

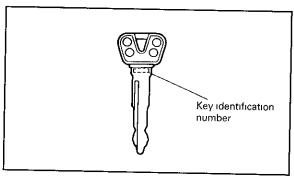
XTOCEA

OWNER'S

MANUAL

1. KEY IDENTIFICATION NUMBER:	
2. VEHICLE IDENTIFICATION NUMBER: FRAME SERIAL 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 (or frame serial 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. (See page 2-1)

XT600EA

OWNER'S MANUAL

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1st Edition, February 1990

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Printed in Japan

INTRODUCTION

Congratulations on your purchase of the Yamaha XT600EA. 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. U-001

NOTE:

Some data in this manual may become outdated due to future improvement on this model.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

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

EAA10200

EUU60100

AWARNING

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

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



The Safety Alert Symbol means ATTENTION BECOME ALERT! YOUR SAFETY IS IN-VOLVED!

AWARNING

Failure to follow WARNING instructions could result in severe injury 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.

A 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 ASPECTS 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 OWN-ER'S MANUAL AND/OR WHEN MADE NECESSARY BY MECHANICAL CON-DITIONS.

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:
- inererore:
- 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."
- 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 qulified. 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.

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 reduc-

tion 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.
- 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 401 lb (182 kg). When loading within these weight limits, keep the following in mind:

- 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.
- 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 motor-cycle. 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".

- 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 vehicles.
- 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 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.
- 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. The engine and exhaust pipe(s)/muffler(s) may be not. Fark 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.

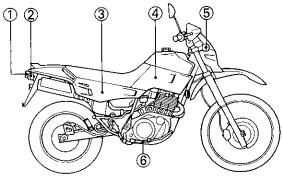
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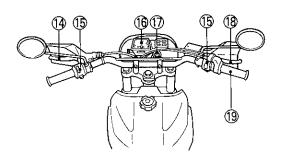
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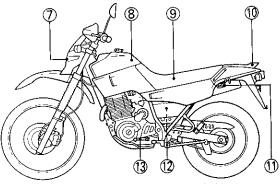
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WIRING DIAGRAM

DESCRIPTION







- 1 Tail/Brake light
- 2 Rear flasher light
- 3 Side cover
- 4 Air duct
- 5 Front flasher light
- 6 Brake pedal
- 7 Headlight
- 8 Fuel tank
- 9 Seat
- 10 Rear carrier
- U-002

- 11 Helmet holder
- 12 Monocross suspension
- 13 Shift pedal
- 14 Clutch lever
- 15 Handlebar switches
- 16 Speedometer
- 17 Main switch
- 18 Brake lever
- 19 Throttle grip

NOTE: .

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

MOTORCYCLE IDENTIFICATION

A-800

Vehicle identification number (For Australia)

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

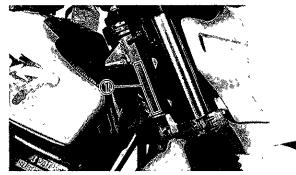
U-004						
NOTE:	 	 	·	 	 	

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

A-602

Frame serial number (Except for Australia)

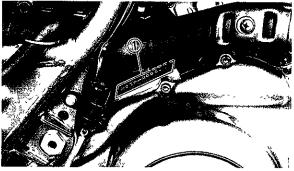
The frame serial number is stamped into the right side of the steering head pipe.



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

Engine serial number

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



1 Engine serial number

NOTE:

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

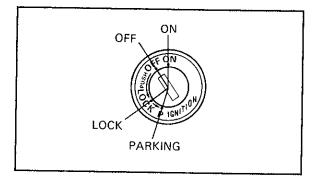
B-000

CONTROL FUNCTIONS

B-001

Main switch

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



B 005

ON:

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

B-006

OFF:

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

8-007

LOCK:

The steering is locked in this position, and all electrical circuits are switched off. The key can be removed in this position. Refer to "Steering lock" (page 3-10) for proper operation.

B-012

PARKING:

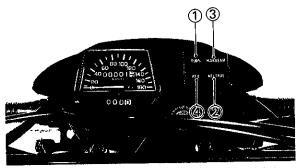
The steering is locked in this position, and the taillight and auxiliary light come on but all other circuits are off. The key can be removed in this position.

U-007

NOTE:

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

Indicator lights



- 1 "TURN" indicator light
- 2 "NEUTRAL" indicator light
- 3 "HIGH BEAM" indicator light
- 4 "REV" indicator light

8-101

"TURN" indicator light (orange):

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

B-102

"NEUTRAL" indicator light (green):

This indicator comes on when the transmission is in neutral.

B-103

"HIGH BEAM" indicator light (blue):

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

EAB12000

"REV." indicator light (red):

This model is equipped with an Over-Revolution indicator light. This indicator light comes on when the engine revs beyond specifications. The table below shows the approximate respective speeds at which the indicator light will come on.

Gear position	km/h (mi/h)
1st	50(31)
2ndi	80 (50)
3rd	105 (65)
4th	135 (84)
5th	165 (103)

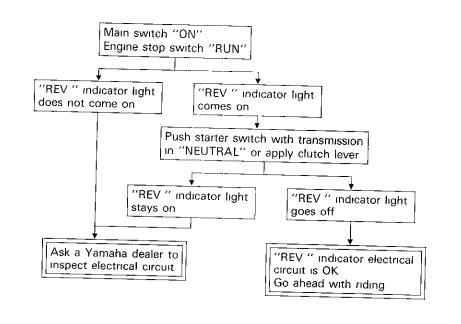
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75		•				

Reduce engine speed when "REV." indicator light comes on; otherwise, engine damage may result.

The circuit of this indicator light can be checked by the following procedure.

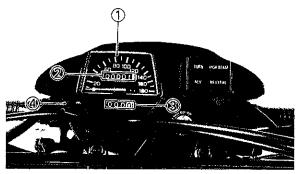
"REV." indicator light circuit check



Speedometer

The odometer and trip odometer are built into the speedometer. 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.

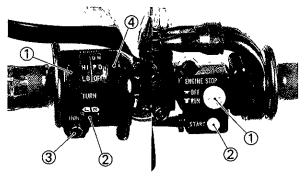


- 1 Speedometer
- 3. Trip odometer

- 2 Odometer
- 4 Reset switch

B-600

Handlebar switches:



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

B-601

"LIGHTS" (Dimmer) switch

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

B-605

"TURN" signal switch

This is a three-way switch. The center position is off; turn to the "L" to turn on the left flasher and to the "R" for the right flasher. Be sure to turn the switch off after completing a turn

B-602

"HORN" switch

Press the switch to sound the horn.

B-612

"LIGHTS" switch

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

B-609

"ENGINE STOP" switch

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

B-607

"START" switch

To start the engine, push the starter.

U-307

CAUTION:

See starting instructions prior to starting the engine.

8-700

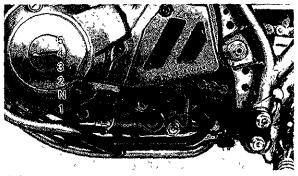
Clutch lever

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 starts. (Refer to the engine starting procedures for a description of the starting circuit cutoff switch.)

EA880000

Shift pedal

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



N Neutral

8-900

Front brake lever

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

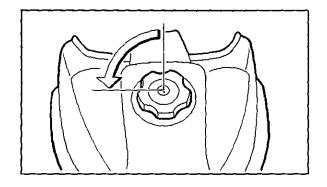
B-901

Rear brake pedal

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

Fuel tank cap

 To remove the tank cap, insert the key in the lock and turn the key 1/4 turn counterclockwise. Rotate the cap 1/3 turn counterclockwise and remove it from the tank.



