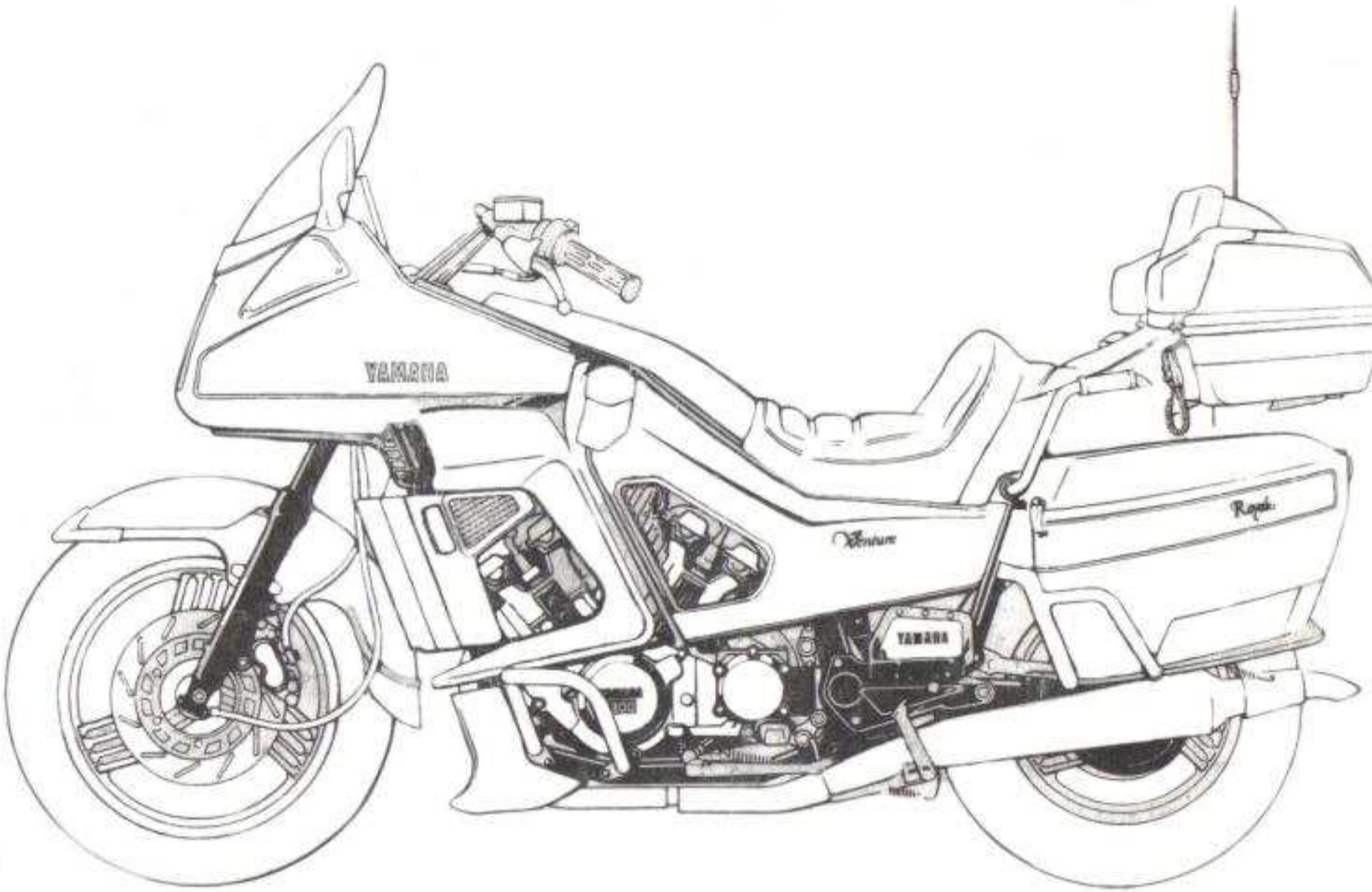

YAMAHA
YAMAHA

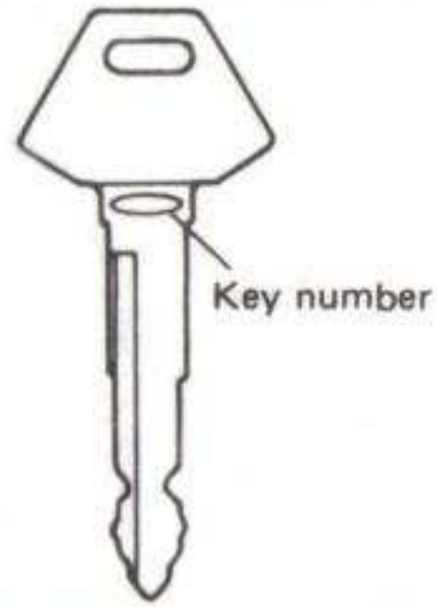
IDENTIFICATION NUMBERS RECORD

1. KEY NUMBER:

2. VEHICLE NUMBER:

3. ENGINE NUMBER:

Your key identification number is stamped on your key as shown in the following illustration.
Record this number in the space provided for reference if you need a new key.



Record your vehicle and engine numbers in the spaces provided to assist you in ordering spare parts from your Yamaha dealer or for reference in case your vehicle is stolen. (See page 4-1)

XVZ13DU/XVZ13DUC
OWNER'S MANUAL

1st Edition, July 1987

Printed in Japan
P/N LIT-11626-06-06

INTRODUCTION

Congratulations on your purchase of the Yamaha XVZ13DU/XVZ13DUC. This model represents the product of many years of Yamaha experience in the production of fine sporting, touring, and pacesetting racing machines. You can now appreciate the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields.
This manual will provide the owner with a good basic understanding of the operation, and basic maintenance and inspection items of this vehicle. If you have any questions regarding the operation or maintenance of your motorcycle, please consult a Yamaha dealer.

NOTE:
Some data in this manual may become outdated due to improvements made to this model in the future. If there is any question concerning this manual, consult your nearby Yamaha dealer.

This Yamaha Motorcycle in its design and manufacture fully complies with the emissions standards for clean air applicable at the date of manufacture. Yamaha has met these standards without reducing the motorcycle's performance or economy of operation. To maintain these high standards, it is important that you and your dealer pay close attention to the recommended maintenance schedules and operating instructions contained within this manual.

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

⚠ WARNING:

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

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

NOTE

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

⚠ CAUTION:

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

⚠ WARNING:

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

NOTE:

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

⚠ TIPS FOR SAFETY

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 mtorcycle. Making yourself conspicuous appears to be very effective in reducing the chance of this type of accident.

   Therefore:

   a. Wear a brightly colored jacket.
   b. Use extra caution when you approach and pass through intersections, since intersections are the most likely places for motorcycle accidents.
   c. Ride where other motorists can see you. Avoid riding in another motorist's "blind spot."
4. Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current motorcycle license.

   a. Make sure you are qulified. Also, only lend your motorcycle to experienced operators.

b. Know your skills and limits. Staying within your limits may help you to avoid an accident.
c. We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with your motorcycle and all of its controls.

5. Many motorcycle accidents have been caused by motorcycle operator errors. A typical error made by the operator is veering wide on a turn due to EXCESSIVE SPEED or undercornering (insufficient lean angle for the speed).
   a. Always obey the speed limits and never travel faster than warranted by road and traffic conditions.
   b. Always signal before turning or changing lanes. Make sure other motorists see you.
6. Operator's and passenger's posture are important for proper control.
   a. The operator should keep both hands on the handlebars and both feet on the operator footrests during operation to maintain control of the motorcycle.
   b. The passenger should always hold on to the operator, or the seat strap or grab bar if the motorcycle is so equipped with both hands and keep both feet on the passenger footrests.
   c. Never carry a passenger unless he or she can firmly place both feet on the passenger footrests.

7. Never ride under the influence of alcohol or drugs.
8. This motorcycle is designed for on-road use only. It is not suitable for off-road use.

PROTECTIVE APPAREL

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

1. Always wear an approved helmet
2. Wear a face shield or goggles. Wind on your unprotected eyes could contribute to an impairment of vision which could delay seeing a hazard.
3. The use of heavy boots, jacket, trousers, gloves, etc. is effective in preventing or reducing abrations 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 clothings 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 386 lbs. (175 kg) XVZ13DU/384 lbs. (174 kg) XVZ13DUC. When loading within these weight limits, keep the following in mind:

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

ACCESSORIES

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

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

1. Never install accessories or carry cargo that would impair the performance of your motorcycle. Carefully inspect the accessory before using it to make sure it does not in any way reduce ground clearance or cornering clearance, limit suspension travel, steering travel or control operation, or obscure lights or reflectors.
   a. Accessories fitted to the handlebar or the front fork area can create instability due to improper weight distribution or aerodynamic changes. If accessories are added to the handlebar or front fork area, they must be as light weight 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 motorcycle's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

GASOLINE AND EXHAUST GAS

1. **GASOLINE IS HIGHLY FLAMMABLE:**
   a. **Always turn off the engine when refueling.**
   b. **Take care not to spill any gasoline on the engine or exhaust pipe(s)/muffler(s) when refueling.**
   c. **Never refuel while smoking or in the vicinity of an open flame.**
2. **Never start the engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate your motorycle in an area that has adequate ventilation.**
3. **Always turn off the engine before leaving the motorcycle unattended and remove the ignition key. When parking the motorcycle, note the following:**
   a. **The engine and exhaust pipe(s)/muffler(s) may be hot. Park the motorcycle in a place where pedestrians or children are not likely to touch these hot areas.**
   b. **Do not park the motorcycle on a slope or soft ground: the motorcycle may fall over.**
   c. **Do not park the motorcycle near an flammable source, e.g. a kerosene heater, or near an open flame. The motorcycle could catch fire.**

4. When transporting the motorcycle in another vehicle, be sure it is kept upright and that the fuel cock(s) is turned to "ON" or "RES" (for vacuum type)/"OFF" (for manual type). If it should lean over, gasoline may leak out of the carburetor or fuel tank.
5. If you should swallow any gasoline, inhale a lot of gasoline vapor, or allow gasoline to get in your eye(s), see your doctor immediately. If any gasoline spills on your skin or clothing, immediately wash with soap and water and change your clothes.

CONTENTS

VENTURE/VENTURE ROYALE MOTORCYCLE LIMITED WARRANTY

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

THE PERIOD OF WARRANTY for the Yamaha Venture/Venture Royale, not including the fairing, saddlebags, travel trunk, related mounting hardware, and audio components installed as original equipment, shall be two (2) years from the date of purchase, or 24,000 miles of use, whichever occurs first. The fairing, saddlebags, travel trunk, and related mounting hardware shall be warranted for one (1) year from the date of purchase. (See the section entitlted "Audio Warranty" for warranty information on the audio system.)

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

DURING THE PERIOD OF WARRANTY any authorized Yamaha motorcycle dealer will provide:

1. The replacement of any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the machine's warranty period. All parts replaced under warranty become property of Yamaha Motor Corporation, U.S.A.
2. Any repairs made necessary by faulty workmanship or material from the factory.

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

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

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

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

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

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

AUDIO WARRANTY (Venture Royale Only)
Yamaha Motor Corporation, U.S.A. warrants that factory-installed audio components which prove defective due to improper workmanship or material will be repaired or replaced, at Yamaha's option, without charge for parts or labor for a period of one (1) year from the date of purchase of the motorcycle, subject to certain stated limitations.

This warranty excludes audio components damaged or affected by:

1. Accident or collision.
2. Misuse or neglect.
3. Alteration, improper installation or connection.
4. Unauthorized adjustment or repairs.
5. Use in an application for which the audio component was not designed.

In addition, any audio component which has had the serial number in any way tampered with or removed will be excluded from warranty.

This warranty does not cover the elimination of static or other electrical interference.

Audio components and parts repaired or replaced under this warranty will be warranted for the balance of the audio warranty period. All defective components or parts replaced under warranty become the property of Yamaha Motor Corporation, U.S.A.

EMISSIONS CONTROL SYSTEM WARRANTY
Yamaha Motor Corporation, U.S.A. also warrants to the ultimate purchaser and each subsequent purchaser of each Venture/Venture Royale that the vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S.

emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards for 30,000 km (18,642 miles) or five years, whichever occurs first. Failures other than those resulting from defects in material or workmanship which arise solely as a result of owner abuse and / or lack of proper maintenance are not covered by this warranty.

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

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

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

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


YAMAHA
BRIDGESTONE
BRIDGESTONE

①

MFD. BY YAMAHA MOTOR CO., LTD. (Month/Year) GVWR xxx LBS. GAWR FRONT – xxx LBS. WITH xxxxx TIRE. xxxxx RIM, AT xx PSI COLD. REAR – xxx LBS. WITH xxxxx TIRE, xxxxx RIM, AT xx PSI COLD.
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
VEHICLE ID NO. x x x x x (17 digits)
TYPE CLASSIFICATION. . . . . MOTORCYCLE.

②

VEHICLE EMISSION CONTROL INFORMATION	THIS VEHICLE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 19** MODEL YEAR NEW MOTORCYCLES AND TO ** HC ENGINE FAMILY EXHAUST EMISSION STANDARD IN CALIFORNIA.
ENGINE FAMILY: **** EVAP. FAMILY: *** DISPLACEMENT: ** cc EXHAUST EMISSION CONTROL SYSTEM: EM.	

ENGINE TUNE-UP SPECIFICATIONS AND ADJUSTMENTS: AT NORMAL OPERATING TEMPERATURE. PUT VEHICLE IN THE UPRIGHT POSITION, TRANSMISSION IN NEUTRAL, AND WARM UP ENGINE

ITEM	SPEC	INSTRUCTIONS
1. IGNITION TIMING **	BTDC AT IDLE SPEED	NO ADJUSTMENT
2. IDLE SPEED (RPM) ***		ADJUST THROTTLE STOP SCREW
3. IDLE MIXTURE		NO ADJUSTMENT
4. VALVE CLEARANCE (MM)	IN: *** EX: ***	SEE SERVICE MANUAL
5. SPARK PLUG: ***	SPARK PLUG GAP (MM): ***	

FUEL SPECIFICATIONS	ENGINE LUBRICANT SPECIFICATIONS
GASOLINE GRADE: REGULAR (LEADED) RESEARCH OCTANE: ** MIN	ENGINE OIL: ***

YAMAHA MOTOR CO., LTD.

③

MOTORCYCLE NOISE EMISSION CONTROL INFORMATION

THIS **** YAM **** MOTORCYCLE MEETS EPA NOISE EMISSION REQUIREMENTS OF ** dB (A) AT **** RPM BY THE FEDERAL TEST PROCEDURE. MODIFICATIONS WHICH CAUSE THIS MOTORCYCLE TO EXCEED FEDERAL NOISE STANDARDS ARE PROHIBITED BY FEDERAL LAW. SEE OWNER'S MANUAL.

④

Keep oil between level gauge lines.
USE HYPOID GEAR OIL
SAE #80

YAMAHA MOTOR CO., LTD.

⑤

CAUTION (AIR SUSPENSION)

1. **Containing highly compressed air.**
2. **Use only air or nitrogen gas, other gases may cause explosion.**
3. **Do not incinerate.**
4. **Servicing requires special knowledge and tools. Read owner's manual before operating this suspension.**

⑥

YAMAHA MONOCROSS SUSPENSION "DE CARBON" SYSTEM

WARNING

△

••••• Sarial No. •••••

YAMAHA MOTOR CO., LTD.

1. Contains high pressure nitrogen gas.
2. See owner's manual for disposal and adjusting unit.
3. Do not open. Do not incinerate. Incineration, puncture or disassembly may cause this unit to explode.

⑦

NEVER
DISASSEMBLE

⑧

CAUTION (AIR DRIER)

1. Replace desiccant every 24 mos.
2. Read owner's manual.

⑨

WARNING

- **DO NOT OPEN CONSOLE BOX LID WHILE RIDING.**
- **MAXIMUM LOAD OF CONSOLE BOX: 4.4 LBS (2 KG) EACH SIDE**

⑩

WINDSHIELD CLEANING

CLEAN THE WINDSHIELD WITH A CLOTH OR FOAM RUBBER DAMPED WITH A NEUTRAL DETERGENT, AND AFTER CLEANING, THOROUGHLY WASH OUT WITH WATER.
SOME CLEANING COMPOUNDS FOR PLASTICS MAY LEAVE SCRATCHES ON SURFACE OF THE WINDSHIELD. BEFORE USING, MAKE A TEST BY POLISHING AN AREA WHICH DOES NOT AFFECT YOUR VISIBILITY.

CAUTION

AVOID USING ANY ALKALINE OR STRONG ACID CLEANER, GASOLINE, BRAKE FLUID, OR ANY OTHER SOLVENT.

⑪

WARNING

- DO NOT EXCEED THESE MAXIMUM LOADS:
  – SADDLEBAGS: 20 LBS (9 KG) EACH
  – TRAVEL TRUNK: 20 LBS (9 KG)
  – TRAVEL TRUNK BRACKET WITHOUT TRAVEL TRUNK: 20 LBS (9 KG)
- TOTAL WEIGHT OF RIDER, PASSENGER, AND CARGO MUST NOT EXCEED THE MOTORCYCLE LOAD CAPACITY SHOWN IN THE OWNER'S MANUAL.
- DISTRIBUTE WEIGHT EVENLY FROM SIDE TO SIDE.
- UNAUTHORIZED ACCESSORIES AND IMPROPER LOADING CAN ADVERSELY AFFECT OPERATING STABILITY AND PERFORMANCE.
- NEVER RIDE AN ACCESSORY-EQUIPPED MOTORCYCLE ABOVE 80 MPH (120 KM/H), THIS SPEED LIMIT MAY BE REDUCED BY SUCH FACTORS AS IMPROPER LOADING, POOR TIRE OR OVERALL MOTORCYCLE CONDITIONS, POOR ROAD SURFACES, ADVERSE WEATHER CONDITIONS, ETC.
- READ THE LOADING AND TIRE SECTIONS IN THE OWNER'S MANUAL.

⑫

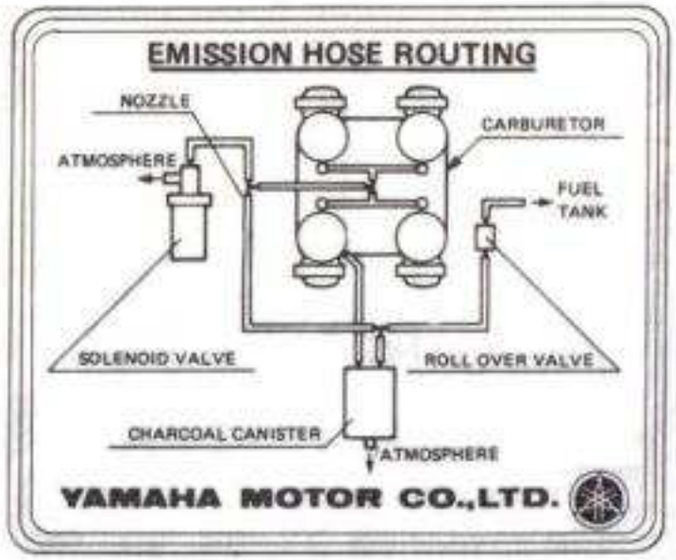
CAUTION:
NEVER ALLOW ANY PART OF CARGO TO TOUCH THIS COVER.

⑬

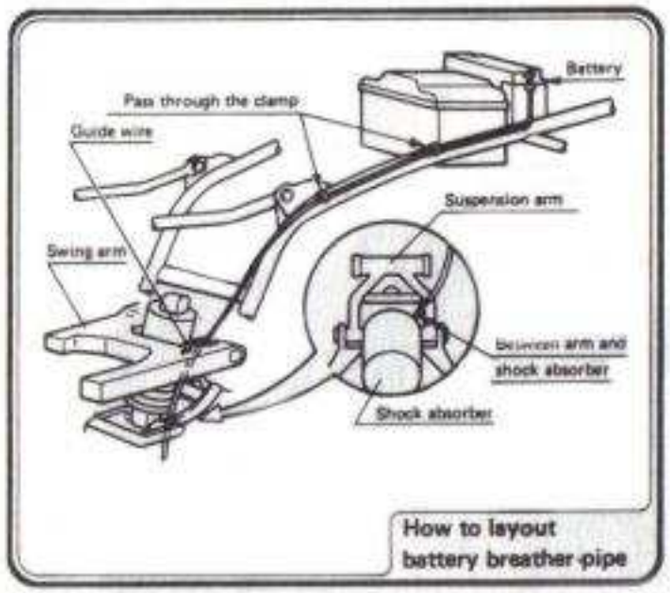
WARNING

DO NOT OPERATE "VENTURE CRUISE" WITHOUT FIRST READING OWNER'S MANUAL.

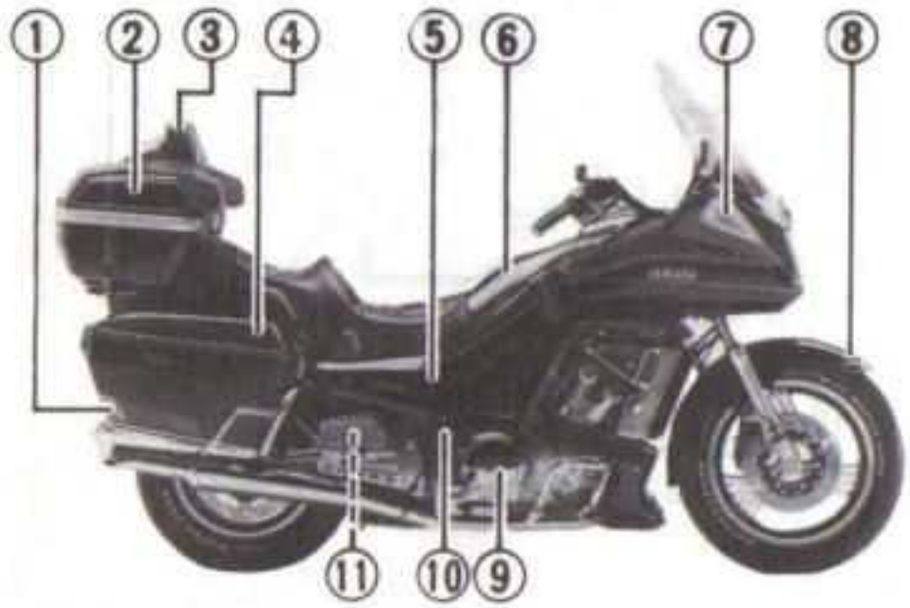
⑭ **for California**

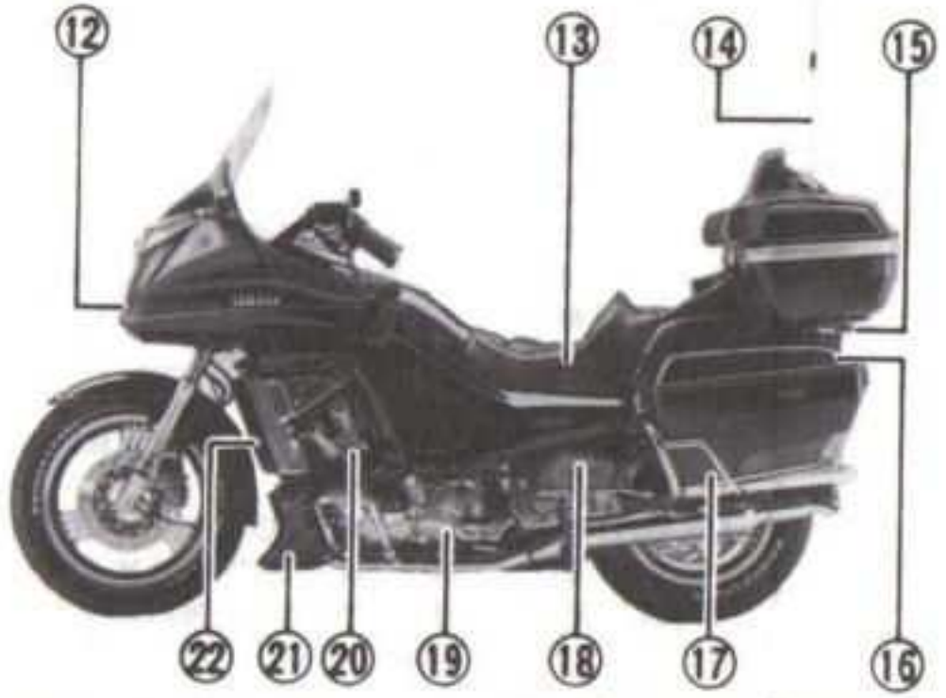


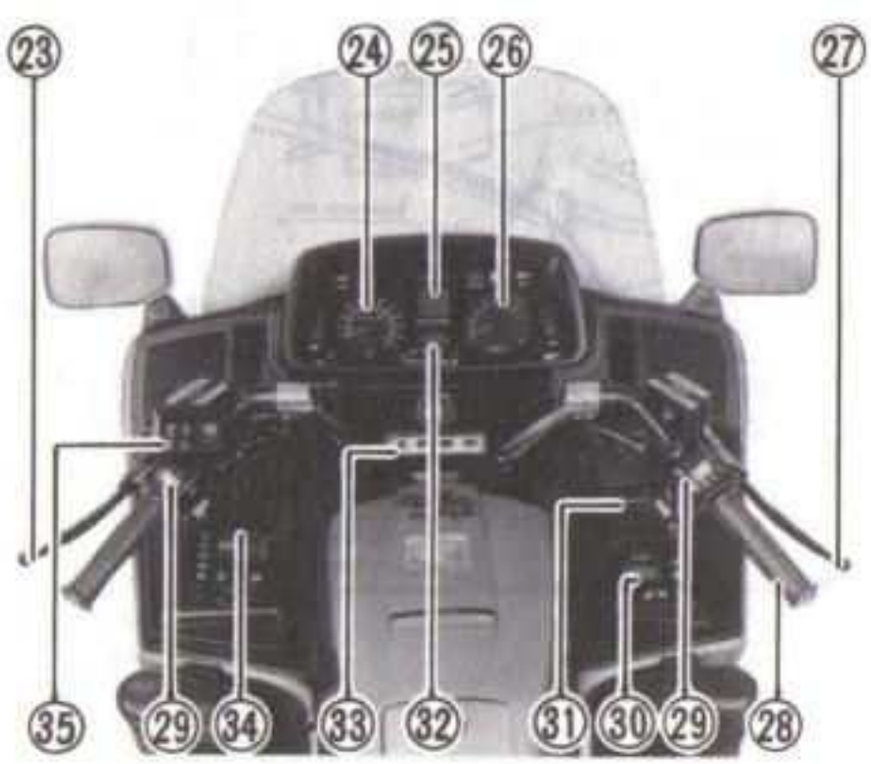
⑮



DESCRIPTION





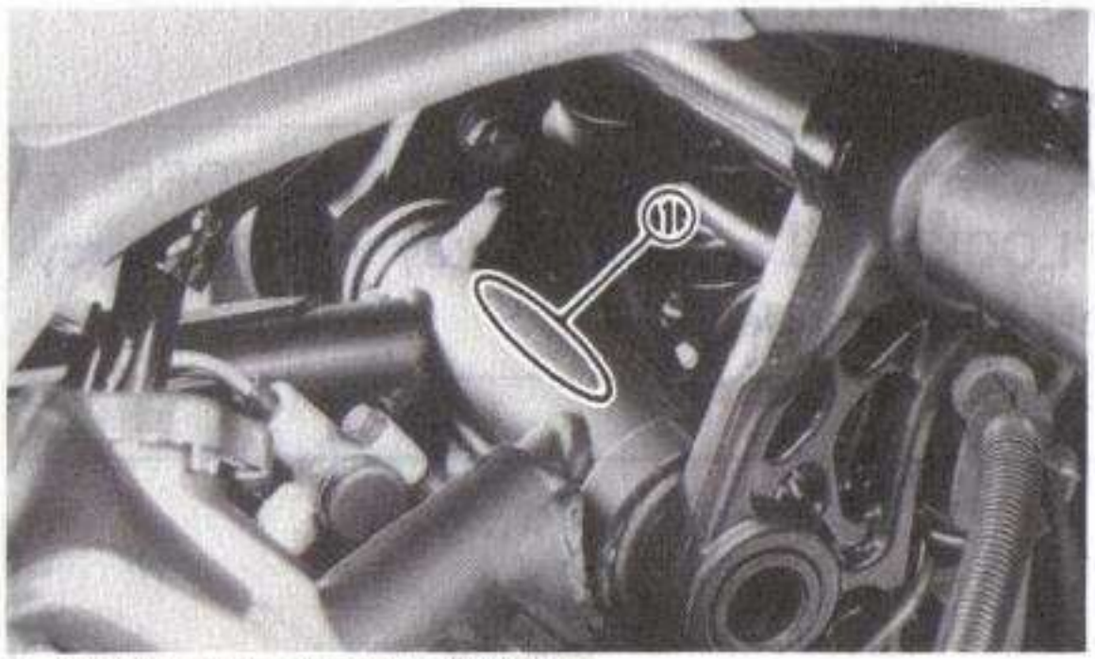


1. Rear flasher light
2. Travel trunk
3. Back rest
4. Saddlebag
5. Side panel
6. Top cover
7. Front flasher light (Front position)
8. Front fender
9. Brake pedal
10. Lower side cover
11. Fuel cock
12. Headlight
13. Seat
14. Antenna
15. Helmet holder
16. Brake/Taillight
17. Muffler
18. Passenger footrest
19. Change pedal
20. Lower panel
21. Lower cowl
22. Radiator
23. Clutch lever
24. Speedometer
25. Display panel
26. Tachometer
27. Brake lever
28. Throttle grip
29. Handlebar switch
30. C.B. Radio
31. Air suspension controller
32. Digital clock
33. Indicator panel
34. Control unit
35. Remote control

MOTORCYCLE IDENTIFICATION

Vehicle identification number

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



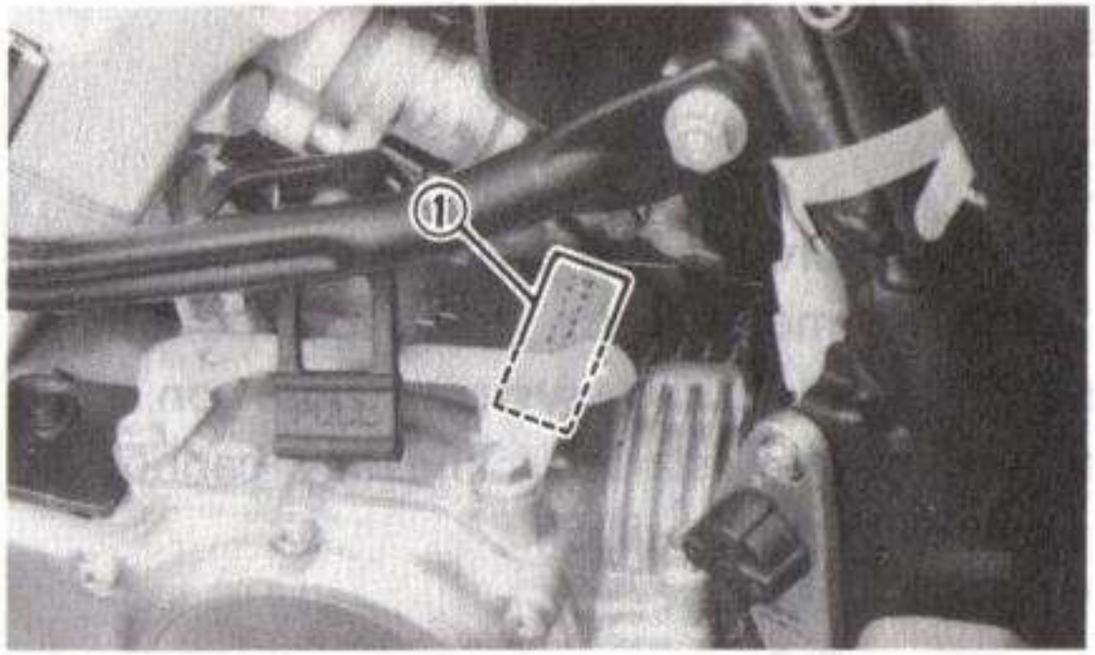
1. Vehicle identification number

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.

Engine serial number

The engine serial number is stamped into the elevated part of the left section of the engine.



1. Engine serial number

NOTE:

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

CONTROL FUNCTIONS

Main switch

Functions of the respective switch positions are as follows:

ON:

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

ACC:

Auxiliary D.C. terminal, audio system, C.B. radio and air suspension controller come on but all other circuits are off.

OFF:

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

LOCK:

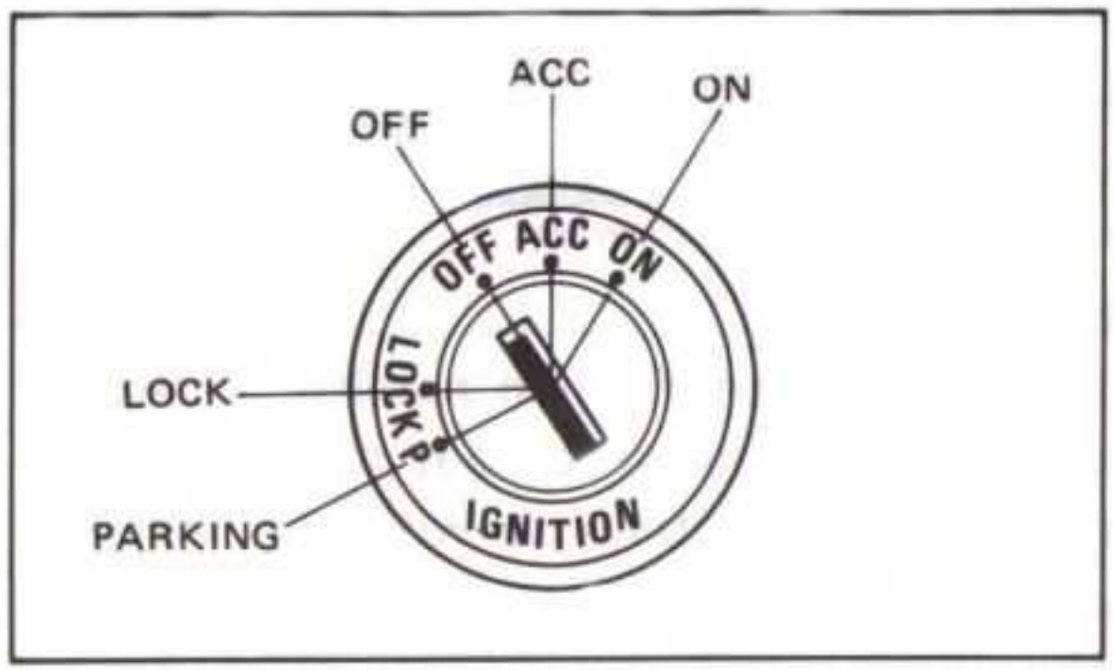
The steering is locked in this position, and all electrical circuits are switched off. The key can be removed in this position. Refer to "Steering lock" (Page 5-21) for proper operation.

PARKING:

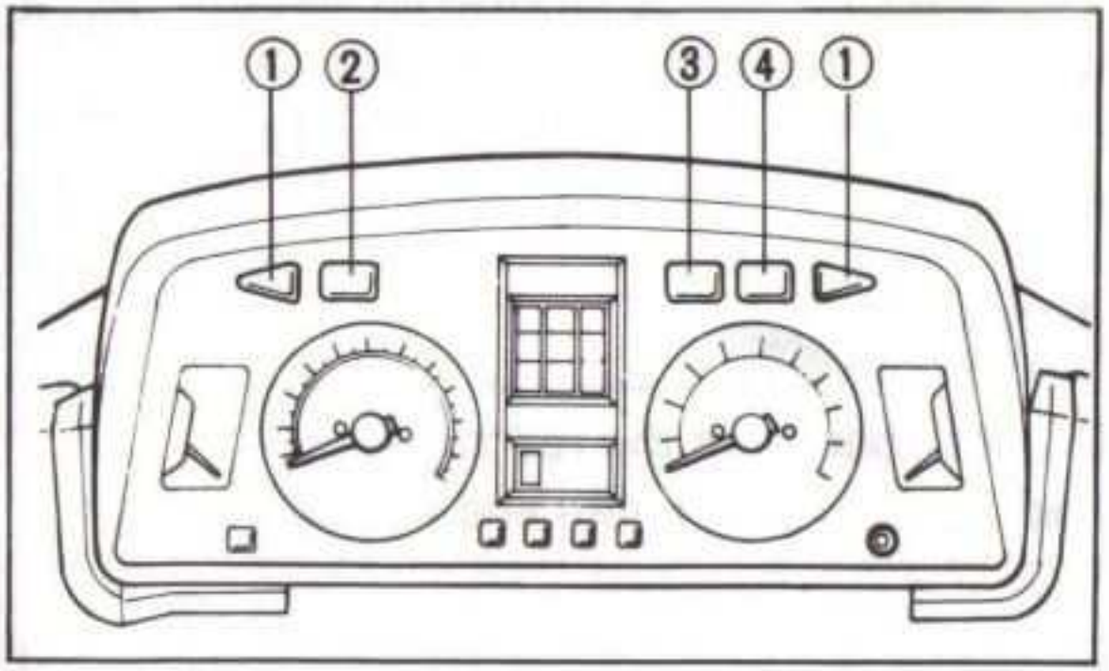
The steering is locked in this position, and the taillight and Front position light come on but all other circuits are off. The key can be removed in this position.

NOTE:

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



Indicator lights



1. "TURN" indicator light
2. "NEUTRAL" indicator light
3. "HIGH BEAM" indicator light
4. Headlight failure indicator light "HEAD LAMP"

"TURN" indicator light (orange):
This indicator flashes when the turn switch is "ON".

"HIGH BEAM" indicator light (blue):
This indicator comes on when the headlight high beam is used.

Headlight failure indicator light "HEAD LAMP" (white):
If either headlight filament burns out, the other filament will come on and the indicator will come on.

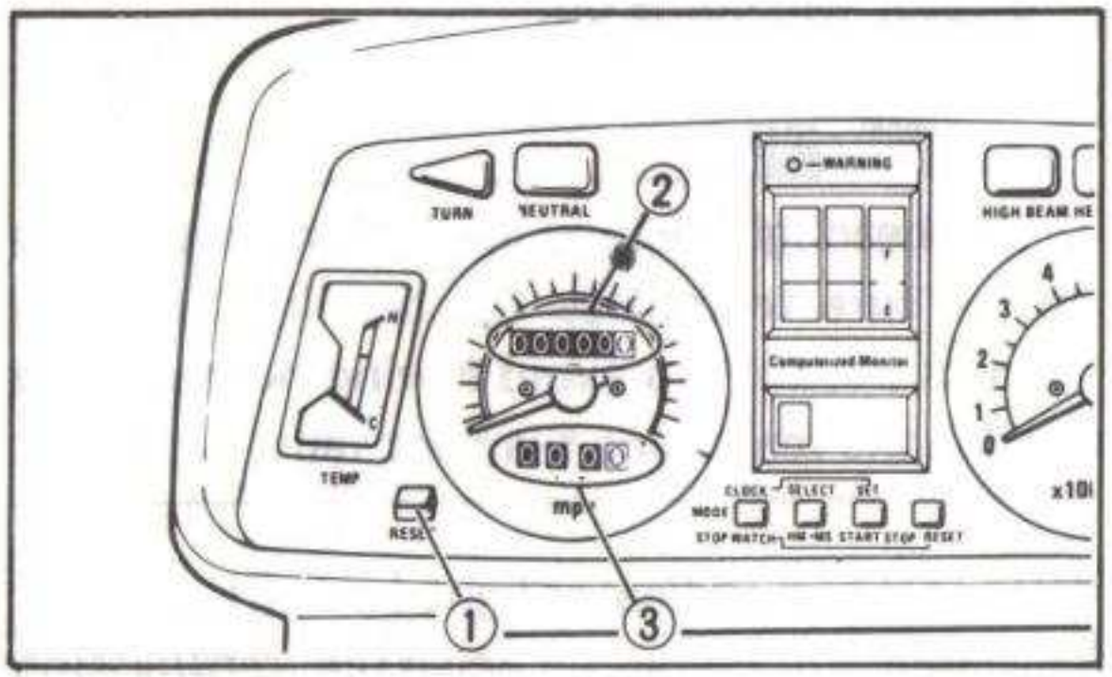
⚠ WARNING:

If the headlight failure indicator light comes on, be sure to replace the headlight bulb as soon as possible to avoid having no headlight at all if the remaining filament fails.

"NEUTRAL" indicator light (green):
This indicator comes on when the transmission is in neutral.

Speedometer

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



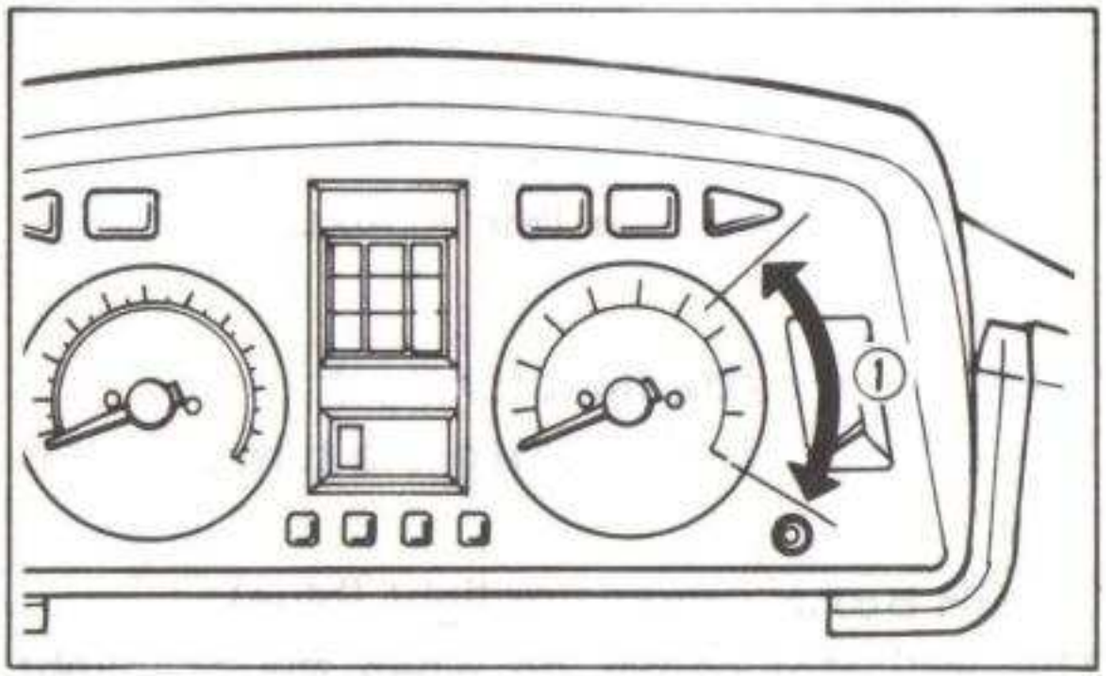
1. Reset switch 2. Odometer 3. Trip odometer

Tachometer

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

⚠ CAUTION:

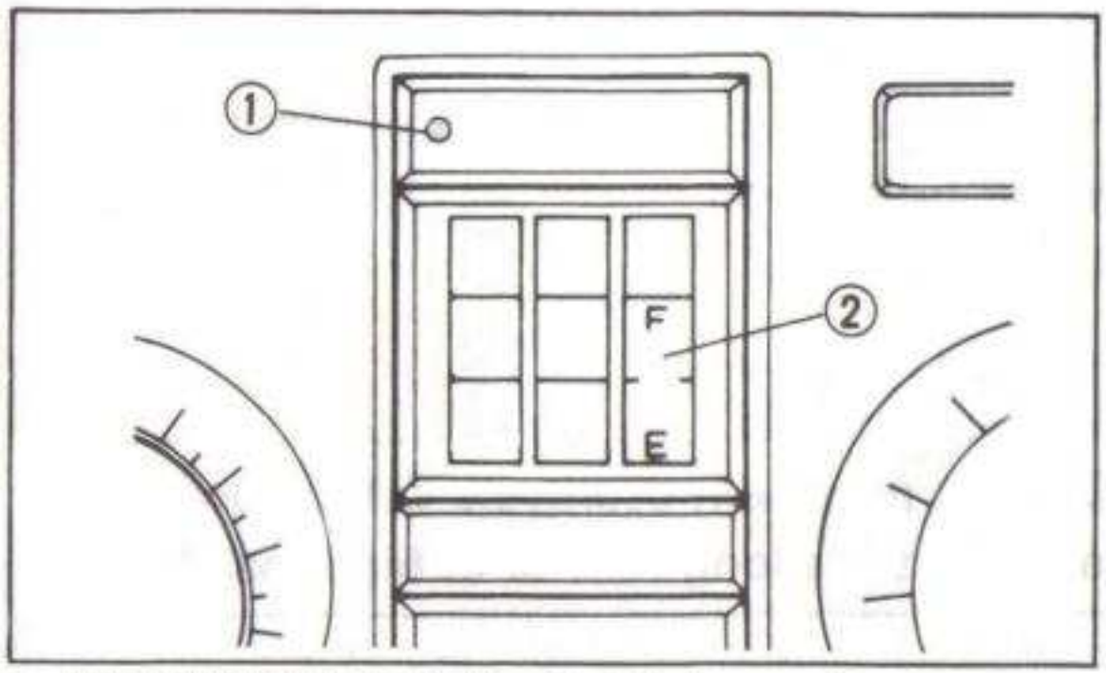
Do not operate in the red zone
Red zone: 7,500 r/min and above



1. Red zone

Computerized monitor system

This system monitors seven separate functions and will warn you of any malfunction if encountered until it is fixed. In addition, the fuel gauge in this system indicates the amount of fuel in the tank.



1. "WARNING" light (red) 2. Display panel

Operation

NOTE:

Before starting out on the road, check the motorcycle conditions using computerized monitor system.

1. When the main switch is turned on, all seven liquid crystal displays (LCDs) come on, with the bottom fuel display (▮▮▮▮▮▮) indicating the amount of fuel in the tank.
2. When the engine is started, the system begins its scan of the motorcycle conditions. From top to bottom all the LCDs flash on and then off in sequence. If any one condition is found improper or inadequate, the red warning light will begin flashing and the LCD for the area in question will remain displayed.

⚠ WARNING:

If any LCD remains displayed or the warning light flashes on, correct the problem immediately. If the correction is beyond your capability, ask a Yamaha dealer or other qualified mechanic.

Display panel


: STND

This indicator comes on when the sidestand is down. Be sure to retract it before starting out on the road.


: BRK

This indicator comes on when the brake fluid level in the front brake master cylinder is below specification. In this case, ask a Yamaha dealer or qualified mechanic immediately to inspect the brake system and add brake fluid.

⚠ WARNING:

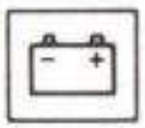
Do not run the motorcycle with a low brake fluid level for a long time or at high speeds.


: OIL

This indicator comes on when the engine oil level is low. If it remains on or keeps flickering while riding, add engine oil at the first opportunity.

⚠ WARNING:

Do not run the motorcycle with a low engine oil level for a long time or at high speeds.


: BATT

This indicator comes on when the battery fluid level is low. If it remains on, add distilled water at the first opportunity.

⚠ CAUTION:

Continuous riding with a low battery fluid level will damage the battery.

: HEAD

This indicator comes on when the headlight bulb is burned out. If it remains on, have the bulb replaced and correctly adjusted at the first opportunity.

: TAIL

This indicator comes on when the taillight and/or brake light bulb is burned out. If it remains on, have the light replaced at the first opportunity.

: FUEL

This indicator comes on when the fuel level is low. If it remains on or keeps flickering while riding, add fuel at the first opportunity.

NOTE:

When this indicator is displayed, the remaining fuel is 4.0 L (0.9 Imp gal, 1.1 US gal).

⚠ CAUTION:

Failure to observe the following precautions could lead to a malfunction in the microcomputer or damage in the electrical circuit.

1. **Taillights, brake lights, and other bulbs must be replaced with bulbs of specified wattage.**
2. **Electrical accessories must not be connected to any computerized monitor system circuit (ex: taillight, headlight, etc.).**
3. **The lower side of the instrument panel must never get wet or be subjected to steam.**

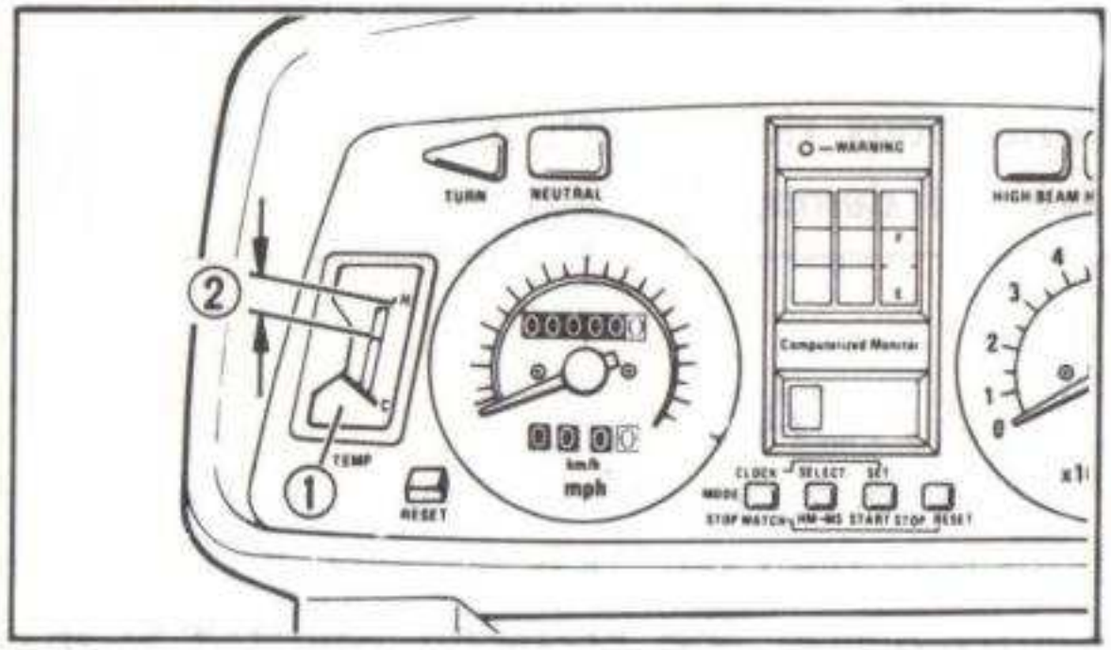
4. **Never bump or jar the display panel, and never press it hard.**
5. **Never place a magnet or other magnetized objects near the display panel.**

Engine temperature gauge

This gauge indicates the coolant temperature when the main switch is ON. The engine operating temperature will vary with changes in weather and engine load. If the needle points to the red zone or higher, stop your motorcycle and allow the engine to cool. (See page 9-19 for more detail.)

⚠ CAUTION:

When the engine is overheated, do not continue riding.



1. Engine temperature gauge 2. Red zone

Voltmeter

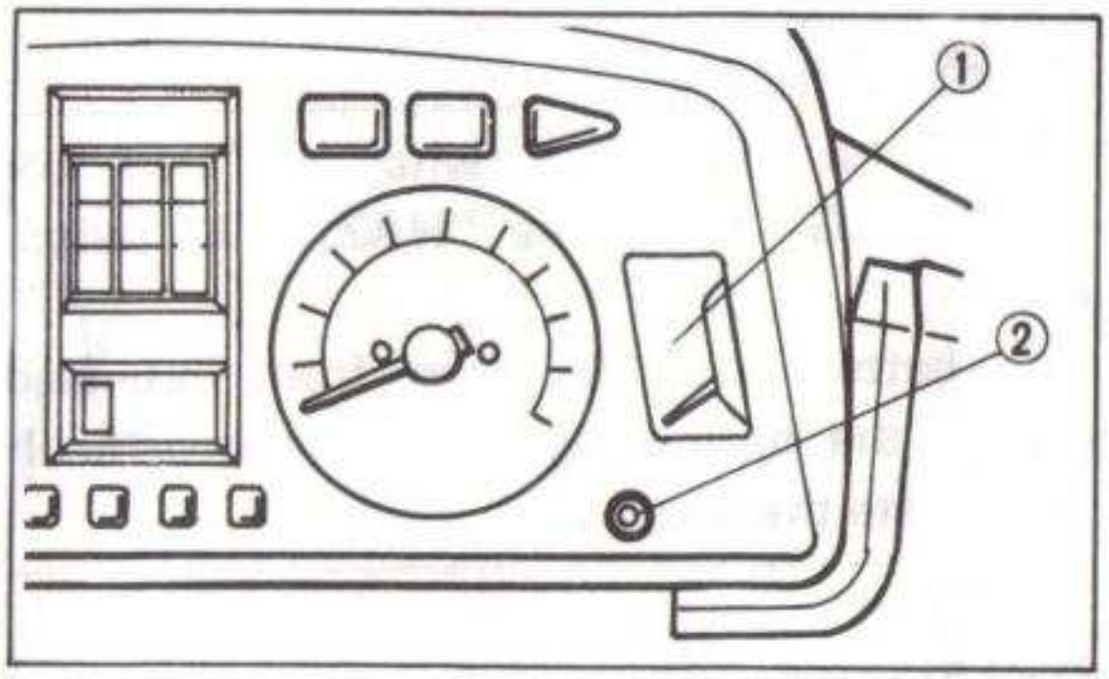
This voltmeter indicates the state of battery charging.

⚠ CAUTION:

If the needle is either in the yellow line during running, go to a Yamaha dealer or other qualified mechanic.

Illumination control knob

This control knob is used to adjust the intensity of the meter light. Turning the knob clockwise darkens the light and turning it counterclockwise brightens the light.



1. Voltmeter 2. Illumination control knob

Gear indicator panel

This panel indicates the gear position which is selected.

Digital clock

This digital clock functions both as a watch and as a stop watch. A clock mode (watch or stop watch) can be displayed on the display panel by turning "ON" the main switch.

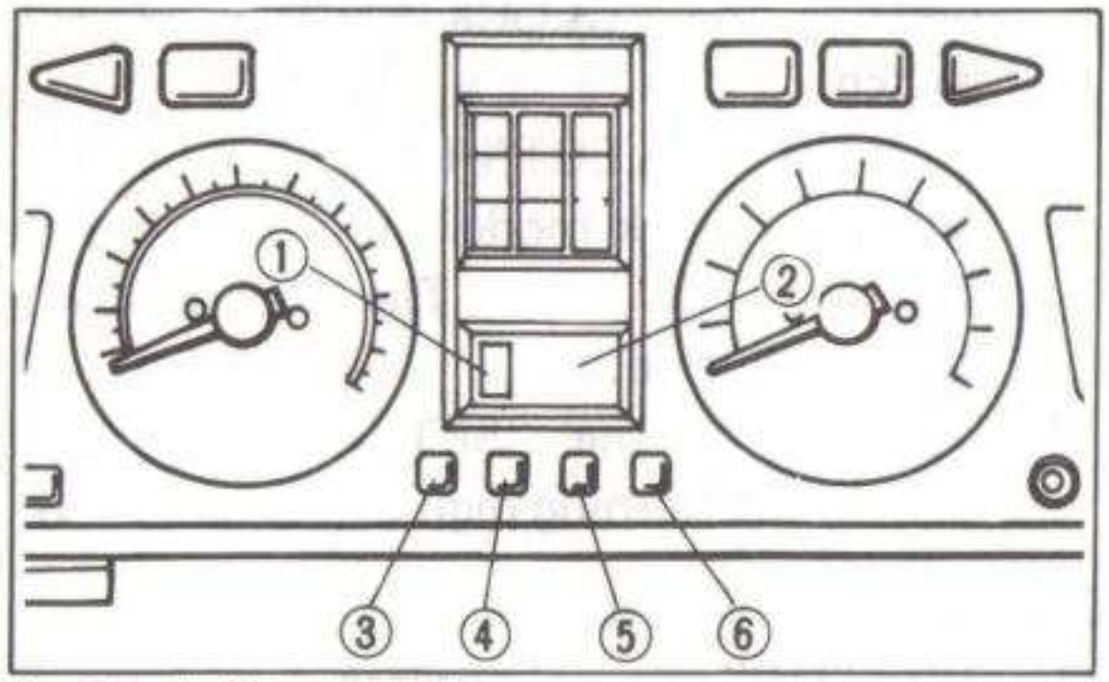
CLOCK ADJUSTMENT

1. Turn "ON" the main switch.
2. Place the clock in the clock mode by pressing the "CLOCK/STOP WATCH" switch.
3. Press the "SELECT/HM-MS" switch and select the clock model (hour or minute) you want to adjust. The flashing digit can be adjusted.
4. By pressing the "SET/START-STOP" switch, the flashing digit can be adjusted.

STOP WATCH OPERATION

1. Turn "ON" the main switch.
2. By pressing the "CLOCK/STOP WATCH" switch, place the clock in the stop watch mode.

3. Select the display of the hour and minutes or the minutes and seconds by pressing the "SELECT/HM-MS" switch.
4. By pressing the "SET/START-STOP" switch, the watch can be started or stopped.
5. The watch can be reset by pressing the "RESET" switch.



1. Gear indicator pannel
2. Digital clock
3. "CLOCK/STOP WATCH" switch
4. "SELECT/HM-MS" switch
5. "SET/START STOP" switch
6. "RESET" switch

"HAZARD" switch

The hazard lights should be used under emergency or hazardous conditions. Both front and rear flasher lights will flash simultaneously, when this switch is turned on.

⚠CAUTION:

Always turn the main switch to "OFF" or "PARKING" while the "HAZARD" switch is on.

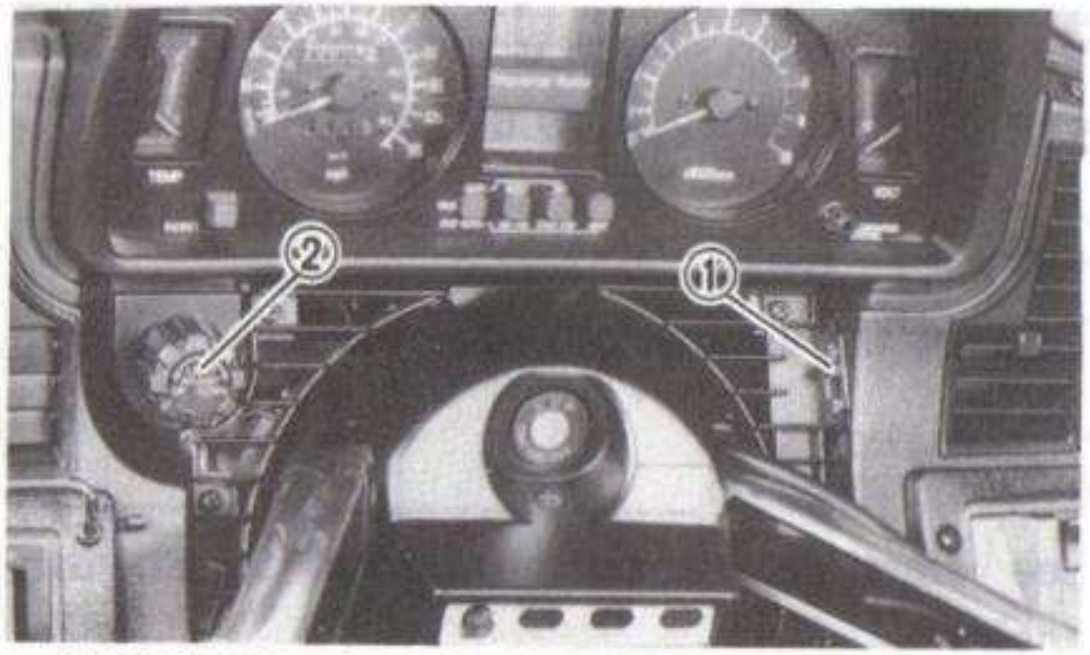
The battery can discharge from extended use of the hazard lights making it difficult to operate the starter.

