



OWNER'S MANUAL

YAMAHA

TT600E

3SW-28199-22

EAA00100

TT600E

OWNER'S MANUAL

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INTRODUCTION

Congratulations on your purchase of the Yamaha TT600E. 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 machine. If you have any questions about the operation or maintenance of your machine, please consult a Yamaha dealer.

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 machine operator, a bystander or a person inspecting or repairing the machine.

CAUTION

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

NOTE:

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

NOTE:

This manual should be considered a permanent part of this machine and should remain with it even if the machine 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 MACHINE.

**WARNING**

THIS MACHINE IS DESIGNED AND MANUFACTURED FOR OFF-ROAD USE ONLY. IT IS ILLEGAL TO OPERATE THIS MACHINE ON ANY PUBLIC STREET, ROAD OR HIGHWAY. SUCH USE IS PROHIBITED BY LAW. THIS MACHINE COMPLIES WITH ALMOST ALL STATE OFF-HIGHWAY NOISE LEVEL AND SPARK ARRESTER LAWS AND REGULATIONS. PLEASE CHECK YOUR LOCAL RIDING LAWS AND REGULATIONS BEFORE OPERATING THIS MACHINE.

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SAFETY INFORMATION

TWO-WHEELED MACHINES 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 MACHINE OPERATION.**
- 2. OBSERVE THE WARNINGS AND MAINTENANCE REQUIREMENTS IN THE OWNER'S MANUAL.**
- 3. 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 machine is designed for off-road use only. It is illegal for this machine to be operated on any public street, road, or highway. Off-road use on public lands may be illegal. Please check local regulations before riding.**
- 3. This machine is designed to carry the operator only. No passengers.**

4. Many accidents involve inexperienced operators.
 - a. Know your skills and limits. Staying within your limits may help you to avoid an accident.
 - b. Only lend your machine to experienced operators.
5. Many machine accidents have been caused by machine 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). Never travel faster than warranted by conditions.
6. Ride cautiously in unfamiliar areas. You may encounter hidden obstacles which could cause an accident.
7. The operator's posture is important for proper control. The operator should keep both hands on the handlebars and both feet on the operator footrests during operation to maintain control of the machine.
8. Never ride under the influence of alcohol or drugs.

PROTECTIVE APPAREL

The majority of fatalities from machine 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.

MODIFICATION

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

LOADING AND ACCESSORIES

Adding accessories or cargo to your machine 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 machine. Use extra care if riding a machine which has added cargo or accessories. Genuine Yamaha accessories have been specifically designed for use on this machine. 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:

1. Never install accessories or carry cargo that would impair the performance of your machine. 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. 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.

