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Royal Star

XVZ13AJ

XVZ13ATJ

OWNER'S MANUAL

4YU-28199-20

YAMAHA

INTRODUCTION

Welcome to the Yamaha world of motorcycling!

As the owner of a XVZ13A/XVZ13AT, 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 XVZ13A/XVZ13AT 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

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



The Safety Alert Symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



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.
-

IMPORTANT MANUAL INFORMATION

 **WARNING**

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

XVZ13A(J)/XVZ13AT(J)

OWNER'S MANUAL

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1st Edition, September 1996

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SAFETY INFORMATION

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SAFETY INFORMATION

1 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 OWNER'S MANUAL AND/OR WHEN MADE NECESSARY BY MECHANICAL CONDITIONS

Safe riding

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

Therefore.

- a. Wear a brightly colored jacket
- b. Use extra caution when you approach and pass through intersections, since intersections are the most likely places for motorcycle accidents.
- c. Ride where other motorists can see you. Avoid riding in another motorist's "blind spot"



SAFETY INFORMATION

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



SAFETY INFORMATION

Protective apparel

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

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

Modification

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

Loading and accessories

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



Loading

The total weight of the operator, passenger, accessories and cargo must not exceed the maximum load limit of XVZ13A. 203 kg/XVZ13AT: 179 kg.

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

1. Cargo and accessory weight should be kept as low and close to the motorcycle as possible. Be sure to distribute the weight as evenly as possible on both sides of the machine to minimize imbalance or instability.
2. Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the motorcycle before riding. Recheck accessory mounts and cargo restraints frequently.
3. Never attach any large or heavy items to the handlebars, front forks, or front fender. These items, including such cargo as sleeping bags, duffel bags, or tents, can create unstable handling or slow steering response.

Accessories

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

Keep in mind these guidelines for mounting accessories in addition to those provided under “LOADING”

1. Never install accessories or carry cargo that would impair the performance of your motorcycle. Carefully inspect the accessory before using it to make sure it does not in any way reduce ground clearance or cornering clearance, limit suspension travel, steering travel or control operation, or obscure lights or reflectors.



SAFETY INFORMATION

1

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

Gasoline and exhaust gas

1. GASOLINE IS HIGHLY FLAMMABLE:
 - a. Always turn off the engine when refueling.
 - b. Take care not to spill any gasoline on the engine or exhaust system when refueling.
 - c. Never refuel while smoking or in the vicinity of an open flame.
2. Never start the engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate your motorcycle in an area that has adequate ventilation.
3. Always turn off the engine before leaving the motorcycle unattended and remove the ignition key. When parking the motorcycle, note the following:



SAFETY INFORMATION

- a. The engine and exhaust system may be hot. Park the motorcycle in a place where pedestrians or children are not likely to touch these hot areas.
 - b. Do not park the motorcycle on a slope or soft ground; the motorcycle may fall over
 - c. Do not park the motorcycle near a flammable source, e.g. a kerosene heater, or near an open flame
The motorcycle could catch fire.
- 4 When transporting the motorcycle in another vehicle, be sure it is kept upright and that the fuel cock 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 eyes, 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

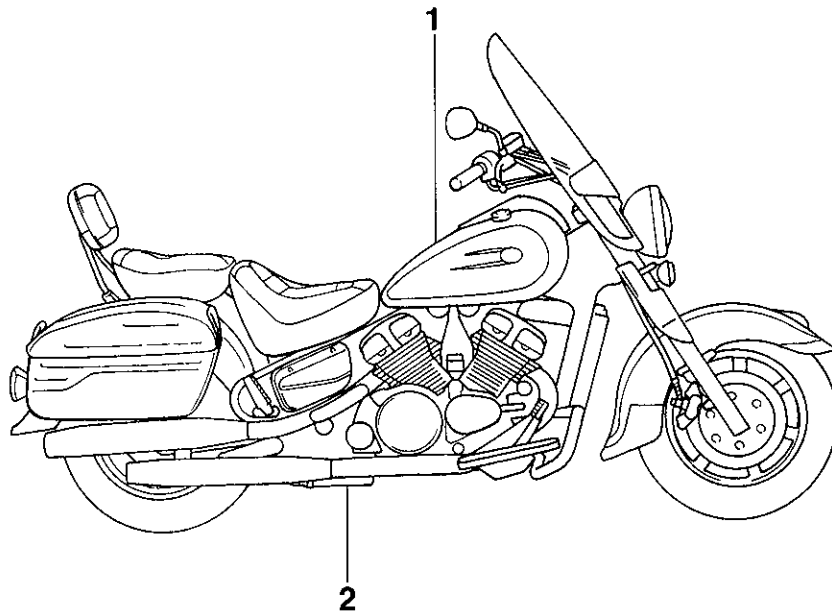


SAFETY INFORMATION

Location of the important labels

1

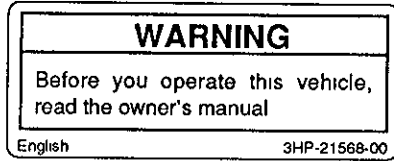
Please read the following labels carefully before operating this motorcycle.





SAFETY INFORMATION

1



2



1

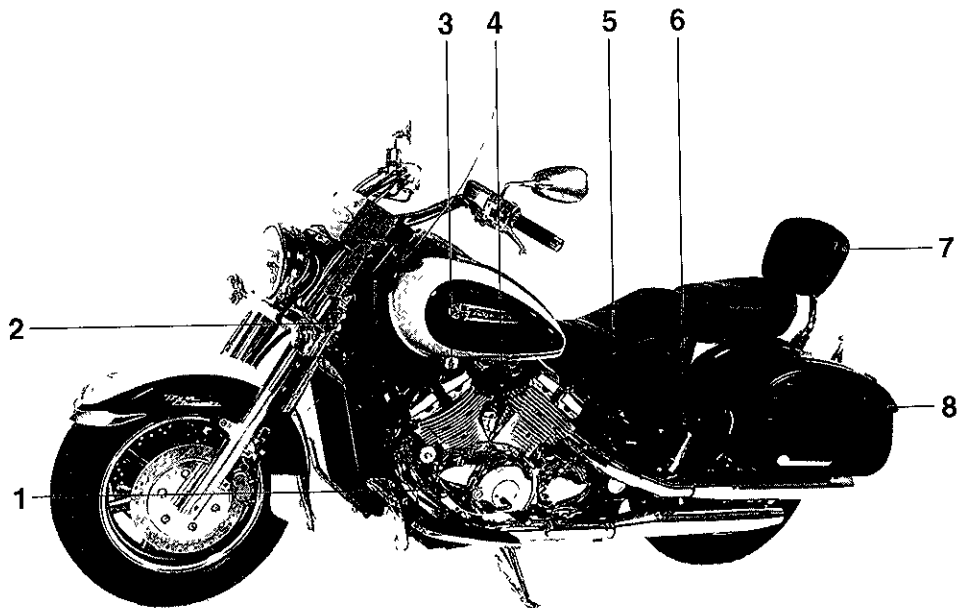
DESCRIPTION

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Left side view (XVZ13A)	2-3
Right side view (XVZ13A)	2-4
Top view (XVZ13AT, XVZ13A)	2-5

DESCRIPTION

Left side view XVZ13AT

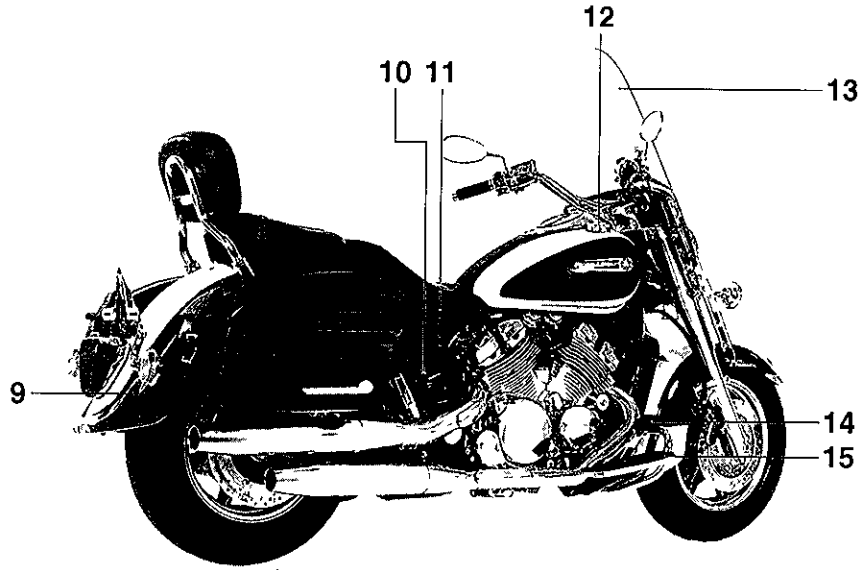
2



- 1. Shift pedal (Page 3-5)
- 2. Steering lock (Page 3-8)
- 3. Fuel cock (Page 3-7)
- 4. Starter "⏏" (Page 3-7)

- 5. Tool kit (Page 6-2)
- 6. Seat lock (Page 3-9)
- 7. Backrest
- 8. Saddlebag

Right side view XVZ13AT



9 Passenger footrest

10. Main switch

11. Helmet holder

12. Fuel tank cap

(Page 3-1)

(Page 3-9)

(Page 3-6)

13 Windshield

14. Brake pedal

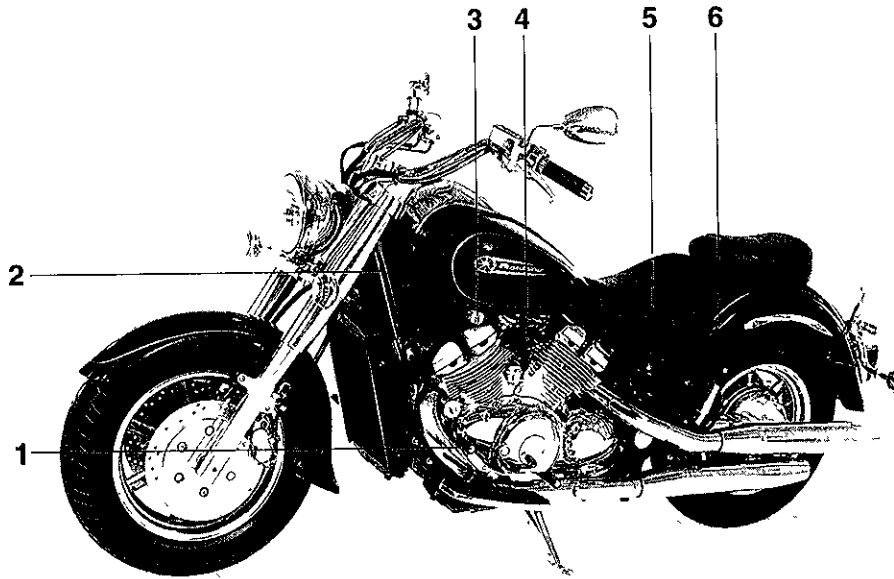
15. Rider footrest

(Page 3-6)


DESCRIPTION

Left side view XVZ13A

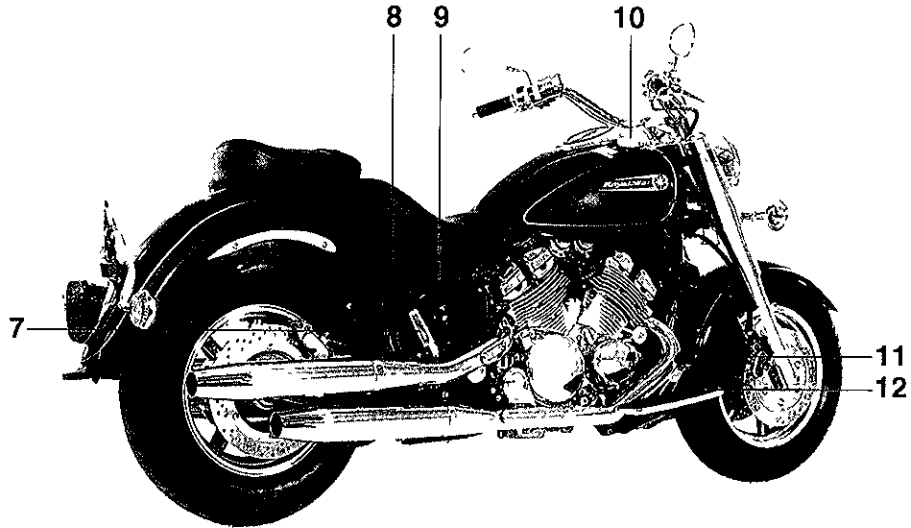
2



- 1. Shift pedal (Page 3-5)
- 2. Steering lock (Page 3-8)
- 3. Fuel cock (Page 3-7)

