

OWNER'S MANUAL

YAMAHA

TDM850B

4CF-28199-20

EAA00100

**TDM850B
OWNER'S MANUAL**

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INTRODUCTION

Congratulations on your purchase of the Yamaha TDM850B. This model is the result of Yamaha's vast experience in the production of fine sporting, touring, and pacesetting racing machines. It represents the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields. This manual will give you an understanding of the operation, inspection, and basic maintenance of this motorcycle. If you have any questions about the operation or maintenance of your motorcycle, please consult a Yamaha dealer.

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

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



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

WARNING

Failure to follow WARNING instructions could result in severe injury or death to the motorcycle operator, a bystander or a person inspecting or repairing the motorcycle.

CAUTION:

A CAUTION indicates special precautions that must be taken to avoid damage to the motorcycle.

NOTE:

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

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

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

 **WARNING** _____
PLEASE READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE OPERATING THIS MOTORCYCLE.

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SAFETY INFORMATION

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

EVERY OPERATOR SHOULD KNOW THE FOLLOWING REQUIREMENTS BEFORE RIDING.

HE OR SHE SHOULD:

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

SAFE RIDING

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

Therefore:

- a. Wear a brightly colored jacket.
 - b. Use extra caution when you approach and pass through intersections, since intersections are the most likely places for motorcycle accidents.
 - c. Ride where other motorists can see you. Avoid riding in another motorist's "blind spot."
4. Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current motorcycle license.
- a. Make sure you are qualified. Also, only lend your motorcycle to experienced operators.
 - b. Know your skills and limits. Staying within your limits may help you to avoid an accident.
 - c. We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with your motorcycle and all of its controls.
5. Many motorcycle accidents have been caused by motorcycle operator errors. A typical error made by the operator is veering wide on a turn due to **EXCESSIVE SPEED** or undercornering (insufficient lean angle for the speed).
- a. Always obey the speed limits and never travel faster than warranted by road and traffic conditions.
 - b. Always signal before turning or changing lanes. Make sure other motorists see you.
6. The operator's and passenger's posture are important for proper control.
- a. The operator should keep both hands on the handlebars and both feet on the operator footrests during operation to maintain control of the motorcycle.

- b. The passenger should always hold on to the operator, or the seat strap or grab bar if the motorcycle is so equipped, with both hands and keep both feet on the passenger footrests.
 - c. Never carry a passenger unless he or she can firmly place both feet on the passenger footrests.
7. Never ride under the influence of alcohol or drugs.
 8. This motorcycle is designed for on-road use only. It is not suitable for off-road use.

PROTECTIVE APPAREL

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

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

MODIFICATION

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

LOADING AND ACCESSORIES

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

LOADING

The total weight of the operator, passenger, accessories and cargo must not exceed the maximum load limit of 452 lbs. (205 kg). When loading within these weight limits, keep the following in mind:

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

ACCESSORIES

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

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

1. Never install accessories or carry cargo that would impair the performance of your motorcycle. Carefully inspect the accessory before using it to make sure it does not in any way reduce ground clearance or cornering clearance, limit suspension travel, steering travel or control operation, or obscure lights or reflectors.
 - a. Accessories fitted to the handlebar or the front fork area can create instability due to improper weight distribution or aerodynamic changes. If accessories are added to the handlebar or front fork area, they must be as lightweight as possible and should be kept to a minimum.
 - b. Bulky or large accessories may seriously affect the stability of the motorcycle due to aerodynamic effects. Wind may attempt to lift the motorcycle, or the motorcycle may become unstable in cross winds. These accessories may also cause instability when being passed by or passing large vehicle.
 - c. Certain accessories can displace the operator from his or her normal riding position. This improper position limits the freedom of movement of the operator and may limit control ability. Therefore such accessories are not recommended.
2. Caution must be used if adding electrical accessories. If these accessories exceed the capacity of motorcycle's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

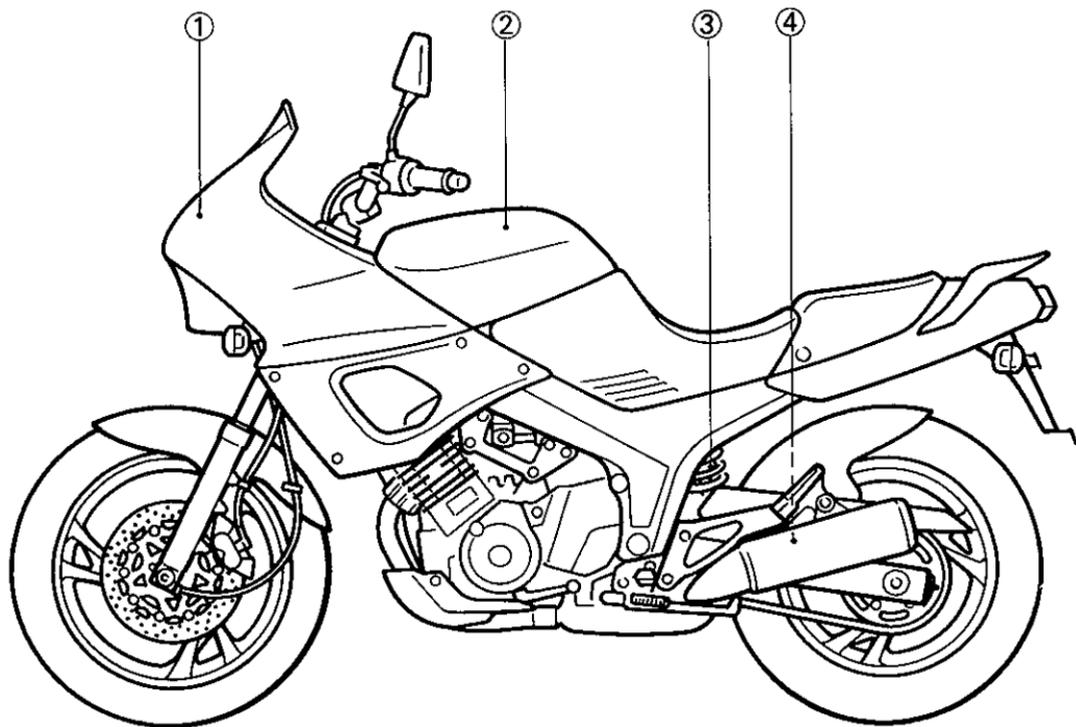
GASOLINE AND EXHAUST GAS

1. **GASOLINE IS HIGHLY FLAMMABLE:**
 - a. Always turn off the engine when refueling.
 - b. Take care not to spill any gasoline on the engine or exhaust pipe(s)/muffler(s) when refueling.
 - c. Never refuel while smoking or in the vicinity of an open flame.

- 2. Never start the engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate your motorcycle in an area that has adequate ventilation.**
- 3. Always turn off the engine before leaving the motorcycle unattended and remove the ignition key. When parking the motorcycle, note the following:**
 - a. The engine and exhaust pipe(s)/muffler(s) may be hot. Park the motorcycle in a place where pedestrians or children are not likely to touch these hot areas.**
 - b. Do not park the motorcycle on a slope or soft ground; the motorcycle may fall over.**
 - c. Do not park the motorcycle near a flammable source, e.g. a kerosene heater, or near an open flame. The motorcycle could catch fire.**
- 4. When transporting the motorcycle in another vehicle, be sure it is kept upright and that the fuel cock(s) is turned to "ON" or "RES" (for vacuum type)/"OFF" (for manual type). If it should lean over, gasoline may leak out of the carburetor or fuel tank.**
- 5. If you should swallow any gasoline, inhale a lot of gasoline vapor, or allow gasoline to get in your eye(s), see your doctor immediately. If any gasoline spills on your skin or clothing, immediately wash it off with soap and water and change your clothes.**

LOCATION OF THE IMPORTANT LABELS

Please read the following labels carefully before operating this motorcycle.



①

CAUTION

Cleaning with alkaline or acid cleaner,
gasoline or solvent will damage windshield
Use neutral detergent

YAMAHA

3JJ-2835Y-00

②

⚠ WARNING

- BEFORE YOU OPERATE THIS VEHICLE, READ THE OWNER'S MANUAL AND ALL LABELS
- ALWAYS WEAR AN APPROVED MOTORCYCLE HELMET, eye protection, and protective clothing

YAMAHA

3MX-2118K-00

③

⚠ WARNING

This unit contains high pressure nitrogen gas
 Mishandling can cause explosion.

- Read owner's manual for instructions
- Do not incinerate, puncture or open.

YAMAHA

3VD-22259-00

④

TIRE INFORMATION

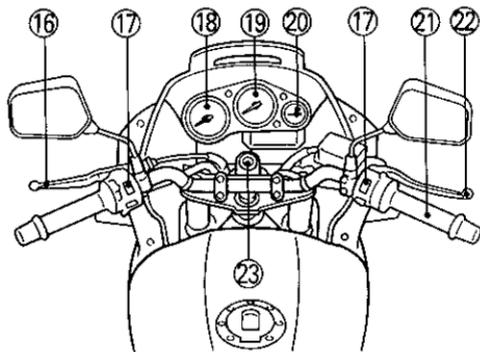
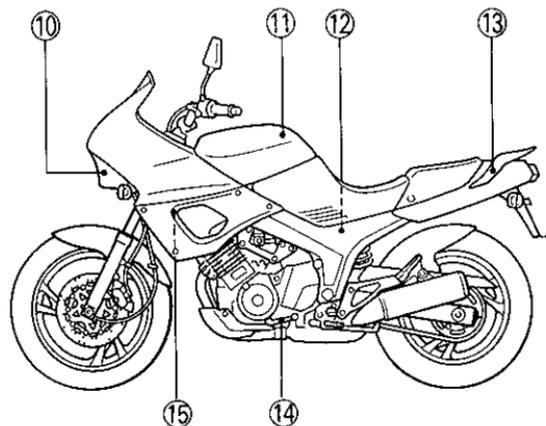
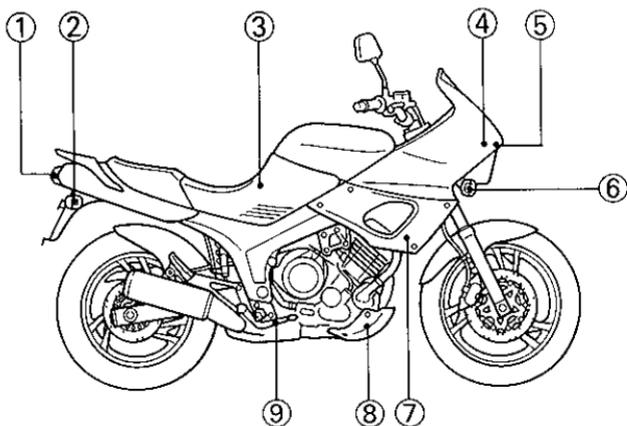
Cold tire normal pressure should be set as follows

- Up to 90 kg (198 lbs) load
- | | |
|--------------|--|
| FRONT | 200 kPa, {2.00 kgf/cm ² }, 29 psi |
| REAR | 225 kPa, {2.25 kgf/cm ² }, 33 psi |
- 90 kg (198 lbs)~maximum load
- | | |
|--------------|--|
| FRONT | 200 kPa, {2.00 kgf/cm ² }, 29 psi |
| REAR | 250 kPa, {2.50 kgf/cm ² }, 36 psi |

YAMAHA

3BT-21668-00

DESCRIPTION



- | | |
|-----------------------|-----------------------------|
| 1 Tail/Brake light | 13 Grab bar |
| 2 Rear flasher light | 14 Shift pedal |
| 3 Seat | 15 Radiator |
| 4 Upper cowl | 16 Clutch lever |
| 5 Auxiliary light | 17 Handlebar switches |
| 6 Front flasher light | 18 Speedometer |
| 7 Side cowl | 19 Tachometer |
| 8 Engine guard | 20 Engine temperature gauge |
| 9 Brake pedal | 21 Throttle grip |
| 10 Headlight | 22 Brake lever |
| 11 Fuel tank | 23 Main switch |
| 12 Helmet holder | |

MOTORCYCLE IDENTIFICATION

EAA60401

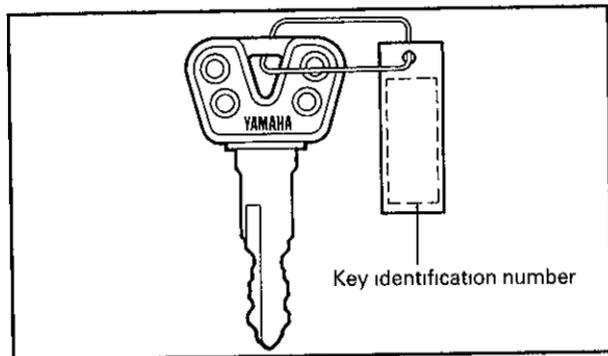
Identification numbers record

1. KEY IDENTIFICATION NUMBER:

2. VEHICLE IDENTIFICATION NUMBER:

3. ENGINE SERIAL NUMBER:

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



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

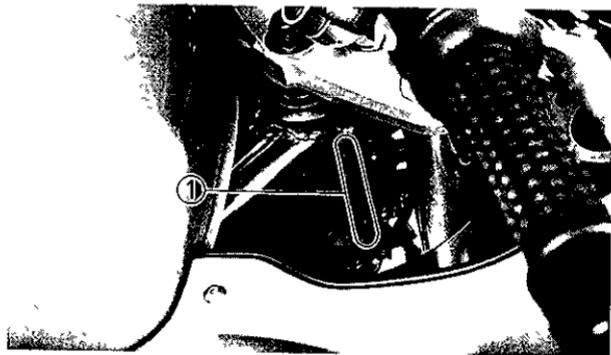
Vehicle identification number

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

EUU00400

NOTE:

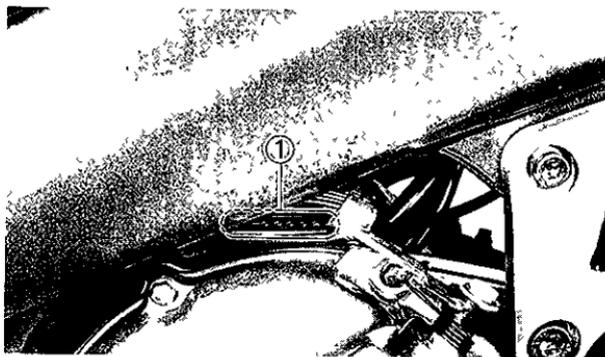
The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your state.