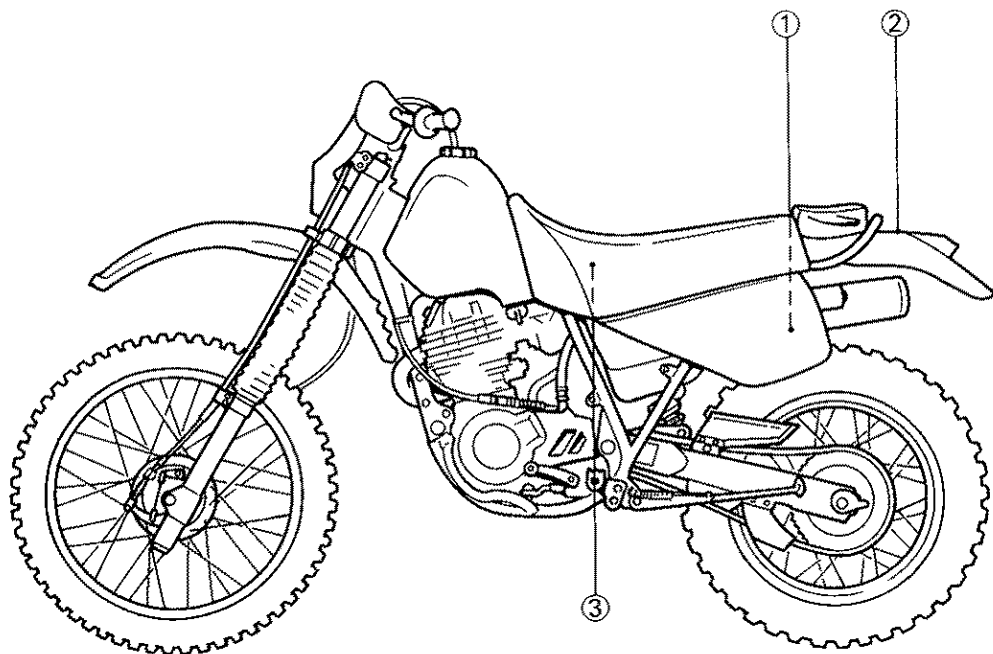
GASOLINE AND EXHAUST GAS

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 machine in an area that has adequate ventilation.

3. Always turn off the engine before leaving the machine unattended and remove the ignition key. When parking the machine, note the following:
 - a. The engine and exhaust pipe(s)/muffler(s) may be hot. Park the machine in a place where pedestrians or children are not likely to touch these hot areas.
 - b. Do not park the machine on a slope or soft ground; the machine may fall over.
 - c. Do not park the machine near an flammable source, e.g. a kerosene heater, or near an open flame. The machine could catch fire.
4. When transporting the machine 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 machine.



①

CAUTION

- Read owner's manual before servicing battery
- Electrolyte will damage metal parts or paint
If electrolyte spills, wash area with fresh water immediately
- Be sure to connect breather hose after installing battery

YAMAHA

3JL-28177-00

②

WARNING

Before you operate this vehicle,
read the owner's manual

English

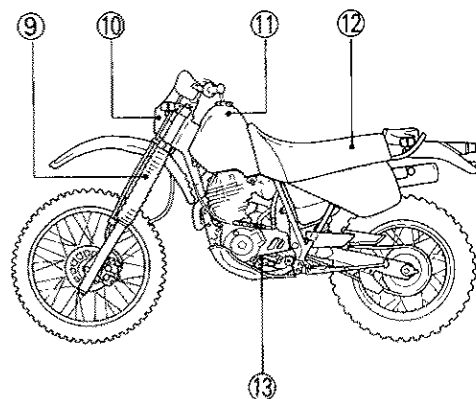
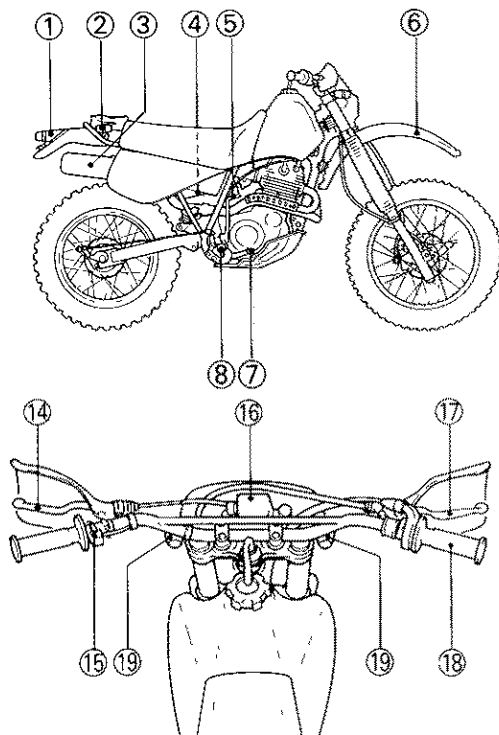
3HP-21568-00

