

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



1. Unlock

# TO CLOSE:

Push the tank cap into position with the key inserted. To remove the key, turn it counterclockwise to the original position. Then, close the key cover.

## EUU01200

# 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. EUU61100

# **WARNING**

Be sure the cap is properly installed and locked in place before riding the motorcycle.

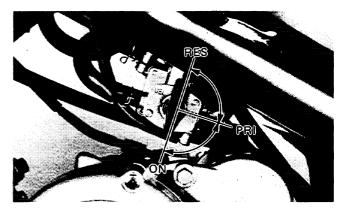
#### EAC10201

## Fuel cock

The negative pressure fuel cock supplies fuel from the tank to the carburetor(s) while filtering it also.

The fuel cock has the following three positions:

- ON: With the lever in this position, fuel flows if the engine is running but stops if the engine is not running.
- RES: This indicates reserve. If you run out of fuel while riding, move the lever to "PRI", start the engine, then switch to "RES". FILL THE TANK AT THE FIRST OPPORTUNITY. BE SURE TO SET THE LEVER TO "ON" AFTER REFUELLING.



#### EUU01400

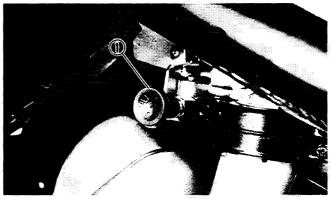
#### NOTE:\_

The fuel cock operates on vacuum from the engine when set at "ON" or "RES." If the line connecting the cock to the carburetor intake manifold is not connected or has a leak, the cock 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 to "ON" after starting the engine.

#### EAC20202

## Starter knob (CHOKE)

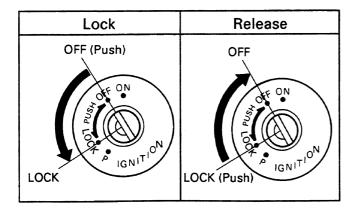
Starting a cold engine requires a richer airfuel mixture. A separate starter circuit supplies this mixture. Pull the starter knob out to open the circuit for starting. When the engine has warmed up, push the knob in to close the circuit.

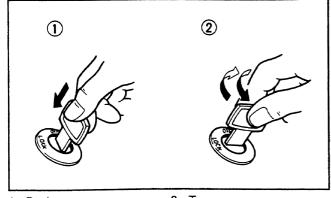


1. Starter knob (CHOKE) EAC30600

## **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. While pushing the key into the main switch, turn it from "OFF" to "LOCK" and remove it. To release the lock, turn the key to "OFF" while pushing.









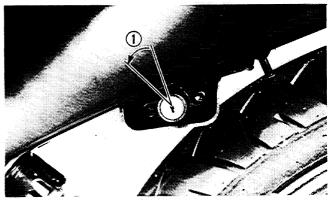
# **WARNING**

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

### EAC42800

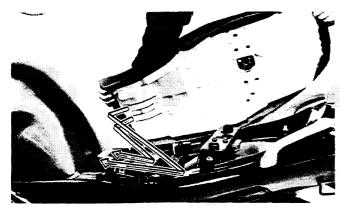
## Seat

1. To unlock the seat, insert the key in the lock and turn it counterclockwise.



1. Unlock

- 2. Remove the seat.
- To lock the seat, insert the lobe(s) on the front of the seat into the receptacle(s) on the fuel tank, then push down the seat at the rear.



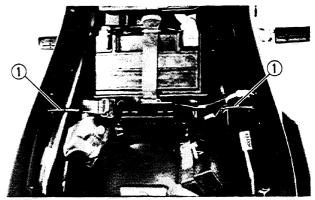
### NOTE:

Make sure that the seat is securely fitted.

### EAC50700

### Helmet holder

The helmet holder is under the seat. Remove the seat and hook the helmet on the helmet holder. Then, reinstall the seat and lock it.



1. Helmet holder

EUU72900

# **WARNING**

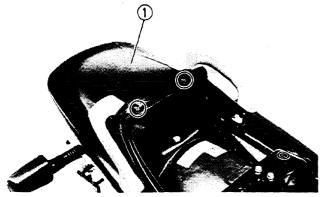
Never ride with a helmet in the helmet holder. The helmet may hit objects, causing loss of control and possibly an accident.

### EAC74400

### Side cover

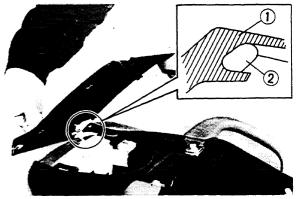
Removal:

- 1. Remove the seat.
- 2. Remove the tail cover.
- a. Remove the screws.



1. Tail cover

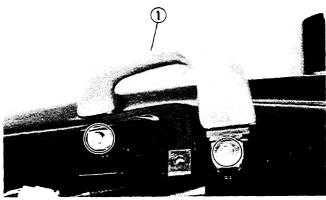
b. Slightly raise the front portion and slide it backward to unhook it.



1. Tail cover

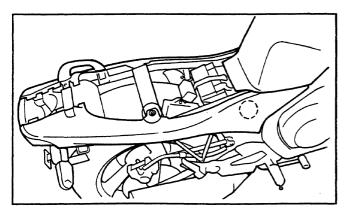
2. Side cover

3. Remove the grab bar by removing the bolts.



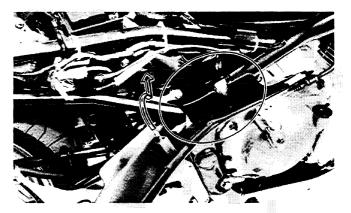
1. Grab bar 6-12

4. Remove the side cover by removing the screws and pulling outward on the bottom portion.



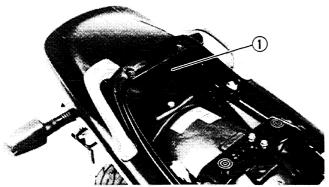
Installation:

1. Insert the side cover projection into the grommet and tighten the screws.



- 2. Reinstall the grab bar.
- 3. Reinstall the tail cover with its hooks in place on the side cover and tighten the screws.
- 4. Reinstall and lock the seat.

# EAC74500 Storage compartment



1. Storage compartment

EUU76000

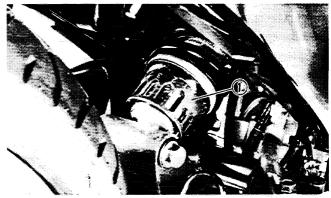
# **WARNING**

Do not exceed maximum load. Maximum load: 1 kg (2 lbs)

### EAC90201

### **Rear shock absorber**

The spring preload of the rear shock absorber can be adjusted to suit the rider's preference, motorcycle's load (ex: optional accessories etc.) and road conditions. Refer to page 9-30 for proper adjustment procedures.



1. Spring preload adjuster

### EAD30001

### 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 8-2 for an explanation of this system.)

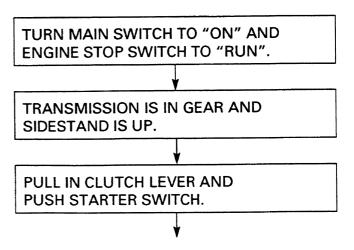
EUU69401

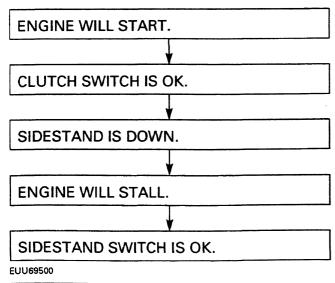
# **WARNING**

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, return the motorcycle to a Yamaha dealer or other qualified mechanic immediately for repair.

### EAD30700

**Sidestand/clutch switch operation check** Check the operation of the sidestand switch and clutch switch against the information below.





# **WARNING**

If improper operation is noted, consult a Yamaha dealer or other qualified mechanic immediately.

# **PRE-OPERATION CHECKS**

## Before using this motorcycle, check the following points:

No.	ltem	Routine	Page
1	Brake	7-3~7-4, 9-18~9-23	
2	Clutch	Check operation, condition and free play.	7-4, 9-23~9-24
3	Engine oil	Check engine oil level, add oil if necessary.	7-4, 9-11~9-16
4	Drive chain	Check chain slack and condition. Adjust if necessary.	7-5, 9-24~9-26
5	Throttle	Check for smooth operation. Adjust if necessary.	7-4, 9-27
6	Lights/Signals	Check operation.	7-10, 9-33~9-35
7	Wheels/Tires	Check tire pressure, wear and damage.	7-5~7-9, 9-35~9-39
8	Fuel	Check fuel level, top-up as required.	7-10~7-11
9	Fittings/Fasteners	Check all chassis fittings and fasteners. Adjust if necessary.	7-10, 9-10

## NOTE:\_

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

# **WARNING**

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

### EAE12501

## Brakes (See page 9-18 for details)

 Brake lever and brake pedal Check for correct free play in the front brake lever and rear brake pedal and adjust if necessary. Make sure the brakes are working properly by checking at low speed shortly after starting out.

EUU61800

# **WARNING**

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

2. Brake fluid

Check the brake fluid level. Add fluid if necessary.

Recommended brake fluid: DOT #4

EUU13100

NOTE:\_\_

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

3. Check the disc pads. Refer to page 9-20.

EUU02101

## NOTE:

When this brake service is necessary, consult a Yamaha dealer or other qualified mechanic.

