YAMAHA

OWNER'S MANUAL

Virago

XV535

3BT-28199-E6

EAU00001

Welcome to the Yamaha world of motorcycling!

As the owner of a XV535, you are benefiting from Yamaha's vast experience in and newest technology for the design and the manufacture of high-quality products, which have earned Yamaha a reputation for dependability.

Please take the time to read this manual thoroughly, so as to enjoy all your XV535's advantages. The owner's manual does not only instruct you in how to operate, inspect and maintain your motorcycle, but also in how to safeguard yourself and others from trouble and injury.

In addition, the many tips given in this manual will help to keep your motorcycle in the best possible condition. If you have any further questions, do not hesitate to contact your Yamaha dealer.

The Yamaha team wishes you many safe and pleasant rides. So, remember to put safety first!

IMPORTANT MANUAL INFORMATION

EAU00005

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

⚠	The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!
⚠ WARNING	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.

NOTE:

- This manual should be considered a permanent part of this motorcycle and should remain with it even if the motorcycle is subsequently sold.
- 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 motorcycle and this manual. If there is any question concerning this manual, please consult your Yamaha dealer.

EW000002

⚠ WARNING

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

EAU00008

XV535
OWNER'S MANUAL

1st Edition, April 1999

Printed in Japan.

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GIVE SAFETY THE RIGHT OF WAY

EAU00021

1

Motorcycles are fascinating vehicles, which can give you an unsurpassed feeling of power and freedom. However, they also impose certain limits, which you must accept; even the best motorcycle does not ignore the laws of physics.

Regular care and maintenance are essential for preserving your motorcycle's value and operating condition. Moreover, what is true for the motorcycle is also true for the rider: good performance depends on being in good shape. Riding under the influence of medication, drugs and alcohol is, of course, out of the question. Motorcycle riders – more than car drivers – must always be at their mental and physical best. Under the influence of even small amounts of alcohol, there is a tendency to take dangerous risks.

Protective clothing is as essential for the motorcycle rider as seat belts are for car drivers and passengers. Always wear a complete motorcycle suit (whether made of leather or tear-resistant synthetic materials with protectors), sturdy boots, motorcycle gloves and a properly fitting helmet. Optimum protective wear, however, should not encourage carelessness. Though full-coverage helmets and suits, in particular, create an illusion of total safety and protection, motorcyclists will always be vulnerable. Riders who lack critical self-control run the risk of going too fast and are apt to take chances. This is even more dangerous in wet weather. The good motorcyclist rides safely, predictably and defensively – avoiding all dangers, including those caused by others.

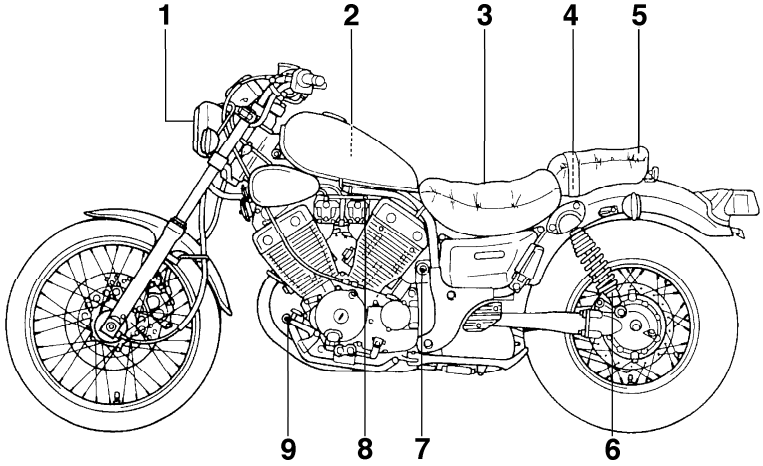
Enjoy your ride!

DESCRIPTION

EAU00026

Left view

2



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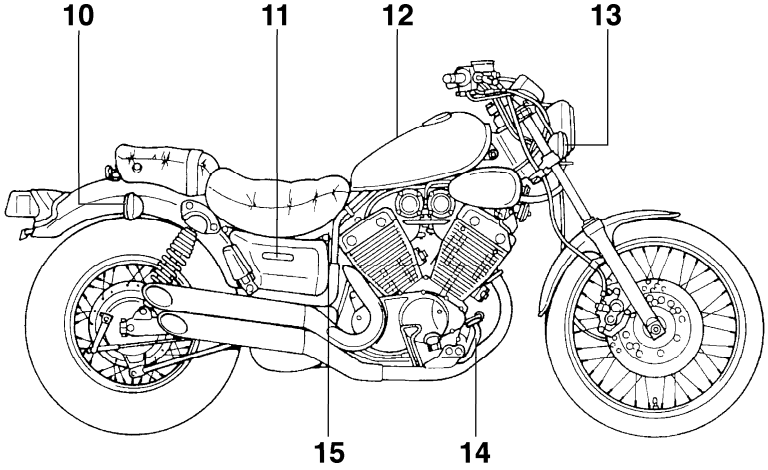

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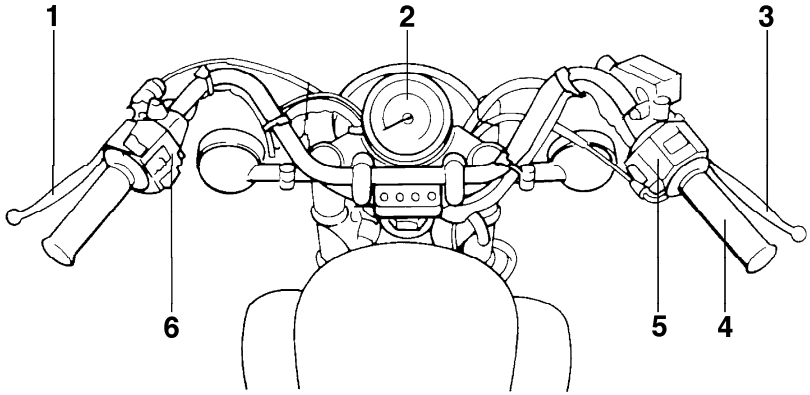

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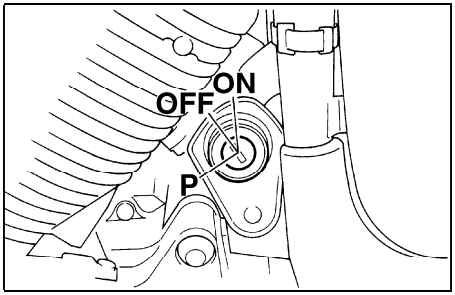
INSTRUMENT AND CONTROL FUNCTIONS

EAU00027



EAU00028

Main switch

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

EAU00036

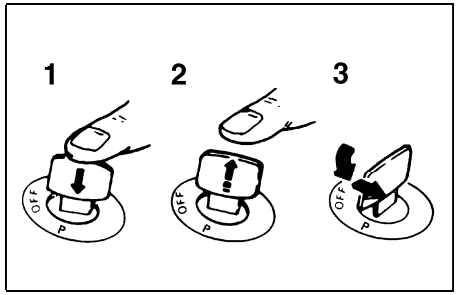
ON

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

EAU00038

OFF

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

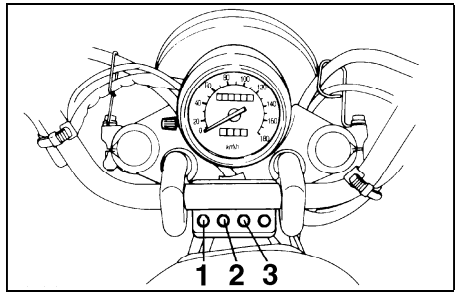


1. Push
2. Release
3. Turn

EAU00055

P (Parking)

The taillight and auxiliary light come on but all other circuits are off. With the key at “OFF”, push it into the main switch and release it. Then turn it counterclockwise to “P”, and remove it. (Do not use this position for an extended length of time as the battery may discharge.) To cancel the parking, turn the key clockwise.



1. High beam indicator light “ ≡D ”
2. Neutral indicator light “ N ”
3. Turn indicator light “ ⇦ ⇨ ”

EAU00056

Indicator lights

EAU00063

High beam indicator light “ ≡D ”

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

EAU00061

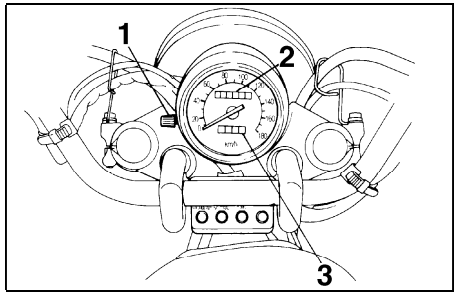
Neutral indicator light “N”

This indicator comes on when the transmission is in neutral.

EAU00057

Turn indicator light “⇦ ⇨”

This indicator flashes when the turn switch is moved to the left or right.

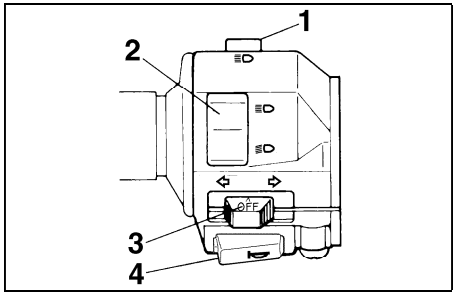


1. Reset knob
2. Odometer
3. Trip odometer

EAU00095

Speedometer

The speedometer shows riding speed. This speedometer is equipped with an odometer and trip odometer. The trip odometer can be reset to "0" with the reset knob. Use the trip odometer to estimate how far you can ride on a tank of fuel. This information will enable you to plan fuel stops in the future.



1. Pass switch " ≡O "
2. Dimmer switch
3. Turn signal switch " ⇦ ⇨ "
4. Horn switch " "

EAU00118

Handlebar switches

EAU00119

Pass switch " ≡O "

Press the switch to operate the passing light.

EAU00121

Dimmer switch

Turn the switch to " ≡O " for the high beam and to " ≡O " for the low beam.

EAU00124

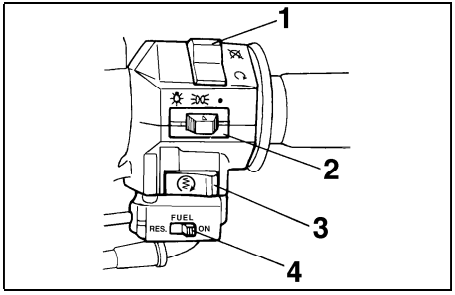
Turn signal switch " ⇦ ⇨ "

This model is equipped with self-cancelling turn signals. To signal a right-hand turn, push the switch to the right. To signal a left-hand turn, push the switch to the left. Once the switch is released it will return to the center position. To cancel the signal, push the switch in after it has returned to the center position. If the switch is not cancelled by hand, it will self-cancel after the motorcycle has travelled at least 150 meters and 15 seconds have passed. The self-cancelling mechanism only operates when the motorcycle is moving. Therefore the signal will not self-cancel while you are stopped at an intersection.