- 4. Starter “” (Page 3-7)
- 5. Tool kit (Page 6-2)
- 6. Seat lock (Page 3-9)

Right side view XVZ13A



7. Passenger footrest

8. Main switch (Page 3-1)

9. Helmet holder (Page 3-9)

10 Fuel tank cap (Page 3-6)

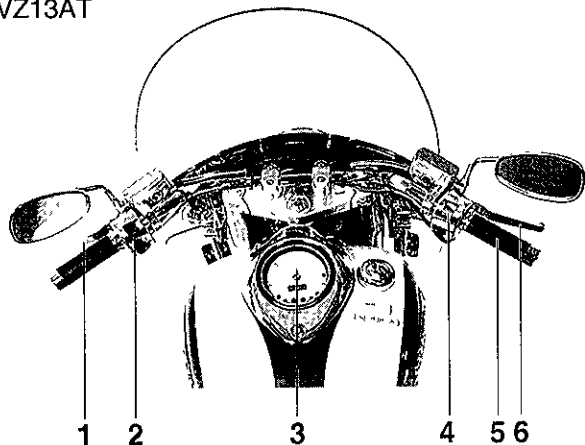
11 Brake pedal (Page 3-6)

12. Rider footrest

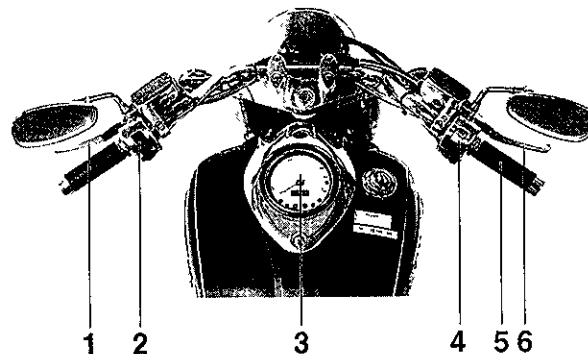
DESCRIPTION

Top view XVZ13AT, XVZ13A

XVZ13AT



XVZ13A

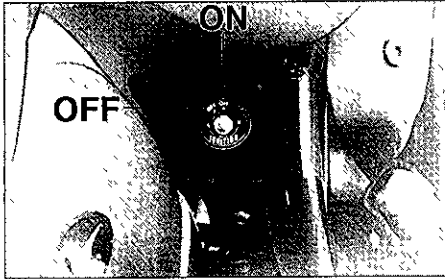


- 1 Clutch lever (Page 3-5)
- 2. Left handlebar switch (Page 3-4)
- 3. Speedometer (Page 3-1)

- 4 Right handlebar switch (Page 3-4)
- 5. Throttle grip (Page 4-7)
- 6. Front brake lever (Page 3-5)

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CONTROL FUNCTIONS



3

Main switch

The main switch is located behind the rider's seat on the right side. It controls the ignition and lighting systems. Its operation is described below.

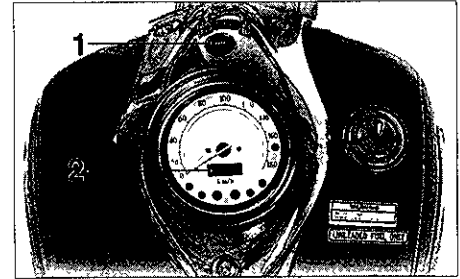
ON.

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

OFF.

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

NOTE: _____
Always turn the main switch to "OFF" and remove the key when the motorcycle is unattended.



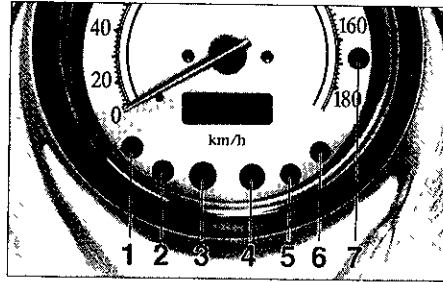
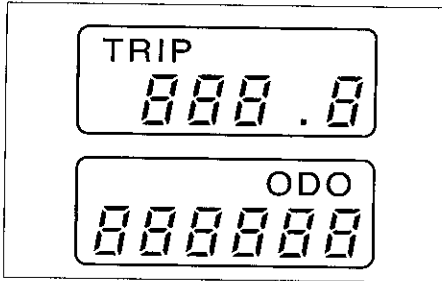
1 Trip button

2 Odometer/trip meter

Speedometer

This speedometer is equipped with an odometer and a trip meter. Pushing the "TRIP" button will change the display from one to the other. When set to "ODO", it indicates the motorcycle's total mileage. When set to "TRIP", it indicates the motorcycle's mileage since the trip meter was last reset.

Use the trip meter to estimate how far you can ride on a tank of fuel. This information will enable you to plan fuel stops in the future.



To reset the trip meter to "0", push the "TRIP" button until it displays "TRIP", then push it once again and hold it down for at least one second.

NOTE:

This motorcycle does not have a tachometer. However, it is equipped with an engine speed limiter, which prevents the engine speed from exceeding approximately 6,000 r/min and the vehicle from exceeding a top riding speed of approximately 180 km/h.

Indicator lights

1. High beam indicator light "☰"

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

2. Fuel level indicator light "⛛"

When the fuel level drops below approximately 3.5 L, this light will come on. When this light comes on, switch the fuel cock to "RES". Then, fill the tank at the first opportunity.

3. Neutral indicator light "N"

This indicator comes on when the transmission is in neutral.

4. Turn indicator light "↔"

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

5. Oil level indicator light "⛛"

This indicator light will come on if the oil level is low.

To check that the indicator light is working properly.

- Turn the engine stop switch to "⊙" and the main switch to "ON"
- Put the transmission in neutral or apply the clutch lever.
- Push the start switch

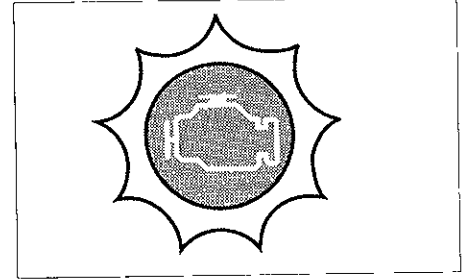
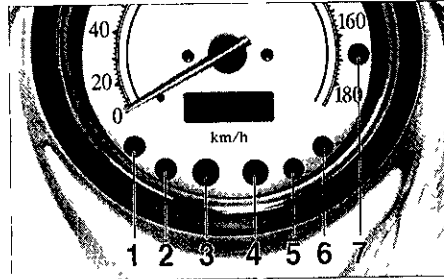
CONTROL FUNCTIONS

3

If the indicator light does not come on while pushing the start switch, have a Yamaha dealer inspect the electrical circuit.

NOTE:


Even if the oil is filled to the specified level, the indicator light may flicker when riding on a slope or during sudden acceleration or deceleration, but this is normal.



6. Engine overheat indicator light “”

This indicator light will come on if the engine overheats. If the light comes on, stop the engine immediately and allow the engine to cool

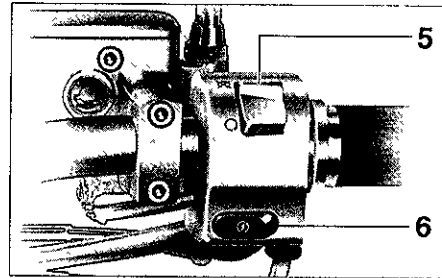
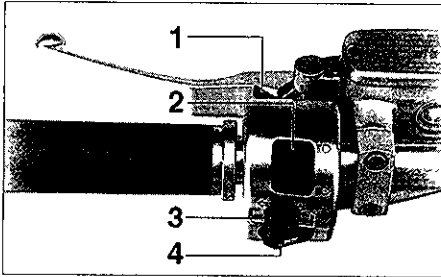
To check that the indicator light is working properly:

- Turn the engine stop switch to “” and the main switch to “ON”
- Put the transmission in neutral or apply the clutch lever
- Push the start switch.

If the indicator light does not come on when pushing the start switch, have a Yamaha dealer inspect the electrical circuit

7. Engine trouble indicator light “”

This indicator light will come on or flash if trouble occurs in a monitoring circuit. In such a case, take the motorcycle to a Yamaha dealer to have the self-diagnostic systems checked



Handlebar switches

1. Pass switch “≡○”

Press the switch to operate the passing light.

2. Dimmer switch

Turn the switch to “≡○” for the high beam and to “≡○” for the low beam.

3. Turn signal switch

To signal a right-hand turn, push the switch to “⇨”. To signal a left-hand turn, push the switch to “⇩”. 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.

4. Horn switch “📢”

Press the switch to sound the horn.

5. 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.

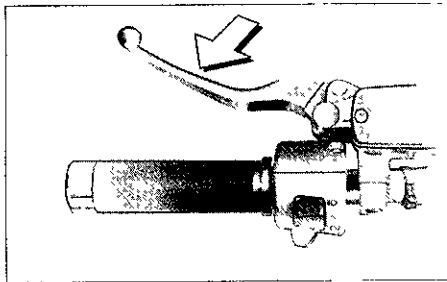
6. Start switch “⊕”

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

CAUTION:

See starting instructions prior to starting the engine.

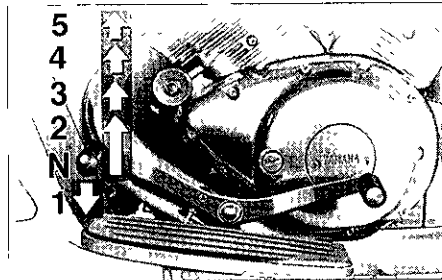
CONTROL FUNCTIONS



3

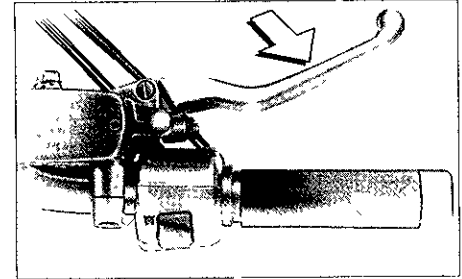
Clutch lever

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.)



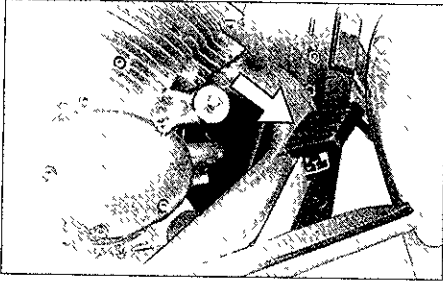
Shift pedal

The shift pedal is located on the left side of the engine and is used in combination with the clutch when shifting. Use your toe or heel to shift up and your toe to shift down.



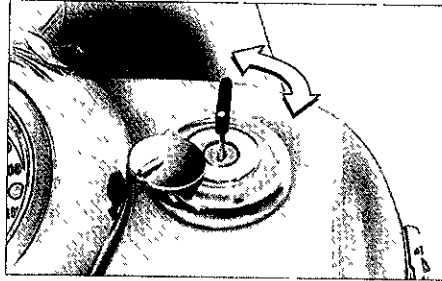
Front brake lever

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



Rear brake pedal

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



Fuel tank cap

TO REMOVE:

Slide the cover open, insert the key and turn it 1/4 turn clockwise. The lock will be released and the cap can be removed.

TO INSTALL:

Make sure the arrow mark on the tank cap is facing forward, then push the tank cap into position. Turn the key counterclockwise to the original position and remove it. Close the lock cover.

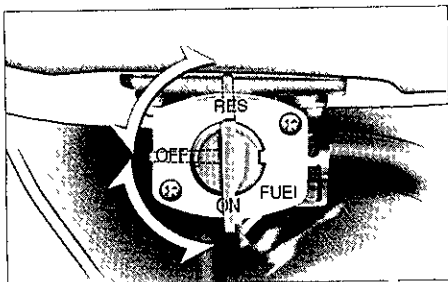
NOTE:

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.