### EAE10601

7-3

## Brake fluid leakage

Apply each brake for a few minutes. Check to see if any brake fluid leaks out from the pipe joints or the master cylinder(s). EUUJ37801

# CAUTION:

Brake fluid may deteriorate painted surfaces or plastic parts. Never spill any fluid. If spilled, clean it up immediately.

# **WARNING**

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

#### EAE20000

### Clutch (See page 9-23 for details)

Check the free play in the clutch lever, and make sure the lever operates properly. If the free play is incorrect, adjust it. EAE30000

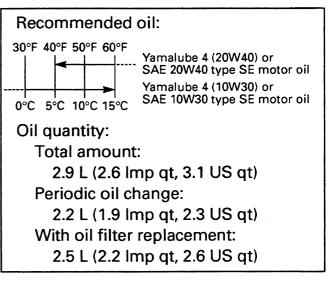
Throttle grip (See page 9-27 for details)

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 or other qualified mechanic to make any necessary adjustments.

### EAE40001

## **Engine oil (See page 9-11 for details)** Make sure the engine oil is at the specified

level. Add oil as necessary.



### EUU08000

### NOTE:

Recommended engine oil classification; API Service "SE", "SF" type or equivalent (e.g. "SF-SE", "SF-SE-CC", "SF-SE-SD" etc.). EAE50001

### Chain (See page 9-24 for details)

Check the general condition of the chain and the chain slack before every ride. Lubricate and adjust the chain as necessary.

## EAE90101

### 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**

44

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:	200 kg (441 lb	s) (XJ600SF)
With oil and full fuel tank	201 kg (443 lb	s) (XJ600SFC)
Maximum load*:	197 kg (434 lb 196 kg (432 lb	s) (XJ600SF) s) (XJ600SFC)
Cold tire pressure:	Front	Rear
Up to 90 kg (198 lbs) load*	200 kPa (2.00 kgf/cm <sup>2</sup> , 29 psi)	225 kPa (2.25 kgf/cm <sup>2</sup> , 33 psi)
90 kg (198 lbs) load ~ Maximum load*	200 kPa (2.00 kgf/cm <sup>2</sup> , 29 psi)	250 kPa (2.50 kgf/cm <sup>2</sup> , 36 psi)
High speed riding	200 kPa (2.00 kgf/cm <sup>2</sup> , 29 psi)	250 kPa (2.50 kgf/cm <sup>2</sup> , 36 psi)

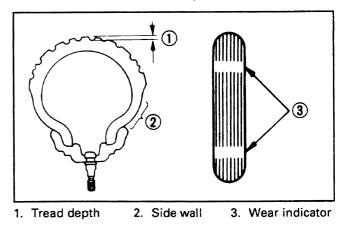
\* Load is the total weight of cargo, rider, passenger, and accessories.

## A WARNING

Proper loading of your motorcycle is important for several characteristics of your motorcycle; such as handling, braking, performance and safety. 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 or other qualified mechanic immediately and have the tire replaced.



FRONT:

Manufacture	Size	Туре	
YOKOHAMA	110/80-17 57H	F209	

**REAR:** 

Manufacture	Size	Туре
YOKOHAMA	130/70-18 63H	R209

Minimum tire tread depth	10 (0.04 :)
(front and rear)	1.0 mm (0.04 in)

EUU68000

# **WARNING**

It is dangerous to ride with a worn-out tire. When a tire tread begins to show lines, have a Yamaha dealer or other qualified mechanic replace the tire immediately. Brakes, tires, and related wheel parts replacement should be left to a Yamaha Service Technician or other qualified mechanic. EAE95200

## Tubeless tires and cast wheels

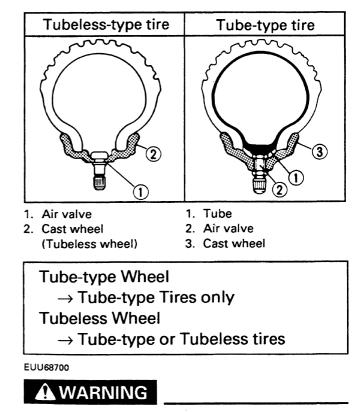
This motorcycle is equipped with cast wheels designed for either tube-type or tubeless tires. Tubeless tires are installed as standard equipment.

EUU68600

# **WARNING**

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

Tire	Wheel				
TUBELESS	SUITABLE FOR TUBELESS TIRES				
The tires and wheels are marked as shown.					



When using tube-type tires, be sure to install the proper tube also. To ensure maximum performance, long service, and safe operation, note the following:

- 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 or other qualified mechanic. 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.

EAE93900 Accessories or replacement parts EUU69700

## **WARNING**

This motorcycle is not designed to pull a trailer or to be attached to a sidecar. The accessories or replacement parts you choose for your motorcycle should be designed specifically for it, and they must be securely mounted to maintain the inherent stability of the original design. Genuine Yamaha Parts and Accessories are designed and tested to be compatible with your motorcycle. Please consider Genuine Yamaha Parts and Accessories before making an accessory purchase. Use of non-Yamaha-approved parts or accessories may cause loss of handling stability and riding safety. Since Yamaha cannot control the quality of parts or accessories manufactured by other companies, Yamaha cannot be held liable for any consequences caused by the use of items which have not been approved by Yamaha.

### EAE85000

### **Fittings/Fasteners**

Always check the tightness of chassis fittings and fasteners before a ride. Use the chart on page 9-10 to find the correct torque.

EAE70000

### 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.

EAE70700

### Switches

Check the operation of the headlight switch, turn switch, brake light switch, horn switch, starter switch, main switch, etc. EAE80000

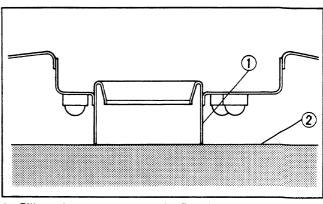
Fuel

Make sure there is sufficient fuel in the tank.

EUU61000

# **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

# CAUTION:

Always wipe off spilled fuel immediately with a dry and clean soft cloth. Fuel may deteriorate painted surfaces or plastic parts.

EAE81701

Recommended fuel: UNLEADED FUEL Fuel tank capacity: Total: 17.0 L (3.7 Imp gal, 4.5 US gal) Reserve:

3.5 L (0.8 Imp gal, 0.9 US gal)

Your Yamaha engine has been designed to use regular unleaded gasoline with a pump octane number ([R+M]/2) of 86 or higher, or research octane number of 91 or higher. If knocking or pinging occurs, use a different brand of gasoline or premium unleaded fuel. Unleaded fuel will give you longer spark plug life and reduced maintenance cost. If unleaded gasoline is not available, then leaded regular gasoline can be used.

### Gasohol

There are two types of gasohol; gasohol containing ethanol and that containing methanol. Gasohol containing ethanol can be used if ethanol content does not exceed 10%. Gasohol containing methanol is not recommended by Yamaha because it can cause fuel system damage or vehicle performance problems.

# OPERATION AND IMPORTANT RIDING POINTS

### EUU62700

# **WARNING**

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

EUU31100

# CAUTION

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

EUU62800

# **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.

### EAF11701

## Starting and warming up a cold engine

EUU02800

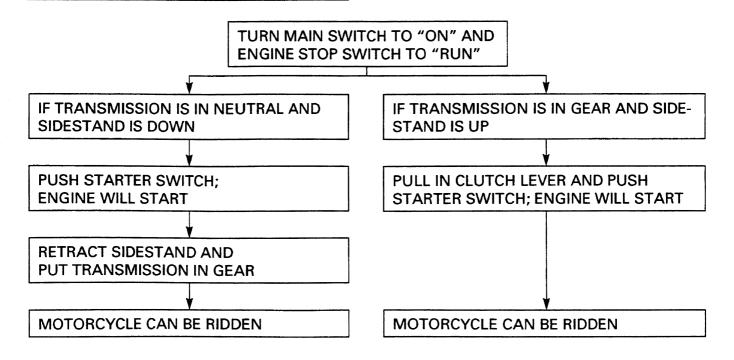
### NOTE:\_\_\_\_\_

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 sidestand switch and clutch switch. (Refer to page 6-15.)



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

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

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

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

EUU02500

### 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.

### EUU31300

# CAUTION

The oil level indicator light should come on when the starter switch is pushed and should go off when the starter switch is released. 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 and check to see that the oil level indicator light goes off. If the light does not go off even with sufficient oil in the crankcase or the light does not come on when pushing the starter switch, consult a Yamaha dealer or other qualified mechanic. 6. After starting the engine, turn back the starter. The starter operation periods differ with the ambient temperature, so refer to the following notes.

EUU03100

### NOTE:\_\_

The engine is warm when it responds normally to the throttle with the starter turned off. To avoid the possibility of excessive exhaust emissions, never leave the starter circuit on longer than necessary. The length of time the starter is needed depends upon the ambient temperature. Warm ambient temperatures (above 10°C/50°F) require about 7 seconds of starter use. Cold ambient temperatures (below 10°C/50°F) require about 35 seconds with the starter fully open, then about 2.5 minutes with the starter in the half-open position. For maximum engine life, always warm up the engine before starting off. Never accelerate hard with a cold engine.

### EAF10800

## Starting a warm engine

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

# CAUTIONS

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

### EAF20002

## 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 shift pedal is shown in the illustration. (Page 6-6) To shift into NEUTRAL, depress the shift 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 using the clutch.

### EAF20100

### 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 in the table below, close the throttle, and at the same time, quickly pull in the clutch lever.
- 5. Shift into SECOND gear. (Be careful not to shift into neutral.)
- 6. Open the throttle part way and gradually release the clutch lever.
- Follow the same procedure when shifting to the next higher gear. Always shift gears at the recommended shift points.