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ıv		L .

The tank cap cannot be reinstalled unless it is unlocked. The key must remain in the cap until the cap is properly installed and locked onto the fuel tank.

 To reinstall the tank cap, set the cap in the filler neck and rotate the cap 1/3 turn clockwise. Lock the cap by turning the key 1/4 turn clockwise, and remove the key

U-611

AWARNING

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

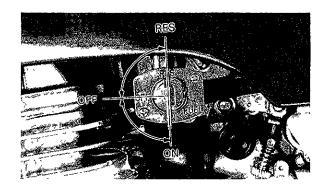
Fuel cock

The fuel cock supplies fuel from the tank to the carburetor while filtering the fuel. The fuel cock has three positions:

OFF: With the lever in this position, fuel will not flow Always return the lever to this position when the engine is not running.

ON: With the lever in this position, fuel flows to the carburetor. Normal riding is done with the lever in this position.

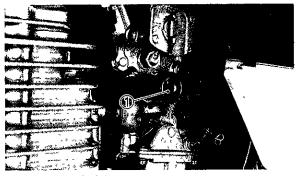
RES: This indicates reserve. If you run out of fuel while riding, move the lever to this position. FILL THE TANK AT THE FIRST OPPORTUNITY. BE SURE TO SET THE LEVER TO "ON" AFTER REFUELLING.



C-202

Starter knob (CHOKE)

When cold, the engine requires a richer airfuel mixture for starting. 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.

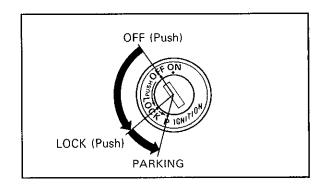


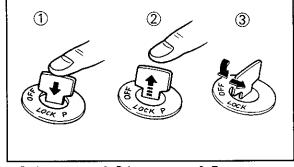
1 Starter knob (CHOKE)

C-304

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. With the key at "OFF," push it into the main switch, turn it counterclockwise to "LOCK," and remove it. To release the lock, turn the key clockwise.





1 Push

2 Release

3 Turn

U-614

AWARNING

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

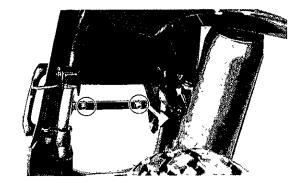
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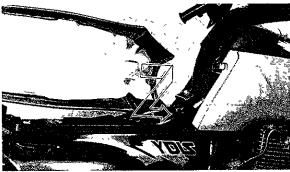
Parking

For "P", push the key at "LOCK", let the fingers off, and then turn it counterclockwise. To release, simply turn the key clockwise.

Seat removal

To remove the rider seat, remove the two bolts. When reinstalling the rider seat, insert the lobe on the seat front into the receptacle on the frame, then tighten the bolts.

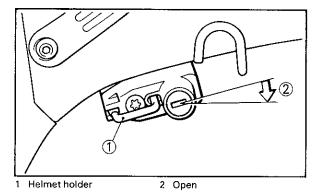




C-500

Helmet holder

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



U-615

AWARNING

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

EAC72900

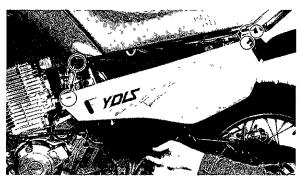
Side cover

- 1 Remove the screw.
- 2. Pull the front portion of the side cover outward to remove the projection from the grommet





3. Pull the front portion of the side cover downward. Then pull forward to remove.



4. To install, reverse the above steps.

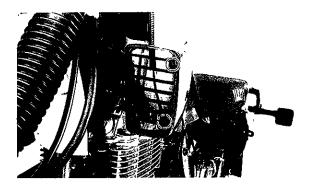
EAD70600

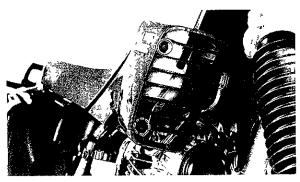
Air duct

Removal:

- 1. Remove the side cover.
- 2. Remove the screw.
- Pull the bottom portion of the air duct outward to remove the projection from the grommet.

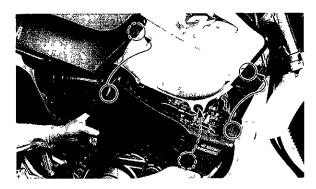
Then pull forward to remove.





Installation:

- Install the air duct rear indent onto the holding bracket and the front indent onto the fuel tank.
- 2. Push the projection into the grommet and tighten the screw.
- 3. Install the side cover.



Rear shock absorber

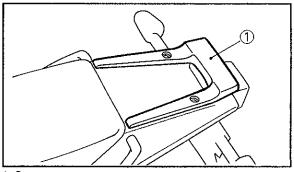
The spring preload of the rear shock absorber can be adjusted to suit the motorcycle's load (ex: optional accessories etc.) and riding conditions Refer to page 6-28 for proper adjustment procedures.



1 Spring preload adjuster

C-720

Rear carrier



1 Rear carrier

EUU76000

AWARNING

Do not exceed maximum load. Maximum load: 3 kg (7 lbs)

Sidestand

This model is equipped with an ignition circuit cut-off system. The motorcycle must not be ridden when the sidestand is down The sidestand is located on the left side of the frame. (Refer to page 5-3 for an explanation of this system.)

U-689

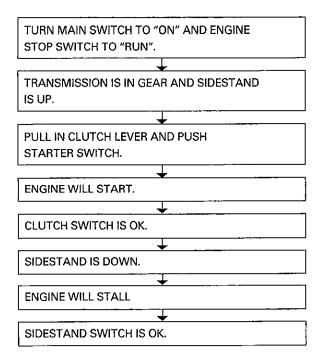
AWARNING

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 the responsibility of retracting the sidestand. Please check carefully the operating instructions listed below and if there is any indication of a malfunction, you

must return the motorcycle to a Yamaha dealer immediately for repair.

D-308

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



U-691

AWARNING

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

PRE-OPERATION CHECKS

Before using this motorcycle, check the following points:

ltem	Routine	Page	
Front brake	Check operation, free play, fluid level, and fluid leakage Top-up with DOT#4 (or #3) brake fluid if necessary	4-3~4-4,	
Rear brake	Check operation, free play, fluid level, and fluid leakage Top-up with DOT #4 brake fluid if necessary	6-16 ~ 6-20	
Clutch	Check operation, condition and free play. Adjust if necessary	4-4, 6-20~6-21	
Throttle grip/Housing	Check for smooth operation Lubricate/Adjust if necessary	4-4, 6-12 ~ 6-14, 6-25	
Engine oil	Check oil level/Add oil as required.	4-4, 6-6~6-9	
Drive chain	Check chain slack and condition Adjust if necessary	4-4, 6-21 ~ 6-24	
Wheels/Tires	Check tire pressure, wear, damage, spoke tighteness	4-5~4-8, 6-34~6-38	
Control/Meter cables			
Brake and shift pedal shafts Check for smooth operation Lubricate if necessary		6-25	
Brake and clutch lever pivots Check for smooth operation Lubricate if necessary		6-25	
Sidestand pivot	Check for smooth operation. Lubricate if necessary	6-25	
Fittings/Fasteners	Check all chassis fittings and fasteners Tighten/Adjust, if necessary	4-8, 6-5	

ltem	Routine	Page
Fuel tank	Check fuel level/top-up as required	4-9
Lights and signals	Check for proper operation.	4-8, 6-32 ~ 6-34

N	O	Т	E	:

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

A WARNING

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

EAE12000

Brakes (See page 6-16 for details)

Brake lever and brake pedal
 Check for correct free play in the front brake lever and rear brake pedal. Make sure they are working properly. Check the brakes at low speed shortly after starting out if the free play is incorrect, adjust it

EUU61900

AWARNING

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 for immediate repairs. A soft, spongy feeling could indicate a hazardous condition in the brake system.