WARNING

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

CONTROL FUNCTIONS



3

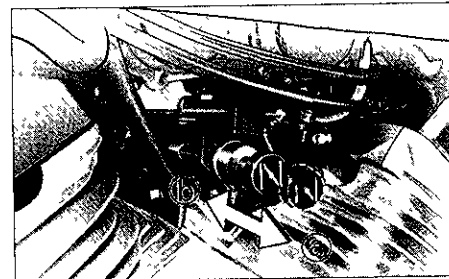
Fuel cock

The fuel cock supplies fuel from the tank to the carburetors while filtering it also

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 carburetors. Normal riding is done with the lever in this position



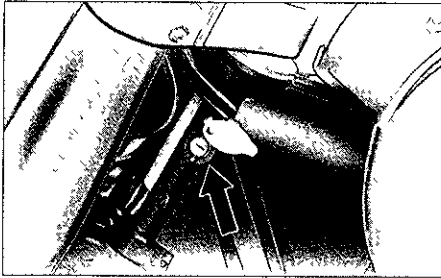
RES: This indicates reserve. If you run out of fuel while riding, move the lever to this position
FILL THE TANK AT THE FIRST OPPORTUNITY. BE SURE TO MOVE THE LEVER TO "ON" AFTER REFUELING

Starter “|↘|”

Starting a cold engine requires a richer air-fuel mixture. A separate starter circuit supplies this mixture

Move in direction ① to turn on the starter.

Move in direction ② to turn off the starter



Steering lock

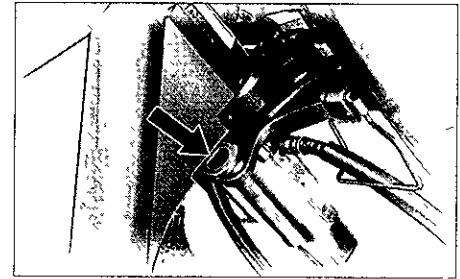
The steering lock is located on the left side of the head pipe

To lock the steering

- Turn the handlebars all the way to the right
- Open the steering lock cover
- Insert the key and turn it counter-clockwise 1/8 turn.
- Push the key in and turn it back 1/8 turn clockwise
- Check that the steering is locked.
- Remove the key and close the steering lock cover

To unlock the steering.

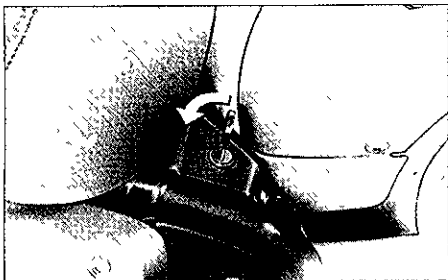
- Open the steering lock cover
- Insert the key, turn it counter-clockwise 1/8 turn, and let go of it. (It automatically moves to where it can be removed)
- Remove the key and close the steering lock cover.



On the right side of the headpipe, there is also a place to lock the steering with a padlock. Turn the handlebars to align the holes in the two brackets and lock the steering with a suitable padlock

CONTROL FUNCTIONS

3

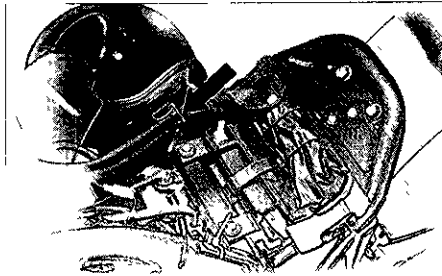


Rider's seat

The rider's seat lock is located behind the rider's seat on the left side.

To open the seat, insert the key in the seat lock and turn it counterclockwise. Then, remove the seat.

To reinstall the seat, insert the projection on the front of the seat into the seat holder on the frame, then push down on the rear of the seat. After making sure the seat is securely fitted, turn the key clockwise to the center position.

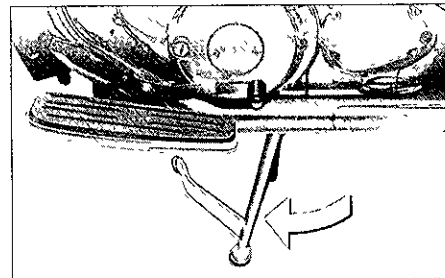


Helmet holder

The helmet holder is located under the rider's seat. Remove the rider's seat and hook the helmet on the helmet holder. Then lock the seat.

⚠ WARNING

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



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 3-10 for an explanation of this system.)

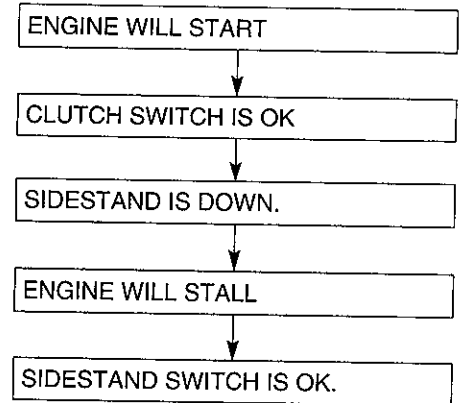
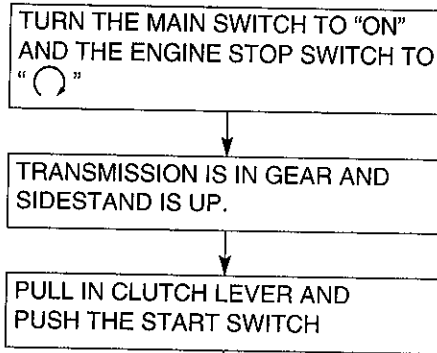
⚠ WARNING

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.

Sidestand/clutch switch operation check

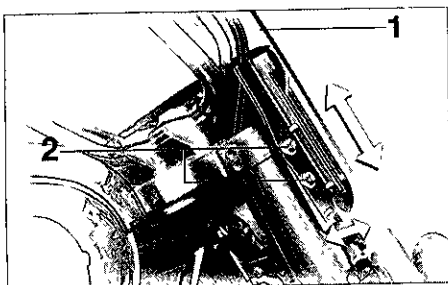
Check the operation of the sidestand switch and clutch switch against the information below.



WARNING

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

CONTROL FUNCTIONS



1 Windshield 2 Bolt (x 4)

Windshield [XVZ13AT]

The windshield height and angle can be adjusted to suit the rider's preference

⚠ WARNING

- Tighten the windshield bolts securely after adjustment.
- After adjusting, turn the handlebars to the left and right making sure there is no obstruction and that the windshield does not contact any other parts, etc.

- Open the throttle and make sure it returns properly when released.

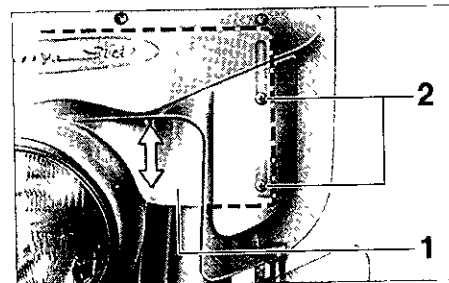
Otherwise an accident or injury could result.

ANGLE ADJUSTMENT.

Loosen the bolts on each side of the windshield. Move the windshield to the desired position, then be sure to tighten the bolts to the specified torque.

HEIGHT ADJUSTMENT:

There are two height positions. To change the height:

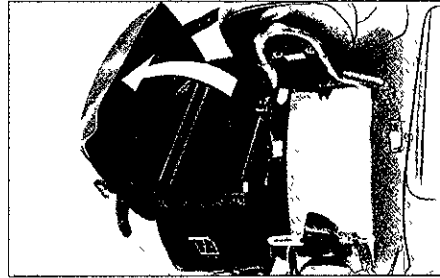
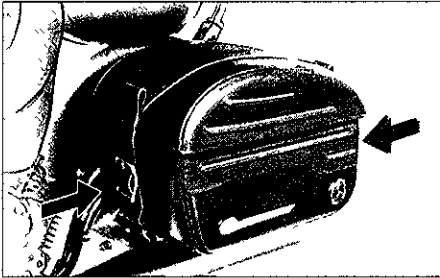


1 Headlight cover 2 Screw (x 4)

- 1 Remove the bolts on each side of the windshield. Move the windshield to the desired position and reinstall the bolts. Be sure to tighten the bolts to the specified torque.
- 2 Loosen the screws which hold the headlight cover. Position the cover so it will fit close to the headlight without touching it. Retighten the screws.

Tightening torque.

Windshield bolts:
16 Nm (1.6 m kg)



Saddlebags [XVZ13AT]

⚠ WARNING

- Always be sure to close each saddlebag securely before operating the motorcycle.
- Distribute weight evenly on each side of the motorcycle.
- Never exceed the maximum loading limit of 5 kg in each saddlebag. Improper loading or overloading can cause vehicle handling problems leading to an accident or personal injury.

TO OPEN

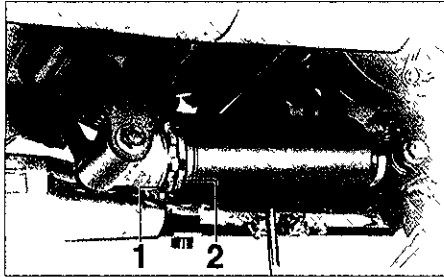
Unhook the belts from the buckles and lift the cover upward.

TO CLOSE:

Put the cover down and buckle both belts securely.

For saddlebag cleaning and care, see page 7-2.

CONTROL FUNCTIONS



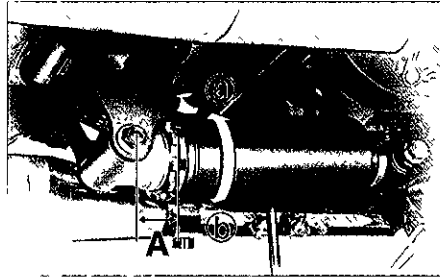
1 Locknut

2 Adjusting nut

Rear shock absorber adjustment

This shock absorber is equipped with a spring preload adjuster. Use the special wrench located in the owner's tool kit and adjust spring preload as follows.

- 1 Loosen the locknut.
- 2 Turn the adjusting nut in direction **a** to increase spring preload and in direction **b** to decrease spring preload.



Measuring distance "A"

Measuring distance "A"

Standard preload setting:

45.5 mm

Softest preload setting:

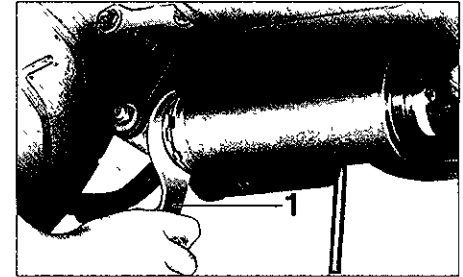
50.5 mm

Hardest preload setting:

42.5 mm

CAUTION:

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



1 Special wrench

3. Tighten the locknut to the specified torque

Tightening torque.

Locknut.

25 Nm (2.5 m·kg)

CAUTION:

Always tighten the locknut against the spring adjusting nut and tighten the locknut to the specified torque.



⚠ WARNING

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

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

PRE-OPERATION CHECKS

Pre-operation check list	4-1
Fuel	4-3
Engine oil	4-4
Brakes	4-5
Clutch	4-6
Brake/clutch fluid leakage	4-6
Final gear oil	4-7
Throttle grip	4-7
Lights, signals and switches	4-7
Tires	4-8
Cast wheels and tires	4-11
Chassis fasteners	4-11

PRE-OPERATION CHECKS

Pre-operation check list

Owners are personally responsible for their vehicle's condition. Your motorcycle/scooter'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.