EAF20301

### To decelerate:

- 1. Apply both the front and the rear brakes at the same time to slow the motorcycle.
- When the motorcycle reaches 25 km/h (15.5 mi/h), shift into first gear. Any time the engine is about to stall or runs very roughly, pull in the clutch and use the brakes to stop.
- 3. When the motorcycle is almost completely stopped, shift into neutral. The green neutral indicator light should come on.

## **Recommended shift point**

	Acceleration shift point km/h (mi/h)	Deceleration shift point km/h (mi/h)
$\begin{array}{rrrr} 1 \text{st} & \rightarrow & 2 \text{nd} \\ 2 \text{nd} & \rightarrow & 3 \text{rd} \\ 3 \text{rd} & \rightarrow & 4 \text{th} \\ 4 \text{th} & \rightarrow & 5 \text{th} \\ 5 \text{th} & \rightarrow & 6 \text{th} \end{array}$	16 (9.9) 24 (14.9) 32 (19.9) 40 (24.9) 48 (29.9)	- 25 (15.5) 25 (15.5) 25 (15.5) 25 (15.5)

### EAF30000

## 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.

 500 ~ 1,000 km (300 ~600 mi): Avoid prolonged full throttle operation. Avoid cruising speeds in excess of 7,000 r/min.

EUU32000

# CAUTION:

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

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

EUU38700

# CAUTION:

Never let engine speeds enter the red zone.

### EUU35600

# CAUTION:

If any engine trouble should occur during the break-in period, consult a Yamaha dealer or other qualified mechanic immediately.

### EAF40000

## Parking

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

# **A** 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

### EAH00100

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)."

EUU63100

# **WARNING**

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

### EAH00300

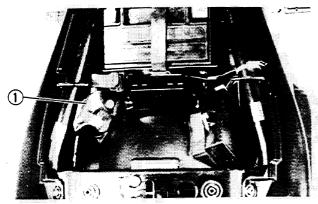
## PERIODIC MAINTENANCE

PROPER PERIODIC MAINTENANCE OF YOUR MOTORCYCLE IS IMPORTANT IN ORDER TO ENJOY LONG, PLEASURABLE SERVICE. ESPECIALLY IMPORTANT ARE THE MAINTENANCE SERVICES RELATED TO EMISSIONS CONTROL. THESE CON-TROLS NOT ONLY FUNCTION TO EN-SURE CLEANER AIR BUT ARE ALSO VITAL TO PROPER ENGINE OPERATION AND MAXIMUM PERFORMANCE. IN THE FOL-LOWING TABLES OF PERIODIC MAINTE-NANCE. THE SERVICES RELATED TO EMISSIONS CONTROL ARE GROUPED SEPARATELY, THESE SERVICES REQUIRE SPECIALIZED DATA, KNOWLEDGE, AND FOUIPMENT, YAMAHA DEALERS ARE TRAINED AND EQUIPPED TO PERFORM THESE PARTICULAR SERVICES.

### EAH10001

## 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 miner repairs. The tools provided in the owner's tool kit are to assist you in the performance of periodic maintenance. However, some other tools such as a torque wrench are also necessary to perform the maintenance correctly.



<sup>1.</sup> Tool kit

EUU18400

### NOTE:\_\_\_

If you do not have necessary tools required during a service operation, take your motorcycle to a Yamaha dealer or other qualified mechanic for service.

EUU63300

# **WARNING**

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

## PERIODIC MAINTENANCE EMISSION CONTROL SYSTEM

			Initial		Od	ometer readi	ngs	
No.	ltem	Remarks	1,000 km (600 mi) or 1 month	**1 7,000 km (4,400 mi) or 7 months	**2 13,000 km (8,200 mi) or 13 months	19,000 km (12,00 mi) or 19 months	**3 25,000 km (15,800 mi) or 25 months	**4 31,000 km (19,600 mi) or 31 months
1*	Valve clearance	Check and adjust valve clearance when engine is cold.					0	
2	Spark plugs	Check condition. Adjust gap and clean. Replace at 13,000 km (or 13 months) and thereafter every 12,000 km(or 12 months).		0	Replace	0	Replace	0
3*	Crankcase breather system	Check breather hose for cracks or damage. Replace if necessary.		0	0	0	0	0
4*	Fuel line	Check fuel hose and vacuum pipe for cracks or damage. Replace if necessary.		0	0	0	0	0
5*	Fuel filter	Replace initial 31,000 km(19,600 mi) and thereafter every 30,000 km (19,000 mi).						Replace
6*	Exhaust system	Check for leakage. Retighten if necessary. Replace gasket(s) if necessary.		0	0	0	0	0
7*	Carburetor Synchronization	Adjust synchronization of carburetors.	0	0	0	0	0	0
8*	idle speed	Check and adjust engine idle speed. Adjust cable free play.		0	0	0	0	0

			Initial	_	ometer readi	neter readings		
No.	ltem	n Remarks		**1 7,000 km (4,400 mi) or 7 months	or	or	**3 25,000 km (15,800 mi) or 25 months	**4 31,000 km (19,600 mi) or 31 months
9*	Evaporative emission control system**	Check control system for damage. Replace if necessary.				0		0

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

\*\* For california type only

### NOTE:

For farther odometer reading, repeat the above maintenance at the period established; \*\*1: Every 6,000 km (3,800 mi) and \*\*2: Every 12,000 km (7,600 mi), \*\*3: Every 24,000 km (15,200 mi) and \*\*4: Every 30,000 km (19,000 mi) intervals.

EAH20001

### Spark plug inspection

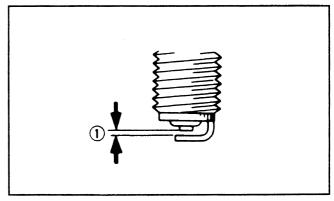
The spark plug is an important engine component and is easy to inspect. The condition of the spark plug can indicate the condition of the engine.

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 or other qualified mechanic. You should periodically remove and inspect the spark plugs 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 the specified plug.

Standard spark plug: CR7E, CR8E (NGK) U22ESR-N, U24ESR-N (NIPPONDENSO)

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



<sup>1.</sup> Spark plug gap

Spark plug gap:

0.7 ~ 0.8 mm (0.028 ~ 0.031 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: 12.5 Nm (1.25 m·kg, 9.0 ft·lb)

EUU03801

## NOTE:\_

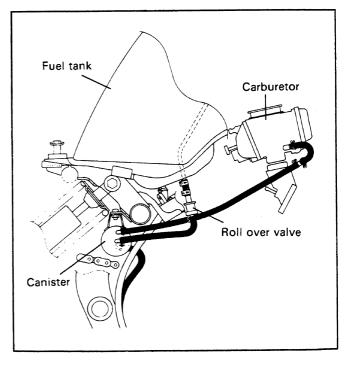
If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 to 1/2 turn past finger tight. Have the spark plug torqued to the correct value as soon as possible with a torque wrench.

### EAH90400

## **Canister (for California only)**

This model is equipped with a canister to prevent the discharging of fuel vapor into the atmosphere. Before using this motor-cycle be sure to check the following: 9-6

- 1. Check each hose connection.
- Check each hose and canister for cracks or damage. Replace if damaged.
- 3. Make sure the bottom (vent.) hose is not blocked. Clean it if necessary.



## **GENERAL MAINTENANCE/LUBRICATION**

				Initial		Od	ometer readi	ngs	
No.	ltem	Remarks	Туре	1,000 km (600 mi) or 1 month	**1 7,000 km (4,400 mi) or 7 months	**2 13,000 km (8,200 mi) or 13 months	19,000 km (12,00 mi) or 19 months	**3 25,000 km (15,800 mi) or 25 months	**4 31,000 km (19,600 mi) or 31 months
1	Engine oil	Warm-up engine before draining.	*1) Yamalube 4 (20W40) or SAE 20W40 type "SE" motor oil *2) Yamalube 4 (10W30) or SAE 10W30 type "SE" motor oil	0	0	0	0	0	0
2*	Oil filter	Replace	-	0		0		0	
3*	Air filter	Clean with compressed air. Replace if necessary.	-		0	0	0	0	0
4*	Brake system	Check brake system. Replace pads if necessary.	_	0	0	0	0	0	ο
5	Clutch	Adjust free play.	-	0	0	0	0	0	0
6*	Drive chain	Check chain condition. Adjust and lubricate chain thoroughly.	SAE 30W-50W motor oil	Every 500 km (300 mi)					
7*	Control and meter cable	Apply chain lube thoroughly.	Yamaha chain and cable lube or SAE 10W30 motor oil	0	0	0	0	0	0

	[			Initial		Od	ometer readi	ngs	
No.	ltem	Remarks	Туре	1,000 km (600 mi) or 1 month	**1 7,000 km (4,400 mi) or 7 months	**2 13,000 km (8,200 mi) or 13 months	19,000 km (12,00 mi) or 19 months	**3 25,000 km (15,800 mi) or 25 months	**4 31,000 km (19,600 mi) or 31 months
8	Rear arm pivot shaft	Apply grease lightly.	Molybdenum disulfide grease					0	
9	Brake/Clutch lever pivot shaft	Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		0	0	0	0	0
10*	Brake pedal and shift pedal shaft	Lubricate. Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		0	0	0	0	0
11*	Sidestand pivot	Check operation and lubricate. Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		0	0	0	0	ο
12*	Front fork	Check operation and leakage.	-		0	0	0	0	0
13*	Steering bearings	Check bearings assembly for looseness. Moderately repack every 24,000 km (15,200 mi).	Medium weight wheel bearing grease.		0	0	0	Repack	ο
14*	Wheel bearings	Check bearings for smooth rotation.	-		0	0	0	0	0

				Initial	Odometer readings				
No.	ltem	Remarks	Туре	1,000 km (600 mi) or 1 month	**1 7,000 km (4,400 mi) or 7 months	or	or	**3 25,000 km (15,800 mi) or 25 months	(19,600 mi) or
15*	Sidestand switch	Check and clean or replace if necessary.		0	0	0	0	0	0

\*1) If ambient temperature does not go below 5°C/40°F.