EAU00129

Horn switch " "

Press the switch to sound the horn.



1. Engine stop switch
2. Lights switch
3. Start switch " "
4. Fuel reserve switch "FUEL"

EAU00138

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 " " to start the engine. In case of emergency, turn the switch to " " to stop the engine.

EAU00134

Lights switch

Turning the light switch to " ", turns on the auxiliary light, meter lights and taillight. Turning the light switch to " ", turns the headlight on also.

EAU00143

Start switch " "

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

EC000005

CAUTION:

See starting instructions prior to starting the engine.

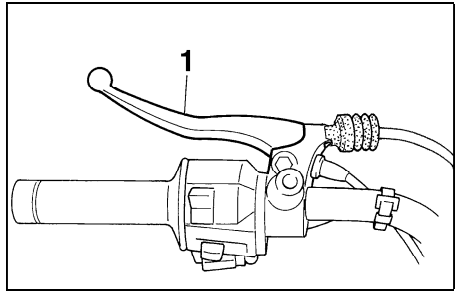
EAU00149

Fuel reserve switch "FUEL"

This switch should usually be kept "ON" while riding. If you run out of fuel while riding, move the switch to "RES" and refuel at the first opportunity. Then move the switch to "ON".

NOTE:

When the switch is turned to reserve "RES", about 2.5 L remain in the fuel tank.

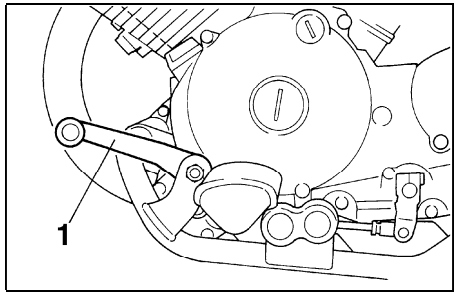


1. Clutch lever

EAU00152

Clutch lever

The clutch lever is located on the left handlebar, and the ignition circuit cut-off system 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 ignition circuit cut-off system.)



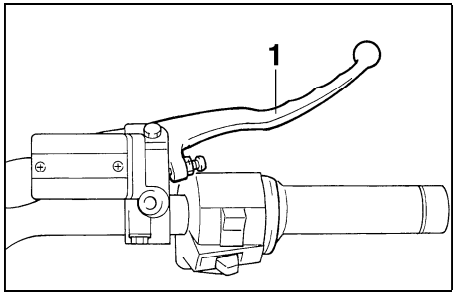
1. Shift pedal

EAU00157

Shift pedal

This motorcycle is equipped with a constant-mesh 5-speed transmission.

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

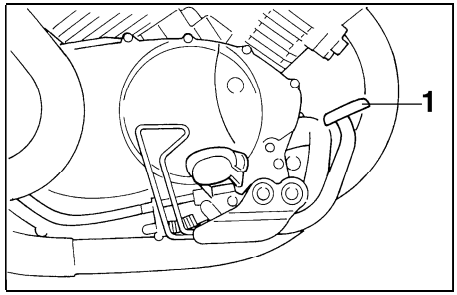


1. Front brake lever

EAU00158

Front brake lever

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

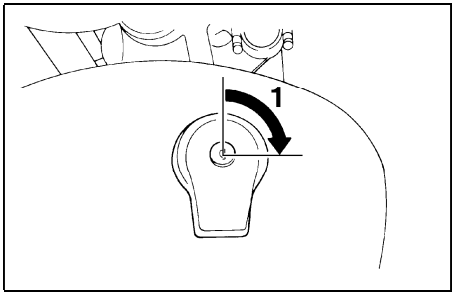


1. Rear brake pedal

EAU00162

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.



1. Open

EAU00167

Fuel tank cap

To open

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

To close

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

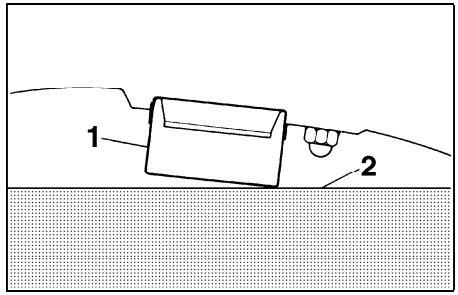
NOTE:

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

EW000023

⚠ WARNING

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



1. Filler tube
2. Fuel level

EAU01183

Fuel

Make sure there is sufficient fuel in the tank. Fill the fuel tank to the bottom of the filler tube as shown in the illustration.

EW000130

⚠ 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 or it may overflow when the fuel heats up later and expands.

EAU00185

CAUTION:

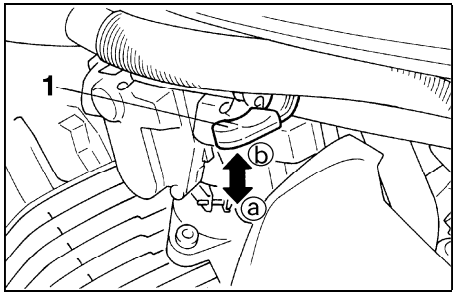
Always wipe off spilled fuel immediately with a dry and clean soft cloth. Fuel may deteriorate painted surfaces or plastic parts.

EAU00191

Recommended fuel:
Regular unleaded gasoline with a research octane number of 91 or higher.
Fuel tank capacity:
Total:
13.5 L
Reserve:
2.5 L

NOTE:

If knocking or pinging occurs, use a different brand of gasoline or higher octane grade.

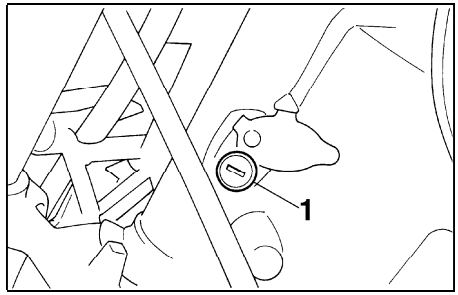


1. Starter (choke) "⎢↘⎢"

EAU02976

Starter (choke) "⎢↘⎢"

Starting a cold engine requires a richer air-fuel mixture. A separate starter circuit supplies this mixture.
Move in direction ⓐ to turn on the starter (choke).
Move in direction ⓑ to turn off the starter (choke).



1. Steering lock

EAU02934

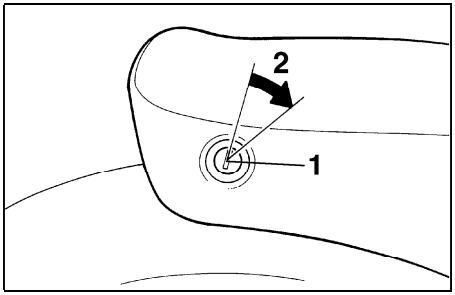
Steering lock

To lock the steering

Turn the handlebars all the way to the right and open the steering lock cover.
Insert the key and turn it 1/8 turn counterclockwise. Then, push the key in while turning the handlebars slightly to the left and turn the key 1/8 turn clockwise.
Check that the steering is locked, remove the key and close the lock cover.

To unlock the steering

Insert the key, push it in and turn it 1/8 turn counterclockwise so that it moves out. Then, release and remove the key.



1. Seat lock
2. Open

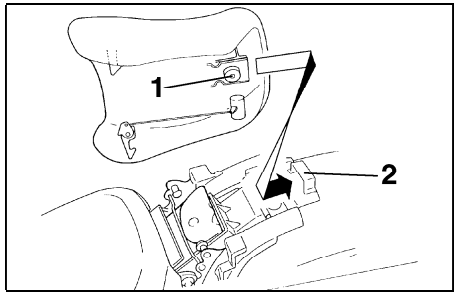
EAU02940

Seats

Passenger seat

To remove

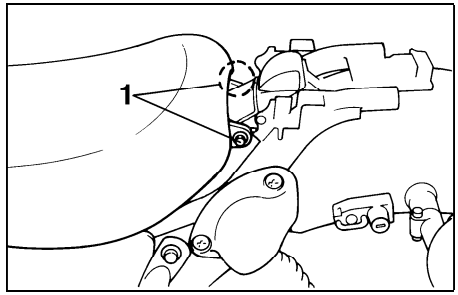
Insert the key in the seat lock and turn it clockwise.



1. Projection
2. Seat holder

To install

Insert the projection on the rear of the seat into the seat holder, and then push down on the seat.

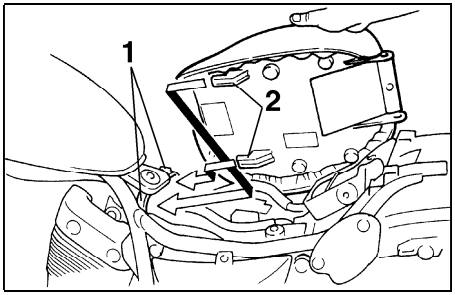


1. Bolt (× 2)

Rider seat

To remove

Remove the passenger seat and then remove the two rider seat bolts.



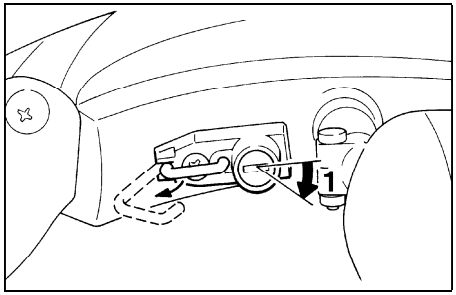
1. Seat holder (× 2)
2. Projection (× 2)

To install

Insert the projections on the front of the seat into the seat holders and tighten the bolts. Then, install the passenger seat.

NOTE:

Make sure that the seats are securely fitted.



1. Open

EAU00260

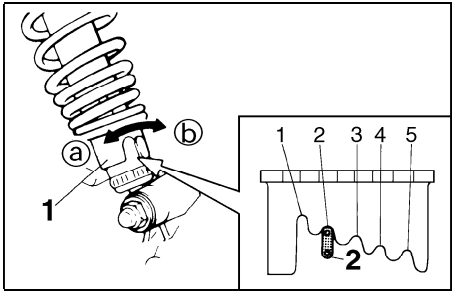
Helmet holder

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.

EW000030

⚠ WARNING

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



1. Spring preload adjusting ring
2. Position indicator

EAU00300

Rear shock absorber adjustment

Each shock absorber is equipped with a spring preload adjusting ring. Adjust spring preload as follows. Turn the adjusting ring in direction ⓐ to increase spring preload and in direction ⓑ to decrease spring preload. Make sure that the appropriate notch in the adjusting ring is aligned with the position indicator on the rear shock absorber.

	Soft	Standard	Hard		
Adjusting position	1	2	3	4	5

EW000040

⚠ WARNING

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

EAU00330

Sidestand

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

EW000044

⚠ 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 the 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 immediately for repair.

EAU00331

Sidestand/clutch switch operation check

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

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

↓

TRANSMISSION IS IN GEAR AND SIDESTAND IS UP.

↓

PULL IN CLUTCH LEVER AND PUSH THE START SWITCH.