1 Vehicle identification number

Engine serial number

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



1 Engine serial number

EUU00300

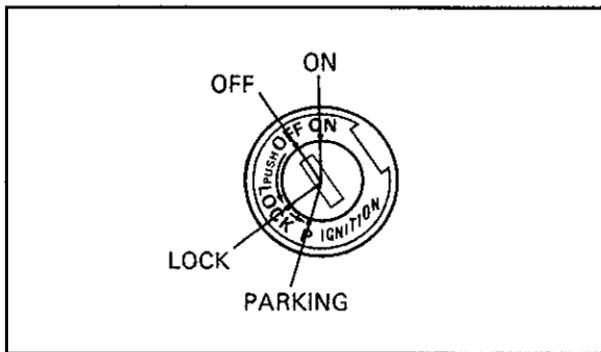
NOTE:

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

CONTROL FUNCTIONS

Main switch

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



ON:

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

OFF:

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

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 5-9) for proper operation.

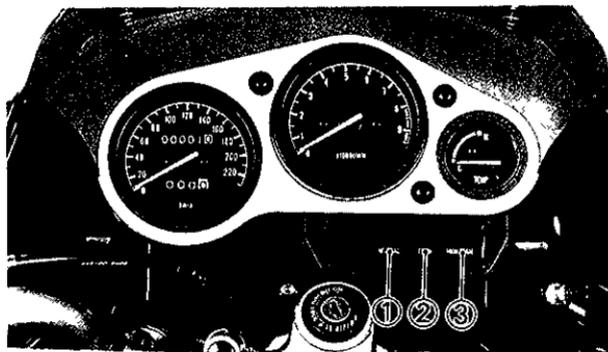
PARKING:

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

NOTE:

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

Indicator lights



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

"TURN" indicator light (green):

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

"NEUTRAL" indicator light (green):

This indicator comes on when the transmission is in neutral.

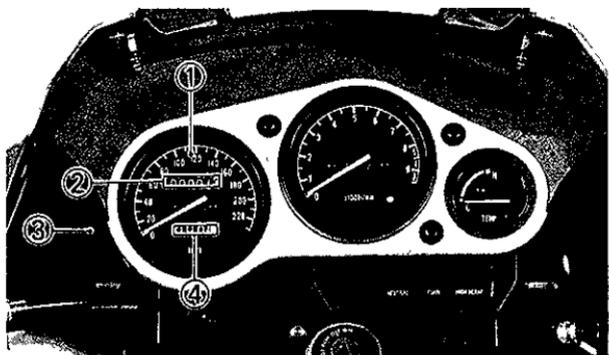
"HIGH BEAM" indicator light (blue):

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

Speedometer

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

Use the odometer to estimate how far you can ride on a tank of fuel before going to "RESERVE". This information will enable you to plan fuel stops in the future.

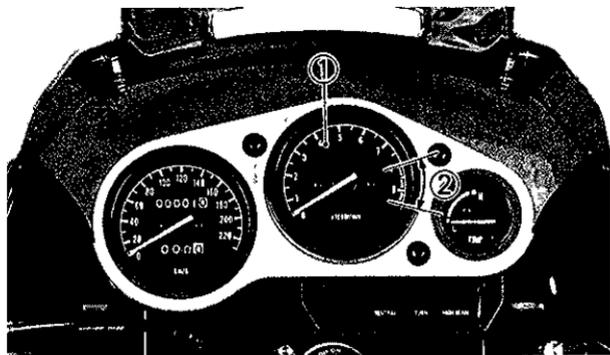


- 1 Speedometer
- 2 Odometer
- 3 Reset knob
- 4 Trip odometer

EAB40200

Tachometer

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



- 1 Tachometer
- 2 Red zone

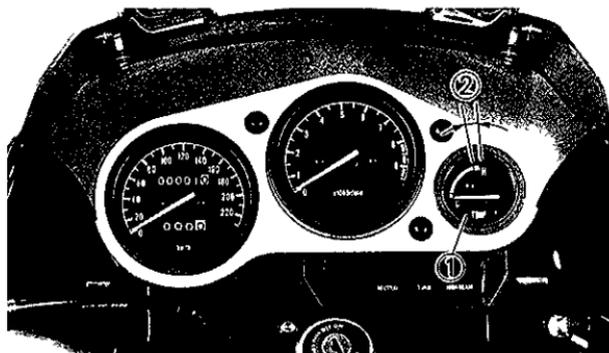
EUU30400

CAUTION:

Do not operate in the red zone
Red zone: 8,000 r/min and above

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 let the engine cool (See page 8-10 for details.)

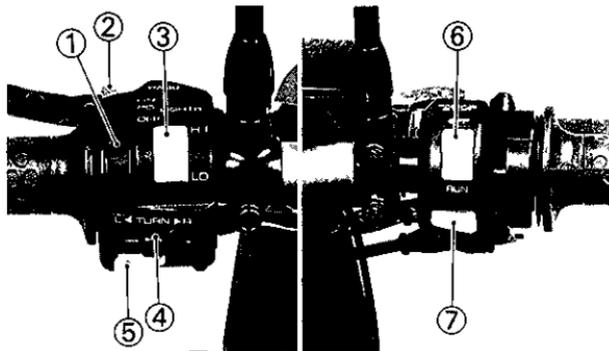


1 Engine temperature gauge 2 Red zone

CAUTION:

When the engine is overheated, do not continue riding.

Handlebar switches:



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

EAB61000

"PASS" switch

When you are passing a vehicle ahead, the passing light switch should be depressed so that the headlight gives a signal to the driver of the other vehicle.

EAB60100

"LIGHTS" (Dimmer) switch

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

EAB62100

"TURN" signal switch

To signal a right-hand turn push the switch to the right; to signal a left-hand turn push the switch to the left. Once the switch is released it will return to the center position. To cancel the signal push the switch in after it has returned to the center position.

EAB60200

"HORN" switch

Press the switch to sound the horn.

EAB61200

"LIGHTS" switch

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

EAB60900

"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."

EAB60700

"START" switch

To start the engine, push the starter.

EUU30700

CAUTION:

See starting instructions prior to starting the engine.

EAB70000

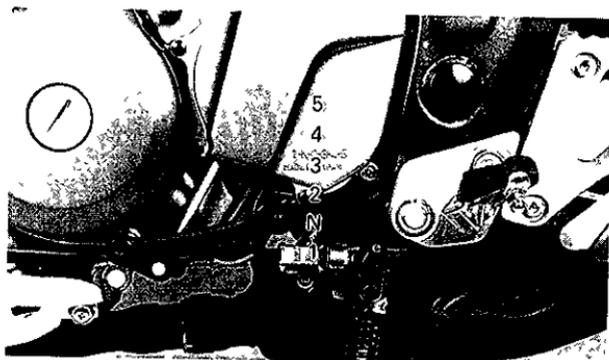
Clutch lever

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

EAB80000

Shift pedal

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



N Neutral

Front brake lever

The front brake lever is located on the right handlebar. Pull it toward the handlebar to activate the front brake. Front brake lever is equipped with a gripping adjuster. Refer to page 8-20 for gripping adjustment.

Rear brake pedal

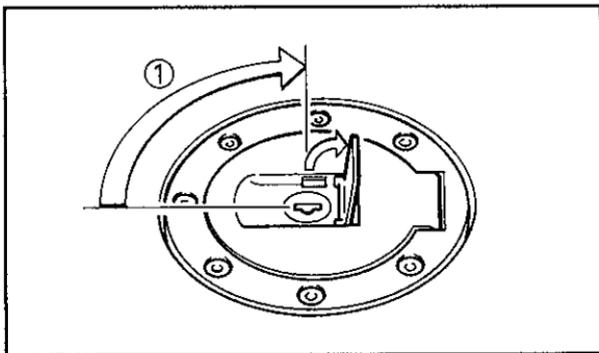
The rear brake pedal is on the right side of the motorcycle. Press down on the brake pedal to activate the rear brake.

Fuel tank cap**TO OPEN:**

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

TO CLOSE:

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



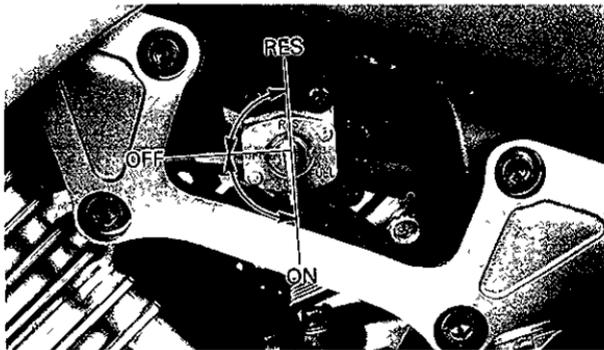
1 Open

NOTE: _____

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

Fuel cock

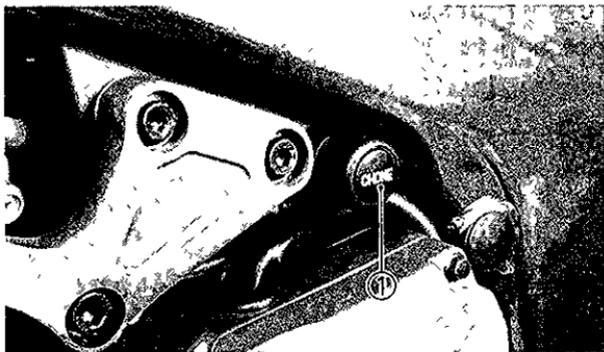
The fuel cock supplies fuel from the tank to the carburetor while filtering the fuel. The fuel cock has three positions:



- OFF: With the lever in this position, fuel will not flow. Always return the lever to this position when the engine is not running.
- ON: With the lever in this position, fuel flows to the carburetor. Normal riding is done with the lever in this position.
- RES: This indicates reserve. If you run out of fuel while riding, move the lever to this position. FILL THE TANK AT THE FIRST OPPORTUNITY. BE SURE TO SET THE LEVER TO "ON" AFTER REFUELLING.

Starter knob (CHOKE)

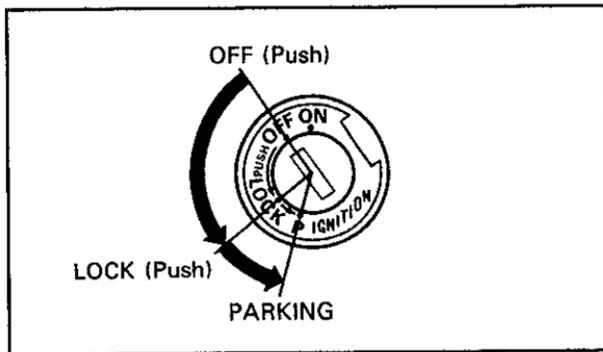
When cold, the engine requires a richer air-fuel mixture for starting. A separate starter circuit supplies this mixture. Pull the starter knob out to open the circuit for starting. When the engine has warmed up, push the knob in to close the circuit.



1 Starter knob (CHOKE)

Steering lock

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



EAC35100

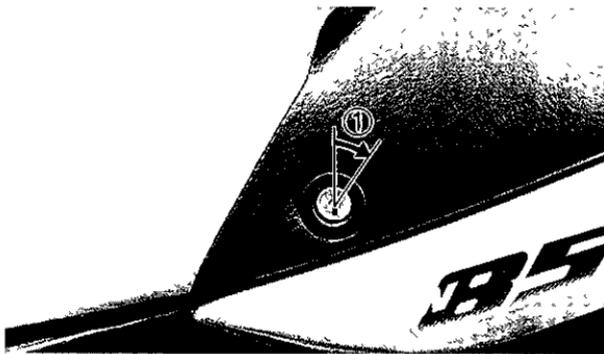
Parking

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

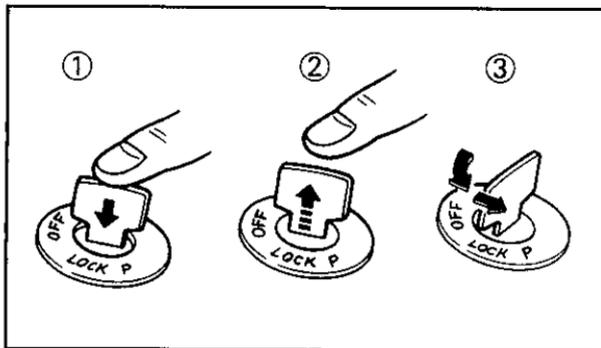
EAC40800

Seat lock

To open the seat lock, insert the key in the lock and turn it clockwise. When reinstalling the seat, insert the lobe(s) on the seat front into the receptacles on the frame, then push down the seat.



1 Open



1 Push

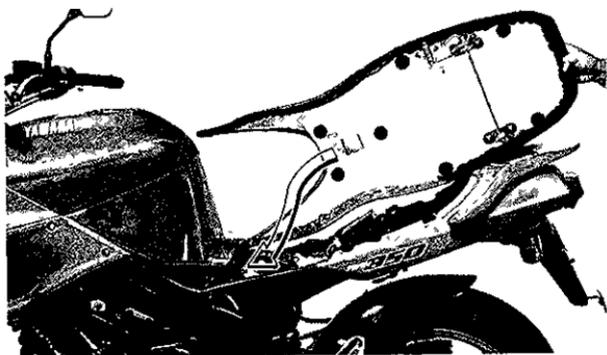
2 Release

3 Turn

EUU61400

⚠ WARNING

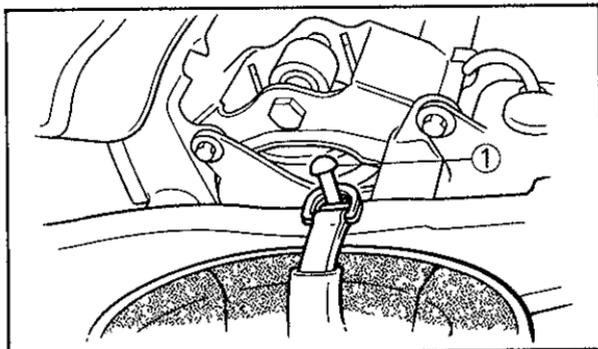
Never turn the key to "LOCK" when the motorcycle is moving.



EAC50400

Helmet holder

Open the seat and hook the helmet into the helmet holder and then lock the seat.