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

Recommended brake fluid: DOT #4

EUU13400

NOTE: _____

If DOT#4 is not available, #3 can be used for the front brake only.

3. Check the disc pads. Refer to page 6-18

EUU02200

NOTE: _____

When this brake service is necessary, ask a Yamaha dealer.

E-107

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).

AWARNING

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

E-200

Clutch (See page 6-20 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.

E-301

Throttle grip (See page 6-12 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 to make any necessary adjustments.

EAE40100

Engine oil (See page 6-6 for details)

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

Recommended oil:

30°F 40°F 50°F 60°F

0°C 5°C 10°C 15°C SAE 10W30 type SE motor oil
Oil quantity:

Total amount:

3.3 L (2.9 Imp qt, 3.5 US qt)

Periodic oil change:

2.7 L (2.4 Imp qt, 2.9 US qt)

With oil filter replacement:

2.8 L (2.5 Imp qt, 3.0 US qt)

EUU08000

NOTE:

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

E-500

Chain (See page 6-21 for details)

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

E-913

Tires

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

Tire air pressure
 Always check and adjust the tire pressure before operating the motorcycle

U-675

AWARNING

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

Basic weight With oil and full fuel tank	168 kg (370 lbs	s)
Maximum load*	182 kg (401 lb:	s)
Cold tire pressure	Front	Rear
Up to 90 kg (198 lb) load*	150 kPa (1 5 kg/cm², 22 psı)	150 kPa (1 5 kg/cm², 22 psi)
90 kg (198 lb)~ Maximum load*	150 kPa (1 5 kg/cm², 22 psi)	200 kPa (2 0 kg/cm², 28 psi)
Off-road riding	125 kPa (1 25 kg/cm², 18 psi)	125 kPa (1 25 kg/cm², 18 psı)
High speed riding	150 kPa (1 5 kg/cm², 22 psı)	150 kPa (1 5 kg/cm², 22 psi)

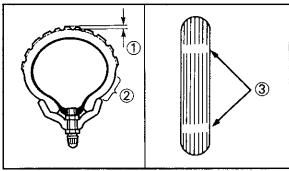
^{*}Load is the total weight of cargo, rider, passenger, and accessories

AWARNING

Proper loading of your motorcycle is important for the handling, braking, and other performance and safety characteristics of your motorcycle. Do not carry loosely packed items that can shift. Securely pack your heaviest items close to the center of the motorcycle, and distribute the weight evenly from side to side. Properly adjust the suspension for your load, and check the condition and pressure of your tires. NEVER OVERLOAD YOUR MOTORCYCLE. Make sure the total weight of the cargo, rider, passenger, and accessories (fairing, saddlebags, etc. if approved for this model) does not exceed the maximum load of the motorcycle. Operation of an overloaded motorcycle could cause tire damage, an accident, or even injury.

2. Tire inspection

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



1 Tread depth

2 Side wall

3 Wear indicator

FRONT

Manufacture	Size	Туре
BRIDGESTONE	90/90-21 54S	TW41
DUNLOP	90/90-21 54S	TRAIL MAX

REAR

Manufacture	Size	Туре
BRIDGESTONE	120/90-17 64S	TW42B
DUNLOP	120/90-17 64S	TRAIL MAX

Minimum tire tread	1 0 mm (0 04 in)
depth (front and rear)	(,

U-700

AWARNING

 It is dangerous to ride with a worn-out tire. When a tire tread begins to show lines, have a Yamaha dealer replace the tire immediately. Brakes, tires, and related wheel parts replacement should be left to a Yamaha Service Technician. 2 Patching a punctured tube is not recommended. If it is absolutely necessary to do so, use great care and replace the tube as soon as possible with a good quality replacement.

E-934

Wheels

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 wheel; be sure the spokes are tight and undamaged. If any abnormal condition exists in a wheel, consult a Yamaha dealer. Do not attempt even small repairs to the wheel. If a wheel is deformed or cracked, it must be replaced.

- 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.
- 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.

E-850

Fittings/Fasteners

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

E-700

Lights and signals

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

E-707

Switches

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

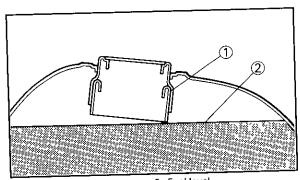
Fuel

Make sure there is sufficient fuel in the tank

U-610

AWARNING

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



1 Filler tube

2 Fuel level

Recommended fuel: Regular gasoline For Australia. Unleaded fuel only Fuel tank capacity:

Total:

13.0 L (2.9 Imp gal, 3.4 US gal)

Reserve:

2.0 L (0.4 lmp gal, 0.5 US gal)

F-000

OPERATION AND IMPORTANT RIDING POINTS

U-672

AWARNING

Before riding this motorcycle, become thoroughly familiar with all operating controls and their functions. Consult a Yamaha dealer regarding any control or function that you do not thoroughly understand. U-628

AWARNING

- 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.
- 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.

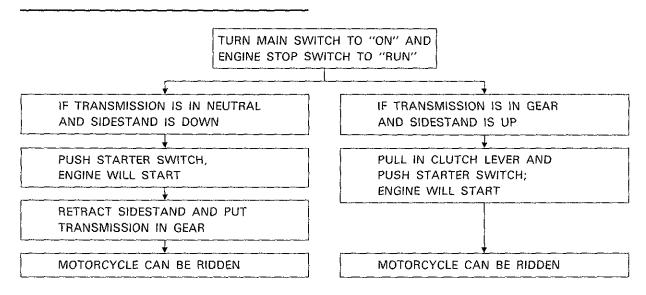
Starting and warming up a cold engine

EUU02800
NOTE:
This motorcycle is equipped with a starting
and an ignition circuit cut-off switch.

- 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.

AWARNING

Before going through the following steps, check the function of the sidestand switch and clutch switch. (Refer to page 3-16.)



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

EUU03000

NOTE: _____

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

- 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

6 After the engine starts, warm it up for one or two minutes. Make sure the starter is in its original position before riding.

F-108

Starting a warm engine

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

U-314

CAUTION:

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

F-200

Shifting

The transmission lets you control the amount of power you have available at a given speed for starting, accelerating, climbing hills, etc The use of the shift pedal is shown in the illustration. (Page 3-7)

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.

U-315

CAUTION:

 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. Always use the clutch when changing gears. The engine, transmission, and driveline are not designed to withstand the shock of forced shifting and can be damaged by shifting without the clutch.

F-300

Engine break-in

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

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

Avoid operation above 1/3 throttle. 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 (100~300 mi):

Avoid prolonged operation above 1/2 throttle. Rev the motorcycle freely through the gears, but do not use full throttle at any time.

500~1,000 km (300~600 mi):
 Avoid cruising speeds in excess of 3/4 throttle.

EUU37200

CAUTION:

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

1,000 km (600 mi) and beyond:
 Avoid prolonged full throttle operation.
 Vary speeds occasionally.

EUU32200

CAUTION:

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

F 401

Parking

When parking the motorcycle, stop the engine and remove the ignition key. Turn the fuel cock to "OFF" whenever stopping the engine.