↓

ENGINE WILL START.

↓

CLUTCH SWITCH IS OK.

↓

SIDESTAND IS DOWN.

↓

ENGINE WILL STALL.

↓

SIDESTAND SWITCH IS OK.

EW000045

WARNING

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

3

PRE-OPERATION CHECKS

EAU01114

Owners are personally responsible for their vehicle's condition. Your motorcycle's vital functions can start to deteriorate quickly and unexpectedly, even if it remains unused (for instance, if it is exposed to the elements). Any damage, fluid leak or loss of tire pressure could have serious consequences. Therefore, it is very important that, in addition to a thorough visual inspection, you check the following points before each ride.

EAU00340

PRE-OPERATION CHECK LIST

ITEM	CHECKS	PAGE
Front brake	• Check operation, free play, fluid level and vehicle for fluid leakage. • Fill with DOT 4 (or DOT 3) brake fluid if necessary.	6-17 ~ 6-21
Rear brake	• Check operation, condition and free play. • Adjust if necessary.	
Clutch	• Check operation, condition and free play. • Adjust if necessary.	6-17
Throttle grip and housing	• Check for smooth operation. • Lubricate if necessary.	6-13
Engine oil	• Check oil level. • Fill with oil if necessary.	6-7 ~ 6-9
Final gear oil	• Check vehicle for leakage.	6-9 ~ 6-10
Wheels and tires	• Check tire pressure, wear, damage and spoke tightness. • Tighten spokes if necessary.	6-14 ~ 6-16
Control and meter cables	• Check for smooth operation. • Lubricate if necessary.	6-21
Brake and shift pedal shafts	• Check for smooth operation. • Lubricate if necessary.	6-22
Brake and clutch lever pivots	• Check for smooth operation. • Lubricate if necessary.	6-22

ITEM	CHECKS	PAGE
Sidestand pivot	• Check for smooth operation. • Lubricate if necessary.	6-23
Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.	—
Fuel tank	• Check fuel level. • Fill with fuel if necessary.	3-5 ~ 3-6
Lights, signals and switches	• Check for proper operation.	6-27 ~ 6-29
Battery	• Check fluid level. • Fill with distilled water if necessary.	6-25 ~ 6-26

NOTE:

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

⚠ WARNING

If any item in the PRE-OPERATION CHECK is not working properly, have it inspected and repaired before operating the motorcycle.

OPERATION AND IMPORTANT RIDING POINTS

EAU00372

EAU00373

⚠ WARNING

- **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.**
- **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.**

EAU02997

Starting the engine

NOTE:

This motorcycle is equipped with an ignition circuit cut-off system. The engine can be started only under one of the following conditions:

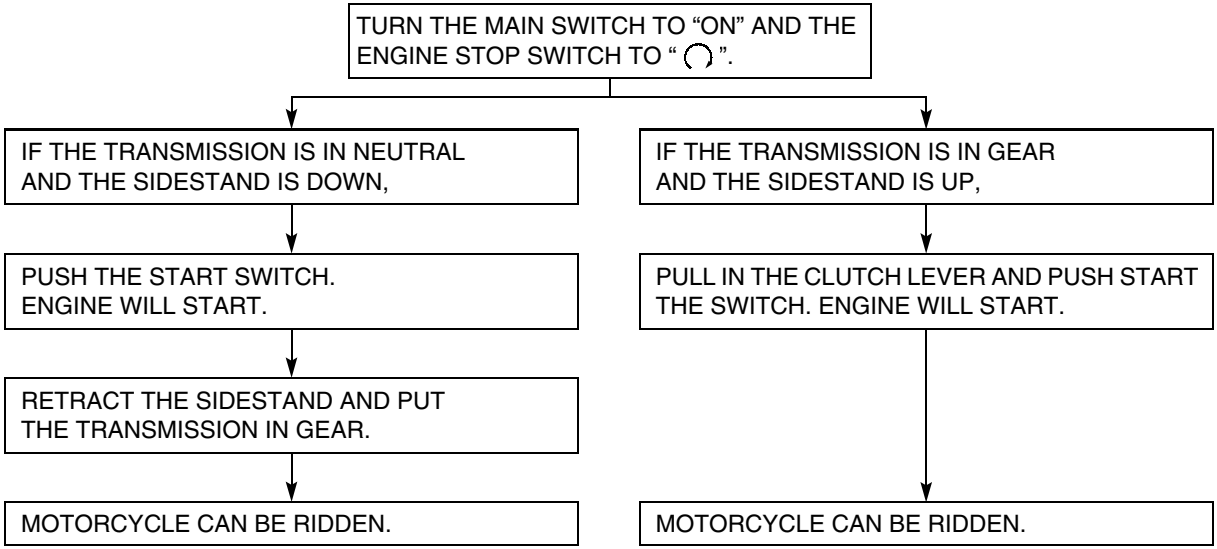
- The transmission is in neutral.
- The sidestand is up, the transmission is in gear and the clutch is disengaged.

The motorcycle must not be ridden when the sidestand is down.

EW000054

⚠ WARNING

Before going through the following steps, check the function of the sidestand switch and clutch switch. (Refer to page 3-10.)


TURN THE MAIN SWITCH TO “ON” AND THE ENGINE STOP SWITCH TO “ ◯ ”.
IF THE TRANSMISSION IS IN NEUTRAL AND THE SIDESTAND IS DOWN,
PUSH THE START SWITCH. ENGINE WILL START.
RETRACT THE SIDESTAND AND PUT THE TRANSMISSION IN GEAR.
MOTORCYCLE CAN BE RIDDEN.
IF THE TRANSMISSION IS IN GEAR AND THE SIDESTAND IS UP,
PULL IN THE CLUTCH LEVER AND PUSH START THE SWITCH. ENGINE WILL START.
MOTORCYCLE CAN BE RIDDEN.

1. Turn the main switch to “ON” and the engine stop switch to “ ◯ ”.
2. Shift the transmission into neutral.

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

3. Turn on the starter (choke) and completely close the throttle grip.
4. Start the engine by pushing the start switch.

NOTE:
If the engine fails to start, release the start 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.

5. After starting the engine, move the starter (choke) to the halfway position.

NOTE:
For maximum engine life, never accelerate hard with a cold engine!

6. After the engine is warm, turn off the starter (choke) completely.

NOTE:
The engine is warm when it responds normally to the throttle with the starter (choke) turned off.

EAU01258

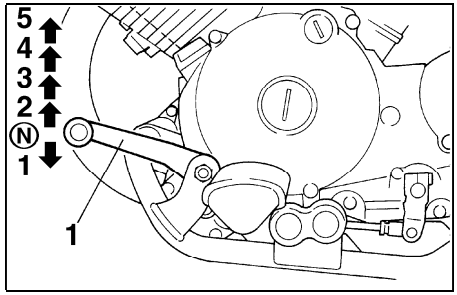
Starting a warm engine

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

EC000046

CAUTION:

See the “Engine break-in” section prior to operating the motorcycle for the first time.



1. Shift pedal
N. Neutral

EAU00423

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.

To shift into neutral, depress the shift pedal repeatedly until it reaches the end of its travel, then raise the pedal slightly.

EC000048

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 using the clutch.**

EAU02941

Recommended shift points (for Switzerland only)

The recommended shift points are shown in the table below.

	Acceleration shift point (km/h)
1st → 2nd	23
2nd → 3rd	36
3rd → 4th	50
4th → 5th	60

NOTE:

When shifting two gears down from 4th to 2nd, bring your motorcycle to a speed of 35 km/h.

5

EAU00424

Tips for reducing fuel consumption

Your motorcycle's fuel consumption depends to a large extent on your riding style. The following tips can help reduce fuel consumption:

- Warm up the engine before riding.
- Turn off the starter (choke) as soon as possible.
- Shift up swiftly and avoid high engine speeds during acceleration.
- Do not double-clutch or rev the engine while shifting down and avoid high engine speeds with no load on the engine.
- Turn off the engine instead of letting it idle for an extended length of time, i.e. in traffic jams, at traffic lights or railroad crossings.

EAU00436

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. 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. 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.

EAU00444

0 ~ 150 km

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.

150 ~ 500 km

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

Avoid cruising speeds in excess of 3/4 throttle.

EC000056

CAUTION:

After 1,000 km of operation, be sure to replace the engine oil, oil filter and final gear oil.

1,000 km and beyond

Avoid prolonged full-throttle operation. Vary speed occasionally.

EC000049

CAUTION:

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

EAU00460

Parking

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

EW000058

⚠ WARNING

The exhaust system is 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.

EAU00462

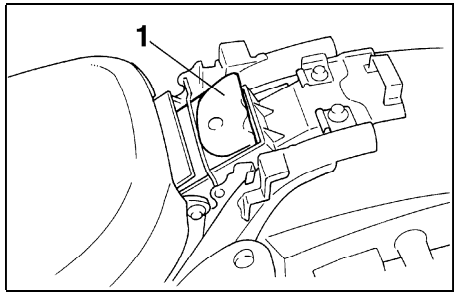
EAU00464

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

EW000060

⚠ WARNING

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



1. Tool kit

EAU00469

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 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.

NOTE:

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

EW000063

⚠ WARNING

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

EAU00473

PERIODIC MAINTENANCE AND LUBRICATION

NO.		ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL (1,000 km)	EVERY	
					6,000 km or 6 months (whichever comes first)	12,000 km or 12 months (whichever comes first)
1	*	**Fuel line**	• Check fuel hoses and vacuum hose for cracks or damage. • Replace if necessary.		√	√
2		**Spark plugs**	• Check condition. • Clean, regap or replace if necessary.	√	√	√
3	*	**Fuel filter**	• Check condition. • Replace if necessary.			√
4	*	**Valves**	• Check valve clearance. • Adjust if necessary.	√	√	√
5		**Air filter**	• Clean or replace if necessary.		√	√
6	*	**Battery**	• Check electrolyte level and specific gravity. • Correct or recharge if necessary. • Make sure that the breather hose is properly routed.		√	√
7		**Clutch**	• Check operation. • Adjust or replace cable.	√	√	√
8	*	**Front brake**	• Check operation, fluid level and vehicle for fluid leakage. (See NOTE on page 6-4.) • Correct accordingly. • Replace brake pads if necessary.	√	√	√
9	*	**Rear brake**	• Check operation. • Adjust brake pedal free play and replace brake shoes if necessary.	√	√	√
10	*	**Wheels**	• Check balance, runout, spoke tightness and for damage. • Tighten spokes and rebalance, replace if necessary.		√	√