③



4AA-22259-40

DESCRIPTION



- | | |
|------------------------|------------------------|
| 1 Tail/Brake light | 11 Fuel tank |
| 2 Rear flasher light | 12 Seat |
| 3 Silencer | 13 Shift pedal |
| 4 Monocross suspension | 14 Clutch lever |
| 5 Kick starter | 15 Handlebar switch |
| 6 Front fender | 16 Speedometer |
| 7 Brake pedal | 17 Brake lever |
| 8 Footrest | 18 Throttle grip |
| 9 Front fork | 19 Front flasher light |
| 10 Headlight | |

MACHINE IDENTIFICATION

EAA60800

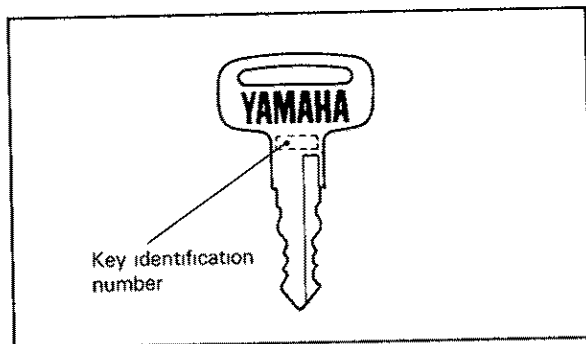
Identification numbers record

1. KEY IDENTIFICATION NUMBER:

2. VEHICLE IDENTIFICATION NUMBER: FRAME SERIAL NUMBER:

3. ENGINE SERIAL NUMBER:

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



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

Vehicle identification number (For Australia)

The vehicle identification number is stamped into the steering head pipe

EUU00400

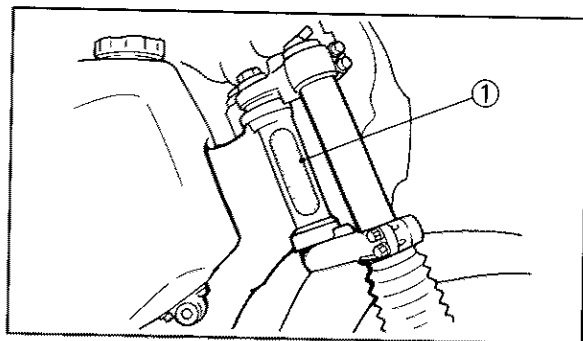
NOTE: _____

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

EAA60200

Frame serial number (Except for Australia)

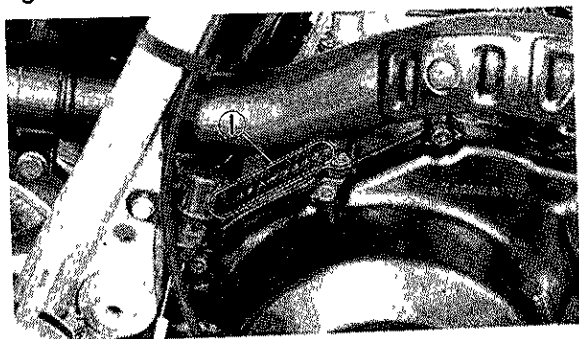
The frame serial number is stamped into the right side of the steering head pipe.



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

Engine serial number

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



1 Engine serial number

EUU00300

NOTE:

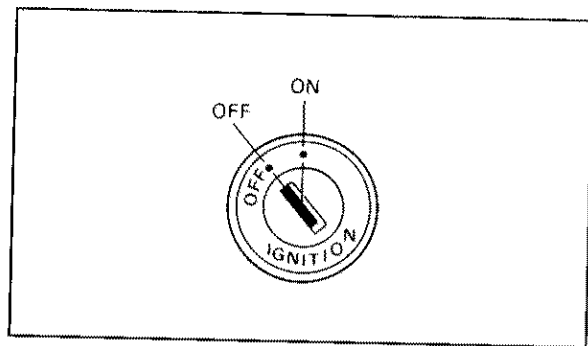
The first three digits of these numbers are for model identification; the remaining digits are the unit production number. Keep a record of these numbers for reference when ordering parts from a Yamaha dealer.