NOTE:

Turn on the hazard lights to warn other drivers if your motorcycle must be stopped where it might be a traffic hazard.

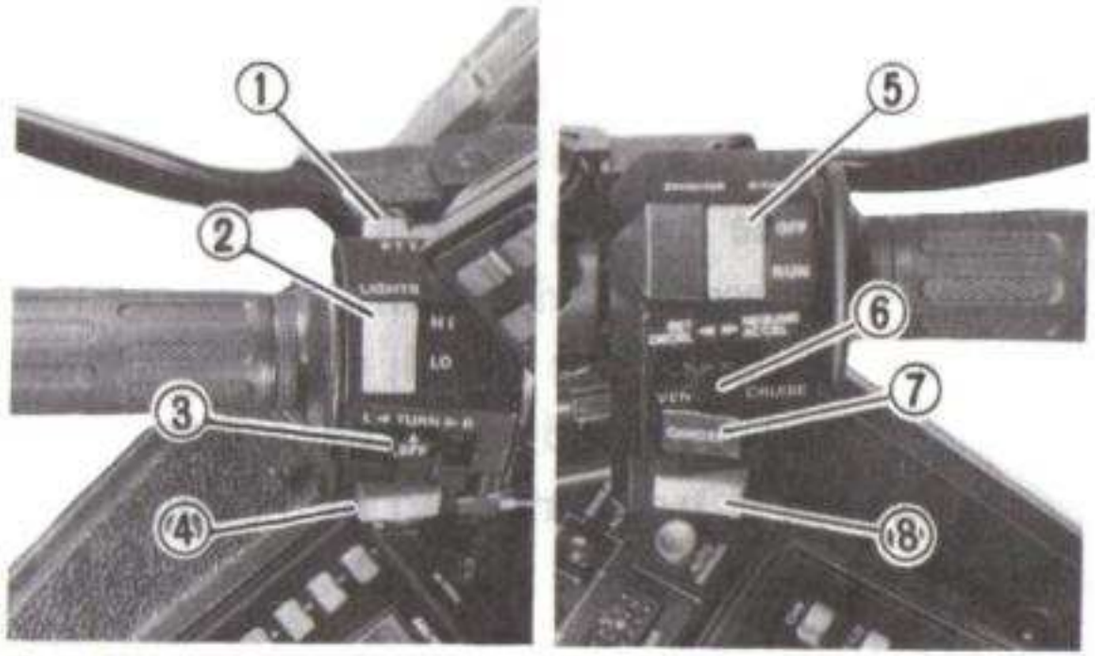
Headlight vertical beam adjusting knob

This knob permits vertical adjustment of the headlight beam. For the adjustment procedure, refer to page 9-53.



1. "HAZARD" switch 2. Headlight vertical adjusting knob

Handlebar switches:



1. "PTT" switch
2. "LIGHTS" (Dimmer) switch
3. "TURN" switch
4. "HORN" switch
5. "ENGINE STOP" switch
6. Control switch
7. "CANCEL" switch
8. "START" switch

"PTT (PUSH-TO-TALK)" switch

The receiver and transmitter are controlled by the "PTT" switch. Press the switch and the transmitter is activated. Release the switch to receive. (See page 6-20)

"LIGHTS" (Dimmer) switch

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

"TURN" signal switch

This model is equipped with self-cancelling turn signals. To signal a right-hand turn, push the switch to the right; to signal a left-hand turn, push the switch to the left. Once the switch is released it will return to the center position. To cancel the signal, push the switch in after it has returned to the center position. If the switch is not cancelled by hand, it will selfcancel after the motorcycle has travelled for about 10 seconds or approximately 150 meters (490 feet) whichever is greater. The self-cancelling mechanism only operates when the motorcycle is moving; thus the signal will not self-cancel while you are stopped at an intersection.

"HORN" switch

Press the switch to sound the horn.

"ENGINE STOP" switch

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

"START" switch

To start the engine, push the starter switch.

⚠ CAUTION:

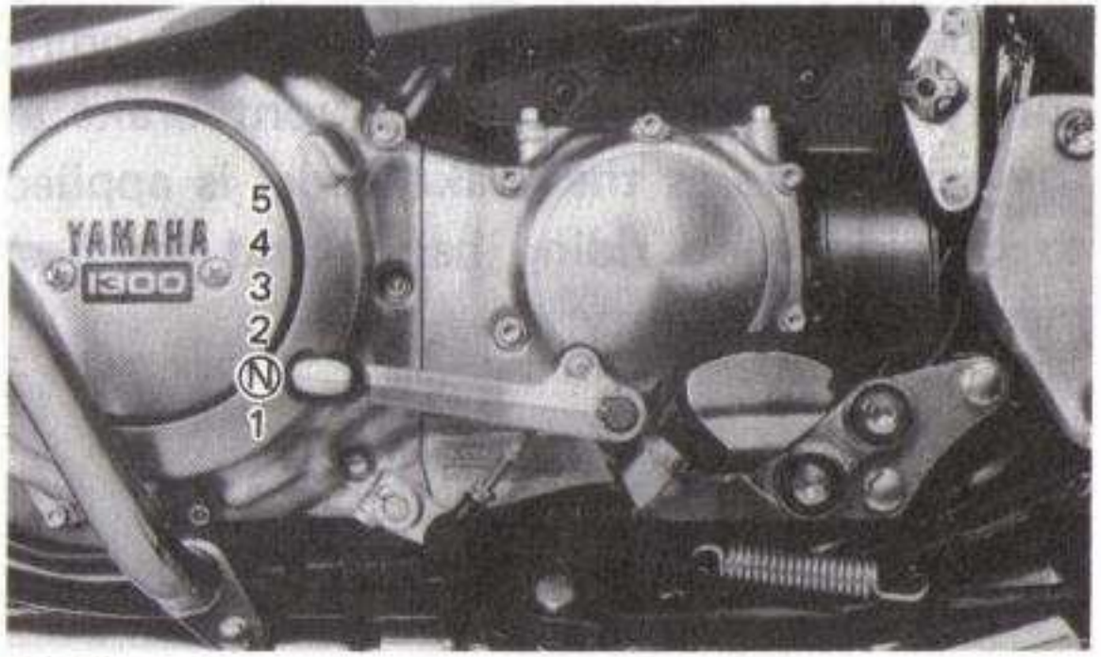
See starting instructions prior to starting engine.

Clutch lever

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

Change pedal

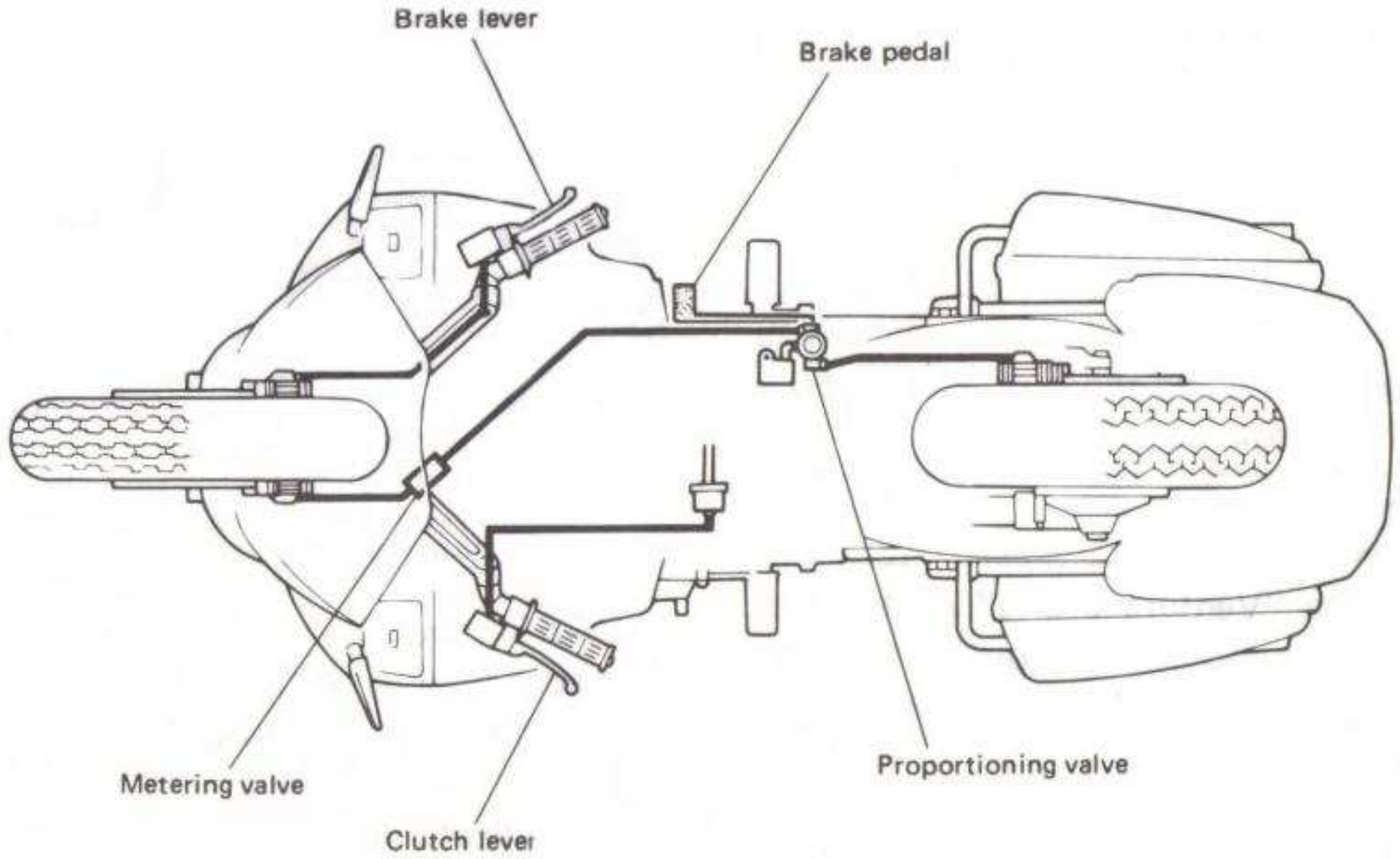
The gear ratios of the constant mesh 5-speed transmission are ideally spaced. The gears can be shifted by using the change pedal on the left side of the engine.



N. Neutral

Brake pedal and lever

The rear brake and the left-hand front brake are connected to the brake pedal; they are activated at the same time when the brake pedal is applied. The right-hand front brake operates independently; it is activated only by the brake lever. For maximum stopping ability, apply the right-hand front brake at the same time as the brake pedal is applied to develop good riding habits and for best mechanical durability.


Brake lever
Brake pedal
Metering valve
Clutch lever
Proportioning valve

"Venture Cruise" control system

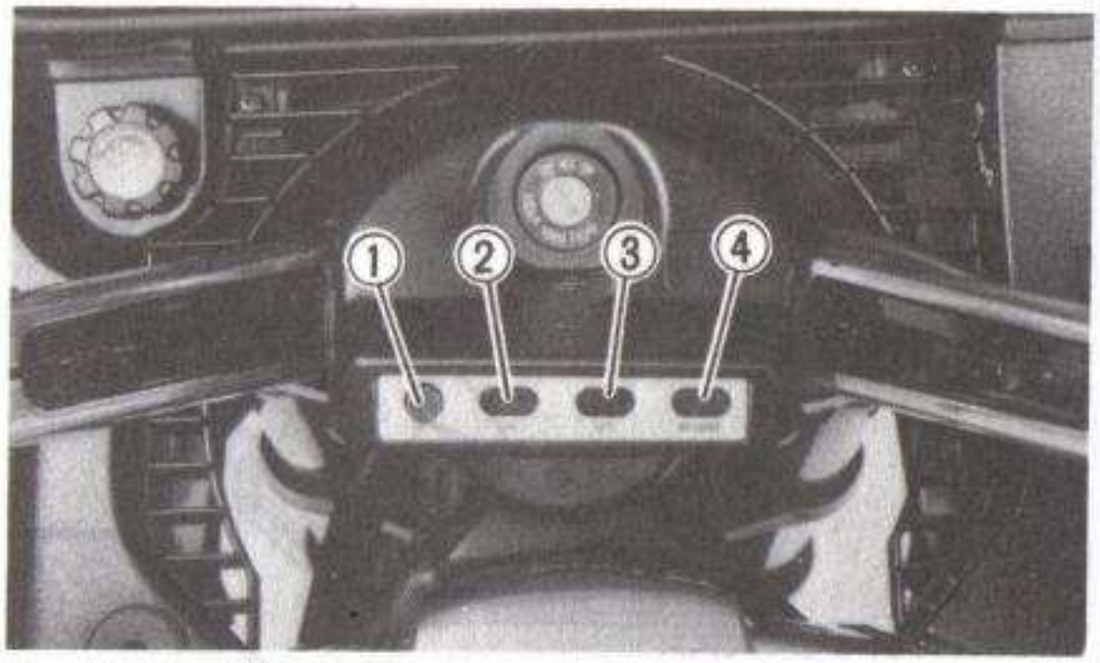
This motorcycle is equipped with the "Venture Cruise" control system which is designed to maintain a set speed. Use this control system on the open road when you are in 5th gear.

A set speed can be maintained only when you are riding in the speed range of approx. 50 ~ 130 km/h (approx. 30 ~ 80 mi/h).

⚠ WARNING:

Don't use the "Venture Cruise" control system in road conditions requiring frequent speed changes such as in heavy traffic or going a hill.

"Venture Cruise" indicator panel



1. "POWER" switch
2. "ON" indicator light
3. "SET" indicator light
4. "RESUME" indicator light

"POWER" switch

This switch, with an ON-OFF feature, presets the "Venture Cruise" control system.

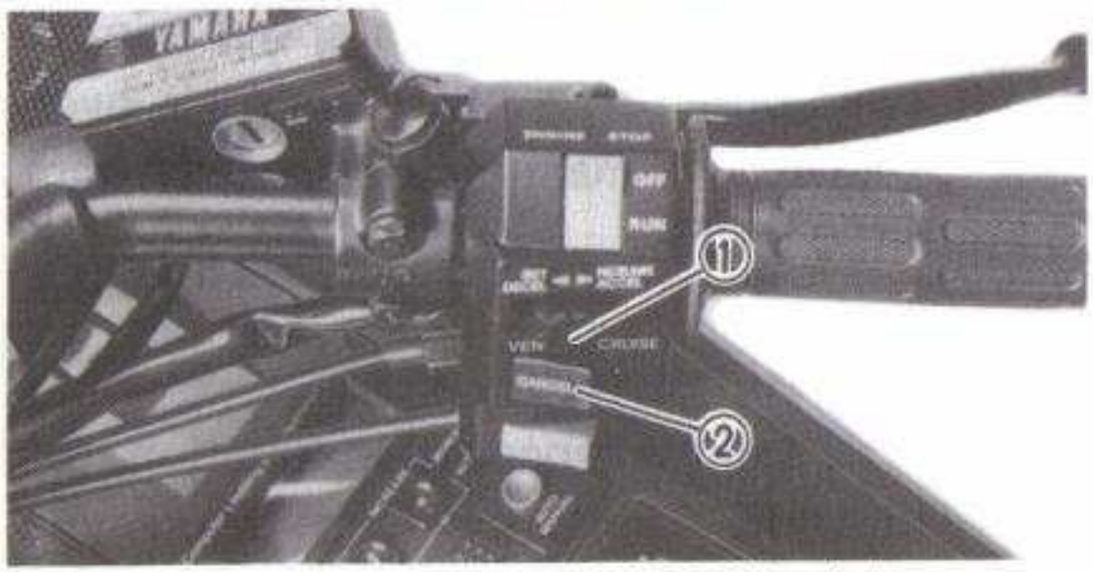
"ON" indicator light (blue)

This light comes on when the "Venture Cruise" control system is preset (when "ON" is selected by the power switch).

"SET" indicator light (green)
This light comes on when the motorcycle is running at a set speed.

"RESUME" indicator light (orange)
This light comes on when the set speed, which is cancelled by any of the steps in "Operation ③ ", is memorized and when the vehicle speed is in the range of approx. 50 ~ 130 km/h (approx. 30 ~ 80 mi/h). If the resume system is operated while this light is on, it continues flashing until the speed returns to that memorized.

"Venture Cruise" control switch



1. Control switch 2. "CANCEL" switch

Control switch
This switch is capable of the following controls Refer to the "Operation" section for details.

- Set-speed ride
- Minute adjustment of set speed
- Consecutive adjustment of set speed
- "RESUME" system

"CANCEL" switch
Push this switch to cancel the set speed ride in the "Venture Cruise" control system.

Operation

① Before starting, push the power switch to preset the "Venture Cruise" control system. This turns the "POWER", "SET", and "RESUME" indicator lights on. The "SET" and "RESUME" indicator lights go out after approximately one second (to check for a burned bulb). The "POWER" indicator light stays on.

② Push to the control switch to the "SET" position when you are at the desided speed. The "SET" indicator will come on and the speed at that moment will be memorized.

③ The set speed can be cancelled by any one of the following:
- Pull the brake lever.
- Pull the clutch lever.
- Step on the brake pedal.
- Give one push to the cancel switch.
- Turn the engine stop switch to off. The resume function will not work in this case.

④ Minute/concecutive adjustment of the set speed

By pushing the control switch are in the direction of eitheth "ACCEL" or "DECEL" during a set speed ride, the set speed can be changed in a increment or decrement of approximately one mile per hour. If the control switch is held in the "ACCEL" or "DECEL" position, the speed can be successively increased or decreased slowly.

The speed at the moment when the control switch is released is memorized as the new set speed in the "Venture Cruise" control system.

NOTE:

The upper limit of the speed increase is 130 km/h (80 mi/h), at which speed control switch operation for a high speed is over-ridden, thereby maintaing a constant 130 km/h (80 mi/h).

The lower limit of the speed reduction is 50 km/h (30 mi/h), at which speed control switch operation for a lower speed is over-ridden, thereby maintaining a constant 50 km/h (30 mi/h)

⑤ "RESUME" System

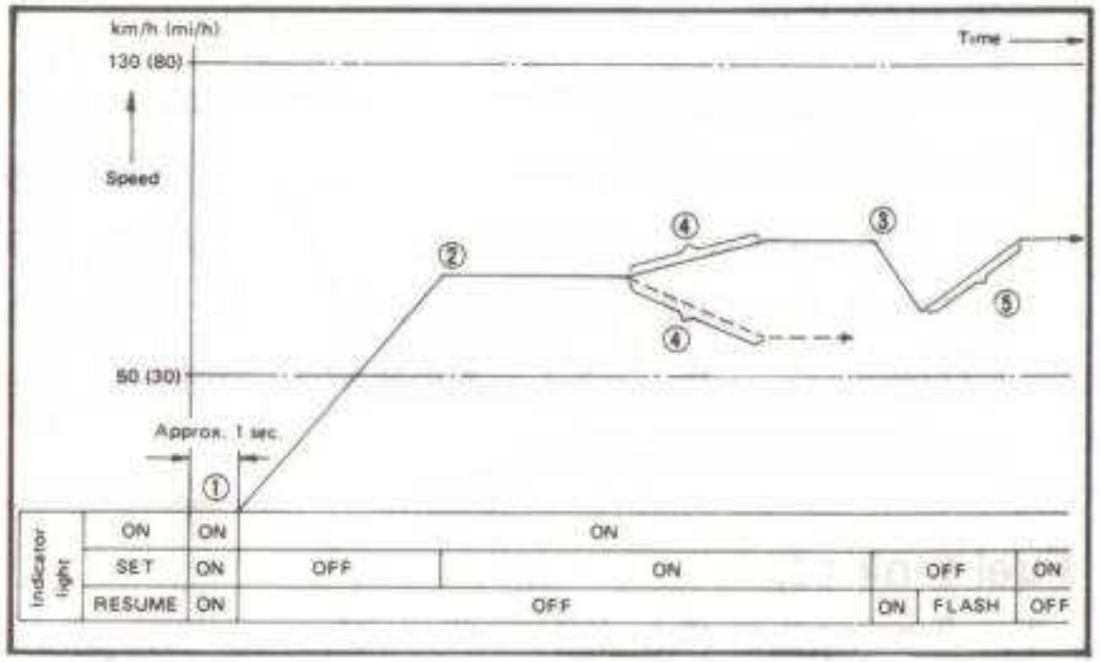
If after using a cancellation function, the "RESUME" indicator light is on you may resume a previously set speed by

pushing the control switch once in the "RESUME" direction.
The "RESUME" indicator light will flash while the speed is returned to the one used before the cancellation. The "RESUME" indicator light will then go out and the "SET" indicator light will come on.

NOTE:

If during a set speed ride the vehicle speed is increased by turning the throttle grip and then the grip is turned back, the vehicle speed is brought back to the set speed.
And if the vehicle speed is incrased by 8 km/h (5 mi/h) within 130 km/h (80 mi/h), one push at the control switch for speed setting allows the speed of that moment to be memorized, thereby causing the motorcycle to run at that set speed.

Operation chart (Operation item numbers correspond to the numbers on the chart below.)



NOTE:

The system can be automatically cancelled in the following cases where:

1. There is something wrong with the system.
2. There is a speed drop of approx. 8 km/h (5 mi/h) or more than set.

⚠ WARNING:

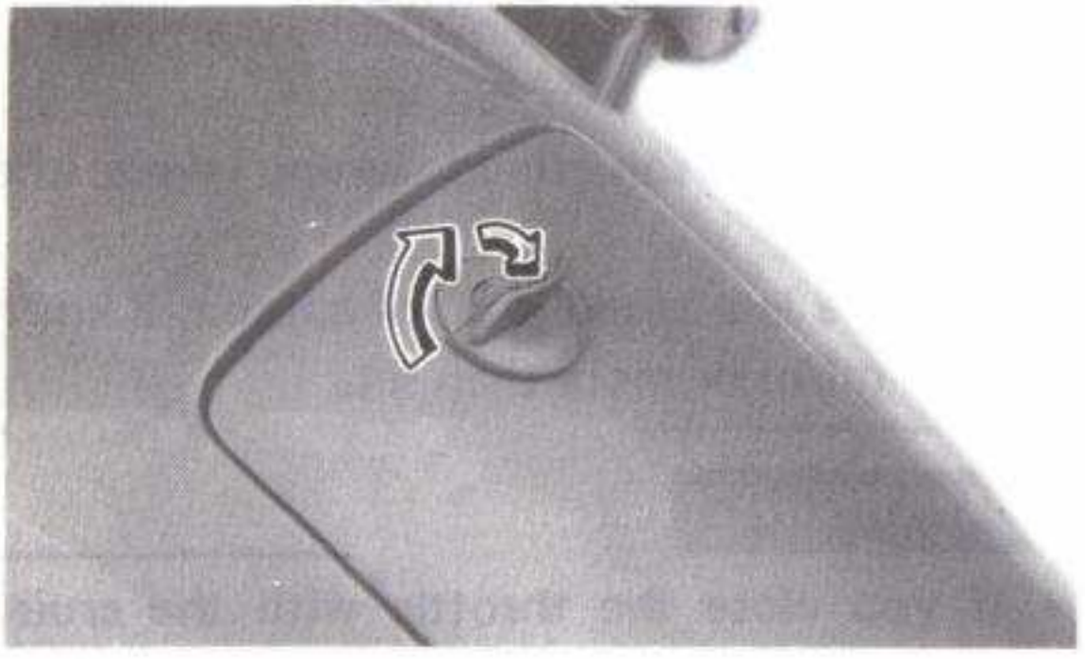
- **If you close the throttle with the cruise control activated, the motorcycle may accelerate upon release of the throttle grip if the deceleration is less than 8 km/h**

(5 mi/h).

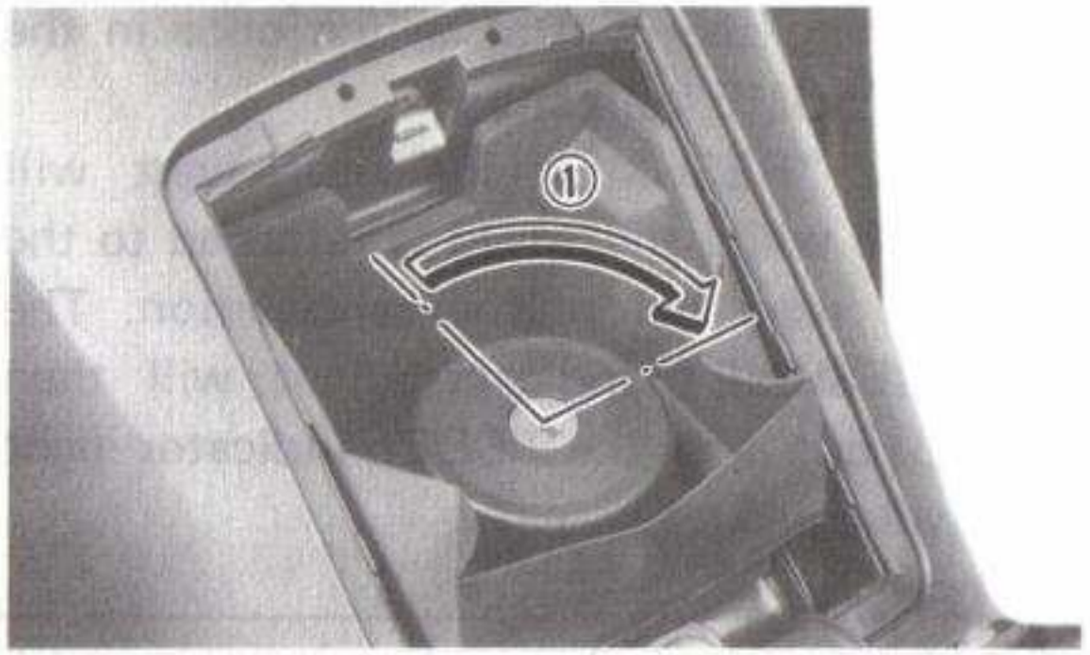
- **For safety, always keep both hands on the handgrips to avoid loss of vehicle stability. If the "SET" indicator light flashes, the system is out of order. Do not use the system if the "SET" incicator flashes. See you Yamaha dealer.**

Fuel tank cap

1. To open the lid, raise the screw piece and turn it clockwise.



2. To remove the tank cap, insert the key in the lock and turn it clockwise.

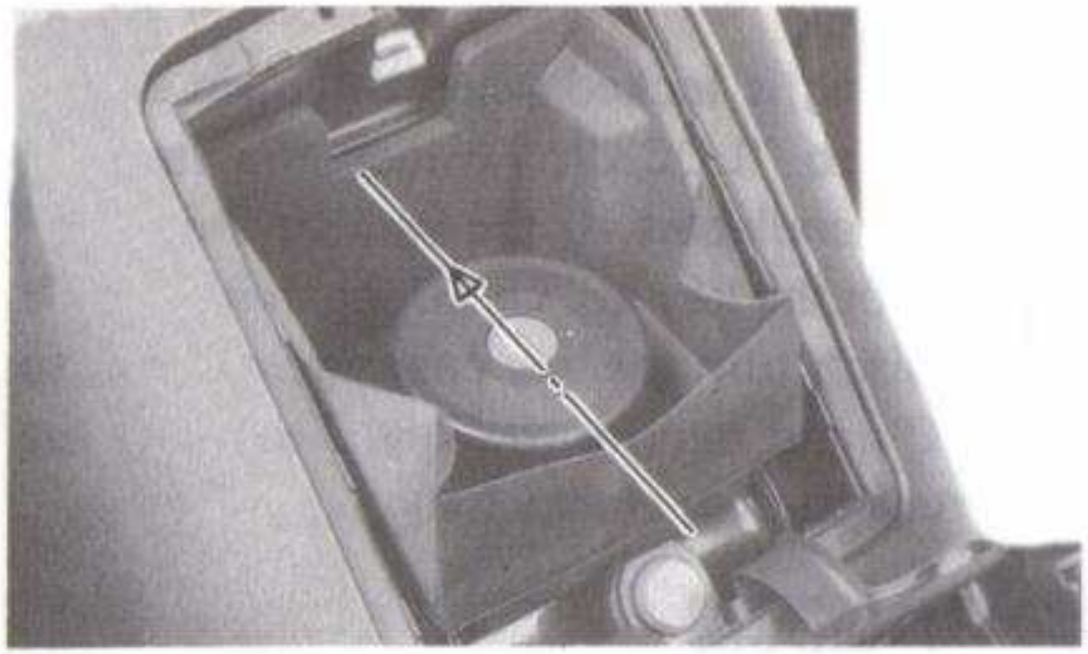


1. Open

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

NOTE:

This tank cap cannot be closed unless the key in the lock. The key cannot be removed if the cap is not locked properly. Be sure that the " ▷ " marks are in line with the motorcycle direction.



4. To close the lid, push it down.

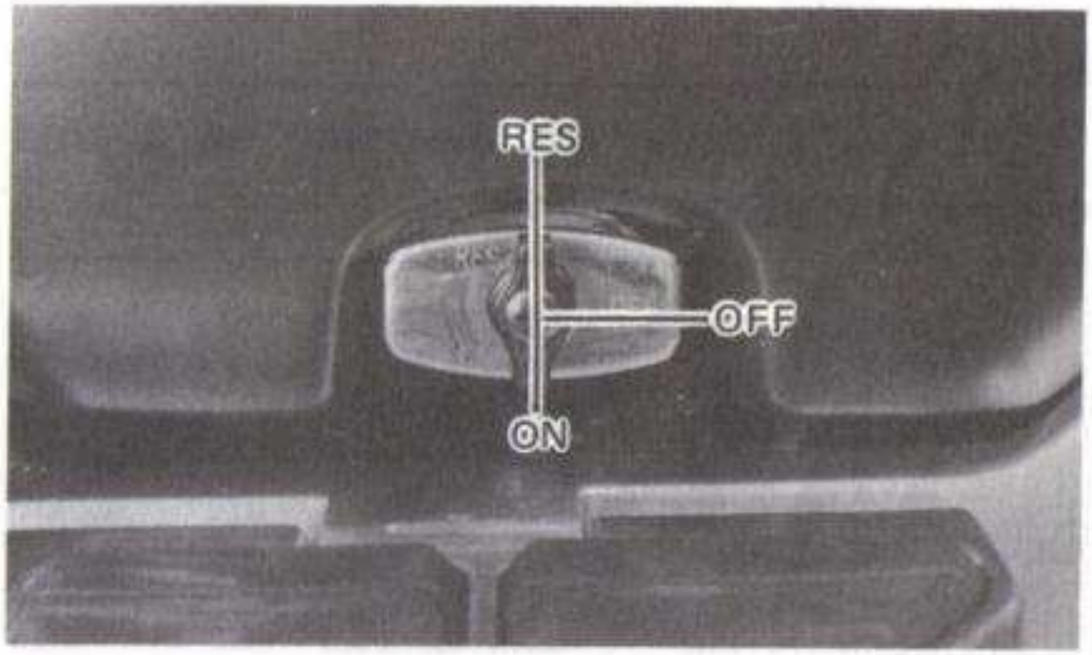
Fuel cock

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

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

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

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



Starter lever (CHOKE)

The starter lever is located on the left handlebar.

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

NOTE:

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

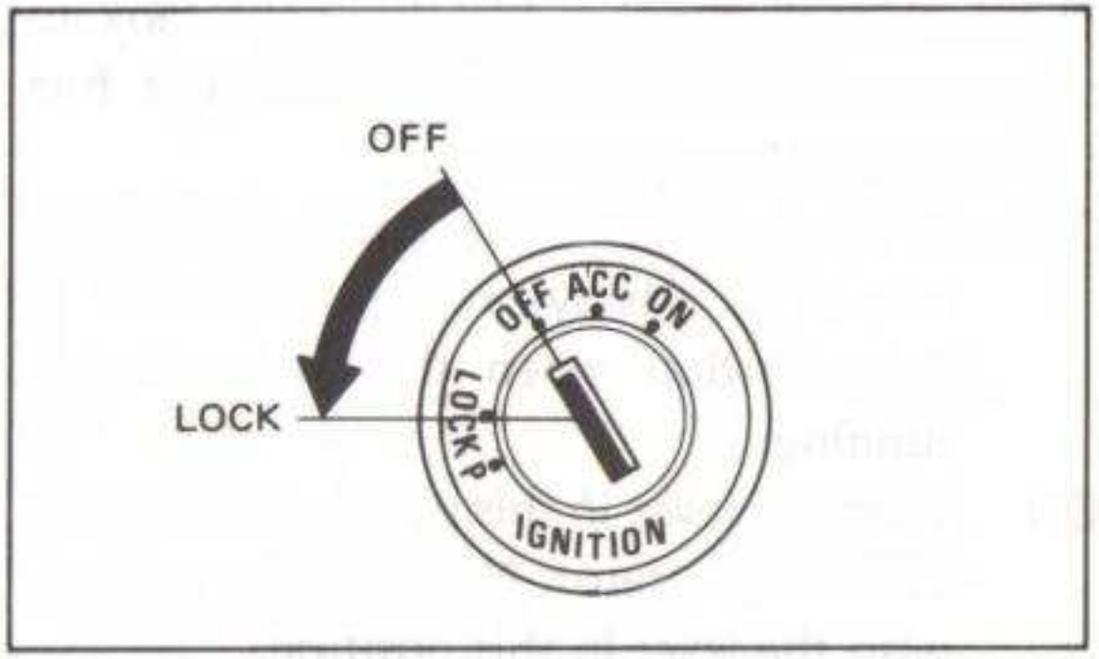
1. Starter lever

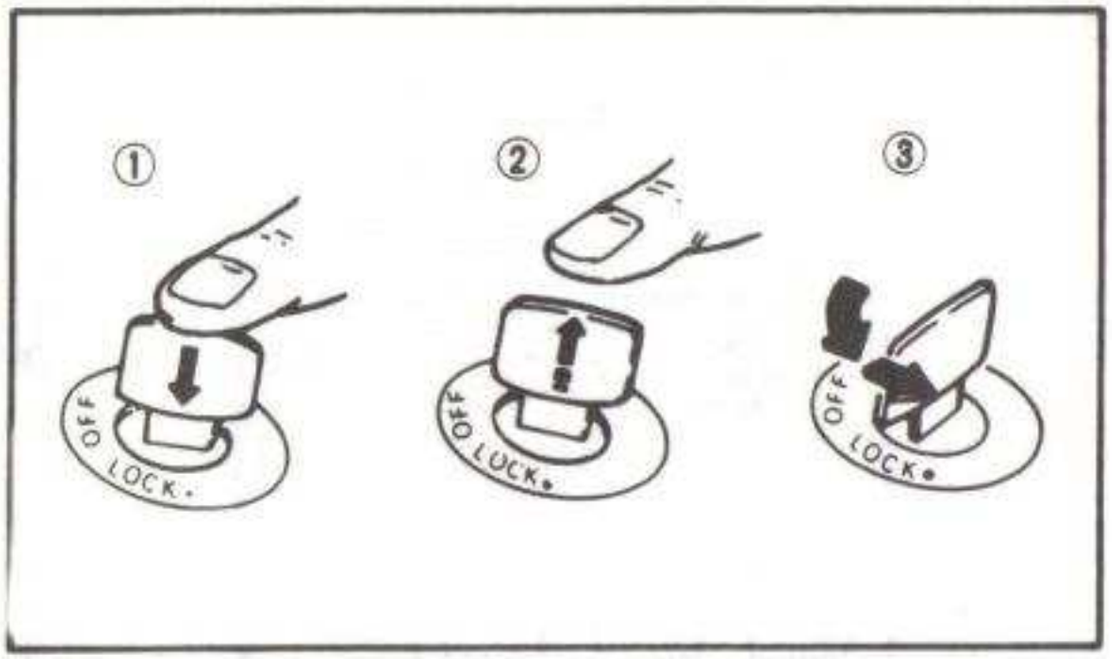
Steering lock

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

⚠ WARNING:

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





1. Push 2. Release 3. Turn

Adjustable handlebars

This model is equipped with handlebars which are capable of vertical and horizontal adjustment to suit the rider's position and preference. For the adjustment procedure, see page 9-32.

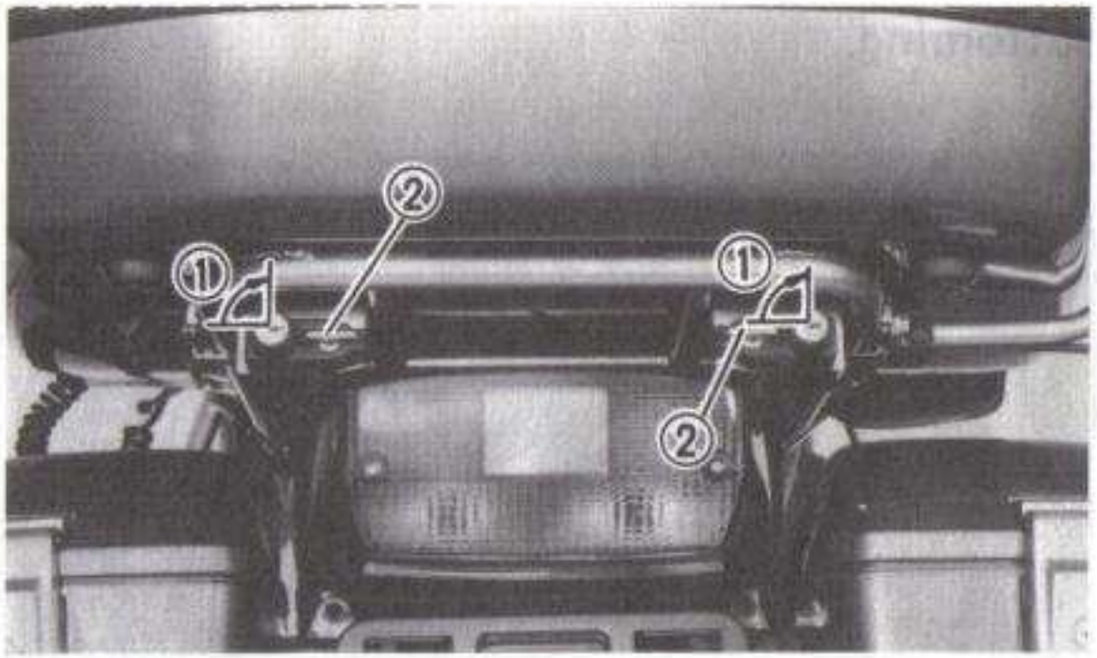
Helmet holder

To open the helmet holder, insert the key in the lock and turn it clockwise.

To lock the helmet holder, replace the holder in the original position.

⚠ WARNING:

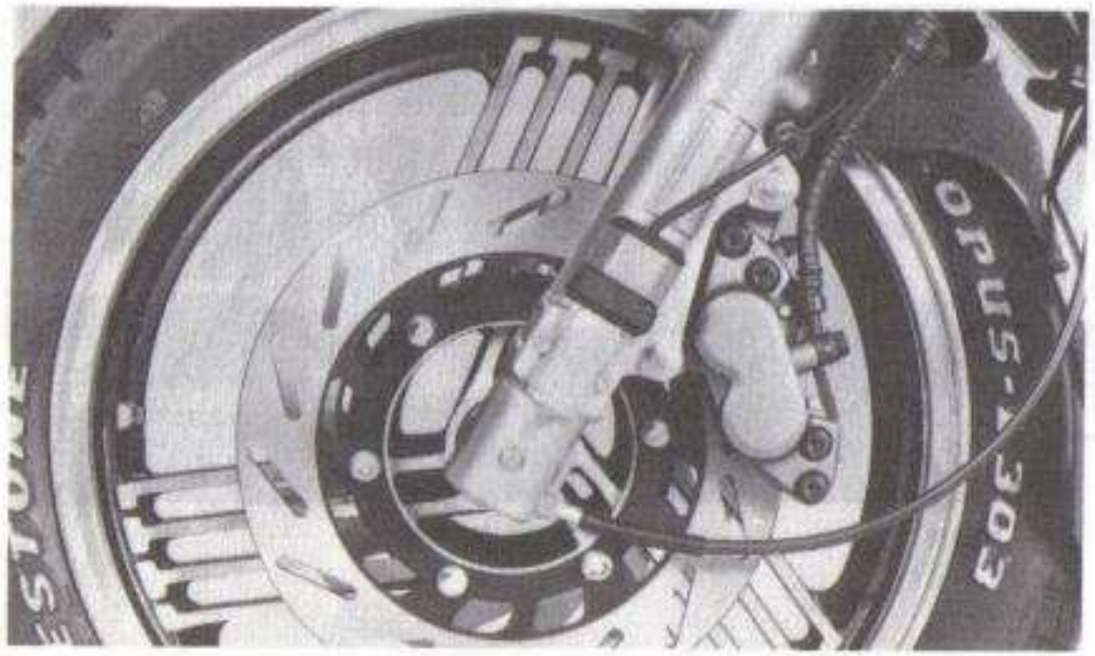
Never ride with a helmet in the helmet holder. It could interfere with rear wheel movement, causing loss of control and possibly an accident.



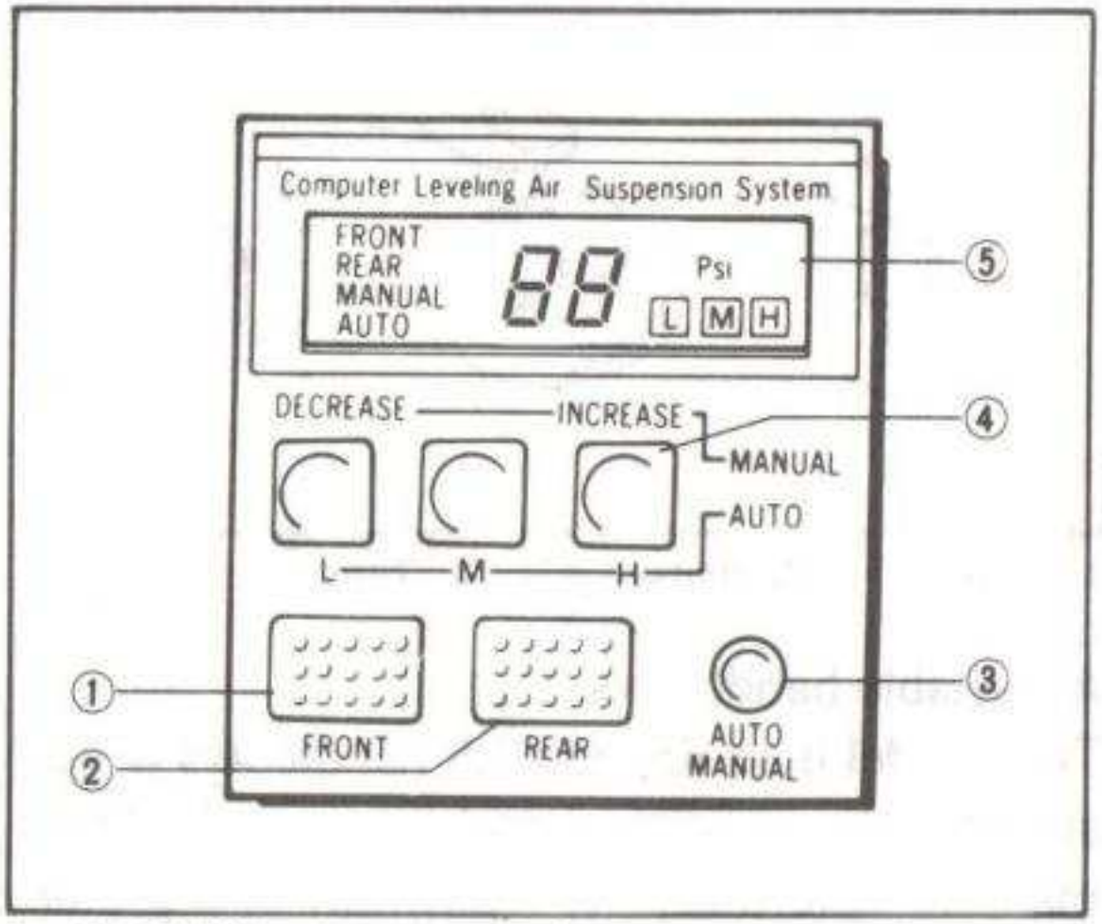
1. Open 2. Helmet holder

Anti-dive suspension system

This model is equipped with a anti-dive suspension system which helps reduce front fork "dive" during hard braking. The system works automatically to help prevent excessive fork compression during braking, thereby maintaining adequate travel and preventing bottoming.



Air suspension controller



1. "FRONT" switch
2. "REAR" switch
3. "AUTO/MANUAL" switch
4. Pressure adjusting switch
5. Display panel

"FRONT" switch

When the switch is pushed, the display panel indicates the front fork air pressure and the indicator "FRONT" comes on, thus making it possible to adjust the front fork air pressure.

"REAR" switch

When the switch is pushed, the display panel indicates the rear shock air pressure and the indicator "REAR" comes on, thus making it possible to adjust the rear shock air pressure.

NOTE:

It is impossible to adjust both front fork and rear shock air pressures at the same time.

"AUTO/MANUAL" switch

Each push of the switch alternates "AUTO" and "MANUAL" with the sign of "AUTO" or "MANUAL" on the display panel.

Pressure adjusting switch

By operating this switch, the front fork and rear shock air pressures can be adjusted.

AUTO:

The air pressure is adjustable in the three positions, L, M, and H, and depending on the preload, the air pressure position should be selected by referring to the following:

MANUAL:

DECREASE:

When the switch is pushed, the air pressure decreases, thus softening the suspension.

INCREASE:

When the switch is pushed, the air pressure increases, thus stiffening the suspension.

Refer to page 9-38 for proper adjustment procedures.

	L	M	H
Loading condition	Solo rider	With passenger or accessory equipments	With accessory equipments and passenger
		 	

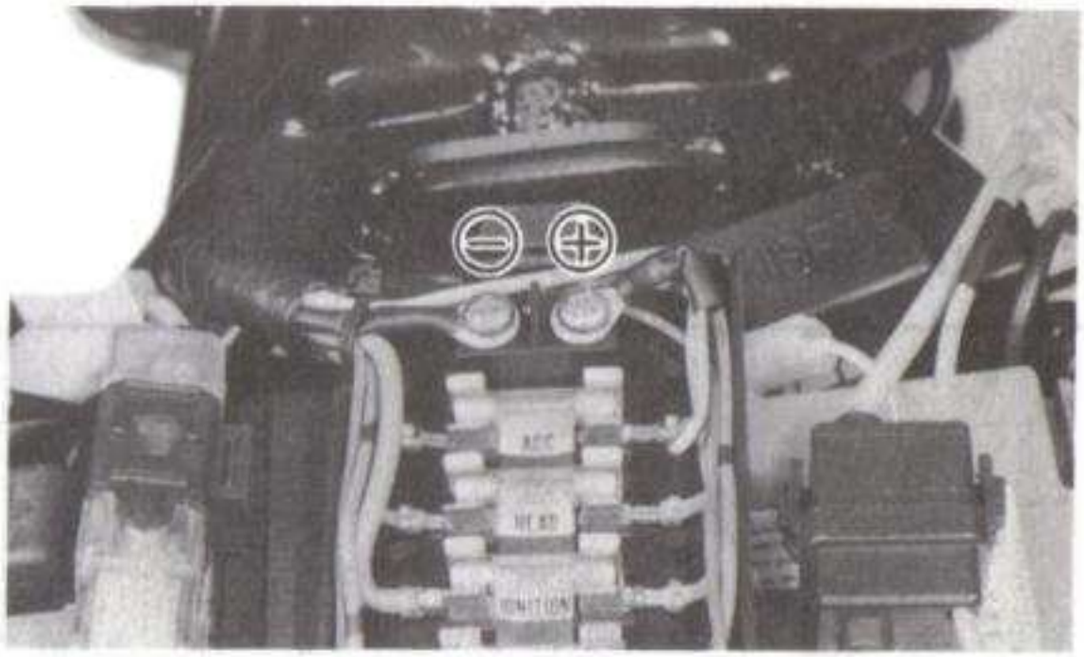
Emergency stop switch

This switch is a safety device to ensure that automatically stops the engine, should the motorcycle fail over or be tilted more than approximately 60 degrees to the right or left from vertical.

Auxiliary D.C. Terminal

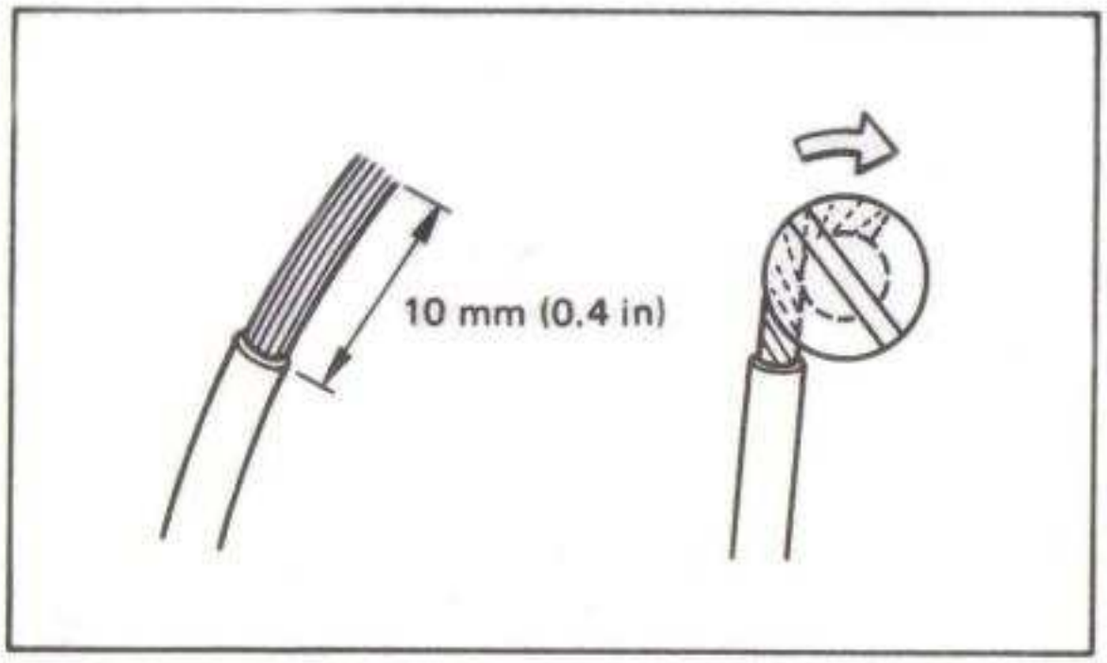
The fused auxiliary D.C. terminal is located in the fuse box under the top cover. This terminal may be used for an accessory not exceeding maximum fuse rating. The fuse for this terminal is located directly above the terminals screws. To prevent wiring damage, never use a large fuse than specified. Remove the fuse until accessory installation is complete. Consult the accessory manufacturer for wire type and gauge. The + (voltage) and — (ground) marks on the terminal backing must be observed when connecting an accessory.

Auxiliary D.C. Terminal: 12V, 10A



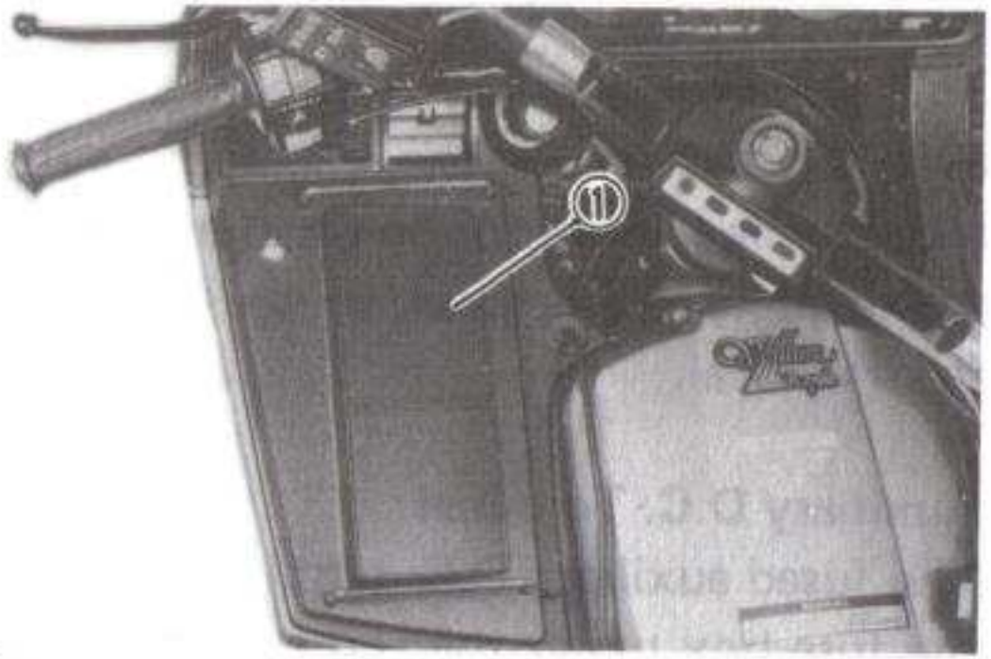
Connecting accessory wires

1. Strip 10 mm (0.4 in) of insulation from each wire. Twist (braid) the ends of the wires.
2. Make a hook in the end of the braided wire so that it will be drawn around the terminal as the screw is being tightened.



Control unit and console box cover removal

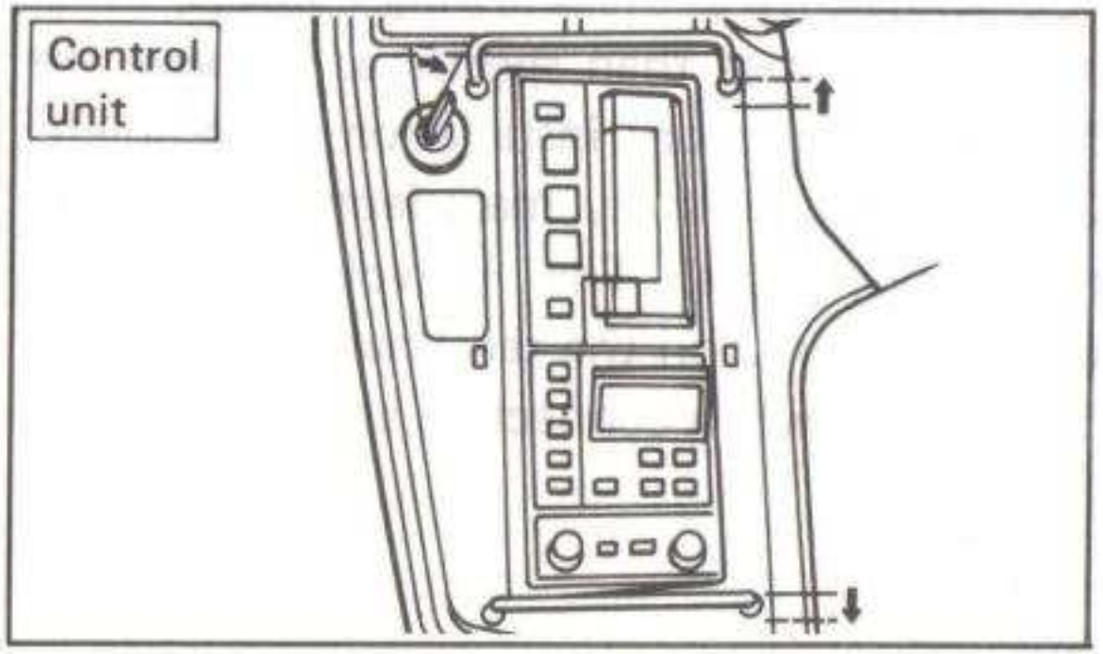
This control unit is detachable. After removing the control unit, fit the cover supplied.



1. Cover

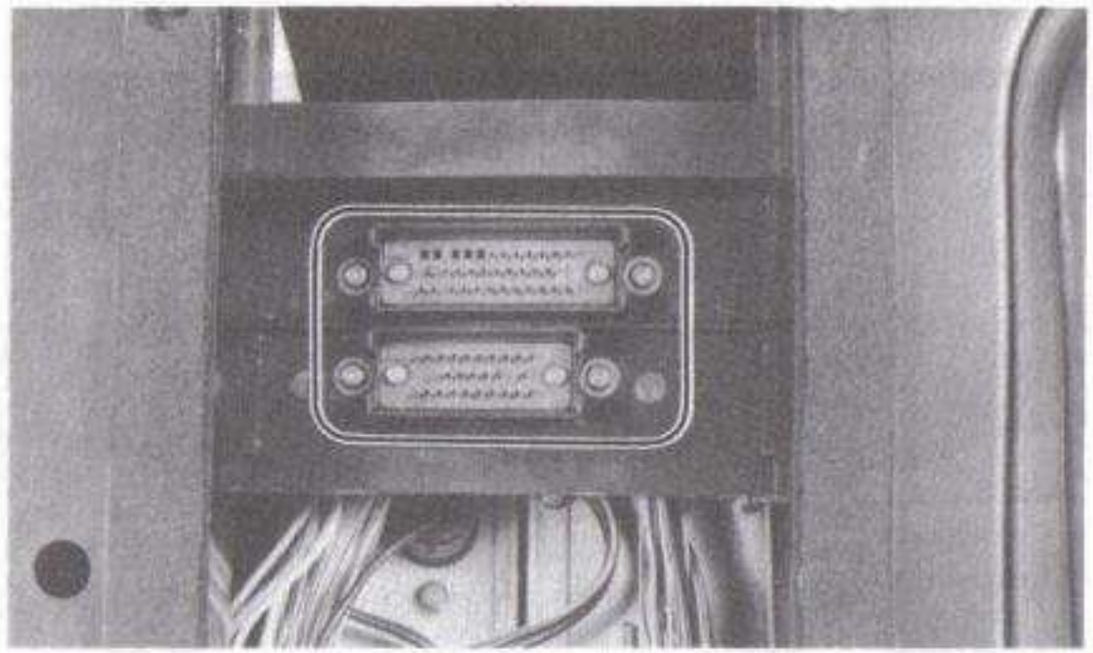
To remove:

Insert the key, turn it clockwise, and as shown, push the lever.