\*2) If ambient temperature dose not go above 15°C/60°F.

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

### NOTE:

For farther odometer reading, repeat the above maintenance at the period established; \*\*1: Every 6,000 km (3,800 mi), \*\*2: Every 12,000 km (7,600 mi) and \*\*3: Every 24,000 km (15,200 mi) intervals.

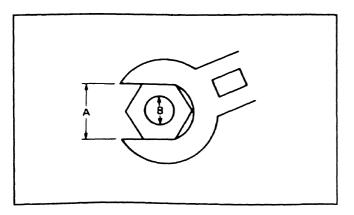
EAH30000

## **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 be checked occasionally, especially before a long trip.

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



Α	В	General torque specifications		
(Nut)	(Bolt)	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

ltem		Torque			
item	Nm	m⋅kg	ft∙lb		
Spark plug	12.5	1.25	9.0		
Engine drain plug	43	4.3	31		
Engine oil filter	17	1.7	12		
Engine oil check bolt	8	0.8	5.8		
Front axle pinch bolt	19	1.9	13		
Front axle	59	5.9	43		
Rear wheel axle nut	105	10.5	75		
Compression bar bolt	30	3.0	22		

#### EAH47800

### **Engine oil**

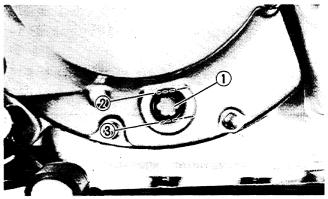
- 1. Oil level measurement
- a. Place the motorcycle on a level place and hold it in an upright position.
   Warm up the engine for several minutes.

EUU03901

### NOTE:\_\_

Be sure the motorcycle is positioned straight up when checking the oil level. A slight tilt toward the side can result in 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.



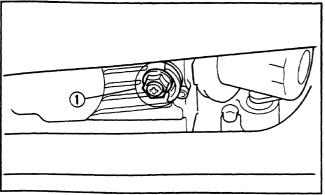
- Level window
   Minimum mark
- 2. Maximum mark

# EUU04000

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

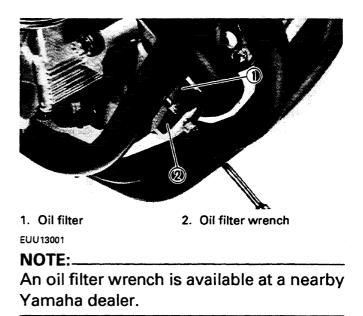
- c. The oil level should be between the maximum and minimum marks. If the level is low, add sufficient oil to raise it to the proper level.
- 2. Engine oil and oil filter replacement
- a. Warm-up the engine for a several minutes.

- 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.



1. Drain plug

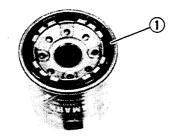
d. Remove the oil filter by using a oil filter wrench.



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

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

f. Apply a light coat of engine oil to the O-ring of new oil filter.



1. O-ring

EUU04101

### NOTE:

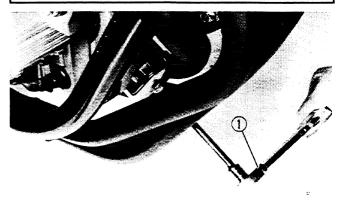
Make sure the O-ring is seated properly.

g. Install the new oil filter and tighten it by using an oil filter wrench.

#### EUU13601

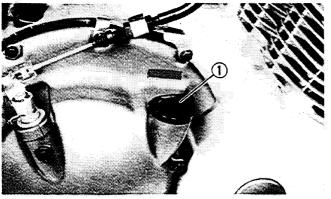
### NOTE:\_

When installing the oil filter, tighten it to the proper torque by using a torque wrench. Oil filter torque: 17 Nm (1.7 m·kg, 12 ft·lb)

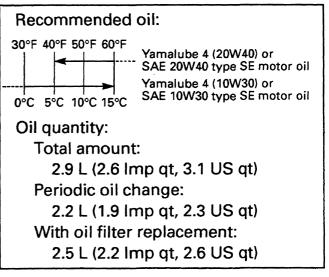


1. Torque wrench

h. Fill engine with oil. Install the oil filler cap and tighten.



1. Oil filler cap



#### EUU08000

### NOTE:\_

Recommended engine oil classification; API Service "SE", "SF" type or equivalent (e.g. "SF-SE", "SF-SE-CC", "SF-SE-SD" etc.). EUU32301

# CAUTION:

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

#### EUU32400

# CAUTION:

Be sure no foreign material enters the crankcase.

- i. Start the engine and warm up for a several minutes. While warming up, check for oil leakage. If oil leakage is found, stop the engine immediately, and check for the cause.
- j. After the engine is started, the oil indicator light should go off if oil is filled to proper level.

EUU32500

# CAUTION:

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

EUU41701

# CAUTION:

After replacing the engine oil, be sure to check the oil pressure as described below.

- 1. Remove the check bolt in the cylinder head.
- 2. Start the engine and keep it idling until oil flows out of the bleed hole. If no oil comes out after one minute, turn off the engine immediately so it will not seize. In such a case go to the nearest Yamaha dealer or other qualified mechanic for repairs.
- 3. After checking, tighten the check bolt securely.



1. Check bolt

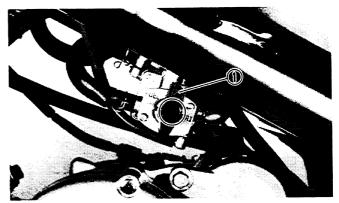
Check bolt torque: 8 Nm (0.8 m·kg, 5.8 ft·lb)

### EAH67400

## Air filter

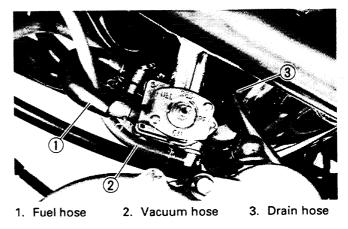
The air filter element should be cleaned at the specified intervals. It should be cleaned more frequently if you are riding in unusually wet or dusty areas.

- 1. Remove the seat.
- 2. Turn the fuel cock lever to "ON" and remove the fuel cock lever by removing screw.

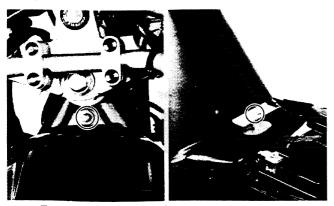


1. Fuel cock lever

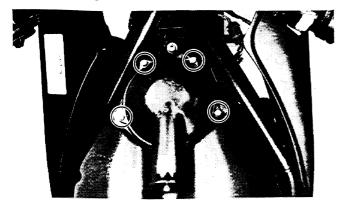
3. Disconnect the hoses.



### 4. Remove the fuel tank.



5. Remove the air filter case cover by removing the screws.



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



8. Reassemble by reversing the removal procedure.

EUU35701

# CAUTION:

Make sure the element is properly seated in the filter case.

EUU42400

# CAUTION:

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

### EAH90200

# **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.

EAH91100

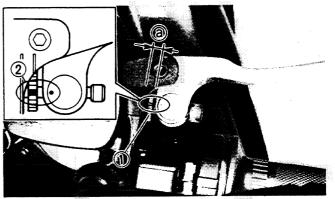
# Valve clearance adjustment

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 Yamaha dealer or other qualified mechanic.

### EAH89700

## Front brake lever position adjustment

Brake lever distance from the throttle grip can be adjusted. To adjust, turn the adjuster while pushing the lever forward and align the mark ( $\blacksquare$ ) on the adjuster with the mark ( $\bigcirc$ ) on the lever.

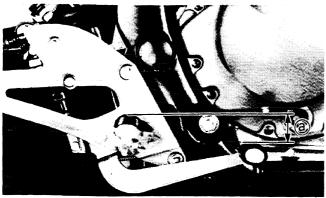


- Adjuster
   Adjusting range
- 2. Proper position

#### EAH80501

### **Rear brake adjustment**

The top of the brake pedal should be positioned 40 mm (1.57 in) below the top of the footrest. If not, ask a Yamaha dealer or other qualified mechanic to adjust it.



a. 40 mm (1.57 in)

EUU79400

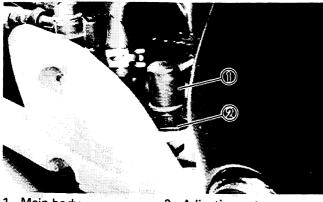
# **WARNING**

A soft or spongy feeling in the 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 a Yamaha dealer or other qualified mechanic inspect and bleed the system if necessary.