AWARNING

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. H-000

PERIODIC MAINTENANCE AND MINOR REPAIR

H-004

Periodic inspection, adjustment and lubrication will keep your motorcycle in the safest and most efficient condition possible. Safety is an obligation of the motorcycle owner. The maintenance and lubrication schedule chart should be considered strictly as a guide to general maintenance and lubrication intervals. YOU MUST TAKE INTO CONSIDERATION THAT WEATHER, TERRAIN, GEOGRAPHICAL LOCATIONS, AND A VARIETY OF INDIVID-UAL USES ALL TEND TO DEMAND THAT EACH OWNER ALTER THIS TIME SCHEDULE TO SHORTER INTERVALS TO MATCH THE ENVIRONMENT. The most important points of motorcycle inspection, adjustment, and lubrication are explained in the following pages.

U-632

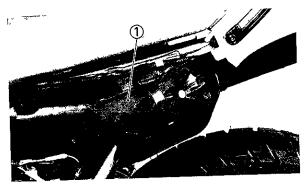
AWARNING

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

H-101

Tool kit

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



1 Tool kit

U-060

NOTE: ___

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

U-671

AWARNING

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

PERIODIC MAINTENANCE/LUBRICATION

Unit km (miles)

			EV	EVERY	
ITEM	REMARKS	1,000 (600)	6,000 (4,000) or 6 months	12,000 (8,000) or 12 months	
Valve(s)*	Check valve clearance Adjust if necessary.	0	0	0	
Spark plug(s)	Check condition Clean or replace if necessary	0	0	0	
Air filter	Clean Replace if necessary		0	0	
Carburetor*	Check idle speed/starter operation Adjust if necessary	0	0	0	
Fuel line*	Check fuel hose for cracks or damage Replace if necessary		0	0	
Engine oil	Replace (Warm engine before draining)	0	0	0	
Engine oil filter/* Oil strainer	Replace filter element and clean oil strainer	0	0	0	
Brake*	Check operation/fluid leakage/See NOTE Correct if necessary		0	0	
Clutch	Check operation Adjust if necessary		0	0	
Rear arm pivot*	Check rear arm assembly for looseness. Correct if necessary Moderately repack ***	0	0	0	
Rear suspension link pivots*	Check operation Moderately repack ***	0	0	0	
Wheels*	Check balance/damage/runout/spoke tightness Repair if necessary		0	0	
Wheel bearings*	Check bearings assembly for looseness/damaged. Replace if damaged		0	0	

			EVERY	
1TEM	REMARKS	1,000 (600)	6,000 (4,000) or 6 months	12,000 (8,000) or 12 months
Steering bearing*	Check bearings assembly for looseness Correct if necessary Moderately repack every 24,000 (16,000) or 24 months **	0		0
Front forks*	Check operation/oil leakage Repair if necessary		0	0
Rear shock absorber*	Check operation/oil leakage Repair if necessary		O	0
Drive chain	Check chain slack/alignment Adjust if necessary Clean and lube		EVERY 500 (30	00)
Fittings/Fasteners*	Check all chassis fittings and fasterners Correct if necessary	0	0	0
Sidestand*	Check operation Repair if necessary	0	0	0
Sidestand switch*	Check operation Clean or replace if necessary	0		0

^{*} It is recommended that these items be serviced by a Yamaha dealer

NOTE:

Brake fluid replacement:

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

^{**} Medium weight wheel bearing grease (bearing type)

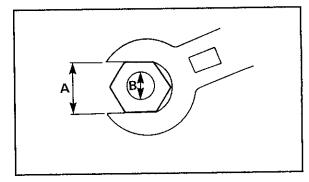
^{***} Lithium soap base grease (bush type)

H-301

Torque specifications

Use a torque wrench to tighten these items. It is recommended that these items be checked occasionally, especially before a long trip. Always check the tightness of these items whenever they are loosened for any reason.

A	В	General torque specifications		
(Nut)	(Bolt)	Nm	m•kg	ft•lb
10 mm	6 mm	6	06	43
12 mm	8 mm	15	15	11
14 mm	10 mm	30	30	22
17 mm	12 mm	55	55	40
19 mm	14 mm	85	85	61
22 mm	16 mm	130	13 0	94

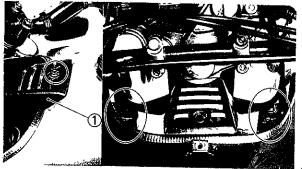


······································		Torque			
ltem	Nm	m•kg	ft•lb		
Spark plug	175	1 75	125		
Engine drain bolt	30	30	22		
(Crankcase)					
Engine drain bolt (Oil tank)	18	18	13		
Oil filter cover screw	10	10	72		
Air bleed screw	5	05	36		
Front wheel axle	58	58	42		
Axe holder nut	8	0.8	58		
Rear wheel axle nut	90	90	65		
Caliper bracket installation bolt	45	45	33		
Rear arm end bolt	3	03	22		

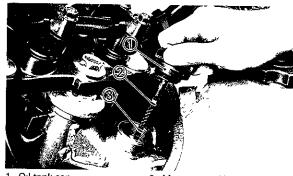
Engine oil

In this model, the dry sump lubrication system is used. That is, oil is supplied to the engine by means of the feed pump, after lubricating is over, the oil is fed back to the oil tank by means of the scavenging pump. Therefore, the oil level can be checked at the oil tank.

- 1. Oil level measurement
- a. Place the motorcycle on a level place and hold it in an upright position.
- Remove the screw, pull out the projections from the grommets to remove the cover.



c. Remove the oil tank cap, and check the oil level.



- Oil tank cap
- Minimum oil level
- 2 Maximum oil level

EUU07800

NOTE:

When checking, do not screw the oil level gauge into the oil tank Insert the gauge lightly. For accuracy, check with the motorcycle held upright.

- d. If the oil level is between the minimum and maximum level lines marked on the oil level gauge, you may start the engine. If there is no oil on the level gauge, add oil up to the minimum level.
- e Start the engine and warm up until the oil temperature rises to approximately 60°C (140°F).
- f. Idle the engine more than 10 seconds while keeping the motorcycle upright. Then stop the engine and check the oil level on the upright motorycle.
- g. Adjust the oil level to the maximum level line.

EUU30000

CAUTION:

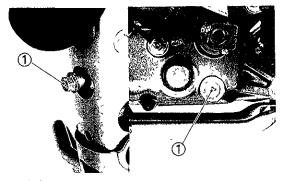
Do not run the motorcycle until you know it has sufficient engine oil.

EUU71500

AWARNING

Never attempt to remove the oil tank cap just after high-speed operation. The heated oil could spout out, causing danger. Wait until the oil cools down to approximately 60°C (140°F).

- 2. Engine oil replacement
- a. Start the engine and stop after a few minutes of warm-up.
- b. Place an oil receiver under the engine.
- c Remove the oil tank cap, drain bolts (at two places), and air bleed screw attached to the oil filter cover.



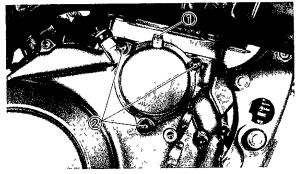
1 Drain bolt

EUU06800

NOTE: ____

The oil filter cover is secured by three screws. The lower one should be removed so that the filter cavity will drain.

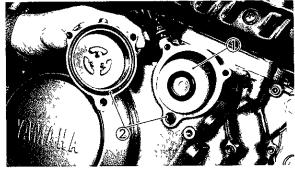
- d. Check each gasket. If damaged, replace
- e. Remove the filter cover screws and remove the oil filter cover. Replace the filter element.



1 Air bleed screw

2 Filter cover screw

f. Check O-ring for damage. Replace if damaged.



1 Filter element

2 O-ring

g. Install the drain bolts (at two places), air bleed screw, and the filter cover screw.