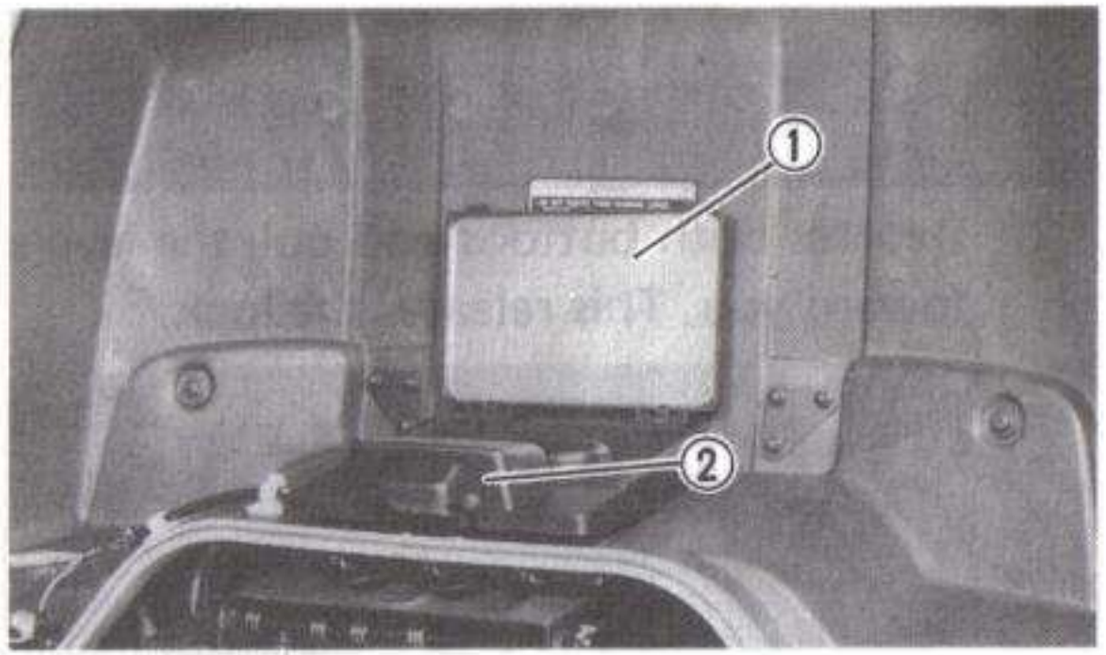
⚠ CAUTION:

Before removing the control unit, turn off the main switch and "ON-VOL"/"INT.VOL" control knobs.
When removing the control unit, protect it, as well as the conectors, from water and mud.
Do not bend or strain the connector terminals.



To install:
Insert the knob into the hole, and push it down. Make sure the control unit and/or console box cover is installed firmly.

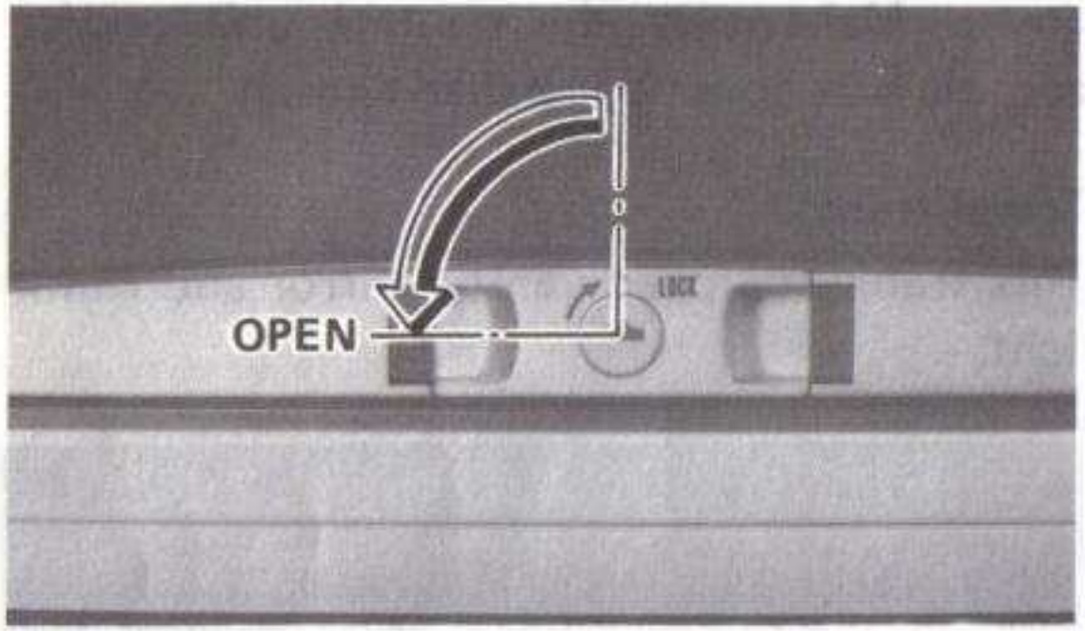
Travel trunk
This trunk equipped vanity mirror and trunk light.



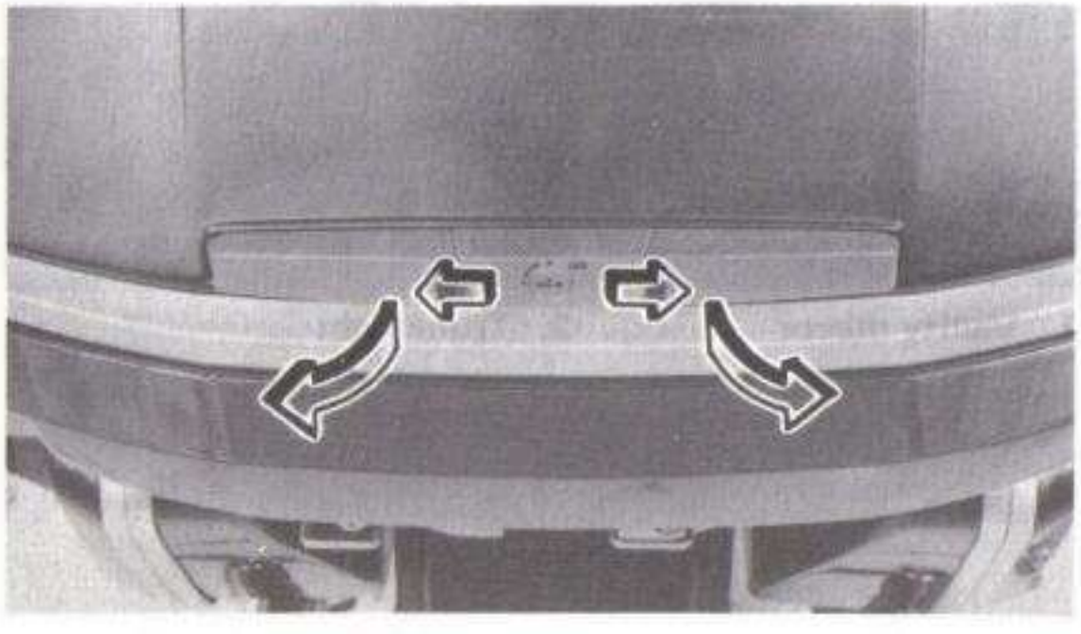
1. Vanity mirror
2. Trunk light

TO OPEN THE TRAVEL TRUNK:

1. Insert the key and turn it to "OPEN".



2. Depress both buttons and pull the levers toward you. This releases the lock.

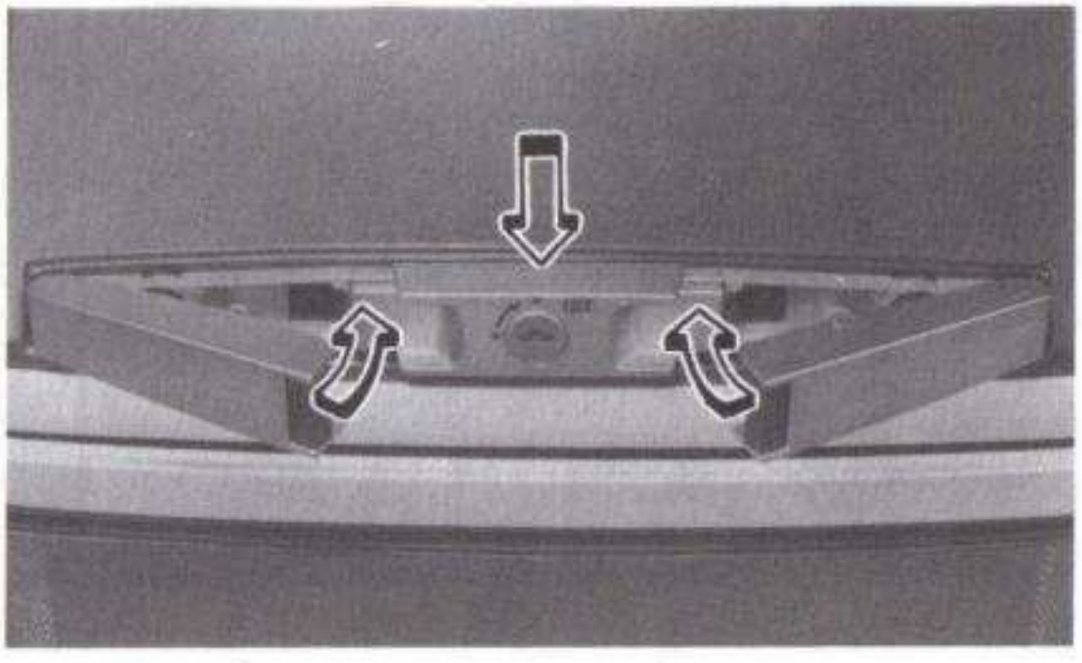


TO CLOSE THE TRAVEL TRUNK:

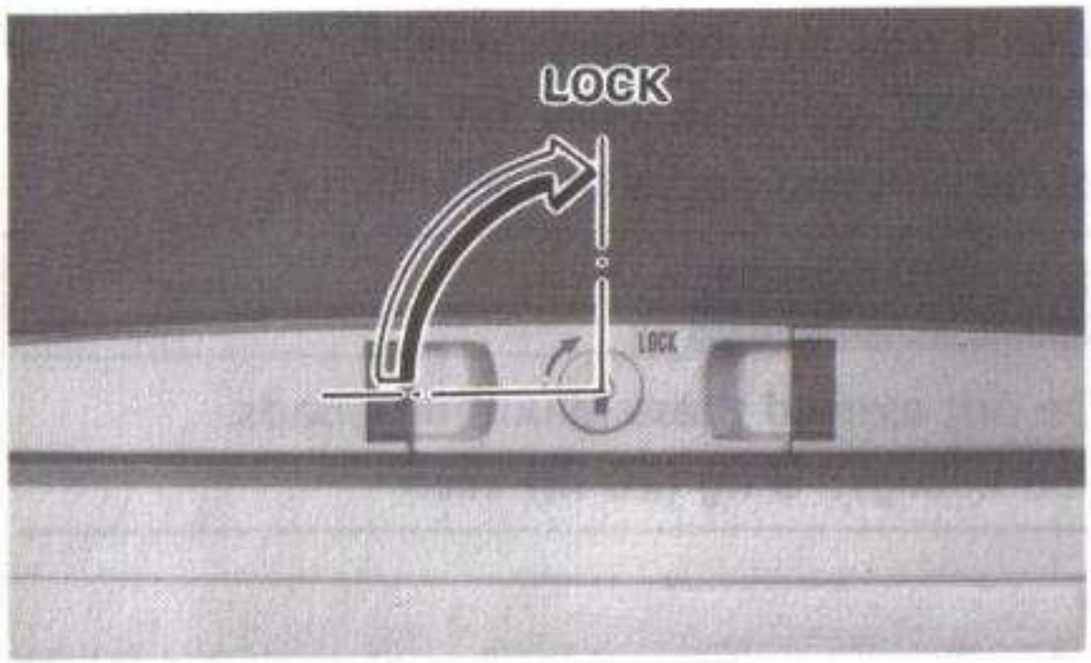
⚠CAUTION:

Be sure to pull the levers toward you before closing the lid. If the lid is closed with the levers set, it will damage the lock assembly.

1. After checking that both levers are pulled out, close the lid and set the levers.



2. Insert the key and turn it to "LOCK".



⚠ WARNING:

Do not ride the motorcycle at the "OPEN" key position.

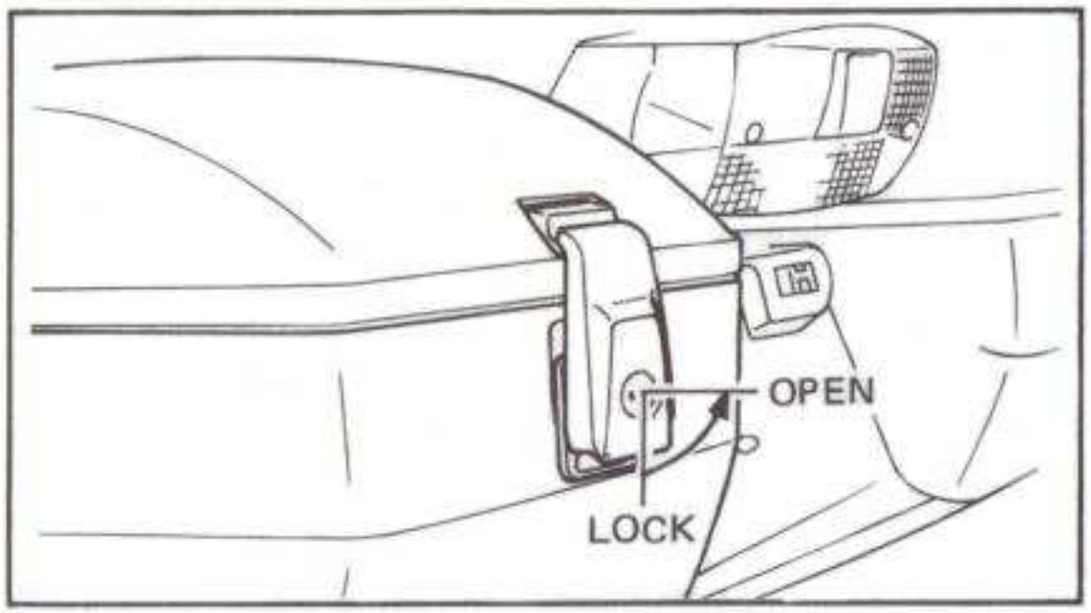
⚠ WARNING:

Do not exceed these maximum loads.
Travel trunk: 9 kg (20 lb)
Travel trunk bracket (with out travel trunk): 9 kg (20 lb)

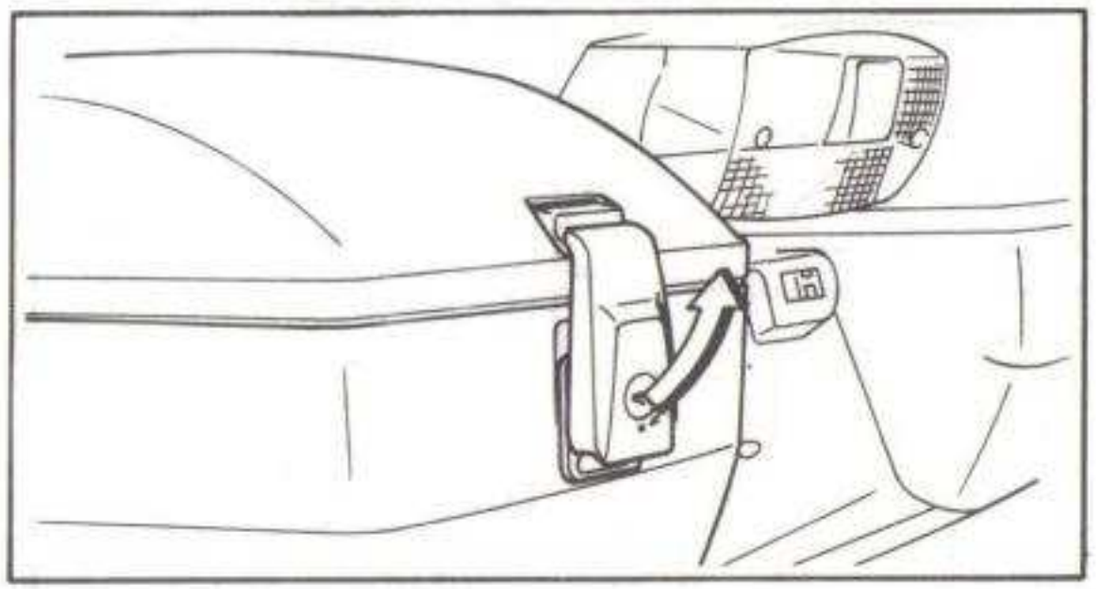
Saddlebag

To remove the saddlebag lid:

1. Insert the key and turn it to "OPEN".

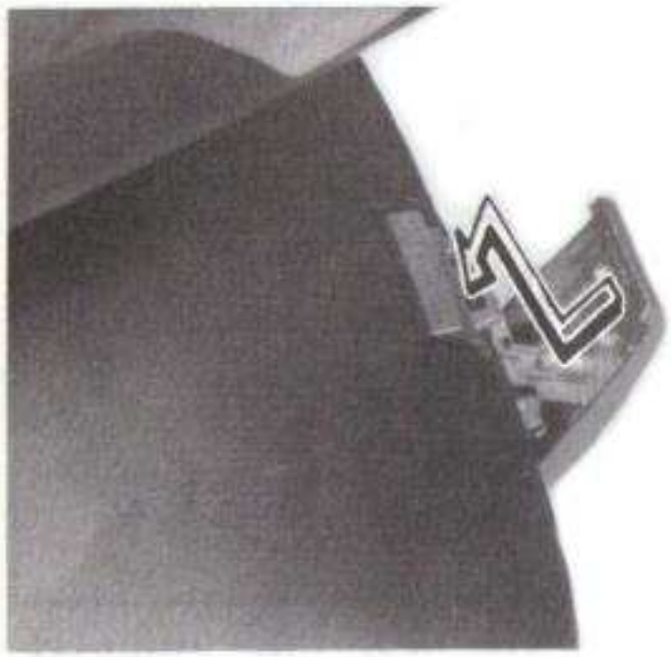


2. Remove the hook while pulling the lock assembly up.

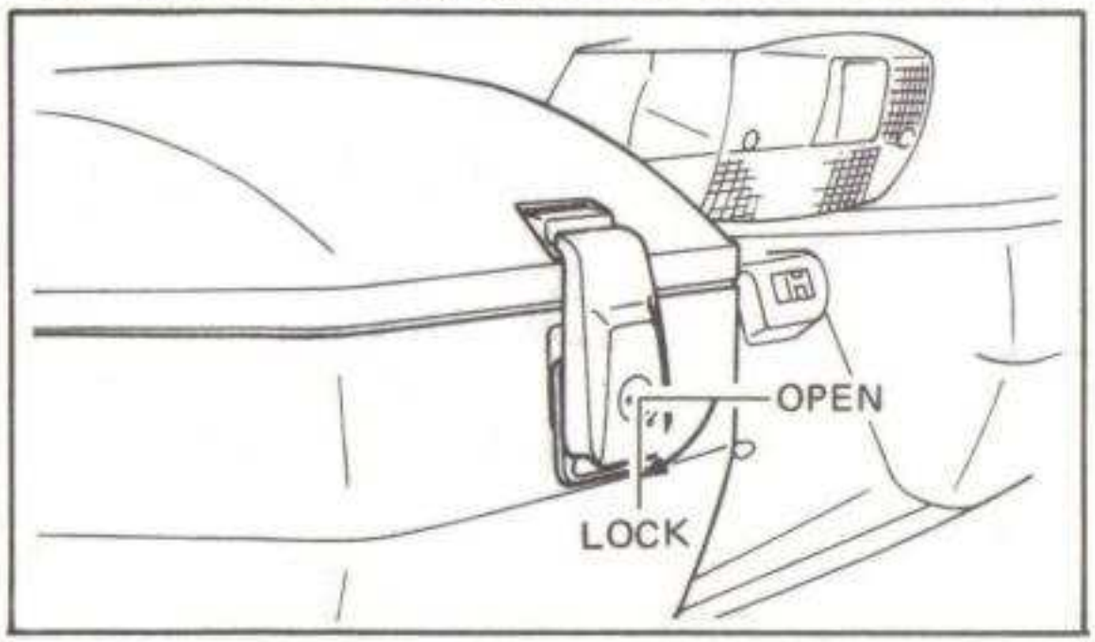


To install the saddlebag lid:

1. Insert the hook and push the lock assembly down.



2. Insert the key and turn it to "LOCK".



⚠ WARNING:

Don't ride the motorcycle with the key in the "OPEN" position. The lid may open during operation and could result in loss of control.

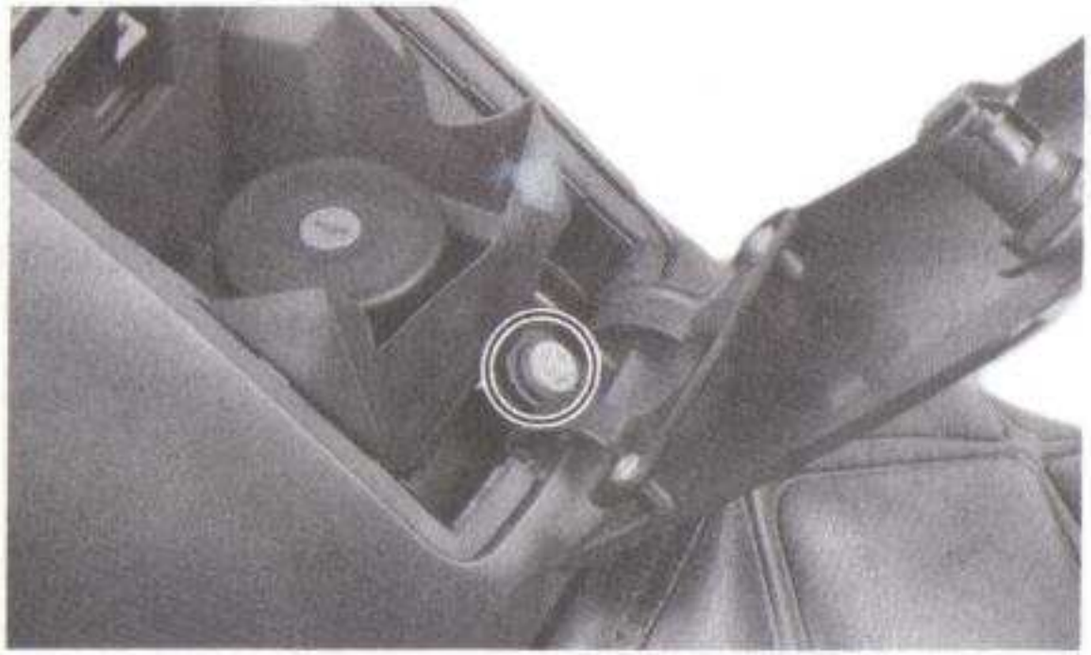
⚠ WARNING:

Do not exceed these maximum loads.
Saddlebags: 9 kg (20 lb) each

Top cover removal

1. To open the lid, rise the screw piece and turn it clockwise.

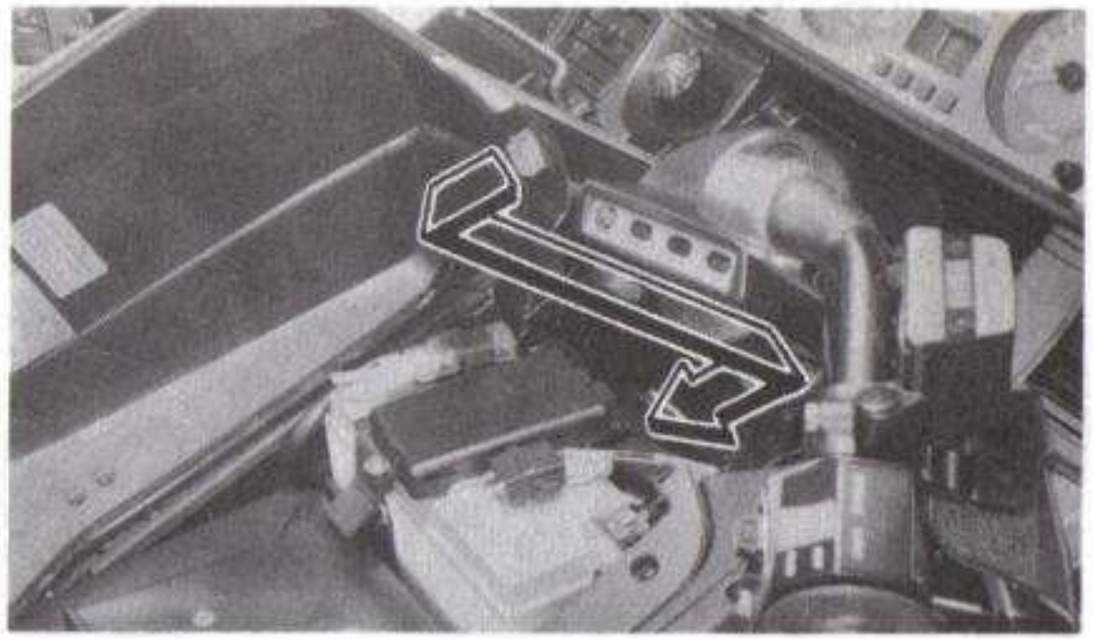
2. Remove the screw and push the top cover forward.



3. To reinstall the top cover, reverse the above steps.

NOTE:

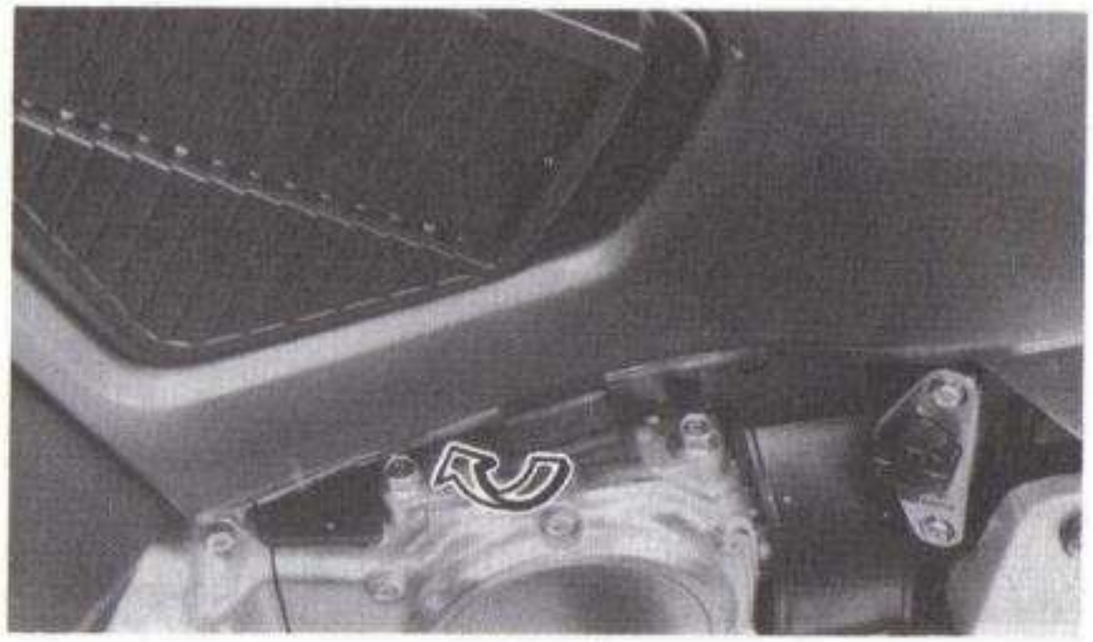
Make sure the hook on the top cover is inserted into the receptacle on the frame.



Side panel

To remove the side panel:

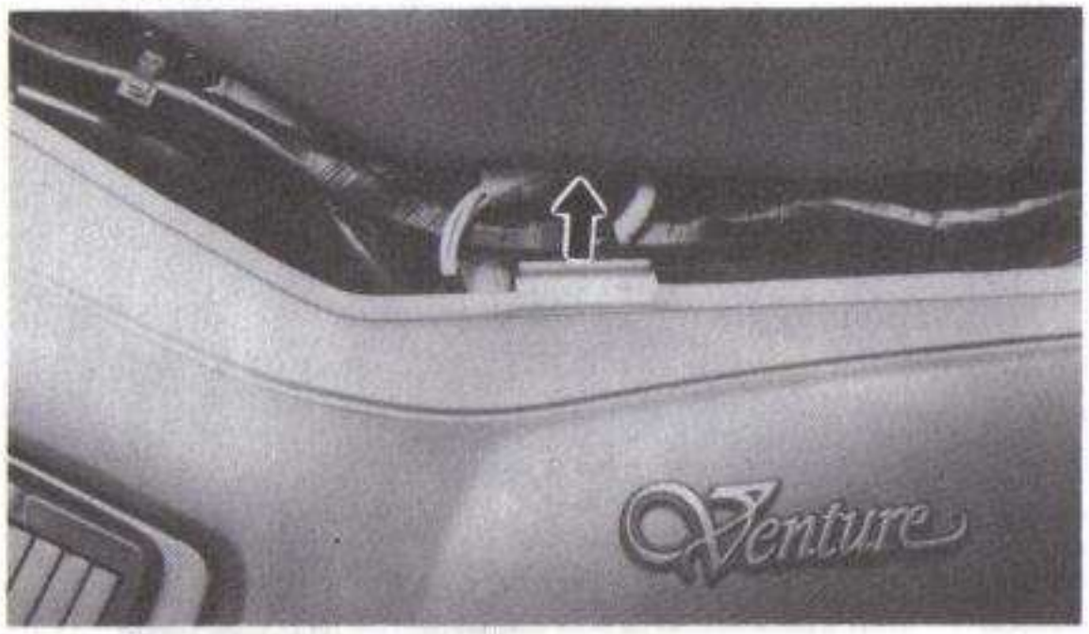
1. Remove the top cover.
2. Pull the rubber band out.



3. Pull the knobs out.

To install the side panel:

1. Place the side panel pawl beneath the seat.



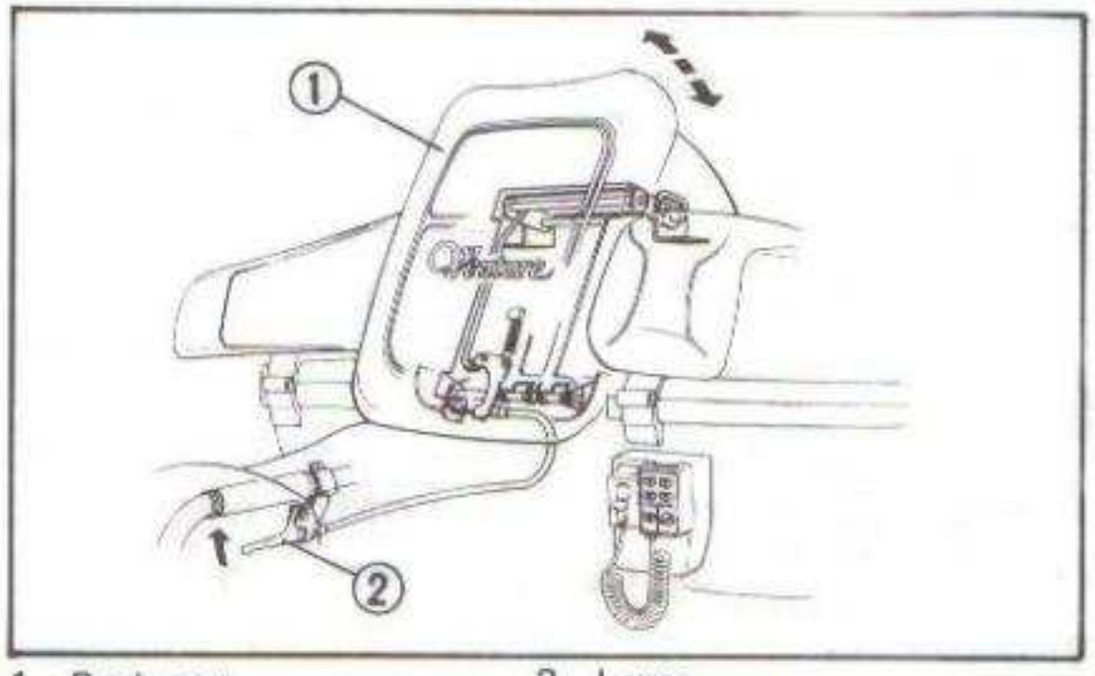
2. Push the knobs in and fit the rubber band.
3. Install the top cover.

Air ducts

The lower panel, console box and side panel are provided with air ducts. Move the air duct lever to the "OPEN" for letting in the air. Move the same lever to the "CLOSE" for shutting the air.

Back rest

This back rest is capable of 3-way adjustment. Squeeze the lever as shown to change position.



1. Back rest
2. Lever

Sidestand

This model is equipped with an ignition circuit cut-off system. The motorcycle must not be ridden when the sidestand is down. The sidestand is located on the left side of the frame.

(Refer to page 8-2 for an explanation of this system.)

⚠ WARNING:

This motorcycle must not be operated with the sidestand in the down position. If the stand is not properly retracted, it could contact the ground and distract the operator resulting in a possible loss of control. Yamaha has designed into this motorcycle a lockout system to assist the operator in fulfilling his responsibility of retracting the sidestand. Please check carefully the operating instructions listed below and if there is any indication of a malfunction, you must return the

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

Sidestand/clutch switch operation check

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

⚠ WARNING:

Be sure to use the centerstand during this inspection.

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

↓

TRANSMISSION IS IN GEAR AND SIDESTAND IS UP.

↓

PULL IN CLUTCH LEVER AND PUSH STARTER SWITCH.

↓

ENGINE WILL START.

↓

CLUTCH SWITCH IS OK.

↓

SIDESTAND IS DOWN.

↓

ENGINE WILL STALL.

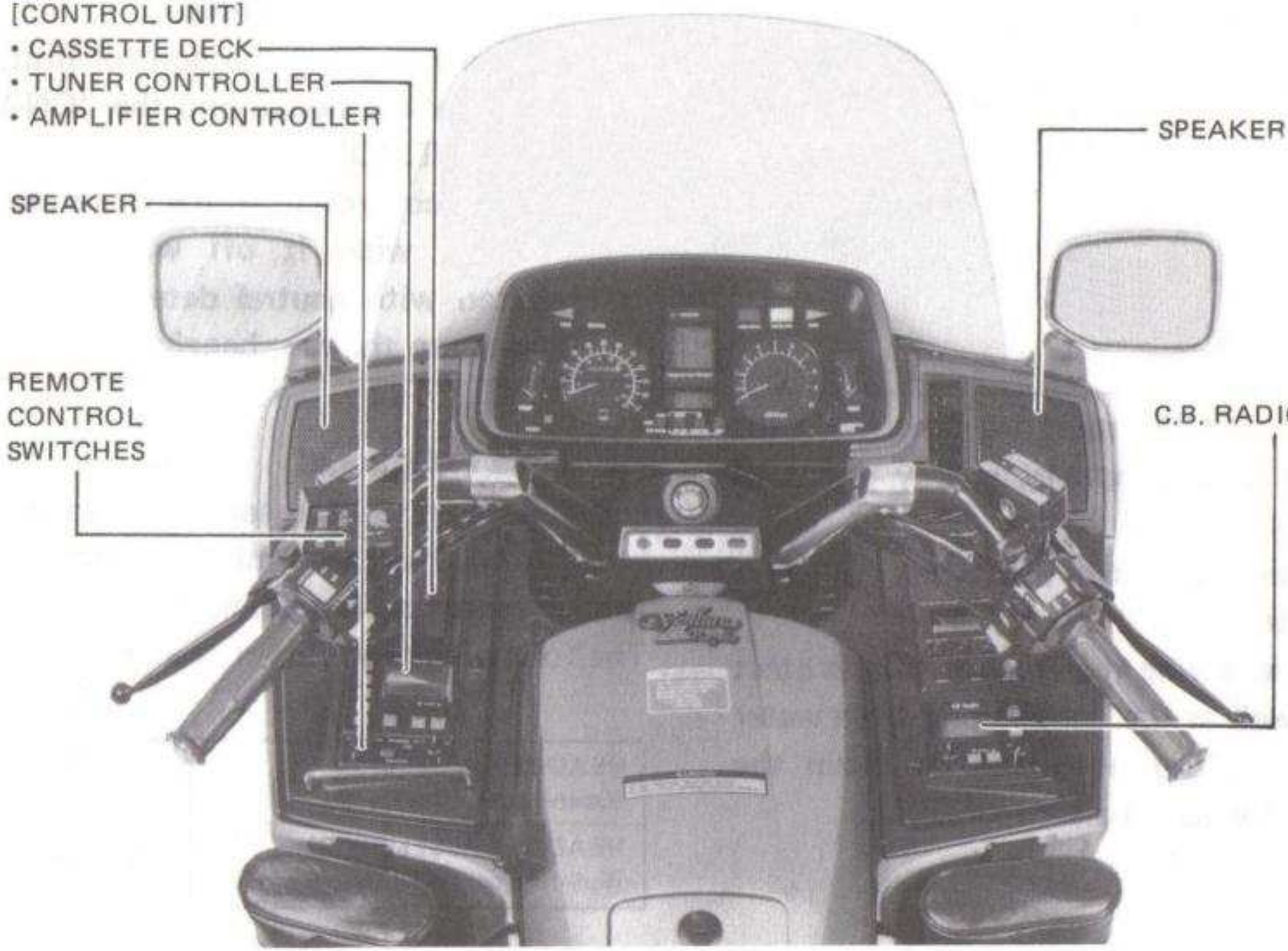
↓

SIDESTAND SWITCH IS OK.

⚠ WARNING:

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

AUDIO SYSTEM AND C.B. RADIO



⚠ WARNING:

1. It is very dangerous to operate radio controls except remote controls during travel: do not leave your hands from the handlebars.
2. To drive safely, keep a moderate sound level.

⚠ CAUTION:

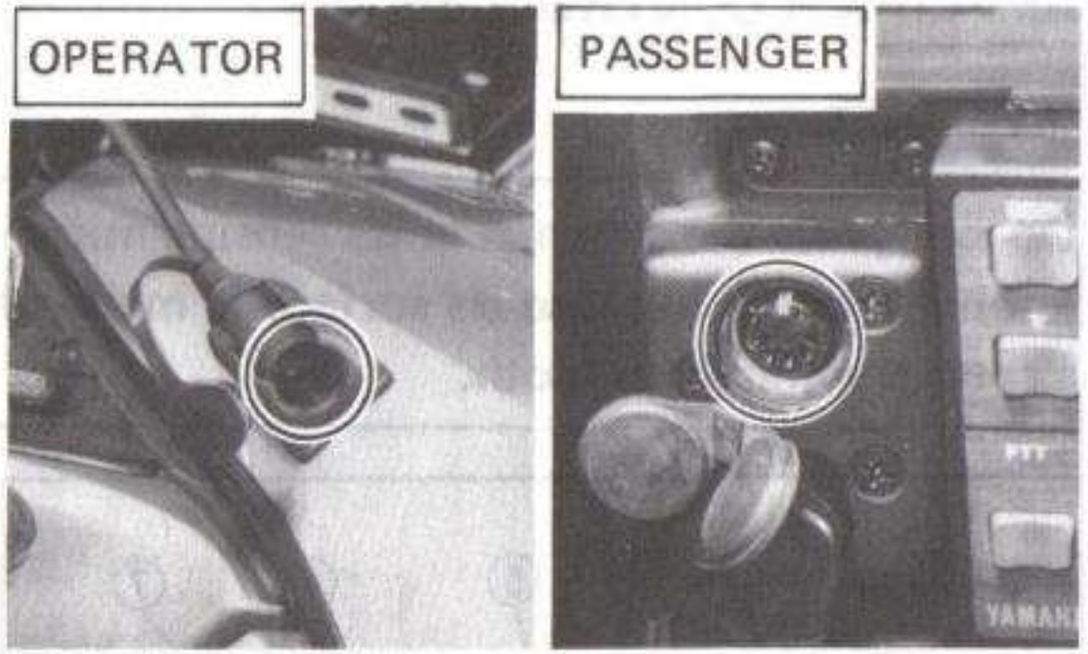
1. Do not use the radio for long when the engine is off: battery energy might be used up.
2. Remove the control unit when you wash the motorcycle.
3. When removing the control unit, protect it, as well as the connectors, from water and mud. Do not bend or strain the connector terminals.
4. Although the control unit has a water-resistant construction, avoid pouring water on it and brushing.
5. Before removing the control unit, turn off the main switch and the "ON-VOL" and "INT.VOL" control knob.
6. If the control unit panel surface gets stained, wipe it off with soft cloth soaked with neutral detergent solution. Never use thinner, benzine, and gasoline.

HEAD SET (Optional)

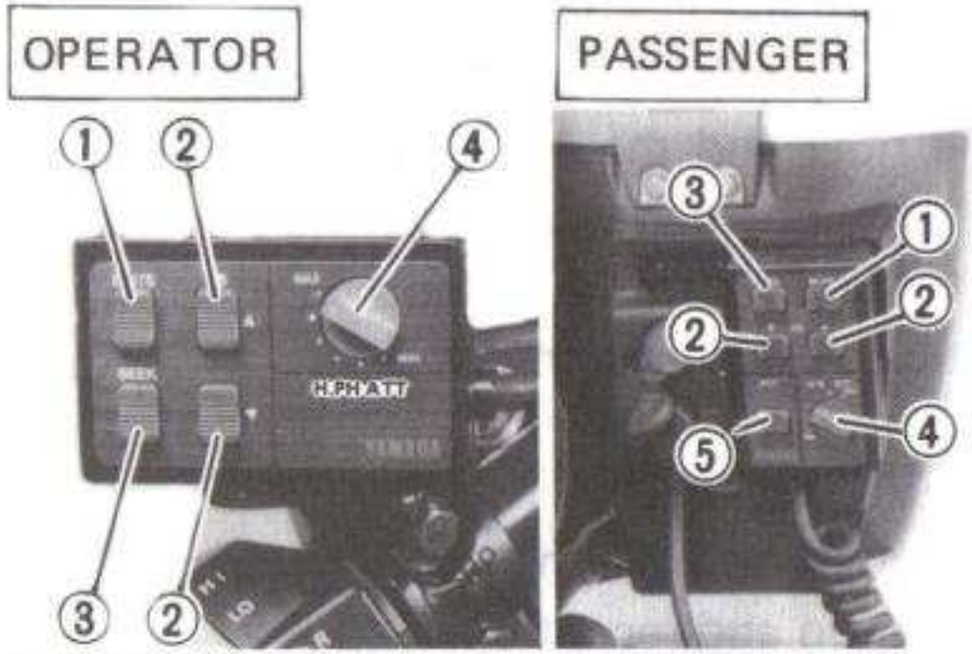
For C.B. radio, a head set is necessary. (Without this head set, transmission is not possible, though reception is possible.)
The following head sets are recommended.

HEAD SET ASSEMBLY 1 (Open-face helmet)	26H-W0773-00
HEAD SET ASSEMBLY 2 (Full-face helmet)	26H-W0774-00

Make connection using the terminals as shown. Select the headphone using the "H.HP" switch on the amplifier controller.



REMOTE CONTROL SWITCH



1. "MUTE" switch
2. "CB △▽" switch
3. "SEEK" switch
4. "H.PH ATT" knob
5. "PTT" switch (See page 4-10)

"SEEK" switch

This permits tuning in to a broadcast automatically.

"MUTE" switch

The sound level immediately drops to about 20dB when this switch is turned on.

"H.PH.ATT" knob

This knob enables the sound volume to be individually adjusted in the head set of each of the rider and the passenger. Generally, set it at the position as shown (one position below Max). Turn the knob in the "MIN" direction to decrease the volume.

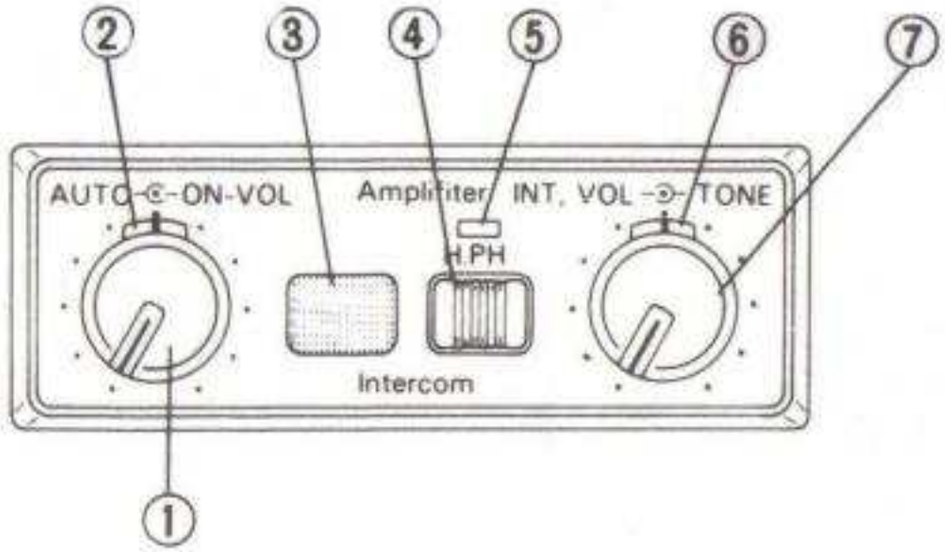
"CB △ ▽ " switch

This switch selects the desired channel for transmission and reception.
Each time the switch is pressed, the channel changes one step (▽) downward or (△) upward. Keeping the switch pressed changes the channels consecutively downward or upward. All channels, except channel 9, may be used for communications between stations operating under different license. Channel 9 has been reserved by the F.C.C. for emergency communications involving the immediate safety to individuals or immediate protection of property. Channel 9 may also be used to render assistance to a motorist.
This is an F.C.C. rule and applies to all operators of Citizens band radios.

AMPLIFIER CONTROLLER

⚠ CAUTION:

Do not press the external noise sensing microphone strongly because its surface is made of a special waterproof cloth.



1. "ON-VOL" control knob
2. "AUTO" control knob
3. External noise sensing microphone
4. "H.PH" switch
5. Headphone indicator light
6. "TONE" control knob
7. "INT.VOL" control knob

"ON-VOL" control knob

This not only turns on and off power supplied to the tuner controller and tape deck but also varies sound level. Turn it counterclockwise to reduce sound level. Rotate it all the way counterclockwise to turn power off. Turn it clockwise to raise sound level.

"AUTO" control knob

During travel, external noises will disturb you from listening to radio, tape (or voice.) Our motorcycle audio system incorporates an automatic volume control which operates according to the level of external noise. Turn the "AUTO" control knob clockwise and the rate of volume compensation will rise. Turn it counterclockwise to reduce the level compensation rate.

NOTE:

You may set the "ON-VOL" and "AUTO" control knobs so appriproately that the sound level remains unchanged during travel and while stopped in traffic.

External noise sensing microphone

This detects external noises for the automatic volume control.

⚠ CAUTION:

Do not permit things like dust to clog the microphone covering nor give damage to it.

"H.PH" switch

Depress this switch to switch output from speakers to headphones or from headphones to speakers alternately.

Headphones indicator light

This lights when the "H.PH" switch selects headphones output.

"TONE" control knob

This controls tone of radio and tape sounds. Turn it counterclockwise to enhace bass and clockwise to enhance treble.

"INT.VOL" control knob

This is the volume control-combined power switch of the Intercom. Turn it counterclockwise to reduce sound level. Rotate it fully counterclockwise to turn power off. Turn it clockwise to raise sound level.

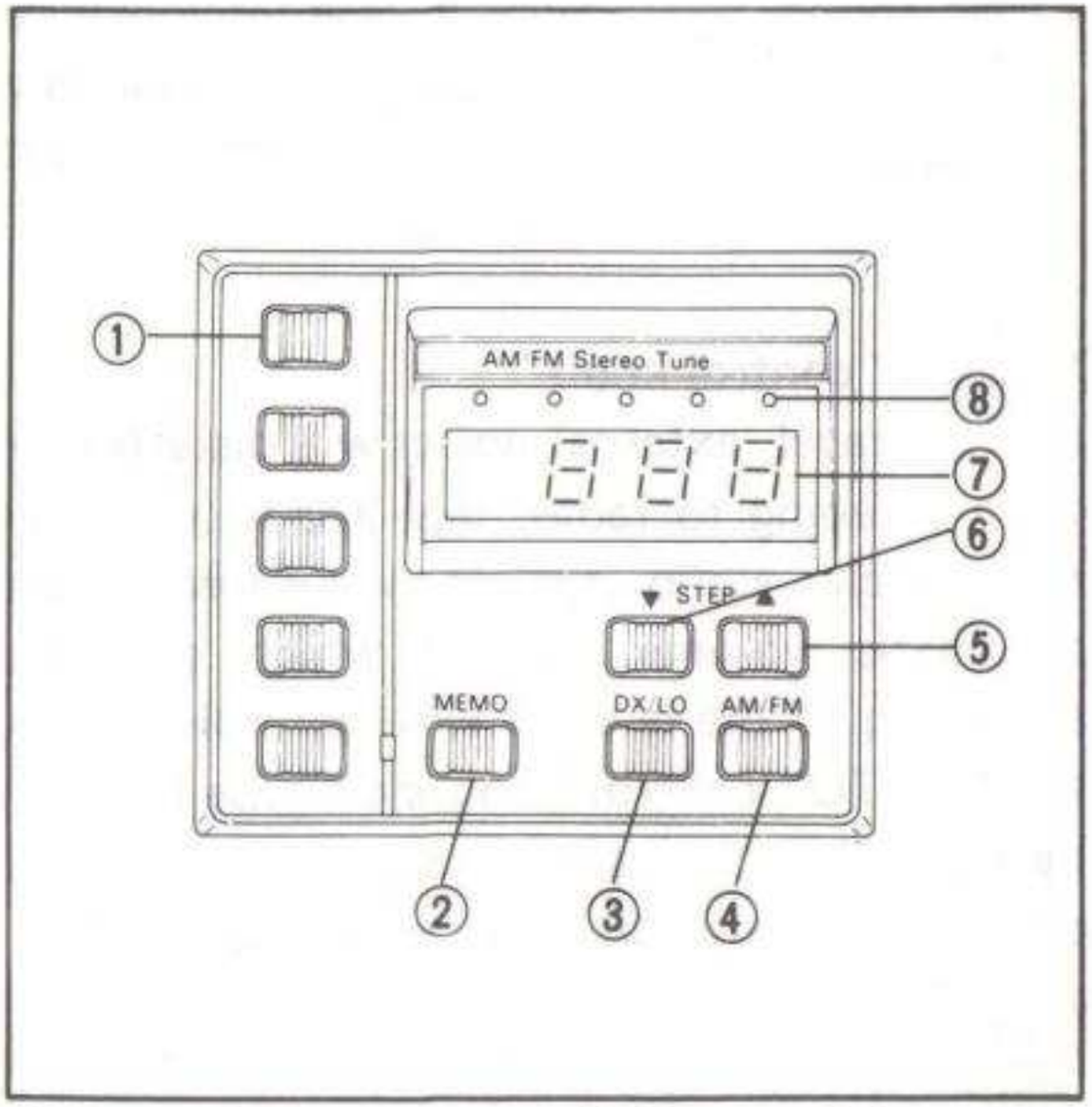
NOTE:

If you raise sound level too much with the Intercom, the noise sensing microphone is likely to pick up noises, making it harder for you to listen to radio or tape sounds.

TUNER CONTROLLER

⚠ CAUTION:

This motorcycle requires use of anti-noise type spark plugs (a resistor is incorporated in this type of spark plug). When replacing spark plugs, be sure to use the designated type.



1. Preset switch
2. "MEMO" (memory) switch
3. "DX/LO" switch
4. "AM/FM" switch
5. Step up switch
6. Step down switch
7. Frequency display
8. Indicator lights

Preset switches

Each of the five preset switches provided permits to instantly tune in to a specific broadcast station preselected with the switch. Up to five AM/FM stations may be preselected.

"MEMO" (Memory) switch

Use this switch to preselect broadcast stations.

"DX/LO" switch

DX and LO alternate on every depression of this switch.

This provides the following effects when the handlebar-mounted "TUNE" switch is on.

DX:

Automatic "TUNE" works for radio waves of strong and weak field intensities inclusively.

LO:

Automatic "TUNE" works for radio waves of strong field intensities only.

"AM/FM" switch

AM and FM alternate on every depression of this switch.

Step up/down switches

On every depression of either of the switches, AM or FM turned frequency scans up or down wave band. Keep one depressed to let tuned frequency scan up or down rapidly.

Frequency display

This displays the tuned frequency.

Indicator lights

MEMO – remains lit for 5 seconds on depression of the memory switch.

AM – lights when "AM" is selected with the "AM/FM" switch.

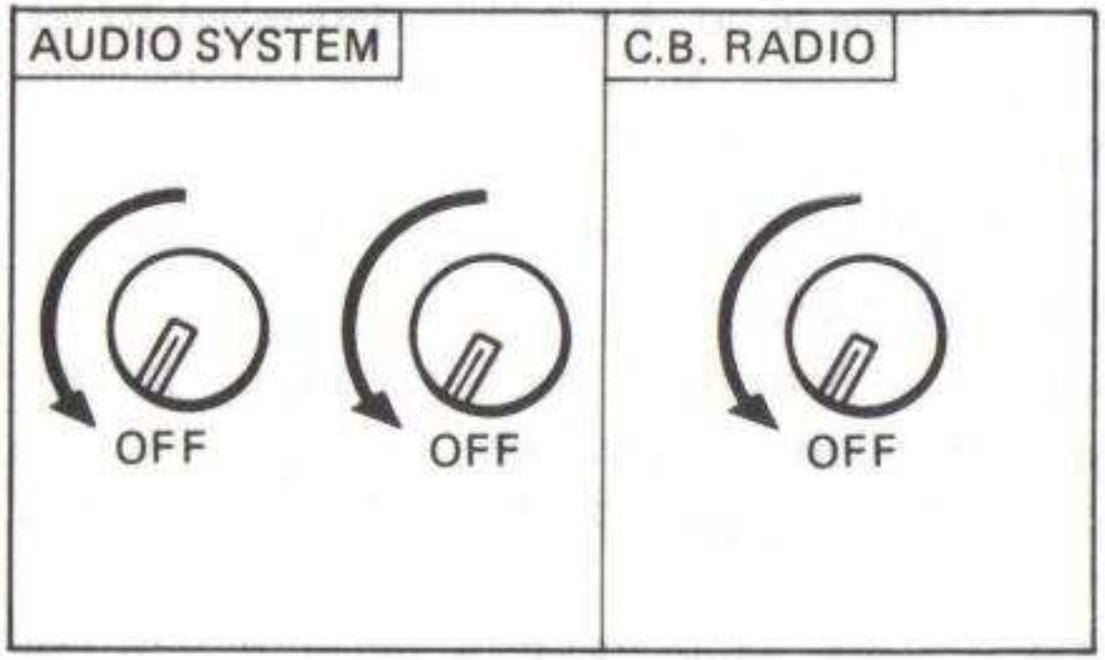
FM – lights when "FM" is selected with the "AM/FM" switch.

ST – lights when "FM" is selected with the "AM/FM" switch and a stereo "FM" broadcast is tuned in to.

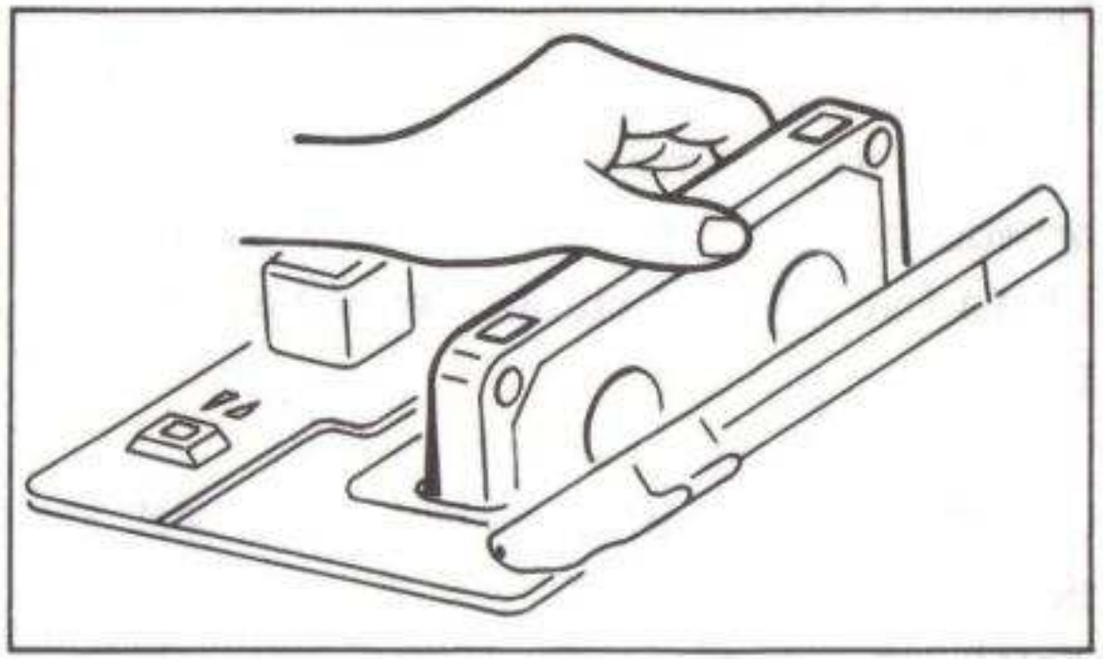
LO – lights when "LO" is selected with the "DX/LO" switch.

HOW TO LISTEN TO RADIO

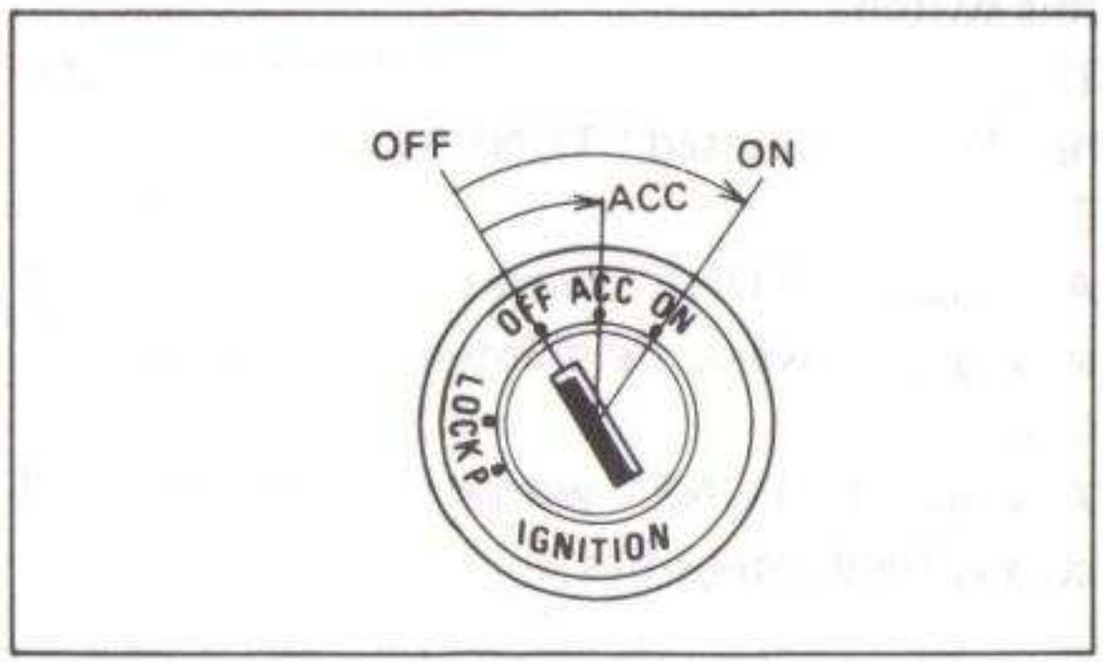
1. Turn off both the "ON-VOL" and "INT.VOL" control knobs of the amplifier controller.
2. Turn off the "ON-VOL" control knob of the C.B. radio.