CONTROL FUNCTIONS

EAB00100

Main switch

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



EAB00500

ON:

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

EAB00600

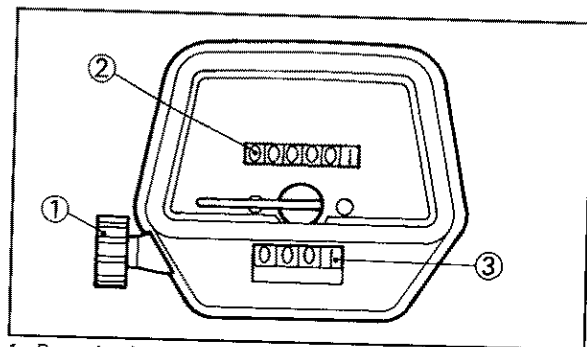
OFF:

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

Speedometer

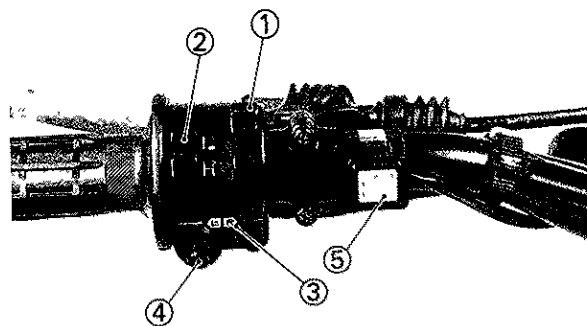
The odometer and trip odometer are built into the speedometer. The trip odometer can be reset to "0" with the reset knob.

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 Reset knob 2 Odometer 3 Trip odometer

Handlebar switches:



- | | |
|-------------------------|----------------------------|
| 1 "LIGHTS" switch | 2 "LIGHTS" (Dimmer) switch |
| 3 "TURN" signal switch | 4 "HORN" switch |
| 5. "ENGINE STOP" button | |

EAB60100

"LIGHTS" (Dimmer) switch

Turn the switch to "H" for the high beam and to "L" for the low beam.

EAB60500

"TURN" signal switch

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

EAB60200

"HORN" switch

Press the switch to sound the horn.

EAB61600

"LIGHTS" switch

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

"ENGINE STOP" button

The engine stop button is a safety device for use in an emergency such as when the machine overturns or when trouble occurs in the throttle system. The engine will not run while the engine stop button is being pushed. In case of an emergency, keep the button pushed in until the engine comes to a stop.

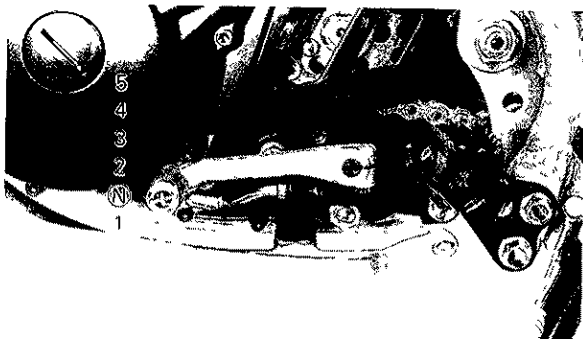
EAB70100

Clutch lever

The clutch lever is located on the left handlebar; it disengages or engages the clutch. 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.

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

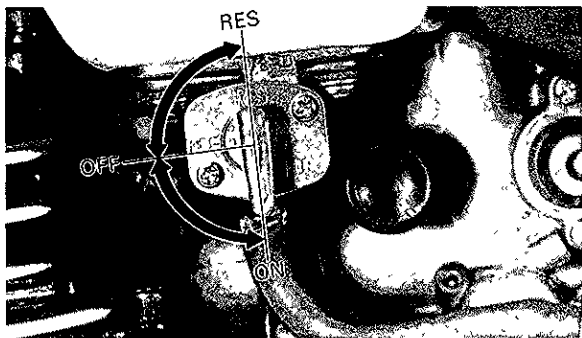
The front brake lever is located on the right handlebar. Pull it toward the handlebar to activate the front brake.