No.	ITEM	ROUTINE	PAGE
1	Fuel	• Check fuel level, add fuel if necessary	4-3
2	Engine oil	• Check engine oil level, add oil if necessary	4-4, 6-10 ~ 6-11
3	Front and rear brakes	• Check operation, fluid level and fluid leakage • Top up with DOT 4 brake fluid if necessary	4-5 ~ 4-6, 6-12 ~ 6-16
4	Clutch	• Check operation, fluid level and fluid leakage • Top up with DOT 4 brake fluid if necessary	4-6, 6-16
5	Final gear oil	• Check for leakage	4-7
6	Throttle	• Check for smooth operation and return by spring force	4-7
7	Lights, signals and switches	• Check for proper operation	4-7, 6-22
8	Tires	• Check tire pressure, wear and damage	4-8 ~ 4-11
9	Chassis fasteners	• Check all chassis fittings and fasteners	4-11

NOTE:

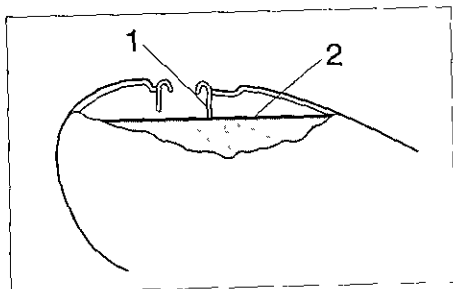
Pre-operation checks should be made each time the motorcycle is used. Such an inspection can be thoroughly accomplished in a very short time, and the added safety it assures is more than worth the time involved.

PRE-OPERATION CHECKS

WARNING

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

PRE-OPERATION CHECKS



1. Filler tube

2. Fuel level

4

Fuel

Make sure there is sufficient fuel in the tank.

WARNING

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

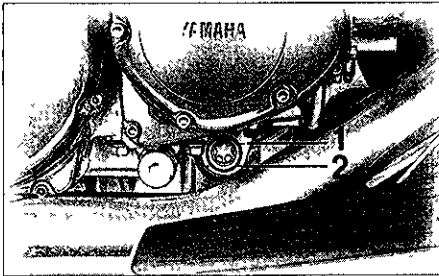
CAUTION:

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

Recommended fuel.
Regular gasoline
For Australia:
Unleaded fuel only
Fuel tank capacity:
Total
18 L
Reserve:
3.5 L

NOTE:

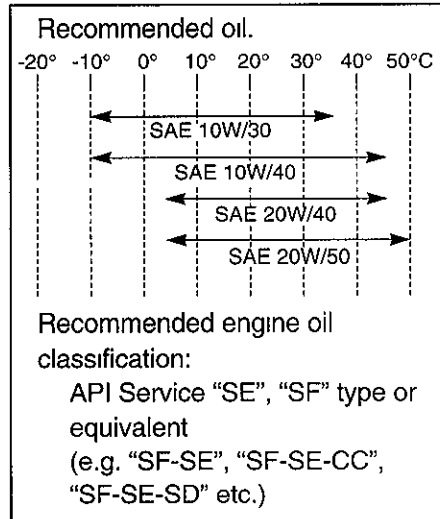
1. If knocking or pinging occurs, use a different brand of gasoline or higher octane grade.
2. If unleaded gasoline is not available, then leaded gasoline can be used.



1 Maximum level 2 Minimum level

Engine oil

Make sure the engine oil is at the specified level. Fill with oil as necessary (See page 6-10 for details)



Oil quantity:

Total amount

4.3 L

Periodic oil change:

3.5 L

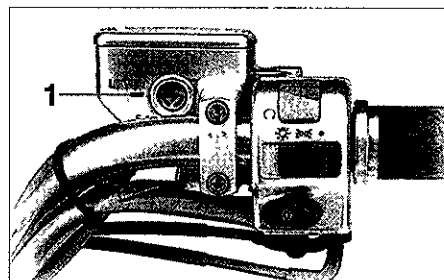
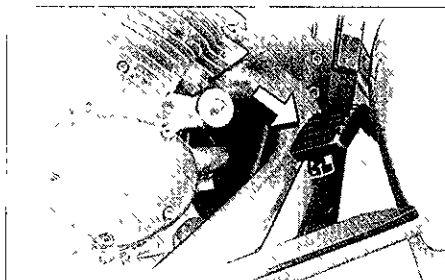
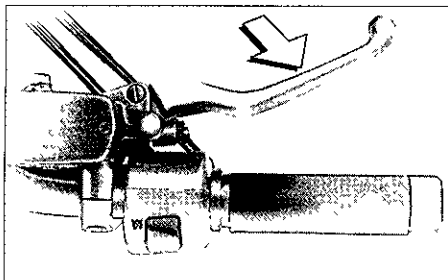
With oil filter replacement

3.7 L

CAUTION:

Do not put in any chemical additives. Also, be sure not to use oils labeled "ENERGY CONSERVING II" or higher. Engine oil also lubricates the clutch and additives could cause clutch slippage.

PRE-OPERATION CHECKS



1 Minimum level

4 Brakes

Brake lever and brake pedal

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

(See page 6-12 ~ 6-14 for details)

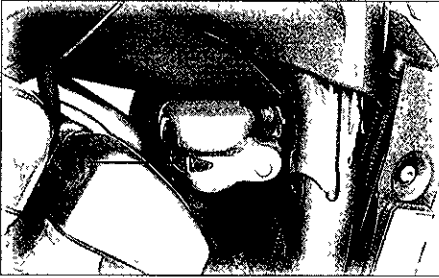
WARNING

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

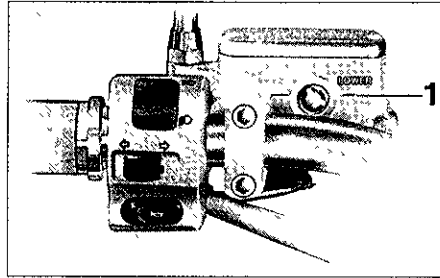
Brake fluid

Check the brake fluid level. Fill the master cylinder with brake fluid if necessary.

Recommended brake fluid. DOT 4



1 Minimum level



1 Minimum level

Clutch

Clutch lever

This motorcycle's clutch lever free play adjusts automatically. Do not attempt to make any adjustments. Make sure the clutch is working properly

Fluid level

Check the fluid level and fill the master cylinder with brake fluid if necessary. (See page 6-15 for details)

NOTE:

The fluid used for the hydraulic clutch is brake fluid

Recommended brake fluid. DOT 4

Brake/clutch fluid leakage

Apply each brake and the clutch for a few minutes. Check to see if any brake fluid leaks out from the hose, joints, master cylinders, or plunger case

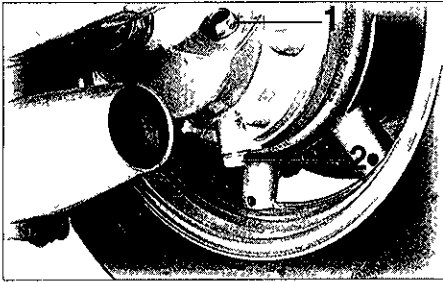
CAUTION:

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

WARNING

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

PRE-OPERATION CHECKS



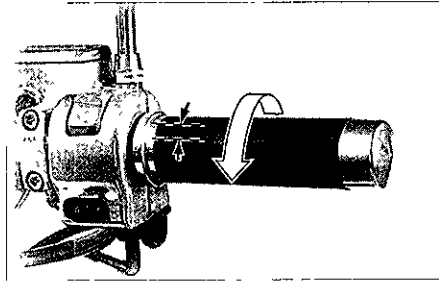
1 Filler bolt

2 Drain plug

4

Final gear oil

Check for oil leakage. If any leakage is found, take the motorcycle to a Yamaha dealer for repairs.

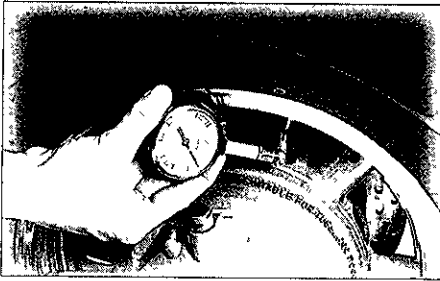


Throttle grip

- Turn the throttle grip to see if it operates properly. Make sure the grip returns by spring force when released.
- There should be a free play of 4 ~ 6 mm at the throttle grip. If the free play is incorrect, ask a Yamaha dealer to make this adjustment.

Lights, signals and switches

Check all the lights, meter lights and indicator lights to make sure they are in working condition. Check the operation of the handlebar switches and main switch.



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

⚠ 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*	203 kg XVZ13A 179 kg XVZ13AT	
Cold tire pressure	Front	Rear
Up to 90 kg load*	250 kPa (2.50 kg/cm ² , 2.50 bar)	250 kPa (2.50 kg/cm ² , 2.50 bar)
90 kg load ~ Maximum load*	250 kPa (2.50 kg/cm ² , 2.50 bar)	280 kPa (2.80 kg/cm ² , 2.80 bar)

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

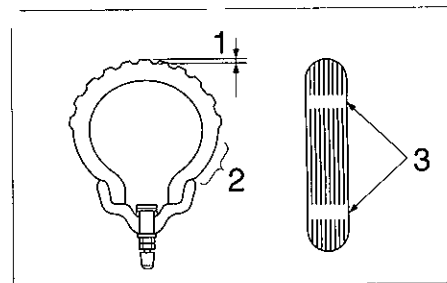
PRE-OPERATION CHECKS

4

⚠ 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, sad-

dlebags, 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.



- 1 Tread depth
- 2 Sidewall
- 3 Wear indicator

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

⚠ 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

PRE-OPERATION CHECKS

immediately. Brakes, tires, and related wheel parts replacement should be left to a Yamaha Service Technician.

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

NOTE:

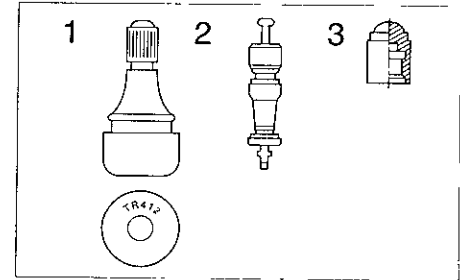
These limits may be different by regulation from country to country. If so, conform to the limits specified by the regulations of your own country

Tire information

This motorcycle is equipped with tubeless tires, tire valves and cast wheels.

WARNING

After extensive tests, the tires mentioned below have been approved by Yamaha Motor Co., Ltd. for this model. No guarantee for handling characteristics can be given if tire combinations other than what is approved are used on this motorcycle. The front and rear tires should be of the same manufacture and design.



- 1 Tire valve 2 Valve core
3 Valve cap with seal

FRONT.

Manufacturer	Size	Type
Dunlop	150/80-16 71H	D404F

REAR.

Manufacturer	Size	Type
Dunlop	150/90-15 M/C 74H	D404

	Type
Tire valve	PVR59A
Valve core	#9000A

PRE-OPERATION CHECKS

4 Cast wheels and tires

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

- 1 Always inspect the wheels before a ride. Check for cracks, bends, or warpage of the wheels. If any abnormal condition exists in a wheel, consult a Yamaha dealer. Do not attempt even small repairs to the wheel. If a wheel is deformed or cracked, it must be replaced.
- 2 Tires and wheels should be balanced whenever either one is changed or replaced. Failure to have a wheel balanced can result in poor performance, adverse handling characteristics, and shortened tire life.
3. Ride at moderate speeds after changing a tire since the tire surface must first be broken in for it to develop its optimal characteristics.

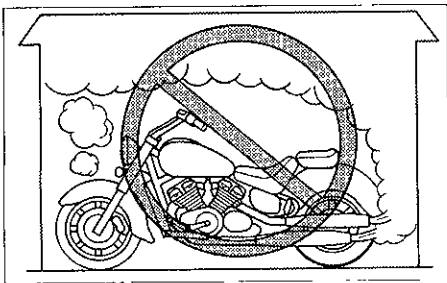
Chassis fasteners

Always check the tightness of all chassis nuts, bolts and screws before a ride. Take the motorcycle to a Yamaha dealer or refer to the Service Manual for correct tightening torque.

OPERATION AND IMPORTANT RIDING POINTS

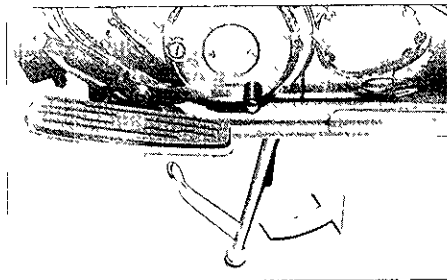
Starting and warming up a cold engine	5-1
Starting a warm engine	5-3
Shifting	5-3
Engine break-in ..	5-4
Parking	5-5

OPERATION AND IMPORTANT RIDING POINTS



⚠ 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.