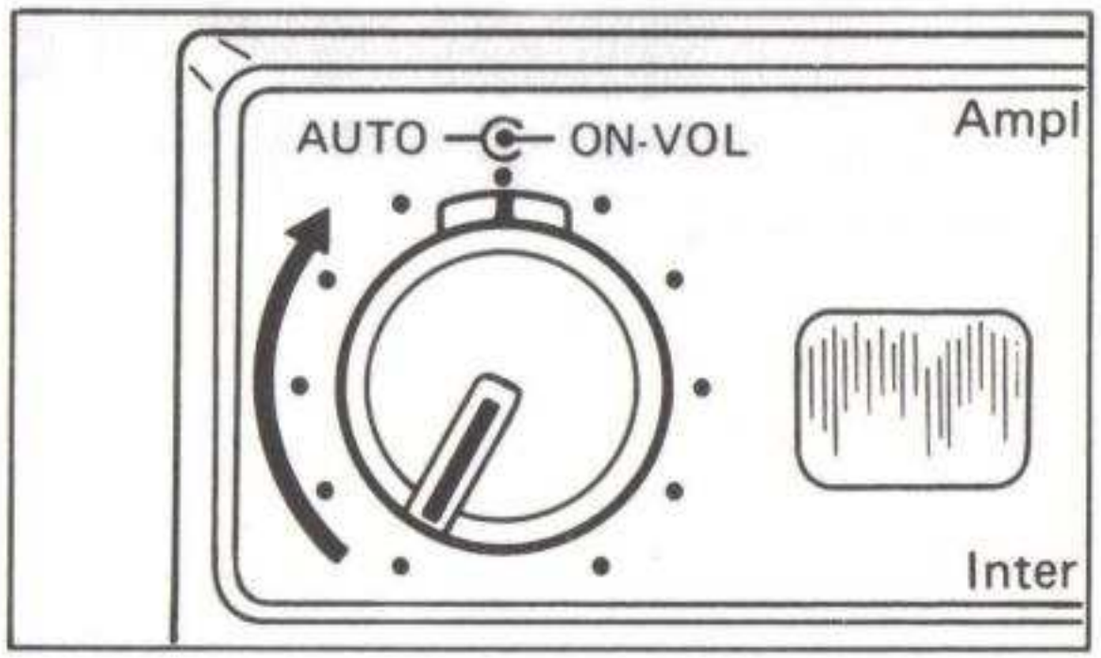
3. Turn off the "MUTE" switch of operator and passenger remote control switch.
4. Remove the cassette tape from the deck, if loaded.



5. Set the main switch at "ACC" or "ON"



6. Select speakers or headphones output with the "H.PH" switch of the amplifier controller.
7. Turn on power with the "ON-VOL" control knob and adjust sound level appropriately.

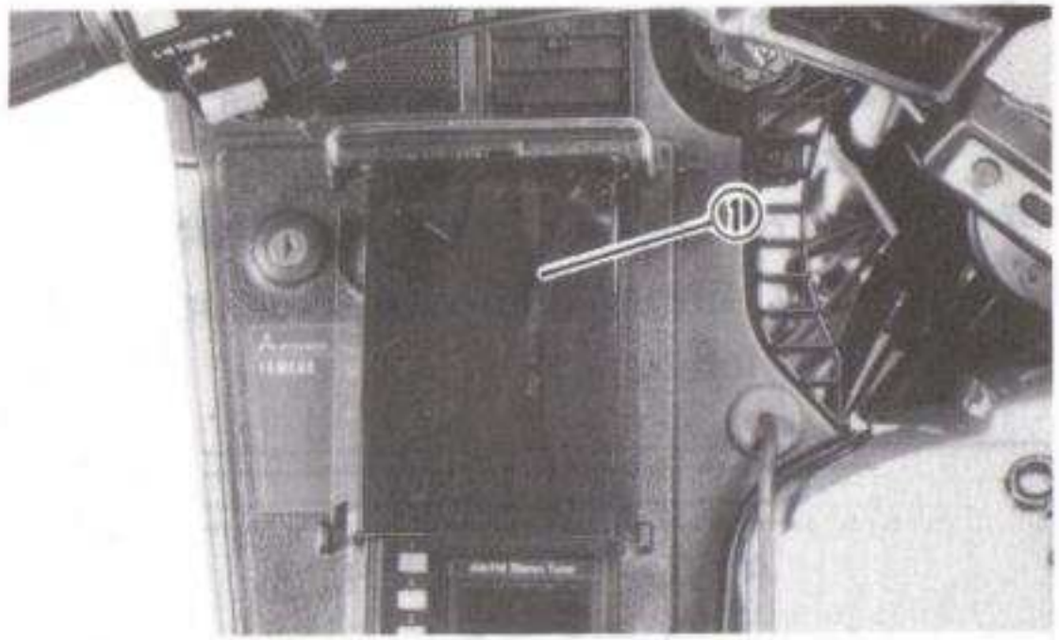


8. Select "AM" or "FM" with the "AM/FM" switch.
9. Turning
   a. Tune in to a broadcast by using the handlebar-mounted "TUNE" switch or the Step Up/Down switches.
   b. Put the frequency of a desired station in memory.
      1) Let the frequency display read the frequency of the desired station.
      2) Depress the "MEMO" (memory) switch. The "MEMO" indicator remains lit for 5 seconds.
      3) Depress a preset switch while the "MEMO" light is lit. Then the station's frequency is assigned to the preset switch and memorized.
   c. Tuning in to a memorized station
      Depress a preset switch, and the station assigned to the preset switch is tuned in to with its frequency read on the frequency display.

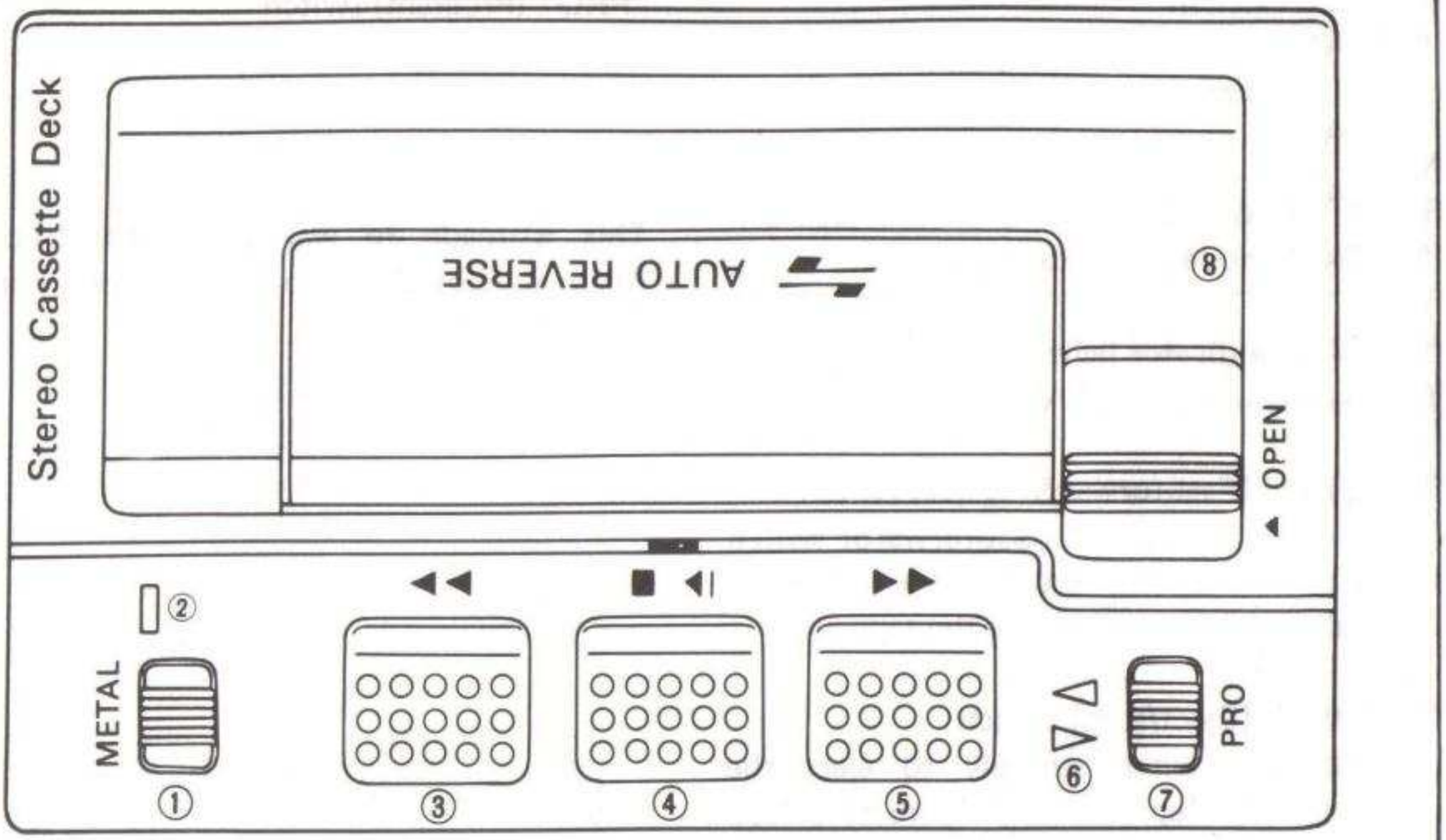
CASSETTE DECK

⚠ CAUTION:

1. Cover the unit with a waterproof awning in rainy days.
2. Keep the cassette compartment lid closed during use.
3. Store the cassette half in the cassette case. It permits to keep the tape without sag.
4. If the tape is loose, it could be snagged by the tape transport mechanism. Be sure to remove sag before use.
5. Do not lead the cassette half in direct sunlight for long.
6. If the inside of the cassette tape deck has got wet, dry it up in the shade with the cassette compartment lid kept open.
7. To clean the magnetic head, wipe it with something like the medical applicator soaked with alcohol. (Never use thinner, benzine, and gasoline.)



1. Waterproof awning



1. "METAL" switch
2. "METAL" indicator light
3. ◀◀ (Fast-forward) switch
4. ■ ◀| (Eject/stop) switch
5. ▶▶ (Fast-reverse) switch
6. Program indicator light
7. "PRO" (Program) switch
8. Cassette compartment lid

"METAL" switch
"METAL" and "NORMAL" modes alternate on every depression of this switch.

NOTE:
Select "NORMAL" mode for normal tape and "METAL" mode for metal tape.

"METAL" indicator light
This lights during "METAL" mode.

" ◀◀, ▶▶ " (Fast-forward/reverse) switch
Depress the " ◀◀ " (fast-forward) switch to fast-forward and the " ▶▶ " (fast-reverse) switch to fast-reverse the tape.

" ■ ◀| " (Eject/stop) switch
Depress this switch strongly to eject the cassette tape. Depress it lightly to stop fast-forwarding or reversing.

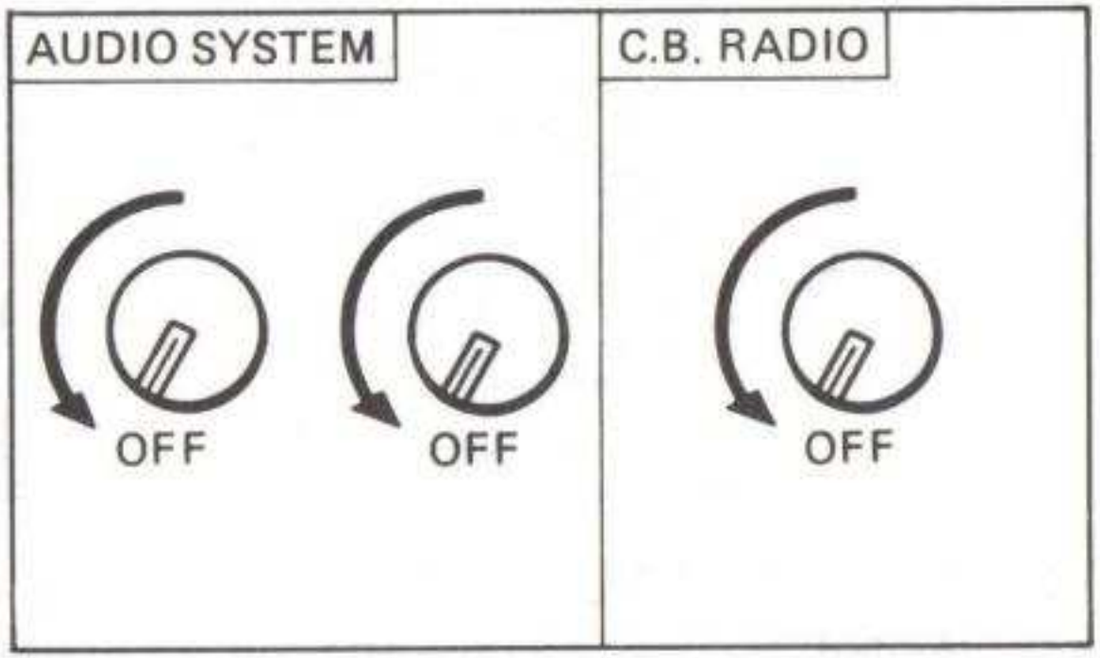
Program indicator light
These indicate tape running direction.

"PRO" (Program) switch
Tape running direction reverses on every depression of this switch.

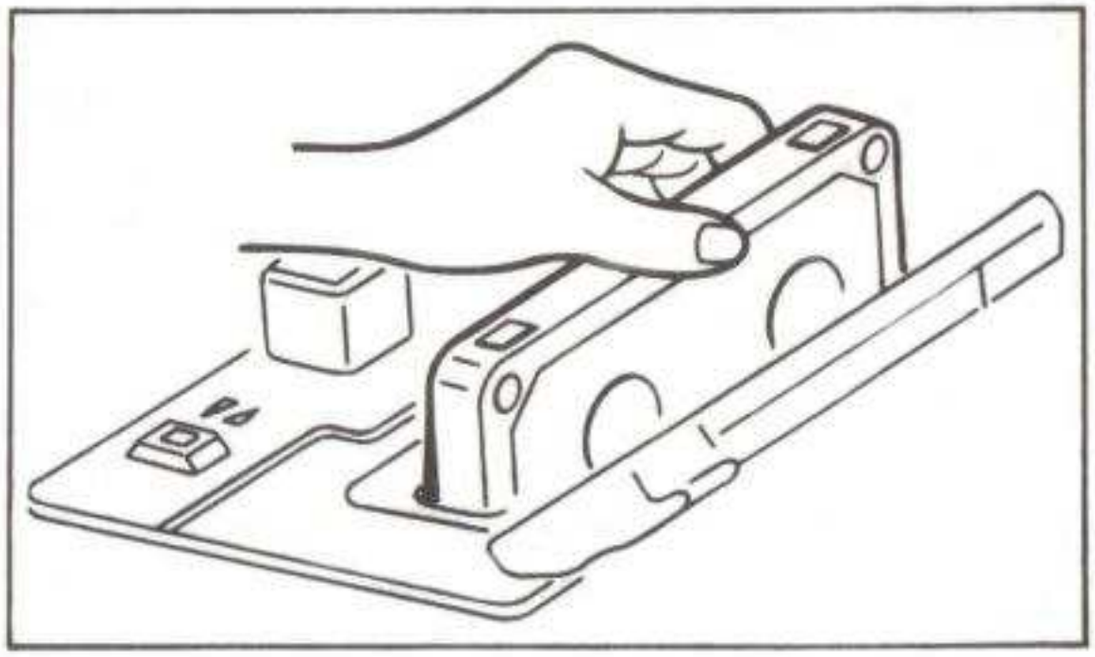
Cassette compartment lid
This is made to waterproof construction. Keep it closed except when installing or removing a tape.

HOW TO LISTEN TO TAPE

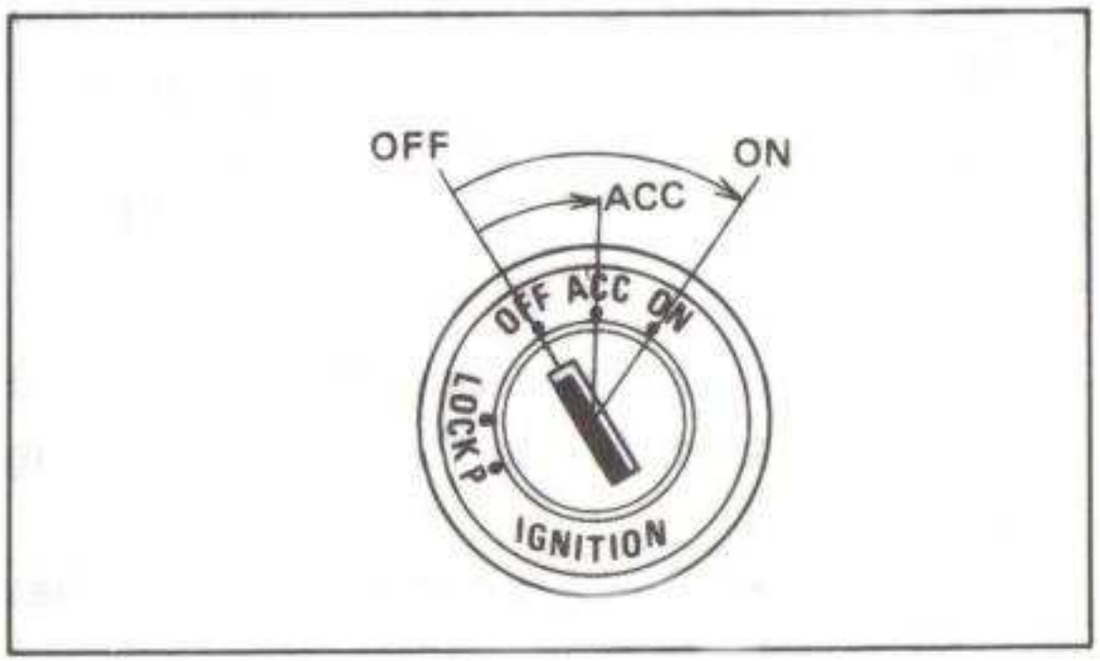
1. Turn off both the "ON-VOL" and "INT. VOL" control knobs of the amplifier controller.
2. Turn off the "ON-VOL" control knob of the C.B. radio.



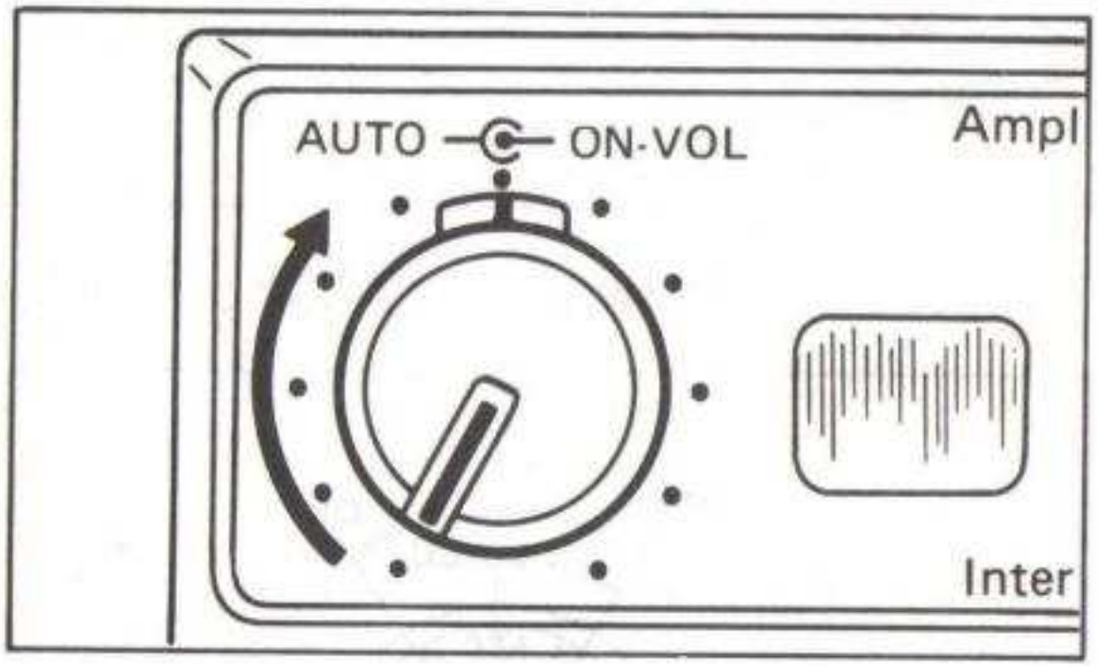
3. Turn off the "MUTE" switch of operator and passenger remote control switch.
4. Remove the cassette tape from the deck, if loaded.



5. Set the main switch at "ACC" or "ON".

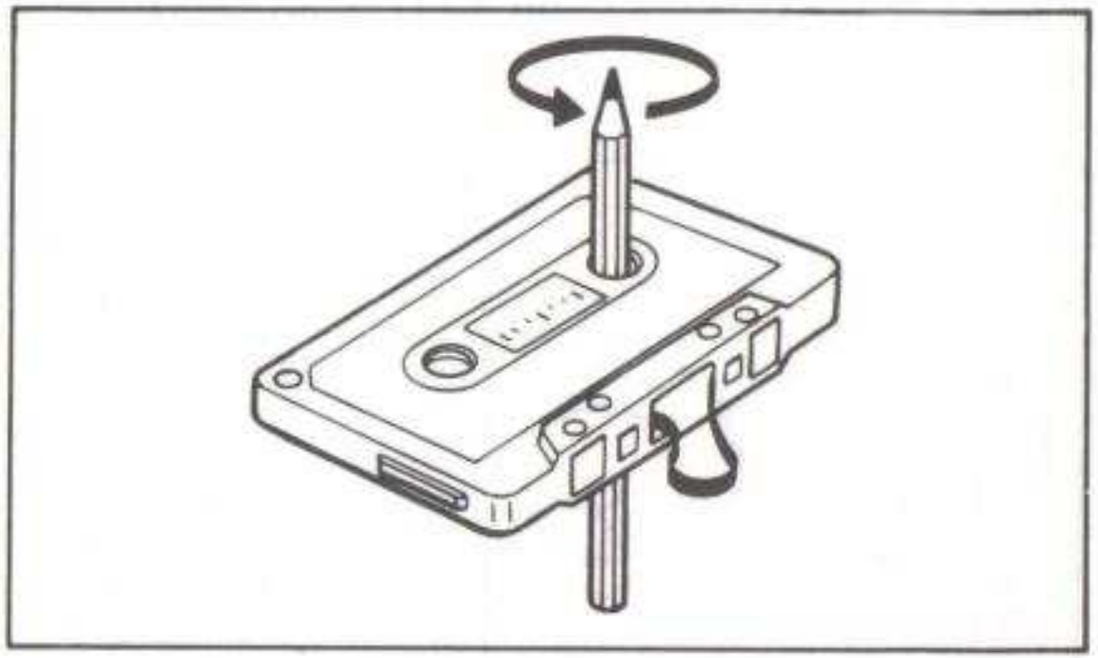


6. Select speakers or headphones output with the "H.PH" switch of the amplifier controller.
7. Turn on power with the "ON-VOL" control knob and adjust sound level appropriately.



8. Open the cassette compartment lid and insert a tape. (Close the lid after loading the tape.)
   Then the system automatically switches from radio to tape.

NOTE:
If the tape is loose, wind it properly by a pencil or the like as illustrated to remove the sag.



9. Select "METAL" mode if metal tape is loaded.
10. Reverse or fast-forward the tape as necessary.

C.B. RADIO

This C.B. radio represents the most advanced mobile station type radio ever designed for use in the Citizens Band Radio Service. It will operate on any of the 40 frequencies designated as Citizens band channels by the Federal Communications Commission (F.C.C.).

This model features a frequency synthesizing circuit with PHASE LOCK LOOP techniques to assure ultraprecise frequency control.

This radio has been Type Accepted and Type Certified by the F.C.C.

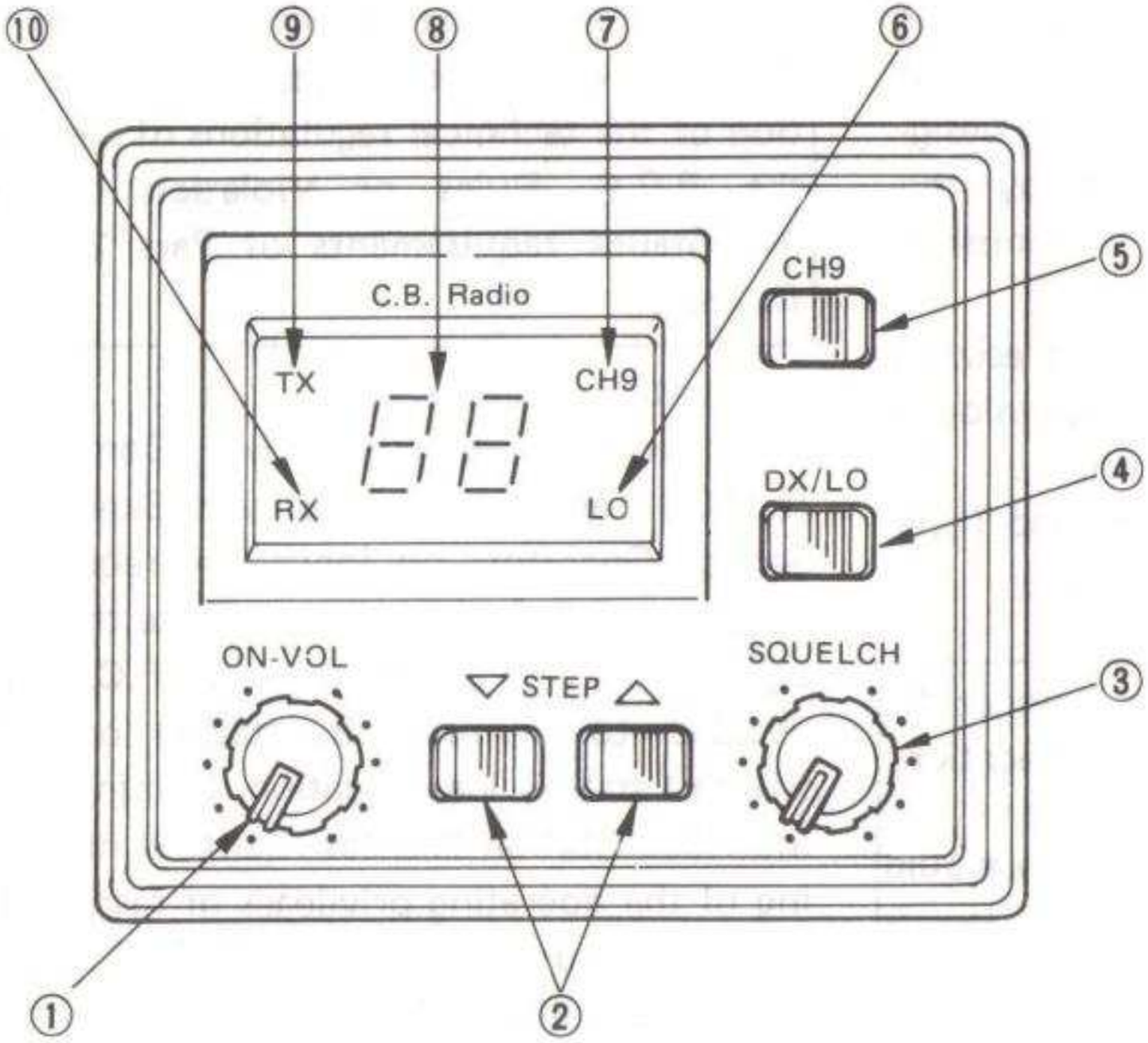
The Citizens Band Radio Service is under the jurisdiction of the Federal Communications Commission (F.C.C.).

Any adjustments or alterations which would alter the performance of the transceiver's original F.C.C. Type Acceptance or which would change the frequency determining method are strictly prohibited.

Replacement or substitution of Crystals, Transistors, IC, Regulator Diodes or any other part of a unique nature, with parts other than those recommended by us, may cause violation of the technical regulations of Part 95 of the F.C.C. Rules or Violation of Type Acceptance requirements of Part 2 of the Rules.

Elimination of licensing

The Federal Communications Commission (F.C.C.) has rules that Citizens Band Radio Service Operators no longer are required to obtain an F.C.C. license to operate their C.B. equipment. In doing so, the F.C.C. also decided to permit C.B. station operation without station identification. Elimination of individual station licenses results in no lessening of the operating privileges or responsibilities of C.B. users. An operator of a C.B. radio station is still required to comply with the Communications Act and with the rules of C.B. Radio Service.



1 "ON-VOL" control knob
2 "▼ STEP ▲" switch
3 "SQUELCH" control knob
4. "DX/LO" switch
5 "CH9" switch
6 "LO" indicator
7 "CH9" indicator
8 Channel indicator
9 "TX" indicator
10 "RX" indicator

"ON-VOL" control knob

Turn clockwise to apply power to the radio and to set the audio volume to the desired listening level.

Turn fully counterclockwise to turn off the radio.

" ▼ STEP ▲ " switch

These buttons select the desired channel for transmission and reception.

Each time this switch is pressed, the channels changes one step (▼) downward or (▲) upward. Keeping the switch pressed changes the channels consecutively downward or upward. All channels, except channel 9, may be used for communications between stations operating under different license. Channel 9 has been reserved by the F.C.C. for emergency communications involving the immediate safety of individuals or immediate protection of property. Channel 9 also may be used to render assistance to a motorist.

This is an F.C.C. rule and applies to all operators of Citizens band radios.

"SQUELCH" control knob

This squelch control is rotated to cut off or eliminate received background noise in the absence of an incoming signal. For maximum receive sensitivity, it is desired that the control be rotated only to this point where the receive background noise or ambient background noise is eliminated. Turn the control fully counterclockwise, then slowly rotate clockwise until the receive noise disappears. In order to be heard, any signal must now be slightly stronger than the average received noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at the maximum clockwise setting.

"DX/LO" switch
For normal reception, set the switch to "DX". For a short-range communication or when signal is so strong as to produce a jarring note, set the switch to "LO".

"CH9" switch
Depress this switch for instant access to emergency channel 9. Depress again to return to the original channel.

"LO" indicator
This indicator is displayed when the "DX/LO" Selector switch is depressed.

"CH9" indicator
This indicator is displayed when the "CH9" switch is depressed.

Channel indicator
Liquid Crystal Display (LCD) indicates the channel number in use.

"TX" indicator
This indicator is displayed when the transmitter is in operation.

"RX" indicator
This indicator is displayed when an incoming signal is received.

HOW TO OPERATE THE C.B. RADIO

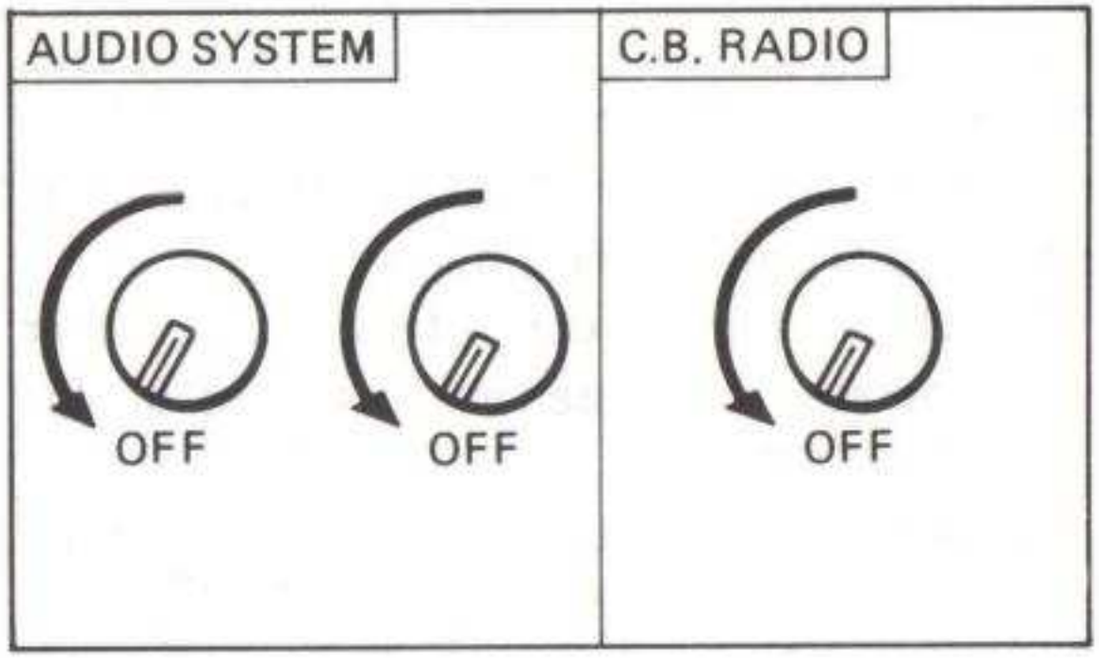
⚠ WARNING:

- **It is very dangerous to operate C.B. radio controls except remote controls while riding: do not remove your hands from the handlebars.**
- **To ride safely, keep a moderate audio level.**

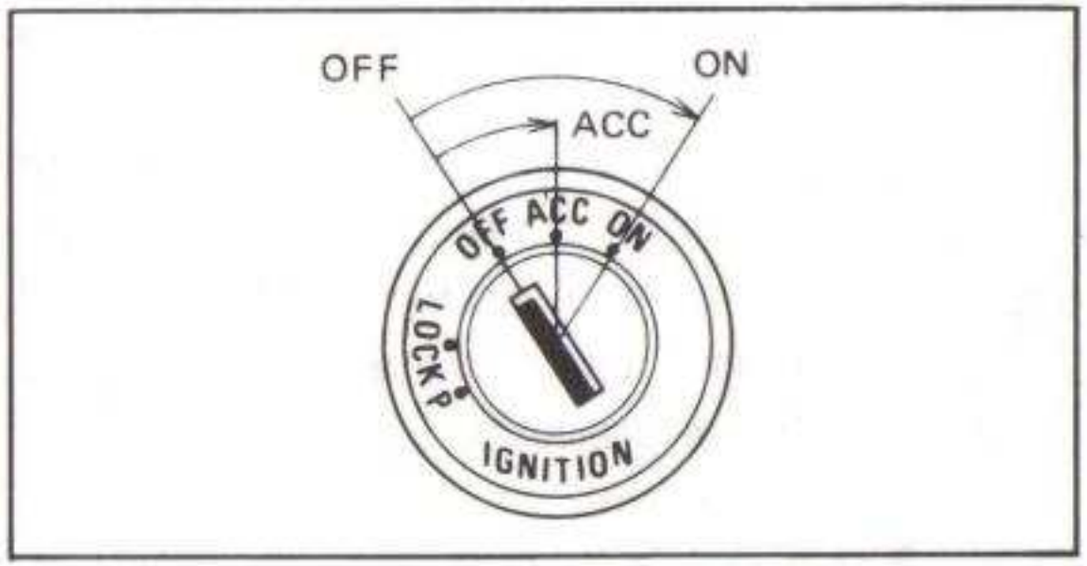
⚠ CAUTION:

- **Do not use the C.B. radio for long time when the engine is off: battery energy might be used up.**

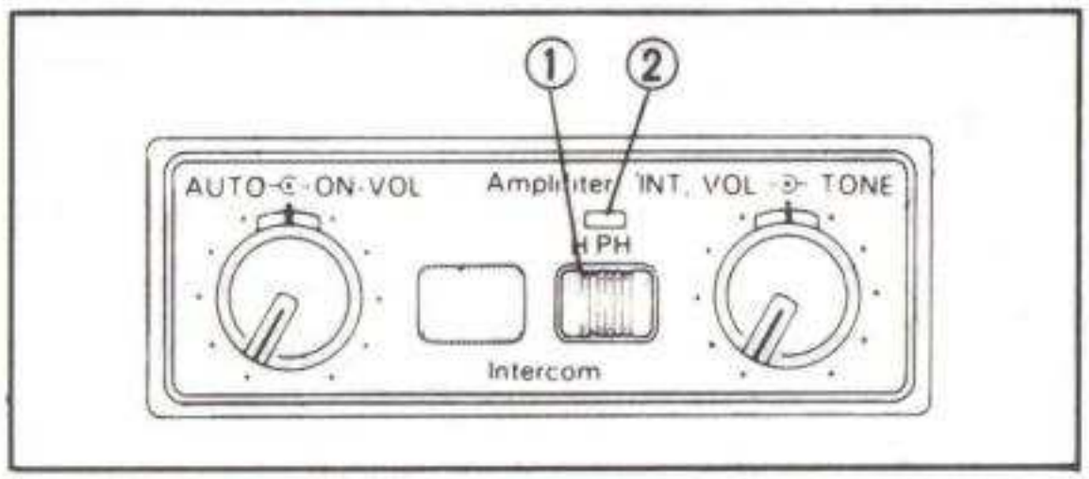
1. Connect the head set (option parts) correctly.
2. Turn off both the "ON-VOL" and "INT. VOL" control knobs of the amplifier controller.
3. Turn off the "ON-VOL" control knob of the C.B. radio.



4. Turn off the "MUTE" switch of operator and passenger remote control switch.
5. Turn the main switch to "ACC" or "ON".



6. Select speakers or headphones output with the "H. PH" switch of the amplifier controller.



1. "H.PH" switch 2. Headphone indicator light

To Receive:

a. Turn the "ON-VOL" control knob clockwise.
b. Set the desired channel.

c. Set the "ON-VOL" control knob to a comfortable listening audio level.
d. Listen to the background noise from the speakers or headphones. Turn the squelch control slowly clockwise until the noise just disappears (no signal should be present). Leave the control at this setting.
The squelch is now properly adjusted. The receiver will remain quiet until a signal is actually received. Do not advance the control too far, or some of the weaker signals will not be heard.

To Transmit:

a. Be sure the operator has read and understands part 95, F.C.C. Rules and Regulations prior to operating the transmitter.
b. Select the desired channel.
c. If the channel is clear, press the "P.T.T." switch on the C.B. radio remote controller and speak in a normal voice.

Simultaneous use of audio system (radio or tape) and CB radio

Adjustment of the "Squelch" control knob automatically enables you to listen to the audio system (radio or tape) when no electric waves are received on the CB radio or when no electric waves are transmitted.

NOTE:

None of the following cases mean the failure of the audio system (radio or tape) even if no sound is produced on the system.

1. When a remote control switch for either operator or passenger is turned on for "MUTE".
2. When the "SQUELCH" control switch is turned to the farthest left with the "ON-VOL" switch is on for the CB radio.
3. When the CB radio is receiving non-modulated signals (when the other party is not speaking).
4. When signals are transmitted or received on the CB radio.

Channel Information

Channel	Channel Frequency in MHz	Channel	Channel Frequency in MHz
1	26.965	14	27.125
2	26.975	15	27.135
3	26.985	16	27.155
4	27.005	17	27.165
5	27.015	18	27.175
6	27.025	19	27.185
7	27.035	20	27.205
8	27.055	21	27.215
9	27.065	22	27.225
10	27.075	23	27.235
11	27.085	24	27.245
12	27.105	25	27.255
13	27.115	26	27.265

Channel	Channel Frequency in MHz	Channel	Channel Frequency in MHz
27	27.275	34	27.345
28	27.285	35	27.355
29	27.295	36	27.365
30	27.305	37	27.375
31	27.315	38	27.385
32	27.325	39	27.395
33	27.335	40	27.405

NOTE:

This radio has been designed for operation in the 11 meter Citizens Radio Service. It uses a frequency synthesizing circuit with Phase Locked Loop (PLL) techniques to provide crystal controlled transmit and receive operation on all 40 channels. The PLL circuitry assures ultraprecise frequency control.

It is designed to meet the Federal Communications Commission requirements applicable to equipment operating in the Citizens Radio Service, and is not to be used for any other purpose.

PRE-OPERATION CHECKS

Before using this motorcycle check the following points:

No.	Item	Routine	Page
1	Brakes	Check operation, free play, fluid level and brake fluid leakage. Top-up with DOT #4 or (DOT #3) brake fluid if necessary.	7-3 ~ 7-4, 9-25 ~ 9-29
2	Clutch	Check operation, fluid level and fluid leakage. Top-up with DOT #4 or (DOT #3) brake fluid if necessary.	7-3 ~ 7-4, 9-29 ~ 9-30
3	Engine oil	Check engine oil level, add oil if necessary.	7-4, 9-12 ~ 9-15
4	Final gear oil	Check for leakage visually.	7-5, 9-15 ~ 9-17
5	Engine coolant	Check for coolant level and leakage, add coolant if necessary.	7-11 ~ 7-12, 9-17 ~ 9-22
6	Throttle	Check for smooth operation. Adjust if necessary.	7-4, 9-31
7	Battery	Check fluid level, top-up with distilled water if necessary.	7-10, 9-48 ~ 9-51
8	Lights/Signals	Check operation.	7-10, 9-51 ~ 9-54
9	Wheels/Tires	Check tire pressure, wear or damage.	7-5, 9-54 ~ 9-63
10	Fittings/Fasteners	Check all chassis fittings and fasteners. Adjust, if necessary.	7-10, 9-11

NOTE:

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

⚠ WARNING:

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

Brakes (See page 9-25 for more detail)

1. Brake lever and brake-pedal
   Check for correct play in the front brake lever and rear brake pedal. Make sure they are working properly. Check the brakes at low speed shortly after starting out.

⚠ WARNING:

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

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

Recommended brake fluid: DOT #4

NOTE:

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

3. Checking the disc pads
   Refer to page 9-27.

NOTE:

When this brake service is necessary, have a Yamaha dealer or other qualified mechanic replace the pads.

Brake 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 or master cylinders.

⚠ CAUTION:

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

⚠ WARNING:

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

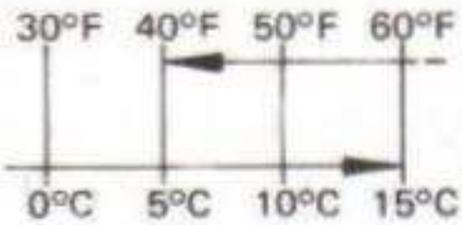
Throttle grip (See page 9-31 for more detail)

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

Engine oil (See page 9-12 for more detail)

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

Recommended oil:



YAMALUBE 4 (20W-40) or SAE 20W40 type SE motor oil

YAMALUBE 4 (10W-30) or SAE 10W30 type SE motor oil

Oil quantity:

Total amount:
4.7 L (4.1 Imp qt, 5.0 US qt)

Periodic oil change:
3.5 L (3.1 Imp qt, 3.7 US qt)

With oil filter replacement:
3.8 L (3.3 Imp qt, 4.0 US qt)

NOTE:

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

Final gear oil (See page 9-15 for more detail)
Make sure the final gear oil is at the specified level. Add oil as necessary.

Recommended oil:
SAE 80 API GL-4 Hypoid gear oil

If desired, an SAE 80W90 hypoid gear oil may be used for all conditions.

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

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

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

⚠ WARNING:

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

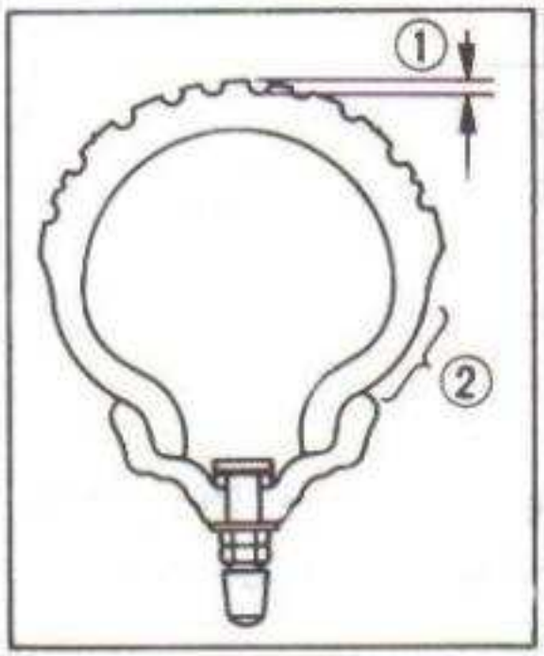
Basic weight: With oil and full fuel tank	XVZ13DU: 355 kg (783 lb) XVZ13DUC: 356 kg (785 lb)	
Maximum load*	XVZ13DU: 175 kg (386 lb) XVZ13DUC: 174 kg (384 lb)	
Cold tire pressure	Front	Rear
Up to 90 kg (198 lb) load*	230 kPa (2.3 kg/cm^2, 32 psi)	230 kPa (2.3 kg/cm^2, 32 psi)
90 kg (198 lb) ~ Maximum load*	230 kPa (2.3 kg/cm^2, 32 psi)	280 kPa (2.8 kg/cm^2, 40 psi)
High speed riding	230 kPa (2.3 kg/cm^2, 32 psi)	230 kPa (2.3 kg/cm^2, 32 psi)

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

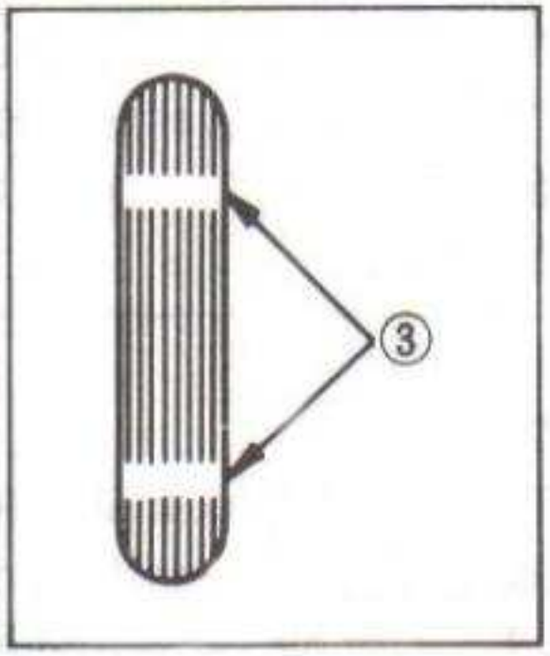
⚠ WARNING:

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

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



1. Tread depth
2. Side wall



3. Wear indicator

	Standard tire
Front: Manufacture/Size/Type	Bridgestone/ 120/90-18/L303 Dunlop/ 120/90-18/F16
Rear: Manufacture/Size/Type	Bridgestone/ 140/90-16/G508 Dunlop/ 140/90-16/K827
Minimum tire tread depth (front and rear)	1.0 mm (0.04 in)

⚠ WARNING:

1. **It is dangerous to ride with a worn-out tire. When a tire thread begins to show lines. Have a Yamaha dealer or other qualified mechanic replace the tire immediately. Brakes, tires, and related wheel parts replacement should be left to a Yamaha Service Technician or other qualified mechanic.**
2. **The tires equipped on this motorcycle are suited to normal riding and touring. They are not suited for sustained, high-speed running or racing and must not be used for such purposes. Consider your riding skill, road and weather conditions, and correct weight distribution when loading your motorcycle.**

Tubeless tires and cast wheels

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

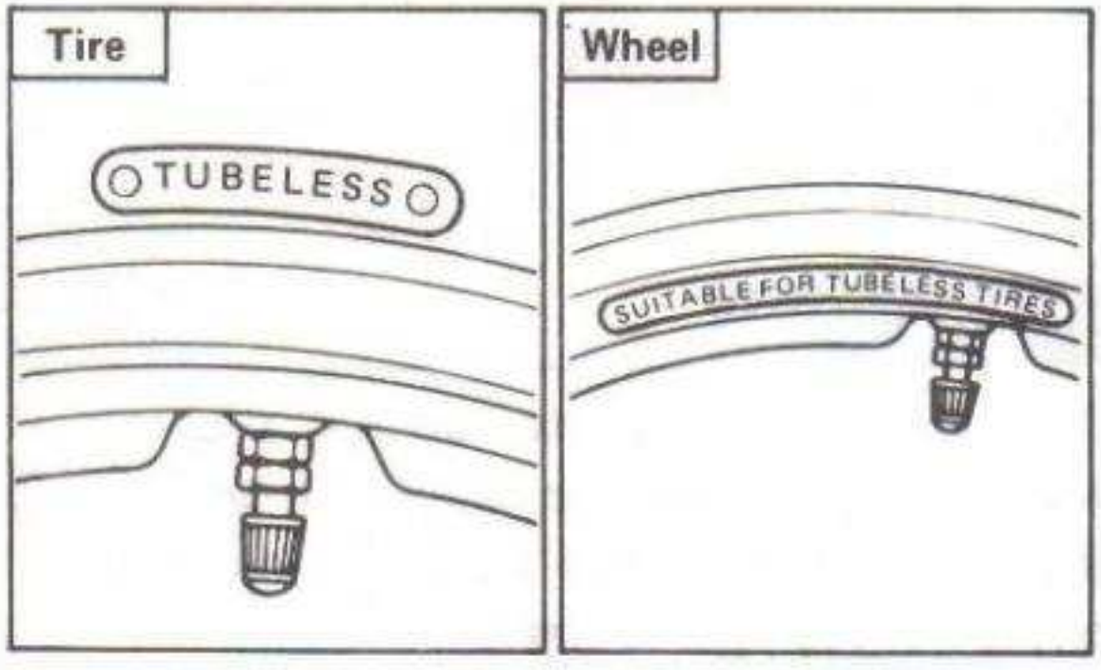
⚠ WARNING:

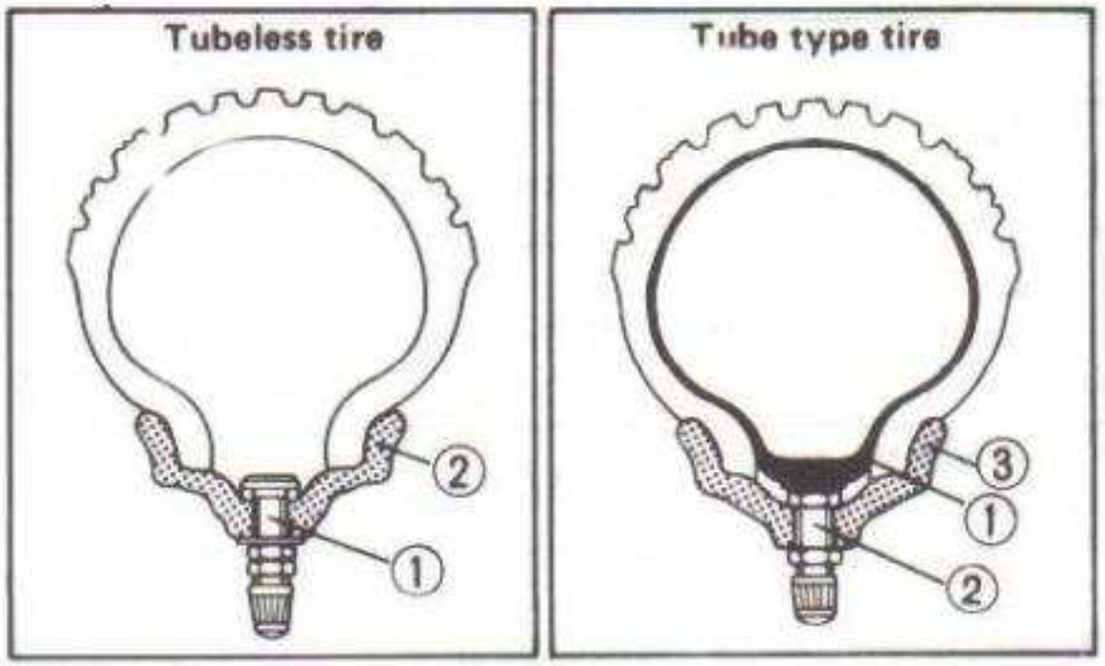
Do not attempt to use tubeless tires on a wheel designed for use only with tube-type tires. Tire failure and personal injury may result from sudden deflation.

Tube-type Wheel	→	Tube-type Tires only
Tubeless-type Wheel	→	Tube-type or Tubless tires

⚠ WARNING:

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





1. Air valve
2. Cast wheel

1. Tube
2. Air valve
3. Cast wheel

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

1. Always inspect the wheels before a ride. Place the motorcycle on its centerstand and check for cracks, bends, or warpage of the wheels. If any abnormal condition exists in a wheel, consult a Yamaha dealer or other qualified mechanic. Do not attempt even small repairs to the wheel. If a wheel is deformed or cracked, it must be replaced.

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

Tightening torque:
1.5 Nm (0.15 m·kg, 1.1 ft·lb)

Accessories or replacement parts

⚠ WARNING:

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

Fittings/Fasteners

Always check the tightness of chassis fittings and fasteners before a ride. Use the chart on page 9-11 to find the correct torque.

Lights and signals

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

Switches

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

Battery (See page 9-48 for more detail)

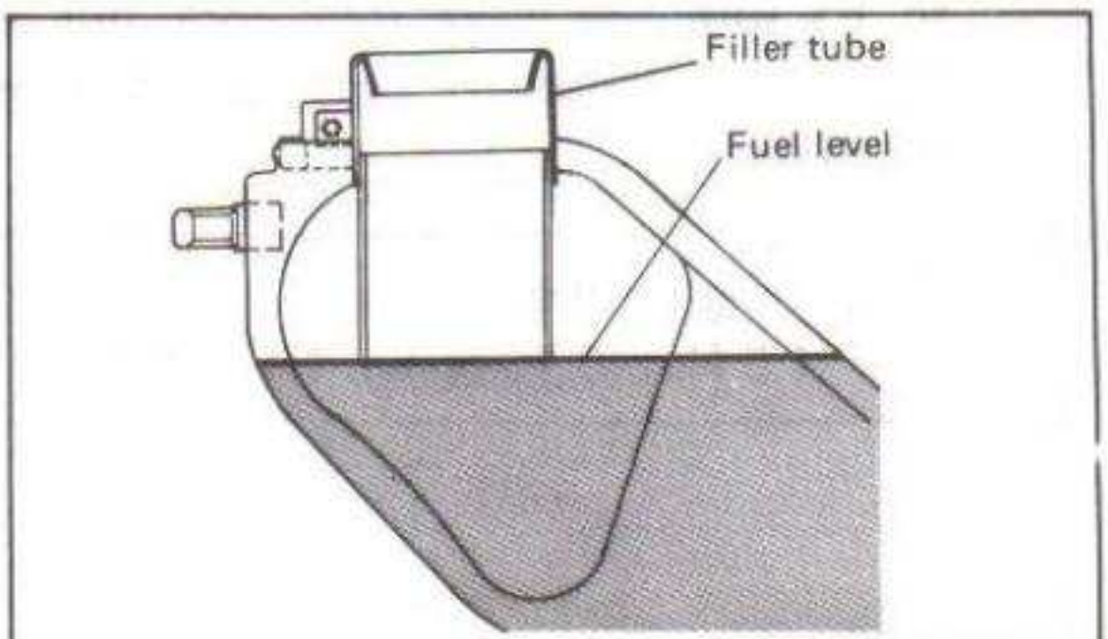
Check the battery fluid level with the computerized monitor system. If this indicator stays on, the battery fluid level is low. Add distilled water at the first opportunity.

Fuel

Check the fuel level with the computerized monitor system. If this indicator stays on, the fuel level is low. Add fuel at the first opportunity.

⚠ 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.



Recommended fuel:
UNLEADED FUEL RECOMMENDED
Fuel tank capacity:
Full:
20.0 L (4.4 Imp gal, 5.3 US gal)
Empty (displayed):
4.0 L (0.9 Imp gal, 1.1 US gal)
(reserve)

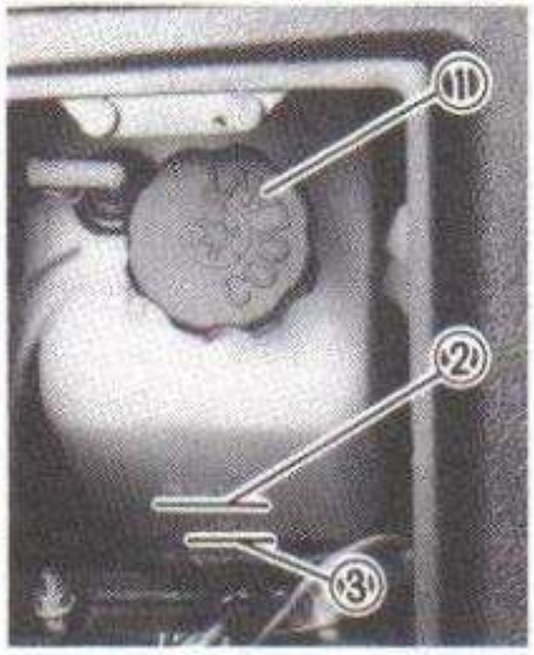
Your Yamaha engine has been designed to use regular unleaded gasoline with a pump octane number ([R + M]/2) of 86 or higher, or research octane number of 91 or higher.
If knocking or pinging occurs, use a different brand of gasoline or premium unleaded fuel.
Unleaded fuel will give you longer spark plug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

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

Coolant

Remove the console box cover.

Check the coolant level in the reservoir tank when the engine is cold. The coolant level is satisfactory if it is between the "FULL" and "LOW" level on the tank. The coolant level will vary with engine temperature. However, if the level is on or below the "LOW" level, add the tap water (soft water) until "FULL" level. Change the coolant every two years. (See page 9-17 for more detail.)



1. Coolant reservoir tank cap 2. Full level 3. Low level

⚠WARNING:

Do not remove the radiator cap when the engine is hot.

NOTE:

Before removing the radiator cap, disconnect the reservoir tank hose. Otherwise, coolant may flow out of the radiator.

⚠CAUTION:

Hard water or salt water is harmful to the engine parts.

You may use boiled water or distilled water, if you can't get soft water.