1 Helmet holder

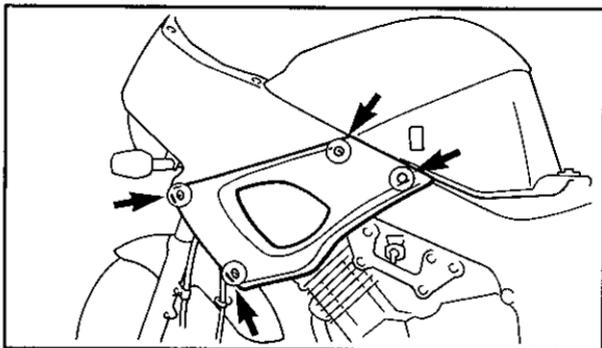
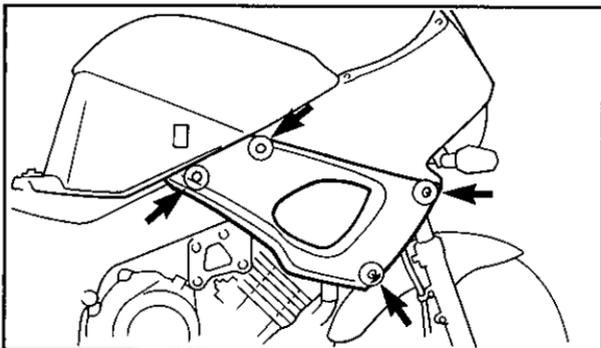
EUU72900

⚠ WARNING

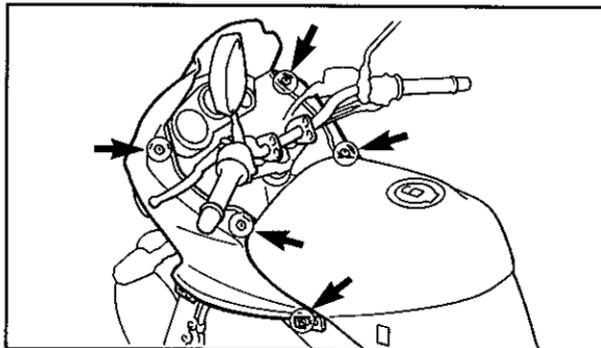
Never ride with a helmet in the helmet holder. The helmet may hit objects, causing loss of control and possibly an accident.

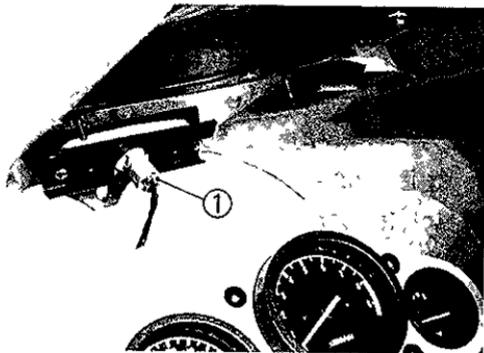
Side cowl/upper cowl

- 1 Remove the side cowls by removing the screws as shown.



- 2 Remove the upper cowl by removing the screws as shown, then disconnect the auxiliary light coupler.





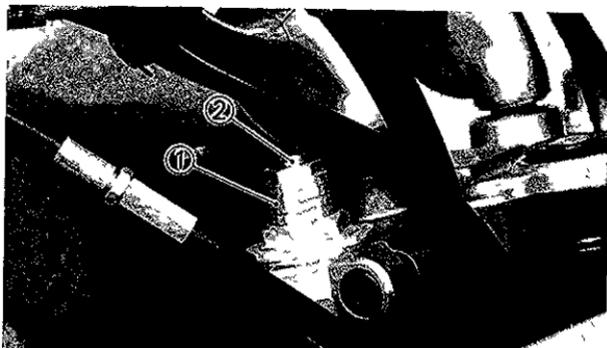
1 Coupler

3. To install, reverse the above steps.

EAC81300

Front fork

The spring preload and damping of the front fork can be adjusted to suit motorcycle's load (ex: optional accessories etc.) and riding conditions. Refer to page 8-30 for proper adjustment procedures.



1 Spring preload adjuster 2. Damping adjuster

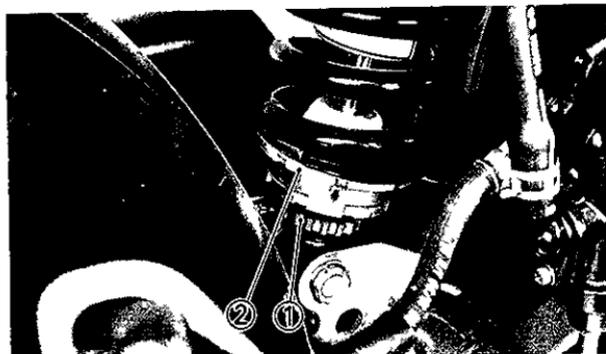
EAC90400

Rear shock absorber

The HARD/SOFT settings, spring preload and the damping of the rear shock absorber can be adjusted to suit the rider's preference, motorcycle's load (ex: optional accessories etc.) and road conditions. Refer to page 8-32 for proper adjustment procedures.

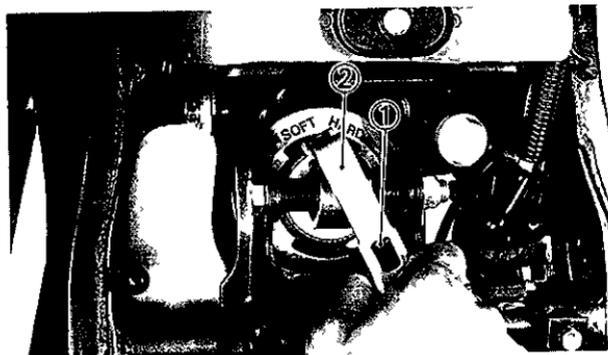
Sidestand

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 7-3 for an explanation of this system.)



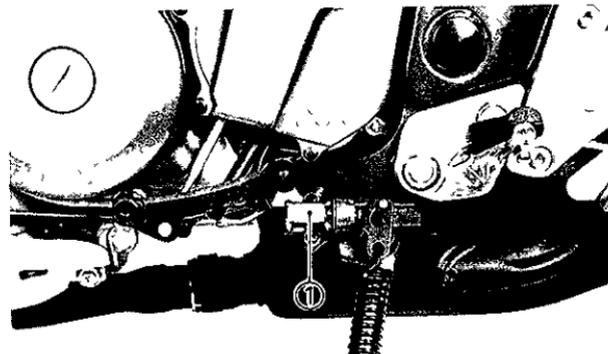
1 Damping adjuster

2 Spring preload adjuster



1 Change lever

2 Change lever wrench



1 Sidestand switch

⚠ WARNING

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

Sidestand/clutch switch operation check

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

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 immediately.

PRE-OPERATION CHECK

Before using this motorcycle, check the following points.

Item	Routine	Page
Front brake	Check operation, free play, fluid level, and fluid leakage Top-up with DOT #4 (or DOT #3) brake fluid if necessary	6-3~6-4
Rear brake	Check operation, free play, fluid level, and fluid leakage Top-up with DOT #4 (or DOT #3) brake fluid if necessary	8-20~8-24
Clutch	Check operation, condition and free play Adjust if necessary	6-4, 8-24
Throttle grip/Housing	Check for smooth operation Lubricate/Adjust if necessary.	6-4, 8-17~8-18, 8-28
Engine oil	Check oil level/Add oil as required	6-4, 8-6~8-10
Coolant reservoir tank	Check coolant level/top up as required.	6-5, 8-10~8-13
Drive chain	Check chain slack and condition Adjust if necessary	6-6, 8-25~8-27
Wheels/Tires	Check tire pressure, wear, damage	6-6~6-10, 8-42~8-46
Control/Meter cable	Check for smooth operation Lubricate if necessary.	8-28
Brake and shift pedal shafts	Check for smooth operation Lubricate if necessary	8-28
Brake and clutch lever pivots	Check for smooth operation Lubricate if necessary.	8-28
Sidestand pivot	Check for smooth operation Lubricate if necessary	8-28~8-29
Fittings/Fasteners	Check all chassis fittings and fasteners Tighten/Adjust, if necessary	6-10, 8-5

Item	Routine	Page
Fuel tank	Check fuel level/top-up as required	6-10~6-11
Lights and signals	Check for proper operation	6-10, 8-40~8-41

NOTE:

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

 WARNING

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

Brakes (See Page 8-20 for details)

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

EUU61900

 WARNING

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

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

Recommended brake fluid: DOT #4

EUU13100

NOTE: _____

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

3. Check the disc pads.
Refer to page 8-22.

EUU02200

NOTE: _____

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

EAE10700

Brake fluid leakage

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

WARNING

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

Clutch (See page 8-24 for details)

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

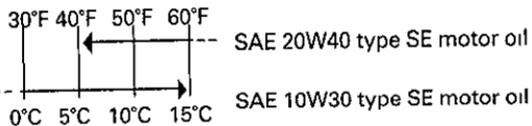
Throttle grip (See page 8-17 for details)

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

Engine oil (See page 8-6 for details)

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

Recommended oil:



Oil quantity:

Total amount:

4.2 L (3.70 Imp qt, 4.44 US qt)

Periodic oil change:

3.8 L (3.34 Imp qt, 4.02 US qt)

With oil filter replacement:

3.9 L (3.43 Imp qt, 4.12 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.).

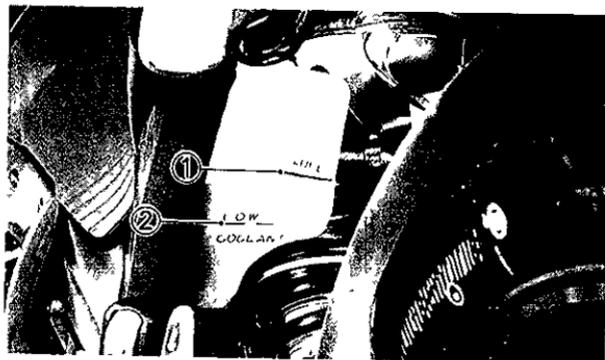
Coolant

Check the coolant level in the reservoir tank when the engine is cold. (The coolant level will vary with engine temperature.) The coolant level is satisfactory if it is between the FULL and LOW marks on the tank. If the coolant level is at or below the LOW level, add tap water (soft water) to bring the level up to FULL. Change the coolant every two years. (See page 8-10 for details.)

EJU62600

⚠ WARNING

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



1 "FULL" level

2 "LOW" level

EJU30900

CAUTION:

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

Reservoir tank capacity:

0.3 L (0.26 Imp qt, 0.32 US qt)

From LOW to FULL level:

0.2 L (0.18 Imp qt, 0.21 US qt)

Chain (See page 8-25 for details)

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

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, saddle-

bags, etc. if approved for this model), and vehicle speed.

Basic weight With oil and full fuel tank	230 kg (507 lbs)	
Maximum load*	205 kg (452 lbs)	
Cold tire pressure	Front	Rear
Up to 90 kg (198 lb) load*	200 kPa (2.00 kg/cm ² , 29 psi)	225 kPa (2.25 kg/cm ² , 33 psi)
90 kg (198 lb)~ Maximum load*	200 kPa (2.00 kg/cm ² , 29 psi)	250 kPa (2.50 kg/cm ² , 36 psi)
High speed riding	200 kPa (2.00 kg/cm ² , 29 psi)	250 kPa (2.50 kg/cm ² , 36 psi)

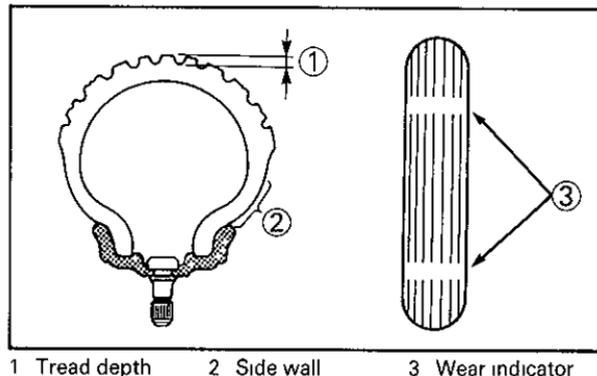
*Load is the total weight of cargo, rider, passenger, and accessories

⚠ 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 immediately and the tire replaced.



FRONT

Manufacture	Size	Type
BRIDGESTONE	110/80-18 58H	G547
DUNLOP	110/80-18 58H	K505F

REAR

Manufacture	Size	Type
BRIDGESTONE	150/70-17 69H	G548G
DUNLOP	150/70-17 69H	K505

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

EUU67900

⚠ WARNING

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

EAE95700

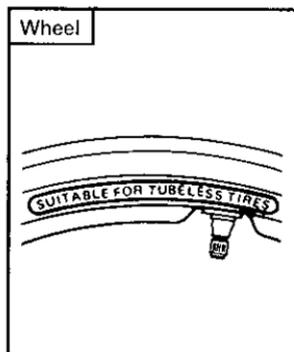
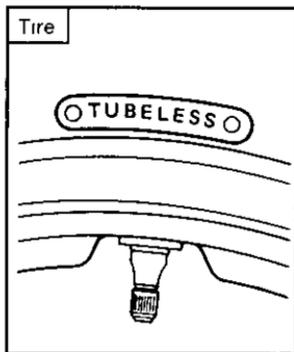
Tubeless tires and cast wheels

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

EUU68600

⚠ WARNING

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

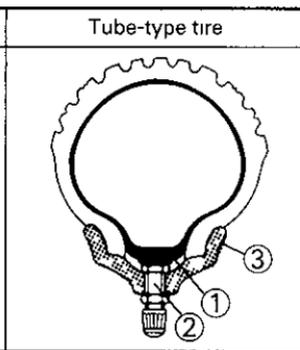
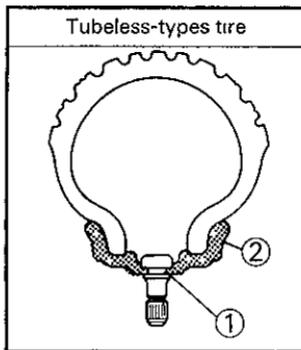


Tube-type Wheel → Tube-type Tires only
 Tubeless Wheel → Tube-type or Tubeless tires

EUU68700

⚠ WARNING

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



- 1 Air valve
- 2 Cast wheel
(Tubeless 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. Check for cracks, bends, or warpage of the wheels. If any abnormal condition exists in a wheel, consult a Yamaha dealer. Do not attempt even small repairs to the wheel. If a wheel is deformed or cracked, it must be replaced.