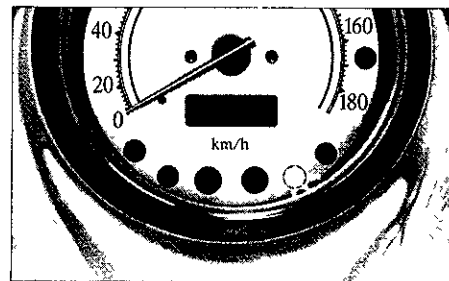
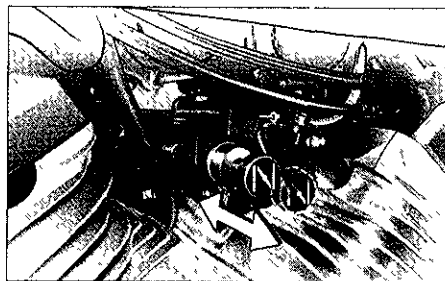
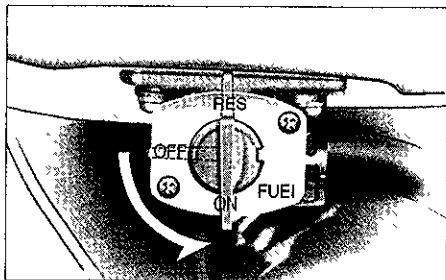
Starting and warming up a cold engine

NOTE:

This motorcycle is equipped with an ignition circuit cut-off system

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

OPERATION AND IMPORTANT RIDING POINTS



⚠ WARNING

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

- 1 Turn the fuel cock to "ON"
- 2 Turn the main switch to "ON" and the engine stop switch to "○"
3. Shift 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.

4. Turn on the starter "⚡" and completely close the throttle grip
5. 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

CAUTION:

The oil level indicator light should come on when the start switch is pushed and should go off when the start switch is released. If the indicator light flickers or remains on, immediately stop the engine and check the engine oil level and for oil leakage. If necessary, fill the engine with oil and check to see that the oil level indicator light goes off. If the light does not go off even with sufficient oil in the crankcase or the light does not come on when pushing the start switch, consult a Yamaha dealer.

OPERATION AND IMPORTANT RIDING POINTS

6. After starting the engine, move the starter “| \ |” halfway back

5

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

- 7 After the engine is warm, turn off the starter completely

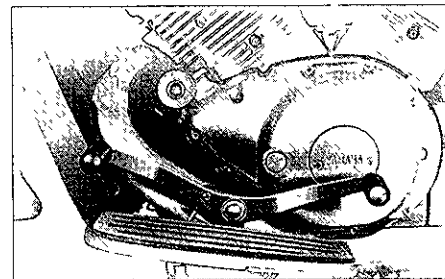
NOTE: _____
The engine is warm when it responds normally to the throttle with the starter “| \ |” turned off.

Starting a warm engine

The starter “| \ |” is not required when the engine is warm

CAUTION: _____

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



Shifting

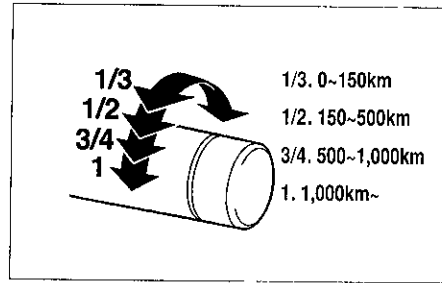
The transmission lets you control the amount of power you have available at a given speed for starting, accelerating, climbing hills, etc. The use of the shift pedal is shown in the illustration (Page 3-5)

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

CAUTION: _____

1. Do not coast for long periods with the engine off, and do not tow the motorcycle a long distance. Even with gears in neu-

OPERATION AND IMPORTANT RIDING POINTS



tral, the transmission is only properly lubricated when the engine is running. Inadequate lubrication may damage the transmission.

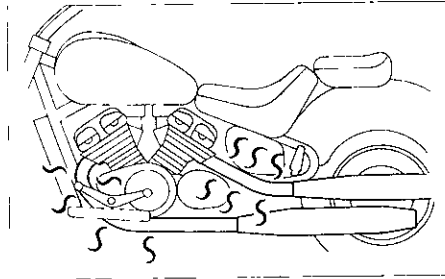
2. Always use the clutch when changing gears. The engine, transmission, and driveline are not designed to withstand the shock of forced shifting and can be damaged by shifting without using the clutch.

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.

1. 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.
2. 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.
3. 500 ~ 1,000 km:
Avoid cruising speeds in excess of 3/4 throttle.

OPERATION AND IMPORTANT RIDING POINTS



CAUTION: _____

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

- 4 1,000 km and beyond:
Avoid prolonged full-throttle operation. Vary speed occasionally

CAUTION: _____

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

Parking

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

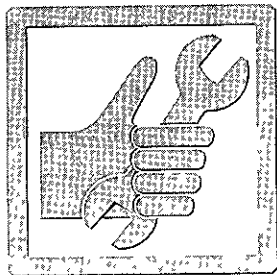
⚠ WARNING _____

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.

PERIODIC MAINTENANCE AND MINOR REPAIR

Tool kit 6-2	Brake fluid replacement 6-16
Periodic maintenance/lubrication chart 6-3	Brake light switch adjustment 6-16
Valve clearance adjustment 6-7	Clutch lever free play 6-16
Spark plug inspection 6-7	Brake and shift pedal lubrication 6-17
Carburetor adjustment 6-8	Brake and clutch lever lubrication 6-17
Idle speed adjustment 6-9	Sidestand lubrication 6-18
Engine oil 6-10	Front fork inspection 6-18
Coolant level inspection 6-12	Battery 6-19
Front brake lever free play adjustment 6-12	Fuse replacement 6-20
Rear brake pedal height adjustment 6-13	Headlight bulb replacement 6-22
Checking the front and rear brake pads 6-14	Troubleshooting 6-23
Inspecting the brake fluid level 6-15	Troubleshooting chart 6-24

PERIODIC MAINTENANCE AND MINOR REPAIR



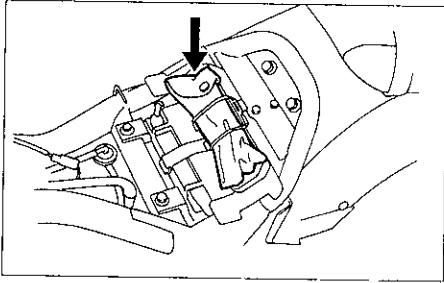
6 Periodic inspection, adjustment and lubrication will keep your motorcycle in the safest and most efficient condition possible. Safety is an obligation of the motorcycle owner. The maintenance and lubrication schedule chart should be considered strictly as a guide to general maintenance and lubrication 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 im-

portant points of motorcycle inspection, adjustment, and lubrication are explained in the following pages

WARNING

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

PERIODIC MAINTENANCE AND MINOR REPAIR



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.

WARNING _____

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

PERIODIC MAINTENANCE AND MINOR REPAIR

Periodic maintenance/lubrication chart

No	ITEM	ROUTINE	TYPE	BREAK-IN	EVERY	
				1,000 km	6,000 km or 6 months	12,000 km or 12 months
1	* Valve clearance	• Check and adjust valve clearance when engine is cold	–	Every 42,000 km		
2	Spark plug	• Check condition • Adjust gap and clean	See page 6-7		○	Replace
3	* Crankcase ventilation system	• Check ventilation hose for cracks or damage • Replace if necessary	–		○	○
4	* Fuel line	• Check fuel hose and vacuum pipe for cracks or damage • Replace if necessary	–		○	○
5	* Fuel filter	• Replace	–	Replace every 30,000 km		
6	* Exhaust system	• Check for leakage • Retighten if necessary • Replace gaskets if necessary	–		○	○
7	* Carburetor synchronization	• Adjust synchronization of carburetors	–	○	○	○
8	* Idle speed	• Check and adjust engine idle speed • Adjust cable free play	–	○	○	○
9	Engine oil	• Replace	See page 4-4	○		○
10	* Oil filter	• Replace	–	○		○

Items marked with an asterisk (*) require special tools, data and technical skills for servicing. Take the motorcycle to a Yamaha Dealer or refer to the Service Manual when servicing these items.

PERIODIC MAINTENANCE AND MINOR REPAIR

No	ITEM	ROUTINE	TYPE	BREAK-IN	EVERY	
				1,000 km	6,000 km or 6 months	12,000 km or 12 months
11	* Air filter (See NOTE on page 6-5)	<ul style="list-style-type: none"> • Clean with compressed air • Replace if necessary 	—		○	○
12	* Cooling system	<ul style="list-style-type: none"> • Check hoses for cracks or damage, replace if necessary • Replace coolant 	Ethylene glycol antifreeze coolant	Replace every 24 months.		
13	* Brake system	<ul style="list-style-type: none"> • Check and replace brake pads if necessary • Check operation and for fluid leakage (See NOTE on page 6-5) • Correct if necessary 	—	○	○	○
14	* Clutch system	<ul style="list-style-type: none"> • Check operation and for fluid leakage (See NOTE on page 6-5) • Correct if necessary 	—	○	○	○
15	* Final gear oil	<ul style="list-style-type: none"> • Check oil level and for leakage • Replace every 24,000 km or 24 months 	SAE 80 API "GL-4" hypoid gear oil	Replace		○
16	* Control cable	<ul style="list-style-type: none"> • Apply chain lube thoroughly 	SAE 10W30 motor oil	○	○	○
17	* Rear arm pivot bearing	<ul style="list-style-type: none"> • Check bearing assembly for looseness • Moderately repack every 24,000 km or 24 months 	Medium weight wheel bearing grease			○
18	Brake/ Clutch lever pivot shaft	<ul style="list-style-type: none"> • Apply chain lube lightly 	SAE 10W30 motor oil		○	○
19	Brake pedal and shift pedal shaft	<ul style="list-style-type: none"> • Lubricate 	SAE 10W30 motor oil		○	○
20	* Sidestand pivot	<ul style="list-style-type: none"> • Check operation • Lubricate 	SAE 10W30 motor oil		○	○
21	* Sidestand switch	<ul style="list-style-type: none"> • Check and clean or replace if necessary 	—	○	○	○

Items marked with an asterisk (*) require special tools, data and technical skills for servicing. Take the motorcycle to a Yamaha Dealer or refer to the Service Manual when servicing these items.

PERIODIC MAINTENANCE AND MINOR REPAIR

No	ITEM	ROUTINE	TYPE	BREAK-IN	EVERY	
				1,000 km	6,000 km or 6 months	12,000 km or 12 months
22	* Front fork	• Check operation and for leakage	–		○	○
23	* Steering bearings	• Check bearing assembly for looseness • Moderately repack every 24,000 km or 24 months	Medium weight wheel bearing grease		○	○
24	* Wheel bearings	• Check bearings for smooth rotation	–		○	○
25	* Rear suspension link pivots	• Check operation • Apply grease lightly every 24,000 km or 24 months	Molybdenum disulfide grease			○

Items marked with an asterisk (*) require special tools, data and technical skills for servicing. Take the motorcycle to a Yamaha Dealer or refer to the Service Manual when servicing these items.

NOTE:

The air filter needs more frequent service if you are riding in unusually wet or dusty areas.

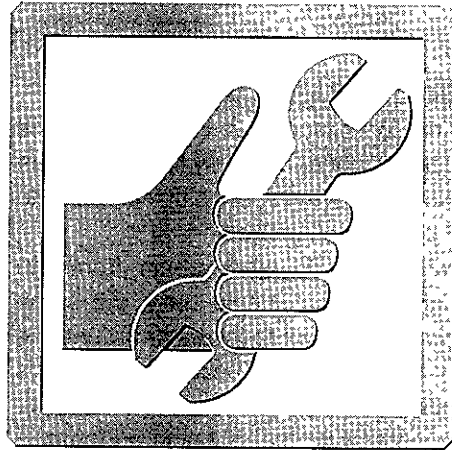
6

NOTE:

Brake fluid replacement

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

PERIODIC MAINTENANCE AND MINOR REPAIR



PERIODIC MAINTENANCE AND MINOR REPAIR

6

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.