Reservoir tank capacity:

Total:

0.39 L (0.34 Imp qt, 0.41 US qt)

From LOW to FULL level:

0.25 L (0.22 Imp qt, 0.26 US qt)

OPERATION AND IMPORTANT RIDING

⚠ WARNING:

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

⚠ CAUTION:

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

⚠ WARNING:

Never start your 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 with adequate ventilation.
Before starting out, make sure that all lids of the trunk and saddlebags are securely locked.

Starting and warming up a cold engine

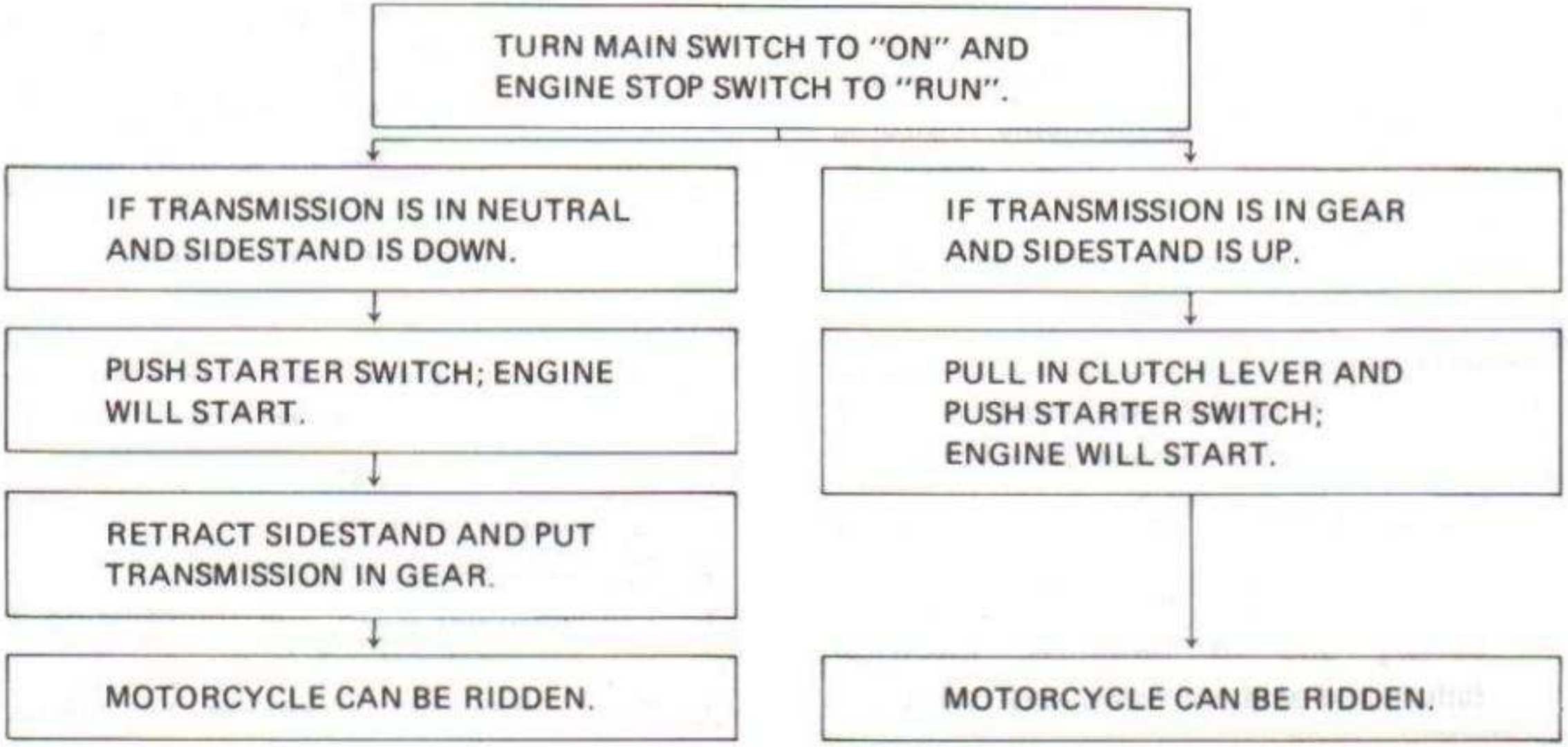
NOTE:

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

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

⚠ WARNING:

Before going through the following steps, check the function of the sidestand switch and clutch switch. (Refer to page 5-35)



1. Turn the ignition key to the "ON" and the engine stop switch to "RUN".
   Refer to page 5-4 for computerized monitor system.
2. Shift transmission into neutral.

NOTE:

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

3. Turn the starter lever (CHOKE) in the left direction and completely close the throttle grip.
4. Start the engine by pushing the starter switch.

NOTE:

If the engine fails to start, release the starter switch, then push the starter switch again. Pause a few seconds before the next attempt. Each cranking should be as short as possible to preserve battery energy. Do not crank the engine more than 10 seconds on each attempt.

5. After starting the engine, move the starter lever back. The starter operation periods differ with the ambient temperature, so refer to the following notes.

NOTE:

To see whether or not the engine is warm, see if engine responds normally to throttle with the starter moved back completely. To avoid the possibility of excessive exhaust emissions, never leave the starter circuit on longer than necessary.

The length of time the starter is used to start a cold engine depends upon the ambient temperature.

Warm ambient temperatures (above 10°C ~ 50°F) require about 7 seconds of starter use. Cold ambient temperatures (below 10°C ~ 50°F) require about 35 seconds with the starter fully open, then about 2.5 minutes with the starter in the half-open position.

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

Starting a warm engine

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

⚠ CAUTION:

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

Shifting and acceleration

This model has a 5-speed transmission. The transmission allows you to control the amount of power you have available at a given speed or while accelerating, climbing hills, etc. The use of the change pedal is shown in the illustration. (Page 5-12)

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

To start out and accelerate:

1. Pull the clutch lever to disengage the clutch.
2. Shift into FIRST gear. The green neutral indicator light should go out.
3. Open the throttle gradually, and at the same time, release the clutch lever slowly.
4. At the recommended shift point shown in the table below, close the throttle, and at the same time, pull in the clutch lever quickly.
5. Shift into SECOND gear. (Be careful not to shift into NEUTRAL.)
6. Open the throttle part way and gradually release the clutch lever.
7. Follow the same procedure when shifting to the next higher gear. Always shift gears at the recommended shift points.

To decelerate:

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

Recommended Shift Point

	Acceleration shift point km/h (mi/h)	Deceleration shift point km/h (mi/h)
1st → 2nd	20 (12.5)	25 (15.5)
2nd → 3rd	30 (19)	25 (15.5)
3rd → 4th	40 (25)	25 (15.5)
4th → 5th	50 (31)	25 (15.5)

⚠ CAUTION:

1. **Do not glide for long periods with the engine off, and do not tow the motorcycle a long distance. Even with gears in neutral, the transmission is only properly lubricated unless 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 load of forced shifting and can be damaged by shifting without the clutch.**

Engine break-in

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

1. 0 ~ 150 km (0 ~ 90 mi):
   Avoid operation above 3,000 r/min. Stop the engine and let it cool for 5 to 10 minutes after every hour of operation. Vary the speed of the motorcycle from time to time. Do not operate it at one set throttle position.

2. 150 ~ 500 km (90 ~ 300 mi):
   Avoid prolonged operation above 4,000 r/min. Rev the motorcycle freely through the gears, but do not use full throttle at any time.
3. 500 ~ 1,000 km (300 ~ 600 mi):
   Avoid prolonged full throttle operation. Avoid cruising speeds in excess of 5,000 r/min.

⚠ CAUTION:

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

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

⚠ CAUTION:

Never let engine speeds enter the red zone.

⚠ CAUTION:

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

Parking

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

⚠ WARNING:

The muffler and exhaust pipe are hot. Park the motorcycle in a place where pedestrians or children are not likely to touch the motorcycle. Do not park the motorcycle on a slope or soft ground; the motorcycle may overturn.

PERIODIC MAINTENANCE AND MINOR REPAIR

Periodic inspection, adjustment, and lubrication will keep your motorcycle in the safest and most efficient condition possible. Safety is an obligation of the motorcycle owner.

The most important points of motorcycle inspection, adjustment, and lubrication are explained in the following pages.

"Maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual using any part which is certified (if applicable)."

⚠ WARNING:

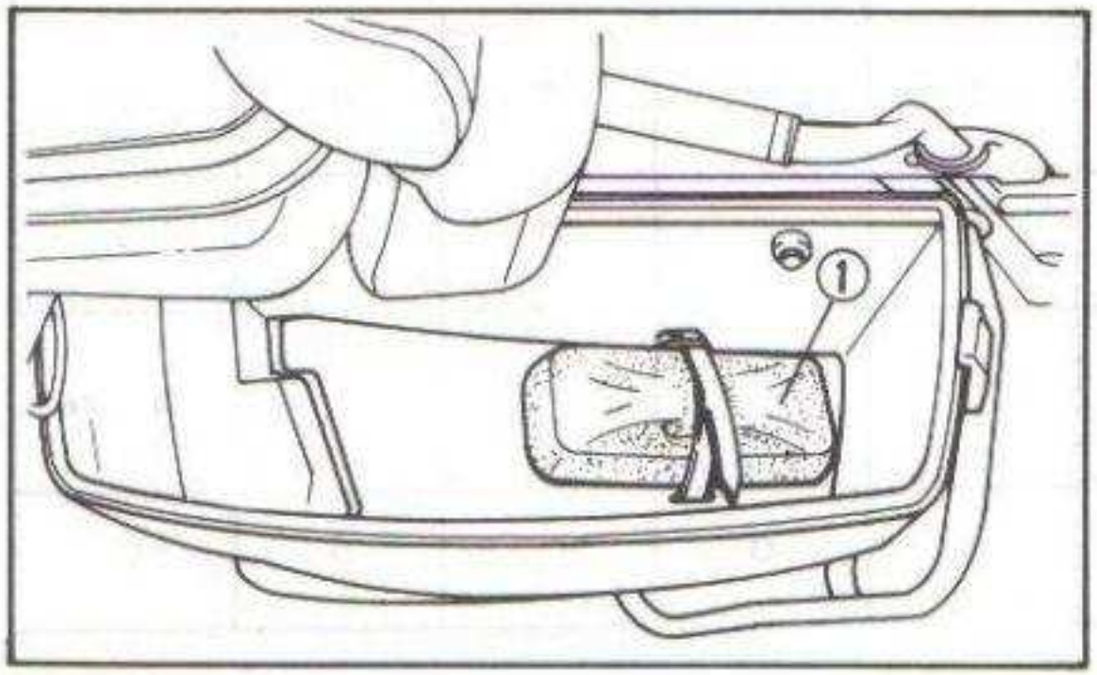
If the owner is not familiar with motorcycle service, this work should be done by a Yamaha dealer or other qualified mechanic.

PERIODIC MAINTENANCE

PROPER PERIODIC MAINTENANCE OF YOUR MOTORCYCLE IS IMPORTANT TO ITS GIVING YOU LONG, PLEASURABLE SERVICE: ESPECIALLY IMPORTANT ARE THE MAINTENANCE SERVICES RELATED TO EMISSIONS CONTROL. THESE CONTROLS NOT ONLY FUNCTION TO ENSURE CLEANER AIR BUT ARE ALSO VITAL TO PROPER ENGINE OPERATION AND MAXIMUM PERFORMANCE. IN THE FOLLOWING TABLES OF PERIODIC MAINTENANCE, THE SERVICE RELATED TO EMISSIONS CONTROL ARE GROUPED SEPARATELY. THESE SERVICES REQUIRE SPECIALIZED DATA, KNOWLEDGE, AND EQUIPMENT. YAMAHA DEALERS ARE TRAINED AND EQUIPPED TO PERFORM THESE PARTICULAR SERVICES.

Tool kit

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



1. Tool kit

NOTE:

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

⚠ WARNING:

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

PERIODIC MAINTENANCE EMISSION CONTROL SYSTEM

No.	Item	Remarks	Initial	Odometer readings				
				**1	**2			**3
			1,000 km or 1 month (600 mi)	7,000 km or 7 months (4,400 mi)	13,000 km or 13 months (8,200 mi)	19,000 km or 19 months (12,000 mi)	25,000 km or 25 months (15,800 mi)	31,000 km or 31 months (19,600 mi)
1*	Valve clearance	Check and adjust valve clearance when engine is cold.	Every 42,000 km (26,600 mi)					
2	Spark plug	Check condition. Adjust gap and clean. Replace at 13,000 km (or 13 months) and thereafter every 12,000 km (or 12 months).		○	Replace	○	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 initial 31,000 km (19,600 mi) and thereafter every 30,000 km (19,000 mi).						Replace
6*	Exhaust system	Check for leakage. Retighten if necessary. Replace gasket(s) if necessary.		○	○	○	○	○

No.	Item	Remarks	Initial	Odometer readings				
			1,000 km or 1 month (600 mi)	**1 7,000 km or 7 months (4,400 mi)	**2 13,000 km or 13 months (8,200 mi)	19,000 km or 19 months (12,000 mi)	25,000 km or 25 months (15,800 mi)	**3 31,000 km or 31 months (19,600 mi)
7*	Carburetor synchronization	Adjust synchronization of carburetors.	○	○	○	○	○	○
8*	Idle speed	Check and adjust engine idle speed. Adjust cable free play.		○	○	○	○	○

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

NOTE:

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

Spark plug inspection

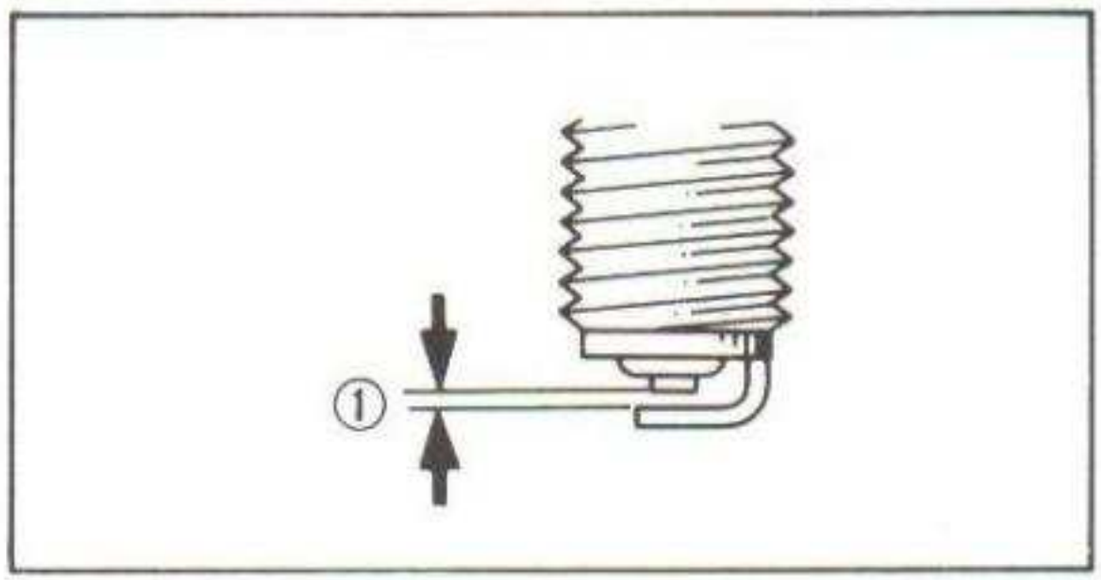
The spark plug is an important engine component and is easy to inspect. The condition of the spark plug can indicate something of the condition of the engine.

Normally, all spark plugs from the same engine should have the same color on the white porcelain insulator around the center electrode. The ideal color at this point is a medium to light tan color for a motorcycle that is being ridden normally. If one spark plug shows a distinctly different color, there could be something wrong with the engine. For example, if the center electrode porcelain is very white, this color could indicate an intake tract air leak or carburetion problem for that cylinder. Do not attempt to diagnose such problems yourself. Instead, take the motorcycle to a Yamaha dealer or other qualified mechanic.

You should periodically remove and inspect the spark plug because heat and deposits will cause any spark plug to slowly break down and erode. If electrode erosion becomes excessive, or if carbon and other deposits are excessive, you should replace the spark plug with one of the proper type.

Standard spark plug:
DPR8EA-9 (N.G.K.) or
X24EPR-U9 (NIPPONDENSO)

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



1. Spark plug gap

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

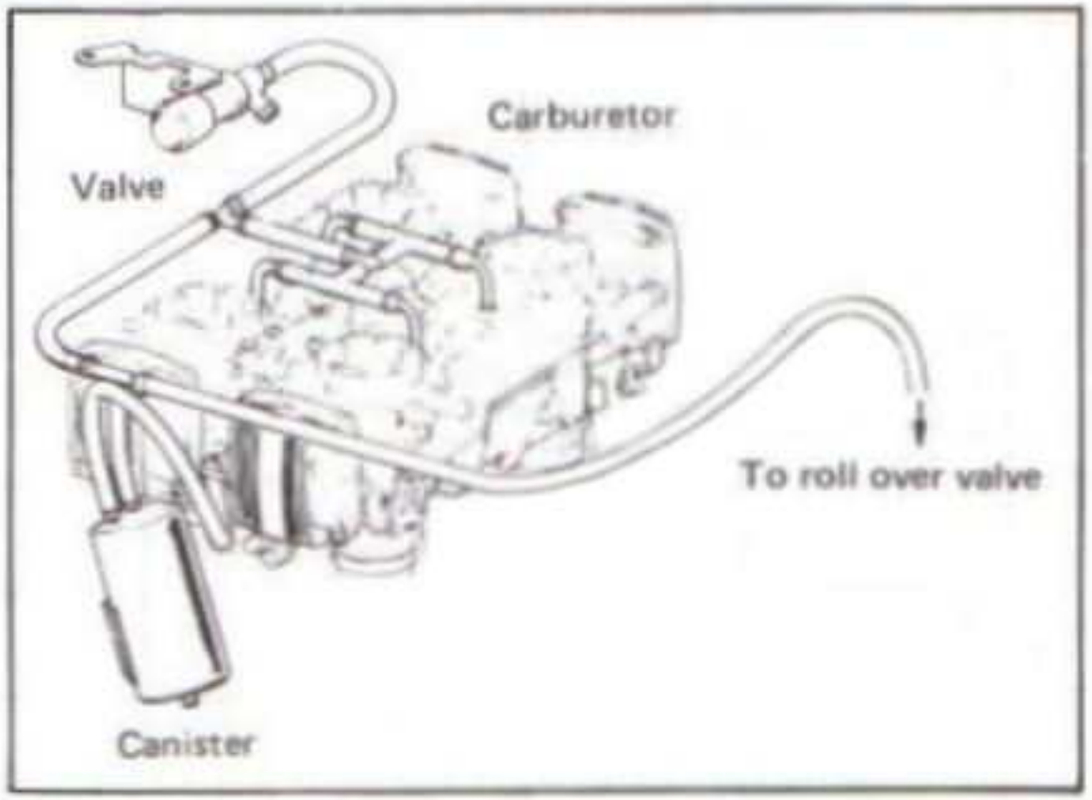
When installing the plug, always clean the gasket surface and use a new gasket. Wipe off any grime from the threads, and torque the spark plug properly.

Spark plug torque:
17.5 Nm (1.75 m·kg, 12.5 ft·lb)

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

Canister (for California only)
This model is equipped with a canister to prevent the discharging of fuel vapor into the atmosphere. Before using this motorcycle be sure to check the following:

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



GENERAL MAINTENANCE/LUBRICATION

No.	Item	Remarks	Type	Initial	Odometer reading				
				1,000 km or 1 month (600 mi)	**1 7,000 km or 7 months (4,400 mi)	**2 13,000 km or 13 months (8,200 mi)	**3 19,000 km or 19 months (12,000 mi)	**4 25,000 km or 25 months (15,800 mi)	31,000 km or 31 months (19,600 mi)
1	Engine oil	Warm-up engine before draining	See page 7-4.	○		○		○	
2	Oil filter	Replace	—	○		○		○	
3*	Air filter	Clean with compressed air. Replace if necessary.	—		○	○	○	○	○
4*	Cooling system	Check hoses for cracks or damage, replace if necessary.	—		○	○	○	○	○
		Replace coolant 24 months.	Ethylene glycol anti-freeze coolant					Replace	
5*	Brake system	Adjust free play. Replace pads if necessary.	—	○	○	○	○	○	○
6*	Final gear oil	Check oil level and leakage. Replace every 24,000 km or 24 months.	SAE 80 API "GL-4" hypoid gear oil	Replace		Check		○	

No.	Item	Remarks	Type	Initial	Odometer reading				
				1,000 km or 1 month (600 mi)	**1 7,000 km or 7 months (4,400 mi)	**2 13,000 km or 13 months (8,200 mi)	**3 19,000 km or 19 months (12,000 mi)	**4 25,000 km or 25 months (15,800 mi)	31,000 km or 31 months (19,600 mi)
7*	Control and meter cable	Apply chain lube thoroughtly.	Yamaha chain and cable lube or SAE 10W30 motor oil	○	○	○	○	○	○
8*	Rear arm pivot bearing	Check bearing assembly for looseness. Moderately repack every 18,000 km (11,400 mi).	Medium weight wheel bearing grease.	Repack					
9	Brake/ Clutch lever pivot shaft	Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		○	○	○	○	○
10	Brake pedal and change pedal shaft	Lubricate. Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil		○	○	○	○	○

No.	Item	Remarks	Type	Initial	Odometer reading				
					**1	**2	**3	**4	
				1,000 km or 1 month (600 mi)	7,000 km or 7 months (4,400 mi)	13,000 km or 13 months (8,200 mi)	19,000 km or 19 months (12,000 mi)	25,000 km or 25 months (15,800 mi)	31,000 km or 31 months (19,600 mi)
11*	Center/Side stand pivots	Check operation and lubricate. Apply chain lube lightly.	Yamaha chain and cable lube or SAE 10W30 motor oil.		○	○	○	○	○
12*	Front fork oil	Check operation and leakage.	—		○	○	○	○	○
13*	Steering bearings	Check bearings assembly for looseness. Moderately repack every 24,000 km (15,200 mi)	Medium weight wheel bearing grease.		○	○	○	Repack	○
14*	Wheel bearings	Check bearings for smooth rotation.	—		○	○	○	○	○
15*	Rear suspension link pivots	Apply grease lightly.	Molybdenum disulfide grease				○		
16*	Air drier	Replace desiccant every 24 months.	—					○	

No.	Item	Remarks	Type	Initial	Odometer reading				
				1,000 km or 1 month (600 mi)	**1 7,000 km or 7 months (4,400 mi)	**2 13,000 km or 13 months (8,200 mi)	**3 19,000 km or 19 months (12,000 mi)	**4 25,000 km or 25 months (15,800 mi)	31,000 km or 31 months (19,600 mi)
17*	Suction filter	Clean filter every 12 months.	—			○		○	
18*	Battery	Check specific gravity and breather pipe for proper operation.	—		○	○	○	○	○
19*	Sidestand switch	Check and clean or replace if necessary.	—	○	○	○	○	○	○

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

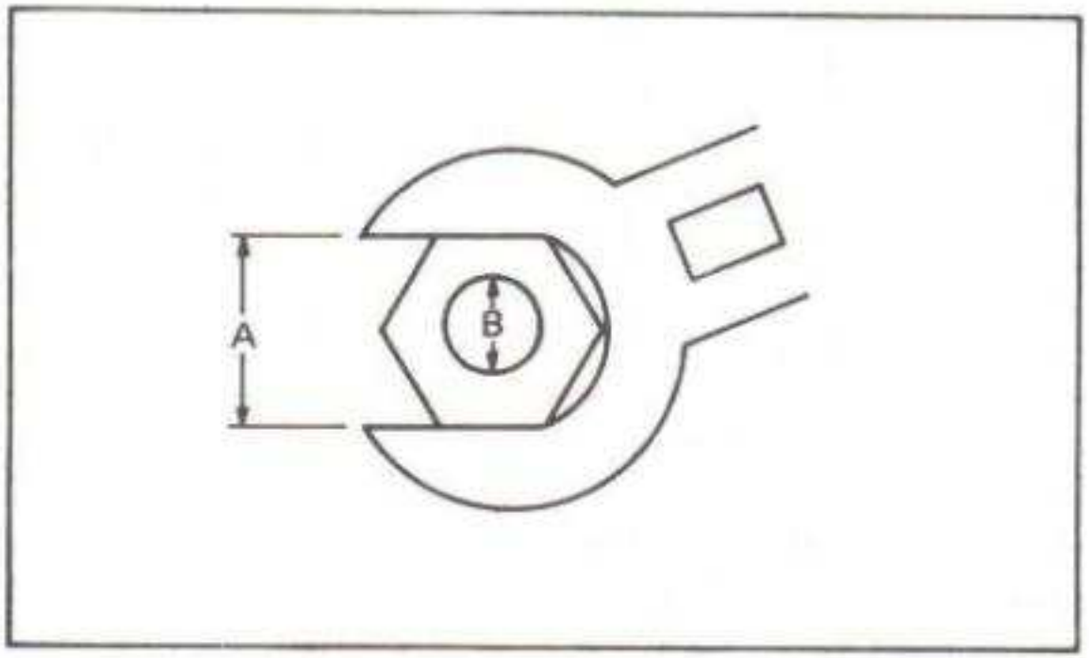
NOTE:

For farther odometer reading, repeat the above maintenance at the period established; **1: Every 6,000 km (3,800 mi), **2: Every 12,000 km (7,600 mi), **3: Every 18,000 km (11,400 mi), **4: Every 24,00 km (15,200 mi) intervals.

Torque specifications

(For a more complete list, refer to the Service Manual for this model.)

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



Item	Torque		
	Nm	m•kg	ft•lb
Spark plug	17.5	1.75	12.5
Engine drain plug	43	4.3	31
Oil filter bolt	32	3.2	23
Change pedal	10	1.0	7.2
Front wheel axle	105	10.5	75
Front axle pinch bolt	20	2.0	14
Rear wheel axle	150	15.0	110
Final gear drain plug	23	2.3	17
Fork brace	20	2.0	14

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

Engine oil

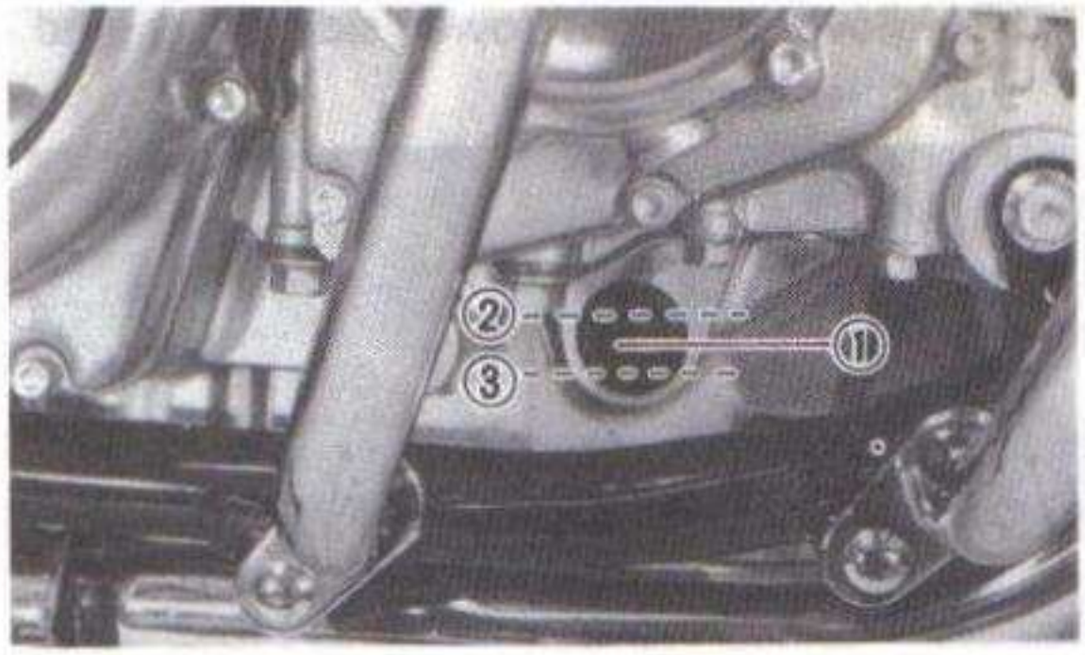
1. Oil level measurement

a. Place the motorcycle on the center-stand.
Warm up the engine for several minutes.

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

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

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



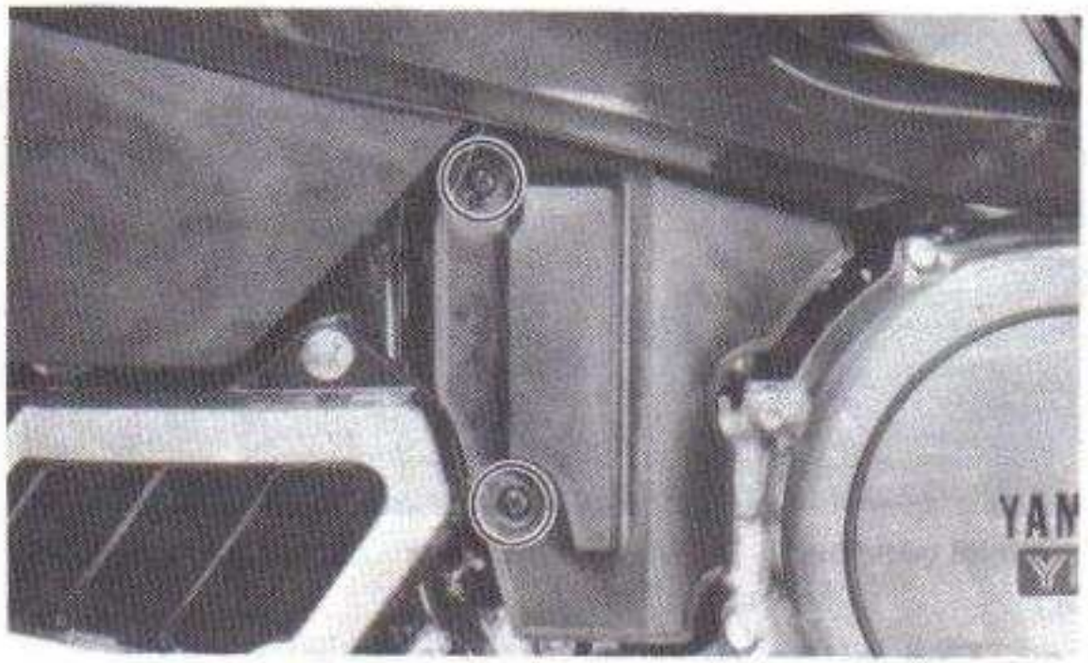
1. Level window 2. Maximum mark 3. Minimum mark

c. The oil level should be between the maximum and minimum marks. If the level is lower, add sufficient oil to raise it to the proper level.

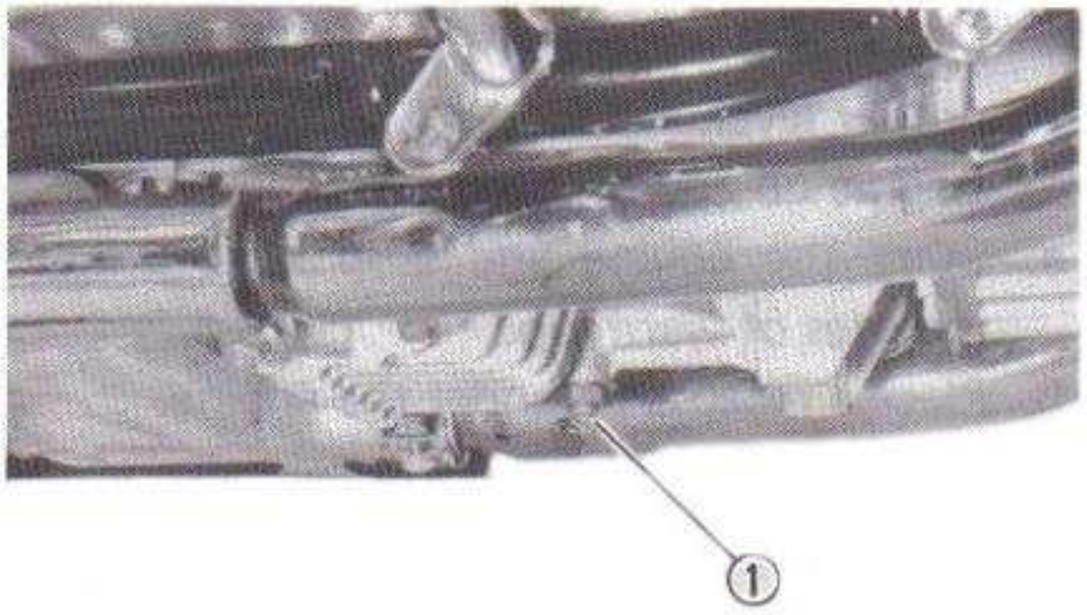
2. Engine oil and oil filter replacement

a. Start the engine and stop after a few minutes of warm-up.
b. Place a receptacle under the engine.

c. Remove the right lower side cover and oil filler cap.

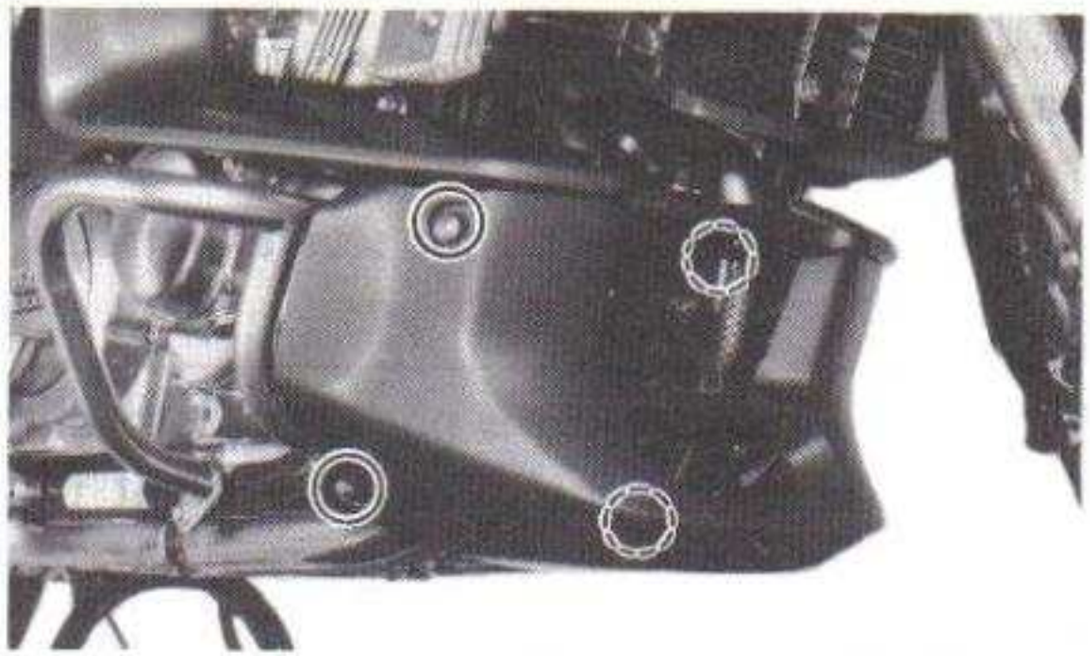


d. Remove the drain plug and drain the oil.

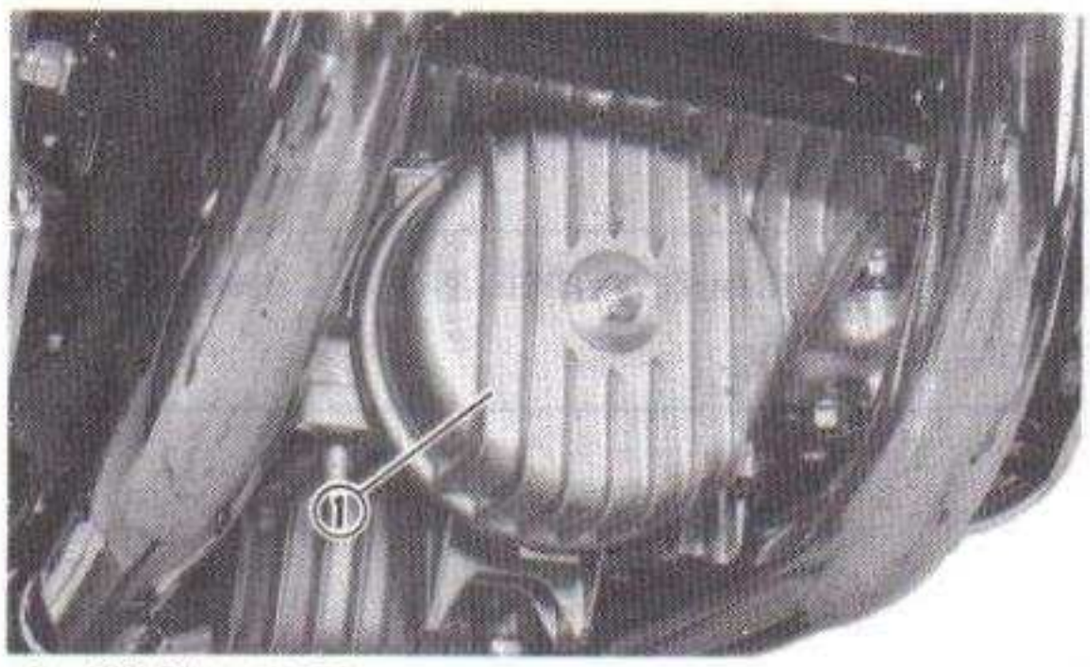


1. Engine drain plug

e. Remove the lower cowl.



f. Remove the oil filter bolt and filter element.



1. Oil filter cover

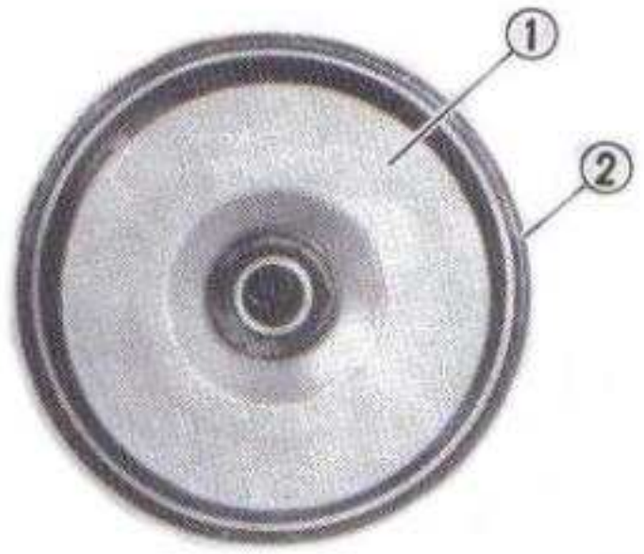
g. Re-install the drain plug (make sure it is tight).

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

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

Oil filter bolt:
32 Nm (3.2 m·kg, 23 ft·lb)

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



1. Oil filter element 2. Proper O-ring position

i. Add oil through the oil filler hole.

Periodic oil change:
3.5 L (3.1 Imp qt, 3.7 US qt)
With oil filter replacement:
3.8 L (3.3 Imp qt, 4.0 US qt)
Recommended oil: See page 7-4.

⚠ CAUTION:
Take care not to allow foreign material to enter the crankcase.

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

⚠ CAUTION:

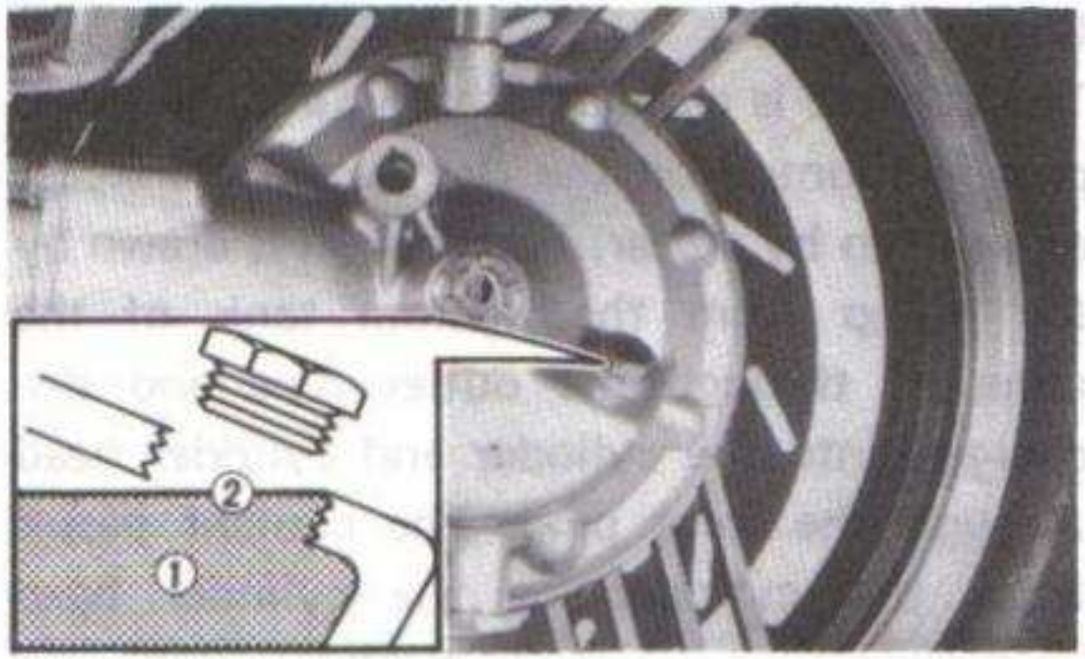
If the indicator light flickers or remains on, immediately stop the engine and consult a Yamaha dealer or other qualified mechanic.

Final gear oil

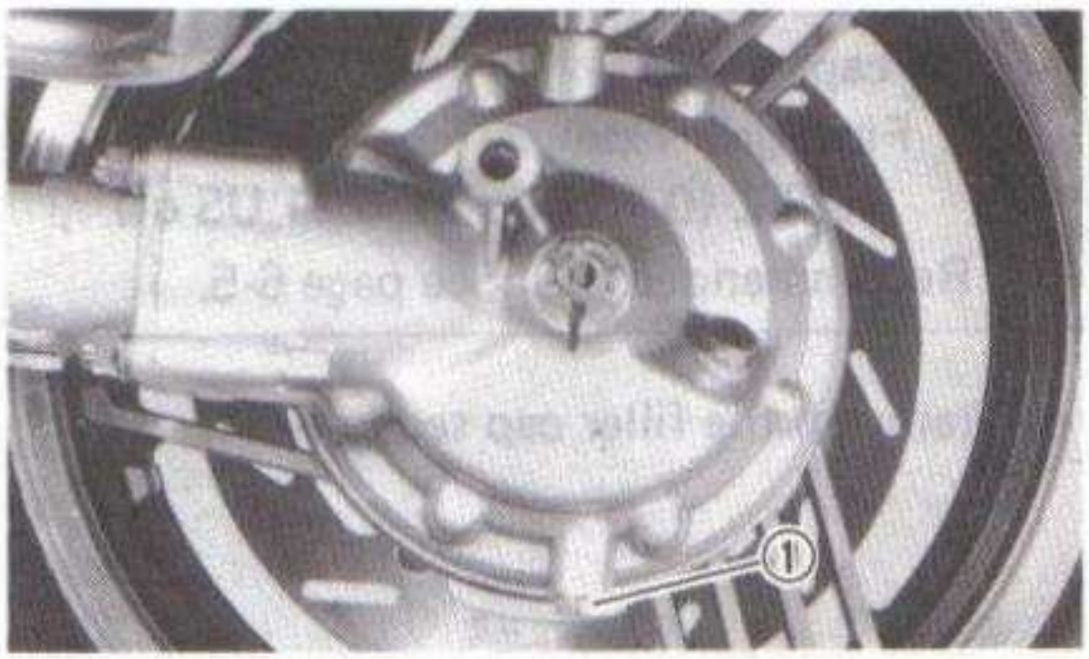
⚠ WARNING:

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

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



1. Final gear oil 2. Correct oil level



1. Final gear drain plug

2. Gear oil replacement

a. Place a receptacle under the final gear case.

b. Remove the final gear oil filler cap and the drain plug, and drain the oil.

⚠WARNING:

When draining or filling, take care not to allow foreign material to enter the final gear case. Do not to allow the gear oil to contact the tire and wheel.

c. Reinstall and tighten the final gear case drain plug. (See page 9-11 for torque specifications.)

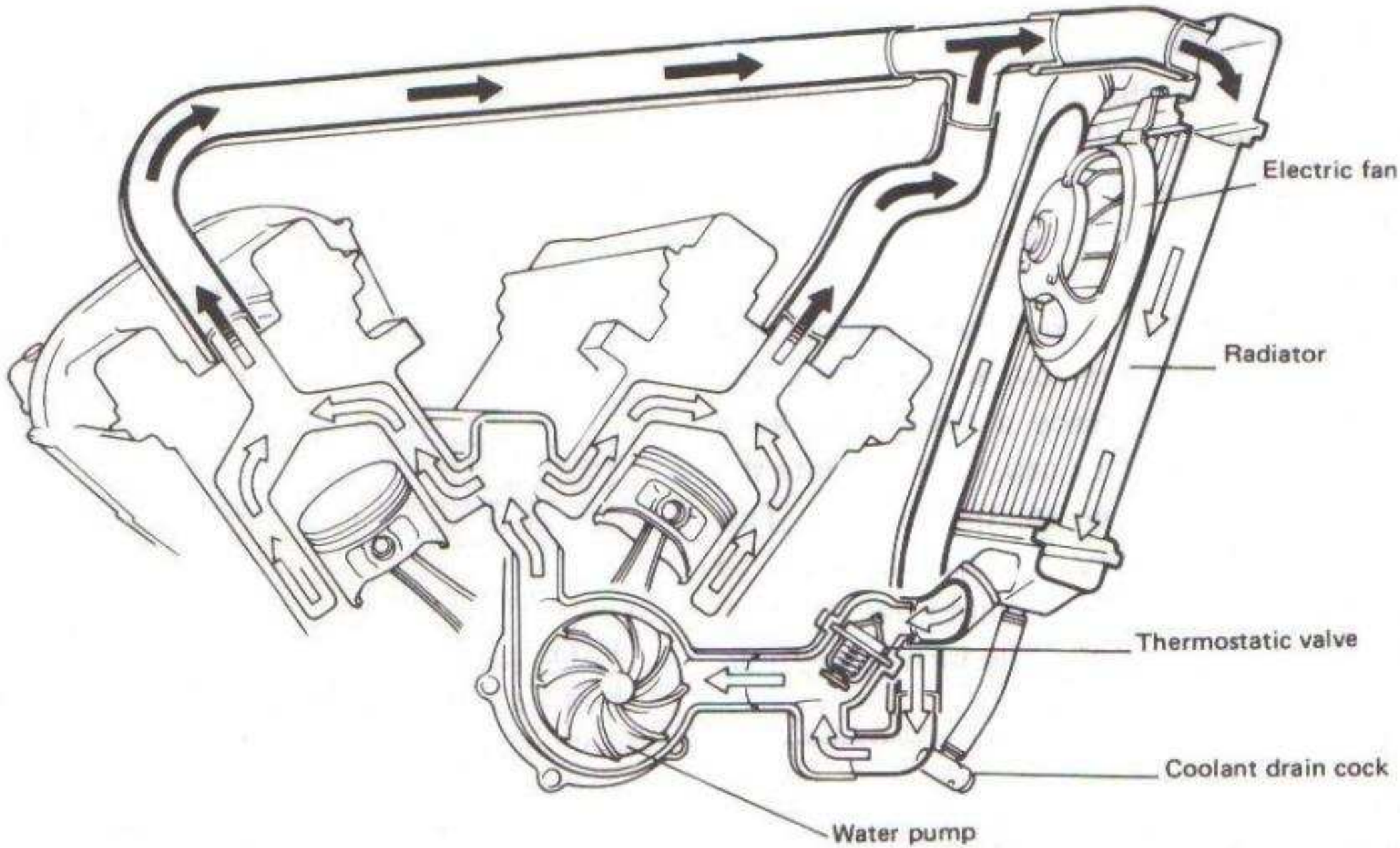
d. Fill the gear case to the specified level.

Oil capacity:
Final gear case:
0.2 L (0.18 Imp qt, 0.21 US qt)
Recommended oil: See page 6-5.

e. Reinstall the filler cap securely

Cooling system

The coolant is circulated by an impeller type pump mounted on the right hand crankcase and driven by a gear. The coolant is drawn by the pump from the bottom tank of the radiator, through the outlet pipe and discharged into the cylinder and cylinder head through the joint pipe. The coolant passes from the cylinder to the cylinder head through coolantways and after circulating around combustion chamber jacketing enters the radiator upper tank via inlet pipe. The heated coolant from the engine then passes down throught the finned tubes to the bottom tank of the radiator. These finned tubes present a large surface area to the air and dessipates the heat.


Electric fan
Radiator
Thermostatic valve
Coolant drain cock
Water pump

1. If your motorcycle overheats

⚠ WARNING:

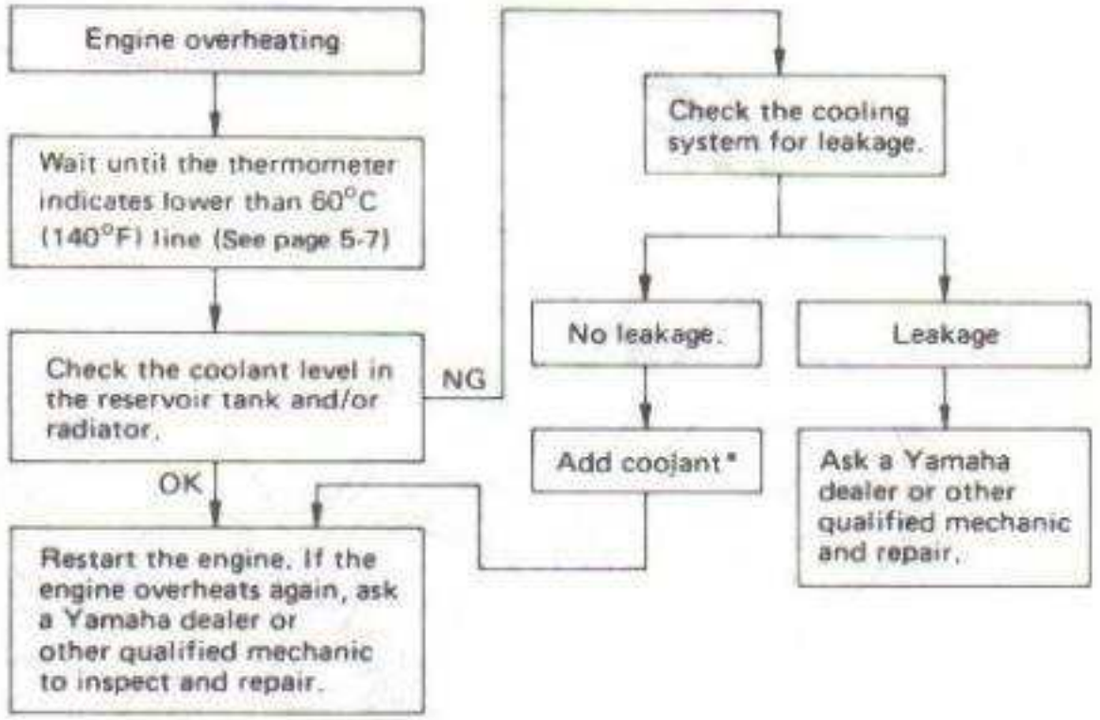
Do not remove the radiator cap especially when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury.

To open the radiator cap, remove the radiator cover by removing the four screws. When the engine has cooled, place a thick rag like a towel over the radiator cap, slowly rotate the cap counterclockwise to the detent. This procedure allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.

NOTE:

Before removing the radiator cap, disconnect the reservoir tank hose. Otherwise, coolant may flow out of the radiator.

If overheating is detected, take the following steps.



*

NOTE:

If it is difficult to get the recommended coolant, tap water can be temporarily used, provided that it is changed to the recommended coolant as soon as possible.

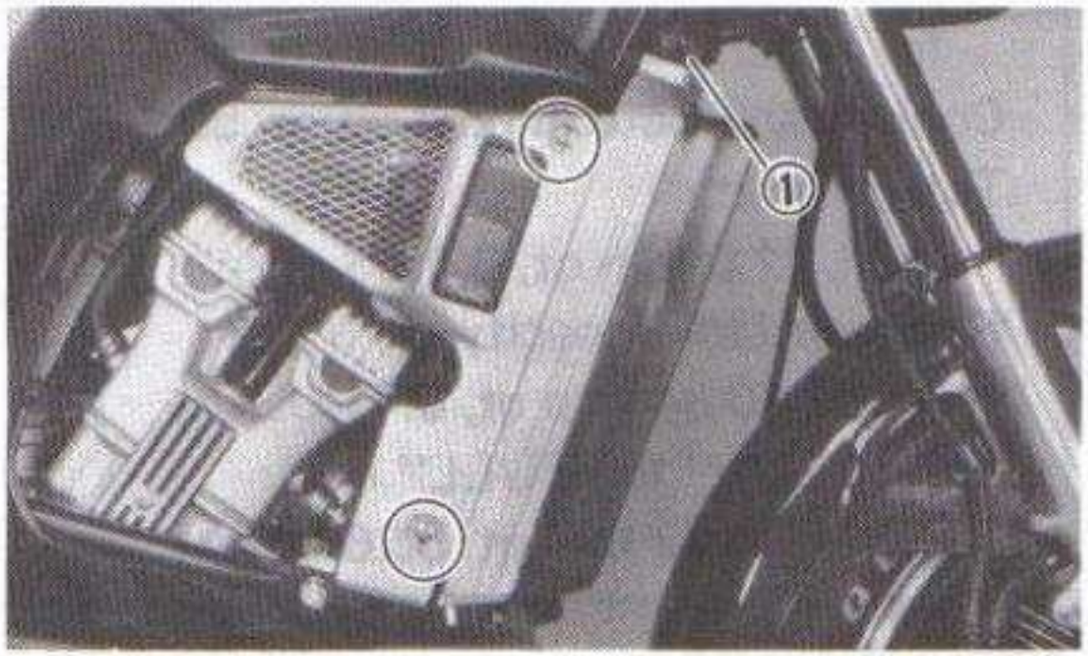
2. Coolant draining procedure

a. ENGINE

1) Place a receptacle under the engine.

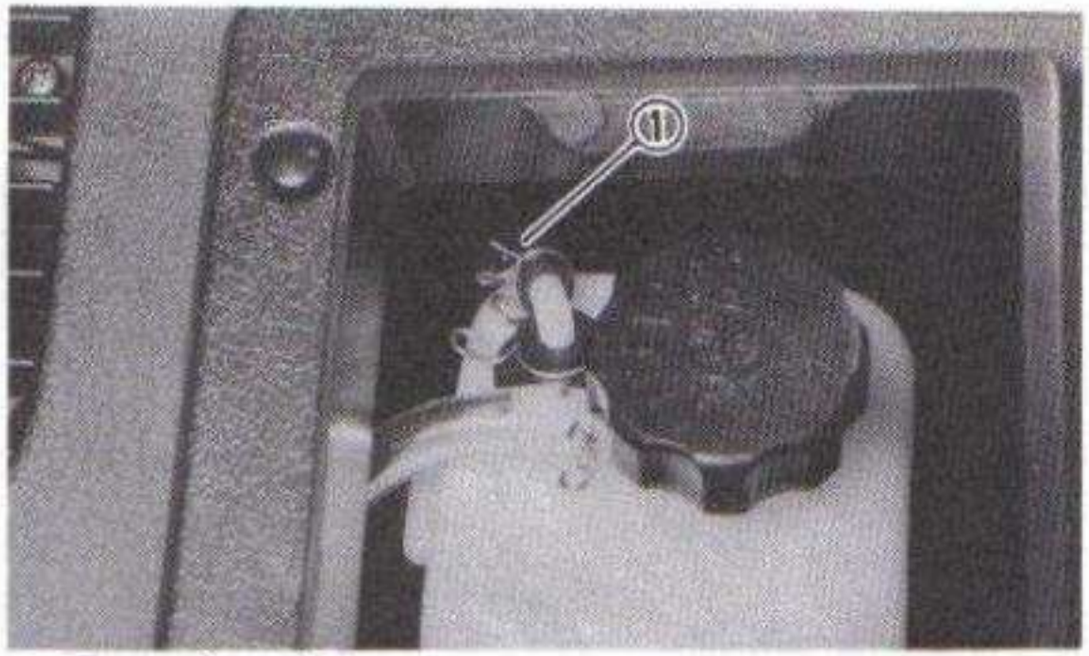
2) Remove the side panel.

3) Remove the radiator cover.



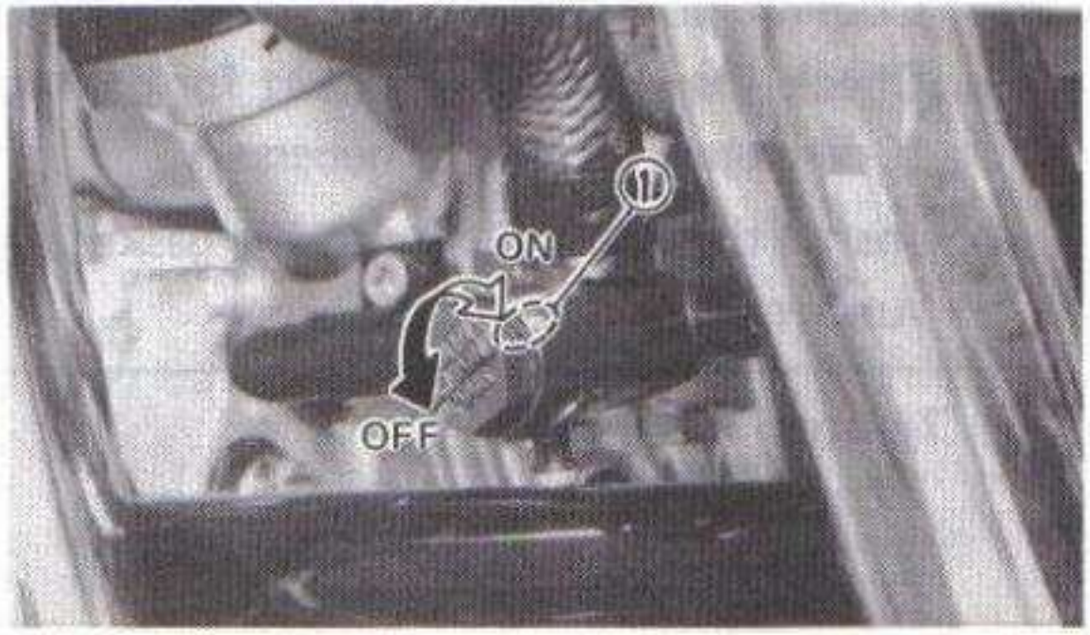
1. Radiator cap

4) Disconnect the reservoir tank hose and remove the radiator cap.