Rear brake pedal

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

Fuel cock

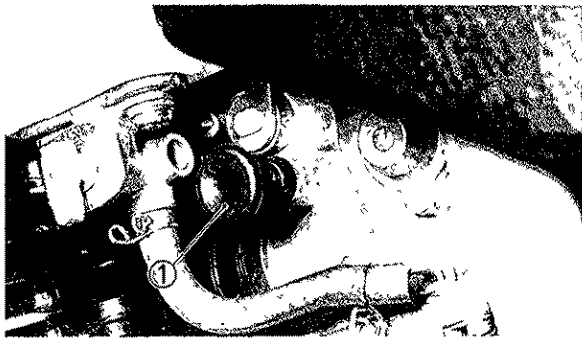
The fuel cock supplies fuel from the tank to the carburetor while filtering the fuel. The fuel cock has three positions.



- 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)

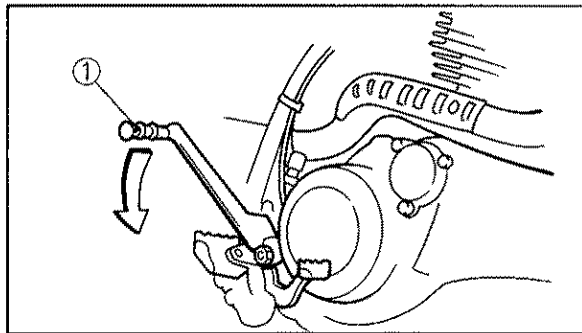
When cold, the engine requires a richer air-fuel mixture for starting. A separate starter circuit supplies this mixture. Pull the starter knob out to open the circuit for starting. When the engine has warmed up, push the knob in to close the circuit.



1 Starter knob

Kick starter

Rotate the kick starter away from the engine. Push the starter down lightly with your foot until the gears engage, then kick smoothly and forcefully to start the engine. This model has a primary-coupled kick starter so the engine can be started in any gear if the clutch is disengaged. In normal practice, however, shift to neutral before starting.



1 Kick starter

NOTE:

This model features an autodecomp. device, which frees the operator from the trouble otherwise required.

Front fork

The air pressure and the damping force of the front fork can be adjusted to suit the operating conditions. Refer to page 8-26 for proper adjustment procedures.

Rear shock absorber

The spring preload and the damping of the rear shock absorber can be adjusted to suit machine's load (ex. optional accessories etc) and riding conditions. Refer to page 8-29 for proper adjustment procedures.

PRE-OPERATION CHECKS

Before using this machine, check the following points:

Item	Routine	Page
Front brake	Check operation, free play, fluid level, and fluid leakage Top-up with DOT #4 (or #3) brake fluid if necessary	6-3 ~ 6-4 8-15 ~ 8-20
Rear brake	Check operation, condition and free play Adjust if necessary	
Clutch	Check operation, condition and free play Adjust if necessary	6-4, 8-20 ~ 8-21
Throttle grip/Housing	Check for smooth operation Lubricate/Adjust if necessary.	6-4, 8-12, 8-24
Engine oil	Check oil level/add oil as required	6-4 ~ 6-5, 8-6 ~ 8-9
Drive chain	Check chain slack and condition. Adjust if necessary	6-5, 8-21 ~ 8-23
Wheels/Tires	Check tire pressure, wear, damage and spoke tightness	6-5 ~ 6-7, 8-36 ~ 8-40
Control/Meter cables	Check for smooth operation Lubricate if necessary	8-23 ~ 8-24
Brake and shift pedal shafts	Check for smooth operation Lubricate if necessary	8-24
Brake and clutch lever pivots	Check for smooth operation Lubricate if necessary.	8-24
Sidestand pivot	Check for smooth operation. Lubricate if necessary.	8-24 ~ 8-25

Item	Routine	Page
Fittings/fasteners	Check all chassis fittings and fasteners Tighten/Adjust, if necessary	6-7, 8-5
Fuel tank	Check fuel level/top-up as required	6-8
Lights and signals	Check for proper operation	6-7, 8-35 ~ 8-36
Battery	Check fluid level, top-up with distilled water if necessary	6-7, 8-32 ~ 8-34

NOTE

Pre-operation checks should be made each time the machine 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 machine.