NO.		ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL (1,000 km)	EVERY	
					6,000 km or 6 months (whichever comes first)	12,000 km or 12 months (whichever comes first)
11	*	**Tires**	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		√	√
12	*	**Wheel bearings**	• Check bearing for looseness or damage. • Replace if necessary.		√	√
13	*	**Swingarm**	• Check swingarm pivoting point for play. • Correct if necessary. • Lubricate with molybdenum disulfide grease.		√	√
14	*	**Steering bearings**	• Check bearing play and steering for roughness. • Correct accordingly. • Lubricate with lithium soap base grease every 24,000 km or 24 months (whichever comes first).		√	√
15	*	**Chassis fasteners**	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.		√	√
16		**Sidestand**	• Check operation. • Lubricate and repair if necessary.		√	√
17	*	**Sidestand switch**	• Check operation. • Replace if necessary.	√	√	√
18	*	**Front fork**	• Check operation and for oil leakage. • Correct accordingly.		√	√
19	*	**Rear shock absorber assemblies**	• Check operation and shock absorbers for oil leakage. • Replace shock absorber assembly if necessary.		√	√
20	*	**Carburetors**	• Check engine idling speed, synchronization and starter operation. • Adjust if necessary.	√	√	√
21		**Engine oil**	• Check oil level and vehicle for oil leakage. • Correct if necessary. • Change. (Warm engine before draining.)	√	√	√

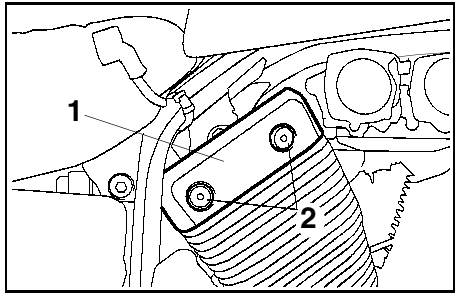
NO.		ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL (1,000 km)	EVERY	
					6,000 km or 6 months (whichever comes first)	12,000 km or 12 months (whichever comes first)
22		**Engine oil filter element**	• Replace.	√		√
23		**Final gear oil**	• Check oil level and vehicle for oil leakage. • Change oil at initial 1,000 km and thereafter every 24,000 km or 24 months (whichever comes first).	√	√	√

* Since these items require special tools, data and technical skills, they should be serviced by a Yamaha dealer.

EAU02970

NOTE:

- The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
- Hydraulic brake system
  - When disassembling the master cylinder or caliper, always replace the brake fluid. Check the brake fluid level regularly and fill as required.
  - Replace the oil seals on the inner parts of the master cylinder and caliper every two years.
  - Replace the brake hoses every four years or if cracked or damaged.



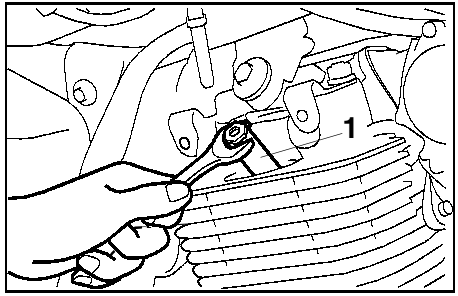
1. Cylinder head cover
2. Screw (× 2)

EAU01486

Spark plugs

Removal

1. Remove the rear right and front left cylinder head covers by removing the screws.
2. Remove the spark plug caps.



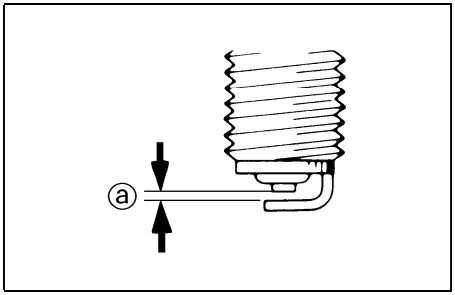
1. Spark plug wrench

3. Use the spark plug wrench in the tool kit to remove the spark plugs as shown.

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 insulator around the center electrode. The ideal color at this point is a medium-to-light tan color for a motorcycle that is being ridden normally. If one spark plug shows a distinctly different color, there could be something wrong with the engine. Do not attempt to diagnose such problems yourself. Instead, take the motorcycle to a Yamaha dealer. You should periodically remove and inspect the spark 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.

Specified spark plug:
For CH:
BPR7ES (NGK) or
W22EPR-U (DENSO)
Except for CH:
BPR6ES (NGK) or
W20EPR-U (DENSO)



a. Spark plug gap

Installation

1. Measure the electrode gap with a wire thickness gauge and, if necessary, adjust the gap to specification.

Spark plug gap:
0.7 ~ 0.8 mm

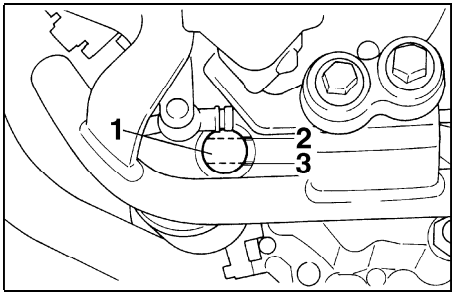
2. Clean the gasket surface. Wipe off any grime from the threads.
3. Install the spark plug and tighten it to the specified torque.

Tightening torque:
Spark plug:
20 Nm (2.0 m·kg)

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 tightened to the specified torque as soon as possible.

4. Install the spark plug caps, the cylinder head covers and the screws.



1. Oil level window
2. Maximum level mark
3. Minimum level mark

EAU02942

Engine oil

Oil level inspection

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

NOTE:

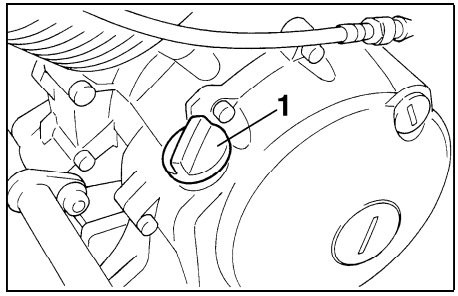
Be sure the motorcycle is positioned straight up when checking the oil level. A slight tilt toward the side can result in false readings.

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

NOTE:

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

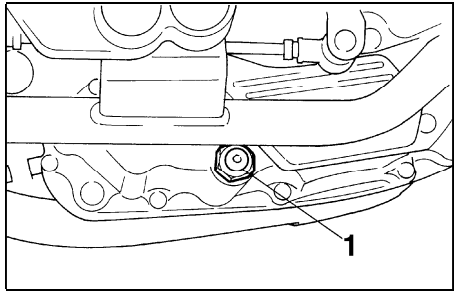
3. The oil level should be between the maximum and minimum marks. If the level is low, fill the engine with sufficient oil to the specified level.



1. Engine oil filler cap

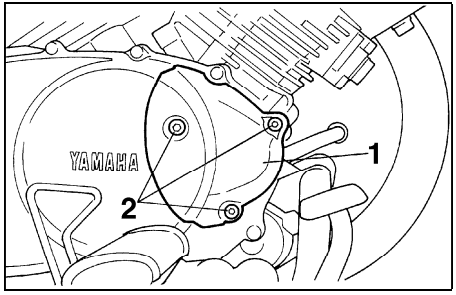
Engine oil and oil filter element replacement

1. Warm up the engine for a few minutes.
2. Stop the engine. Place an oil pan under the engine and remove the oil filler cap.



1. Engine oil drain bolt

3. Remove the drain bolt and drain the oil.



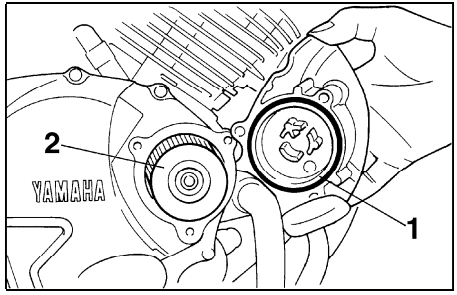
1. Oil filter cover
2. Bolt (× 3)

4. Remove the oil filter bolts, oil filter and O-ring.
5. Install the drain bolt and tighten it to the specified torque.

Tightening torque:
Drain bolt:
43 Nm (4.3 m·kg)

6. Install the new oil filter, new O-ring and the filter cover. Then tighten the oil filter bolts to the specified torque.

Tightening torque:
Oil filter bolts:
10 Nm (1.0 m·kg)



1. O-ring
2. Oil filter element

NOTE:
Make sure the O-ring is seated properly.

7. Fill the engine with oil. Install the oil filler cap and tighten it.

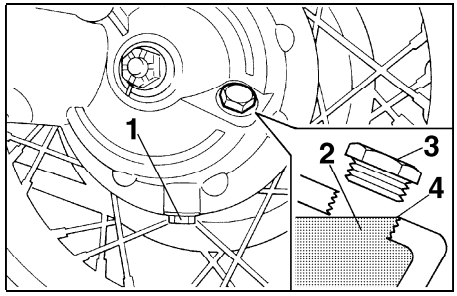
Recommended oil:
See page 8-1.
Oil quantity:
Total amount:
3.2 L
Periodic oil change:
2.6 L
With oil filter replacement:
2.8 L

EC000066

CAUTION:

- **Do not put in any chemical additives. Engine oil also lubricates the clutch and additives could cause clutch slippage.**
- **Be sure no foreign material enters the crankcase.**

8. Start the engine and warm it up for a few minutes. While warming up, check for oil leakage. If oil leakage is found, stop the engine immediately and check for the cause.



1. Final gear oil drain bolt
2. Final gear oil
3. Final gear oil filler bolt
4. Correct level

EAU02943

Final gear oil

EW000066

WARNING

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

Oil level inspection

1. Place the motorcycle on a level place and hold it in an upright position. The engine should be cool at ambient temperature.
2. Remove the oil filler bolt and check the oil level. The oil level should be at the brim of the filler hole. Add the recommended oil if necessary.

Oil replacement

1. Place an oil pan under the final gear case.
2. Remove the oil filler bolt and drain bolt to drain the oil.
3. Install and tighten the drain bolt to the specified torque.

Tightening torque:
Drain bolt:
23 Nm (2.3 m·kg)

4. Fill the gear case to the brim of the filler hole with the recommended oil.

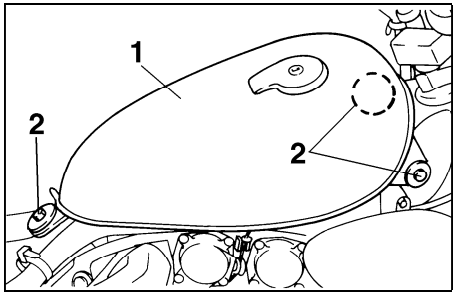
Final gear case capacity:
0.19 L
Recommended oil:
SAE 80 API GL-4 Hypoid gear oil
If desired, an SAE 80W90 hypoid gear oil may be used for all conditions.

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

5. Install and tighten the filler bolt to the specified torque.

Tightening torque:
Oil filler bolt:
23 Nm (2.3 m·kg)

6. After replacing the final gear oil, be sure to check for oil leakage.



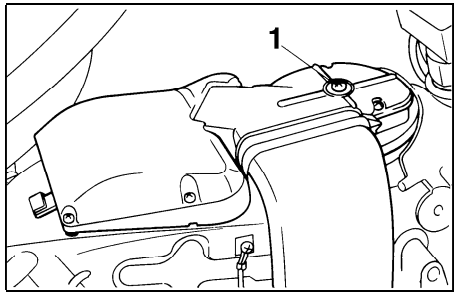
1. Fuel tank
2. Bolt (× 3)

EAU02998

Air filter

The air filter 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 seats. (See page 3-7 for seat removal and installation procedures.)
2. Remove the fuel tank bolts.