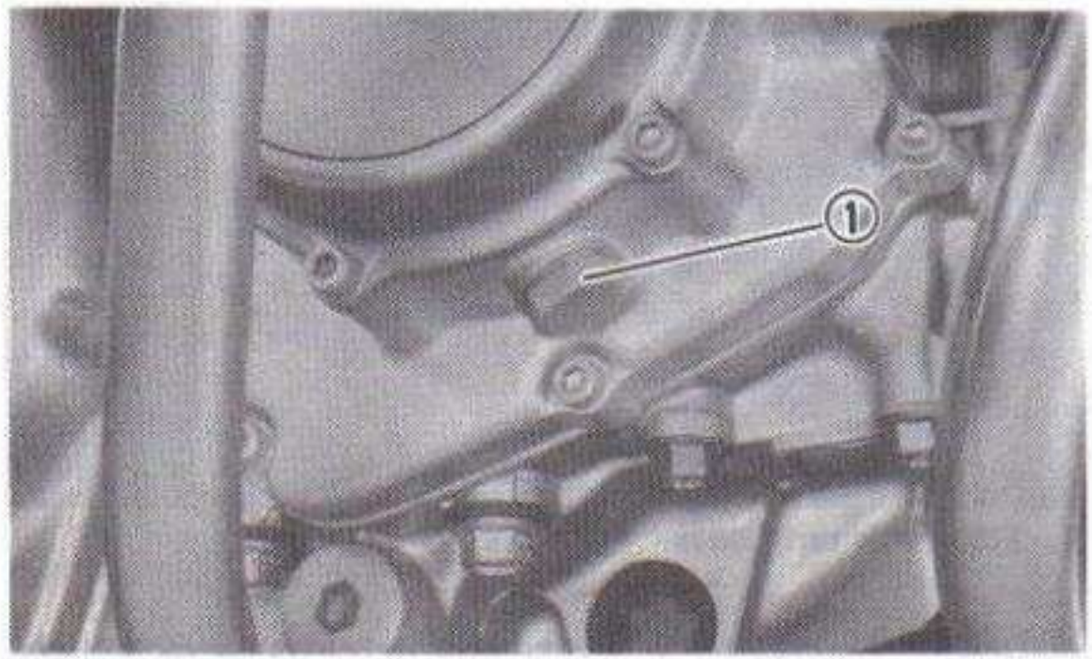
1. Reservoir tank hose

5) Turn the coolant drain cock to "ON".



1. "ON" position

6) Remove the drain plug.
The coolant rush out.



1. Drain plug

3. Coolant filling procedure

a. Check the drain plug gasket for damage. If damaged, replace as necessary.

b. Install the drain plug with the gasket and rubber plug.

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

c. Pour the recommended coolant into the radiator until the radiator is full.

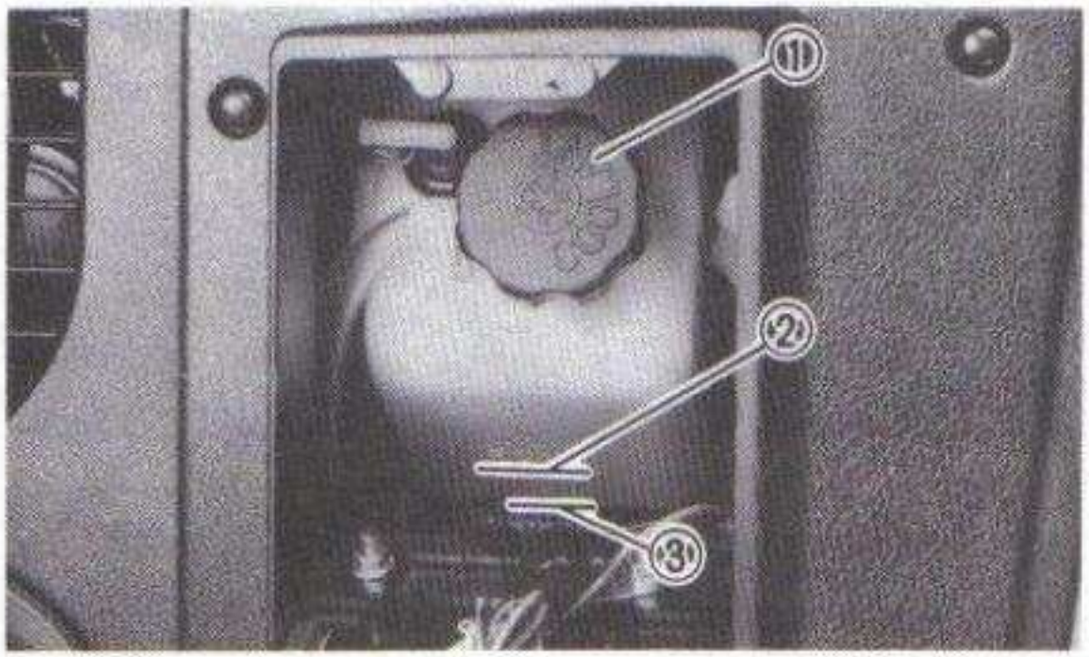
Recommended coolant:
High quality ethylene glycol
anti-freeze containing anti-corrosion
for aluminum engine inhibitors
Coolant and water mixed ratio: 50%/50%
Total amout:
2.8 L (2.5 Imp qt, 3.0 US qt)
Reservoir tank capacity:
0.39 L (0.34 Imp qt, 0.41 US qt)
From "LOW" to "FULL" level:
0.25 L (0.22 Imp qt, 0.26 US qt)

⚠CAUTION:

Hard water or salt water is harmful to the engine parts. You may use boiled water or distilled water, if yoy can't get soft water.

d. Reinstall radiator cap and covers.

e. Run the engine several minutes to recheck the coolant level in the radiator. If it is low, add more coolant until it reaches the top of the radiator.
f. Connect the reservoir tank hose.
g. Fill the reservoir tank with coolant up to the "FULL" level.



1. Coolant reservoir tank cap 2. "FULL" level
3. "LOW" level

h. Turn the coolant drain cock to "OFF" position.
i. Reinstall the lower panels, radiator cover and side panels and check for coolant leakage.

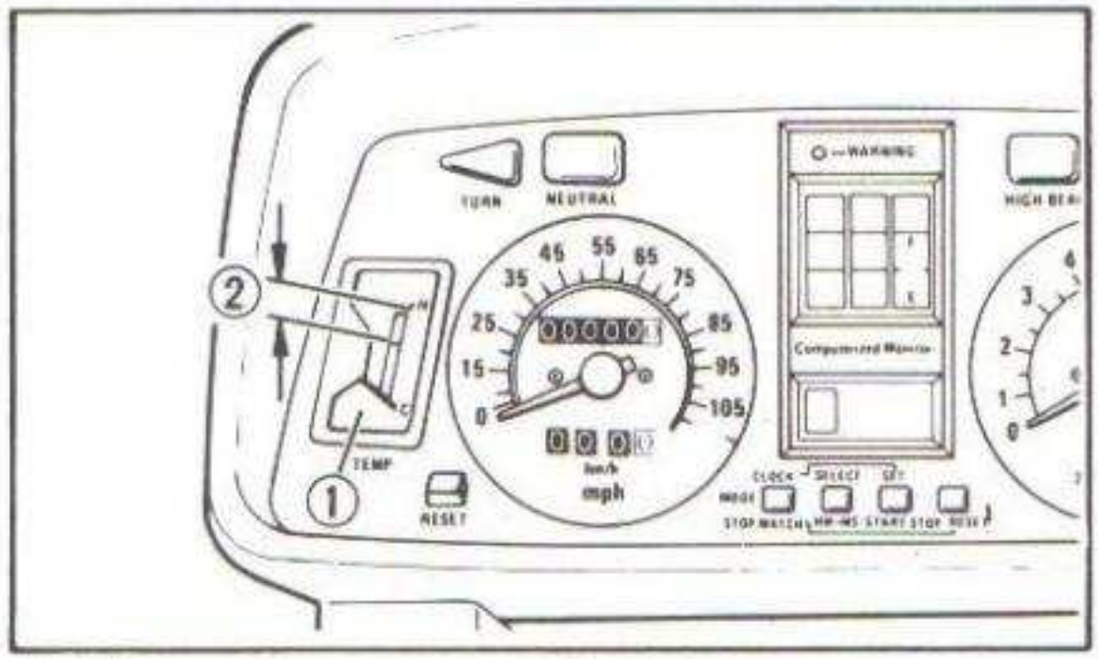
NOTE:
If you found any leaks, ask a Yamaha dealer or other qualified mechanic to inspect.

Electric fan

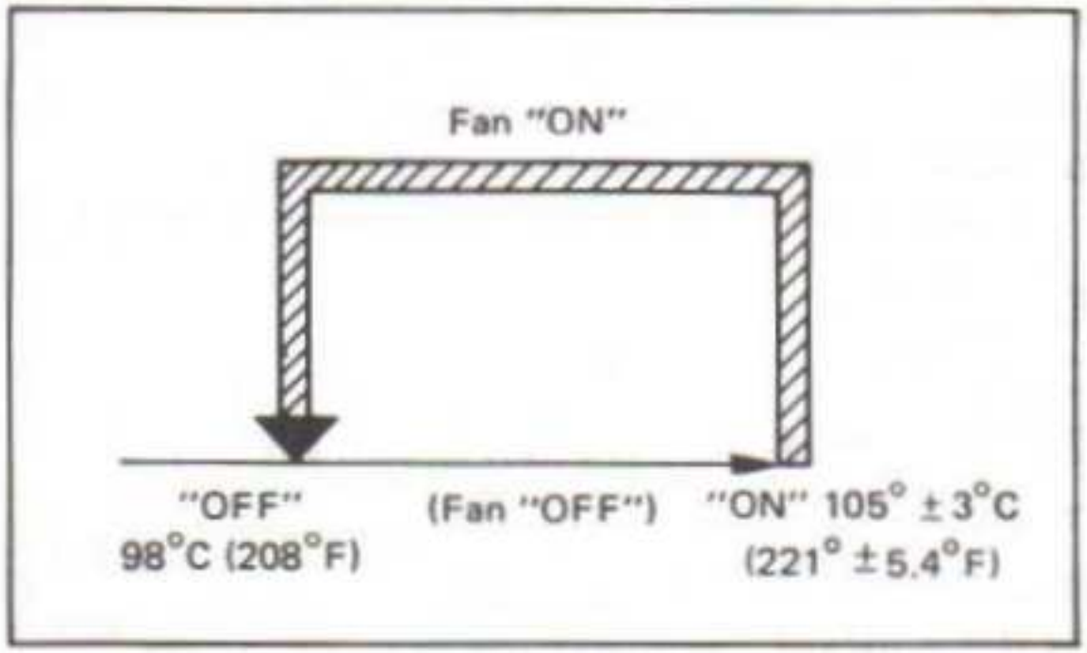
Operation

The electric fan operation is completely automatic.

It will be switched "ON" or "OFF" according to the coolant temperature in the radiator.



1. Thermometer 2. Red zone



Air filter

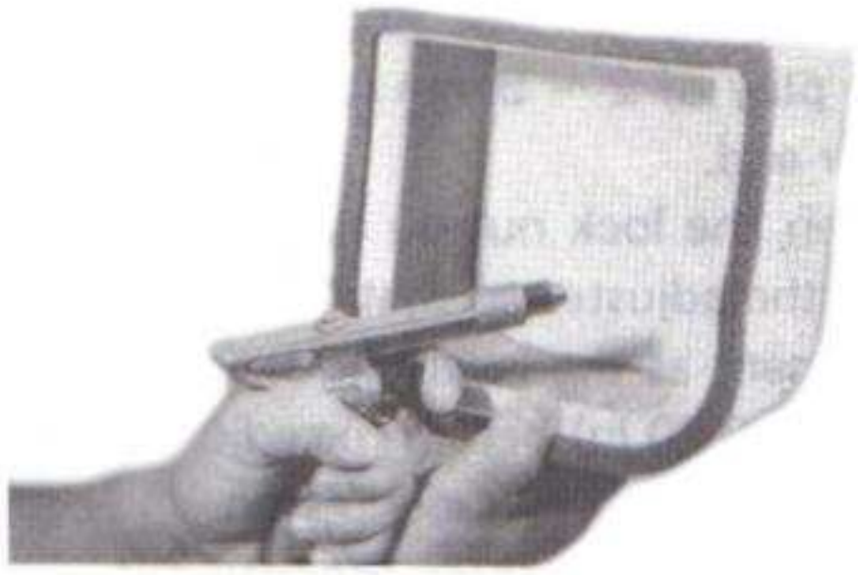
1. Removal

a. Remove the top cover.

d. Remove the air filter case cover by removing the four screws.

c. Pull out the element.

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



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

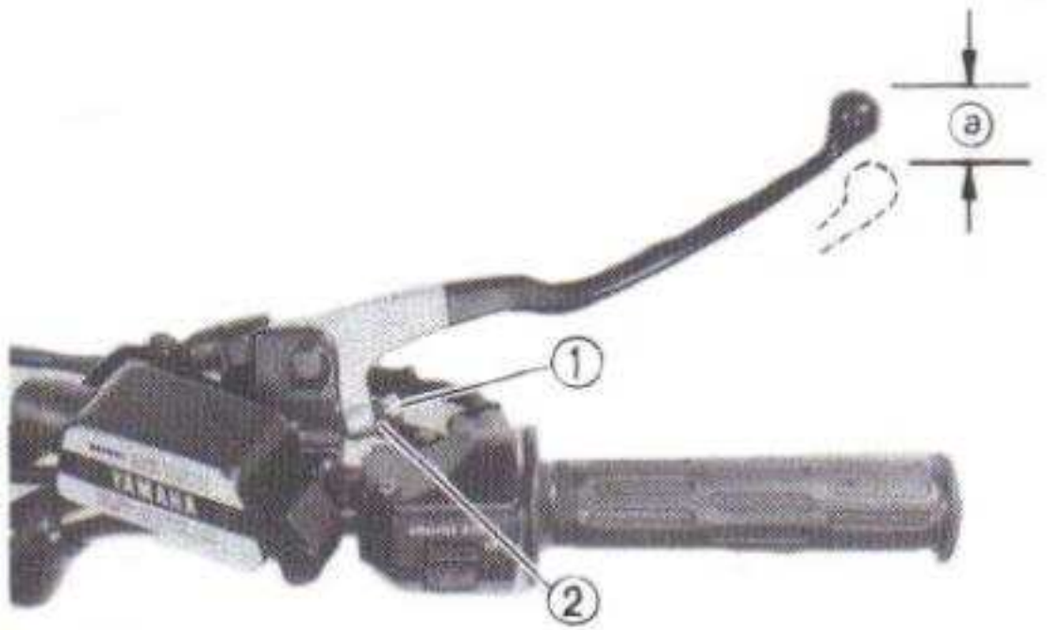
⚠ CAUTION:

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

Front brake adjustment

The front brake should be so adjusted that it has a free play of 2 ~ 5 mm (0.08 ~ 0.20 in) at the lever end.

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



1. Adjuster 2. Lock nut a. 2 ~ 5 mm (0.08 ~ 0.20 in)

⚠ WARNING:

Check for correct play, and make sure it lever is working properly.

⚠ WARNING:

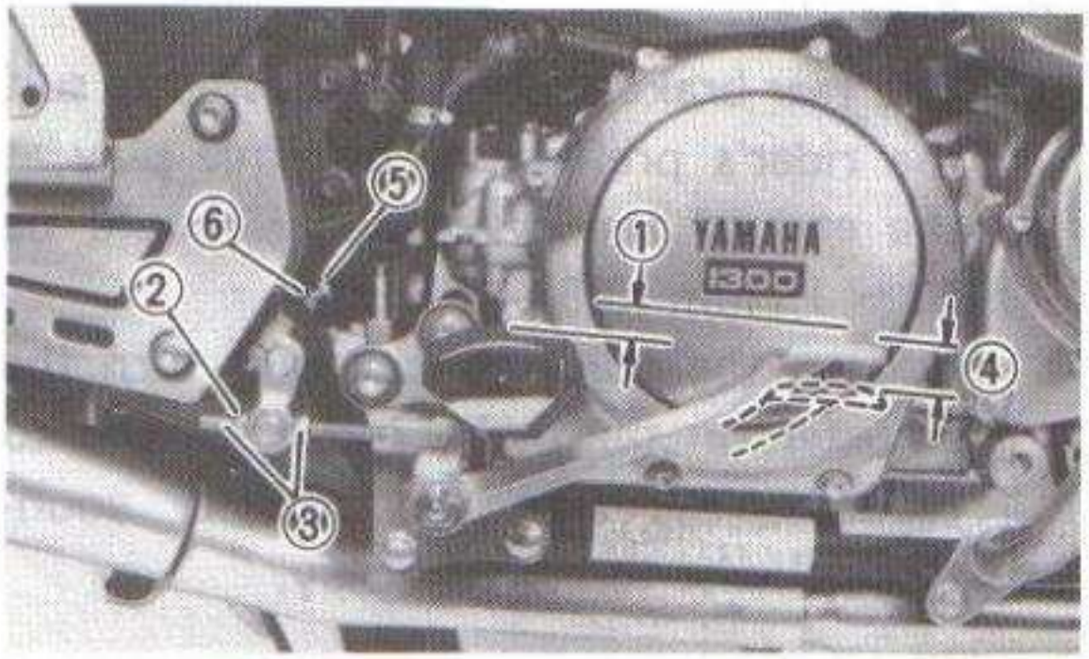
A soft or spongy feeling in the brake lever can indicate the presence of air in the brake system. This air must be removed by bleeding the brake system before the motorcycle is operated. Air in the system will result in greatly diminished braking capability and can result in loss of control and an accident.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

Rear brake adjustment

⚠ WARNING:

For the brake pedal position adjustment, be sure to proceed as follows; (It is advisable to have a Yamaha dealer or other qualified mechanic make this adjustment.)

1. Pedal height
   a. Remove the right lower side cover.
   b. Loosen the adjuster lock nut (for pedal height).
   c. By turning the adjuster clockwise or counterclockwise, adjust the brake pedal position so that its top end is approximately 10 mm (0.4 in) above the top of the footrest.
   d. Secure the adjuster lock nut.

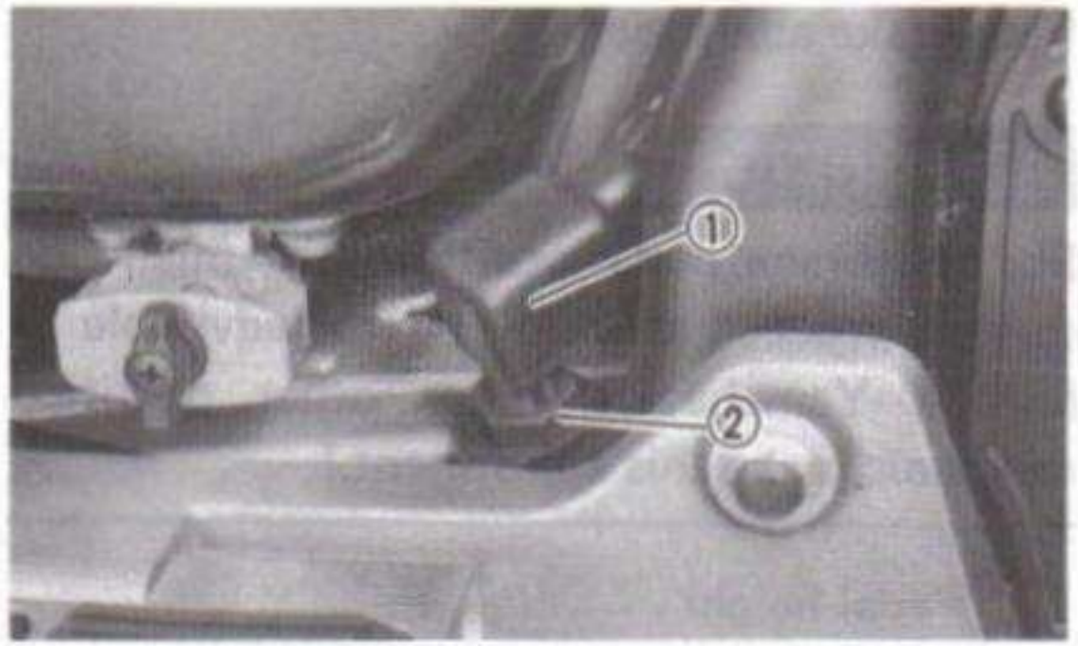


1. Pedal height 10 mm (0.4 in)
2. Adjuster (for pedal height)
3. Lock nut
4. Free play 13 ~ 15 mm (0.5 ~ 0.6 in)
5. Adjust bolt
6. Lock nut

⚠ WARNING:

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

2. Free play
The rear brake should be adjusted to suit the rider's preference, but free play at the end of the brake pedal should be 13 ~ 15 mm (0.5 ~ 0.6 in).
Loosen the adjuster lock nut, turn the adjuster on the brake rod clockwise to reduce play; turn the adjuster counterclockwise to increase play.



1. Main body 2. Adjusting nut

⚠ WARNING:

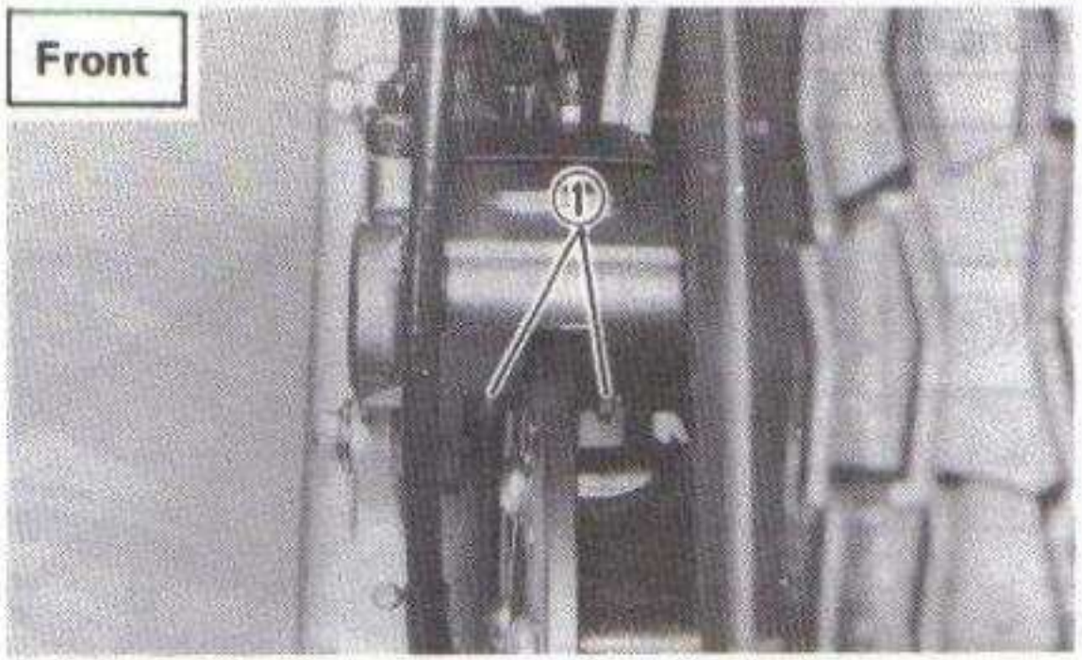
Check the operation of the brake light after adjusting the rear brake.

Brake light switch adjustment

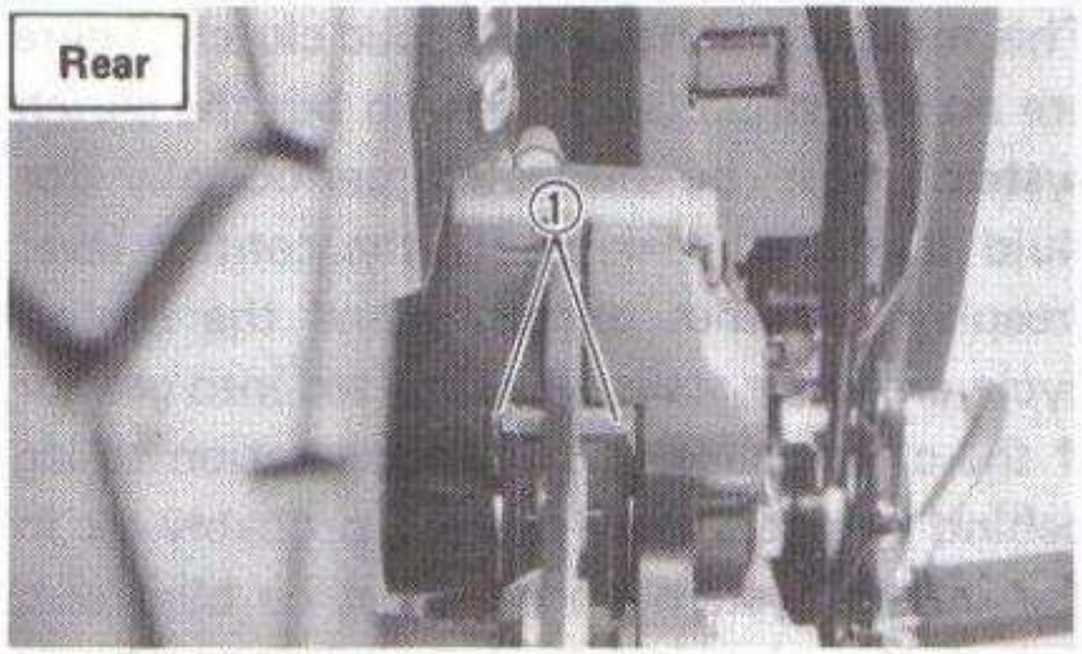
The brake light switch is operated by the movement of the brake pedal.
To adjust, hold the switch body with the hand so it does not rotate and turn the adjusting nut. Proper adjustment is achieved when the brake light comes on slightly before the brake begins to take effect.

Checking the front and rear brake pads

A wear indicator is attached to each brake pad to facilitate disc brake pad checks. This indicator permits a visual check without disassembling the pads. To check, depress the brake and inspect the wear indicator. If the wear indicator is ALMOST in contact with the disc plate, ask a Yamaha dealer or other qualified mechanic to replace the pads.



1. Wear indicator



1. Wear indicator

Inspecting the brake fluid level

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

Before riding, check the brake fluid level with computerized monitor system and replenish when necessary; observe these precautions:

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

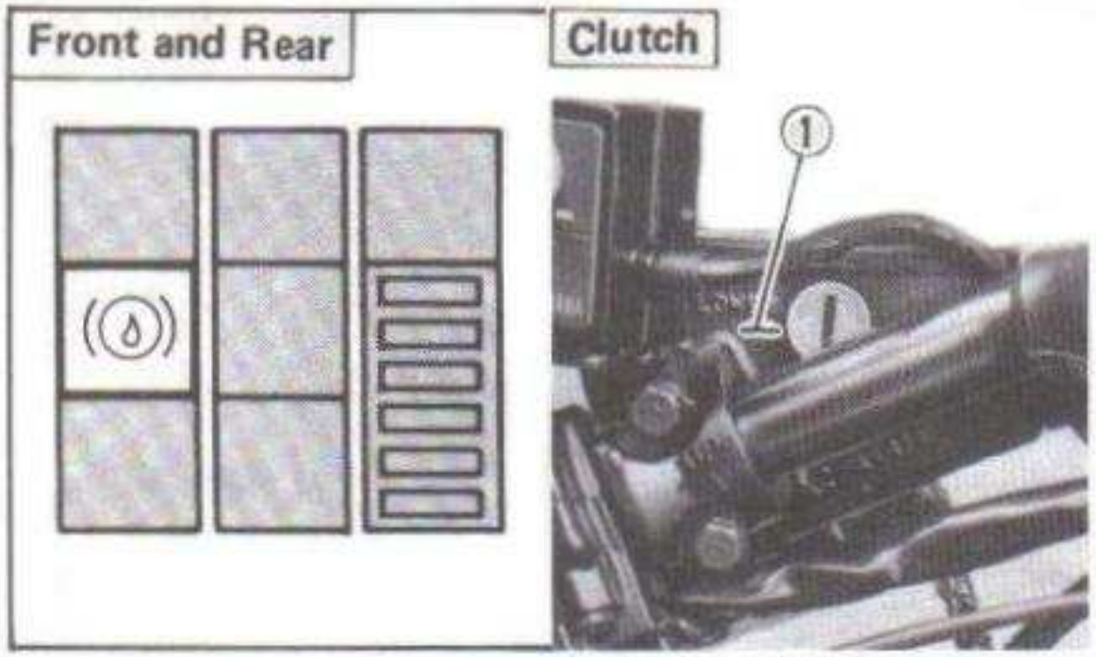
Recommended brake fluids:
DOT #4

NOTE:

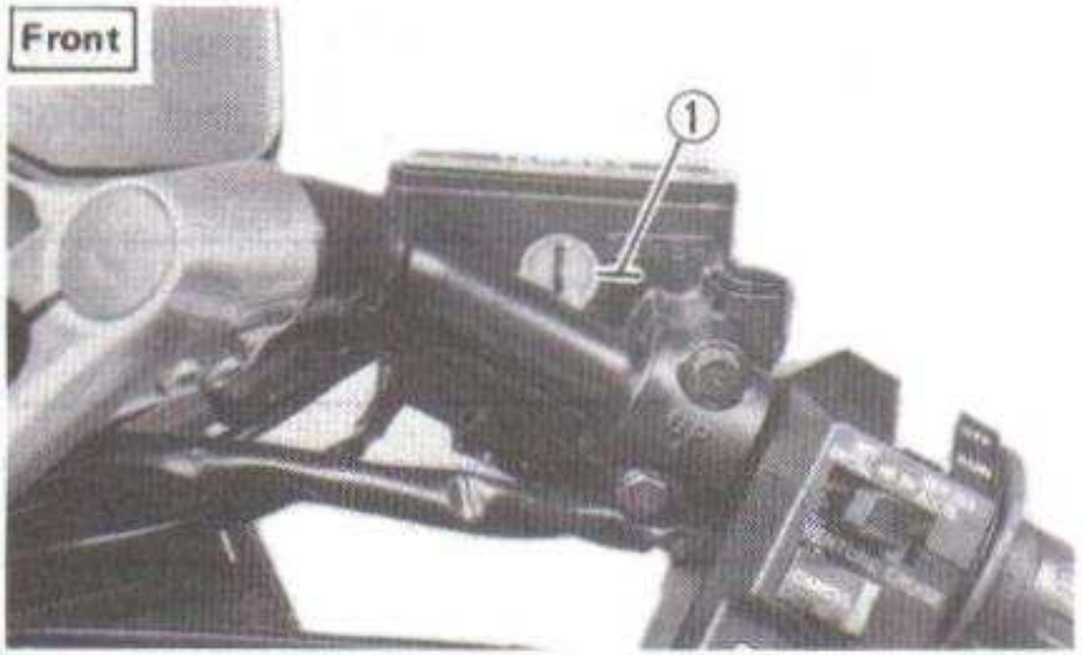
If DOT #4 is not available, #3 can be used.

3. Refill with the same type of brake fluid; mixing fluids may result in a harmful chemical reaction and lead to poor performance.

4. Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.
5. Brake fluid may erode painted surfaces or plastic parts. Always clean up spilled fluid immediately.
6. Have a Yamaha dealer or other qulified mechanic check the cause if the brake fluid level goes down.



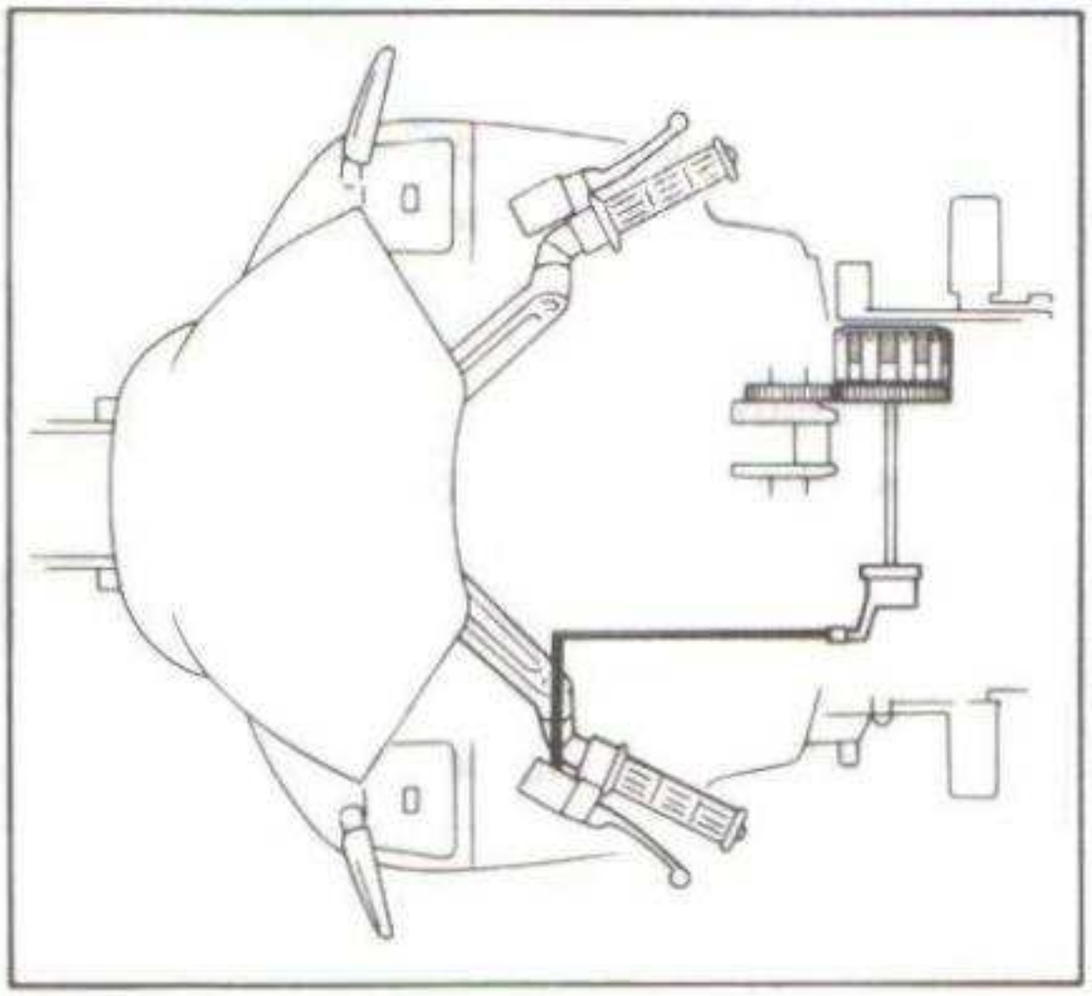
1. Lower level



1. Lower level

Clutch

This motorcycle has a hydraulic clutch. There are no adjustments to perform but the clutch system must be inspected periodically for fluid level and leakage. If the control lever freeplay 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 or qualified mechanic for this service.



Brake fluid replacement

1. Complete fluid replacement should be done only by trained Yamaha service personnel or other qualified mechanic.
2. Have a Yamaha dealer or other qualified mechanic replace the following components when indicated in the schedule or when they are damaged or leaking.

a. Replace all rubber seals every two years.
b. Replace all hoses every four years.

Cable inspection and lubrication

⚠ WARNING:

Damage to the outer housing of the various cables, may cause corrosion and often free movement will be obstructed. An unsafe condition may result so replace such cables as soon as possible.

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

Recommended lubricant:
Yamaha chain and cable lube
or SAE 10W30 motor oil

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

Brake and change pedals
Lubricate the pivoting parts.

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

Brake and clutch levers
Lubricate the pivoting parts.

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

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

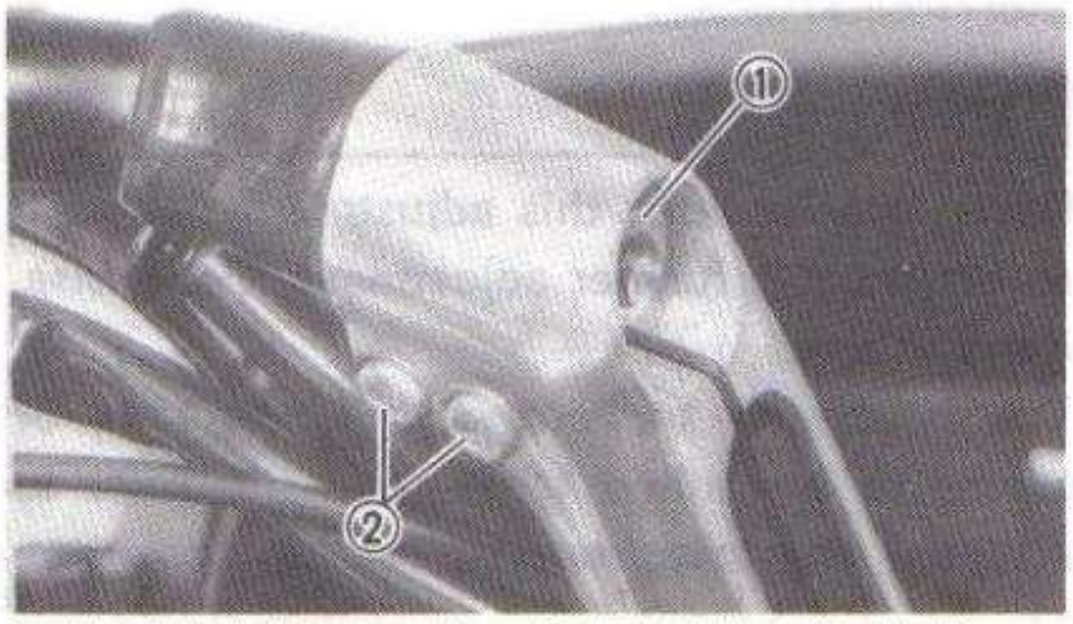
Recommended lubricant:
Yamaha Chain and Cable Lube or
SAE 10W30 motor oil

⚠ WARNING:

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

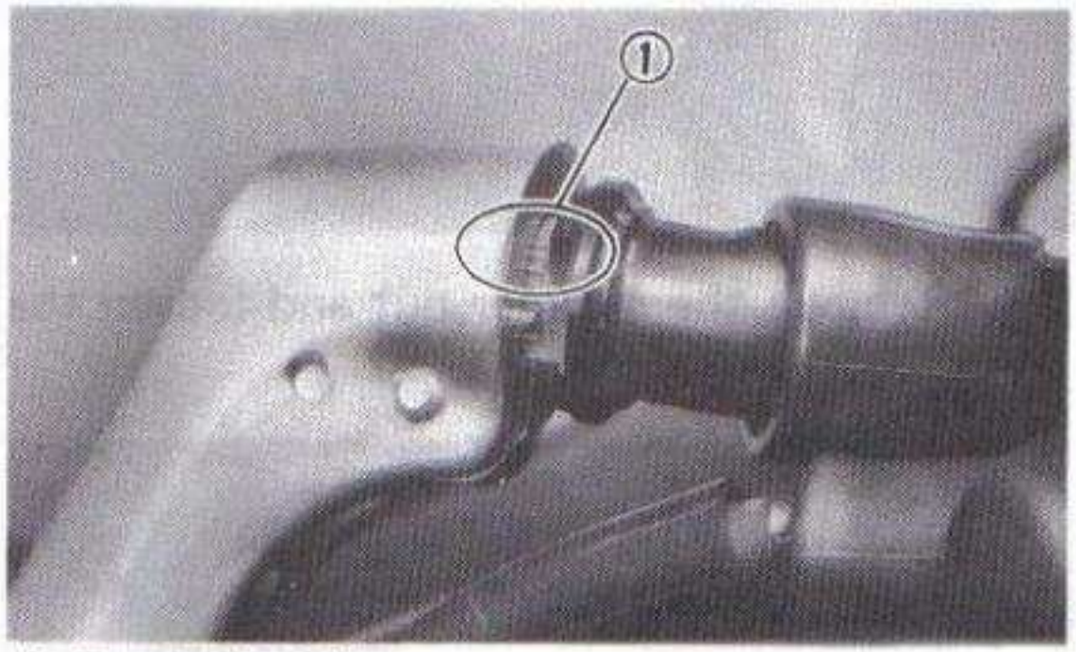
Handlebars adjustment

1. Vertical adjustment
   a. Remove the cap.
   b. Remove the stopper nut and loosen the pinch bolt.



1. Handlebar stopper nut 2. Handlebar pinch bolt

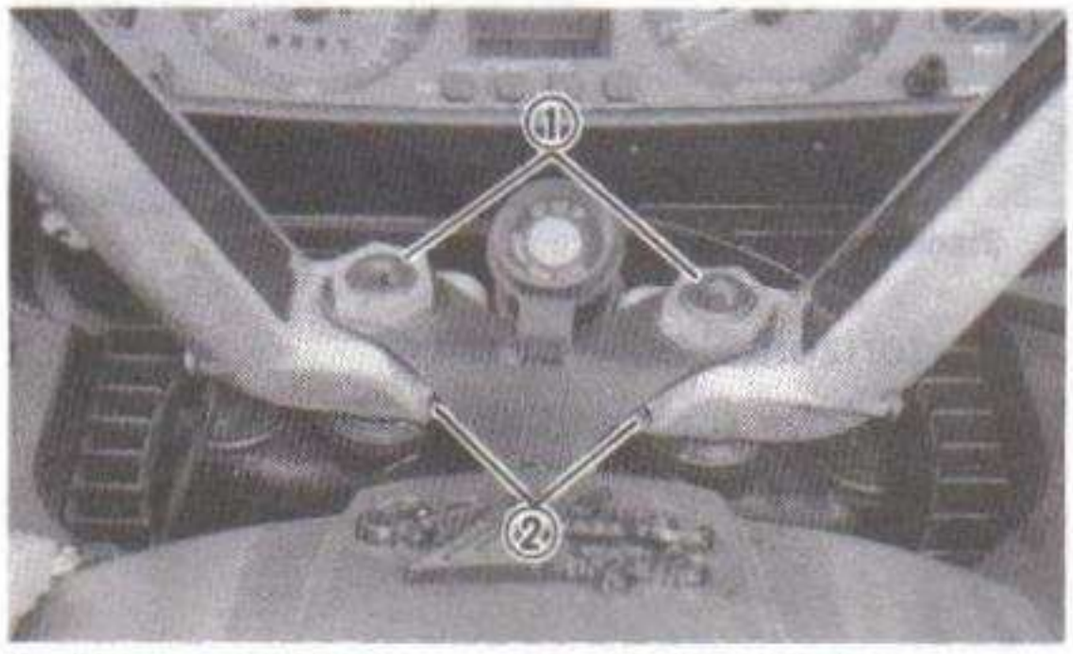
   c. Pull the handlebar as far away from the handle as necessary to permit adjustment.
   d. Then move the handlebar either up or down. (Three possible positions only)



1. Standard position

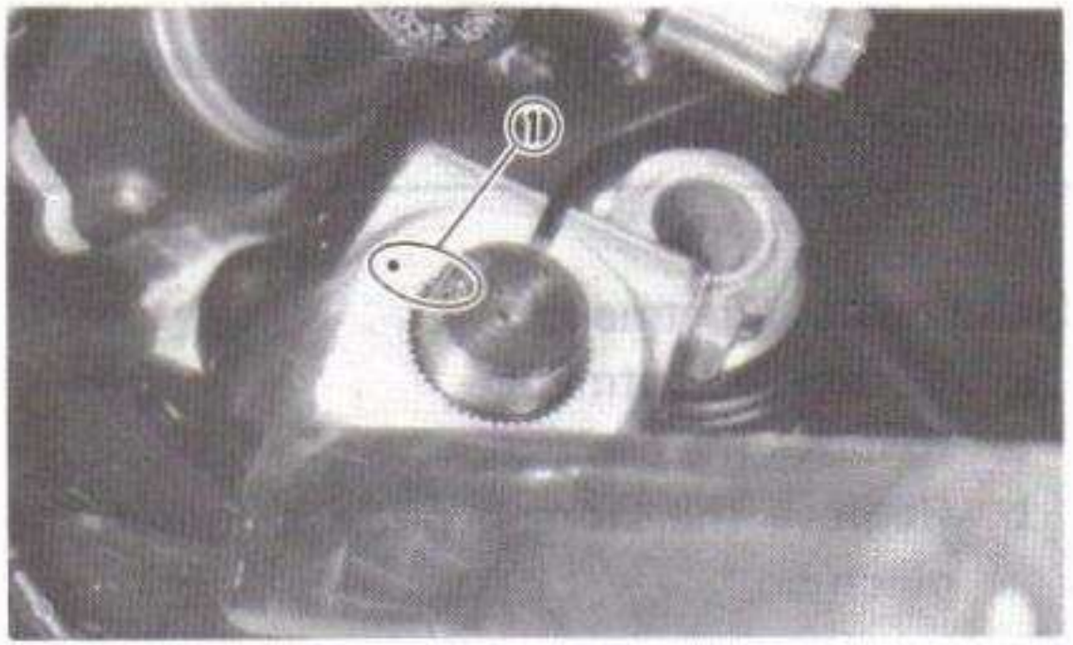
2. Horizontal adjustment
   a. Remove the handlebar cover.

b. Remove the stopper nut and loosen the pinch bolt.



1. Handle stopper nut 2. Handle pinch bolt

c. Adjust the handle position. (Two possible positions only)



1. Standard position

⚠ WARNING:

Never tamper with this adjustment device in an attempt at further adjustment. Otherwise, it may cause:
The handlebar to contact the fuel tank or cables to be pulled tense, and the rider to assume an inappropriate riding position.

Always adjust the handlebars on each side to the same position. Uneven adjustment will cause an improper riding position.

3. Reinstall the handlebars.

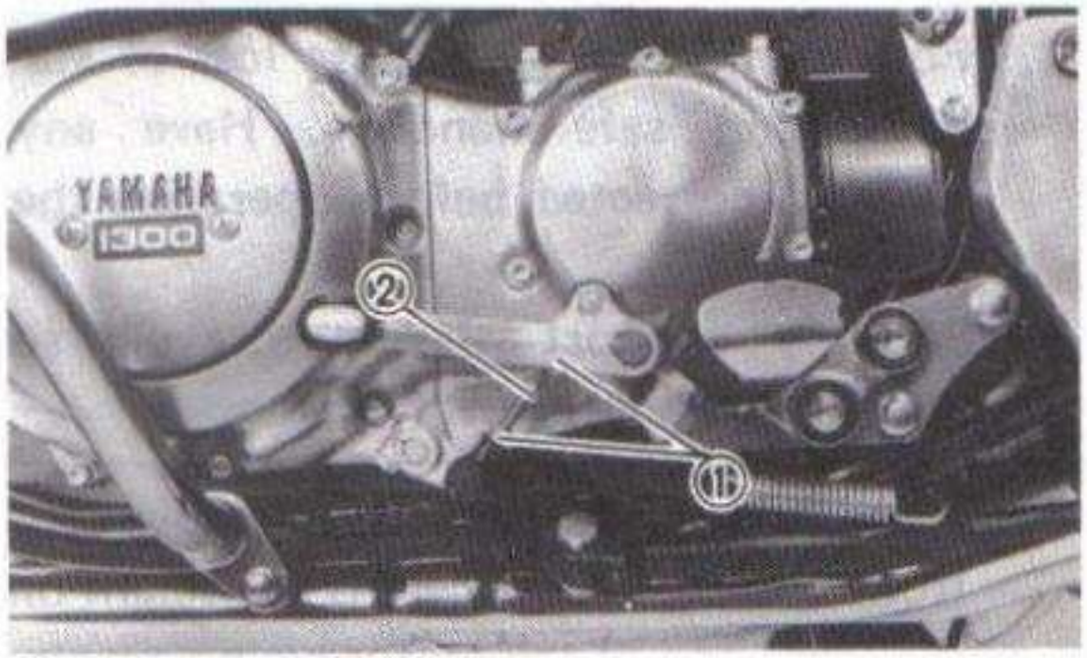
Tightening torque:
Handlebar stopper nut:
35 Nm (3.5 m·kg, 25 ft·lb)
Handlebar pinch bolt:
17 Nm (1.7 m·kg, 12 ft·lb)
Handle stopper nut:
125 Nm (12.5 m·kg, 90 ft·lb)
Handle pinch bolt:
30 Nm (3.0 m·lg, 22 ft·lb)

⚠ WARNING:

After the above adjustment, tighten all bolts using a torque wrench. If a torque wrench is not available, have a Yamaha dealer or other qualified mechanic adjust and torque the handlebars to specification.

Change pedal adjustment

1. Loosen the lock nuts and nut.



1. Lock nut 2. Adjuster

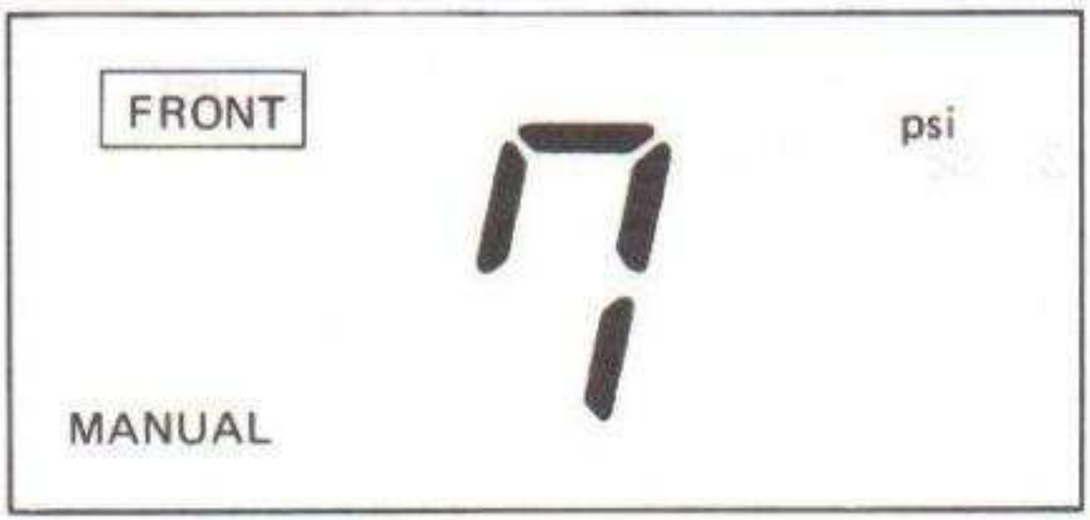
2. By turning the adjuster clockwise or counterclockwise, adjust the position of the change pedal so that its peg top end is flush with the top of the footrest.
3. Secure the lock nuts.

Front fork oil change

⚠ WARNING:

1. Fork oil leakage can cause loss of stability and safe handling. Have any problem corrected before operating the motorcycle.
2. Securely support the motorcycle so there is no danger of it falling over.

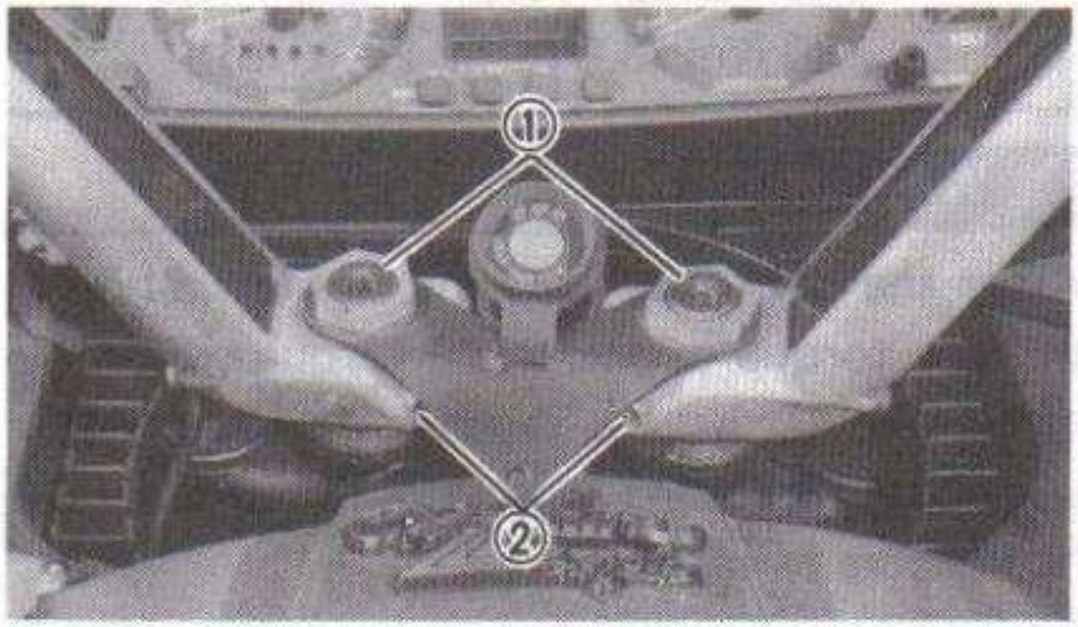
1. Raise the motorcycle or remove the front wheel so that there is no weight on the front end of the motorcycle.
2. Adjust the front fork air pressure to the minimum (0.5 kg/cm² or 7 psi) by operating the air suspension controller.



3. Remove the handlebar cover.
4. Remove the hoods.

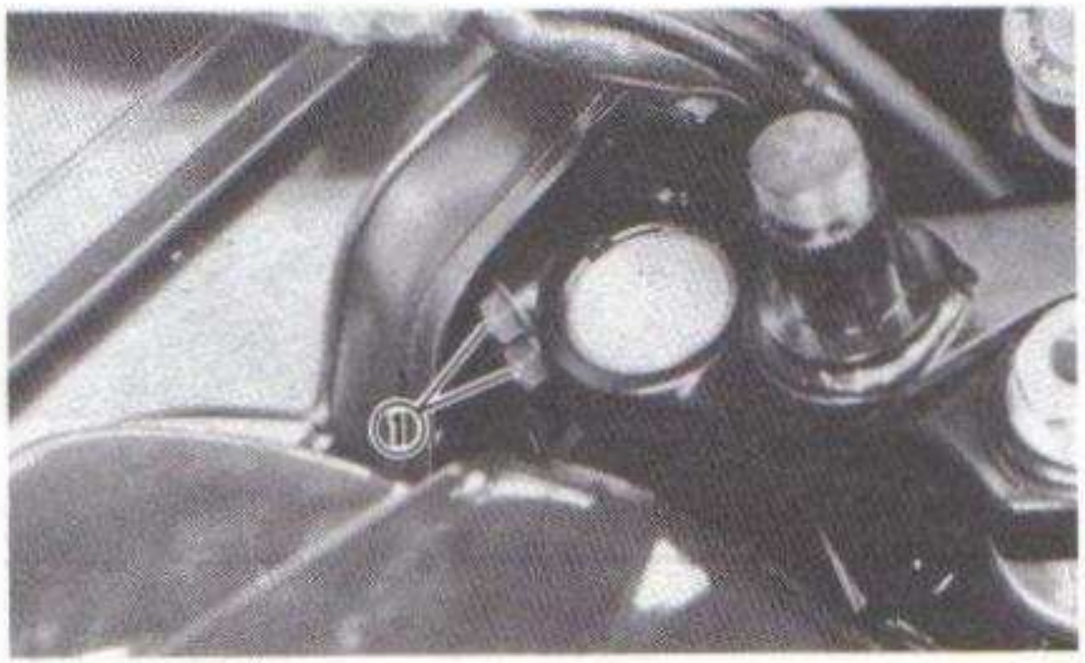
1. Hood

5. Remove the handlebars.



1. Handle stopper nut
2. Handle pinch bolt

6. Loosen the front fork pinch bolts, and remove the complete fork cap bolts from the inner fork tubes.

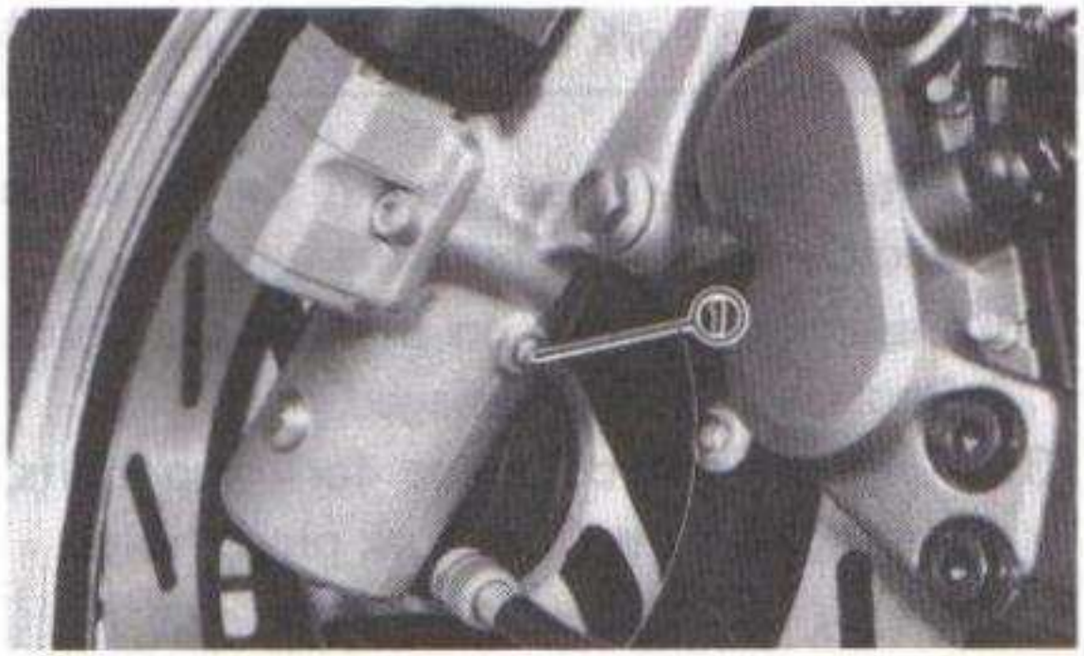


1. Pinch bolt

7. Place a receptacle under each drain hole. Remove the drain screw from each outer tube.

⚠ WARNING:

Do not allow oil to contact the disc brake components. If any oil should contact the brake components, it must be removed before the motorcycle is operated. Oil will cause diminished braking capacity and will damage the rubber components of the brake assembly.