Brakes (See page 8-15 for details)**1. Brake lever and brake pedal**

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

EUU62300

** WARNING**

A soft, spongy feeling in the brake lever indicates a failure in the brake system. Do not operate the machine 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 8-18.

4. Check the brake shoes.

Refer to page 8-18.

EUU02200

NOTE: _____

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

Brake fluid leakage (Front)

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

EUU62500

⚠ WARNING

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

EAE20000

Clutch (See page 8-20 for details)

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

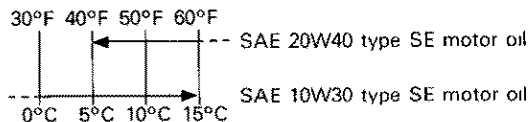
EAE30100

Throttle grip (See page 8-12 for details)

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

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:**

2.4 L (2.1 Imp qt, 2.5 US qt)

Periodic oil change:

2.0 L (1.8 Imp qt, 2.1 US qt)

With oil filter replacement:

2.1 L (1.9 Imp qt, 2.2 US qt)

Oil tank capacity:

1.9 L (1.7 Imp qt, 2.0 US qt)

NOTE:

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

EAE50000

Chain (See page 8-21 for details)

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

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 machine.

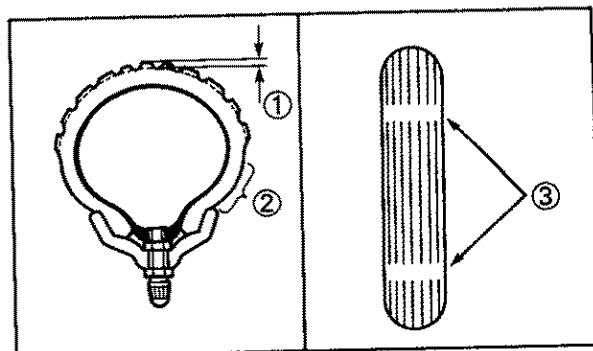
⚠ WARNING

Tire inflation pressure should be checked and adjusted when the temperature of the tire equals the ambient air temperature.

Off-road riding	Front	Rear
	100 kPa (1.0 kg/cm ² , 15 psi)	100 kPa (1.0 kg/cm ² , 15 psi)

2. Tire inspection

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



1 Tread depth

2 Side wall

3 Wear indicator

FRONT

Manufacture	Size	Type
IRC	100/80-21-4PR	MOTOCROSS Z MARK III

REAR

Manufacture	Size	Type
IRC	140/80-18-4PR	MOTOCROSS Z MARK III

Minimum tire tread depth (front and rear)	1.0 mm (0.04 in)
---	------------------

⚠ WARNING

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

Wheels

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

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.

Light and signals

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

Switches

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

Battery (See page 8-32 for details)

Check the fluid level and top-up if necessary. Use only distilled water if refilling is necessary.

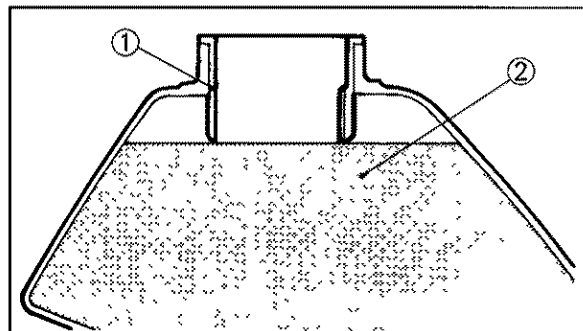
Fuel

Make sure there is sufficient fuel in the tank.