1. Screw

3. Lift the front of the fuel tank upward and position it away from the air filter. (Do not remove the fuel tank.)

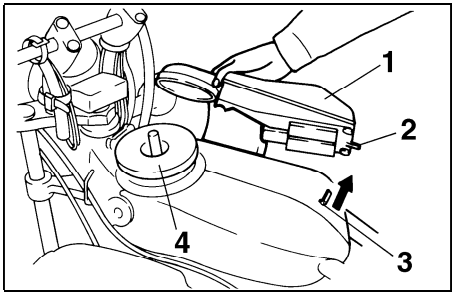
EW000071

⚠ WARNING

- **Support the fuel tank carefully during this procedure.**
- **Do not tilt the fuel tank too much or pull it too hard because the fuel hose connections may become loose causing fuel leakage.**

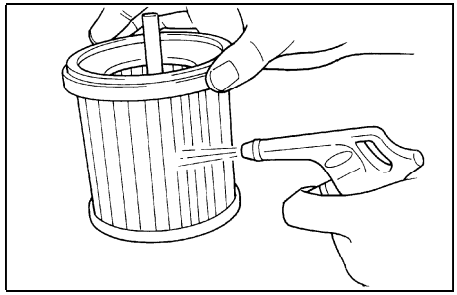
4. Remove the air filter case cover screw.

6



1. Air filter case cover
2. Tab
3. Holder
4. Air filter

5. Slide the air filter case cover so as to unhook the tab on the rear of the cover from the holder on the frame. Then lift the air filter case cover upward without removing it.



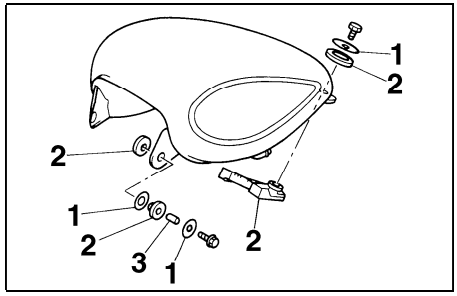
6. Pull out the air filter element and tap it lightly to remove most of the dust and dirt. Blow out the remaining dirt with compressed air as shown. If the air filter element is damaged, replace it.

7. Reassemble by reversing the removal procedure.

EC000082

CAUTION:

- **Make sure the air filter is properly seated in the air filter case.**
- **The engine should never be run without the air filter installed. Excessive piston and/or cylinder wear may result.**



1. Washer
2. Rubber damper
3. Spacer

EW000131

⚠ WARNING

Make sure that the fuel hoses and vacuum hose are properly connected, in place and not pinched. If a hose is damaged, be sure to replace it.

EC000086

CAUTION:

When reinstalling the fuel tank holding bolts, make sure that the washers, damper rubbers and spacers are positioned properly.

EAU00630

Carburetor adjustment

The carburetors are important parts of the engine and require very sophisticated adjustment. Most adjustments should be left to a Yamaha dealer who has the professional knowledge and experience to do so. However, the idle speed may be adjusted by the owner as part of routine maintenance.

EC000095

CAUTION:

The carburetors were set at the Yamaha factory after many tests. If they are changed, poor engine performance and damage may result.

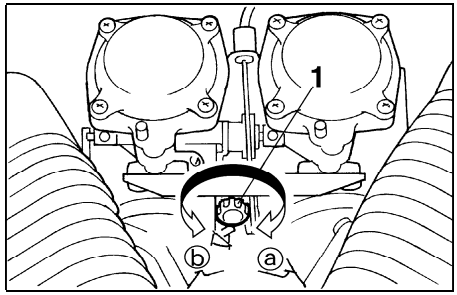
EAU01168

Idle speed adjustment

NOTE:

A diagnostic tachometer must be used for this procedure.

1. Attach the tachometer. Start the engine and warm it up for a few 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.



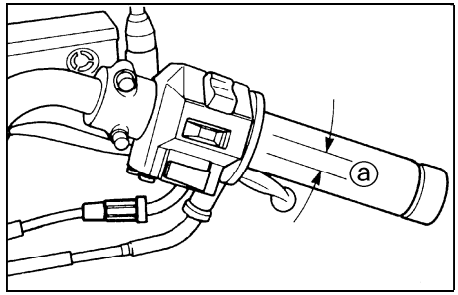
1. Throttle stop screw

2. Set the idle to the specified engine speed by adjusting the throttle stop screw. Turn the screw in direction ⓐ to increase engine speed and in direction ⓑ to decrease engine speed.

Standard idle speed:
1,150 ~ 1,250 r/min

NOTE:

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



a. Free play

EAU00635

Throttle cable free play inspection

There should be a free play of 3 ~ 5 mm at the throttle grip. If the free play is incorrect, ask a Yamaha dealer to make this adjustment.

EAU00637

Valve clearance adjustment

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

EAU00647

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.

EW000082

⚠ WARNING

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

Maximum load*	220 kg (except for CH, A) 218 kg (for CH, A)	
Cold tire pressure	Front	Rear
Up to 90 kg	200 kPa (2.00 kg/cm^2, 2.00 bar)	225 kPa (2.25 kg/cm^2, 2.25 bar)
90 kg load ~ Maximum load*	200 kPa (2.00 kg/cm^2, 2.00 bar)	250 kPa (2.50 kg/cm^2, 2.50 bar)

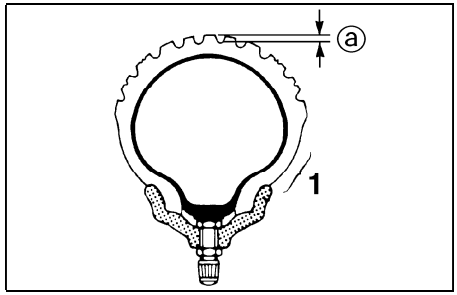
* Load is the total weight of cargo, rider, passenger and accessories.

6

EW000083

⚠ 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.



a. Tread depth
1. Side wall

Tire inspection

Always check the tires before operating the motorcycle. If center tread depth reaches the limit as shown, 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.

FRONT

Manufacturer	Size	Type
Bridgestone	3.00-19 49S	L303A
Dunlop	3.00-19 49S	F14G

REAR

Manufacturer	Size	Type
Bridgestone	140/90-15 M/C 70S	G508
Dunlop	140/90-15 M/C 70S	K425

Minimum tire tread depth (front and rear)	1.6 mm

NOTE:

These limits may be different by regulation from country to country. If so, conform to the limits specified by the regulations of your own country.

EAU00681

⚠ WARNING

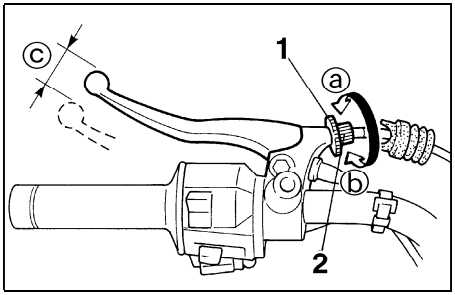
- **Operating the motorcycle with excessively worn tires decrease riding stability and can lead to loss of control. Have excessively worn tires replaced by a Yamaha dealer immediately. Brakes, tires, and related wheel parts replacement should be left to a Yamaha Service Technician.**
- **Patching a punctured 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.**

EAU00685

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.
- Ride at moderate speeds after changing a tire since the tire surface must first be broken in for it to develop its optimal characteristics.



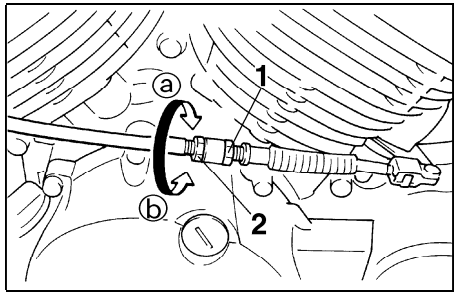
1. Locknut
2. Adjusting bolt
c. Free play

EAU00694

Clutch lever free play adjustment

The clutch lever free play should be adjusted to 10 ~ 15 mm.

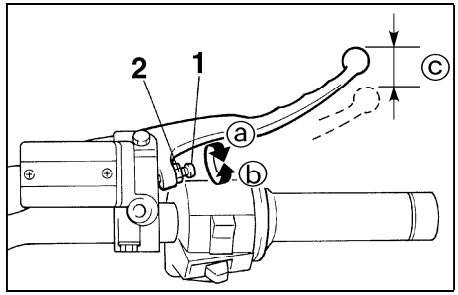
1. Loosen the locknut at the clutch lever.
2. Turn the adjusting bolt at the clutch lever in direction ⓐ to increase free play or in direction ⓑ to decrease free play.
3. Tighten the locknut at the clutch lever.



1. Locknut
2. Adjusting nut

If the specified free play cannot be obtained, proceed with the following steps.

4. Loosen the locknut at the clutch lever.
5. Turn the adjusting bolt at the clutch lever in direction ⓐ to loosen the cable.
6. Loosen the locknut at the crankcase side.
7. Turn the adjusting nut at the crankcase in direction ⓐ to increase free play or in direction ⓑ to decrease free play.
8. Tighten the locknut at the crankcase and the clutch lever.



1. Adjusting bolt
2. Locknut
c. Free play

EAU00696

Front brake lever free play adjustment

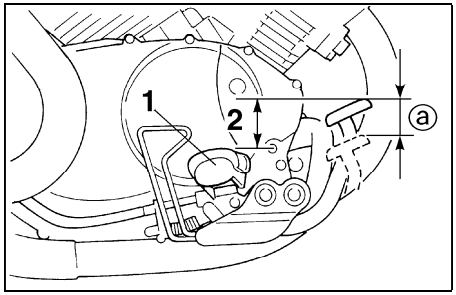
The free play at the front brake lever should be 2 ~ 5 mm.

1. Loosen the locknut.
2. Turn the adjusting bolt in direction ⓐ to increase free play or in direction ⓑ to decrease free play.
3. After adjusting, tighten the locknut.

EW000099

⚠ WARNING

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



1. Footrest
2. Pedal height

a. Free play

EAU00711

Rear brake pedal height and free play adjustment

EW000104

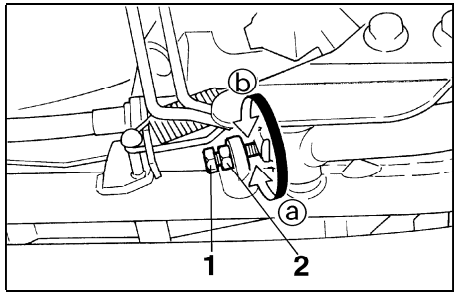
⚠ WARNING

It is advisable to have a Yamaha dealer make this adjustment.

The brake pedal height should be adjusted before adjusting the brake pedal free play.