Tightening torque:

Drain bolt (crankcase):

30 Nm (3.0 m·kg, 22 ft·lb)

Drain bolt (oil tank):

18 Nm (1.8 m · kg, 13 ft · lb)

Filter cover screw:

10 Nm (1.0 m·kg, 7.2 ft·lb)

Air bleed screw:

5 Nm (0.5 m · kg, 3.6 ft · lb)

h Add engine oil. Install the oil tank cap and tighten.

Oil capacity: See page 4-4

Recommended oil: See page 4-4

- i Start the engine and allow a few minutes of warm-up. While warming up, check for oil leakage. If oil leaks, stop the engine immediately, and check for the cause.
- j. Stop the engine and check the oil level.

EUU37700

CAUTION:

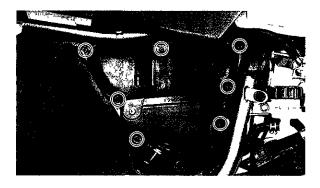
After replacing the engine oil, be sure to check the oil pressure as described below.

- Remove the air bleed screw from the oil filter cover.
- Start the engine and keep it idling until oil flows out of the bleed hole. If no oil comes out after a lapse of one minute, turn off the engine immediately so it will not seize. In such a case go to the nearest Yamaha dealer for repairs.
- 3. After checking, tighten the air beed screw securely.

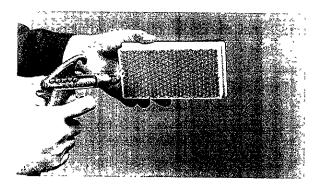
EAH64600

Air filter

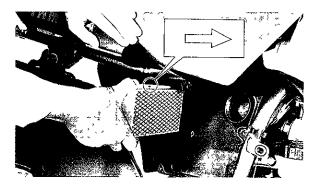
- Remove the right-hand side cover and air duct.
- 2 Remove the air filter case fitting screws and the filter case cover.



- 3. Pull out the element.
- 4 Tap the element lightly to remove most of the dust and dirt; blow out the remaining dirt with compressed air from the mesh side of the element. If the element is damaged, replace it.



Install the air filter element with the arrow mark on the top pointing inward



- 6. Reassemble by reversing the removal procedure.
- 7 The air filter element should be cleaned at the specified intervals.

EUU3260

CAUTION:	

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

EAH91900

Carburetor adjustment

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

	'13	
 ,,,		

J	O	TE:	

A diagnostic tachometer must be used for this procedure.

EUU33000

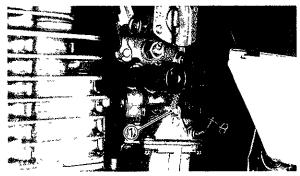
CAUTION:

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

EAH92000

Idle speed adjustment

 Attach the tachometer. Start the engine and warm it up for a few minutes (normally, 1 or 2 minutes) at approximately 1,000 to 2,000 r/min Occasionally rev the engine to 4,000 to 5,000 r/min. The engine is warm when it quickly responds to the throttle. Set the idle to the specified engine speed by adjusting the throttle stop screw, turn the screw in to increase engine speed, and out to decrease engine speed.



1 Throttle stop screw

Standard idle speed: 1,200~1,400 r/min

C1	JUC	145	ሳሳ

NOTE:

If the specified idle speed cannot be obtained by performing the above adjustment, consult a Yamaha dealer.

EAH91800

Throttle cable adjustment

EUU06400

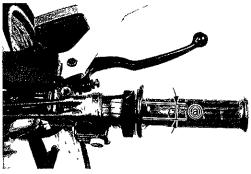
NOTE:

Before adjusting the throttle cable free play, the engine idling speed should be adjusted.

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

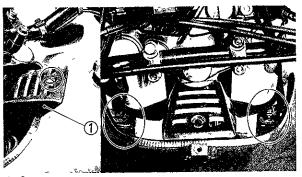
Free play.

3~5 mm (0.12~0 20 in)



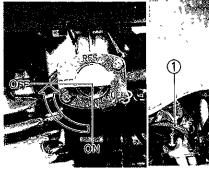
a 3~5 mm (0 12~0 20 in)

- 1. Remove the side covers, seat and air ducts.
- Remove the screw, pull out the projections from the grommets to remove the cover.

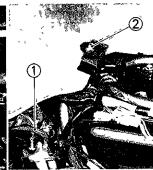


1 Cover

3. Turn the fuel cock to "OFF" and remove the fuel pipe.

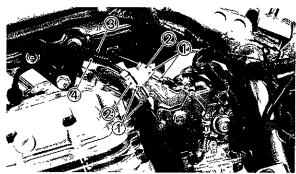


1 Fuel pipe



2 Fuel tank holding bolt

- 4. Remove the fuel tank holding bolt, and then remove the fuel tank.
- Loosen the lock nuts on the carburetor side of throttle cable 1, and turn the adjuster in and out so the play is correct. After the adjustment, be sure to tighten the lock nut.
- If the play is still incorrect after the adjuster is loosened 5 mm (0.20 in), make an adjustment with the adjuster to the throttle cable 2



- 1 Lock nut
- 3 Throttle cable 1

- 2 Adjuster
- 4 Throttle cable 2

H-908

Valve clearance adjustment

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

H-203

Spark plug inspection

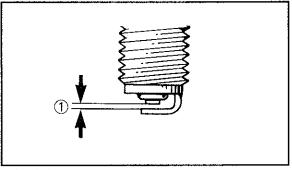
The spark plug is an important engine component and is easy to inspect The condition of the spark plug can indicate something of the condition of the engine.

The ideal color on the white porcelain insulator around the center electrode is a medium to light tan color for a motorcycle that is being ridden normally. Do not attempt to diagnose any problems yourself Instead, take the motorcycle to a Yamaha dealer. You should periodically remove and inspect the spark plugs because heat and deposits will cause the spark plugs to slowly break down and erode If electrode erosion becomes excessive, or if carbon and other deposits are excessive, you should replace the spark plugs with a proper type of plug.

Standard spark plug: DPR8EA-9 or DPR9EA-9 (NGK)

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

Spark plug gap: 0.8~0.9 mm (0.031~0.035 in)



1 Spark plug gap

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 torque¹ 17.5 Nm (1.75 m•kg, 12.5 ft•lb)

NOTE:

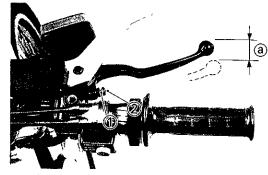
If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 to 1/2 turns past finger tight Have the spark plug torqued to the correct value as soon as possible with a torque wrench.

EAH80100

Front brake adjustment

The free play at the end of the front brake lever should be $2\sim5$ mm ($0.08\sim0.20$ in)

- 1 Loosen the lock nut.
- Turn the adjuster so that the brake lever movement at the lever end is 2~5 mm (0.08~0.20 in) before the adjuster contacts the master cylinder piston
- 3. After adjusting, tighten the lock nut



- 1 Lock nut
- 2~5 mm (0 08~0 20 in)

2 Adjuster

EUU63600

AWARNING

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

EUU64100

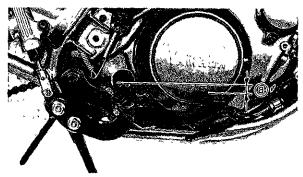
AWARNING

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

H-804

Rear brake adjustment

The brake pedal top end should be 15 mm (0.6 in) below the top of the footrest. If not, ask a Yamaha dealer to adjust it.



a. Pedal height 15 mm (0.6 in)

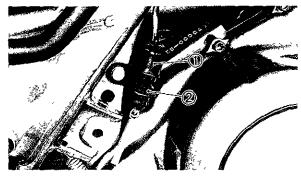
U-688

AWARNING

An incorrect free play indicates a hazardous condition in the brake system. Do not operate the motorcycle until the failure in the brake system is corrected. Ask a Yamaha dealer for immediate repairs. H-833

Brake light switch adjustment

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



1 Main body

2 Adjusting nut

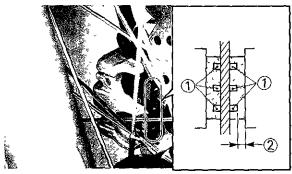
EAH87300

Checking the front and rear brake pads Check the brake pads for damage and wear

EAH87400

FRONT

To check, depress the brake and inspect the wear indicator. If the brake pads are worn to the wear limit, have a Yamaha dealer replace the pads



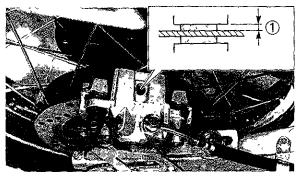
Wear indicator

2 Wear limit 10 mm (0 04 in)

EAH87500

REAR

To check, open the wear indicator cap. If the thickness is less than the specified value, have a Yamaha dealer replace the pads.