EUJ61000

⚠ WARNING

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



1 Filler tube

2 Fuel level

CAUTION

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

EAE80900

Recommended fuel. Regular gasoline

For Australia: Unleaded fuel only

Fuel tank capacity:

Total:

11 L (2.4 Imp gal, 2.9 US gal)

Reserve:

3 L (0.7 Imp gal, 0.8 US gal)

OPERATION AND IMPORTANT RIDING POINTS

EUU67200

WARNING

Before riding this machine, 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.

EUU72200

WARNING

This model is designed for off-road use only. In most instances, it is illegal to ride this model (either day or night) on any public street or highway.

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 machine 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.
-

EAF12600

Starting and warming up a cold engine

1. Turn the fuel cock to "ON".
2. Turn the ignition key to "ON".
3. Shift transmission into neutral.

4. Fully open the starter (CHOKE), and completely close the throttle grip.
5. Kick the kick starter to start the engine.
6. After starting the engine, turn back the starter (CHOKE) to warming up position (about halfway).

EUU02600

NOTE:

To get 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 completely

EUU02700

NOTE:

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

EA110800

Starting a warm engine

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

EUU31400

CAUTION

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

EA120001

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 5-3)

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 machine 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.

EAF30000

Engine break-in

There is never a more important period in the life of your machine 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.

EAF32100

1. 0 ~ 150 km (0 ~ 100 mi):
Avoid operation above 1/3 throttle. Stop the engine and let it cool for 5 to 10 minutes after every hour of operation. Vary the speed of the machine from time to time. Do not operate it at one set throttle position.
2. 150 ~ 500 km (90 ~ 300 mi):
Avoid prolonged operation above 1/2 throttle. Rev the machine freely through the gears, but do not use full throttle at any time.
3. 500 ~ 1,000 km (300 ~ 600 mi):
Avoid cruising speeds in excess of 3/4 throttle.

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:
Avoid prolonged full throttle operation
Vary speeds occasionally.

CAUTION:

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

Parking

When parking the machine, 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 machine in a place where pedestrians or children are not likely to touch the machine.

Do not park the machine on a slope or soft ground; the machine may overturn.

PERIODIC MAINTENANCE AND MINOR REPAIR

EAH00400

Periodic inspection, adjustment and lubrication will keep your machine in the safest and most efficient condition possible. Safety is an obligation of the machine 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 machine inspection, adjustment and lubrication are explained in the following pages.

EUU63200

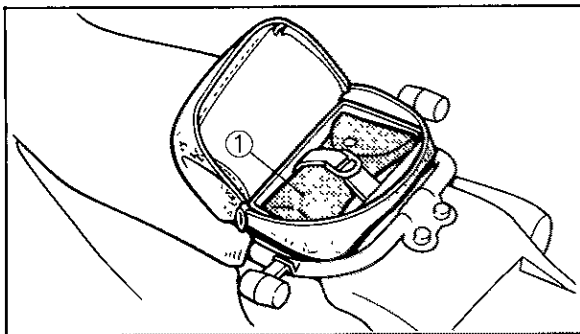
WARNING

If you are not familiar with machine 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 machine to a Yamaha dealer to check the torque settings and adjust them as necessary.

⚠ WARNING

Modifications to this machine 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 (mi)