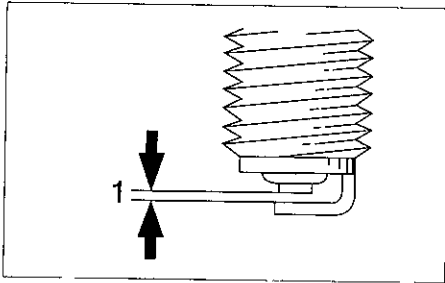
Spark plug inspection

The spark plug is an important engine component and is easy to inspect. The condition of the spark plug can indicate the condition of the engine. Normally, all spark plugs from the same engine should have the same color on the white 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:
DPR7EA-9/NGK or
X22EPR-U9/NIPPONDENSO

PERIODIC MAINTENANCE AND MINOR REPAIR



1 Spark plug gap

Before installing any spark plug, measure the electrode gap with a wire thickness gauge. Adjust the gap to specification

Spark plug gap:
0.8 ~ 0.9 mm

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

Tightening torque:
Spark plug.
17.5 Nm (1.75 m·kg)

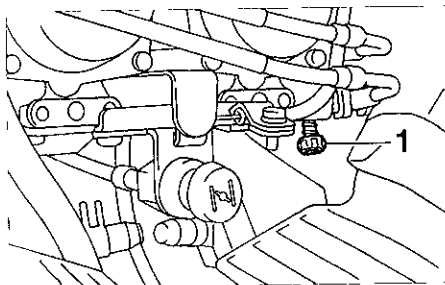
NOTE: _____
If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 to 1/2 turn past finger tight. Have the spark plug tightened to the specified torque as soon as possible.

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 following may be serviced by the owner as part of routine maintenance.

NOTE: _____
A diagnostic tachometer must be used for this procedure.

PERIODIC MAINTENANCE AND MINOR REPAIR



1 Throttle stop screw

CAUTION:

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

6

Idle speed adjustment

NOTE:

A diagnostic tachometer must be used for this procedure.

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

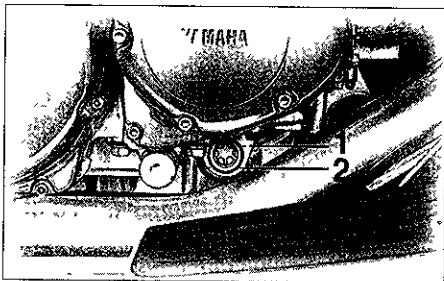
- 2 Set the idle to the specified engine speed by adjusting the throttle stop screw; turn the screw in to increase engine speed, and out to decrease engine speed.

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

NOTE:

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

PERIODIC MAINTENANCE AND MINOR REPAIR



1 Maximum level 2 Minimum level

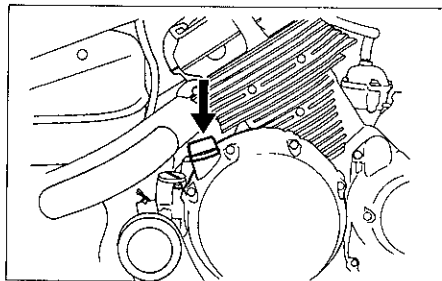
Engine oil

Oil level inspection

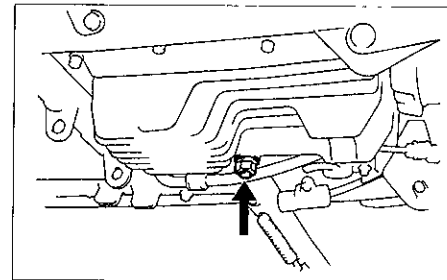
- Place the motorcycle on a level place and hold it in an upright position. Warm up the engine for several minutes.
- Stop the engine and wait for a few minutes. Check the oil level through the level window located at the lower part of the right side crankcase cover

NOTE:

Wait a few minutes until the oil level settles before checking



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



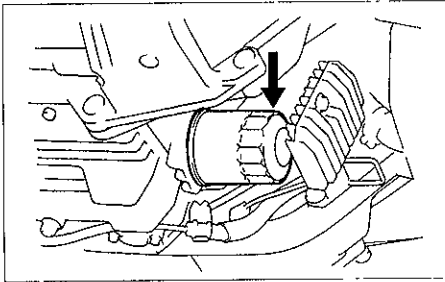
Engine oil and oil filter cartridge replacement

- Warm up the engine for several minutes
- Stop the engine. Place an oil pan under the engine and remove the oil filler cap.
- Remove the drain plug and drain the oil
- Remove the oil filter by using an oil filter wrench.

NOTE:

An oil filter wrench is available at a nearby Yamaha dealer.

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- Reinstall the drain plug and tighten it to the specified torque

Tightening torque

Drain plug:
38 Nm (3.8 m·kg)

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

NOTE:

Make sure the O-ring is seated properly

- Install the oil filter and tighten it to the specified torque with an oil filter wrench.

Tightening torque.

Oil filter:
17 Nm (1.7 m·kg)

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

Recommended oil:

See page 4-4

Oil quantity:

Total amount

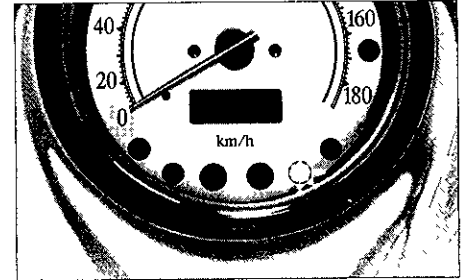
4.3 L

Periodic oil change:

3.5 L

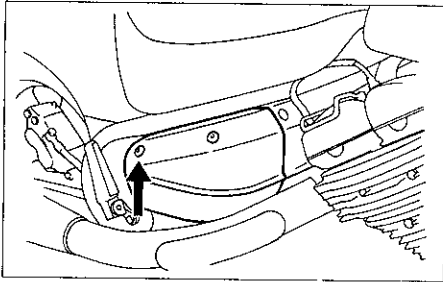
With oil filter replacement.

3.7 L



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.
-
- Start the engine and warm it up for several minutes. While warming up, check for oil leakage. If oil leakage is found, stop the engine immediately and check for the cause.
 - After the engine is started, the oil level indicator light should go off if the oil is at the specified level.



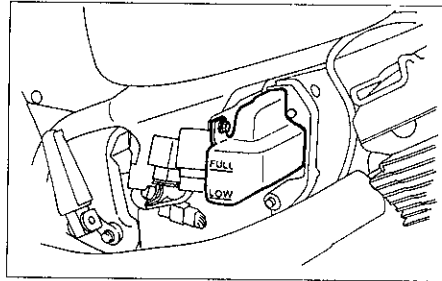
Coolant level inspection

Remove the reservoir tank cover by removing the screws.

Check the coolant level in the reservoir tank when the engine is cold. The coolant level will vary with engine temperature. The coolant level is satisfactory if it is between the minimum and maximum marks on the tank. If the level is low, add coolant or distilled water to bring the coolant level up to the maximum mark.

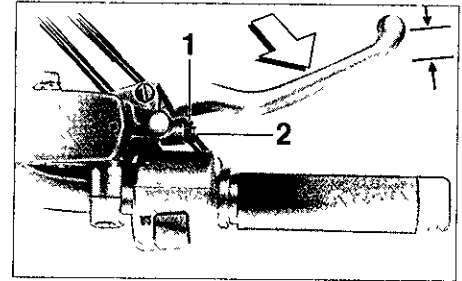
Place the reservoir tank cover in the original position and install the screws.

Reservoir tank capacity
0.84 L



NOTE:

- If water is added, have a Yamaha dealer check the antifreeze content of the coolant as soon as possible.
- Have a Yamaha dealer change the coolant every two years.



1 Locknut

2 Adjusting bolt

Front brake lever free play adjustment

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

- Loosen the locknut.
- Turn the adjusting bolt so that the brake lever movement is 2 ~ 5 mm before the bolt contacts the master cylinder piston.
- After adjusting, tighten the locknut.

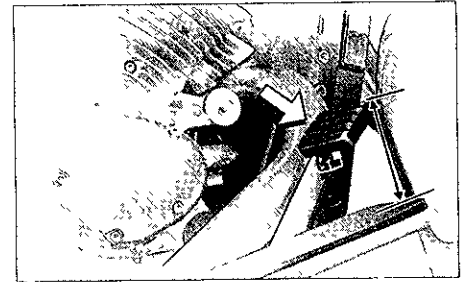
PERIODIC MAINTENANCE AND MINOR REPAIR

6

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.



Rear brake pedal height adjustment

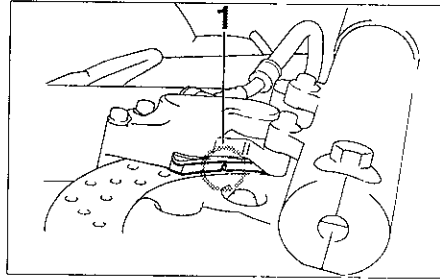
The top of the brake pedal should be positioned 100 mm below the top of the footrest. If not, ask a Yamaha dealer to adjust it.

WARNING

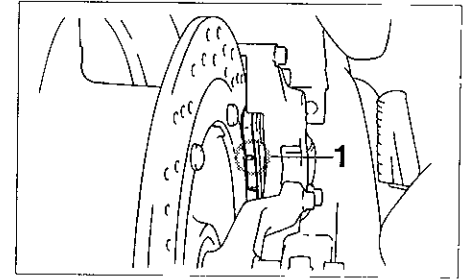
A soft or spongy feeling in the brake pedal can indicate the presence of air in the brake system. This air must be removed by bleeding the brake system before the motorcycle is operated. Air in the system will cause greatly diminished braking capability and can result in loss of

PERIODIC MAINTENANCE AND MINOR REPAIR

control and an accident. Have a Yamaha dealer inspect and bleed the system if necessary.



1 Wear indicator groove

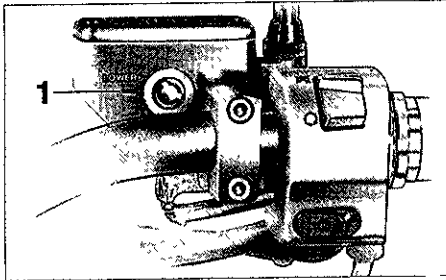


1 Wear indicator groove

Checking the front and rear brake pads

A wear indicator groove is provided on each brake pad. This indicator allows checking of brake pad wear without disassembling the brake. Inspect the groove. If the groove has almost disappeared, ask a Yamaha dealer to replace the pads.

PERIODIC MAINTENANCE AND MINOR REPAIR



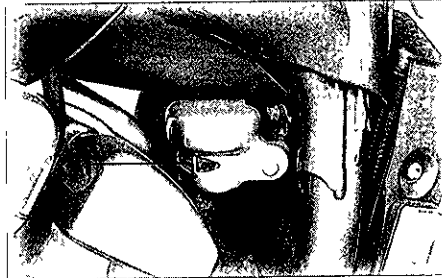
1 Minimum level

Inspecting the brake fluid level

Insufficient brake fluid may let air enter the brake or clutch system, possibly causing them to become ineffective. Before riding, check that the brake fluid is above the minimum level and fill when necessary.

Observe these precautions

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

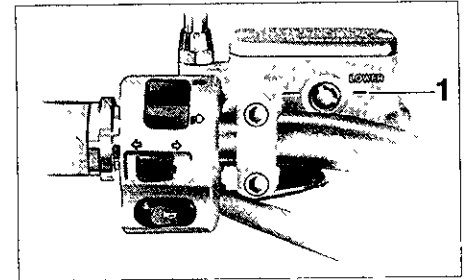


1 Minimum level

- 2 Use only the designated quality brake fluid. Otherwise, the rubber seals may deteriorate, causing leakage and poor brake or clutch performance.

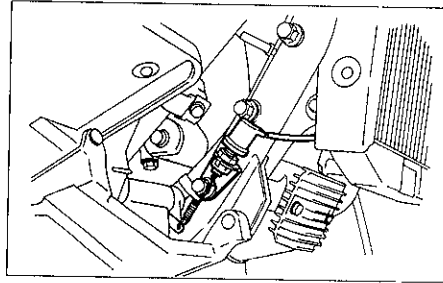
Recommended brake fluid: DOT 4

- 3 Refill with the same type of brake fluid. Mixing fluids may result in a harmful chemical reaction and lead to poor brake or clutch performance.