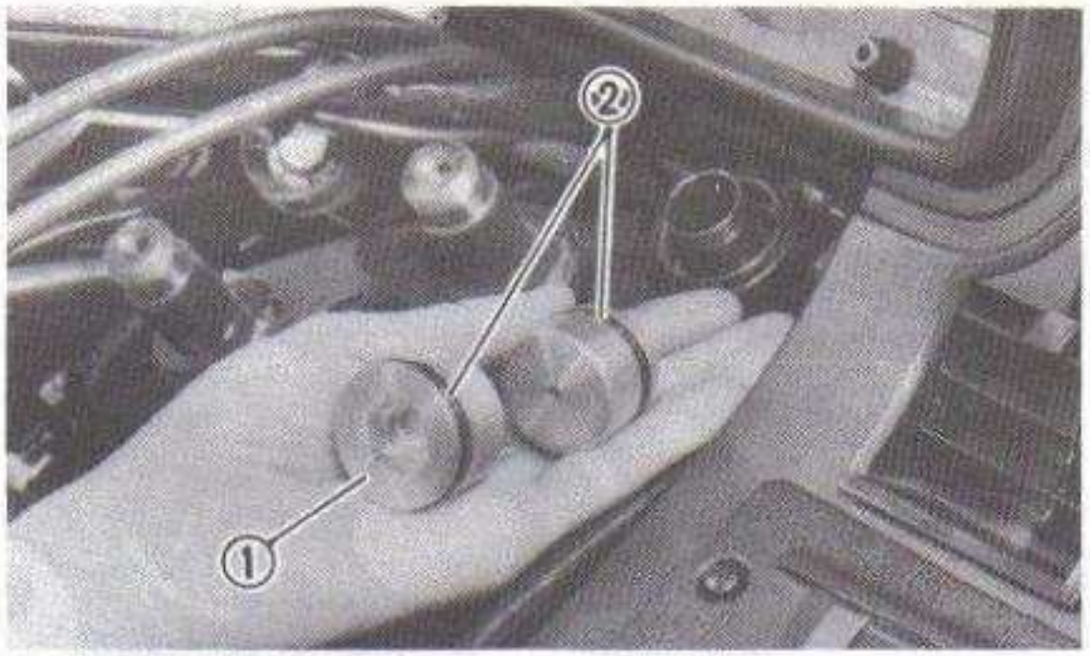


1. Drain screw

8. When most of the oil has drained, slowly raise and lower the outer tubes to pump out the remaining oil.
9. Inspect the drain bolt gasket. Replace if damaged. Reinstall the drain bolt.
10. Pour the specified amount of oil into the fork inner tube.

Front fork oil (each fork):
409 cm³ (14.4 Imp oz, 13.8 US oz)
Yamaha Fork Oil 10wt or equivalent

11. After filling, slowly pump the forks up and down to distribute the oil.
12. Inspect the O-ring on the fork cap bolts. Replace O-ring if damaged.
13. Reinstall the complete fork cap bolts, and tighten the front fork pinch bolts.



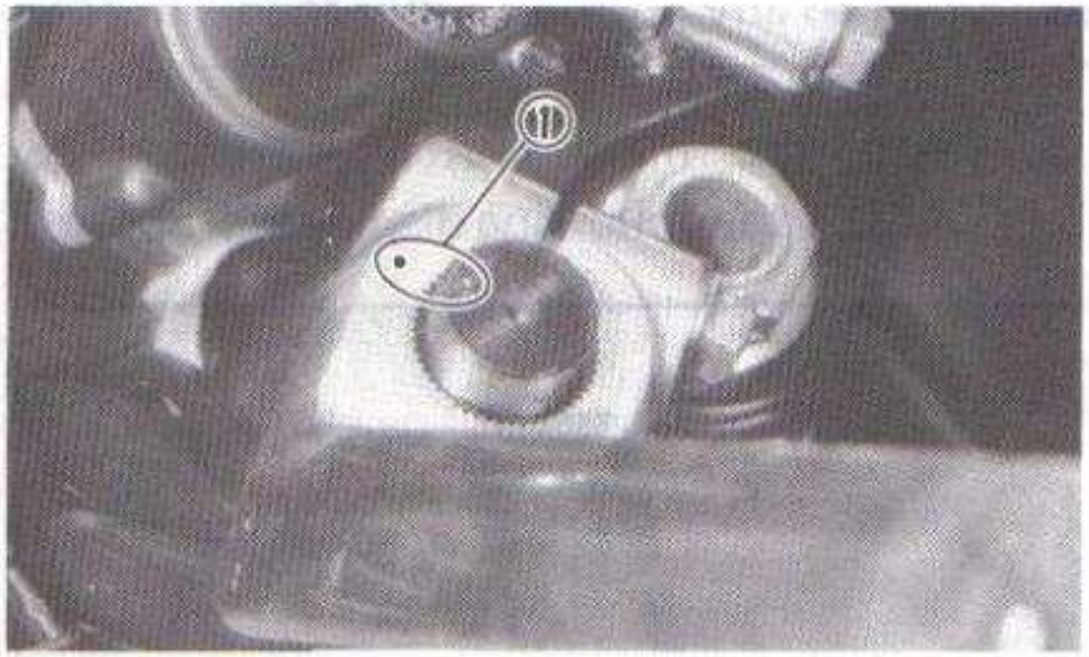
1. Complete fork cap bolt 2. O-ring

Tightening torque:
Fork cap bolt:
23 Nm (2.3 m·kg, 17 ft·lb)
Front fork pinch bolt:
23 Nm (2.3 m·kg, 17 ft·lb)

14. Reinstall the handlebars, handlebar cover and hoods.

⚠ WARNING:

When installing the handlebars, align the punched mark on the handle with the corresponding one on the handlebar boss.



1. Punch mark (Standard position)

Tightening torque:
Handle stopper nut:
125 Nm (12.5 m·kg, 90 ft·lb)
Handle pinch bolt:
30 Nm (3.0 m·kg, 22 ft·lb)

15. Adjust the front fork air pressure by operating the air suspension controller.

Front fork and rear shock absorber adjustment

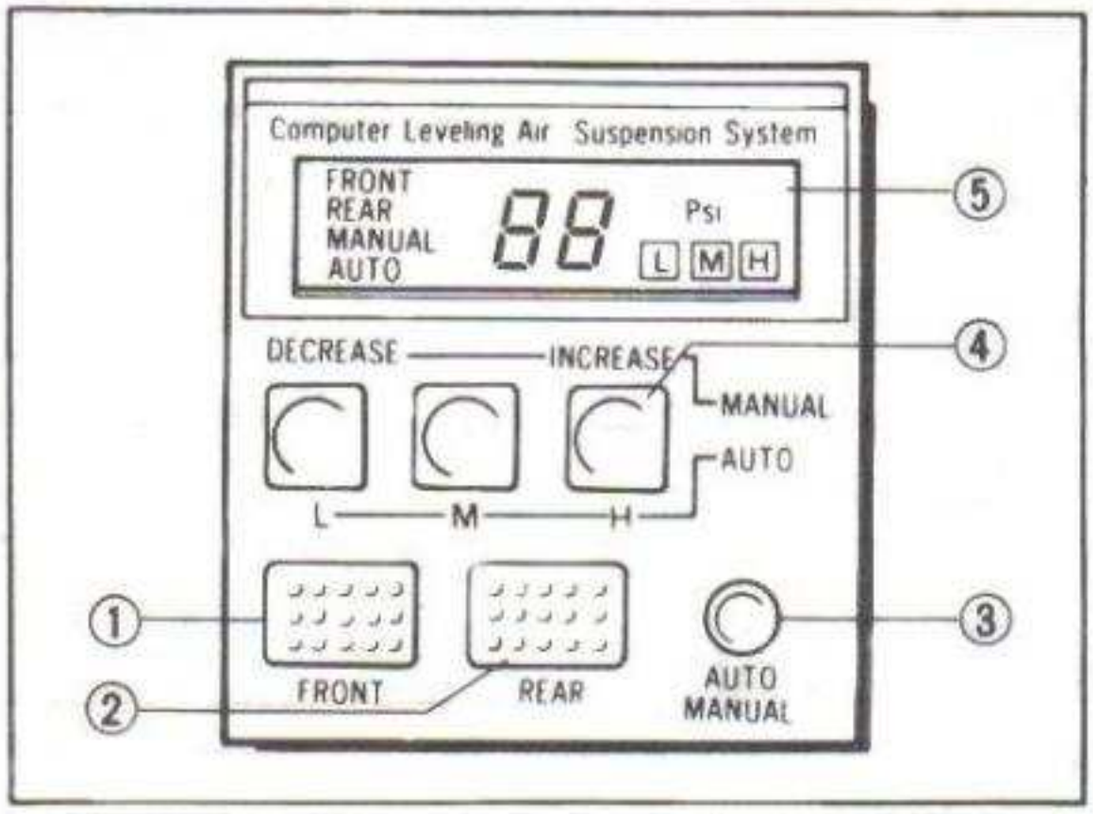
⚠ CAUTION:

Don't damage the air hose. It will result in an air leakage.

⚠ WARNING:

Any adjustment except for air pressure and damping, or any replacement must be performed by a Yamaha dealer or other qualified mechanic.

Air pressure adjustment (Front and rear)



1. "FRONT" switch
2. "REAR" switch
3. "AUTO/MANUAL" switch
4. Pressure adjusting switch
5. Display panel

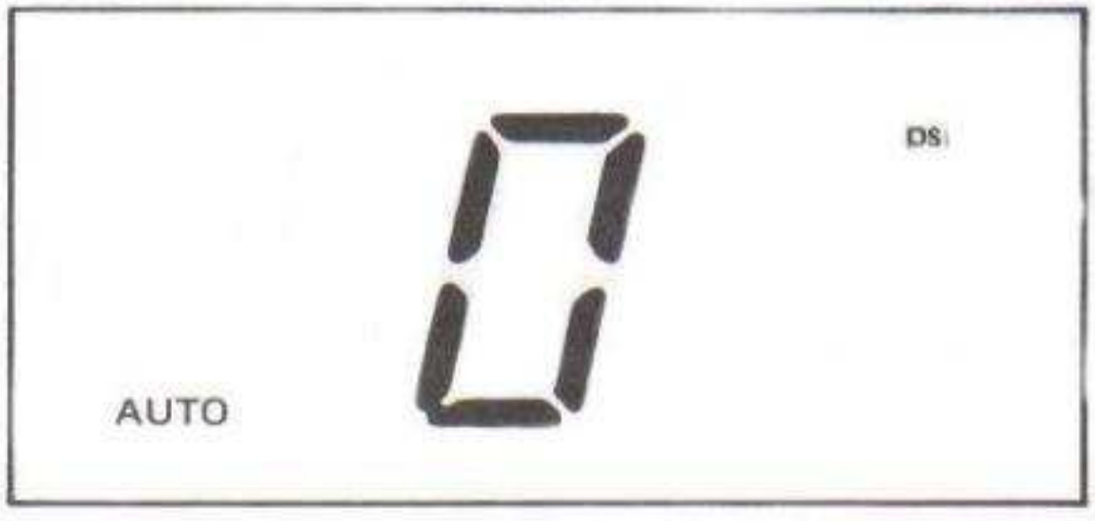
1. Elevate the wheel by placing the motorcycle on the centerstand.

NOTE:
When checking and adjusting the air pressure, there should be no weight on the motorcycle.

2. Turn the main switch to "ACC". All indicators on the display panel will light for about three seconds.

NOTE:
No adjustment is impossible with the main switch set to any position other than "ACC".

3. When the main switch is turned to "ACC", the following display will appear.



4. Push the "FRONT" switch or the "REAR" switch. The front fork or the rear shock air pressure will be indicated on the display panel.

5. "AUTO" adjustment.
   a. Select "AUTO" by operating the "AUTO/MANUAL" switch.
   b. Using the pressure adjusting switch, push your desired switch (L, M, or H), and the air pressure is automatically adjusted to the preset pressure.
6. "MANUAL" adjustment
   a. Using the "AUTO/MANUAL" switch, select "MANUAL".
   b. By pushing "DECREASE" or "INCREASE" on the pressure adjusting switch, the air pressure can be adjusted. By referring to the chart below, adjust the air pressure properly.

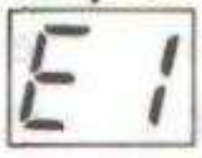
NOTE:
When making a manual adjustment, adjust the front fork air pressure first and then the rear shock. If the procedure is reversed, the residual high-pressure air in the circuit will flow into the front forks.

Air pressure setting chart

Air pressure		Min.	AUTO			Max.
			L	M	H	
FRONT	kg/cm^2	0.5	0.8	1.0	1.2	1.5
	psi	7	11	14	17	21
REAR	kg/cm^2	0.5	1.0	3.0	5.0	6.0
	psi	7	14	43	71	85

7. If the display panel shows the following error sign, or if the system does not operate normally, consult a Yamaha dealer.

Symbol mark



Shows trouble on the system. (If detected by self-check when power is turned on.)

Air pressure does not rise when the air compressor is operated.

The air compressor has been operated continuously for about one minute.

E4 The pressure sensor has no output voltage.

E5 Control unit has trouble.

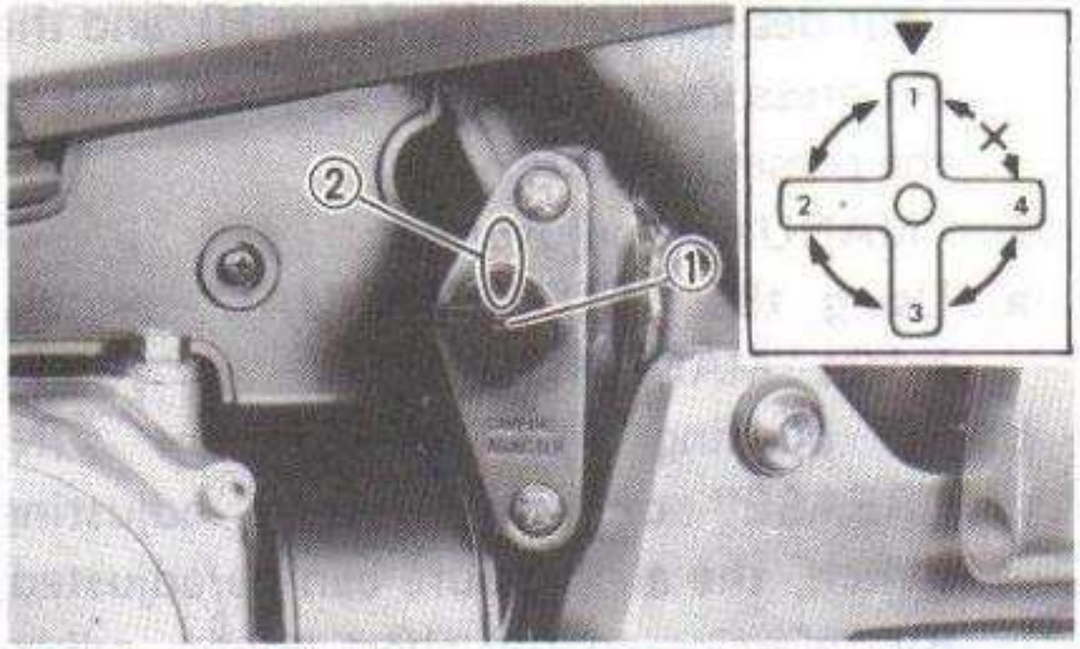
E6 Air pressure does not drop with the discharge valve opened.

If the motorcycle should turn over, proceed as follows:

1. Place the machine on the stand, and readjust the front fork air pressure, if necessary.
2. Check the air pressure again a few seconds after the readjustment.
3. If there is a difference of 3 psi from the specified pressure, it is considered that the front fork fluid may have entered the air pipe. Consult a Yamaha dealer immediately.

Damping adjustment (Rear)

1. Turn the damping adjuster to increase or decrease the damping.
2. If the damping adjuster is turned toward the "4", the damping becomes harder; if the adjuster is turned toward the "1", damping becomes softer.



1. Damping adjuster 2. Standard position

Standard position – No.1
No.1 – Minimum damping
No.4 – Maximum damping

⚠ CAUTION:

Turn the damping adjuster from 1 to 4 or 4 to 1 in progressive steps. Never turn the adjuster directly from 1 to 4 or 4 to 1.

Recommended combinations of the front fork and the rear shock absorber.

Use this table as guidance to meet specific riding conditions and motorcycle load.

		L		M		H	
Loading condition		Solo rider		With passenger or accessory equipments		With accessory equipments and passenger	
				 			
Air Pressure	Front	kg/cm²	psi	kg/cm²	psi	kg/cm²	psi
		0.8	11	1.0	14	1.2	17
	Rear	1.0	14	3.0	42	5.0	71
Damping adjuster		1 or 2		2 or 3		3 or 4	

Maintenance (Drier and suction filter)

⚠ CAUTION:

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

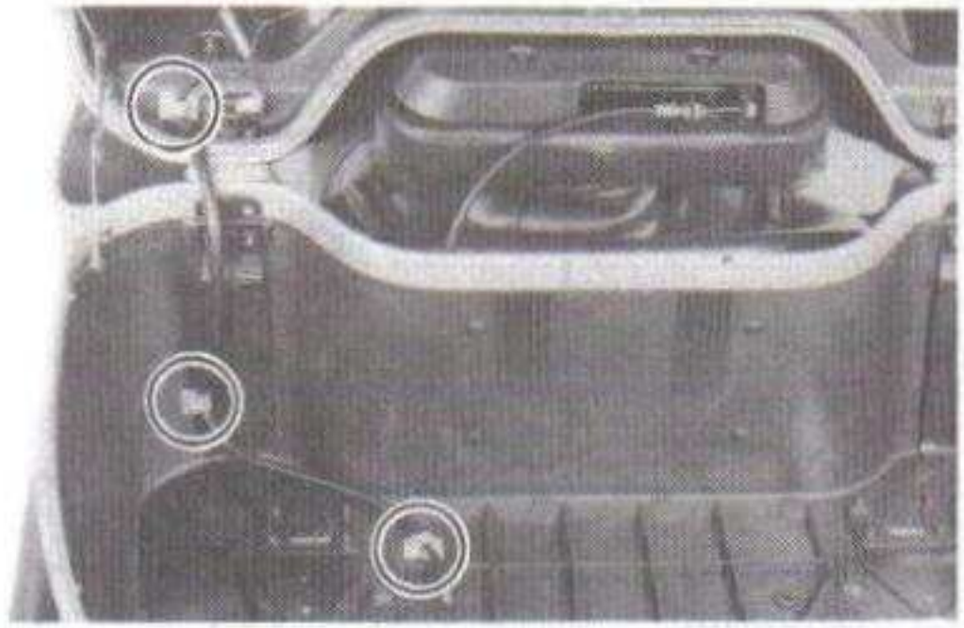
1. Replacing the desiccant (silicagel) in the air drier;
   The air drier contains 60 grams of silicagel as an absorbant. The absorbing power of the desiccant (silicagel) decreases as it absorbs moisture, so it must be replaced periodically. The desiccant (silicagel) is colorless when it is new but turns to pink after absorbing moisture.

Replacement interval: 2 years

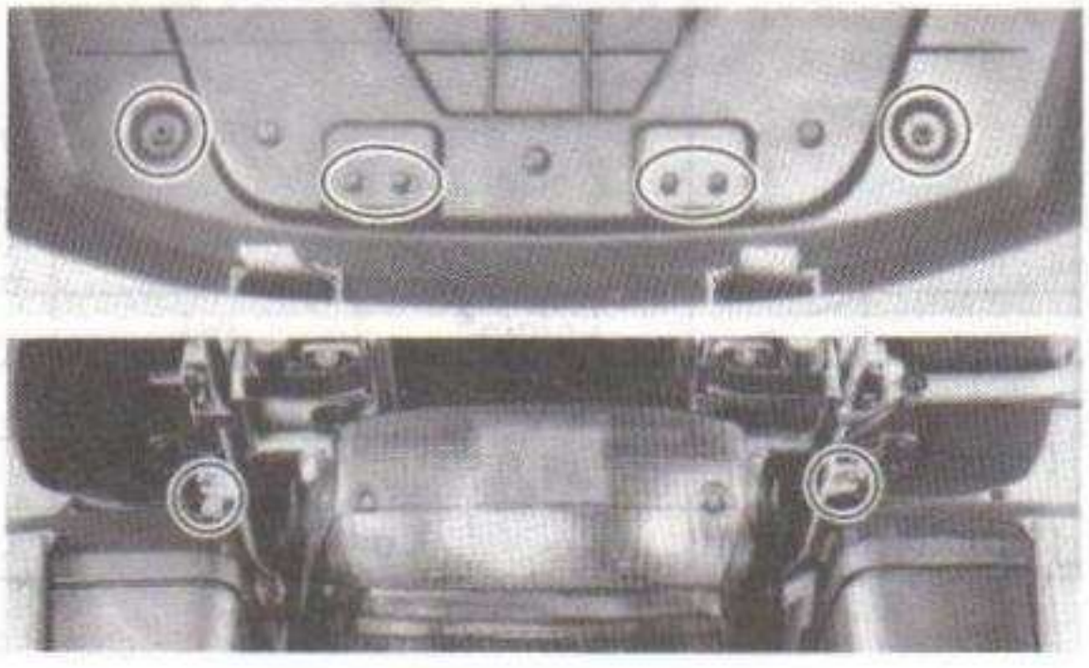
NOTE:
When used frequently or in humid areas, replacement interval should be shortened.

Replacement:

a. Open the travel trunk lid and disconnect the trunk light lead.

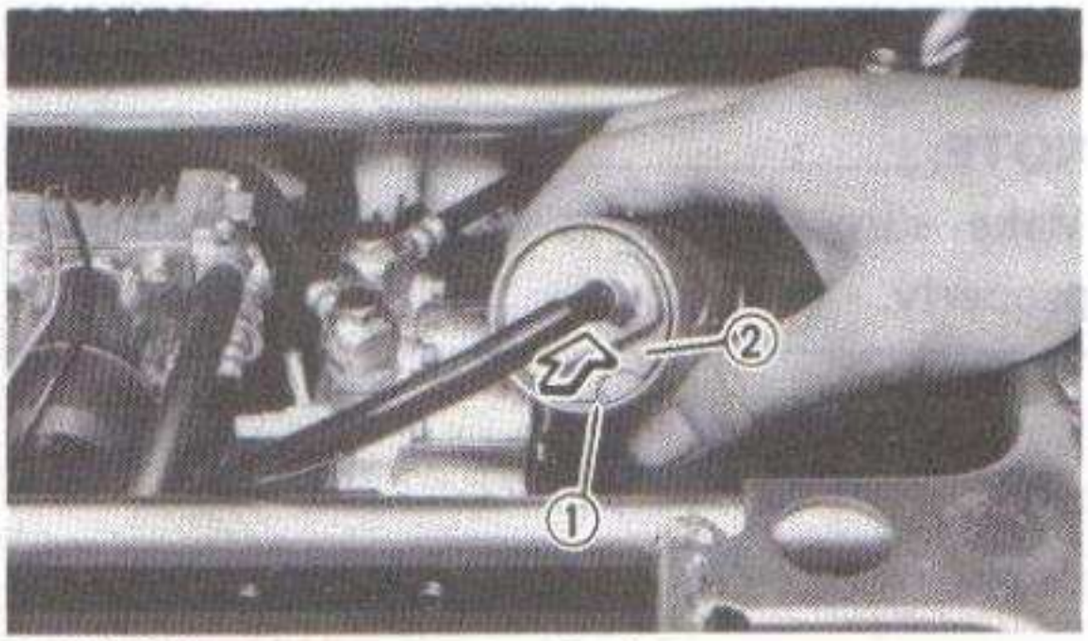


b. Remove the travel trunk and cover.



c. Remove the drier from the bracket.

d. By pushing the cap, remove the circlip, and pull out the cap.

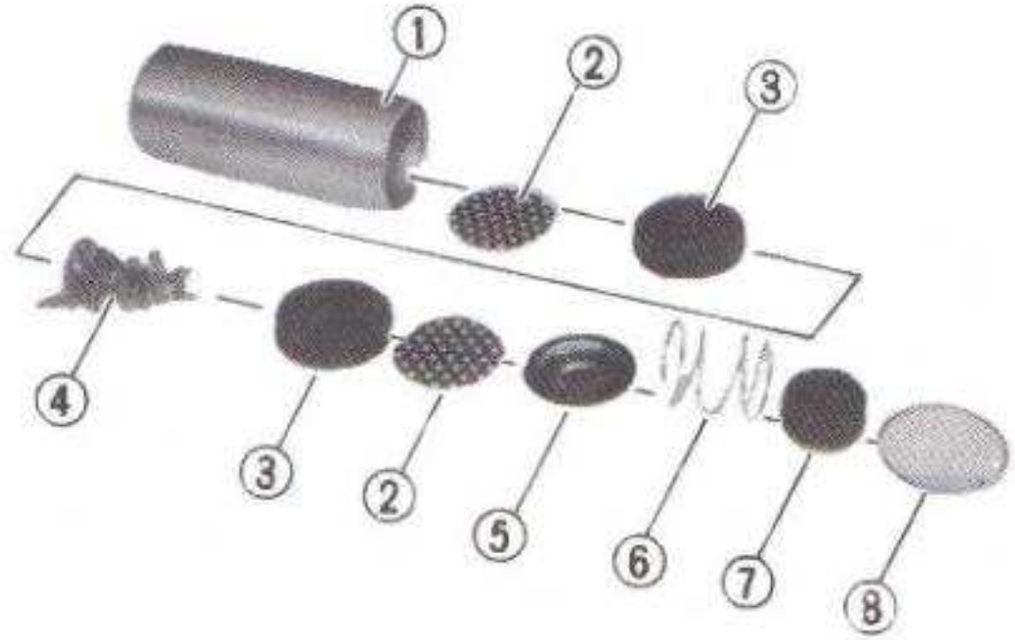


1. Circlip
2. Cap

⚠ CAUTION:

Avoid pulling the hose. Keep the opening of the chamber upright so that inner parts do not fall off.

e. Remove the spring, filter, buckle plate, filter plate and filter, and remove the desiccant (silicagel).



1. Drier
2. Filter plate
3. Filter
4. Disiccant
5. Buckle plate
6. Spring
7. Filter
8. Circlip

f. Remove the filter and filter plate on the bottom of the drier and thoroughly wipe off the inner surface of the drier, then let it dry. Wash the filter in water and dry it off. Install the filter plate and filter on the bottom of the drier, put 60 grams of desiccant (silicagel) (specified) into the drier, and install the filter, filter plate, buckle plate, spring, and filter, in that order, then install the cap.

NOTE:

Any pulverized desiccant (silicagel) should be excluded. Contact a Yamaha dealer for the designated desiccant (silicagel).

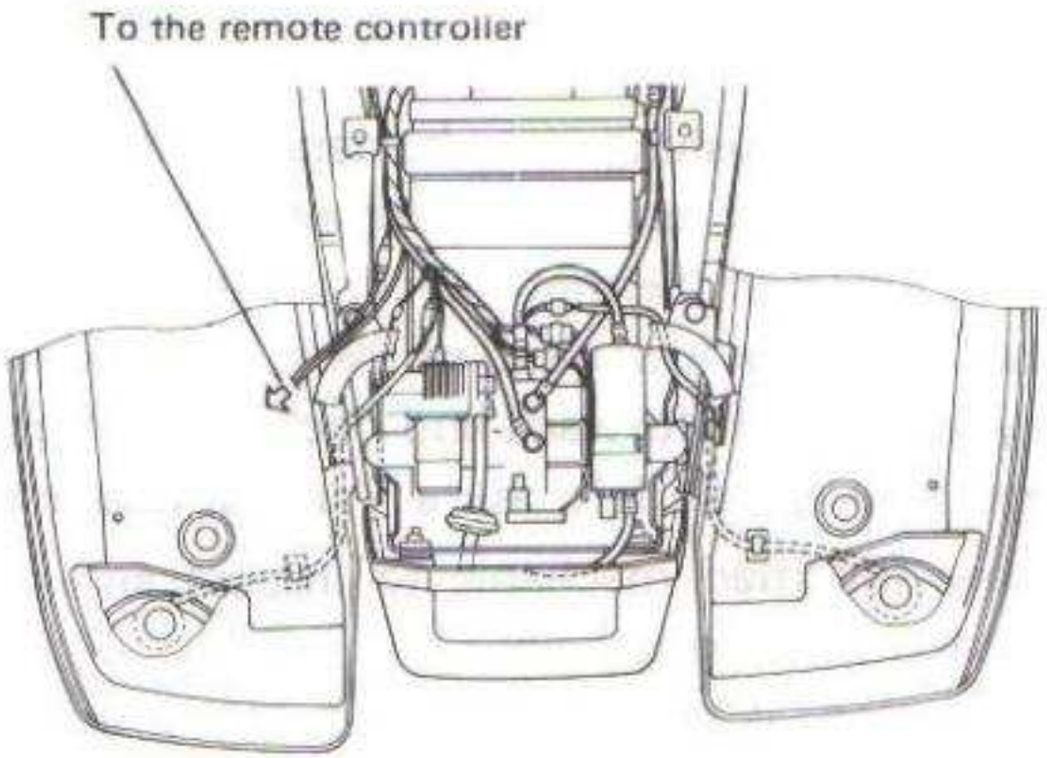
⚠ WARNING:

- **This desiccant cannot be eaten. Should you swallow any, go to a doctor at once.**
- **Keep out of reach of children.**
- **Descard desiccant immediately after use.**

⚠ CAUTION:

- **Use this desiccant as soon as its bag is opened.**
- **Do not press or crush this desiccant in any way.**

g. Install the circlip and pull the cap.
h. Install the drier on the bracket.



i. Install the cover, carrier, antenna and travel trunk.

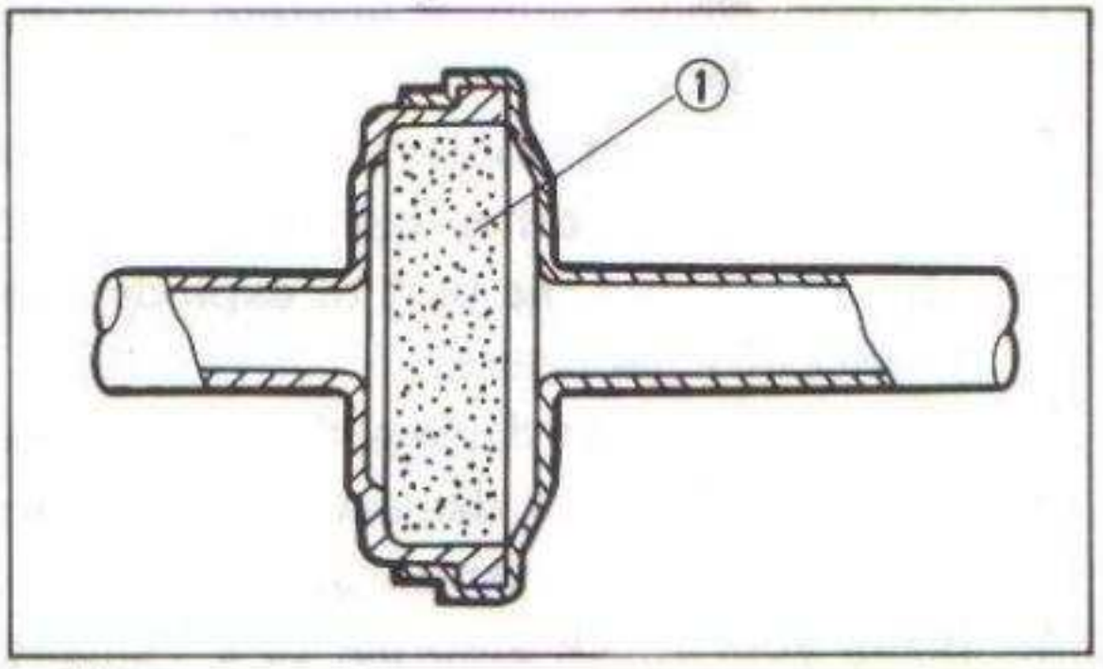
2. Cleaning the suction filter
   The air compressor suction port is fitted with a filter which must be cleaned periodically.

Cleaning interval: One year

Cleaning:

a. Remove the travel trunk, antenna, carrier and cover.

b. After cleaned in a cleaning solvent, the filter should be dried up. After installing the filter, connect the hose to the filter housing while taking care not to bend it. The open end of the hose should face downward, and the filter housing halves should be put together so that no water enters through the mating surfaces.



1. Filter

c. Install the cover, carrier, antenna and travel trunk.

Rear shock absorber (New monocross suspension " De Carbon" system)

⚠ WARNING:

This shock absorber contains highly compressed 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 reault from improper handling.

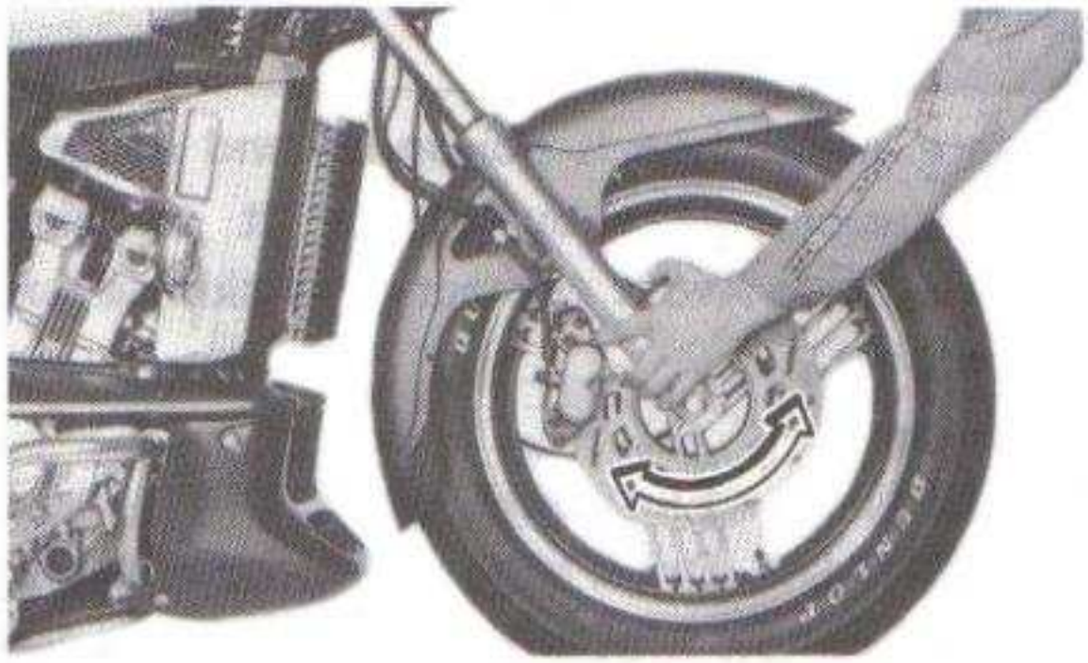
1. **Do not tamper with or attempt to open the cylinder assembly.**
2. **Do not subject shock absorber to an open flame or other high heat source. This may cause the unit to explode due to excessive gas pressure.**
3. **Do not deform or damage the cylinder in any way. Cylinder damage will result in poor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

Steering inspection

Periodically inspect the condition of the steering. Worn out or loose steering bearings or front forks bushings may be dangerous.
Place a block under the engine to raise the front wheel of the motorcycle off the ground: then hold the lower end of the front fork and try to move it forward and backward. If any free play can be felt, ask a Yamaha dealer or other qualified mechanic to inspect and adjust the steering assembly.
Inspection is easier if the front wheel is removed.

⚠ WARNING:

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



Wheel bearings

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

Battery

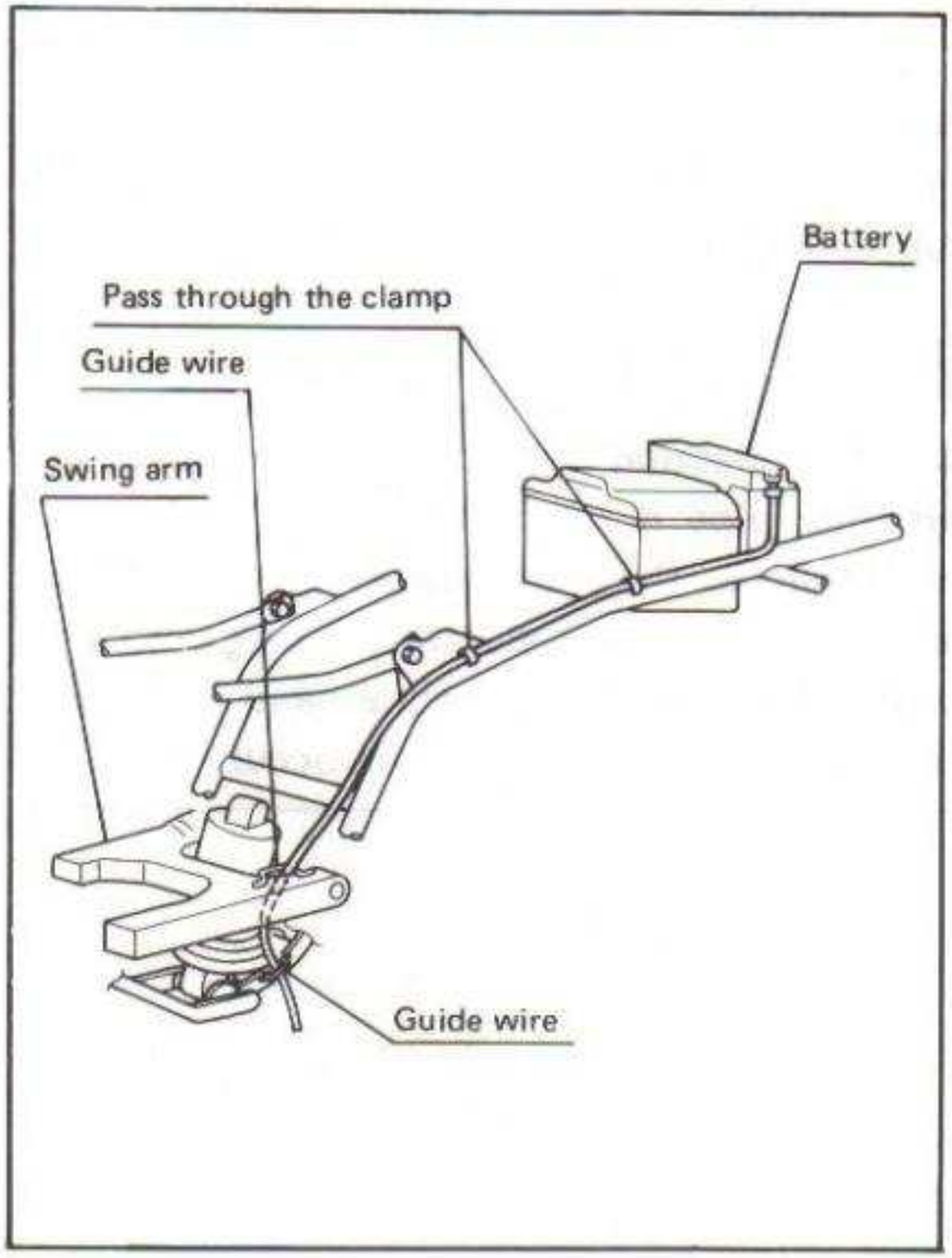
This model has been equipped with a long life type battery; however the battery electrolyte should be checked at least once a month.

The electrolyte level should be between the upper and the lower level marks.

⚠CAUTION:

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

How to layout battery breather pipe



⚠ WARNING:

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

Antidote:

EXTERNAL – Flush with water.

INTERNAL – Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call 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 closed space. Always shield your eyes when working near batteries.

KEEP OUT OF REACH OF CHILDREN.

Replenishing the battery fluid

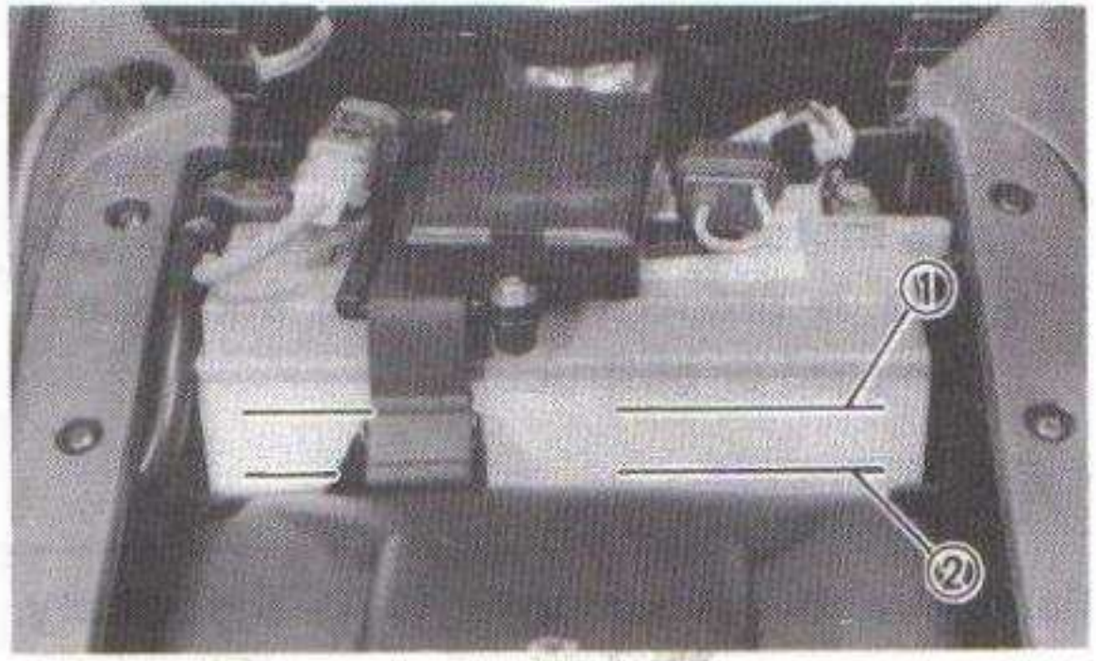
1. Remove the top cover.
2. Remove the filling plug and slowly put in distilled water. Each cell will be filled automatically. Fill only to the UPPER LEVEL mark.

⚠ CAUTION:

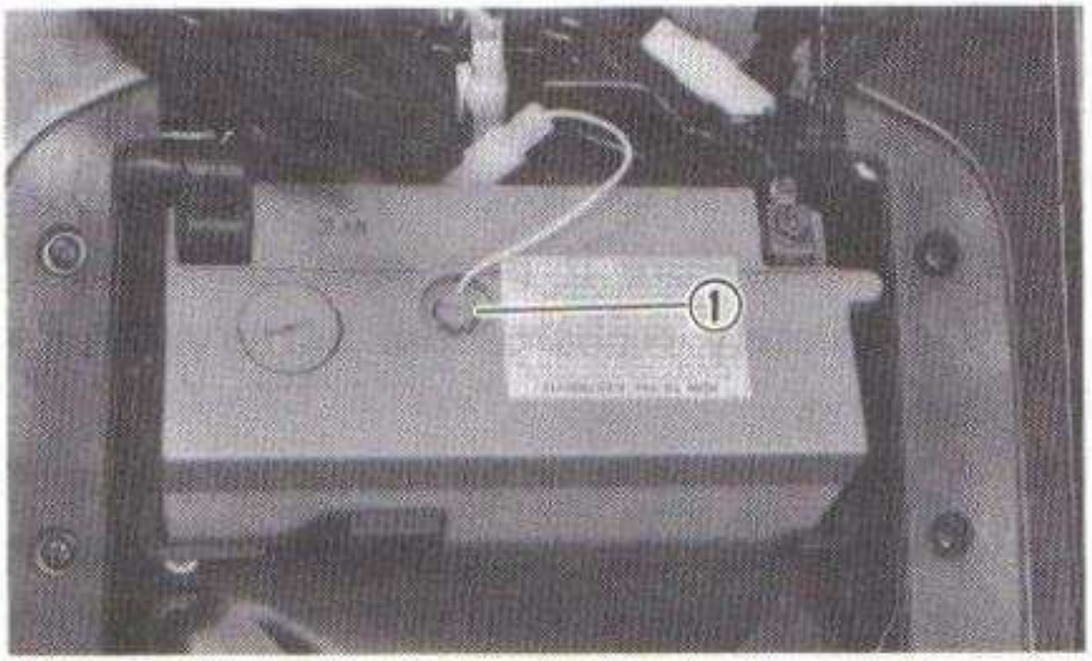
Normal tap water contains minerals which are harmful to a battery; therefore, refill only with distilled water.

⚠ CAUTION:

Do not overfill! If any excess fluid flows from the breather hose, stop filling and rinse affected areas thoroughly with a solution of 1 tablespoon baking soda in a cup of water.



1. Upper level 2. Lower level



1. Battery sensor

3 Securely tighten the filling plug.

4 Always make sure the connections are correct when putting the battery back in the motorcycle. Make sure the breather pipe is properly connected and is not damaged or obstructed.

⚠ CAUTION:

Make sure that the connection to the battery is correct; otherwise, damage to the microcomputer may occur.

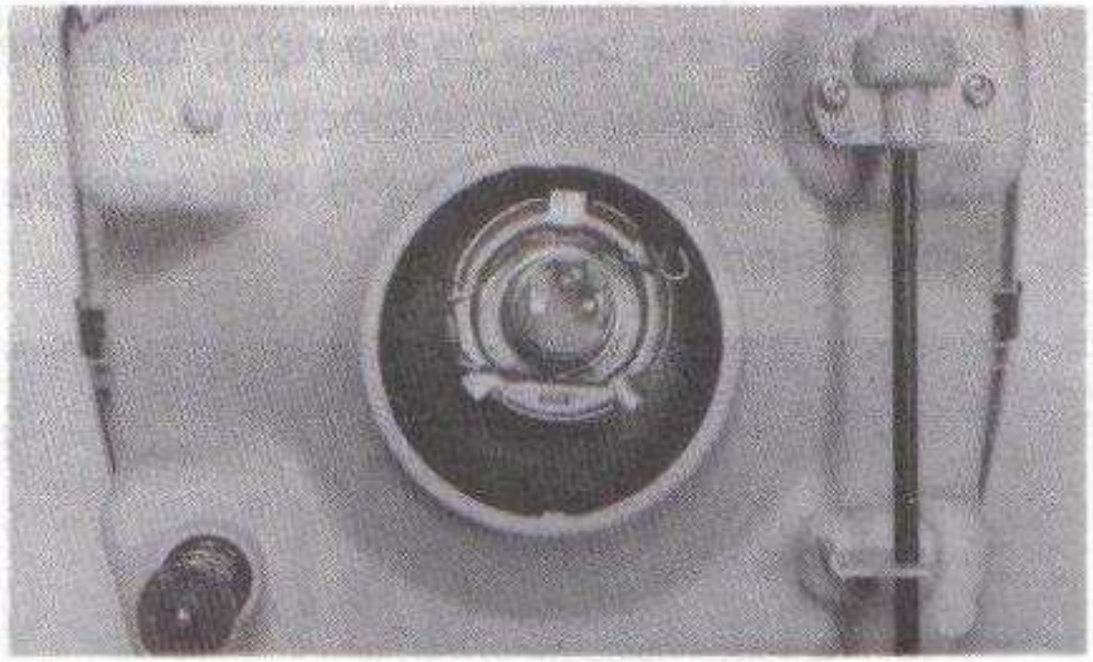
5. When the motorcycle is not to be used for a month or longer, remove the battery and store it in a cool, dark place. Completely recharge the battery before reusing.
6. If the battery is to be stored for a longer period than the above, check the specific gravity of the fluid at least once a month and recharge the battery when it is too low.

Headlight

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

1. Headlight bulb replacement
   a. Remove the screws.

b. Remove the headlight cover.



c. Disconnect the lead wires and remove the light unit assembly

d. Remove the headlight bulb holding spring.

e. Slip a new bulb into position and secure it in place with the bulb holding spring.

⚠CAUTION:

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

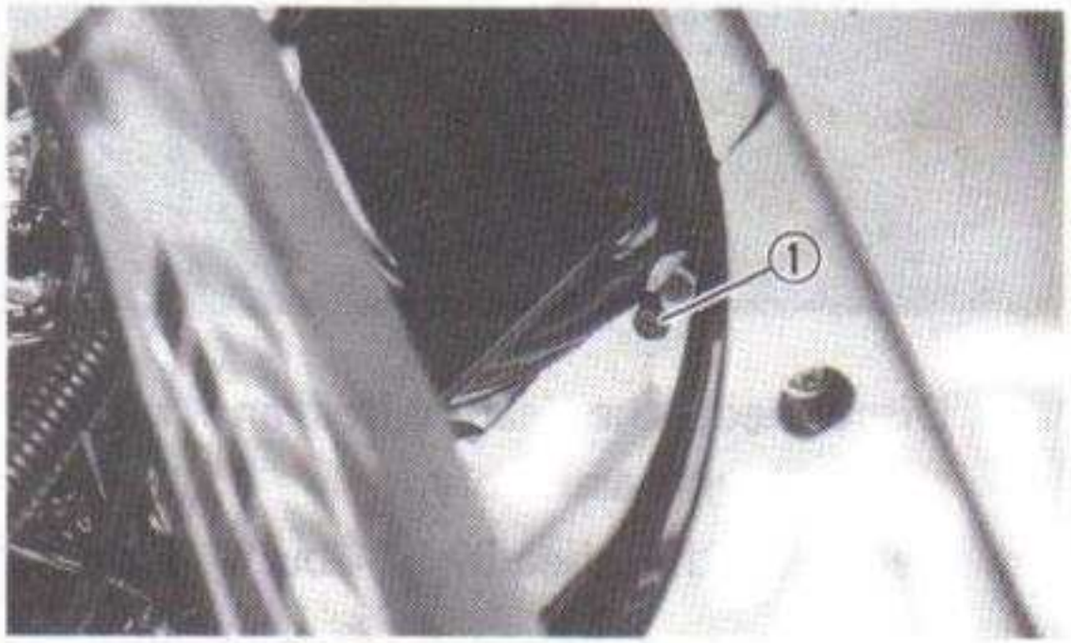
⚠ WARNING:

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

f. Reinstall the light unit assembly to the headlight body. Adjust the headlight beam if necessary.

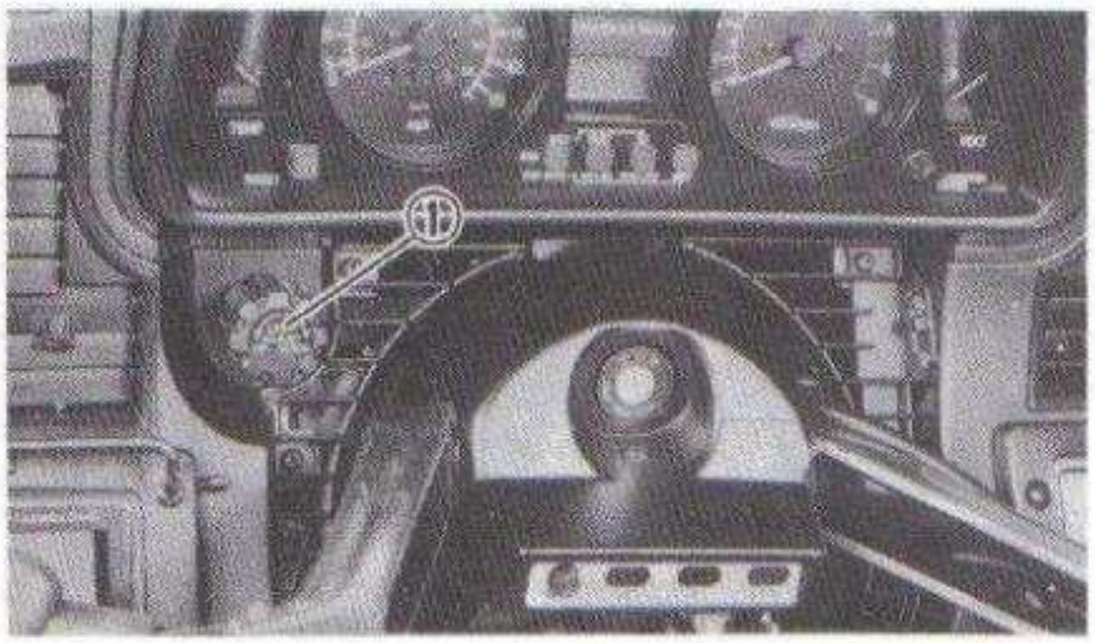
2. Headlight beam adjustment

a. Horizontal adjustment:
To adjust the beam to the right, turn the adjusting screw counterclockwise.
To adjust the beam to the left, turn the screw clockwise.



1. Horizontal adjusting screw

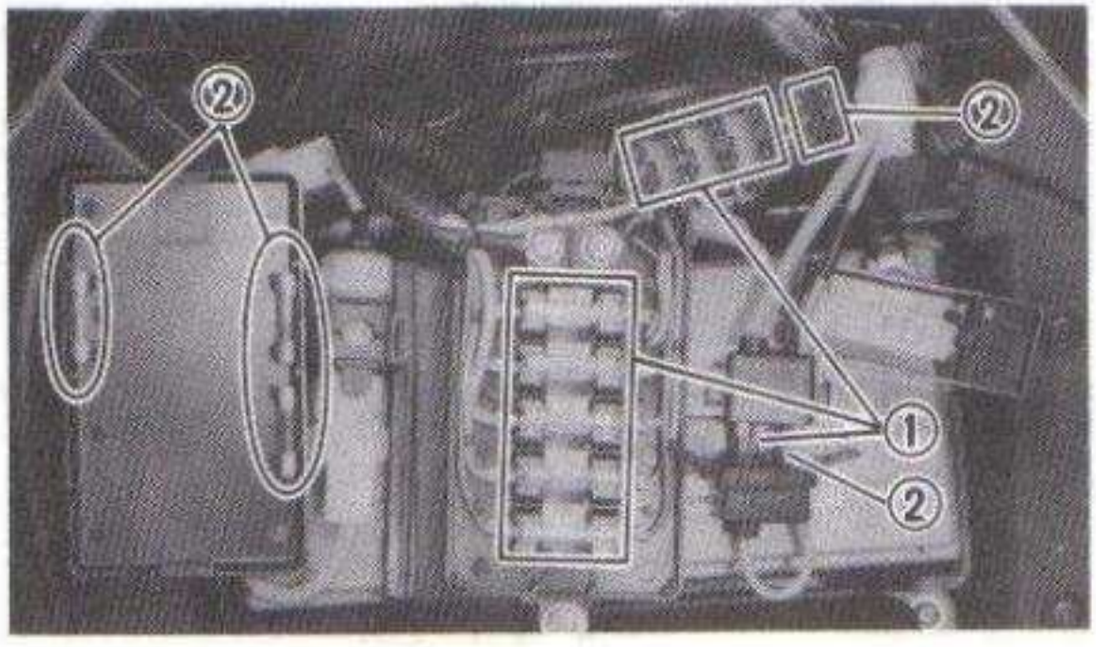
b. Vertical adjustment:
To adjust the beam to the upper, turn the adjusting knob "UP".
To adjust the beam to the lower, turn the adjusting knob "DOWN".



1. Headlight vertical adjusting knob

Fuse replacement

1. The fuse block is located under the top cover.



2. If any fuse is blown, turn off the ignition switch and the switch in the circuit in question, install a new fuse of proper amperage.
   Turn on the switches, and see if the electrical device operates. If the fuse immediately blows again, consult a Yamaha dealer or other qualified mechanic.

⚠ WARNING:

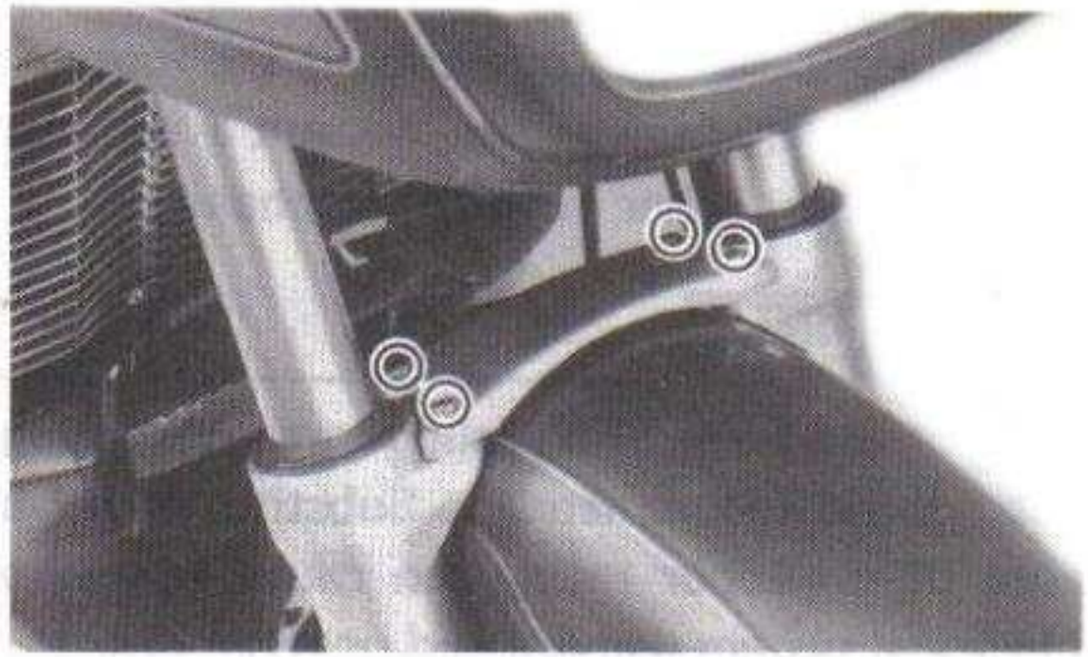
Do not use fuses of a higher amperage rating than those recommended. Substitution of a fuse of improper rating can cause extensive electrical system damage and possible fire.

Front wheel removal

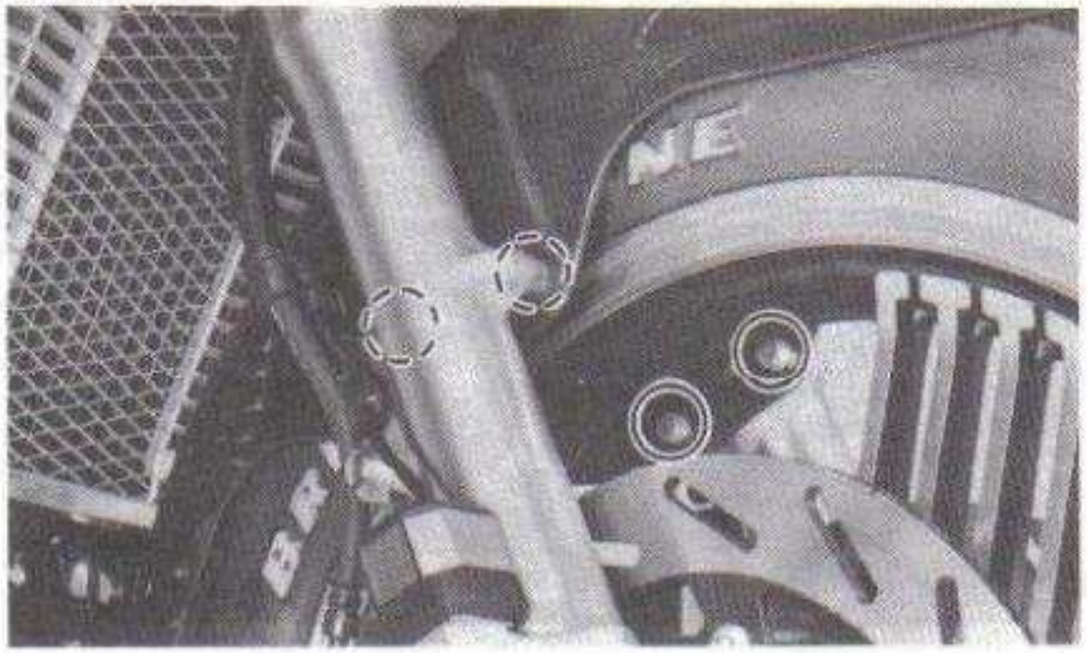
⚠ CAUTION:

It is advisable to have a Yamaha dealer or other qualified mechanic mark this removal and reassembly.