#### EAH83301

## 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 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

#### EAH87300

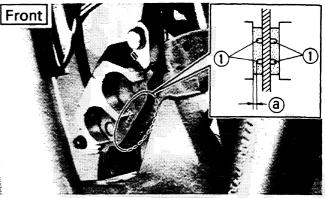
## Checking the front and rear brake pads

Check the brake pads for damage and wear.

## EAH87701

### FRONT

Apply the brake and inspect the wear indicator. If the brake pads are worn to the wear limit, have a Yamaha dealer or other qualified mechanic to replace the pads.

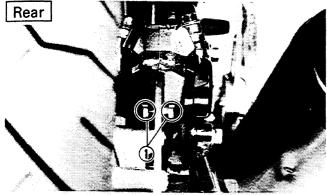


1. Wear indicator a. Wear limit 0.8 mm (0.031 in)

#### EAH800A0

### REAR

Apply the brake and inspect the wear indicator. If the wear indicator is ALMOST in contact with the disc plate, ask a Yamaha dealer or other qualified mechanic to replace the pads.



1. Wear indicator

#### EAH806A0

## 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 that the brake fluid is above the lower level and replenish when necessary.

Observe these precautions:

- 1. When checking the fluid level, make sure the top of the master cylinder is level by turning the handlebars.
- 2. Use only the designated quality brake fluid. Otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.

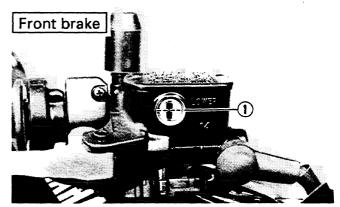
Recommended brake fluid: DOT#4

EUU13100

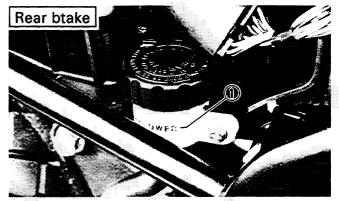
### NOTE:

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 brake performance.
- 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 deteriorate painted surfaces or plastic parts. Always clean up spilled fluid immediately.
- 6. Have a Yamaha dealer or other qualified mechanic check the cause if the brake fluid level goes down.



1. Lower level



1. Lower level

#### EAH84001

## Brake fluid replacement

- Complete fluid replacement should be done only by trained Yamaha service personnel or other qualified mechanics.
- 2. Have a Yamaha dealer or other qualified mechanic replace the following components during periodic maintenance or when they are damaged or leaking.
- a. Replace all rubber seals every two years.
- b. Replace all hoses every four years.

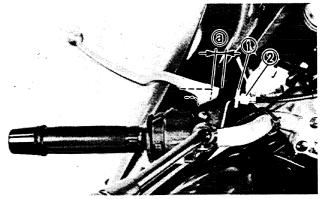
### EAI01600

## **Clutch adjustment**

The clutch lever free play should be adjusted to  $2 \sim 3 \text{ mm}$  (  $0.08 \sim 0.12 \text{ in}$ ) at the clutch lever. If the free play is incorrect, adjust as follows.

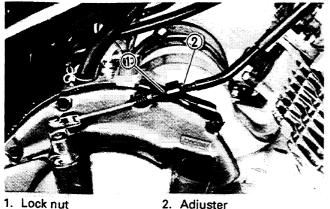
Free play:

2 ~ 3 mm (0.08 ~ 0.12 in)



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

- 1. Loosen the lock nut at the handlebar.
- 2. Turn the adjuster in or out until proper lever free play is obtained.
- 3. Tighten the lock nut.
- 4. If the free play is still incorrect, make an adjustment at the crankcase side.



EUU18200

2. Adjuster

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## NOTE:

If proper adjustment cannot be obtained or the clutch does not work correctly, ask a Yamaha dealer or other qualified mechanic to inspect the internal clutch mechanism.

#### EAI40801

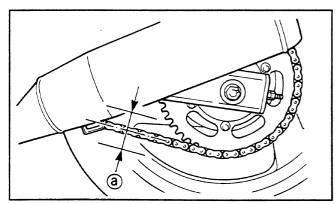
Drive chain slack check

EUU04801

### NOTE:

Spin the wheel several times and find the tightest position of the chain. Check and/or adjust the chain slack while it's in this tightest position.

To check the chain slack the motorcycle must be held straight up with both wheels on the ground and without rider. Check the slack at the position shown in the illustration. Normal slack is approximately 30 ~ 40 mm (1.2 ~ 1.6 in). If the slack exceeds 40 mm (1.6 in), adjust.



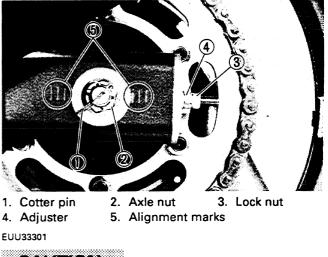
a. 30~40 mm (1.2~1.6 in)

#### EAI42201

### Drive chain slack adjustment

- 1. Remove the cotter pin from the axle nut.
- 2. Loosen the axle nut.
- Loosen the lock nuts on each side. To tighten the chain, turn the chain adjuster clockwise. To loosen the chain, turn the adjuster counterclockwise and push the wheel forward. Turn each adjuster exactly the same amount to maintain correct axle align-

ment. There are marks on each side of the swingarm. Use these marks to align the rear wheel.



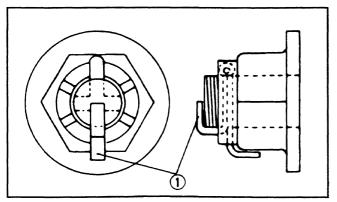
# CAUTION:

Too little chain slack will overload the engine and other vital parts. Keep the slack within the specified limits.

4. After adjusting, be sure to tighten the lock nuts and the axle nut.

Axle nut torque: 105 Nm (10.5 m·kg, 75 ft·lb)

5. Insert a new cotter pin into the axle nut and bend the end of the cotter pin as shown in the illustration. If the notch in the nut and the cotter pin hole do not match, tighten the nut slightly to align them.



1. Cotter pin

EUU64700

# **WARNING**

Always use a new cotter pin on the axle nut.

#### EAI40701

### **Drive chain lubrication**

The chain consists of many parts which work with each other. If the chain is not maintained properly, it will wear out guickly, Therefore, the chain must be serviced regularly. This service is especially necessary when riding in dusty areas. This motorcycle is equipped with a sealed type chain. Steam cleaning, high-pressure washes, and solvents can damage chain so do not use these for cleaning it. Use only kerosene to clean the drive chain. Wipe it dry, and thoroughly lubricate it with SAE 30 ~ 50W motor oil. Do not use any other lubricants on the drive chain. They may contain solvents that could damage the sealed chain.

#### EAI10001

Cable inspection and lubrication

# **WARNING**

Damage to the outer housing of cables may allow internal rusting and cause interference with cable movement. Replace damaged cables as soon as possible to prevent unsafe conditions.

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

Recommended lubricant: Yamaha Chain and Cable Lube or SAE 10W30 motor oil

#### EAI10201

## 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. After removing the screws, hold the end of the cable up in the air and put in several drops of lubricant. With the throttle grip disassembled, coat the metal surface of the grip assembly with a suitable all-purpose grease. EAI30201

## Brake and shift pedals

Lubricate the pivoting parts.

Recommended lubricant: Yamaha Chain and Cable Lube or SAE 10W30 motor oil

#### EAI30300

# **Brake and clutch levers** Lubricate the pivoting parts.

Recommended lubricant: Yamaha Chain and Cable Lube or SAE 10W30 motor oil

EAI31001

## Sidestand

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

Recommended lubricant: Yamaha Chain and Cable Lube or SAE 10W30 motor oil

EUU70101

# **WARNING**

If the sidestand does not move smoothly, consult a Yamaha dealer or other qualified mechanic.

EAI31900

## **Rear suspension** Lubricate the pivoting parts.

Recommended lubricant: Molybdenum disulfide grease

EAI20601

## **Front fork inspection**

EUU65700

# **WARNING**

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

1. Visual check

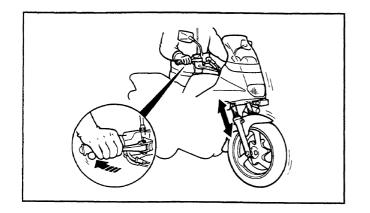
Check for scratches/damage on the inner tube and excessive oil leakage from the front fork.

- 2. Operation check Place the motorcycle on a level place.
- a. Hold the motorcycle in an upright position and apply the front brake.
- b. Stroke the front forks up and down several times.

EUU42600

# CAUTION:

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



EAI51802 Rear shock absorber EUU67401

# A WARNING

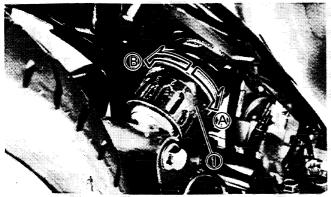
This shock absorber contains highly pressurized nitrogen gas. Read and understand the following information before handling the shock absorber. The manufacturer cannot be held responsible for property damage or personal injury that may result from improper handling.

- 1. Do not tamper with or attempt to open the cylinder assembly.
- 2. Do not subject the shock absorber to an open flame or other high heat source. This may cause the unit to explode due to excessive gas pressure.
- 3. Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.
- 4. Take your shock absorber to a Yamaha dealer or other qualified mechanic for any service.

#### EAI57801

## Rear shock absorber adjustment

This shock absorber is equipped with a spring preload adjuster. Adjust spring preload as follows. Turn adjuster in direction A to increase preload and in direction B to decrease spring preload.