2. Tires and wheels should be balanced whenever either one is changed or replaced. Failure to have a wheel balanced can result in poor performance, adverse handling characteristics, and shortened tire life.
3. 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.

EAE85000

Fittings/Fasteners

Always check the tightness of chassis fittings and fasteners before a ride. Use the chart on page 8-5 to find the correct torque.

EAE70100

Lights and signals

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

EAE70700

Switches

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

EAE80000

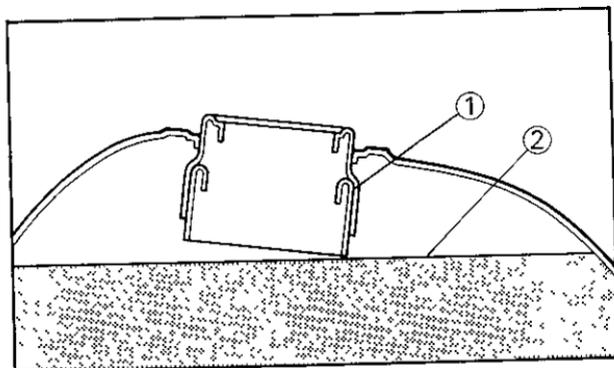
Fuel

Make sure there is sufficient fuel in the tank.

EUU61000



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



1 Filler tube

2 Fuel level

EUU39301

CAUTION: _____

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

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

Total:

18 L (3.96 Imp gal, 4.76 US gal)

Reserve:

3.5 L (0.77 Imp gal, 0.92 US gal)

EUU12700

NOTE: _____

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

OPERATION AND IMPORTANT RIDING POINTS

EUU67200

WARNING

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

EUU62800

WARNING

1. Never start your engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and can cause loss of consciousness and death within a short time. Always operate your motorcycle in an area with adequate ventilation.
 2. Before starting out, always be sure the sidestand is up. Failure to retract the sidestand completely can result in a serious accident when you try to turn a corner.
-

Starting and warming up a cold engine

EUU02800

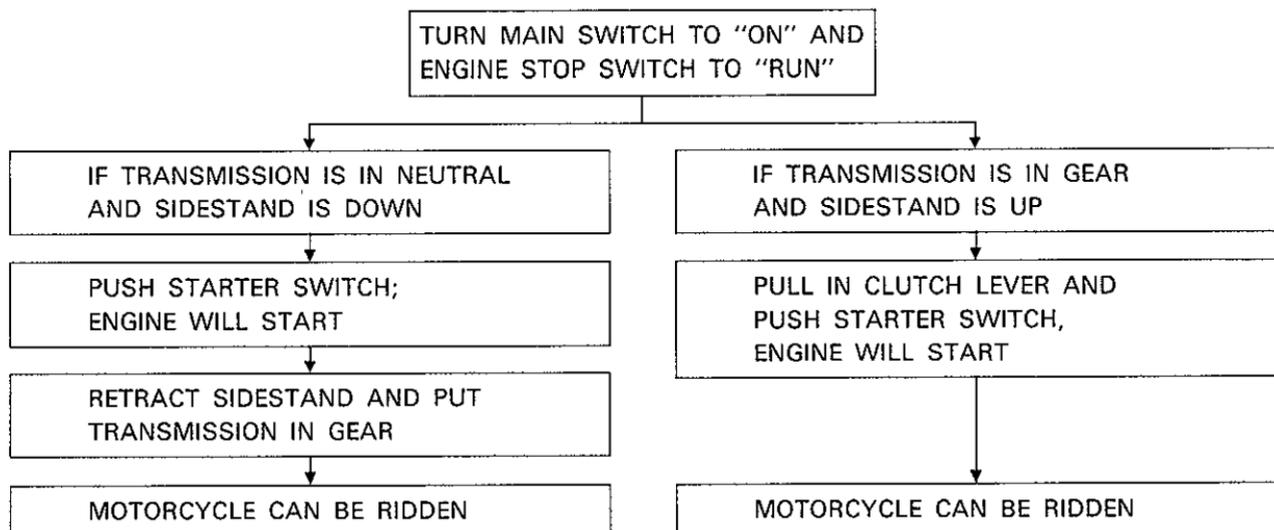
NOTE: _____

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

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

WARNING

Before going through the following steps, check the function of the sidestand switch and clutch switch. (Refer to page 5-15.)



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

EUU03000

NOTE: _____

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

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

EUU02500

NOTE: _____

If the engine fails to start, release the starter switch, wait a few seconds, then try again. Each attempt should be as short as possible to preserve the battery. Do not crank the engine more than 10 seconds on any one attempt.

6. After starting the engine, turn back the starter (CHOKE) to warming up position (about halfway).

EUU02600

NOTE: _____

For maximum engine life, always warm up the engine before starting off. Never accelerate hard with a cold engine!

7. After warming up the engine, turn off the starter (CHOKE) completely.

EUU02700

NOTE: _____

The engine is warm when it responds normally to the throttle with the starter turned off.

Starting a warm engine

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

CAUTION:

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

Shifting

The transmission lets you control the amount of power you have available at a given speed for starting, accelerating, climbing hills, etc. The use of the shift pedal is shown in the illustration (Page 5-6)

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

CAUTION:

1. Do not coast for long periods with the engine off, and do not tow the motorcycle a long distance. Even with gears in neutral, the transmission is only properly lubricated when the engine is running. Inadequate lubrication may damage the transmission.
 2. Always use the clutch when changing gears. The engine, transmission, and driveline are not designed to withstand the shock of forced shifting and can be damaged by shifting without 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 4,000 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 5,000 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 6,000 r/min.

CAUTION: _____

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

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

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 immediately.

Parking

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

 WARNING _____

The 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

EAH00400

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

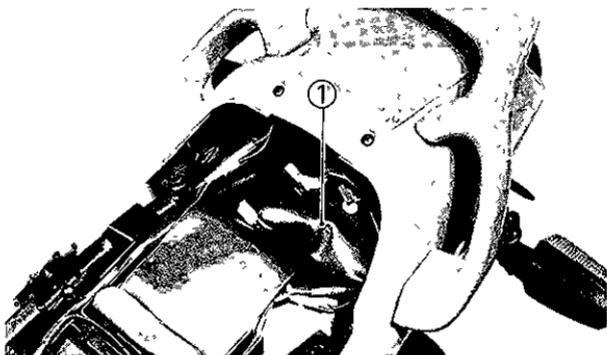


If you are not familiar with motorcycle service, this work should be done by a Yamaha dealer.

EAH10100

Tool kit

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



1 Tool kit

EUU06000

NOTE:

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

EUU67100

⚠ WARNING

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

PERIODIC MAINTENANCE/LUBRICATION

Unit km (miles)

ITEM	REMARKS	BREAK-IN 1,000 (600)	EVERY	
			6,000 (4,000) or 6 months	12,000 (8,000) or 12 months
Valve(s)*	Check valve clearance Adjust if necessary	EVERY 42,000 (26,000) or 42 months		
Spark plug(s)	Check condition Clean or replace if necessary	○	○	○
Air filter	Clean Replace if necessary		○	○
Carburetor*	Check idle speed/synchronization/starter operation Adjust if necessary	○	○	○
Fuel line*	Check fuel hose and vacuum pipe for cracks or damage Replace if necessary		○	○
Engine oil	Replace (Warm engine before draining)	○	○	○
Engine oil filter*	Replace	○		○
Brake*	Check operation/fluid leakage/See NOTE Correct if necessary		○	○
Clutch	Check operation Adjust if necessary		○	○
Rear arm pivot*	Check rear arm assembly for looseness Correct if necessary Moderately repack every 24,000 (16,000) or 24 months ***			○
Wheels*	Check balance/damage/runout Repair if necessary		○	○
Wheel bearings*	Check bearings assembly for looseness/damage Replace if damaged		○	○
Steering bearings*	Check bearings assembly for looseness Correct if necessary Moderately repack every 24,000 (16,000) or 24 months **	○		○

ITEM	REMARKS	BREAK-IN 1,000 (600)	EVERY	
			6,000 (4,000) or 6 months	12,000 (8,000) or 12 months
Front forks*	Check operation/oil leakage Repair if necessary		○	○
Rear shock absorber*	Check operation/oil leakage Repair if necessary		○	○
Cooling system	Check coolant leakage Repair if necessary. Replace coolant every 24,000 (16,000) or 24 months		○	○
Drive chain	Check chain slack/alignment Adjust if necessary Clean and lube	EVERY 500 (300)		
Fittings/Fasteners*	Check all chassis fittings and fasteners Correct if necessary	○	○	○
Sidestand*	Check operation Repair if necessary	○	○	○
Sidestand switch*	Check operation Clean or replace if necessary	○	○	○

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

** Medium weight wheel bearing grease

*** Molybdenum disulfide grease

NOTE: _____

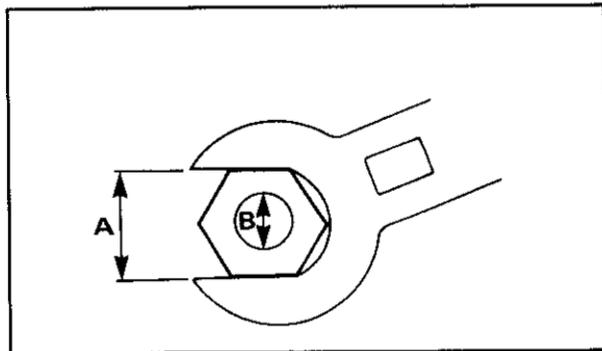
Brake fluid replacement:

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

Torque specifications

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

A (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



Item	Torque		
	Nm	m • kg	ft • lb
Spark plug	18	1.8	13
Engine drain bolt Ⓐ	35	3.5	25
Engine drain bolt Ⓑ	30	3.0	22
Oil filter cover screw	10	1.0	7.2
Engine oil check bolt	20	2.0	14
Coolant drain bolt	10	1.0	7.2
Front fender securing bolt	9	0.9	6.5
Front wheel axle	58	5.8	42
Front axle pinch bolt	19	1.9	13
Rear wheel axle nut	110	11.0	80
Rear caliper bracket installation bolt	35	3.5	25

Engine oil

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

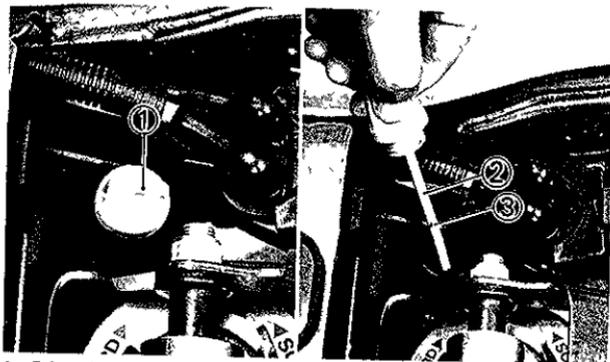
1. Oil level measurement
 - a. Place the motorcycle on a level place and hold it in an upright position.
 - b. Remove the oil tank cap, and check the oil level.

EUU07800

NOTE:

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

- c. If the oil level is between the minimum and maximum level lines marked on the oil level gauge; you may start the engine. If there is no oil on the oil level gauge, add oil up to the minimum level.



1 Oil tank cap

2 Maximum oil level

3 Minimum oil level

- d. Start the engine and warm up until the oil temperature rises to approximately 60°C (140°F).

- e. Idle the engine more than 10 seconds while keeping the motorcycle upright. Then stop the engine and check the oil level on the upright motorcycle.
- f. Fill oil to the maximum level line.

EUU30000

CAUTION: _____

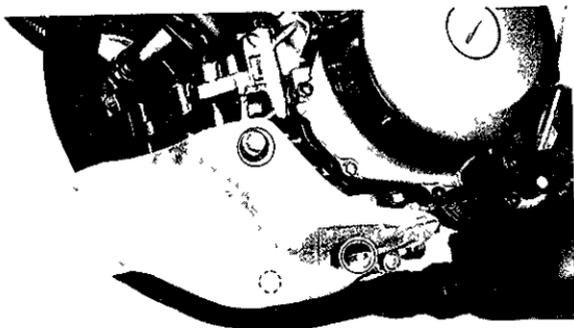
Do not run the motorcycle until you know it has sufficient engine oil.

EUU71500

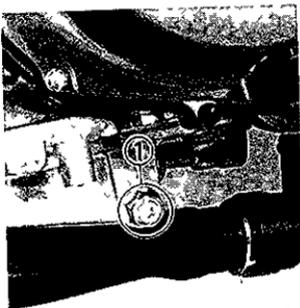
⚠ WARNING _____

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

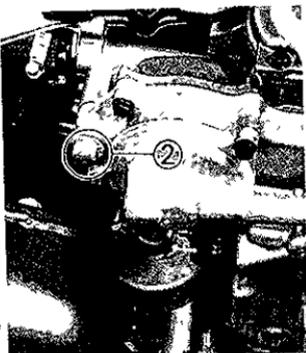
- 2 Engine oil and oil filter replacement
 - a Start the engine and stop after a few minutes of warm-up.
 - b. Remove the engine guard.



- c. Place an oil receiver under the engine.
- d. Remove the oil tank cap, drain bolts (two places).

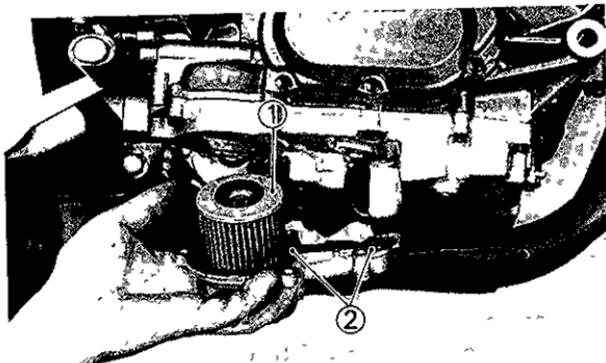


1 Drain bolt Ⓐ



2 Drain bolt Ⓑ

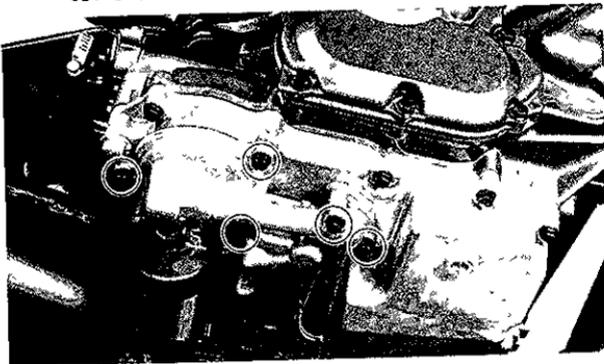
- e. Check each gasket. If damaged, replace.
- f. Remove the filter cover screws and remove the oil filter cover. Replace the filter element.