1 Minimum level

- 4 Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.
5. Brake fluid may deteriorate 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.



Brake fluid replacement

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

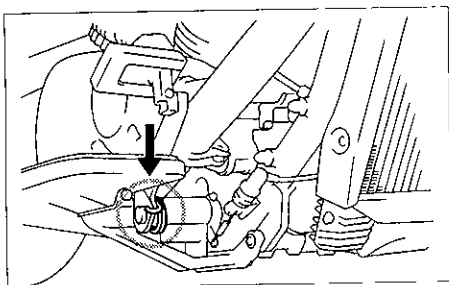
Brake light switch adjustment

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

Clutch lever free play

This motorcycle has a hydraulic clutch. There are no adjustments to perform but the clutch system must be inspected periodically for proper fluid level and leakage. If the control lever free play becomes excessive and the motorcycle creeps or stalls when shifted into gear, or if the clutch slips, causing acceleration to lag behind engine speed, there is probably air in the clutch system and it must be bled out. Ask a Yamaha dealer to do this service.

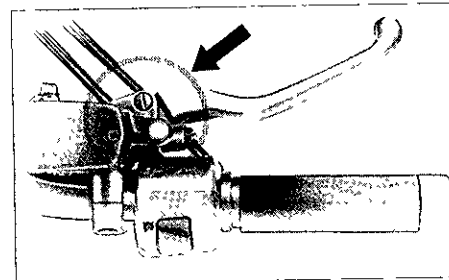
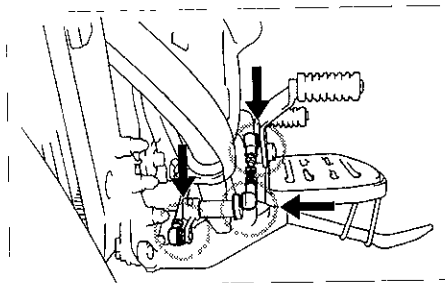
PERIODIC MAINTENANCE AND MINOR REPAIR



Brake and shift pedal lubrication

Lubricate the pivoting parts.

Recommended lubricant:
SAE 10W30 motor oil

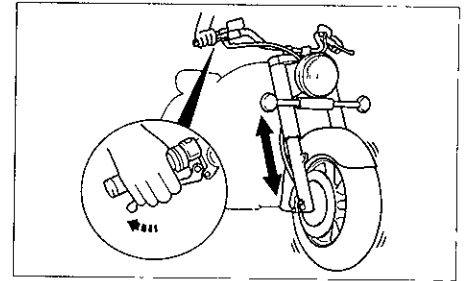
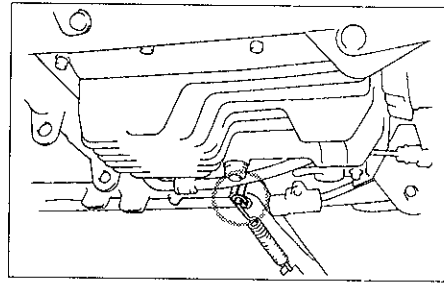
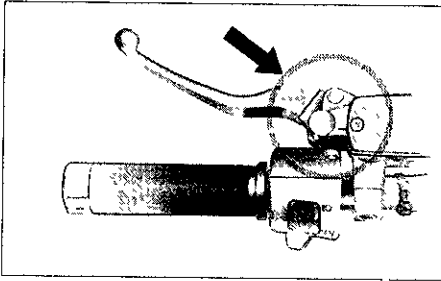


Brake and clutch lever lubrication

Lubricate the pivoting parts.

Recommended lubricant:
SAE 10W30 motor oil

PERIODIC MAINTENANCE AND MINOR REPAIR



Sidestand lubrication

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

Recommended lubricant,
SAE 10W30 motor oil

WARNING

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

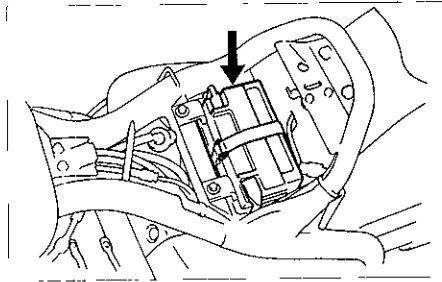
Front fork inspection

WARNING

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

1. Visual check
Check for scratches or damage on the inner tube and excessive oil leakage from the front fork.
2. Operation check
Place the motorcycle on a level place
 - a. Hold the motorcycle in an upright position and apply the front brake

PERIODIC MAINTENANCE AND MINOR REPAIR



- b Push down hard on the handlebars several times and check if the fork rebounds smoothly.

CAUTION: _____

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

Battery

This motorcycle is equipped with a sealed-type battery. Therefore it is not necessary to check the electrolyte or fill the battery with distilled water.

- If the battery seems to have discharged, consult a Yamaha dealer
- If the motorcycle is equipped with optional electrical accessories, the battery tends to discharge more quickly, so be sure to recharge it periodically.

CAUTION: _____

Never try to remove the sealing caps of the battery cells. The battery will be damaged.

⚠ 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

PERIODIC MAINTENANCE AND MINOR REPAIR

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.

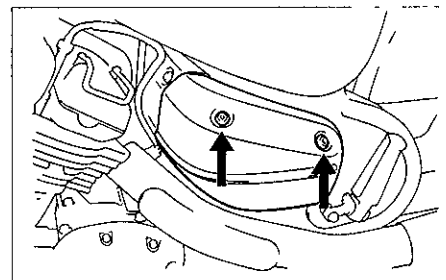
KEEP OUT OF REACH OF CHILDREN.

Storage

When the motorcycle is not used for a month or longer, remove the battery, fully charge it and store it in a cool, dark place.

CAUTION:

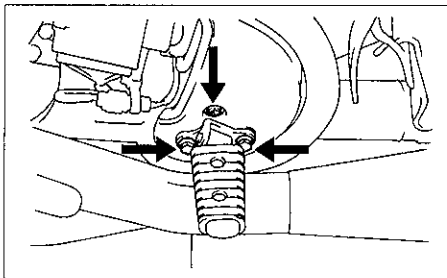
- **Completely recharge the battery before storing. Storing a discharged battery can cause permanent battery damage.**
- **A special battery charger (constant voltage/ampere or constant voltage) is required for recharging a sealed-type battery. Using a conventional battery charger will cause battery damage.**
- **Always make sure the connections are correct when reinstalling the battery.**



Fuse replacement

This motorcycle is equipped with a main fuse box and a sub-fuse box. To reach the main fuse box: Remove the main fuse box cover by removing the screws

PERIODIC MAINTENANCE AND MINOR REPAIR

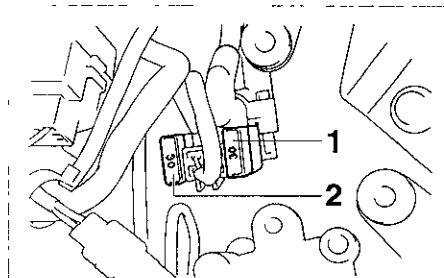


To reach the sub fuse box:

- Remove the left passenger footrest by removing the bolts
- Remove the sub fuse box cover by removing the screw.

6

If a fuse is blown, turn off the main switch and the switch of the circuit in question. Install a new fuse of proper amperage. Turn on the switches and check if the electrical device operates. If the fuse immediately blows again, consult a Yamaha dealer. After checking or replacing a fuse, re-install the covers and the footrest.

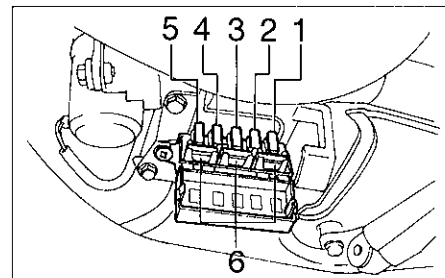


1 Main

2 Spare

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.



1 Ignition

2 Signal

3 Head

4 Fan

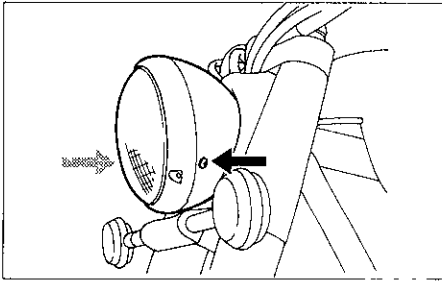
5 Back up (odometer)

6 Spare (x 3)

Specified fuses:

Main.	30A
Ignition:	10A
Signaling system:	10A
Headlight:	15A
Fan:	10A
Back up (odometer):	5A

PERIODIC MAINTENANCE AND MINOR REPAIR

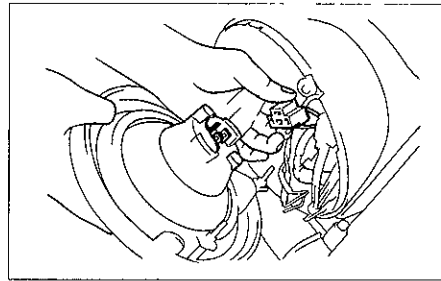


Headlight bulb replacement

This motorcycle is equipped with a quartz bulb headlight.

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

1. Remove the screws holding the light unit assembly.

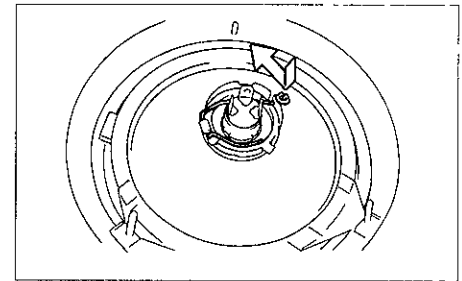


2. Remove the connectors, the light unit assembly and then the bulb holder cover.
3. Turn the bulb holder counter-clockwise to remove it and remove the defective bulb.

⚠ 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.

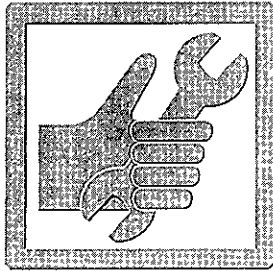


CAUTION:

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 holder cover, connectors and the light unit assembly. If the headlight beam adjustment is necessary, ask a Yamaha dealer to make that adjustment.

PERIODIC MAINTENANCE AND MINOR REPAIR



Troubleshooting

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

6

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.

PERIODIC MAINTENANCE AND MINOR REPAIR

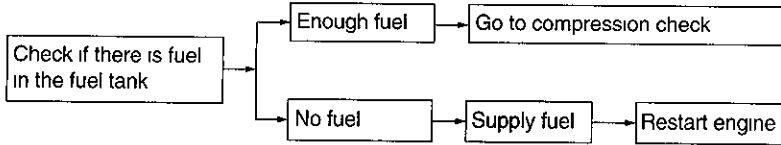
Troubleshooting chart



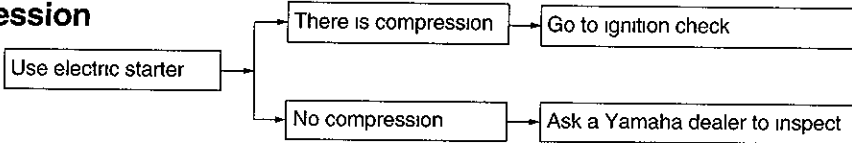
WARNING

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

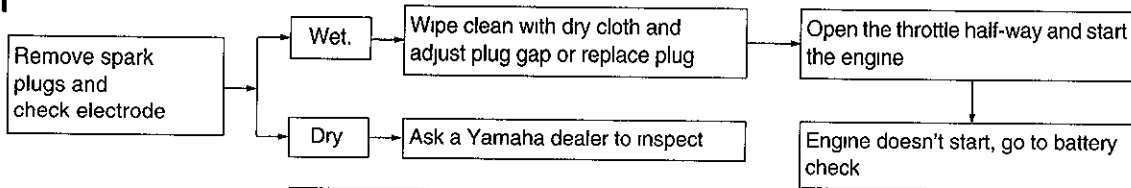
1. Fuel



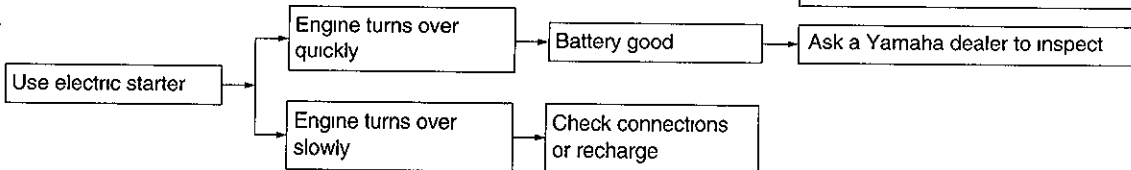
2. Compression



3. Ignition



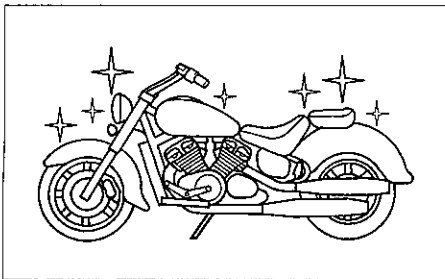
4. Battery



CLEANING AND STORAGE

Cleaning	7-1
Saddlebag cleaning and care	7-2
Storage	7-3

CLEANING AND STORAGE



A. CLEANING

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

1. Before cleaning the motorcycle.
 - a. Block off the end of the exhaust pipes to prevent water entry; a plastic bag and strong rubber band may be used.
 - b. Make sure the spark plugs and all filler caps are properly installed.
2. If the engine case is excessively greasy, apply degreaser with a paint brush. Do not apply degreaser to wheel axles