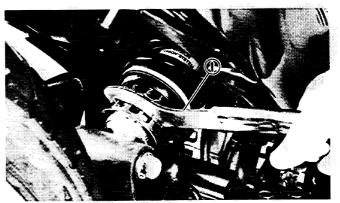
- 1. Spring preload adjuster
- A. Increase spring preload
- B. Decrease spring preload

	HARD			STD	SC	FT	
Adjusting position	7	6	5	4	3	2	1

#### EUU05200

### NOTE:

When adjusting, use the special wrench which is included in the owner's tool kit.

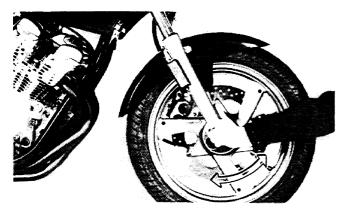


1. Special wrench

EAI60001

## **Steering inspection**

Periodically inspect the condition of the steering. Worn out or loose steering bearings may be dangerous. Place a stand 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 or other qualified mechanic to inspect and adjust the steering. Inspection is easier if the front wheel is removed.



EUU65700

# **WARNING**

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

#### EAI60101

### Wheel bearings

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

### EA184901

### Battery

This motorcycle is equipped with a "Sealed type" battery. Therefore, it is not necessary to check the electrolyte or add distilled water in the battery.

If the battery seems to have discharged, consult a Yamaha dealer.

EUU43401

## CAUTION

Do not try to remove the sealing caps of the battery cells. You may damage the battery. EUU65800

# **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.

#### EA185000

## **Battery maintenance**

1. When the motorcycle is not used for a month or longer, remove the battery and store it in a cool, dark place. Completely recharge the battery before reinstallation.

EUU43500

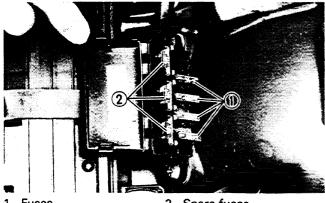
# CAUTION:

A special battery charger (constant voltage/ampere or constant voltage) is required for recharging the sealed type battery. Using a conventional battery charger may shorten the battery life.

 Always make sure the connections are correct when reinstalling the battery. The red (positive) lead is for the + terminal and the black (negative) lead is for the – terminal. Always connect the red(positive) lead first, then connect the black(negative) lead. EAI90201

### Fuse replacement

1. The fuse case is located under the seat.



1. Fuses

2. Spare fuses

 If any fuse is blown, turn off the ignition switch and the switch of 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 or other qualified mechanic. EUU34400

# 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.

Specified fuse	:	
Main:	30A	
Head:	15A	
Signal:	15A	
Ignition:	10A	

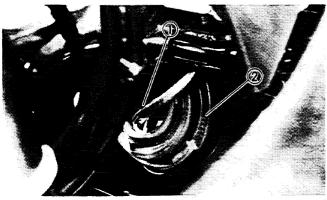
### EA186500

## Headlight bulb replacement

This motorcycle is equipped with a quartz bulb headlight.

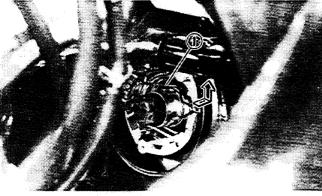
If the headlight bulb burns out, replace the bulb as follows:

1. Disconnect the headlight leads, and remove the cover.



1. Headlights leads 2. Cover

2. Unhook the bulb holding spring and remove the defective bulb.



EUU66001

# **WARNING**

Keep flammable products and your hands away from the bulb while it is on, as it is hot. Do not touch the bulb until it cools down.

3. Put a new bulb into position and secure it in place with the bulb holding spring.

EUU34100

# 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, thoroughly clean it with a cloth moistened with alcohol or lacquer thinner.

1. Bulb holding spring

 Install the cover and connect the headlight lead(s). If the headlight beam adjustment is necessary, ask a Yamaha dealer or other qualified mechanic to make adjustment.

EAJ24402

Front wheel removal

EUU66201

# **WARNING**

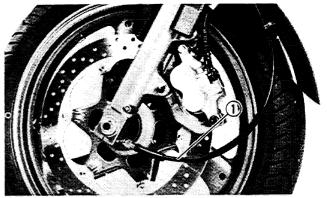
It is advisable to have a Yamaha dealer service the wheel.

EUU65700

# **WARNING**

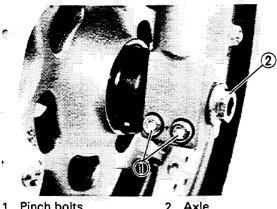
Securely support the motorcycle so there is no danger of it falling over.

1. Remove the speedometer cable from the front wheel side.



1. Speedometer cable

2. Loosen the pinch bolts and wheel axle.





2. Axle

- 3. Elevate the front wheel by placing a suitable stand under the engine.
- 4. Remove the wheel axle and the front wheel. Make sure the motorcycle is properly supported.

EUU05400

## NOTE:\_\_

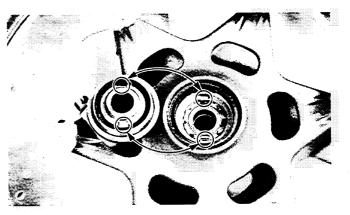
Do not depress the brake lever when the disc is off the caliper as the brake pads will be forced shut.

FA.128400

## Front wheel installation

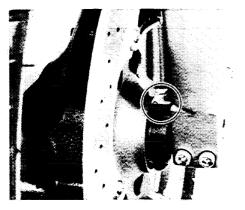
When installing the front wheel, reverse the removal procedure. Pay attention to the following points:

1. Make sure the wheel hub and the speedometer gear unit are installed with the projections meshed into the slots.



2. Make sure there is enough gap between the brake pads before inserting the brake disc.

3. Make sure the slot in the speedometer gear unit fits over the stopper on the front fork outer tube.



4. Make sure the wheel axle is properly torqued.

Tightening torque: Wheel axle: 59 Nm (5.9 m·kg, 43 ft·lb)

5. Before tightening the pinch bolt, stroke the front fork several times to check for proper fork operation.

6. Tighten the pinch bolt.

Pinch bolt torque: 19 Nm (1.9 m·kg, 13 ft·lb)

EAJ60800

**Rear wheel removal** 

EUU66101

# A WARNING

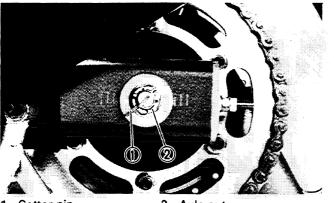
It is advisable to have a Yamaha dealer or other qualified mechanic service the wheel.

EUU65700

# 

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

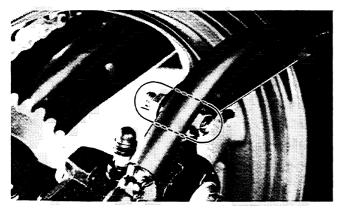
- 1. Elevate the rear wheel by placing a suitable stand under the rear arm.
- 2. Remove the axle nut cotter pin and the axle nut.



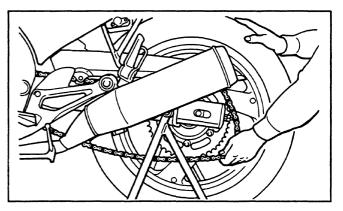
1. Cotter pin

2. Axle nut

3. Remove the compression bar bolt by removing the cotter pin and nut.



- 4. While supporting the brake caliper, pull out the wheel axle.
- 5. Push the wheel forward and remove the drive chain.



6. Remove the wheel assembly.

### NOTE:

Do not depress the brake pedal when the disc and caliper are separated.

EUU05600

### NOTE:

You do not have to disassemble the chain in order to remove or install the rear wheel.

#### EAJ32601

## **Rear wheel installation**

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

- Make sure there is enough gap between the brake pads before inserting the brake disc.
- 2. Adjust the drive chain.
- 3. Make sure the following parts are properly torqued, and a new cotter pin is installed.

EUU78000

# A WARNING

Always use a new cotter pin.

Tightening torque: Axle nut: 105 Nm (10.5 m·kg, 75 ft·lb) Compression bar bolt: 30 Nm (3.0 m·kg, 22 ft·lb)

#### EAJ50002

## Troubleshooting

Although Yamaha motorcycles receive a rigid inspection before shipment from the factory, trouble may occur during operation.

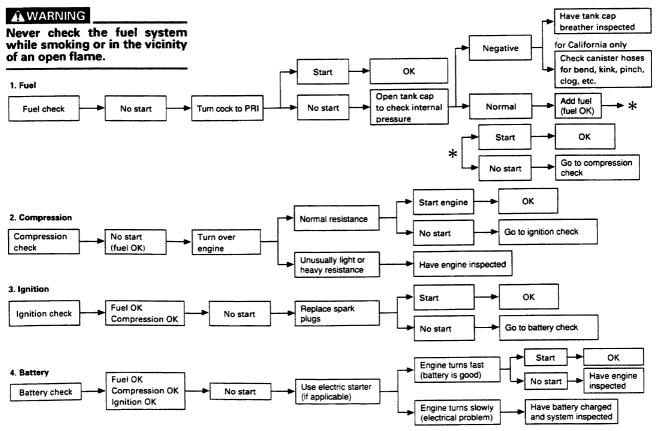
Any problem in the fuel, compression, or ignition systems can cause poor starting and loss of power. The troubleshooting chart describes a quick, easy procedure for making checks.