1 Filter element

2 O-ring

- g. Check O-ring for damage. Replace if damaged.
- h. Install the drain bolts and the filter cover screws.



Tightening torque.

Drain bolt (A):

35 Nm (3.5 m • kg, 25 ft • lb)

Drain bolt (B):

30 Nm (3.0 m • kg, 22 ft • lb)

Filter cover screw:

10 Nm (1.0 m • kg, 7.2 ft • lb)

- i. Add engine oil. Install the oil tank cap and tighten.

Oil capacity: See page 6-4

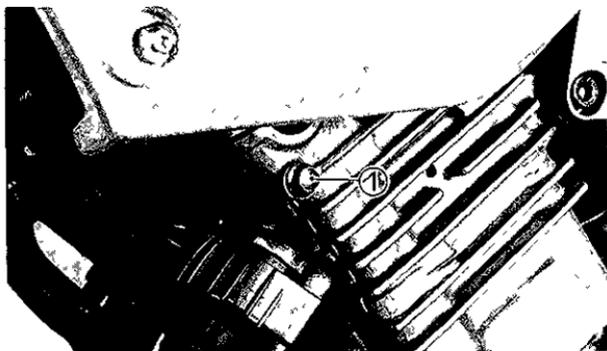
Recommended oil: See page 6-4

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

CAUTION:

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

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



1 Check bolt

EAH52100

Cooling system

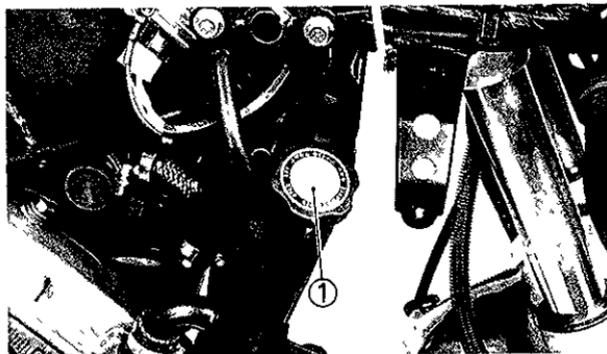
1. If your motorcycle overheats

EUU77100

⚠ WARNING

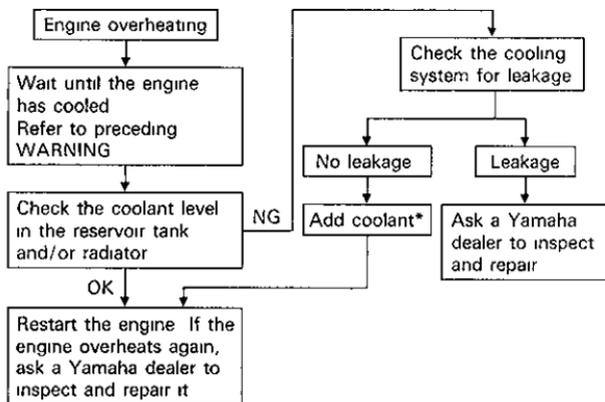
Do not remove the radiator cap when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. When opening the radiator cap, note the following points. Wait until the engine has

cooled enough. Place a thick rag like a towel over the radiator cap and 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.



1 Radiator cap

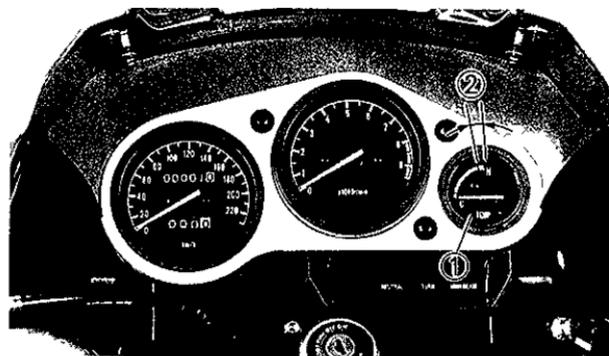
If overheating is detected, perform the following checks.



EUU04300

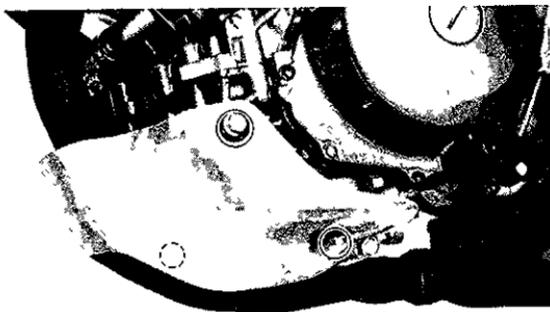
*** NOTE:** _____

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.

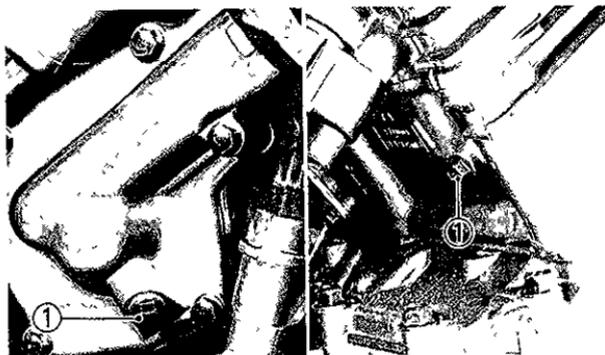


1 Engine temperature gauge 2 Red zone

2. Changing the coolant
 - a. Remove the side cowls and upper cowl.
 - b. Remove the radiator cap.
 - c. Remove the engine guard.



- d Place a container under the engine.
- e. Remove the drain bolts.



1 Drain bolt

- f. Disconnect the reservoir tank pipe on the reservoir tank side, and drain the reservoir tank of its coolant.



1 Reservoir tank pipe

- g. Drain the coolant completely, and thoroughly flush the cooling system with clean tap water.
- h. Retighten the drain bolts. If the gasket is damaged, replace it.

Tightening torque:
10 Nm (1.0 m • kg, 7.2 ft • lb)

- i. Reinstall the reservoir tank pipe
- j. Pour the recommended coolant into the radiator until the radiator is full.

Recommended coolant:

High quality ethylene glycol anti-freeze containing corrosion inhibitors for aluminum engines.

Coolant and water mixed ratio:
50%/50%

Total amount:

1.7 L (1.50 Imp qt, 1.80 US qt)

Reservoir tank capacity:

0.3 L (0.26 Imp qt, 0.32 US qt)

Reservoir tank capacity:
(From LOW to FULL level)

0.2 L (0.18 Imp qt, 0.21 US qt)

EUU30900

CAUTION: _____

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

- k. Reinstall the radiator cap.
- l. Run the engine several minutes to re-check the coolant level of the radiator. If it is low, add more coolant until it reaches the top of the radiator.
- m. Fill the reservoir tank with coolant up to "FULL" level.
- n. Reinstall the reservoir tank cap and check for coolant leakage.

EUU04400

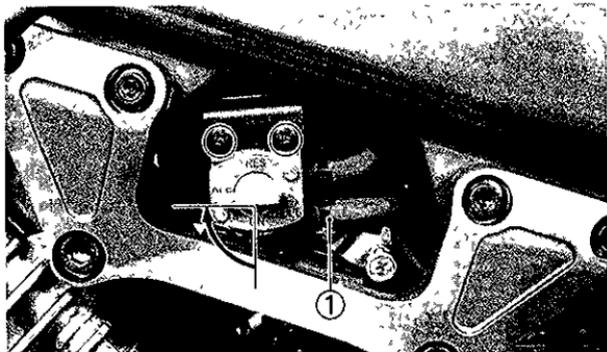
NOTE: _____

If you find any leaks, ask a Yamaha dealer to inspect.

- o. Reinstall the upper cowl and side cowls.

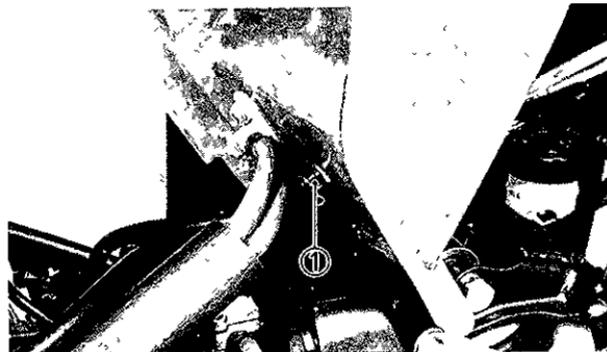
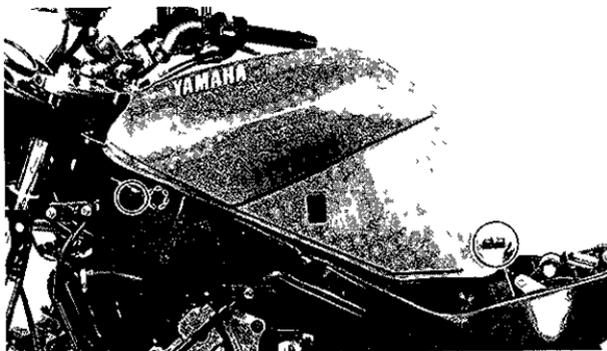
Air filter

1. Remove the seat, side cowls and upper cowl.
2. Remove the fuel cock by turning the fuel cock lever to "OFF" and disconnect the fuel hose from the fuel cock side.



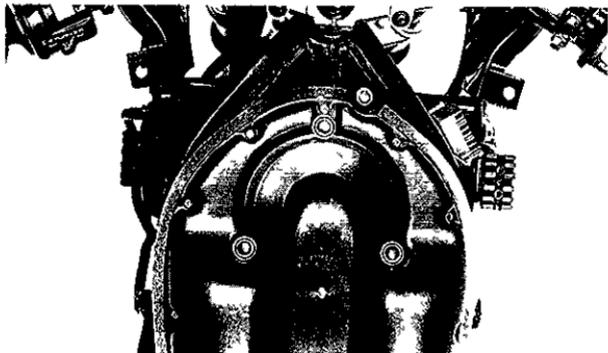
1 Fuel hose

3. Remove the fuel tank by removing the holding bolts, then disconnect the breather hose.

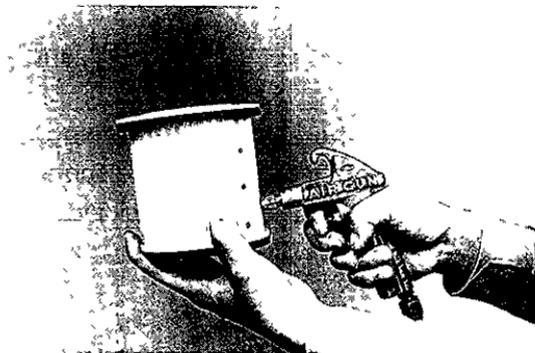


1 Breather hose

4. Remove the air filter case cover by removing the screws as shown.



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



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

EUU32600

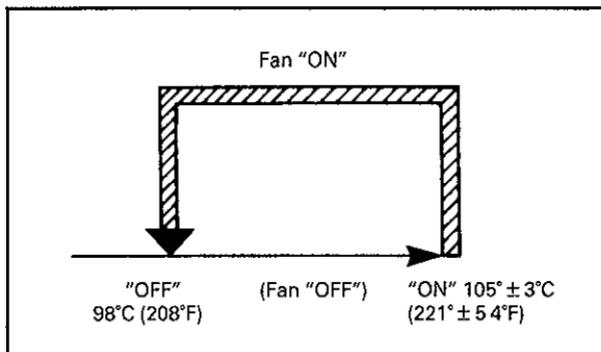
CAUTION: _____

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

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.



Carburetor adjustment

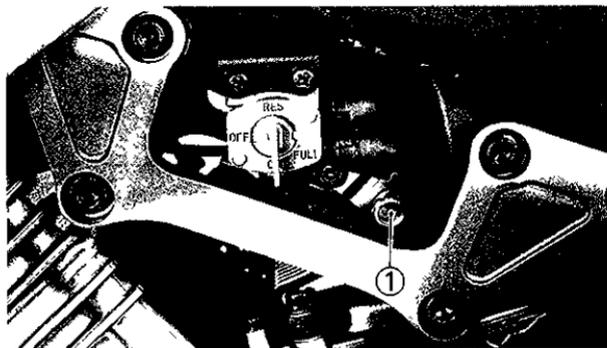
The carburetor is a vital part of the engine and requires very sophisticated adjustment. Most adjustments should be left to a Yamaha dealer who has the professional knowledge and experience to do so. However, the following point may be serviced by the owner as part of this routine maintenance.

CAUTION:

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

Idle speed adjustment

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



1 Throttle stop screw

Standard idle speed:
1,000~1,200 r/min

EUU04500

NOTE:

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

EAH90300

Throttle cable adjustment

EUU06400

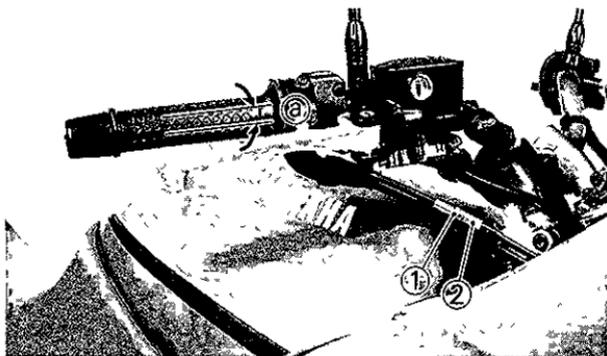
NOTE:

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

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

Free play:

3~5 mm (0.12~0.20 in)



1 Lock nut

a 3~5 mm (0.12~0.20 in)

2 Adjuster

1. Loosen the lock nut.
2. Turn the adjuster in or out until the adjustment is suitable.
3. Tighten the lock nut.

EAH90800

Valve clearance adjustment

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

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.