Pedal height

The brake pedal should be positioned approximately 38 mm above the top of the footrest.



1. Adjusting bolt
2. Locknut

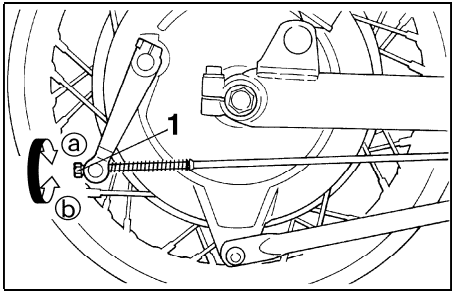
1. Loosen the locknut.
2. Turn the adjusting bolt in direction ⓐ to raise pedal height or in direction ⓑ to lower pedal height.
3. Tighten the locknut.

EW000105

⚠ WARNING

After adjusting the pedal height adjust brake pedal free play.

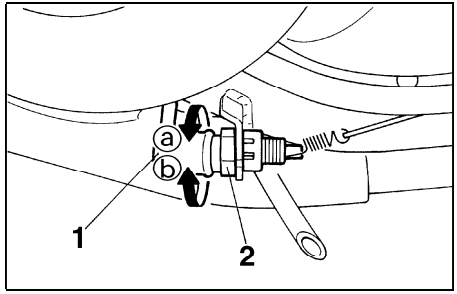
6



1. Adjusting nut

Free play

The brake pedal free play should be adjusted to 20 ~ 30 mm at the brake pedal end. Turn the adjusting nut on the brake rod in direction ⓐ to increase free play or in direction ⓑ to decrease free play.

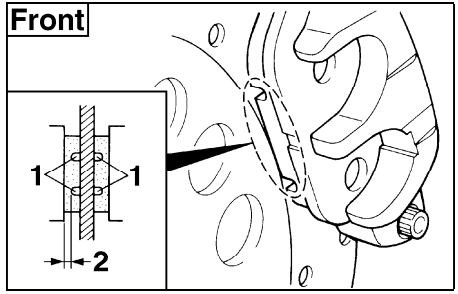


1. Brake light switch
2. Adjusting nut

EAU00713

Brake light switch adjustment

The rear brake light switch is activated by the brake pedal and is properly adjusted when the brake light comes on just before braking takes effect. To adjust the rear brake light switch, hold the switch body so it does not rotate while turning the adjusting nut. Turn the adjusting nut in direction ⓐ to make the brake light come on earlier. Turn the adjusting nut in direction ⓑ to make the brake light come on later.



1. Wear indicator groove (× 2)
2. Wear limit

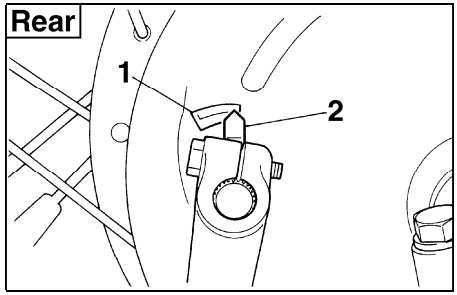
EAU00720

Checking the front brake pads and rear brake shoes

EAU01119

Front brake

Wear indicator grooves are provided on each brake pad. These indicators allow checking of brake pad wear without disassembling the brake. Inspect the grooves. If they have almost disappeared, ask a Yamaha dealer to replace the pads.



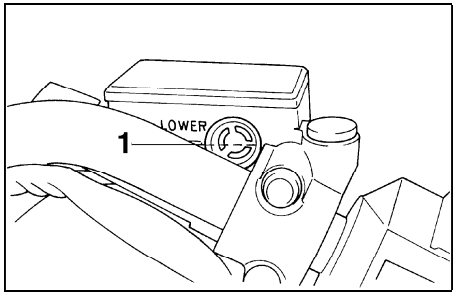
1. Wear limit
2. Wear indicator

EAU00727

Rear brake

Apply the brake and inspect the wear indicator.

If the indicator reaches the wear limit line, ask a Yamaha dealer to replace the shoes.



1. Minimum level mark

EAU00732

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 minimum level and fill when necessary.

Observe these precautions:

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

Recommended brake fluid: DOT 4

NOTE:

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

- 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.

- Brake fluid may deteriorate painted surfaces or plastic parts. Always clean up spilled fluid immediately.
- Have a Yamaha dealer check the cause if the brake fluid level goes down.

EAU00742

Brake fluid replacement

The brake fluid should be replaced only by trained Yamaha service personnel. Have the Yamaha dealer replace the following components during periodic maintenance or when they are damaged or leaking:

- oil seals (every two years)
- brake hoses (every four years)

EAU02962

Cable inspection and lubrication

EW000112

⚠ WARNING

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

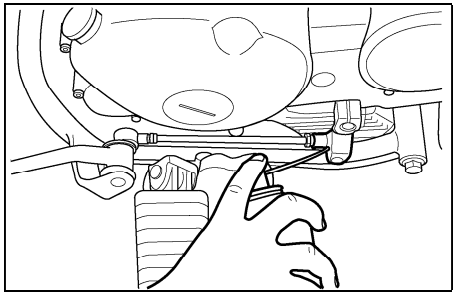
Lubricate the cables and cable ends. If a cable does not operate smoothly, ask a Yamaha dealer to replace it.

Recommended lubricant:
Engine oil

EAU00773

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.

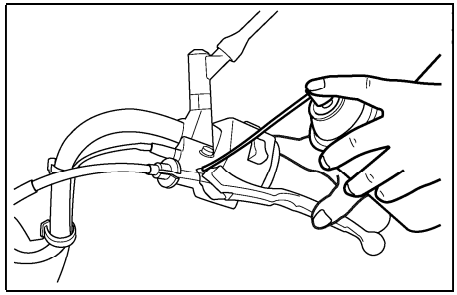


EAU02984

Brake and shift pedal lubrication

Lubricate the pivoting parts.

Recommended lubricant:
Engine oil

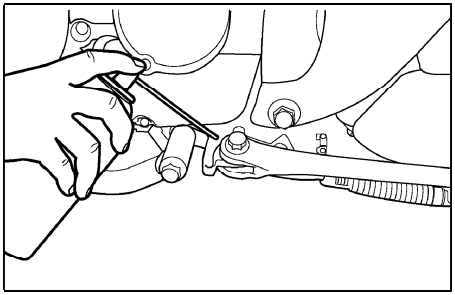


EAU02985

Brake and clutch lever lubrication

Lubricate the pivoting parts.

Recommended lubricant:
Engine oil



EAU02986

Sidestand lubrication

Lubricate the sidestand pivoting point and metal-to-metal contact surfaces. Check that the sidestand moves up and down smoothly.

Recommended lubricant:
Engine oil

EW000113

⚠ WARNING

If the sidestand does not move smoothly, consult a Yamaha dealer.

EAU00790

Rear suspension lubrication

Lubricate the pivoting parts.

Recommended lubricant:
Molybdenum disulfide grease

EAU02939

Front fork inspection

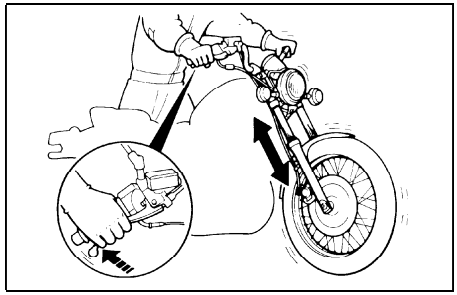
Visual check

EW000115

⚠ WARNING

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

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



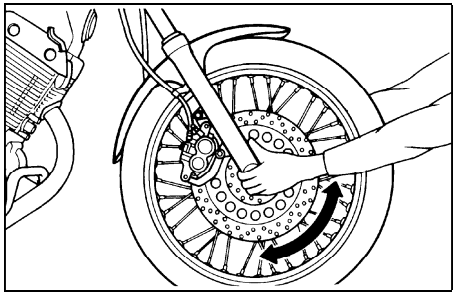
Operation check

1. Place the motorcycle on a level place.
2. Hold the motorcycle in an upright position and apply the front brake.
3. Push down hard on the handlebars several times and check if the fork rebounds smoothly.

EC000098

CAUTION:

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



EAU00794

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 to inspect and adjust the steering. Inspection is easier if the front wheel is removed.

EW000115

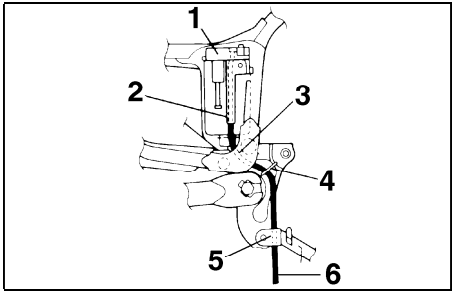
⚠ WARNING

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

EAU01144

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 inspect the wheel bearings.



1. Battery
2. Pass through the battery case
3. Pass through the frame
4. Pass through the cable guide
5. Pass through the engine bracket
6. Battery breather hose

EAU00798

Battery

Check the level of the battery electrolyte and make sure that the terminals are tight. Fill with distilled water if the electrolyte level is low. If the motorcycle is equipped with optional electrical accessories, the battery tends to discharge more quickly, so be sure to recharge it periodically.

EC000099

CAUTION:

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

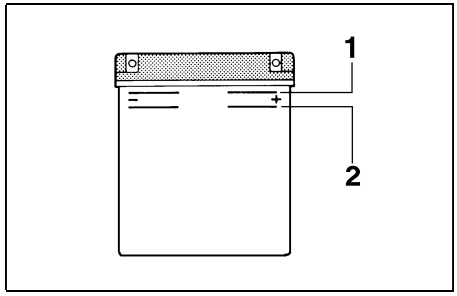
EW000116

⚠ 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.



1. Maximum level mark
2. Minimum level mark

Replenishing the battery fluid

A poorly maintained battery will corrode and discharge quickly. The battery fluid should be checked at least once a month. The level should be between the minimum level and maximum level marks. Use only distilled water if refilling is necessary.

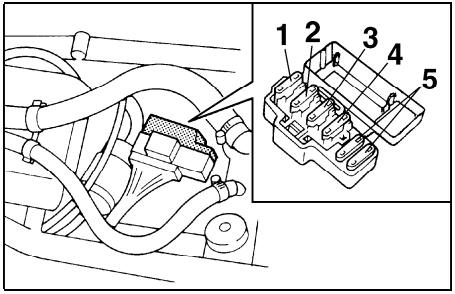
EC000100

CAUTION:

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

Battery storage

- When the motorcycle will not be used for a month or longer, remove the battery, fully charge it and store it in a cool, dry place. Completely recharge the battery before reinstalling.
- If the battery will be stored for longer than two months, check the specific gravity of the fluid at least once a month and recharge the battery when it is too low.
- Always make sure the connections are correct when putting the battery back in the motorcycle. Make sure the breather hose is properly connected and is not damaged or obstructed.