3. Rinse the dirt and degreaser off with a garden hose. Use only enough pressure to do the job.

CAUTION: _____

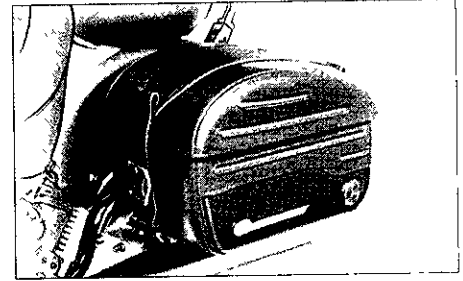
Excessive hose pressure may cause water seepage and deterioration of wheel bearings, front fork, brakes, transmission seals and electrical parts.

Many expensive repair bills have resulted from improper high pressure detergent applications such as those available in coin-operated car washers.

4. Once the majority of the dirt has been hosed off, wash all surfaces with warm water and mild, detergent-type soap. An old toothbrush or bottle brush is handy for hard-to-get-at places.
5. Rinse the motorcycle off immediately with clean water and dry all surfaces with a chamois, clean towel, or soft absorbent cloth
6. Windscreen cleaning (XVZ13AT)

CAUTION: _____

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



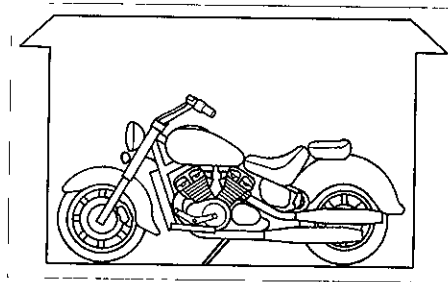
Saddlebag cleaning and care (XVZ13AT)

Use a good grade of saddle soap. Rub lightly over the surface of the soap with a damp cloth or sponge to produce a lather. Apply the lather to the surface of the saddlebag. Allow to dry. When dry, polish with a soft cloth to remove all traces of the dry lather.

If the saddlebag has been exposed to severe weather conditions over a long period of time and has become faded, or if it has been scuffed by rough use, you can use a fine boot creme to return the leather to its original rich, even color.

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

CLEANING AND STORAGE



Exposure to the elements can result in the drying out of the leather saddlebag.

To replenish the oils necessary to beautiful leather, an occasional application of mink oil is recommended. Make sure the saddlebag is clean and dry before applying the mink oil. Using a soft cloth or a dauber, work a thin coat of mink oil into the leather surface of the saddlebag. Wipe off excess immediately and allow to dry for several hours. This application will also enhance the water resistance of the saddlebag.

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 Fill the fuel tank with fuel
- 2 Drain the carburetor float bowls
- 3 Remove the spark plugs, pour about one tablespoon of SAE 10W30 or 20W40 motor oil in each spark plug hole and reinstall the spark plugs. Turn the engine over several times (ground spark plug leads) to coat the cylinder walls with oil.

WARNING

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

4. Lubricate all control cables.
5. Block up the frame to raise both wheels off the ground.
6. Tie a plastic bag over the exhaust pipe outlets to prevent moisture from entering.
7. If storing in a humid or salt-air atmosphere, coat all exposed metal surfaces with a light film of oil. Do not apply oil to any rubber parts or the seat cover.

8. Remove the battery and fully 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 or more than 30°C). See page 6-20 for battery storage precautions.

NOTE: _____
Make any necessary repairs before storing the motorcycle.

MOTORCYCLE IDENTIFICATION AND SPECIFICATIONS

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Key identification number ..	8-1
Vehicle identification number	8-2
Model label	8-2
Specifications	8-3

MOTORCYCLE IDENTIFICATION AND SPECIFICATIONS

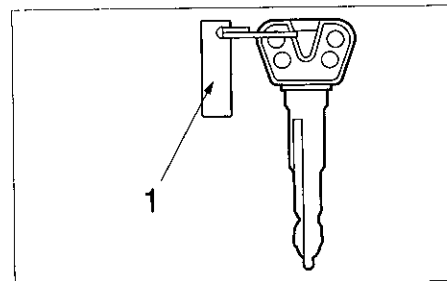
Identification numbers record

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

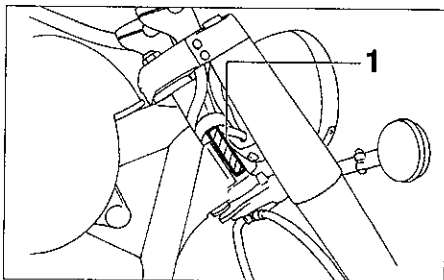


1 Key identification number

Key identification number

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

MOTORCYCLE IDENTIFICATION AND SPECIFICATIONS



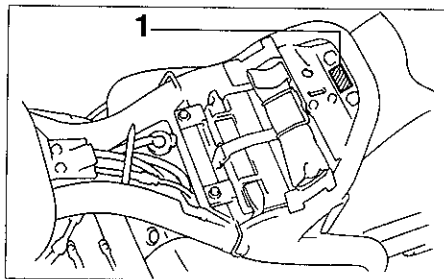
1 Vehicle identification number

Vehicle identification number

The vehicle identification number is stamped into the steering head pipe

NOTE: _____

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



1 Model label

Model label

The model label is affixed to the location shown in the figure. Record the information on this label in the space provided. This information will be needed to order spare parts from your Yamaha dealer.

MOTORCYCLE IDENTIFICATION AND SPECIFICATIONS

Specifications

Model	XVZ13A/XVZ13AT
Dimensions	
Overall length	2,480 mm XVZ1300A
	2,485 mm XVZ1300AT
Overall width	910 mm
Overall height	1,160 mm XVZ1300A
	1,475 mm XVZ1300AT
Seat height	715 mm XVZ1300A
	725 mm XVZ1300AT
Wheelbase	1,695 mm
Minimum ground clearance	150 mm XVZ1300A
	145 mm XVZ1300AT
Minimum turning radius	3,400 mm
Basic weight	
With oil and full fuel tank	330 kg XVZ1300A
	354 kg XVZ1300AT

MOTORCYCLE IDENTIFICATION AND SPECIFICATIONS

Model	XVZ13A/XVZ13AT
Engine Engine type Cylinder arrangement Displacement Bore x stroke Compression ratio Starting system Lubrication system	Liquid-cooled 4-stroke, DOHC V type 4-cylinder 1,294 cm ³ 79 x 66 mm 10 1 Electric starter Wet sump
Engine oil Type Capacity Periodic oil change With oil filter replacement Total amount	See page 4-4 3.5 L 3.7 L 4.3 L
Final gear oil Type Capacity	SAE80API "GL-4" Hypoid Gear Oil 0.2 L
Radiator capacity (including all routes)	2.9 L
Air filter	Dry type element

MOTORCYCLE IDENTIFICATION AND SPECIFICATIONS

Model	XVZ13A/XVZ13AT
Fuel	
Type	Regular gasoline Unleaded fuel only (For Australia)
Fuel tank capacity	18 L
Reserve amount	3.5 L
Carburetor	
Type / quantity	BDS28/4
Manufacturer	MIKUNI
Spark plug	
Type/Manufacturer	DPR7EA-9/NGK or X22EPR-U9/NIPPONDENSO
Spark plug gap	0.8 ~ 0.9 mm
Clutch type	Wet, multiple-disc

MOTORCYCLE IDENTIFICATION AND SPECIFICATIONS

Model	XVZ13A/XVZ13AT					
Transmission Primary reduction system Primary reduction ratio Secondary reduction system Secondary reduction ratio Transmission type Operation Gear ratio <table data-bbox="542 459 590 631" style="margin-left: 200px;"> <tr><td>1st</td></tr> <tr><td>2nd</td></tr> <tr><td>3rd</td></tr> <tr><td>4th</td></tr> <tr><td>5th</td></tr> </table>	1st	2nd	3rd	4th	5th	Spur gear 85/51(1 666) Shaft drive 21/27 × 33/10 (2 566) Constant mesh 5-speed Left foot operation 39/16 (2 438) 30/19 (1 579) 29/25 (1 160) 29/32 (0 906) 21/28 (0 750)
1st						
2nd						
3rd						
4th						
5th						
Chassis Frame type Caster angle Trail	Double cradle 30° 126 mm					
Tire Type Size – Front Rear	Tubeless 150/80-16 71H 150/90-15M/C 74H					

MOTORCYCLE IDENTIFICATION AND SPECIFICATIONS

Model	XVZ13A/XVZ13AT
Brake Front brake – Type Operation Rear brake – Type Operation	Dual disc brake Right hand operation Single disc brake Right foot operation
Suspension Front suspension Rear suspension	Telescopic fork Swingarm (link suspension)
Shock absorber Front shock absorber Rear shock absorber	Coil spring / Oil damper Coil spring / Gas-oil damper
Wheel travel Front wheel travel Rear wheel travel	140 mm 95 mm
Electrical Ignition system Generator system Battery type Battery capacity	T C I (Digital) A C generator YTX20L-BS 12 V 18 AH
Headlight type	Quartz bulb (Halogen)

MOTORCYCLE IDENTIFICATION AND SPECIFICATIONS

Model	XVZ13A/XVZ13AT
Bulb voltage, wattage × quantity	
Headlight	12 V 60 W / 55 W
Tail / brake light	12 V 5 W / 21 W
Flasher light	12 V 21 W × 4
Meter light	12 V 1.7 W × 2
Neutral indicator light	12 V 1.7 W × 1
High beam indicator light	12 V 1.7 W × 1
Turn indicator light	12 V 1.7 W × 1
Fuel level indicator light	12 V 3.0 W × 1
Engine overheat indicator light	12 V 1.7 W × 1
Oil level indicator light	12 V 1.7 W × 1
Engine trouble indicator light	12 V 1.7 W × 1

HOW TO USE THE CONVERSION TABLE

HOW TO USE THE CONVERSION TABLE 9-1

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	7 233	ft lb
	m kg	86 794	in lb
	cm kg	0 0723	ft lb
	cm kg	0 8679	in lb
Weight	kg	2 205	lb
	g	0 03527	oz
Speed	km/hr	0 6214	mph
Distance	km	0 6214	mi
	m	3 281	ft
	m	1 094	yd
	cm	0 3937	in
	mm	0 03937	in
Volume / Capacity	cc (cm ³)	0 03527	oz (IMP liq)
	cc (cm ³)	0 06102	cu in
	lit (liter)	0 8799	qt (IMP liq)
	lit (liter)	0 2199	gal (IMP liq)
Misc	kg/mm	55 997	lb/in
	kg/cm ²	14 2234	psi (lb/in ²)
	Centigrade (°C)	9/5 + 32	Fahrenheit (°F)

NOISE REGULATION (FOR Australia) 10-1

NOISE REGULATION

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.

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PRINTED ON RECYCLED PAPER

YAMAHA
YAMAHA MOTOR CO., LTD

PRINTED IN JAPAN
96 9 - 03 x 1 CR
(英)