1 Wear limit 0.8 mm (0.031 in)

EAH88000

Inspecting the brake fluid level

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

Before riding, check the brake fluid level and replenish when necessary. Observe these precautions.

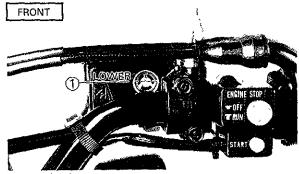
 When checking the fluid level, make sure the master cylinder top is horizontal by turning the handlebars. 2. Use only the designated quality brake fluid; otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.

Recommended brake fluids: DOT #4

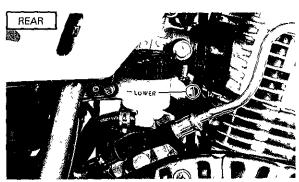
EUU13400

NOTE: _

If DOT#4 is not available, #3 can be used for the front brake only.



Lower level



1 Lower level

- Refill with the same type of brake fluid, mixing fluids may result in a harmful chemical reaction and lead to poor 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.
- Brake fluid may erode painted surfaces or plastic parts. Always clean up spilled fluid immediately.
- 6 Have a Yamaha dealer check the cause if the brake fluid level goes down

H-835

Brake fluid replacement

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

1 001

Clutch adjustment

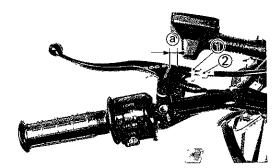
This model has two clutch cable length adjusters. The cable length adjusters are used to take up slack from cable stretch and to provide sufficient free play for proper clutch operation. Normally, once the clutch cable length adjuster (crankcase) is properly set, the only adjustment required is maintenance of free play at the clutch cable length adjuster (handlebar lever)

1-005

Free play adjustment

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

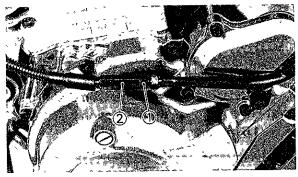
Clutch lever free play: 2~3 mm (0.08~0.12 in)



1 Lock nut

2 Adjuster

a 2~3 mm (0.08~0.12 in)



1 Lock nut

Adjuster

1-408

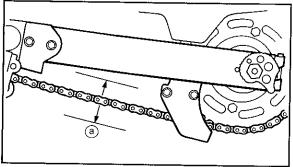
Drive chain slack check

11-048

NOTE:

Before checking and/or adjusting the chain slack, rotate the rear wheel through several revolutions. Check the chain slack several times to find the point where the chain is the tightest. Check and/or adjust the chain slack where the rear wheel is in this "tight chain" position.

To check the chain slack the motorcycle must stand vertically with both wheels on the ground and without a rider. Check the slack at the position shown in the illustration. The normal vertical deflection is approximately 30~40 mm (1.2~1.6 in). If the deflection exceeds 40 mm (1.6 in) adjust the chain slack.

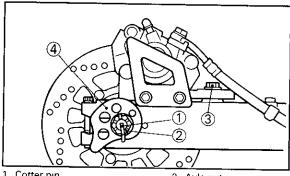


a 30~40 mm (12~16 in)

EAI41900

Drive chain slack adjustment

Remove the cotter pin from the rear wheel axle nut



- Cotter pin
- 3 Caliner bracket installation bolt
- 2 Axle nut
- 4 Chain puller
- Loosen the rear wheel axle nut and caliper bracket installation bolt.
- Turn the chain puller both left and right, until the axle is situated in the same puller slot position.

CAUTION:

Too small 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 axle nut and caliper bracket installation bolt.

Tightening torque:

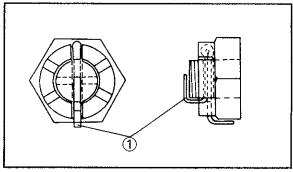
Axle nut:

90 Nm (90 m•kg, 65 ft•lb)

Caliper bracket installation bolt:

45 Nm (4.5 m·kg, 33 ft·lb)

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



1 Cotter pin

EUU64700

AWARNING

Always use a new cotter pin on the axle nut.

1 107

Drive chain lubrication

The chain consists of many parts which work against each other If the chain is not maintained properly, it will wear out rapidly, therefore, form the habit of periodically servicing the chain. This service is especially necessary when riding in dusty conditions

This motorcycle has a drive chain with small rubber O-rings between the chain plates Steam cleaning, high-pressure washes, and certain solvents can damage these O-rings 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 O-rings

Cable inspection and lubrication

U-646

AWARNING

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

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

Recommended lubricant: SAE 10W30 motor oil I-102

Throttle cable and grip lubrication

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

1-306

Brake and shift pedals

Lubricate the pivoting parts.

Recommended lubricant: SAE 10W30 motor oil 1-307

Brake and clutch levers

Lubricate the pivoting parts.

Recommended lubricant SAE 10W30 motor oil

1-311

Sidestand

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

Recommended lubricant: SAE 10W30 motor oil

U-704

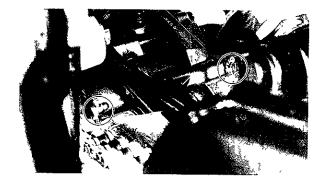
AWARNING

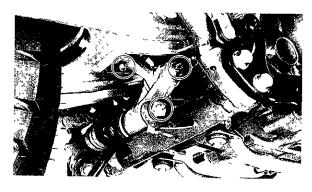
If the sidestand movement is not smooth, consult a Yamaha dealer.

Rear suspension

Lubricate the pivoting parts.

Recommended lubricant: Lithium soap base grease





EAI20500

Front fork inspection

EUU65700

AWARNING

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

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

- Operation check
 Place the motorcycle on a level place.
- Hold the motorcycle on an upright position with the rider's hands on the handlebar, and apply the front brake.
- b. Pump the front forks up and down several times.



EUU42500

CAUTION:

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

I-515

Rear shock

U-673

AWARNING

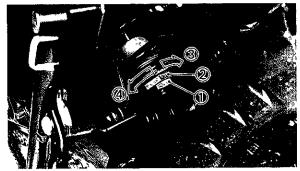
This shock absorber contains highly pressurized nitrogen gas. Read and understand the following information before handling the shock absorber. The manufacturer cannot be held responsible for property damage or personal injury that may result from improper handling.

- Do not tamper with or attempt to open the cylinder assembly.
- 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. Bring your shock absorber to a Yamaha dealer for any service.