If your motorcycle requires any repair, bring it to a Yamaha dealer. The skilled technicians at a Yamaha dealership 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.

#### EAJ50200

### **Troubleshooting chart**

EUU66300



EAK00000

# CLEANING AND STORAGE

EAK01302

# 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 the 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 the chain, sprockets, or wheel axles.
- 3. Rinse the dirt and degreaser off with a garden hose. Use only enough pressure to do the job.

#### EUU34602

# CAUTION:

Excessive hose pressure may cause water seepage and deterioration of wheel bearings, front fork, brakes transmission seals and electrical parts.

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 toothbrush or bottle brush is handy for hard-to-get-at places.
- 5. Rinse the motorcycle off immediately with clean water and dry all surfaces with a chamois, clean towel, or soft absorbent cloth.
- 6. Dry the chain and lubricate it to prevent rust.
- 7. Windscreen cleaning

10-1

EUU37400



Avoid using any alkaline or strong acid cleaner, gasoline, brake fluid, or any other solvent.

Clean the windscreen with a cloth or sponge dampened with a neutral detergent, and after cleaning, thoroughly wash it off with water. Some cleaning compounds for plastics may leave scratches on surfaces of the windscreen. Before using them, make a test by polishing an area which does not affect your visibility.

- 8. Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.
- Automotive-type wax may be applied to all painted and chrome-plated surfaces. Avoid combination cleanerwaxes. Many contain abrasives which may mar the paint or protective finish

on the fuel tank and side covers. When finished, start the engine and let it idle for several minutes.

EAK01200

# **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 the empty fuel tank, pour a cup of SAE 10W30 or 20W40 motor oil in the 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.

EUU66400

# **WARNING**

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

- 4. Remove the drive chain. Thoroughly clean the chain with kerosene and lubricate it. Reinstall the chain or store it in a plastic bag (tied to frame for safe-keeping).
- 5. Lubricate all control cables.
- 6. Block up the frame to raise both wheels off the ground.

- 7. Tie a plastic bag over the exhaust pipe outlet to prevent moisture from enter-ing.
- 8. 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.
- 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)).

EUU05800

NOTE:\_

Make any necessary repairs before storing the motorcycle.

# **SPECIFICATIONS**

Model	XJ600SF/XJ600SFC
Dimension: Overall length Overall width Overall height Seat height Wheel base Minimum ground clearance	2,095 mm (82.5 in) 750 mm (29.5 in) 1,220 mm (48.0 in) 770 mm (30.3 in) 1,445 mm (56.9 in) 150 mm (5.9 in)
Basic weight: With oil and full fuel tank	200 kg (441 lb): XJ600SF 201 kg (443 lb): XJ600SFC
Minimum turning radius:	2,600 mm (102 in)
Engine: Type Model Cylinder arrangement Displacement Bore × Stroke Compression ratio Starting system Lubrication system	Air cooled 4-stroke, gasoline, DOHC 4DU7 (XJ600SF) 4DU8 (XJ600SFC) Parallel 4-cylinder, forward inclined 599 cm <sup>3</sup> 58.5 $\times$ 55.7 mm (2.30 $\times$ 2.19 in) 10 : 1 Electric starter Wet sump

Model	XJ600SF/XJ600SFC
Engine oil (4-cycle) Type 30 40 50 60°F  0 5 10 15°C	Yamalube 4 (20W40) or SAE 20W40 type SE motor oil (If temperature does not go below 5°C/40°F) Yamalube 4 (10W30) or SAE 10W30 type SE motor oil (If temperature does not go above 15°C/60°F)
Capacity Periodic oil change With oil filter replacement Total amount	2.2 L (1.9 Imp qt, 2.3 US qt) 2.5 L (2.2 Imp qt, 2.6 US qt) 3.9 L (2.6 Imp qt, 3.1 US qt)
Air filter:	Dry type element
Fuel: Type Tank capacity Reserve amount	Unleaded fuel 17.0 L (3.7 Imp gal, 4.5 US gal) 3.5 L (0.8 Imp gal, 0.9 US gal)
Carburetor: Type/manufacturer	BDS26/MIKUNI
Spark plug: Type/manufacturer Gap	CR7E, CR8E/NGK U22ESR-N, U24ESR-N/NIPPONDENSO 0.7 ~ 0.8 mm (0.028 ~ 0.031 in)
Clutch type:	Wet, multi-disc

Model	XJ600SF/XJ600SFC
Transmission: Primary reduction system Primary reduction ratio Secondary reduction system Secondary reduction ratio Transmission type Operation Gear ratio 1st 2nd 3rd 4th 5th	Chain gear 23/24 × 65/28 (2.225) Chain drive 48/16 (3.000) Constant mesh 6-speed Left foot operation 41/15 (2.733) 32/18 (1.777) 28/21 (1.333) 29/27 (1.074) 21/23 (0.913)
6th Chassis: Frame type Caster angle	23/28 (0.821) Double cradle 25°
Trail Tire: Type Size – Front Rear	97 mm (3.8 in) Tubeless 110/80-17 57H 130/70-18 63H
Brake: Front brake type Operation Rear brake type Operation	Single, Disc brake Right hand operation Single, Disc brake Right foot operation

Model	XJ600SF/XJ600SFC
Suspension: Front Rear	Telescopic fork Swingarm (Monocross suspension)
Shock absorber: Front Rear	Coil spring, Oil damper Gas, Coil spring, Oil damper
Wheel travel: Front Rear	140 mm (5.5 in) 110 mm (4.3 in)
Electrical: Ignition system Generator system Battery type/capacity	TCI (Digital) AC magneto generator YTX9-BS, GTX9-BS/12V 8AH
Headlight type:	Quarz bulb
Bulb wattage/quantity: Headlight Tail/brake light Flasher light Front Rear Meter light	12V 60W/55W × 1 12V 5W/21W × 1 12V 27W/8W × 2 12V 27W × 2 12V 1.7W × 3
Indicator light wattage/quantity: "NEUTRAL" "HIGH BEAM" "OIL LEVEL" "TURN"	12V 3.4W × 1 12V 3.4W × 1 12V 3.4W × 1 12V 3.4W × 1 12V 3.4W × 1

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EAL00300

# **MOTORCYCLE NOISE REGULATION**

# TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:

Federal law prohibits the following acts or the causing thereof: (1) 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 or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

"AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LIST-ED BELOW. "

These acts include tampering with the following systems; i.e., modification, removal, etc.

Exhaust system	Muffler Exhaust pipe Silencer
Intake system	Air cleaner case Air cleaner element Intake duct

# MAINTENANCE RECORD

Copies of work orders and/or receipts for parts you purchase and install will be required to document that maintenance has been completed in accordance with the emission warranty. The chart below is printed only as a reminder to you that the maintenance work is required. It is not acceptable proof of maintenance work.

MAINTENANCE INTERVAL	DATE OF SERVICE	MILEAGE	SERVICING DEALER NAME AND ADDRESS	REMARKS
1,000 km or 600 mi or 1 mo.				
7,000 km or 4,400 mi or 7 mos.				
13,000 km or 8,200 mi or 13 mos.				
19,000 km or 12,000 mi or 19 mos.				
25,000 km or 15,800 mi or 25 mos.				

MAINTENANCE INTERVAL	DATE OF SERVICE	MILEAGE	SERVICING DEALER NAME AND ADDRESS	REMARKS
31,000 km or 19,600 mi or 31 mos.				
37,000 km or 23,400 mi or 37 mos.				
43,000 km or 27,200 mi or 43 mos.				
49,000 km or 31,000 mi or 49 mos.				
55,000 km or 34,800 mi or 55 mos.				
61,000 km or 38,600 mi or 61 mos.				

### YAMAHA MOTOR CORPORATION, U.S.A. STREET AND ENDURO MOTORCYCLE LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants each new street or enduro model Yamaha motorcycle purchased from an authorized Yamaha motorcycle dealer in the continental United States will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations.

THE PERIOD OF WARRANTY for Yamaha motorcycles originally equipped with headlight, stoplight, and turn signals shall be one (1) year from the date of purchase, with no mileage limitation.

MODELS EXCLUDED FROM WARRANTY include those used for non-Yamaha-authorized renting, leasing, or other commercial purposes, and TZ models.

DURING THE PERIOD OF WARRANTY any authorized Yamaha motorcycle dealer will, free of charge, repair or replace, at Yamaha's option, any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the product's warranty period. All parts replaced under warranty become property of Yamaha Motor Corporation U.S.A.

**GENERAL EXCLUSIONS** from this warranty shall include any failures caused by:

- a. Competition or racing use.
- Installation of parts or accessories that are not qualitatively equivalent to genuine Yamaha parts.
- c. Abnormal strain, neglect, or abuse.
- d. Lack of proper maintenance.
- e. Accident or collision damage.
- f. Modification to original parts.
- g. Damage due to improper transportation.

SPECIFIC EXCLUSIONS from this warranty shall include parts replaced due to normal wear or routine maintenance.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to:

- 1. Operate and maintain the motorcycle as specified in the appropriate Owner's Manual, and
- Give notice to an authorized Yamaha motorcycle dealer of any and all apparent defects within ten (10) days after discovery, and make the machine available at that time for inspection and repairs at such dealer's place of business.

WARRANTY TRANSFER: To transfer the warranty from the original purchaser to any subsequent purchaser, it is imperative that the machine be inspected and registered for warranty by an authorized Yamaha motorcycle dealer. In order for this warranty to remain in effect, this inspection and registration must take place within ten (10) days after transfer. An inspection and registration fee will be charged for this service.