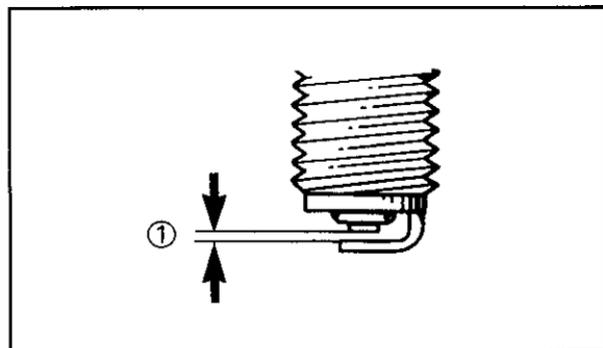
Normally, all spark plugs from the same engine should have the same color on the white porcelain insulator around the center electrode. The ideal color at this point is a medium to light tan color for a motorcycle that is being ridden normally. If one spark plug shows a distinctly different color, there could be something wrong with the engine.

Do not attempt to diagnose such problems yourself. Instead, take the motorcycle to a Yamaha dealer. You should periodically remove and inspect the spark plugs because heat and deposits will cause any spark plug to slowly break down and erode. If electrode erosion becomes excessive, or if carbon and other deposits are excessive, you should replace the spark plug with a proper type of plug.

Standard spark plug:
DPR9EA-9 (NGK) or
X27EPR-U9 (NIPPONDENSO)

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

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



1 Spark plug gap

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

Spark plug torque:
18 Nm (1.8 m • kg, 13 ft • lb)

EUU03800

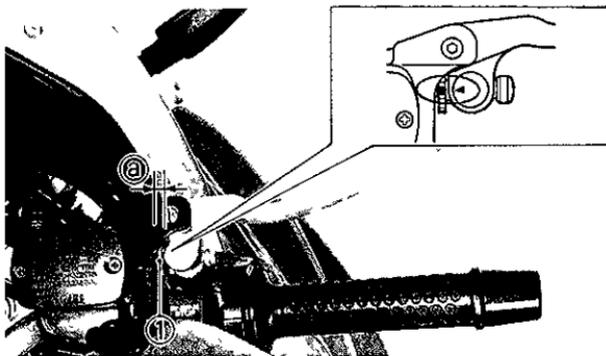
NOTE:

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

EAH89000

Front brake lever position adjustment

Brake lever distance from the throttle grip can be adjusted. To adjust, turn the adjuster while pushing the front brake lever forward and align the mark(■) on the adjuster with the mark(◀) on the lever.



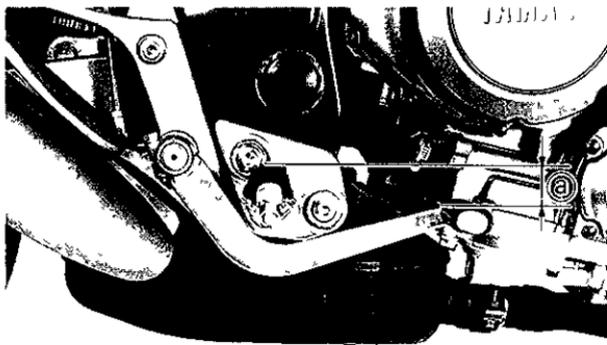
1 Adjuster

a Adjusting range

EAH80400

Rear brake adjustment

The brake pedal top end should be 17~41 mm (0.67~1.61 in) below the top of the footrest. If not, ask a Yamaha dealer to adjust it.



a 17~41 mm (0.67~1.61 in)

EUU68800

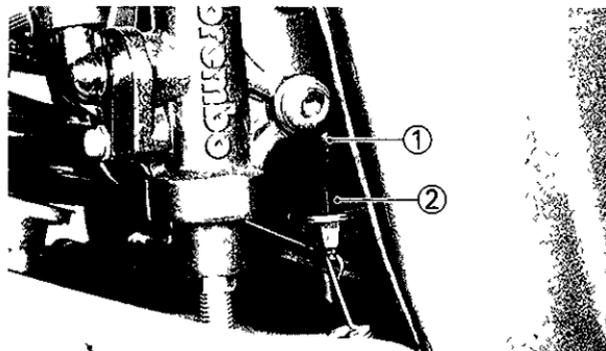
⚠ WARNING

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

EAH83300

Brake light switch adjustment

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

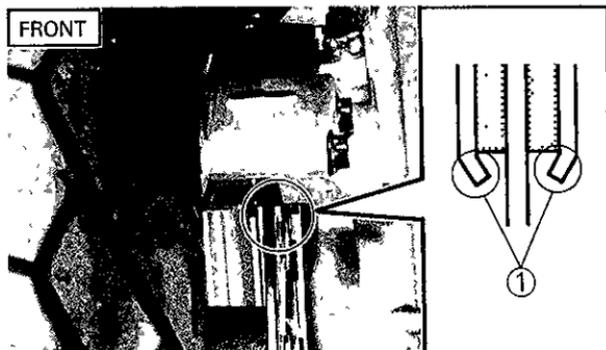


1 Main body

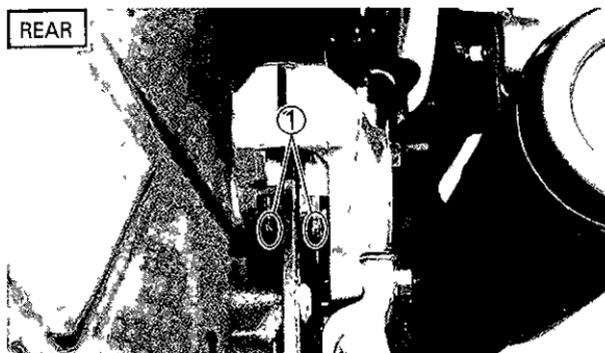
2 Adjuster nut

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 to replace the pads.



1 Wear indicator



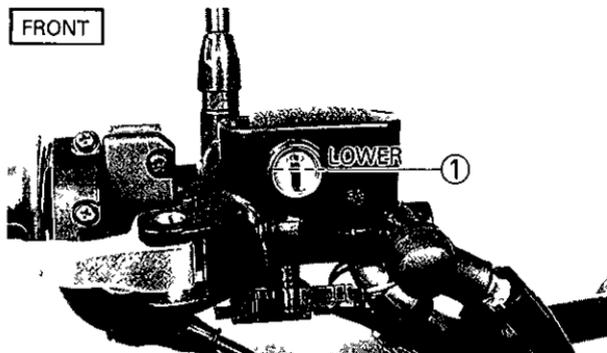
1 Wear indicator

Inspecting the brake fluid level

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

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

FRONT



1 Lower level

REAR



1 Lower level

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 brake performance.

Recommended brake fluids: DOT#4

EUU13100

NOTE: _____

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

- 3 Refill with the same type of brake fluid; mixing fluids may result in a harmful chemical reaction and lead to poor 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 check the cause if the brake fluid level goes down.

Brake fluid replacement

1. Complete fluid replacement should be done only by trained Yamaha service personnel.
2. Have a Yamaha dealer replace the following components 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.

Clutch adjustment

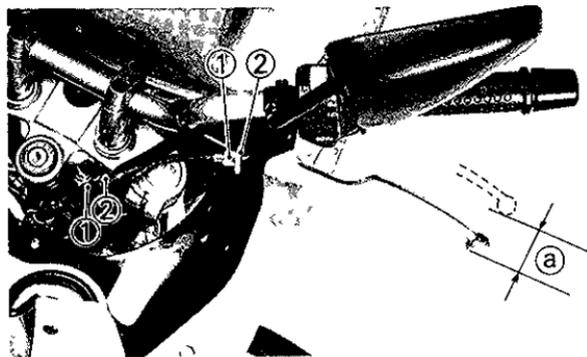
This model has two clutch cable length adjusters. The cable length adjusters are used to take up slack from cable stretch and to provide sufficient free play for proper clutch operation.

Free play adjustment

The clutch should be adjusted to suit the rider's preference, but free play at the lever end should be 8~12 mm (0.31~0.47 in). Loosen either the handlebar lever adjuster lock nut or the cable length adjuster lock nut. Turn the cable length adjuster either in or out until proper lever free play is achieved.

Clutch lever free play:

8~12 mm (0.31~0.47 in)



1 Adjuster
2 Lock nut

a 8~12 mm (0.31~0.47 in)

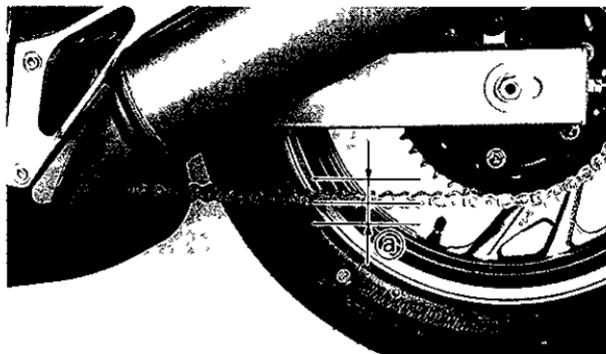
Drive chain slack check

EUU04800

NOTE:

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

To check the chain slack the motorcycle must stand vertically with both wheels on the ground and without a rider. Check the slack at the position shown in the illustration. The normal vertical deflection is approximately 40~50 mm (1.6~2.0 in). If the deflection exceeds 50 mm (2.0 in) adjust the chain slack.



a 40~50 mm (1.6~2.0 in)

Drive chain slack adjustment

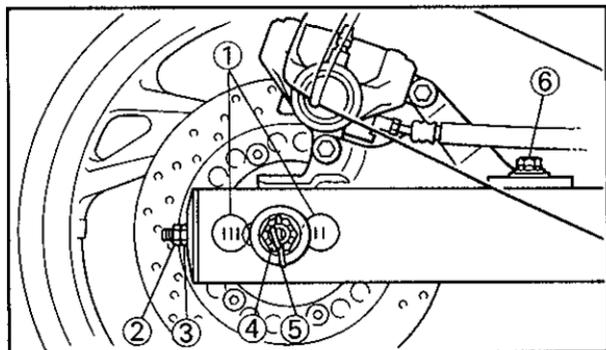
1. Remove the cotter pin from the rear wheel axle nut.
2. Loosen the rear wheel axle nut and caliper bracket installation bolt.

3. Loosen the lock nuts on each side. To tighten the chain, turn the chain adjuster clockwise. To loosen the chain, turn the adjuster counterclockwise and push the wheel forward. Turn each adjuster exactly the same amount to maintain correct axle alignment. (There are marks on each side of the swingarm, use them to check for proper alignment.)

EUU33300

CAUTION: _____

Too small chain slack will overload the engine and other vital parts; keep the slack within the specified limits.



- 1 Marks for alignment 2 Lock nut
3 Adjuster 4 Axle nut 5 Cotter pin
6 Caliper bracket installation bolt

4. After adjusting, be sure to tighten the lock nut, the axle nut and caliper bracket installation bolt.

Tightening torque:

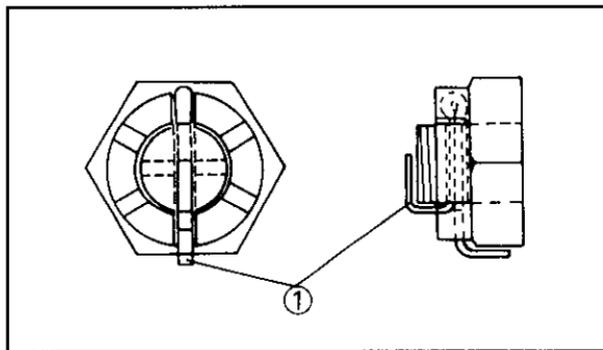
Axle nut:

110 Nm (11.0 m • kg, 80 ft • lb)

Caliper bracket installation bolt:

35 Nm (3.5 m • kg, 25 ft • lb)

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



1 Cotter pin

EUU64700

WARNING

Always use a new cotter pin on the axle nut.

EAM40700

Drive chain lubrication

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

This motorcycle has a drive chain with small rubber O-rings between the chain plates. Steam cleaning, high-pressure washes, and certain solvents can damage these O-rings. Use only kerosene to clean the drive chain. Wipe it dry, and thoroughly lubricate it with SAE 30~50W motor oil. Do not use any other lubricants on the drive chain. They may contain solvents that could damage the O-rings.

Cable inspection and lubrication

EUU64600



WARNING

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

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

Recommended lubricant:
SAE 10W30 motor oil

EAI10200

Throttle cable and grip lubrication

The throttle twist grip assembly should be greased at the time that the cable is lubricated, since the grip must be removed to get at the end of the throttle cable. Two screws clamp throttle housing to the handlebar. Once these two are removed, the end of the cable

8-28

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.

EAI30601

Brake and shift pedals

Lubricate the pivoting parts.

Recommended lubricant:
SAE 10W30 motor oil

EAI30700

Brake and clutch levers

Lubricate the pivoting parts.

Recommended lubricant:
SAE 10W30 motor oil

EAI31100

Sidestand

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

Recommended lubricant:
SAE 10W30 motor oil

⚠ WARNING

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

Rear suspension

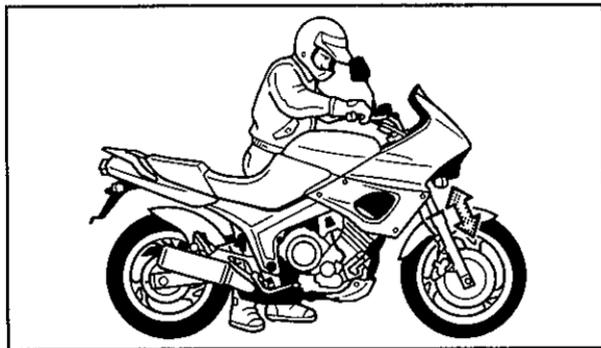
Lubricate the pivoting parts.

Recommended lubricant:
Molybdenum disulfide grease

Front fork inspection**⚠ WARNING**

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

1. Visual check
Check for scratches/damage on the inner tube and excessive oil leakage with the front fork.
2. Operation check
Place the motorcycle on a level place.
 - a. Hold the motorcycle on an upright position with the rider's hands on the handlebar, and apply the front brake.
 - b. Pump the front forks up and down several times.