Rear shock absorber adjustment

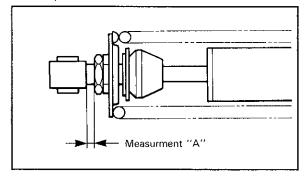
The preload is adjusted by changing the set length of the spring: a shorter set length increases the preload, a longer set length decreases the preload

- To adjust the preload, loosen the lock nut.
- Adjust the spring set length by turning the spring adjuster with the special wrench.



- 1 Lock nut3 Increase spring preload
- 2 Adjuster
- 4 Decrease spring preload
- To increase the preload, turn the spring adjuster clockwise. To decrease the pre-

load, turn the spring adjuster counterclockwise. One complete turn of the adjuster will change the preload 1 mm (0 04 in).



Measurement "A"
Standard length:
8.9 mm (0.35 in)
Minimum length:
3.4 mm (0.13 in)
Maximum length:
14.4 mm (0.57 in)

EUU36300

CAUTION:

Never attempt to turn the adjuster beyond the maximum or minimum setting.

Tightening torque:

42 Nm (4,2 m·kg, 30 ft·lb)

EUU36400

CAUTION:

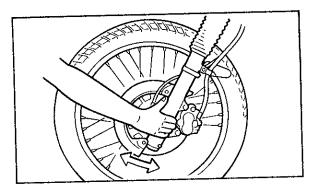
Always tighten the lock nut against the spring adjuster and torque the lock nut to specification.

1-603

Steering inspection

Periodically inspect the condition of the steering. Worn out or loose steering bearings may be dangerous Place a block under the engine to raise the front wheel off the ground. Hold the lower end of the front forks and try to

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



U 657

AWARNING

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

1 602

Wheel bearings

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

EAI84900

Battery

This motorcycle is equipped with a "Sealed type" battery. Therefor, it is not necessary to check the electrolyte or add distilled water in the battery. In the battery seems to have lost its capacity, consult a Yamaha dealer.

EUU43400

CAUTION:

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

EUU65800

AWARNING

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. IN-TERNAL-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.

FAI85000

Battery maintenance

 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:

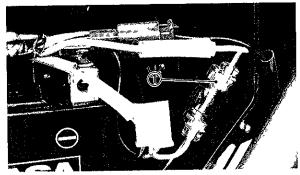
A special battery charger (constant voltage/ampere or constant voltage) is required for recharging the sealed type battery. Using a conventional battery charger may shorten the battery life.

 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. I-910

Fuse replacement

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

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



1 Fuse

CAUTION:

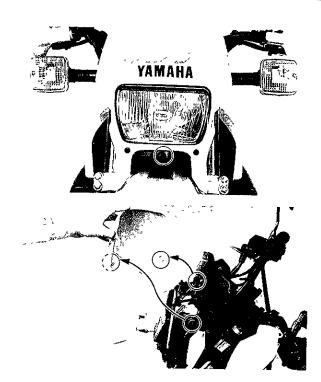
Do not use fuses of higher amperage rating than those recommended. Substitution of a fuse of improper rating can cause extensive electrical system damage and possibly a fire.

EAI85200

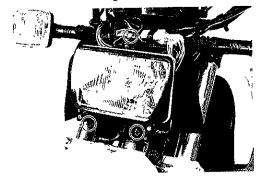
Replacing the headlight bulb

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

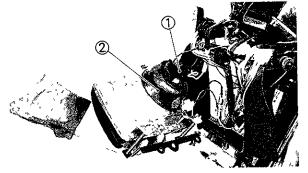
Remove the screw, pull out the projections from the grommets to remove the cowling



2. Remove the headlight unit assembly.



Disconnect the headlight leads and remove the cover.



4. Turn the bulb holder counterclockwise and remove the defective bulb.



EUU66000

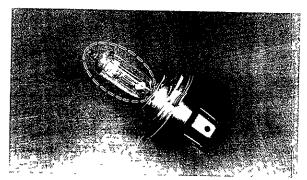
AWARNING

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

5. Insert a new bulb into position and secure it in place with the bulb holder

CAUTION:

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



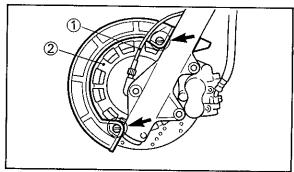
- 6. Reinstall the cover.
- 7 Reconnect the headlight leads.

8. Reinstall the light unit assembly and cowling. If the headlight beam adjustment is necessary, ask a Yamaha dealer to make adjustment.

EAJ25600

Front wheel removal

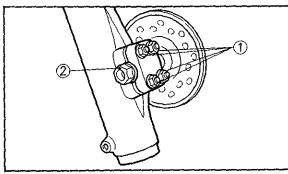
- 1. Elevate the front wheel by placing a suitable stand under the engine.
- 2. Remove the speedometer cable and disc cover.



1 Speedometer cable

2 Disc cover

3. Loosen the wheel axle holder nuts.



1 Axle holder nut

2 Axle

 Remove the axle and the front wheel.
 Make sure the motorcycle is properly supported.

EUU05400

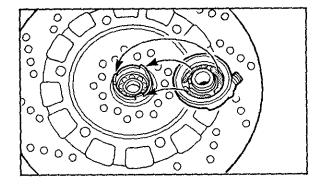
NOTE: ____

Do not depress the brake lever when the disc is off the caliper as the brake pads will be forced shut. EAJ25700

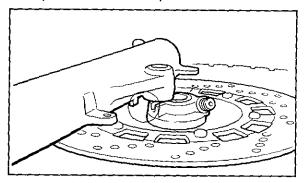
Front wheel installation

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

 Make sure the wheel hub and the speedometer clutch assembly are installed with the projections meshed into the slots.



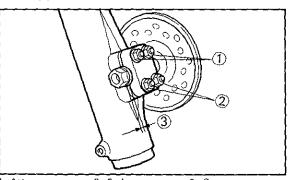
Make sure there is enough gap between the brake pads before inserting the brake disc. Make sure the projecting portion (torque stopper) of the speedometer housing is positioned correctly.



4 Make sure the axle is properly torqued.

Tightening torque 58 Nm (58 m+kg, 420 ft+lb)

 Before tightening the holder nuts, compress the front forks several times to check for proper fork operation. 6. Tighten the axle holder nuts; first the upper and then lower ones



1 1st

2 2nd

3 Gap

Axle holder nut torque: 8 Nm (0.8 m · kg, 5.8 ft · lb)

EAJ37200

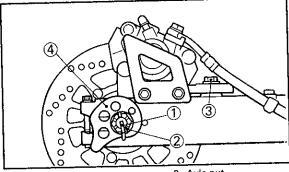
Rear wheel removal

EUU66200

AWARNING

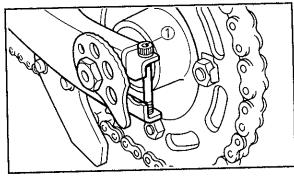
It is advisable to have a Yamaha dealer service the rear wheel.

- 1 Elevate the rear wheel by placing a suitable stand under the engine.
- Remove the cotter pin and axle nut.
- Loosen the caliper bracket installation bolt and chain pullers.

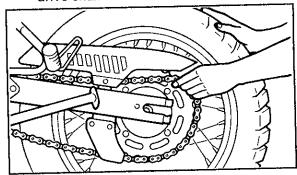


1 Cotter pin

- 2 Axle nut
- 3 Caliper bracket installation bolt
- 4 Chain puller
- 4. Remove the rear arm end bolt.



- 1 Rear arm end bolt
 - 5. Push the wheel forward and remove the drive chain.



6 Pull out the rear axle and remove the wheel assembly backward.

EUU05500	
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NOTE:

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

EAJ37300

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. Make sure the rear wheel axle is inserted on the left-hand side and that the chain pullers are installed with the punched side outward.