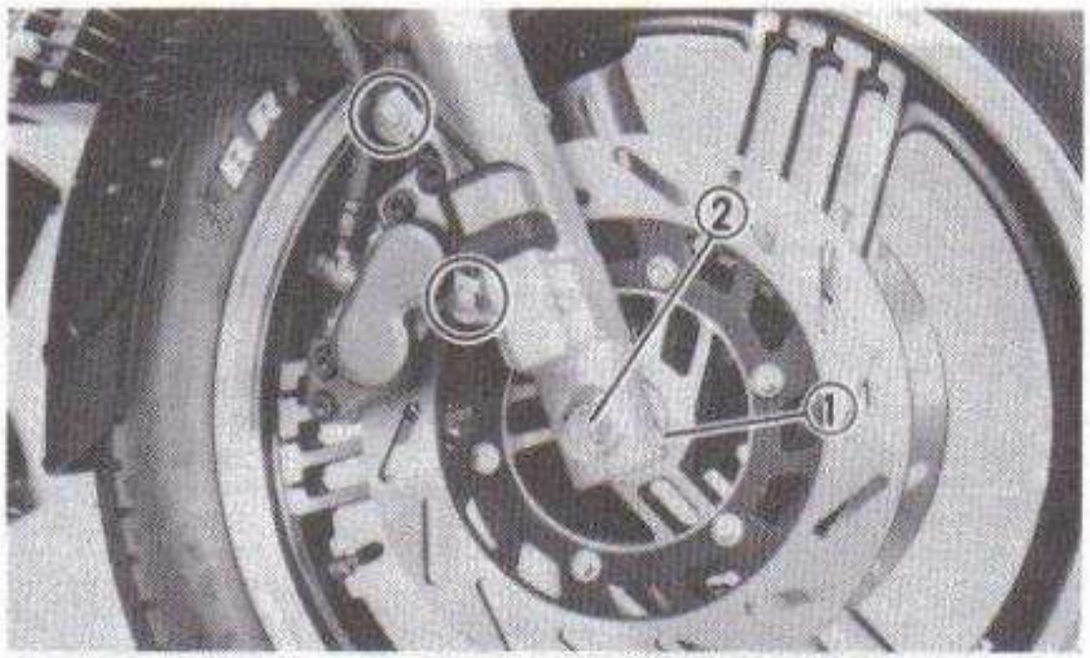
1. Place the motorcycle on the center stand.
2. Remove the speedometer cable.
3. Remove the front fork brace.



4. Remove the front fender securing bolts, brake hose holder and remove the fender.



5. Remove the right caliper.
6. Loosen the pinch bolt securing the axle.



1. Pinch bolt
2. Axle shaft

7. Remove the axle shaft and the front wheel. In this case, make sure the motorcycle is properly supported.

NOTE:

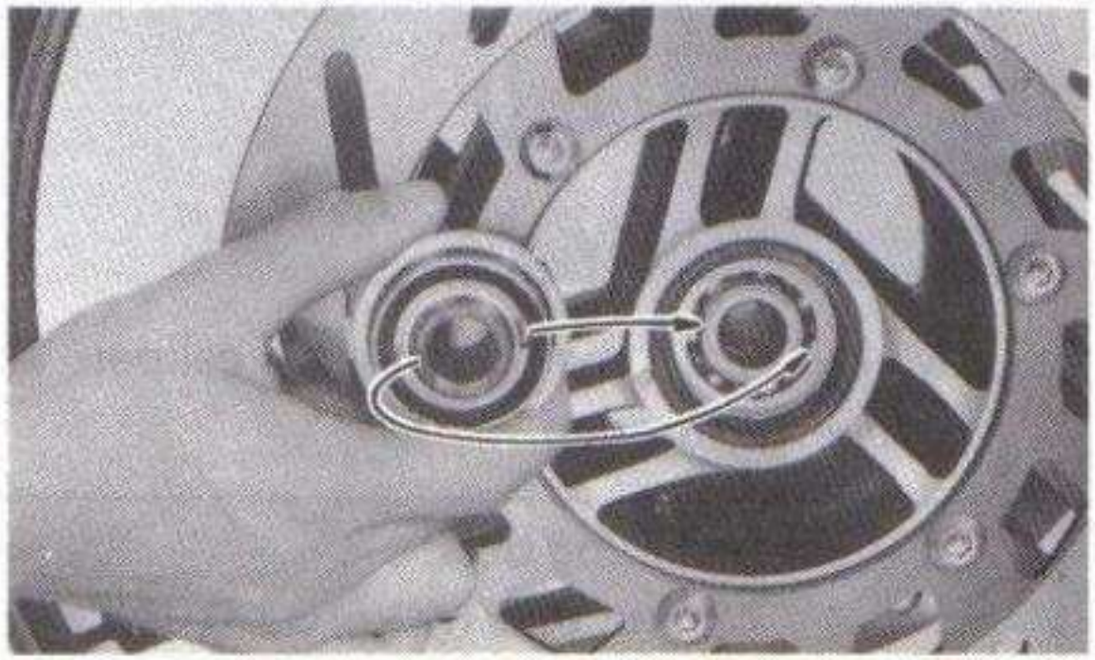
Do not depress the brake lever when the wheel is off the motorcycle as the brake pads will be forced to shut.

8. Lower the wheel until the disc come off the caliper. Turn the caliper outward so they do not obstruct the wheel and remove the wheel.

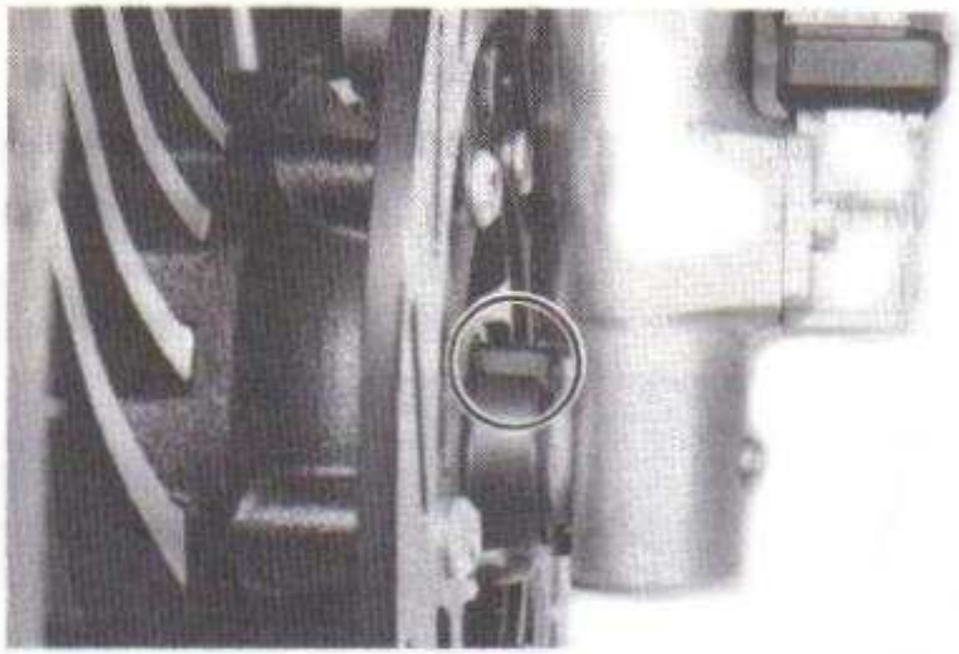
Front wheel installation

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

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



2. Make sure the projection portion (torque stopper) of the speedometer housing is positioned correctly.

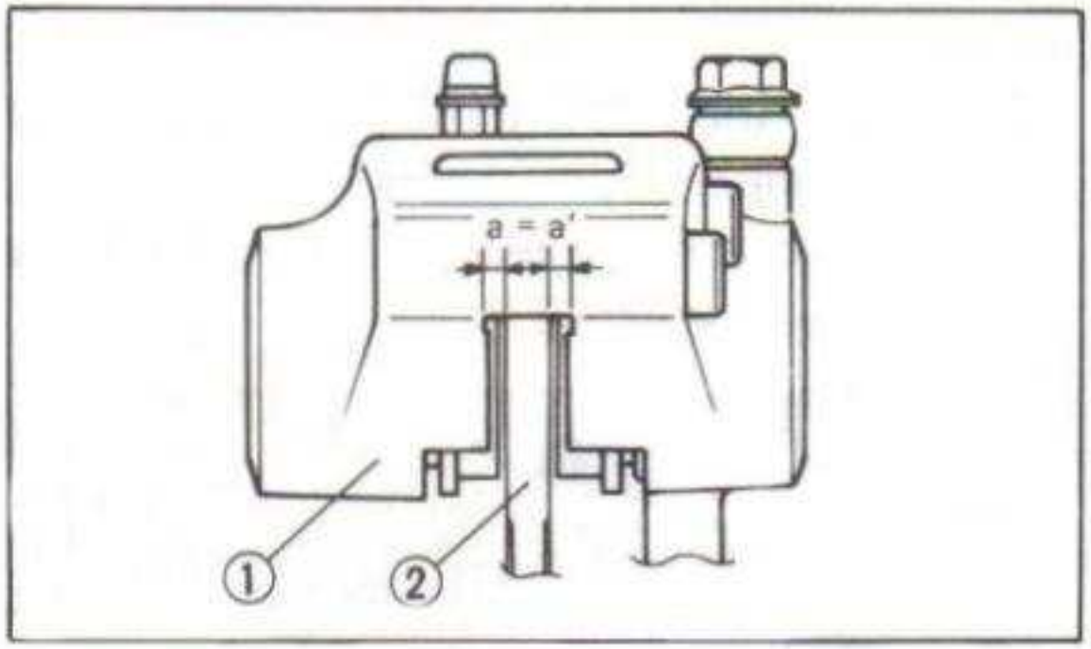


3. Make sure the axle and caliper are properly torqued.

Caliper installing bolt: 45 Nm (4.5 m·kg, 32 ft·lb)

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

4. Before tightening the pinch bolt, stroke the front forks several times to make sure of proper fork operation.
With the axle pinch bolt loose, work the right fork leg back and forth until the proper clearance between the disc and caliper is obtained.



1. Caliper 2. Disc

5. Tighten the axle pinch bolt.

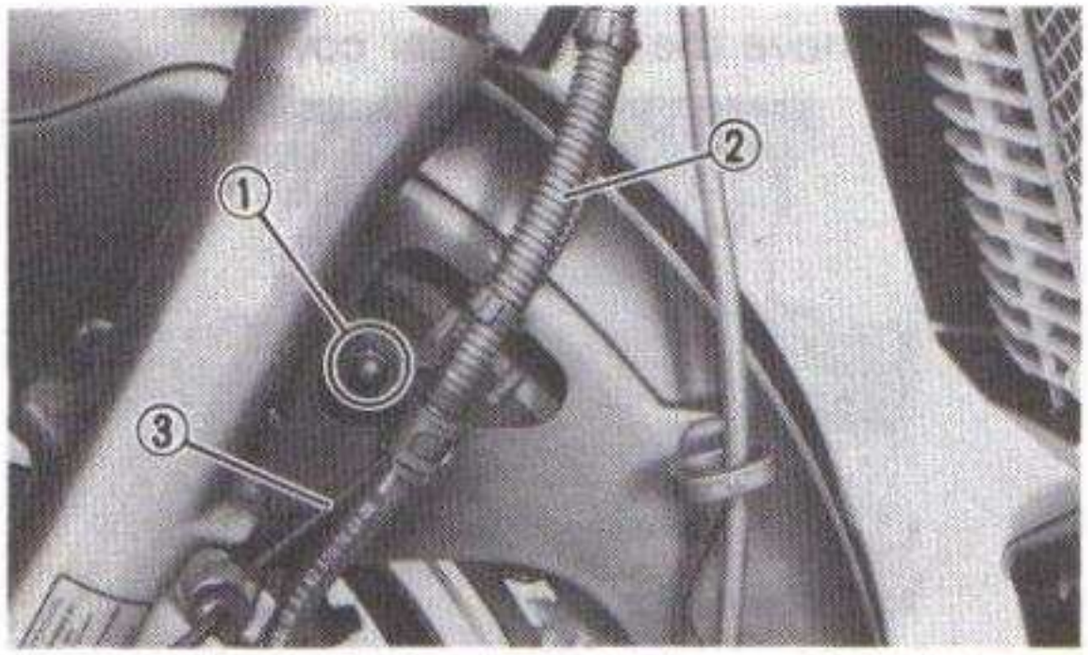
Axle pinch bolt torque: 20 Nm (2.0 m·lb, 14.0 ft·lb)

6. Tighten the front fork brace and fender securing bolts.

Fork brace bolt torque: 20 Nm (2.0 m·kg, 14 ft·lb) Fender bolt: 20 Nm (2.0 m·kg, 14 ft·lb)

⚠ WARNING:

Make sure that pipes and wires are routed properly.



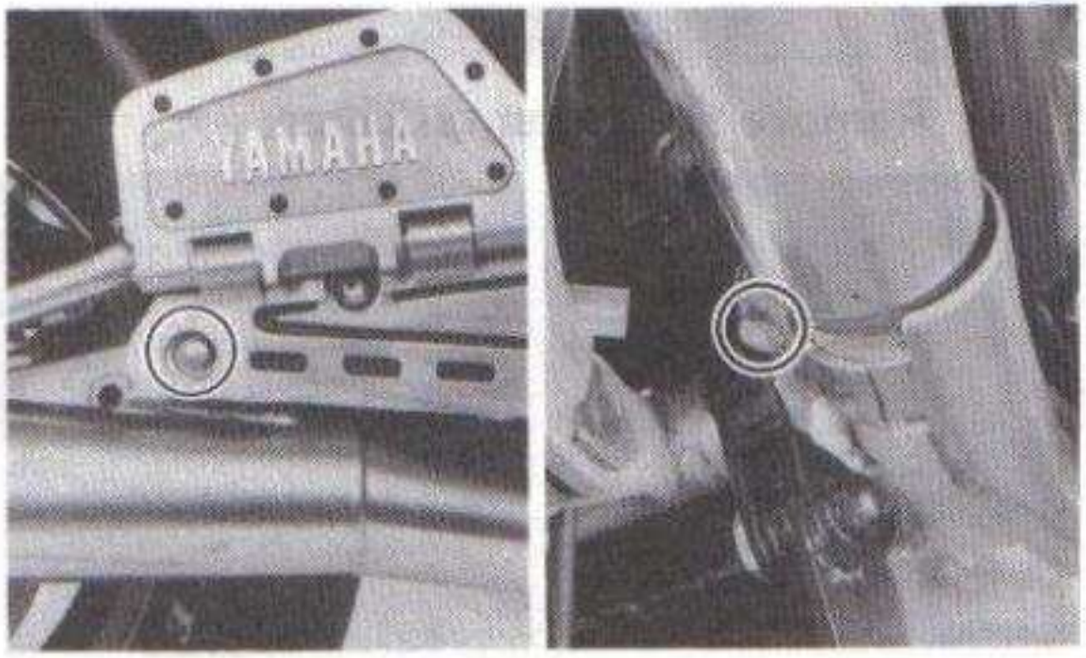
1. Brake hose holder installation bolt
2. Brake hose
3. Anti-dive lead

Rear wheel removal

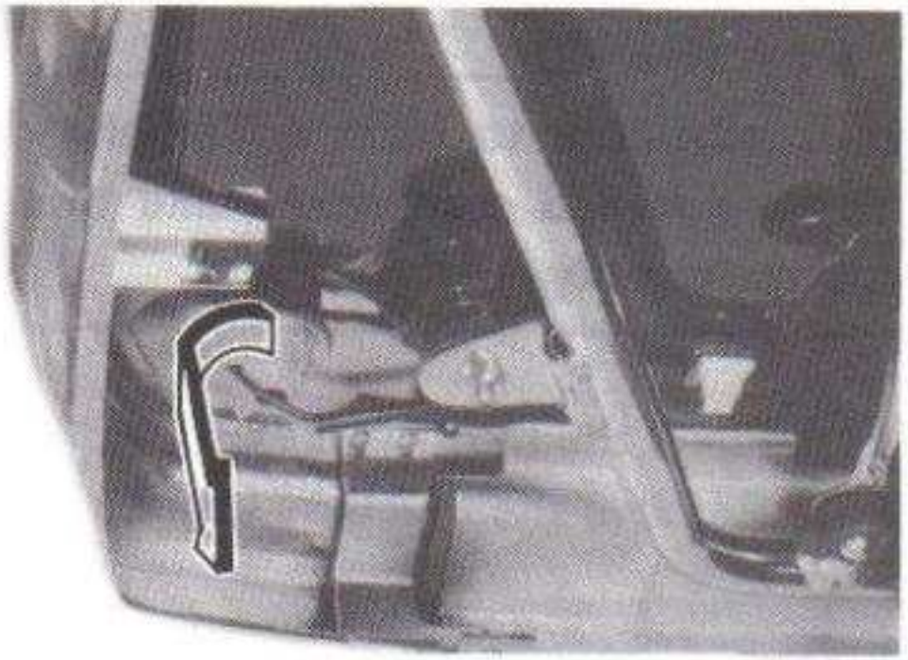
⚠ CAUTION:

It is advisable to have a Yamaha dealer or other qualified mechanic make this removal and reassembly.

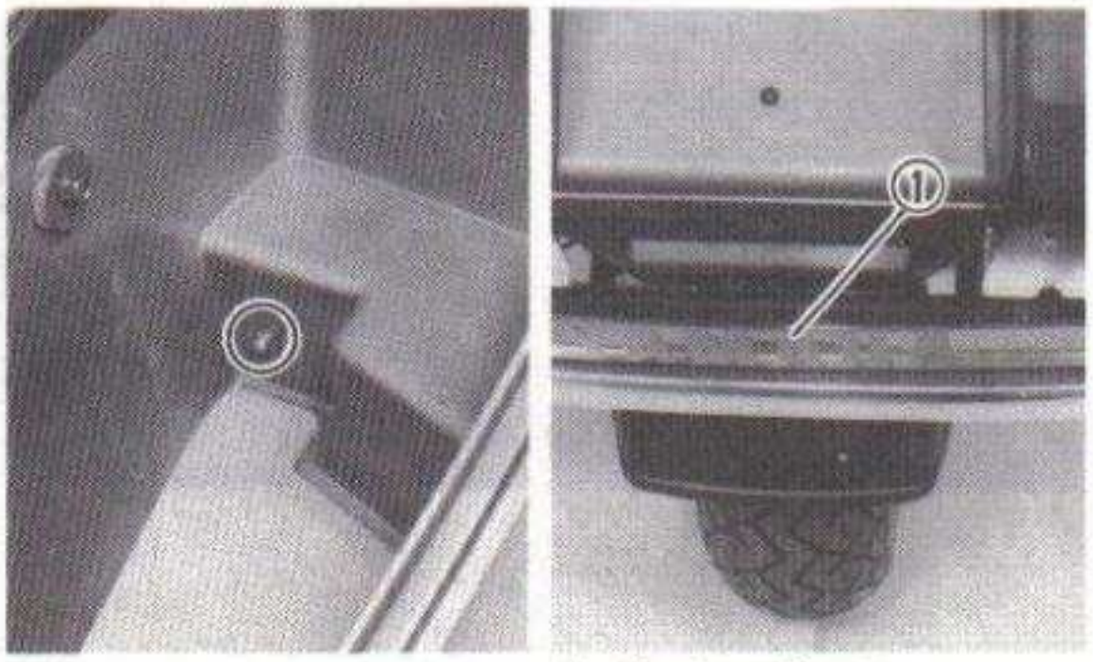
1. Place the motorcycle on the centerstand.
2. Remove the mufflers (right and left).



3. Remove the saddlebag lid.
4. Remove the right flasher light bulb.

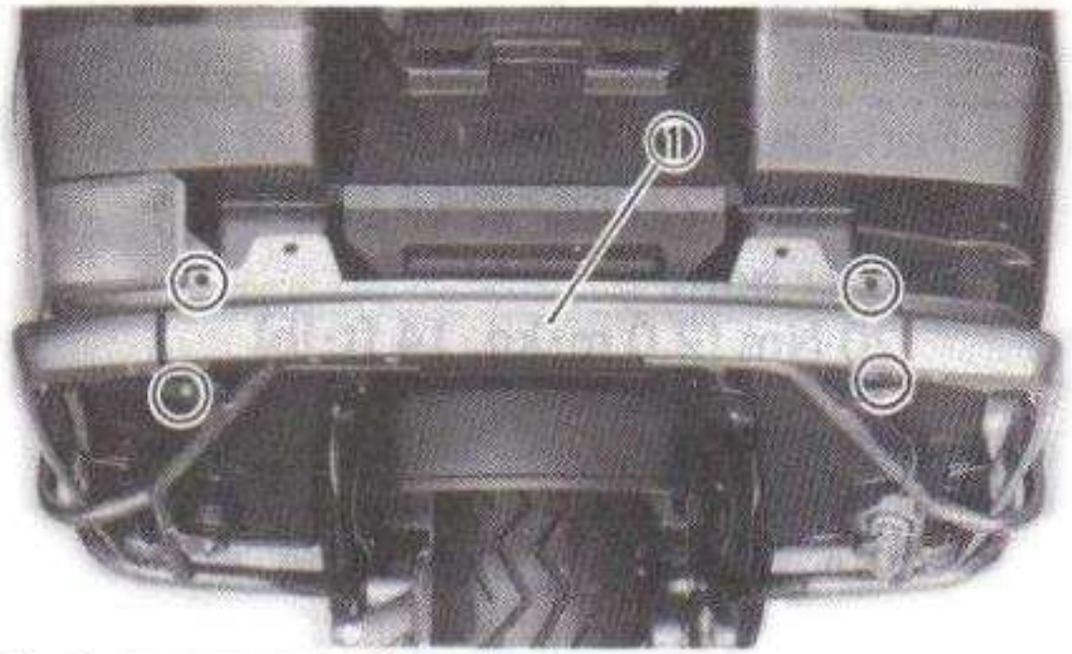


5. Remove the center reflector



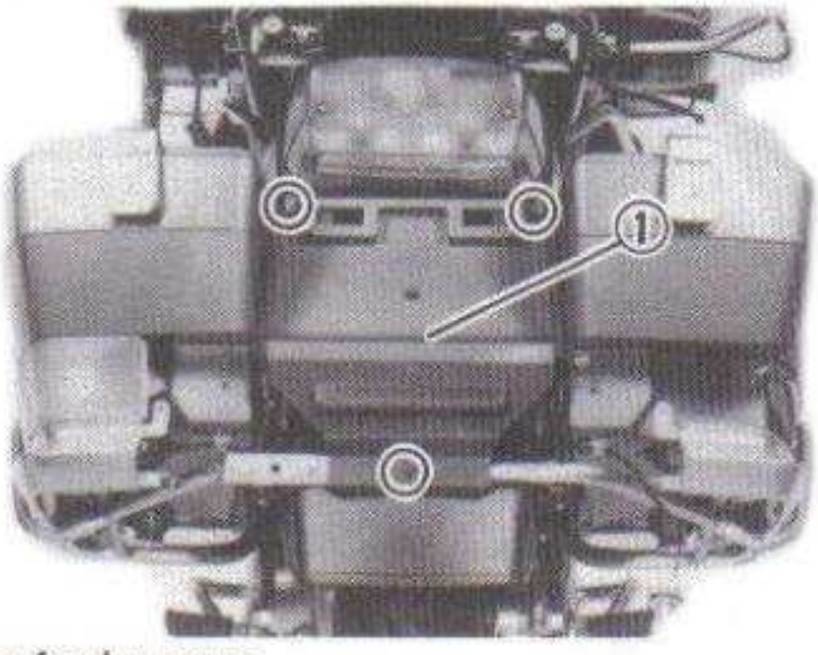
1. Center reflector

6. Remove the center ornamental band.



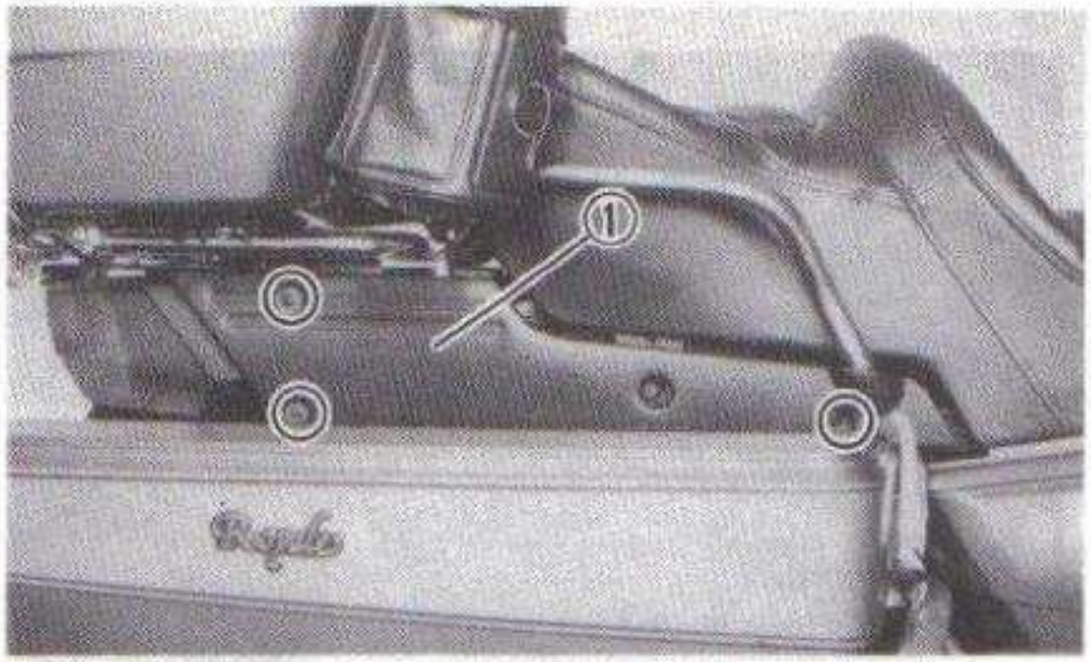
1. Center ornamental band

7 Remove the rear fender cover.



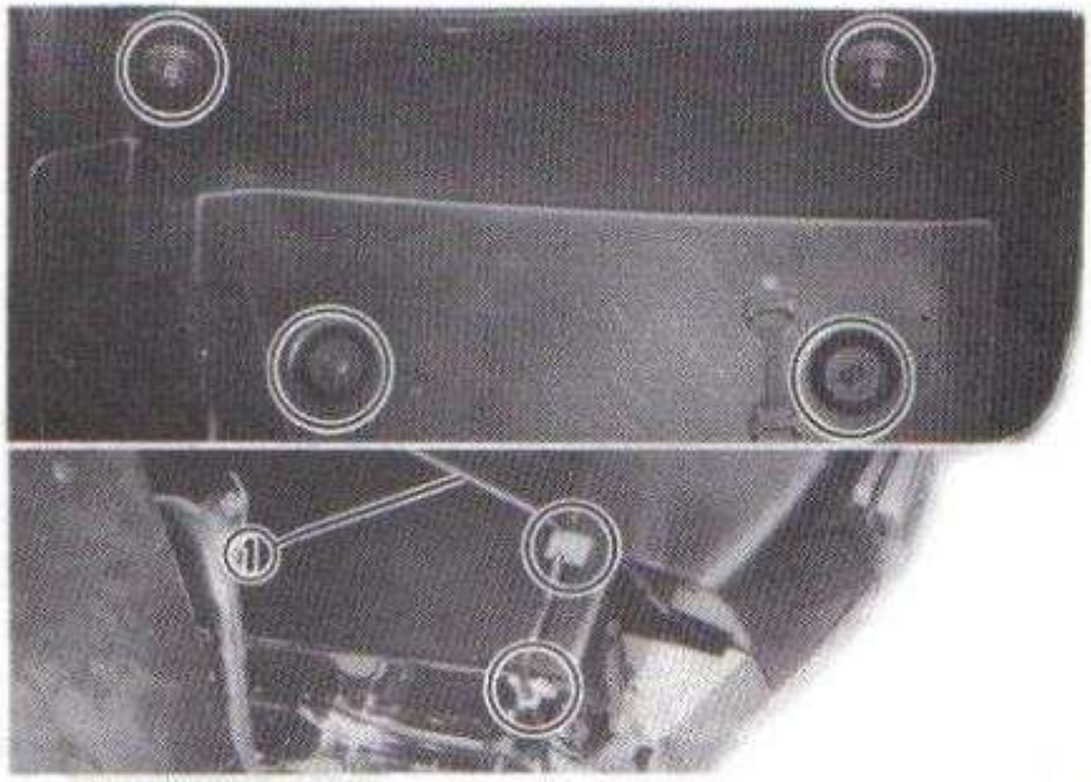
1. Rear fender cover

8. Remove the right cover.



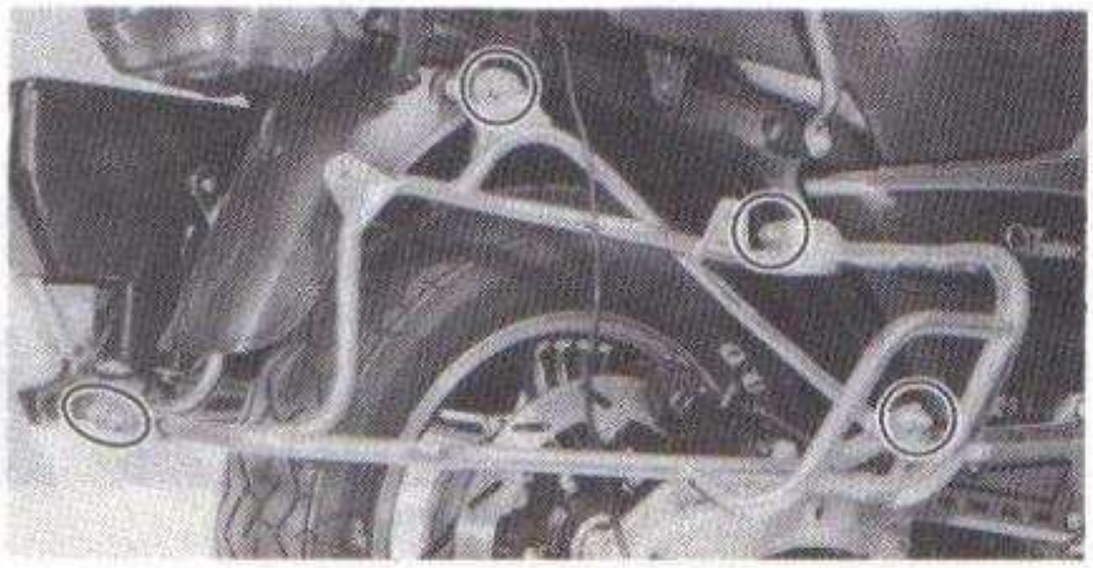
1. Right cover

9. Remove the right saddlebag assembly. Pay attention to the flasher lead.

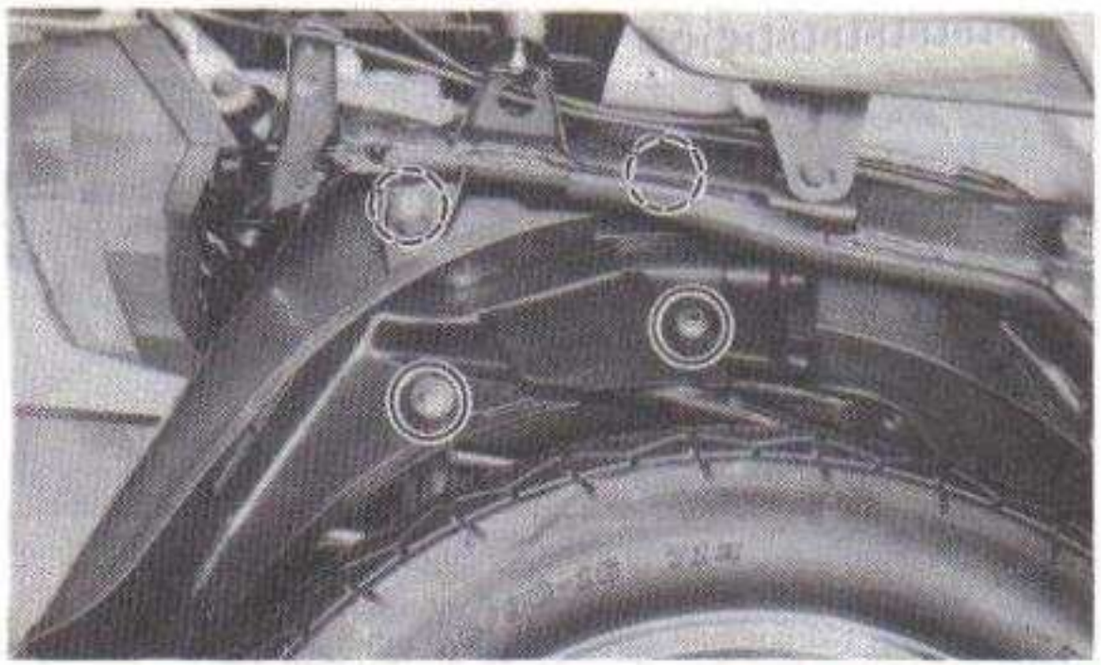


1. Flasher light lead

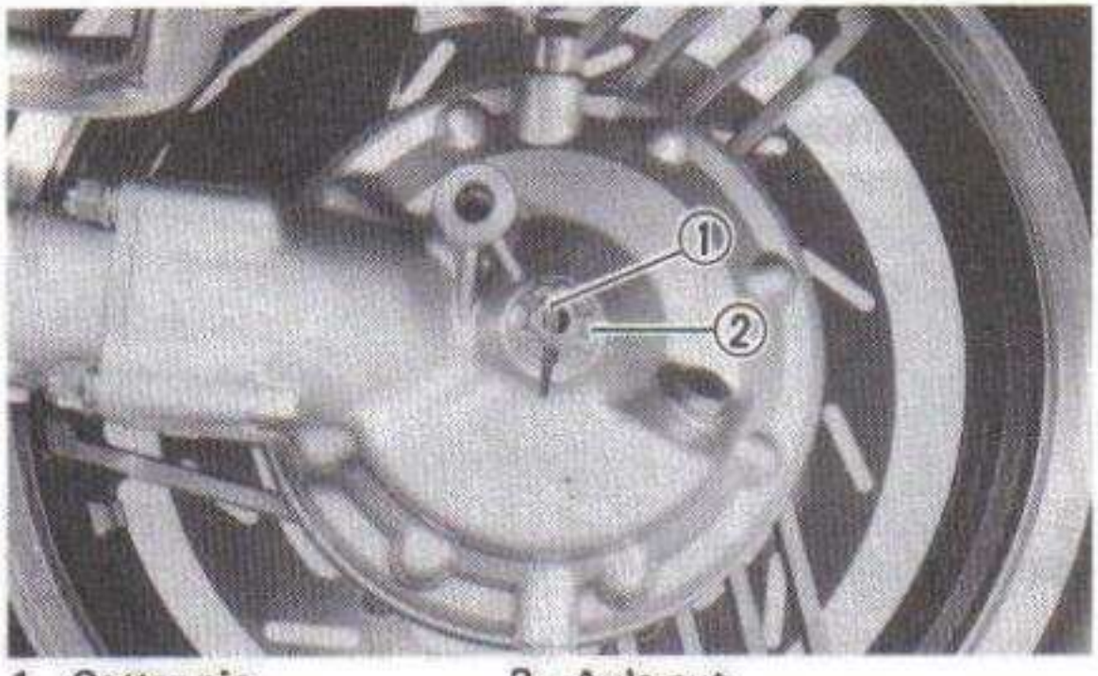
10. Remove the saddlebag stay.



11. Remove the rear fender.

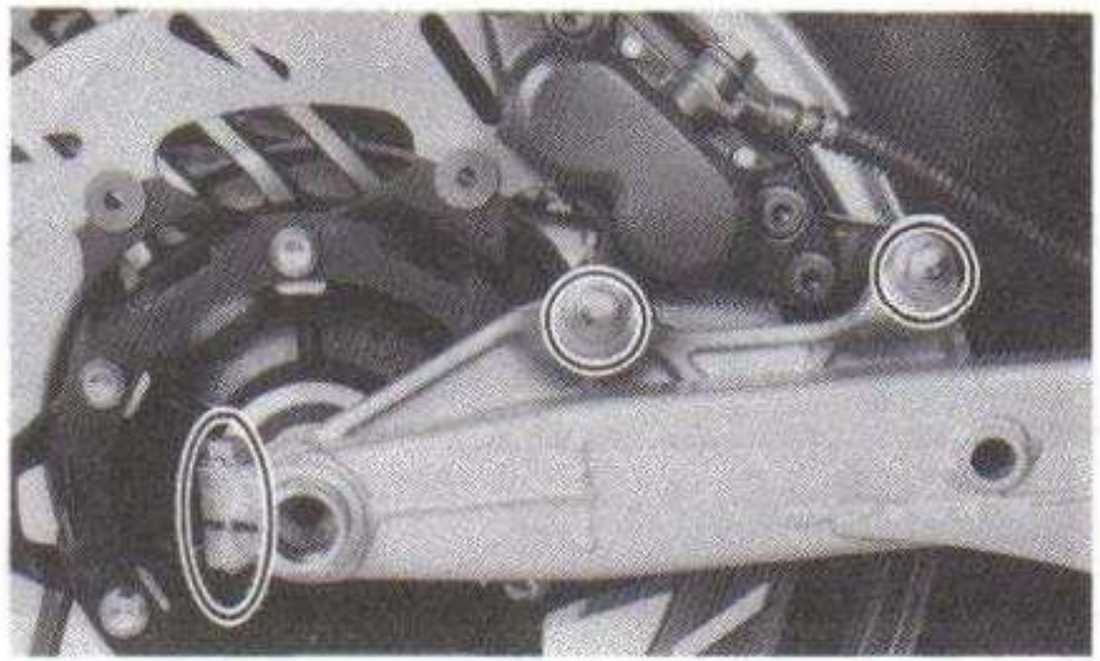


12. Remove the axle nut cotter pin and axle nut.



1. Cotter pin 2. Axle nut

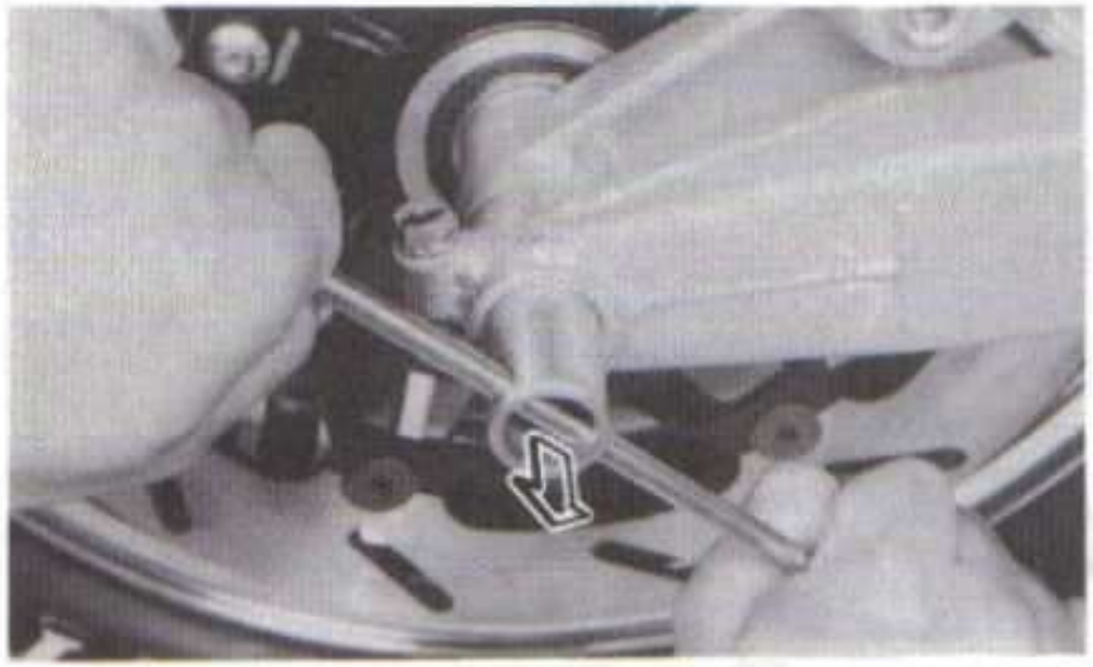
13. Remove the caliper and loosen the pinch bolt.



NOTE:

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

14 Pull the rear axle out and remove the caliper bracket.

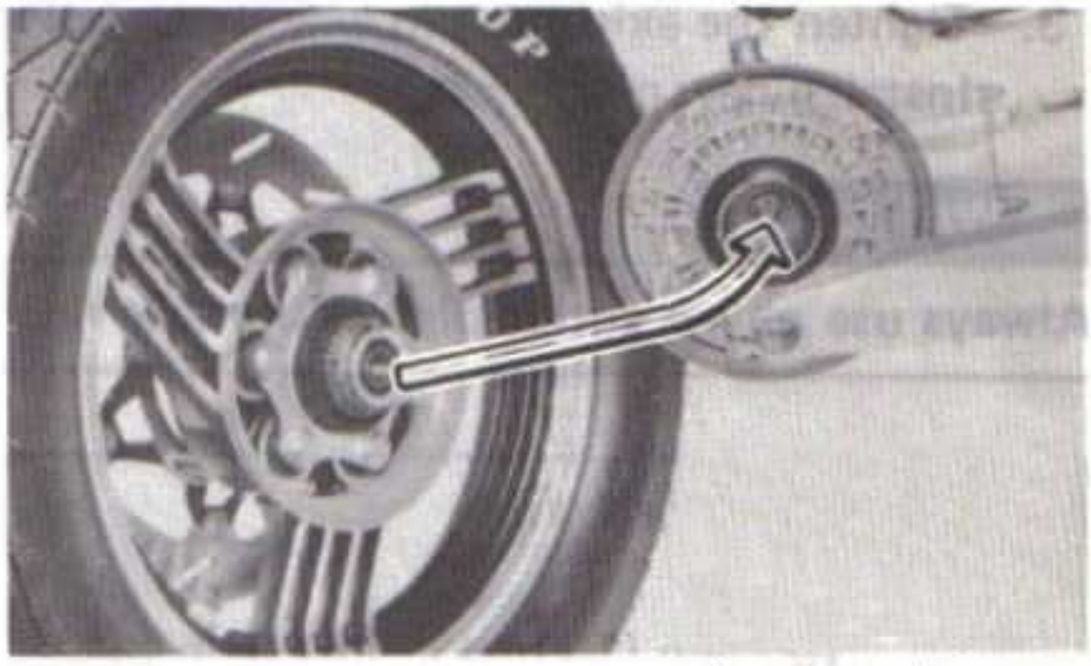


15. Pull the wheel to the right to separate it from the final gear case and remove the rear wheel.

Rear wheel installation

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

1. Before installing the rear wheel, apply a light coating of lithium base grease to final gear case splines and rear wheel hub splines. When installing the rear wheel, be sure the splines on the wheel hub fit into the final gear case.



2. Fit the swingarm projection (torque stopper) into the caliper bracket hole as shown.

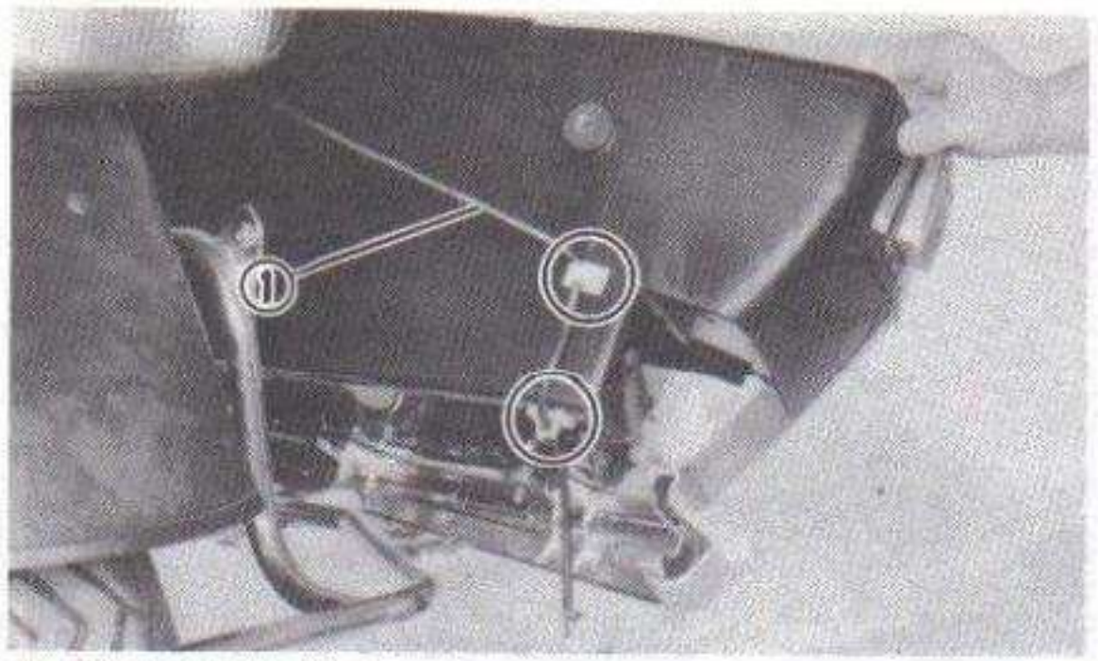
3. Tighten the axle nut and axle pinch bolt. Install a new cotter pin.

⚠ WARNING:

Always use a new cotter pin on the axle nut.

Tightening torque:
Axle nut:
150 Nm (15 m·kg, 110 ft·lb)
Axle pinch bolt:
20 Nm (2.0 m·kg, 14 ft·lb)
Caliper installing bolt:
45 Nm (4.5 m·kg, 32 ft·lb)

4. Route the flasher light lead before installing the saddlebag assembly.



1. Flasher light lead

Carburetor adjustment:

The carburetor is a vital part of the engine and its emission control system. Adjustment should be left to a Yamaha dealer or other qualified mechanic with the professional knowledge, specialized data and equipment to do so properly.

Troubleshooting

Although Yamaha motorcycles are given a rigid inspection before shipment from the factory, trouble may occur during operation. If this happens, check the motorcycle in accordance with the procedures given in the following chart. If repair is necessary, ask a qualified mechanic such as a Yamaha dealer for assistance. The skilled technicians at a Yamaha dealer are trained and equipped to perform the necessary maintenance and repair work. For replacement parts, Yamaha recommends you use Genuine Yamaha Parts or parts you know are equivalent in quality.

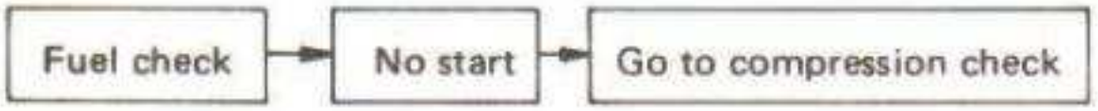
Any problem in the fuel, compression or ignition system can cause poor starting, excessive emissions, engine damage, or loss of power while riding. The troubleshooting chart describes a quick and easy series of system checks to locate the problem

Troubleshooting chart

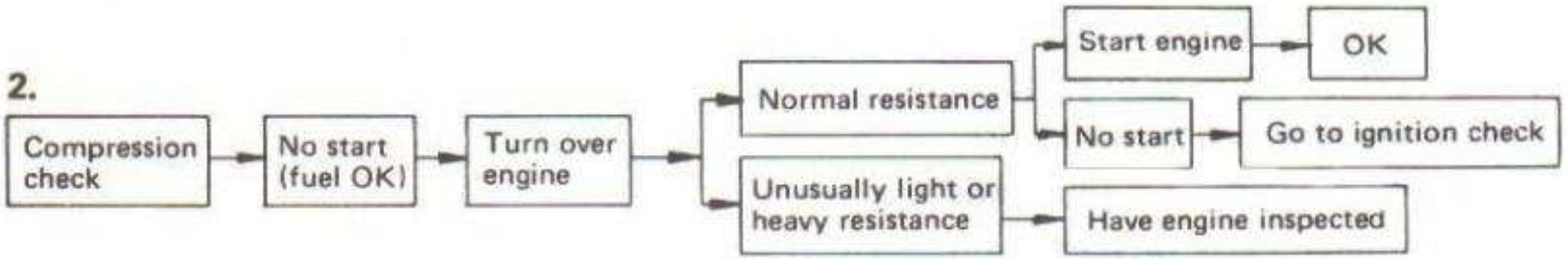
⚠ WARNING:

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

1.

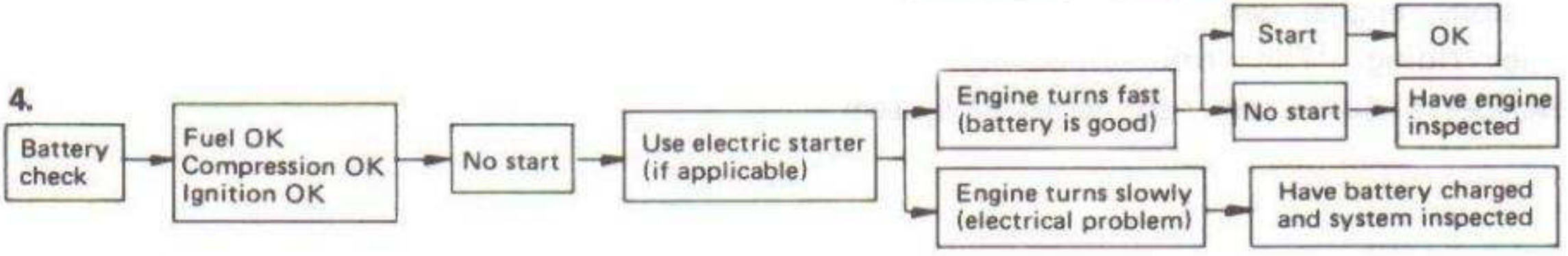


2.



3.

4.



CLEANING AND STORAGE

A. CLEANING

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

1. Before cleaning the motorcycle:
   a. Block off end of exhaust pipe to prevent water entry; a plastic bag and strong rubber band may be used.
   b. Make sure spark plug and gas cap are properly installed.
   c. Remove the control unit, and cover the connector and air suspension controller with vinyl sheet.
2. If engine case is excessively greasy, apply degreaser with a paint brush. Do not apply degreaser to wheel axles.
3. Rinse dirt and degreaser off with a garden hose, using only enough hose pressure to do the job.

⚠ CAUTION:

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

4. Once the majority of the dirt has been hosed off, wash all surfaces with warm water and mild, detergent-type soap. An old tooth brush or bottle bruch is handy to reach hard-to-get-to places.
5. Rinse motorcycle off immediately with clean water and dry all surfaces with a chamois, clean towel, or soft absorbent cloth.

6. Chrome-plated parts such as handlebars, fenders, forks, etc., may be further cleaned with automotive chrome cleaner.
7. Windscreen cleaning.

⚠ CAUTION:

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

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

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

B. STORAGE

Long term storage (60 days or more0 of your motorcycle will require some preventive procedures to insure aginst deterioration. After cleaning the machine thoroughly, prepare for storage as follows:

1. Drain fuel tank, fuel lines, and carburetor float bowl.
2. Remove the empty fuel tank, pour a cup of SAE 10W30 or SAE 20W40 motor oil in tank, shake the tank to coat the inner surfaces thoroughly and drain off excess the oil. Reinstall the tank.
3. Remove the spark plug, pour about one tablespoon of SAE 10W30 or SAE 20W40 motor oil in the spark plug hole and reinstall the spark plugs. Crank the engine over several times (ground spark plug lead wires) to coat the cylinder walls with oil.

⚠ WARNING:

When using starter motor to crank the engine, remove 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 round.
6. Tie a plastic bag over the exhaust pipe outlet to prevent moisture entering.
7. If storing in humid or salt-air atmosphere, coat all exposed metal surfaces with a light film of oil. Do not apply oil to any rubber parts or the seat cover.
8. Remove the battery and charge it. Store it in a dry place and recharge it once a month. Do not store the battery in an excessively warm or cold place (less than 0°C (30°F) or more than 30°C (90°F)).

NOTE:

Make any necessary repairs before storing the motorcycle.

MISCELLANEOUS

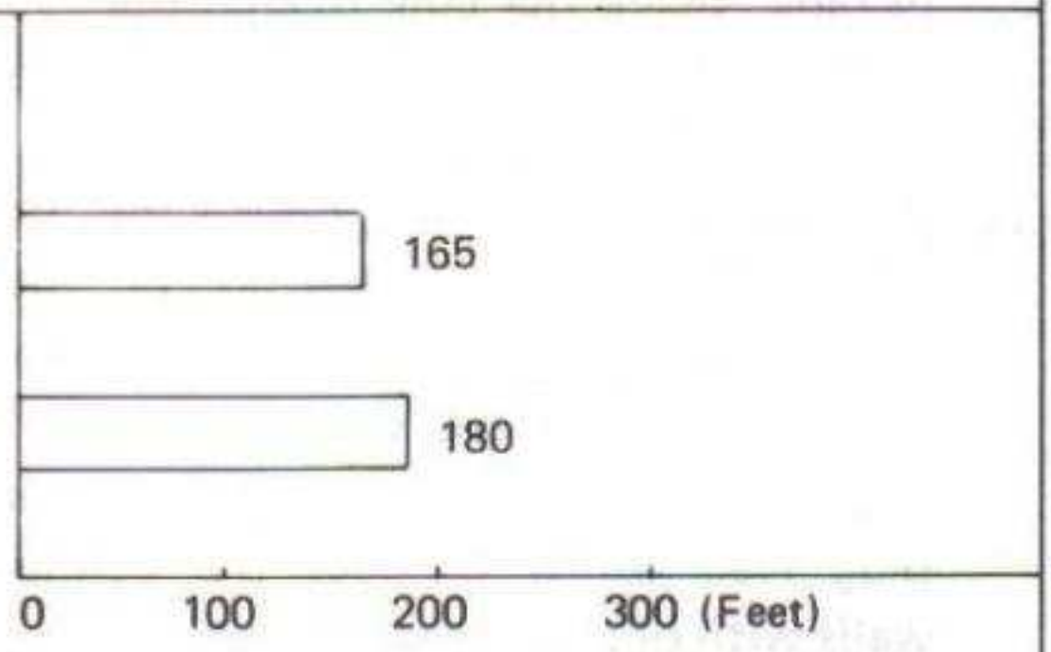
Consumer information

STOPPING DISTANCE

These figures indicate braking performance that can be met or exceeded by the vehicles to which they apply, without locking the wheels, under different conditions of loading and with partial failures of the braking system. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions and the information may not be correct under other conditions.

Description of vehicles to which this table applies.: Yamaha motorcycle XVZ13DU/XVZ13DUC.

A. Fully Operational Service Brake



NOTE:
The statement above is required by U.S. Federal law. "Partial failures" of the braking system do not apply to this chart.

SPECIFICATIONS

General specifications

MODEL	XVZ13DU/XVZ13DUC
Dimension:	
Overall length	2,540 mm (100.0 in)
Overall width	940 mm (37.0 in)
Overall height	1,535 mm (60.4 in)
Wheelbase	1,610 mm (63.4 in)
Minimum road clearance	145 mm (5.9 in)
Basic weight:	
With oil and full fuel tank	XVZ13DU: 355 kg (783 lb) XVZ13DUC: 356 kg (785 lb)
Performance:	
Minimum turning radius	2,900 mm (114 in)
Engine:	
Type	4-stroke, gasoline, liquid cooled, DOHC
Engine model	XVZ13DU: 2WR XVZ13DUC: 2WT
Cylinder	4-cylinder V-type
Displacement	1,294 cm^3
Bore x Stroke	79.0 x 66.0 mm (3.11 x 2.60 in)
Compression ratio	10.5 : 1

MODEL	XVZ13DU/XVZ13DUC
Starting system	Electric starter
Ignition system	Battery ignition (Full transistor ignition)
Fuel tank capacity	Total: 20 L (4.4 Imp gal, 5.3 US gal)
Engine oil capacity:	Total amount: 4.7 L (4.1 Imp qt, 5.0 US qt) Periodic oil charge: 3.5 L (3.1 Imp qt, 3.7 US qt) With oil filter replacement: 3.8 L (3.3 Imp qt, 4.0 US qt)
Lubrication system	Wet sump
Battery type/capacity	GM18Z-3A/12V, 20 AH
Generator	A.C. magneto
Spark plug	DPR8EA-9 (N.G.K.), X24EPR-U9 (NIPPONDENSO)
Carburetor	BDS35 x 4
Air cleaner	Dry type element
Clutch type	Wet, multiple-disc
Transmission:	
Primary reduction system	Gear
Primary reduction ratio	87/49 (1.775)

MODEL		XVZ13DU/XVZ13DUC
Secondary reduction system		Shaft
Secondary reduction ratio		21/27 x 33/10 (2.566)
Gear box type		Constant mesh, 5-speed forward
Operation system		Left foot operation
Gear ratio:	First	39/15 (2.600)
	Second	39/22 (1.772)
	Third	31/23 (1.347)
	Fourth	31/29 (1.068)
	Fifth	29/32 (0.906)
Chassis:		
Frame type		Tubular steel, double cradle
Steering:	Caster	28.5°
	Trail	125 mm (4.9 in)
Tire size:	Front	120/90-18 65H Tubeless tire
	Rear	140/90-16 71H Tubeless tire
Braking system:	Front right	Disc brake/Right hand operation
	Front left and rear	Disc brake/Right foot operation
Suspension:	Front	Telescopic fork
	Rear	Swingarm (New monocross suspension "De Carbon" system)
Shock absorber:	Front	Air/coil spring, oil damper
	Rear	Air/coil spring, gas oil damper

MODEL		XVZ13DU/XVZ13DUC
Electrical:		
Headlight		12V, 65W/60W (Quartz bulb)
Tail/brake light		12V, 8W/27W x 2
Flasher light		12V, 27W x 4
Parking/running light		12V, 8W x 2
Trunk light		12V, 5W
Pilot lights:	TURN	12V, 3.4W x 2
	HEAD LAMP	12V, 3.4W
	NEUTRAL	12V, 3.4W
	HIGH BEAM	12V, 3.4W
	ON	12V, 3W
	SET	12V, 3W
	RESUME	12V, 3W
Meter light		12V, 3.4W x 4

MOTORCYCLE NOISE REGULATION

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:

Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

"AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW."

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

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

MAINTENANCE RECORD

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

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

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