#### EMISSIONS CONTROL SYSTEM WARRANTY

Yamaha Motor Corporation, U.S.A. also warrants to the ultimate purchaser and each subsequent purchaser of each Yamaha motorcycle covered by this warranty with a displacement of 50cc or greater, that the vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S. emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the periods listed immediately below. Failure other than those resulting from defects in material or workmanship which arise solely as a result of owner abuse and /or lack of proper maintenance are not covered by this warranty.

#### ENGINE DISPLACEMENT 50cc to 169cc or five years, whichever occurs first

170cc to 279cc 18,000 km (11,185 miles) or five years, whichever occurs first

280cc or over 30,000 km (18,641 miles) or five years, whichever occurs first

YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

> YAMAHA MOTOR CORPORATION, U.S.A. P. O. Box 6555 Cypress, California 90630

#### WARRANTY QUESTIONS AND ANSWERS

- Q. What costs are my responsibility during the warranty period?
- A. The customer's responsibility includes all costs of normal maintenance services, nonwarranty repairs, accident and collision damage, and oil, oil filters, air filters, spark plugs, and brake shoes or pads.
- Q. What are some examples of "abnormal" strain, neglect, or abuse?
- A. These terms are general and overlap each other in areas. Specific examples include: Running the machine out of oil; sustained high-rpm, full-throttle use; operating the machine with a broken or damaged part which causes another part to fail; damage or failure due to improper or careless transporation and or tie down; and so on. If you have any specific questions on operation or maintenance, please contact your dealer for advice.
- Q. Does the warranty cover incidental costs such as towing or transportation due to a failure?
- A. No. The warranty is limited to repair of the machine itself.
- Q. May I perform any or all of the recommended maintenance shown in the Owner's Manual instead of having the dealer do them?
- A. Yes, if you are a qualified mechanic and follow the procedures specified in the Owner's and Service Manual. We do recommend, however, that items requiring special tools or equipment be done by a Yamaha motorcycle dealer.
- Q. Will the warranty be void or cancelled if I do not operate or maintain my new motorcycle exactly as specified in the Owner's Manual?
- A. No. The warranty on a new motorcycle cannot be "voided" or "cancelled." However, if a particular failure is caused by operation or maintenance other than as shown in the Owner's Manual, that failure may not be covered under warranty.
- Q. What responsibility does my dealer have under this warranty?
- A. Each Yamaha motorcycle dealer is expected to:
  - 1. Completely set up every new machine before sale.
  - 2. Explain the operation, maintenance, and warranty requirements to your satisfation at the time of sale, and upon your request at any later date.

In addition, each Yamaha motorcycle dealer is held responsible for his setup, service and warranty repair work.

- Q. Is the warranty transferable to second owners?
- A. Yes. The remainder of the existing warranty can be transferred upon request. The unit has to be inspected and re-registered by an authorized Yamaha motorcycle dealer for the warranty coverage to remain effective.

#### CUSTOMER SERVICE

If your machine requires warranty service, you must take it to any authorized Yamaha motorcycle dealer within the continental United States. Be sure to bring your warranty registration identification or other valid proof of the original date of purchase. If a question or problem arises regarding warranty, first contact the owner of the dealership. Since all warranty matters are handled at the dealer level, this person is in the best position to help you. If you are still not satisfied and require additional assistance, please write:

> YAMAHA MOTOR CORPORATION U.S.A. CUSTOMER RELATIONS DEPARTMENT P.O. Box 6555 Cypress, California 90630

When contacting Yamaha Motor Corporation, U.S.A. don't forget to include any important information such as names, addresses, model, engine serial number, dates, and receipts.

#### CHANGE OF ADDRESS

The federal government requires each manufacturer of a motor vehicle to maintain a complete, up-to-date list of all first purchasers against the possibility of a safety-related defect and recall. This list is compiled from the purchase registrations sent to Yamaha Motor Corporation, U.S.A. by the selling dealer at the time of your purchase.

If you should move after you have purchased your new motorcycle, please advise us of your new address by sending a postcard listing your motorcycle model name, engine serial number, dealer number (or dealer's name) as it is shown on your warranty identification, your name and new mailing address. Mail to:

> YAMAHA MOTOR CORPORATION, U.S.A. WARRANTY DEPARTMENT P.O. Box 6555 Cypress, California 90630

This will ensure that Yamaha Motor Corporation, U.S.A. has an up-to-date registration record in accordance with federal law.

# YAMAHA EXTENDED SERVICE (Y.E.S.)

Keep your Yamaha protected even after your warranty expires with genuine Yamaha Extended Service (Y.E.S.).

- Y.E.S. is designed and administered by Yamaha Motor Corporation to provide maximum owner satisfaction. You get uninterrupted factory-backed coverage for extra peace of mind.
- Y.E.S. is flexible. You choose the plan that's right for you: 12 months, 24 months, or 36 months beyond your warranty period.
- Y.E.S. is designed and administered by the same Yamaha people who handle your warranty — and it shows in the comprehensive coverage benefits. There are no mileage limitations. Coverage isn't limited to "moving parts" or the "drive train" like many other plans. And Y.E.S. covers manufacturing defects just like the warranty. See the sample contract at your Yamaha dealer to see how comforting uninterrupted factorybacked protection can be.
- You don't have to pay anything for covered repairs. There's no deductible to pay, and repairs aren't "pro-rated." You don't have any "out-of-pocket" expenses for covered repairs.

- In addition, Travel and Recreation Interruption Protecti-(TRIP) is included at no extra cost. TRIP gives you up \$150 reimbursement per occurrence for any reasonal expenses you incur because your Yamaha need covered service: replacement vehicle rental, emergenc towing, phone calls, even food and lodging when you an away from home. This superb coverage goes into effet when you purchase Y.E.S., so it applies to any warran y repairs as well as covered repairs during your entire Y.E.S. plan period.
- Y.E.S. coverage is honored at any authorized Yamahili dealer nationwide.
- Y.E.S. coverage is transferrable to a new owner if you sell or trade-in. That can make your Yamaha much more valuable!

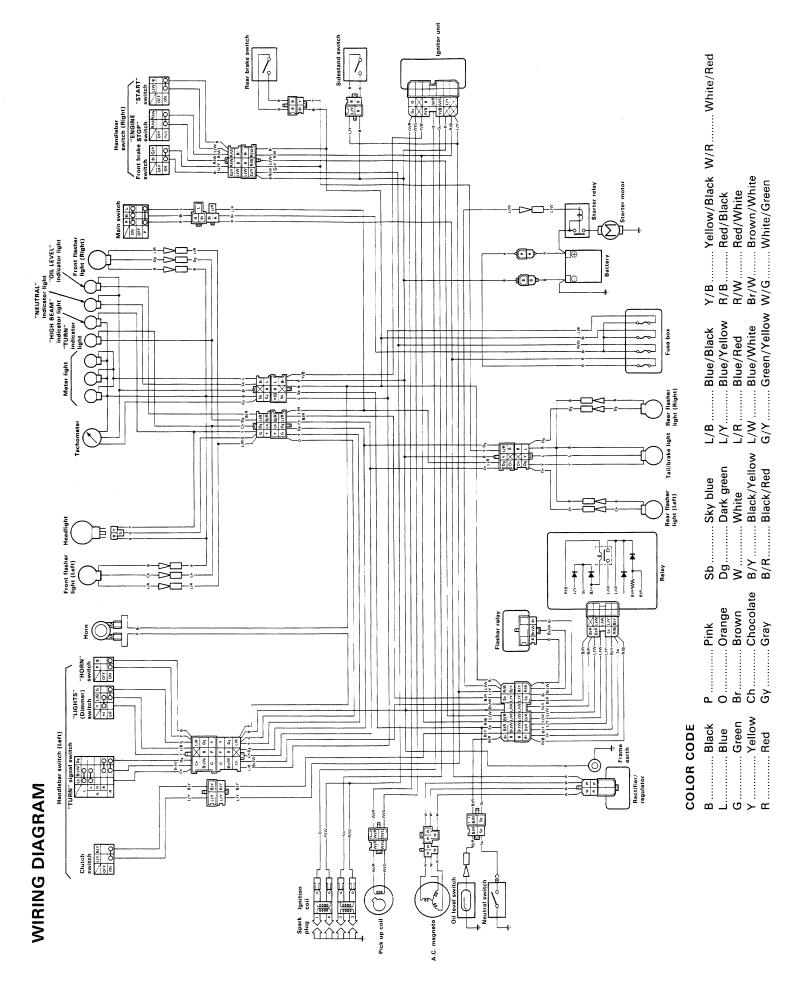
This excellent Y.E.S. plan coverage is only available to Yamaha owners like you, and only while your Yamaha is still within the Yamaha Limited Warranty period. So visit your authorized Yamaha dealer to get all the facts. He can show you how easy it is to protect your investment with Yamaha Extended Service. We urge you to act now. You'll get the excellent benefits of TRIP coverage right away, and you'll rest easy knowing you'll have strong factory-backed protection even after your Yamaha Limited Warranty expires. You can also save money: Y.E.S. costs less within the first 90 days after you buy your Yamaha. See your dealer today!

#### A special note:

If visiting your dealer isn't convenient, contact Yamaha with your Primary ID number (your engine number). We'll be happy to help you get the Y.E.S. coverage you need.

Yamaha Service Marketing P.O. Box 6555 Cypress, CA 90630 (714) 761-7631





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