- 3. Adjust the drive chain.
- Make sure the axle nut, caliper bracket installation bolt and rear arm end bolt are properly torqued, and a new cotter pin is installed

EUU64700

AWARNING

Always use a new cotter pin on the axle nut.

Tightening torque:

Axle nut:

90 Nm (9.0 m·kg, 65 ft·lb)

Caliper bracket installation bolt

45 Nm (4.5 m · kg, 33 ft · lb)

Rear arm end bolt

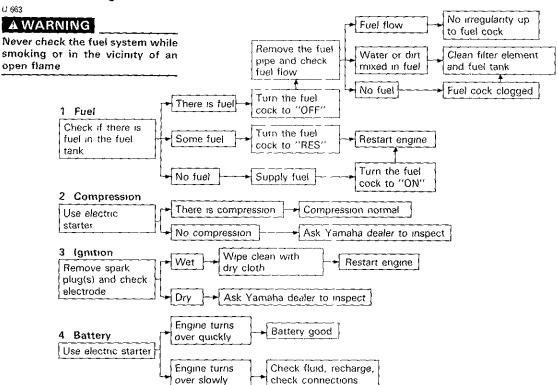
3 Nm (0 3 m·kg, 2 2 ft·lb)

J-500

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

Troubleshooting chart



6-40

CLEANING AND STORAGE

K-009

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.

- 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.
- If the engine case is excessively greasy, apply degreaser with a paint brush. Do not apply degreaser to the chain, sprockets, or wheel axles.
- Rinse the dirt and degreaser off with a garden hose. Use only enough pressure to do the job.

CAUTION:

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

- 4. Once the majority of the dirt has been hosed off, wash all surfaces with warm water and mild, detergent-type soap. An old toothbrush or bottle brush is handy for hard-to-get-at places
- 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.

- Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.
- 8. Automotive-type wax may be applied to all painted and chrome-plated surfaces. Avoid combination cleaner-waxes. Many contain abrasives which may mar the paint or protective finish on the fuel tank and side covers. When finished, start the engine and let it idle for several minutes.

K-012

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

U-664

AWARNING

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

- 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 contol cables.
- 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 entering.
- 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)).

U-058
NOTE:
Make any necessary repairs before storing the
motorcycle.

SPECIFICATIONS

Model	XT600EA
Dimension:	
Overall length	2,220 mm (87.4 in)
Overall width	820 mm (32 3 in)
Overall height	1,245 mm (49 0 in)
Seat height	855 mm (33.7 in)
Wheel base	1,445 mm (56 9 in)
Minimum ground clearance	235 mm (9.3 in)
Basic weight	
With oil and full fuel tank	168 kg (370 lb)
Mınimum turning radius:	2,200 mm (86.6 in)
Engine ⁻	
Туре	Air cooled 4-stroke, gasoline, SOHC
Model	3WR1
Cylinder arrangement	Single cylinder, Forward inclined
Displacement	595 cm ³
BoreXStroke	95.0×84 0 mm (3.74×3 31 in)
Compression ratio	85 1
Starting system	Electric starter
Lubrication system	Dry sump

Model	XT600EA
Engine oil (4-cycle). Type 30°F 40°F 50°F 60°F 0°C 5°C 10°C 15°C Capacity Periodic oil change With oil filter replacement Total amount	SAE 20W40 type SE motor oil (If temperature does not go below 5°C/40°F) SAE 10W30 type SE motor oil (If temperature does not go above 15°C/60°F) 2.7 L (2.4 Imp qt, 2 9 US qt) 2.8 L (2.5 Imp qt, 3 0 US qt) 3.3 L (2.9 Imp qt, 3 5 US qt)
Air filter	Dry type element
Fuel. Type Tank capacity Reserve amount	Regular gasoline For Australia: Unleaded fuel only 13.0 L (2 9 Imp gal, 3.4 US gal) 2.0 L (0.4 Imp gal, 0 5 US gal)
Carburetor: Type/manufacturer	Y26PV/TEIKEI

Model	XT600EA
Spark plug Type/manufacturer Gap	DPR8EA-9 or DPR9EA-9/NGK 0 8~0 9 mm (0 031~0 035 in)
Clutch type	Wet, multi-disc
Transmission Primary reduction system Primary reduction ratio Secondary reduction system Secondary reduction ratio Transmission type Operation Gear ratio 1st	Spur gear 71/34 (2 088) Chain drive 45/15 (3 000) Constant mesh 5-speed Left foot operation
2nd 3rd 4th 5th	31/12 (2.583) 27/17 (1 588) 24/20 (1 200) 21/22 (0 954) 19/24 (0.791)

Model	XT600EA
Chassis. Frame type Caster angle Trail	Diamond 27 75° 116 mm (4 6 in)
Tire Type Size — Front Rear	With tube 90/90-21 54S 120/90-17 64S
Brake: Front brake type Operation Rear brake type Operation	Single, Disk brake Right hand operation Single, Disk brake Right foot operation
Suspension: Front Rear	Telescopic fork Swingarm (Monocross suspension)
Shock Absorber Front Rear	Air Coil spring, Oil damper Gas, Coil spring, Oil damper

Model	XT600EA
Wheel travel Front Rear	225 mm (8 9 in) 200 mm (7 9 in)
Electrical. Ignition system Generator system Battery type/capacity	TCI (Digital) AC generator YTX9-BS/12V8AH YUASA DMX9-12B
Headlight type:	Quarz bulb
Bulb wattage/quantity Headlight Tail/brake light Flasher light Auxiliary light Meter light	12V60W/55W 12V21W/5W 12V21W × 4 12V3 4W 12V3 4W
ndicator light wattage/quantity [.] "NEUTRAL" "HIGH BEAM" "TURN" "REV."	12V3 4W 12V3 4W 12V3 4W 12V3 4W

NOISE REGULATION (FOR Australia) "TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED"

Owners are warned that the law may prohibit.

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

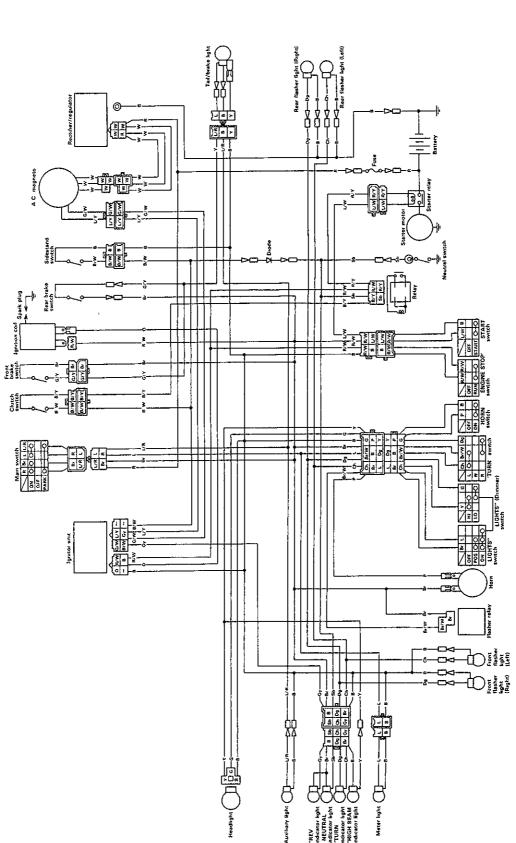
MEMO

MEMO

MEMO



IWATA JAPAN



COLOR CODE

B Black
Br Brown
Ch . Chocolate
Dg . Dark green
G Green
L Blue
O Orange
P . Pink
R P Pink
R P Pink
R P