CAUTION:

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

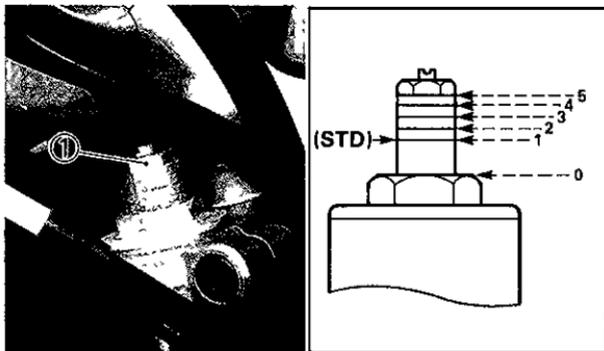
Front fork adjustment

EJU66900

WARNING

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

- 1 Spring preload adjustment.
To increase the preload, turn the adjuster clockwise.
To decrease the preload, turn the adjuster counterclockwise.



1 Spring preload adjuster

NOTE:

The adjuster is at the "0" position when it is fully turned out.

EJU43000

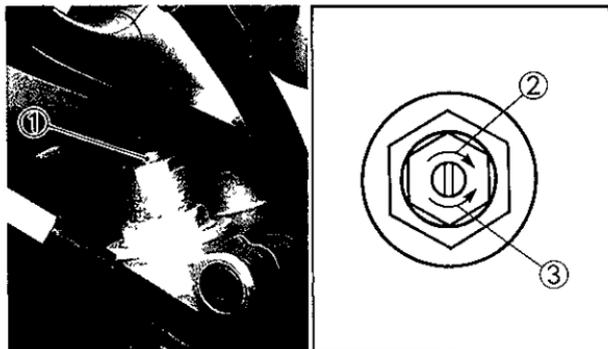
CAUTION:

The grooves are provided to show the adjustment level. Always keep the adjustment level equal on both forks.

2. Damping adjustment:

To increase the damping turn the adjuster clockwise.

To decrease the damping turn the adjuster counterclockwise.



1 Damping adjuster
3 Decrease

2 Increase

Maximum	2 clicks out*
STD	4 clicks out*
Minimum	6 clicks out*

* From the fully turned- in position

EUU36300

CAUTION: _____

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

Rear shock absorber

EUU67300



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

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

Rear shock absorber adjustment

This shock absorber can be adjusted to suit the rider's preference, motorcycle's load and road conditions.

1. HARD/SOFT selector

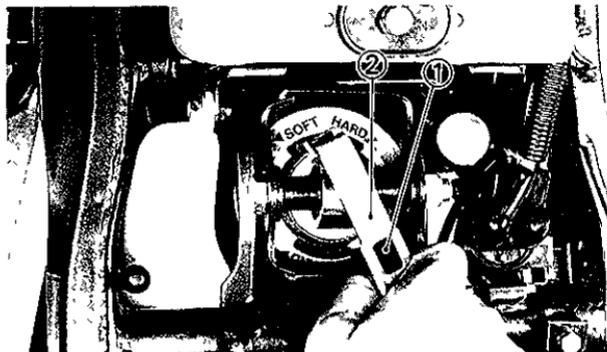
This shock absorber is equipped with a change lever to select the HARD or SOFT position.

- a. Remove the seat.
- b. Select the HARD position by turning the change lever to "HARD".
Select the SOFT position by turning the change lever to "SOFT"

EUU16700

NOTE:

When turning the change lever, use the change lever wrench which is attached to the owner's tool kit.



- 1 Change lever 2 Change lever wrench

- c. Install the seat.
- 2. Spring preload adjustment
 - a. Loosen the lock nut
 - b. To increase the preload, turn the adjuster clockwise. To decrease the preload, turn the adjuster counterclockwise.



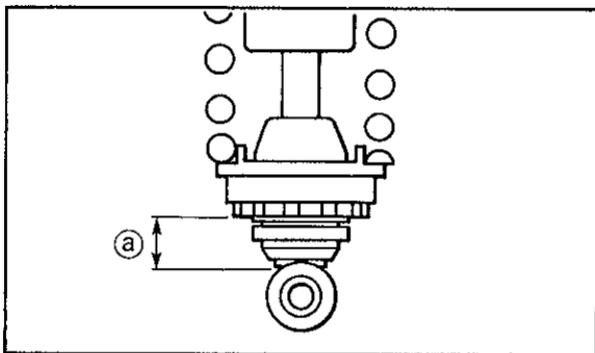
- 1 Lock nut 2 Adjuster
3 Decrease 4 Increase

EUU36300

CAUTION: _____

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

- c. The length of the spring (installed) changes 1 mm (0.04 in) per turn of the adjuster



a Measurement "A"

	Measurement "A"
S.T.D Length	24 mm (0.94 in)
MIN. Length	22 mm (0.87 in)
MAX Length	29 mm (1.14 in)

EUU05200

NOTE:

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

Tightening torque:
70 Nm (7.0 m • kg 50 ft • lb)

EUU36400

CAUTION:

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

3. Damping adjustment

To increase the damping, turn the adjuster clockwise. To decrease the damping, turn the adjuster counterclockwise.



1 Damping adjuster
3 Decrease

2 Increase

S.T.D. position. 10 clicks out*
Minimum position: 15 clicks out*
Maximum position: 5 clicks out*

* From the fully turned-in position

EUU36300

CAUTION: _____

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

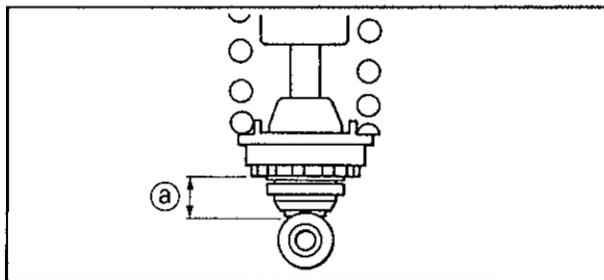
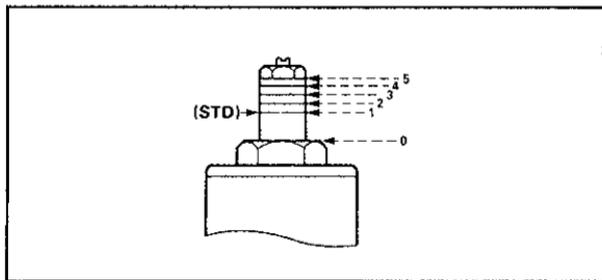
Recommended combinations of the front fork and the rear shock absorber settings

Use this table as a guide for specific riding and motorcycle load conditions.

Front fork		Rear shock absorber			Loading condition			
Spring preload adjuster	*1 Damping adjuster	HARD/SOFT selector	*2 Spring preload adjuster	*1 Damping adjuster	Solo rider	With passenger	With accessories and equipment	With accessories, equipment and passenger
0 ~ 3	4 ~ 6	S	22 ~ 25.5 mm (0.87 ~ 1.00 in)	8 ~ 15	○			
1 ~ 4	3 ~ 5	H	24 ~ 28 mm (0.94 ~ 1.10 in)	7 ~ 10		○		
0 ~ 3	3 ~ 5	S or H	24 ~ 28 mm (0.94 ~ 1.10 in)	6 ~ 10			○	
1 ~ 5	2 ~ 5	H	26 ~ 29 mm (1.02 ~ 1.14 in)	5 ~ 8				○

*1 Clicks out from the fully turned-in position

*2 Measurement "A"

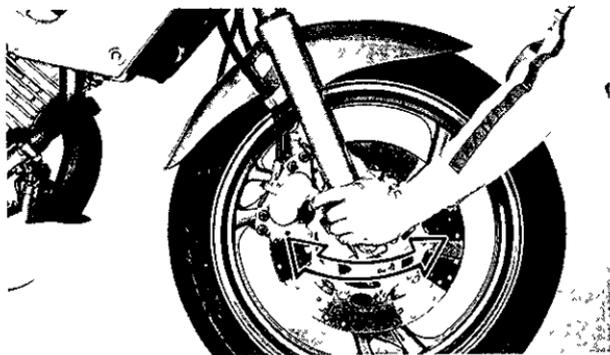


a Measurement "A"

Steering inspection

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

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



⚠ 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 inspect the wheel bearings. The wheel bearings should be inspected according to the Maintenance Schedule.

Battery

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

EUU43400

CAUTION:

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

EUU65800

⚠ WARNING

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

Antidote: EXTERNAL-Flush with water. INTERNAL-Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call a physician immediately.

Eyes: Flush with water for 15 minutes and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes etc., away. Ventilate when charging or using in an enclosed space. Al-

ways shield your eyes when working near batteries.

KEEP OUT OF REACH OF CHILDREN.

EAI85000

Battery maintenance

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

EUU43500

CAUTION:

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

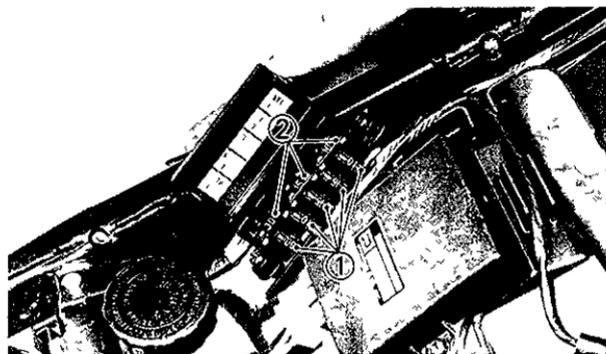
2. Always make sure the connections are correct when reinstalling the battery. The red (positive) lead is for the + terminal and the black (negative) lead is for the — terminal. Always connect the red (positive) lead first, then connect the black (negative) lead.

EAI90300

Fuse replacement

1. The fuse block is located under the seat.
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.



1 Fuse

2 Spare fuse

EUU34400

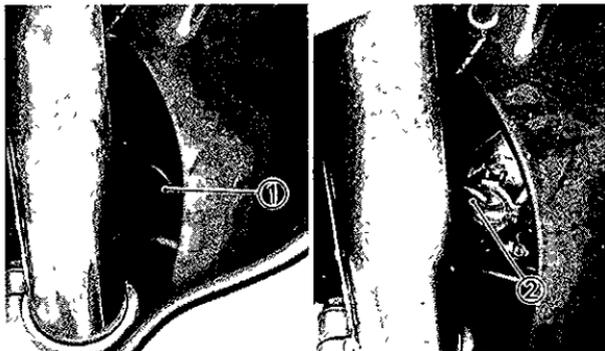
CAUTION:

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

Replacing the headlight bulb

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

1. Disconnect the headlight leads and remove the cover.



1 Cover

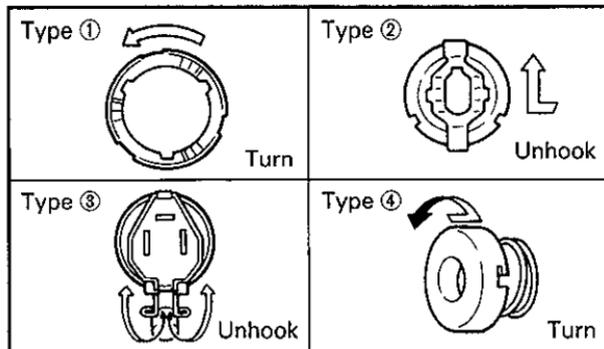
2 Headlight lead

2. Remove the bulb holder.

EUU12801

NOTE:

Removal procedure is different according to the bulb holder. Remove your bulb holder by referring to the following illustration



3. Remove the defective bulb.

EUU66000

⚠ WARNING

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

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

CAUTION: _____

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



5. Reconnect the headlight leads.
6. Reinstall the cover. If the headlight beam adjustment is necessary, ask a Yamaha dealer to make adjustment.

4. Turn the bulb counterclockwise and remove the defective bulb.
5. Push a new bulb into position and turn it clockwise.
6. To install the socket, reverse the removal procedure

Taillight bulb replacement

1. Remove the seat
2. Remove the tool kit.
3. To remove the socket, turn it approximately 30° counterclockwise.

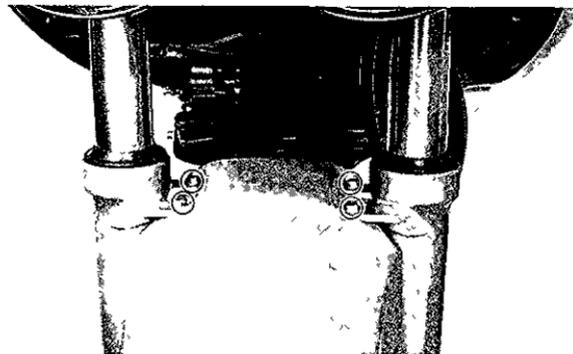
Front wheel removal

1. Remove the speedometer cable from front wheel side.

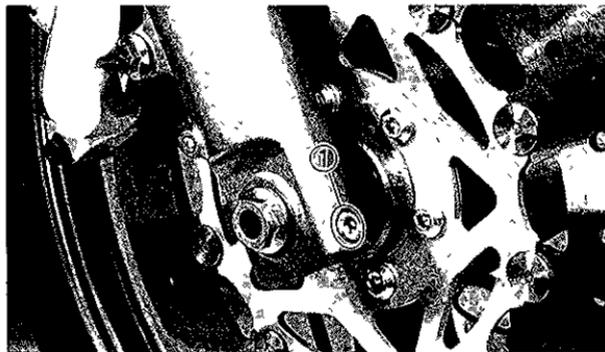


1 Speedometer cable

2. Remove the front fender.



3. Loosen the pinch bolt.



1 Pinch bolt

4. Loosen the wheel axle.
5. Elevate the front wheel by placing a suitable stand under the engine.
6. Remove the wheel axle.
7. Lower the wheel until the discs come off the calipers. Turn the calipers outward so they do not obstruct the wheel, and remove the wheel.



Front wheel installation

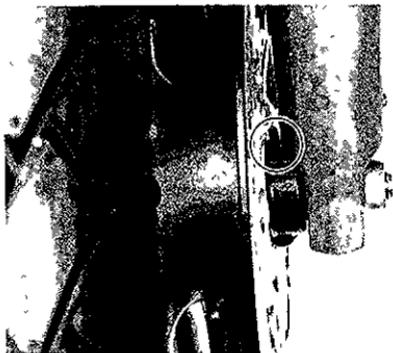
When installing the front wheel, reverse the removal procedure.