1. Main fuse
2. Headlight fuse
3. Signaling system fuse
4. Ignition fuse
5. Spare fuse (× 2)

EAU00818

Fuse replacement

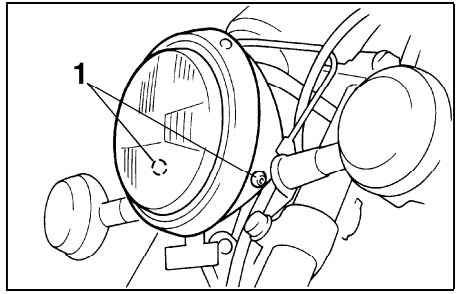
The fuse box is located under the rider seat. If any fuse is blown, turn off the main switch and the switch of the circuit in question. Install a new fuse of the specified amperage. Turn on the switches and check if the electrical device operates. If the fuse immediately blows again, consult a Yamaha dealer.

EC000103

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 fuses:	
Main fuse:	30 A
Headlight fuse:	15 A
Signaling system fuse:	15 A
Ignition fuse:	15 A



1. Screw (× 2)

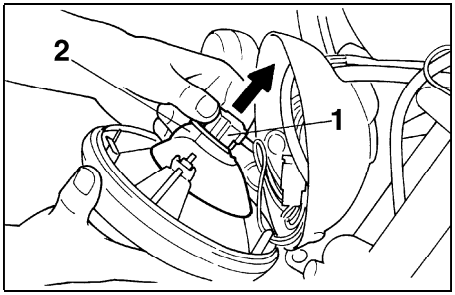
EAU01524

Headlight bulb replacement

This motorcycle is equipped with a quartz bulb headlight.

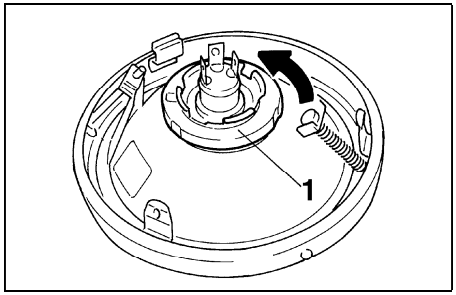
If the headlight bulb burns out, replace the bulb as follows:

1. Remove the headlight unit screws.



1. Connector
2. Bulb cover

2. Remove the connector, the headlight unit and then the bulb cover.



1. Bulb holder

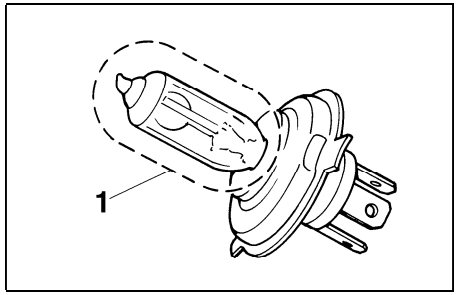
3. Turn the bulb holder counterclockwise to remove it and remove the defective bulb.

EW000119

⚠ WARNING

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

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



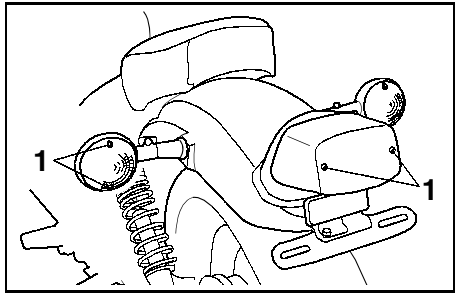
1. Don't touch

EC000105

CAUTION:

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

5. Install the bulb cover, connector and headlight unit.
   Ask a Yamaha dealer to adjust the headlight beam if necessary.

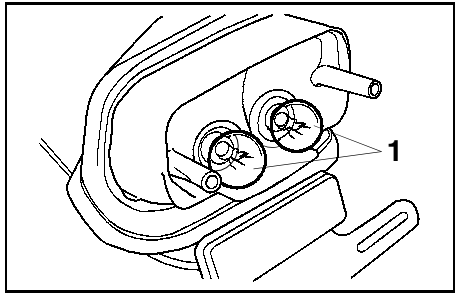


1. Screw (× 2)

EAU00855

Turn signal and taillight bulb replacement

1. Remove the screws and the lense.



1. Bulb (× 2)

2. Push the bulb inward and turn it counterclockwise.
3. Place a new bulb in the socket. Push the bulb inward and turn it clockwise until it engages into the socket.
4. Install the lense and the screws.

EC000108

CAUTION:

Do not over-tighten the screws as the lense may break.

EAU01008

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.

EAU01562

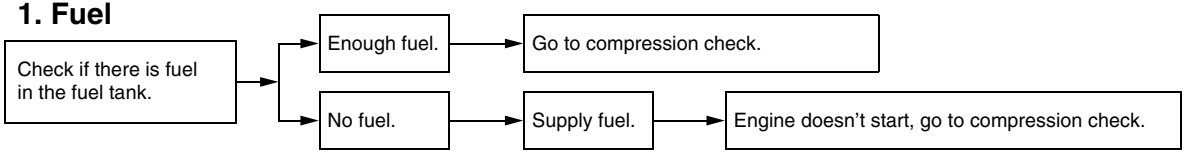
Troubleshooting chart

EW000125

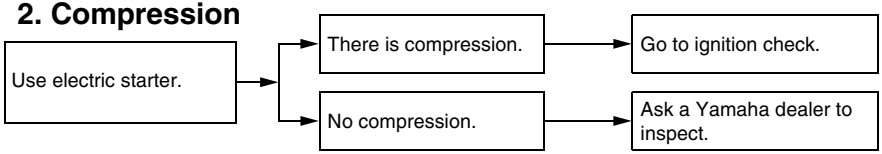
WARNING

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

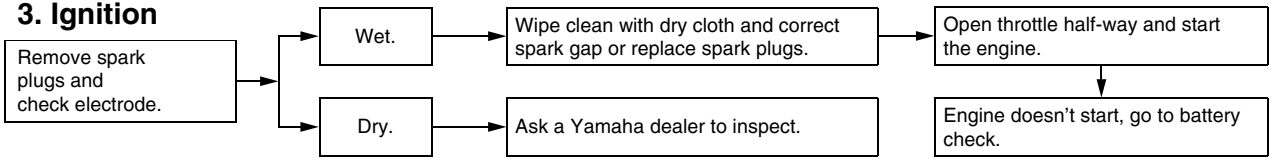
1. Fuel



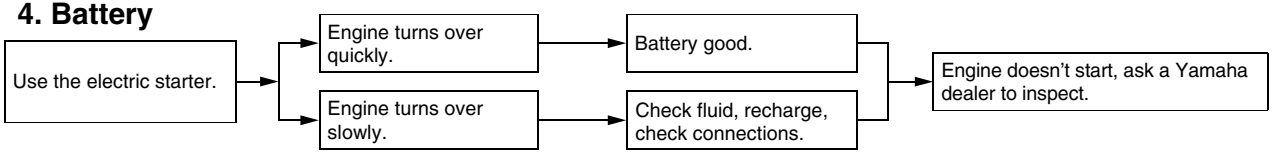
2. Compression



3. Ignition



4. Battery



6

MOTORCYCLE CARE AND STORAGE

MOTORCYCLE CARE AND STORAGE

EAU01521

Care

The exposure of its technology makes a motorcycle charming but also vulnerable. Although high-quality components are used, they are not all rust-resistant. While a rusty exhaust pipe may remain unnoticed on a car, it does look unattractive on a motorcycle. Frequent and proper care, however, will keep your motorcycle looking good, extend its life and maintain its performance. Moreover, the warranty states that the vehicle must be properly taken care of. For all these reasons, it is recommended that you observe the following cleaning and storing precautions.

7

Before cleaning

1. Cover up the muffler outlets with plastic bags.
2. Make sure that all caps and covers as well as all electrical couplers and connectors, including the spark plug caps, are tightly installed.
3. Remove extremely stubborn dirt, like oil burnt onto the crankcase, with a degreasing agent and a brush, but never apply such products onto seals, gaskets and wheel axles. Always rinse the dirt and degreaser off with water.

Cleaning

After normal use

Remove dirt with warm water, a neutral detergent and a soft clean sponge, then rinse with plenty of clean water. Use a tooth or bottle brush for hard-to-reach parts. Tougher dirt and insects will come off more easily if the area is covered with a wet cloth for a few minutes before cleaning.

ECA00010

CAUTION:

- **Avoid using strong acidic wheel cleaners, especially on spoked wheels. If you do use such products for hard-to-remove dirt, do not leave it on any longer than instructed, then thoroughly rinse it off with water, immediately dry the area and apply a corrosion protection spray.**
- **Improper cleaning can damage windshields, cowlings, panels and other plastic parts. Use only a soft, clean cloth or sponge with mild detergent and water to clean plastic.**
- **Do not use any harsh chemical products on plastic parts. Be sure to avoid using cloths or sponges which have been in contact with strong or abrasive cleaning products, solvent or thinner, fuel (gasoline), rust removers or inhibitors, brake fluid, antifreeze or electrolyte.**
- **Do not use high-pressure washers or steam-jet cleaners since they cause water seepage and deterioration in the following areas: seals (of wheel bearings, swingarm bearings, forks and brakes), electric components (couplers, connectors, instruments, switches and lights), breather hoses and vents.**
- **For motorcycles equipped with a windshield: Do not use strong cleaners or hard sponges as they will cause dulling or scratching. Some cleaning compounds for plastic may leave scratches on the windshield. Test the product on a small hidden part of the windshield to make sure they do not leave any marks. If the windshield is scratched, use a quality plastic polishing compound after washing.**

After riding in the rain, near the sea or on salt-sprayed roads

Since sea salt or salt sprayed on the roads in the winter are extremely corrosive in combination with water, carry out the following steps after each ride in the rain, near the sea or on salt-sprayed roads. (Salt sprayed in the winter may remain on the roads well into spring.)

1. Clean your motorcycle with cold water and soap after the engine has cooled down.

ECA00012

CAUTION:

Do not use warm water since it increases the corrosive action of the salt.

2. Be sure to apply a corrosion protection spray on all (even chrome- and nickel-plated) metal surfaces to prevent corrosion.

After cleaning

1. Dry the motorcycle with a chamois or an absorbing cloth.
2. Use a chrome polish to shine chrome, aluminum and stainless-steel parts, including the exhaust system. (Even the thermally induced discoloring of stainless-steel exhaust systems can be removed through polishing.)
3. To prevent corrosion, it is recommended to apply a corrosion protection spray on all (even chrome- and nickel-plated) metal surfaces.
4. Use spray oil as a universal cleaner to remove any remaining dirt.
5. Touch up minor paint damage caused by stones, etc.
6. Wax all painted surfaces.
7. Let the motorcycle dry completely before storing it or covering it.

EWA00001

⚠ WARNING

Make sure that there is no oil or wax on the brakes and tires. If necessary, clean the brake discs and linings with a regular brake disc cleaner or acetone, and wash the tires with warm water and mild soap. Then, carefully test the motorcycle for its braking performance and cornering behavior.