Pay attention to the following points:

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



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



3. Make sure the axle is properly torqued.

Tightening torque:
58 Nm (5.8 m • kg, 42 ft • lb)

4. Before tightening the pinch bolt, compress the front forks several times to check for proper fork operation.

5. Tighten the axle pinch bolt.

Axle pinch bolt torque:
19 Nm (1.9 m • kg, 13 ft • lb)

6. Tighten the front fender securing bolts.

Front fender securing bolt torque:
9 Nm (0.9 m • kg, 6.5 ft • lb)

EAJ39000

Rear wheel removal

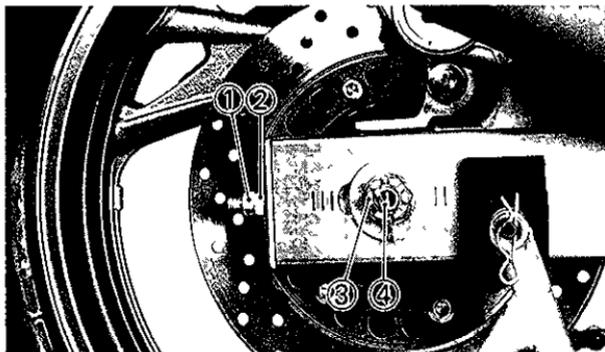
EUU66200

⚠ WARNING

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

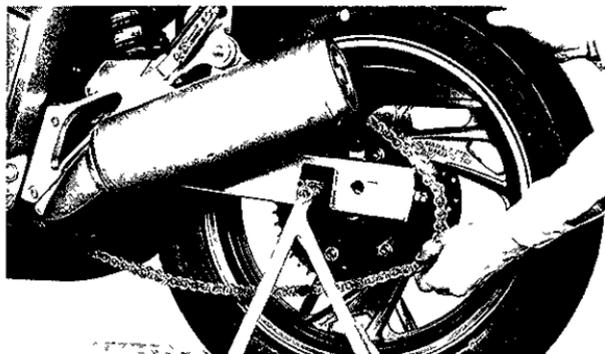
1. Elevate the rear wheel by placing a suitable stand under the rear arm.
2. Remove the axle nut cotter pin and the axle nut.

3. Loosen the lock nuts of right and left chain adjusters and loosen the adjusters.



1 Lock nut 2 Adjuster 3 Axle nut 4 Cotter pin

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



6. Remove the wheel assembly.

EUU05500

NOTE: _____

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

NOTE:

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

Rear wheel installation

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

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

⚠ WARNING

Always use a new cotter pin on the axle nut.

Axle nut torque

110 Nm (11.0 m • kg, 80 ft • lb)

Troubleshooting

Although Yamaha motorcycles receive a rigid inspection before shipment from the factory, trouble may occur during operation. Any problem in the fuel, compression, or ignition systems can cause poor starting and loss of power. The troubleshooting chart describes a quick, easy procedure for checking these systems. If your motorcycle requires any repair, bring it to a Yamaha dealer. The skilled technicians at a Yamaha dealership have the tools, experience, and know-how to properly service your motorcycle. Use only genuine Yamaha parts on your motorcycle. Imitation parts may look like Yamaha parts, but they are often inferior. Consequently, they have a shorter service life and can lead to expensive repair bills.

Troubleshooting chart

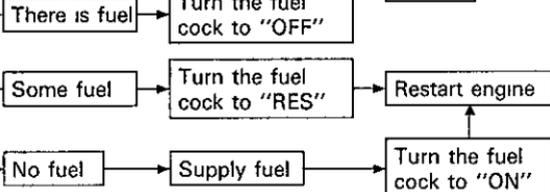
EUU66300

⚠ WARNING

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

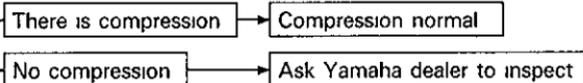
1 Fuel

Check if there is fuel in the fuel tank



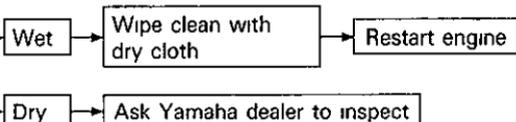
2. Compression

Use electric starter



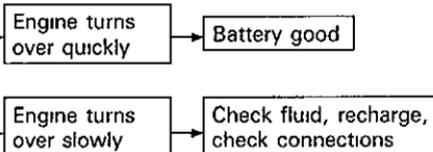
3. Ignition

Remove spark plug(s) and check electrode



4 Battery

Use electric starter



CLEANING AND STORAGE

EAK01300

A. CLEANING

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

1. Before cleaning the motorcycle:
 - a. Block off the end of the exhaust pipe to prevent water entry; a plastic bag and strong rubber band may be used.
 - b. Make sure the spark plug(s) and all filler caps are properly installed.
2. If the engine case is excessively greasy, apply degreaser with a paint brush. Do not apply degreaser to the chain, sprockets, or wheel axles.
3. Rinse the dirt and degreaser off with a garden hose. Use only enough pressure to do the job.

CAUTION:

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

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

CAUTION:

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

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

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

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

EAK01200

B. STORAGE

Long term storage (60 days or more) of your motorcycle will require some preventive procedures to guard against deterioration. After thoroughly cleaning the motorcycle, prepare for storage as follows:

1. Drain the fuel tank, fuel lines, and carburetor float bowl(s).
2. Remove the empty fuel tank, pour a cup of SAE 10W30 or 20W40 motor oil in the tank, shake the tank to coat the inner surfaces thoroughly and drain off the excess oil. Reinstall the tank.

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

EUU66400

⚠ WARNING

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

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

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

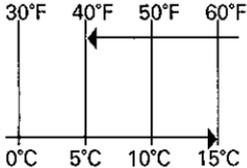
EUU05800

NOTE:

Make any necessary repairs before storing the motorcycle.

SPECIFICATIONS

Model	TDM850B
Dimension: Overall length Overall width Overall height Seat height Wheel base Minimum ground clearance	2,175 mm (85.6 in) 780 mm (30.7 in) 1,260 mm (49.6 in) 795 mm (31.3 in) 1,475 mm (58.1 in) 160 mm (6.3 in)
Basic weight: With oil and full fuel tank	230 kg (507 lb)
Minimum turning radius	2,900 mm (114.2 in)
Engine Type Model Cylinder arrangement Displacement Bore × Stroke Compression ratio Starting system Lubrication system	Liquid cooled, 4-stroke, gasoline DOHC 4CF1 Parallel 2-cylinder Forward inclined 849 cm ³ 89.5 × 67.5 mm (3.52 × 2.66 in) 9.2 : 1 Electric starter Dry sump

Model	TDM850B
<p>Engine oil (4-cycle): Type</p>  <p>Capacity Periodic oil change With oil filter replacement Total amount</p>	<p>SAE 20W40 type SE motor oil (If temperature does not go below 5°C/40°F)</p> <p>SAE 10W30 type SE motor oil (If temperature does not go above 15°C/60°F)</p> <p>3.8 L (3.34 Imp qt, 4.02 US qt) 3.9 L (3.43 Imp qt, 4.12 US qt) 4.2 L (3.70 Imp qt, 4.44 US qt)</p>
<p>Radiator capacity (Including all routes)</p>	<p>1.7 L (1.50 Imp qt, 1.80 US qt)</p>
<p>Air filter:</p>	<p>Dry type element</p>
<p>Fuel: Type</p> <p>Tank capacity Reserve amount</p>	<p>Regular gasoline For Australia: Unleaded fuel only</p> <p>18 L (3.96 Imp gal, 4.76 US gal) 3.5 L (0.77 Imp gal, 0.92 US gal)</p>
<p>Carburetor Type/manufacturer</p>	<p>BDST38/MIKUNI</p>

Model	TDM850B
Spark plug: Type/manufacturer Gap	DPR9EA-9 (NGK) or X27EPR-U9 (NIPPONDENSO) 0.8~0.9 mm (0.031~0.035 in)
Clutch type:	Wet, multi-disc
Transmission: Primary reduction system Primary reduction ratio Secondary reduction system Secondary reduction ratio Transmission type Operation Gear ratio 1st 2nd 3rd 4th 5th	Spur gear 67/39 (1.718) Chain drive 44/16 (2.750) Constant mesh 5-speed Left foot operation 37/13 (2.846) 37/20 (1.850) 29/22 (1.318) 29/27 (1.074) 27/30 (0.900)

Model	TDM850B
Chassis: Frame type Caster angle Trail	Pressed backbone 25.0° 105 mm (4.13 in)
Tire: Type Size — Front Rear	Tubeless 110/80-18 58H 150/70-17 69H
Brake Front brake type Operation Rear brake type Operation	Dual, Disc brake Right hand operation Single, Disc brake Right foot operation
Suspension: Front Rear	Telescopic fork Swingarm
Shock absorber: Front Rear	Coil spring, Oil damper Coil spring/Gas-oil damper

Model	TDM850B
Wheel travel: Front Rear	160 mm (6.30 in) 140 mm (5.51 in)
Electrical: Ignition system Generator system Battery type/capacity	TCI (Digital) AC Magneto generator YTX12-BS/12V 10AH or GTX12-BS/12V10AH
Headlight type:	Quarz bulb
Bulb wattage/quantity: Headlight Tail/brake light Flasher light Auxiliary light Meter light	12V 35W/35W × 2 12V 5W/21W × 2 12V 21W × 4 12V 5W × 1 12V 3.4W × 4
Indicator light wattage/quantity: "NEUTRAL" "HIGH BEAM" "TURN"	12V 3.4W × 1 12V 3.4W × 1 12V 3.4W × 1

NOISE REGULATION (For Australia)

"TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED"

Owners are warned that the law may prohibit:

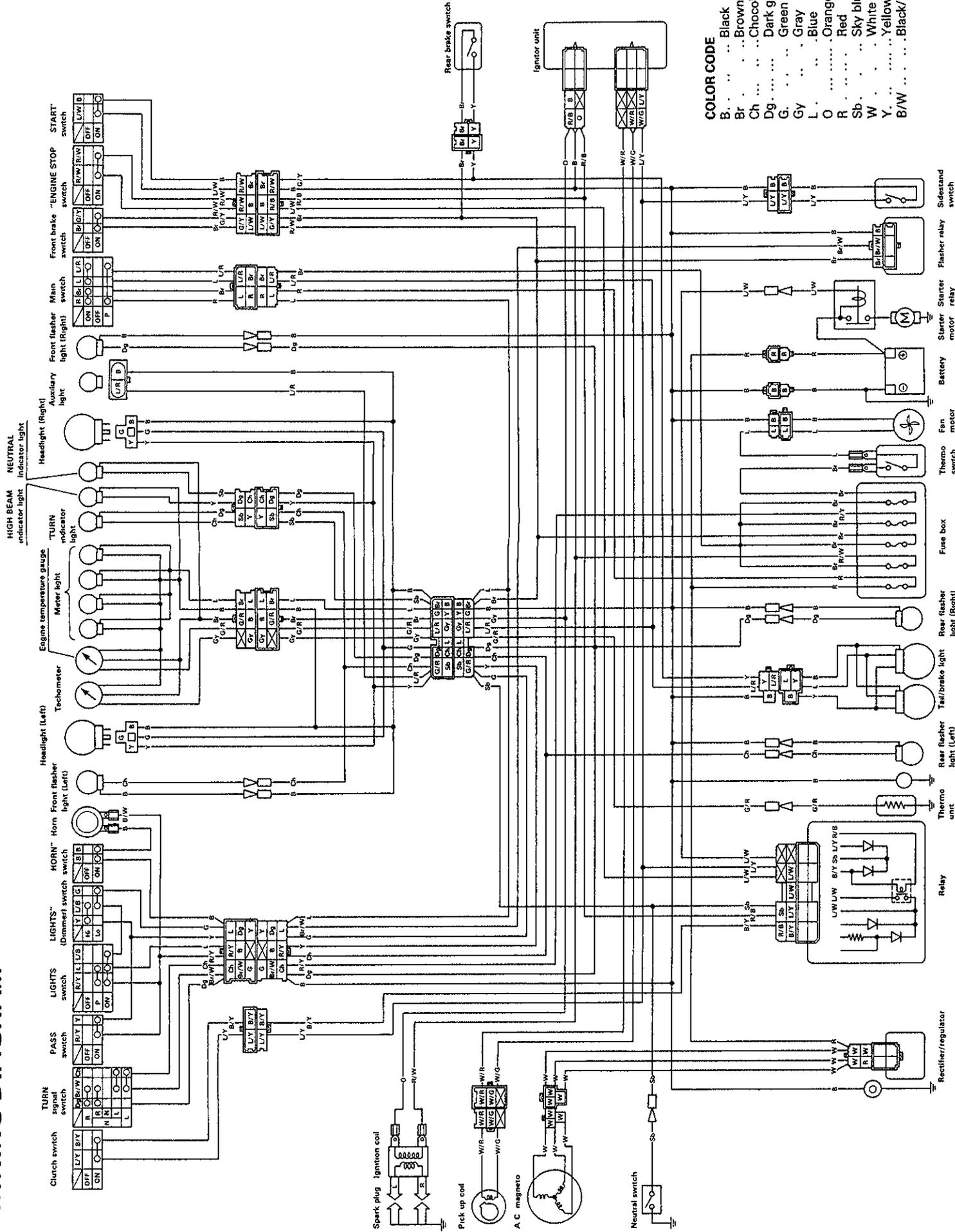
- (a) The removal or rendering inoperative by any person other than for purposes of maintenance, repair or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use,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

YAMAHA MOTOR CO.,LTD.

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WIRING DIAGRAM



COLOR CODE

B	Black	B/Y	Black/Yellow
Br	Brown	Br/W	Brown/White
Ch	Chocolate	G/R	Green/Red
Dg	Dark green	G/Y	Green/Yellow
G	Green	L/B	Blue/Black
GY	Gray	L/R	Blue/Red
L	Blue	L/W	Blue/White
O	Orange	L/Y	Blue/Yellow
R	Red	R/B	Red/Black
Sb	Sky blue	R/W	Red/White
W	White	R/Y	Red/Yellow
Y	Yellow	W/G	White/Green
B/W	Black/White	W/R	White/Red