ECA00013

CAUTION:

- **Apply spray oil and wax sparingly and wipe off any excess.**
- **Never apply oil or wax on rubber and plastic parts, but treat them with a suitable care product.**
- **Avoid using abrasive polishing compounds as they wear away the paint.**

NOTE:

Consult a Yamaha dealer for advice on what products to use.

Storage

Short-term

Always store your motorcycle in a cool, dry place and, if necessary, protect it against dust with a porous cover.

ECA00014

CAUTION:

- **Storing the motorcycle in a poorly ventilated room or covering it with a tarp while it is still wet will allow water and humidity to seep in and cause rust.**
- **To prevent corrosion, avoid damp cellars, stables (because of the presence of ammonia) and areas where strong chemicals are stored.**

Long-term

Before storing your motorcycle for several months:

1. Follow all the instructions in the “Care” section of this chapter.
2. Drain the carburetor float chambers by loosening the drain bolts; this will prevent fuel deposits from building up. Pour the drained fuel into the fuel tank.
3. Only for motorcycles equipped with a fuel cock which has an “OFF” position: Turn the fuel cock to “OFF”.
4. Fill up the fuel tank and add fuel stabilizer (if available) to prevent the fuel tank from rusting and the fuel from deteriorating.
5. Perform the following steps to protect the cylinders, piston rings, etc. from corrosion.

a. Remove the spark plug caps and spark plugs.
b. Pour a teaspoonful of engine oil into each spark plug bore.
c. Install the spark plug caps onto the spark plugs and place the spark plugs on the cylinder head so that the electrodes are grounded. (This will limit sparking during the next step.)
d. Turn the engine over several times with the starter. (This will coat the cylinder walls with oil.)
e. Remove the spark plug caps from the spark plugs, install the spark plugs and then the spark plug caps.

EWA00003

⚠ WARNING

When turning the engine over, be sure to ground the spark plug electrodes to prevent damage or injury from sparking.

6. Lubricate all control cables and the pivoting points of all levers and pedals as well as of the sidestand/centerstand.
7. Check and, if necessary, correct the tire air pressure, then raise the motorcycle so that both of its wheels are off the ground. Alternatively, turn the wheels a little every month in order to prevent the tires from becoming degraded in one spot.
8. Cover up the muffler outlets with plastic bags to prevent moisture from entering.
9. Remove the battery and fully charge it. Store it in a cool, dry place and recharge it once a month. Do not store the battery in an excessively cold or warm place (less than 0˚C or more than 30˚C). For more information, see “Battery storage” in the chapter “PERIODIC MAINTENANCE AND MINOR REPAIRS”.

NOTE:

Make any necessary repairs before storing the motorcycle.

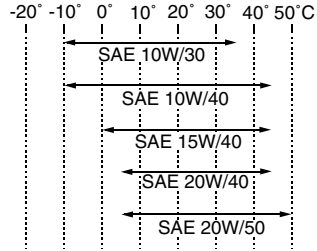
EAU01038

Specifications

Model	**XV535**
Dimensions	
Overall length	2,225 mm (except for CH, S, SF, N)
	2,250 mm (for CH, S, SF, N)
Overall width	780 mm
Overall height	1,120 mm
Seat hight	720 mm
Wheelbase	1,520 mm
Ground clearance	160 mm
Minimum turning radius	2,900 mm
Basic weight (with oil and full fuel tank)	195 kg (except for CH, A)
	197 kg (for CH, A)
Engine	
Engine type	Air-cooled 4-stroke, SOHC
Cylinder arrangement	V type 2-cylinder
Displacement	535 cm^3
Bore × Stroke	76.0 × 59.0 mm
Compression ratio	9:1
Starting system	Electric starter
Lubrication system	Wet sump

Engine oil

Type



Recommended engine oil classification	API Service SE, SF, SG type or higher

CAUTION:

Be sure to use motor oils that do not contain anti-friction modifiers. Passenger car motor oils (often labeled "Energy Conserving") contain anti-friction additives which will cause clutch and/or starter clutch slippage, resulting in reduced component life and poor engine performance.

Quantity

Periodic oil change	2.6 L
With oil filter replacement	2.8 L
Total amount	3.2 L

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Final gear oil	
Type	SAE 80 API “GL-4” hypoid gear oil
Quantity	0.19 L
Air filter	Dry type element
Fuel	
Type	Regular unleaded gasoline
Fuel tank capacity	13.5 L
Reserve amount	2.5 L
Carburetor	
Type × quantity	BDS34 × 2
Manufacturer	MIKUNI
Spark plug	
Type/Manufacturer	Except for CH: BPR6ES / NGK or W20EPR-U / DENSO For CH: BPR7ES / NGK or W22EPR-U / DENSO
Gap	0.7 ~ 0.8 mm
Clutch type	Wet, multiple-disc
Transmission	
Primary reduction system	Spur gear
Primary reduction ratio	1.944
Secondary reduction system	Shaft drive
Secondary reduction ratio	3.071
Transmission type	Constant mesh 5-speed
Operation	Left foot operation
Gear ratio	
1st	2.714
2nd	1.900
3rd	1.458
4th	1.167
5th	0.967
Chassis	
Frame type	Pressed backbone
Caster angle	31.5°
Trail	125 mm
Tires	
Front	
Type	With tube
Size	3.00-19 49S
Manufacturer/ model	Bridgestone / L303A Dunlop / F14G
Rear	
Type	With tube
Size	140/90-15M/C 70S
Manufacturer/ model	Bridgestone / G508 Dunlop / K425

Maximum load*	220 kg (except for CH, A)
	218 kg (for CH, A)
Air pressure (cold tire)	
Up to 90 kg load*	
Front	200 kPa (2.00 kg/cm^2, 2.00 bar)
Rear	225 kPa (2.25 kg/cm^2, 2.25 bar)
90 kg load ~ maximum load*	
Front	200 kPa (2.00 kg/cm^2, 2.00 bar)
Rear	250 kPa (2.50 kg/cm^2, 2.50 bar)

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

Wheels

Front	
Type	Spoke
Size	19 × MT1.85
Rear	
Type	Spoke
Size	15M/C × MT3.00

Brakes

Front	
Type	Single disc brake
Operation	Right hand operation
Fluid	DOT 4 or DOT 3
Rear	
Type	Drum brake
Operation	Right foot operation

Suspension

Front	
Type	Telescopic fork
Rear	
Type	Swingarm

Shock absorbers

Front	Coil spring/oil damper
Rear	Coil spring/oil damper

Wheel travel

Front	150 mm
Rear	85 mm

Electrical system

Ignition system	T.C.I. (digital)
Charging system	
Type	A.C. magneto
Standard output	14 V, 24 A @ 5,000 r/min
Battery	
Type	GM12AZ-3A-2
Voltage, capacity	12 V, 12 AH

Headlight type Quartz bulb (halogen)

Bulb voltage, wattage × quantity

Headlight	12 V, 60/55 W × 1
Auxiliary light	12 V, 4 W × 1 (except for GB)
	12 V, 3.4 W × 1 (for GB)
Tail/brake light	12 V, 5/21 W × 2
Front flasher light	12 V, 21 W × 2
Rear flasher light	12 V, 21 W × 2
Meter light	14 V, 3 W × 1
Neutral indicator light	14 V, 3 W × 1
High beam indicator light	12 V, 1.7 W × 1
Turn indicator light	14 V, 3 W × 1

Fuses

Main fuse	30 A
Ignition fuse	15 A
Signaling system fuse	15 A
Headlight fuse	15 A

EAU01064

HOW TO USE THE CONVERSION TABLE

All specification data in this manual are listed in SI and METRIC UNITS.

Use this table to convert METRIC unit data to IMPERIAL unit data.

Ex.

METRIC		MULTIPLIER		IMPERIAL
**mm	×	0.03937	=	**in
2 mm	×	0.03937	=	0.08 in

CONVERSION TABLE

METRIC TO IMPERIAL			
	Metric unit	Multiplier	Imperial unit
Torque	m·kg m·kg cm·kg cm·kg	7.233 86.794 0.0723 0.8679	ft·lb in·lb ft·lb in·lb
Weight	kg g	2.205 0.03527	lb oz
Speed	km/hr	0.6214	mph
Distance	km m m cm mm	0.6214 3.281 1.094 0.3937 0.03937	mi ft yd in in
Volume / Capacity	cc (cm^3) cc (cm^3) lt (liter) lt (liter)	0.03527 0.06102 0.8799 0.2199	oz (IMP liq.) cu·in qt (IMP liq.) gal (IMP liq.)
Misc.	kg/mm kg/cm^2 Centigrade (°C)	55.997 14.2234 9/5 + 32	lb/in psi (lb/in^2) Fahrenheit (°F)

8

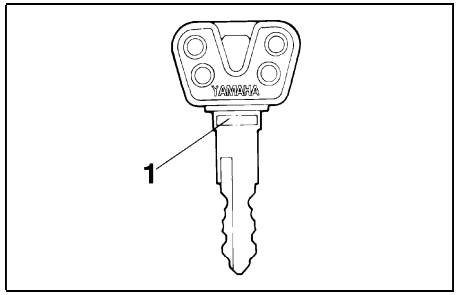
EAU02944
Identification number records

Record the key identification number, vehicle identification number and model label information in the spaces provided for assistance when ordering spare parts from a Yamaha dealer or for reference in case the vehicle is stolen.

1. KEY IDENTIFICATION NUMBER:

2. VEHICLE IDENTIFICATION NUMBER:

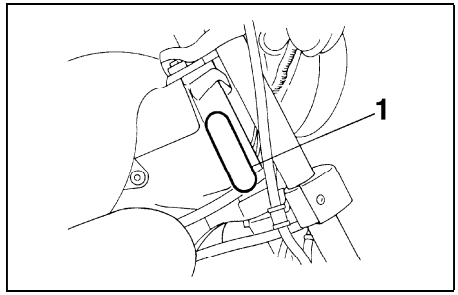
3. MODEL LABEL INFORMATION:



1. Key identification number

EAU01042
Key identification number

The key identification number is stamped on the key. Record this number in the space provided and use it for reference when obtaining a new key.



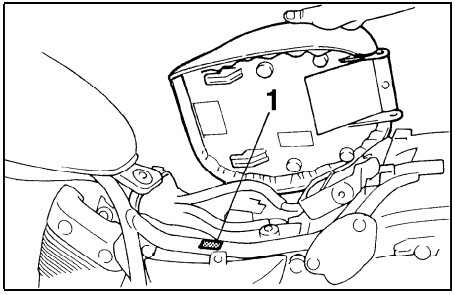
1. Vehicle identification number

EAU01043
Vehicle identification number

The vehicle identification number is stamped into the steering head pipe. Record this number in the space provided.

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. Model label

EAU01050

Model label

The model label is affixed to the frame under the seat. (See page 3-7 for seat removal procedures.) Record the information on this label in the space provided. This information will be needed to order spare parts from your Yamaha dealer.

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