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 <i>Adjust if necessary</i>	○	○	○
Spark plug(s)	Check condition <i>Clean or replace if necessary</i>	○	○	○
Air filter	Clean <i>Replace if necessary</i>		○	○
Carburetor*	Check idle speed/starter operation. <i>Adjust if necessary</i>	○	○	○
Fuel line*	Check fuel hose for cracks or damage <i>Replace if necessary</i>		○	○
Engine oil	Replace (<i>Warm engine before draining</i>)	○	○	○
Engine oil filter	Replace	○	○	○
Front brake*	Check operation/ <i>fluid leakage</i> /See NOTE <i>Correct if necessary</i>		○	○
Rear brake	Check operation <i>Adjust if necessary</i>		○	○
Clutch	Check operation <i>Adjust if necessary</i>		○	○
Decompression system*	Check operation <i>Adjust if necessary</i>		○	○
Rear arm pivot*	Check rear arm assembly for looseness <i>Correct if necessary</i> <i>Moderately repack every 24,000 (16,000) or 24 months ***</i>			○
Rear suspension link pivots*	Check operation <i>Moderately repack ***</i>	○	○	○
Wheels*	Check balance/damage/runout/spoke tightness <i>Repair if necessary</i>		○	○

ITEM	REMARKS	BREAK-IN 1,000 (600)	EVERY	
			6,000 (4,000) or 6 Months	12,000 (8,000) or 12 Months
Wheel bearings*	Check bearings assembly for looseness/damage Replace if damaged		()	()
Steering bearing*	Check bearings assembly for looseness. Correct if necessary. Moderately repack every 24,000 (16,000) or 24 months **	()		()
Front forks*	Check operation/oil leakage. Repair if necessary		()	()
Rear shock absorber*	Check operation/oil leakage. Repair if necessary		()	()
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	()	()	()
Battery*	Check specific gravity. Check that the breather pipe is working properly. Correct if necessary		()	()

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

** Medium weight wheel bearing grease

*** Lithium soap base grease

NOTE:

Brake fluid replacement

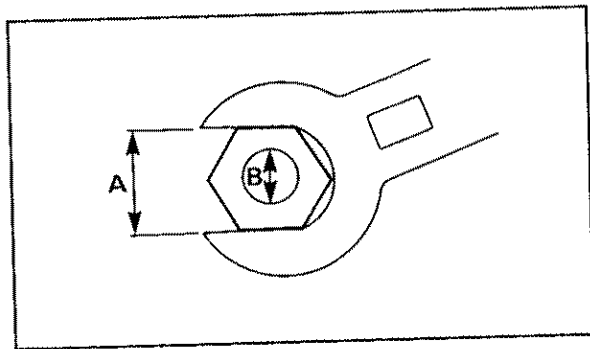
1. When disassembling the master cylinder or caliper cylinder, replace the brake fluid. Normally check the brake fluid level and add the fluid as required.
2. On the inner parts of the master cylinder and caliper cylinder, replace the oil seals every two years.
3. Replace the brake hoses every four years,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

Item	Torque		
	Nm	m•kg	ft•lb
Spark plug	17.5	1.75	12.5
Engine drain bolt (Crankcase)	30	3.0	22
Engine drain bolt (Oil tank)	18	1.8	13
Oil filter cover screw	10	1.0	7.2
Air bleed screw	5	0.5	3.6
Front wheel axle	58	5.8	42
Axle holder nut	8	0.8	5.8
Rear wheel axle nut	105	10.5	75

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



Engine oil

In this model, the dry sump lubrication system is used. That is, oil is supplied to the engine by means of the feed pump, and, 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 machine on a level place and hold it in an upright position.
 - b. Remove the oil tank cap, and check the oil level.



1 Oil tank cap
3 Minimum oil level

2 Maximum oil level

NOTE:

When checking, do not screw the oil level gauge into the oil tank. Insert the gauge lightly. For accuracy, check with the machine 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.
- d. Start the engine and warm it up until the oil temperature rises to approximately 60°C (140°F).
- e. Idle the engine more than 10 seconds while keeping the machine upright. Then stop the engine and check the oil level on the upright machine.
- f. Adjust the oil level to the maximum level line.

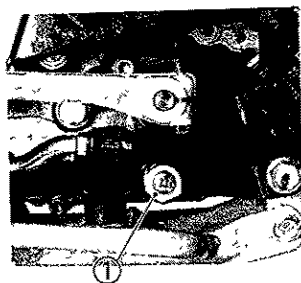
CAUTION

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

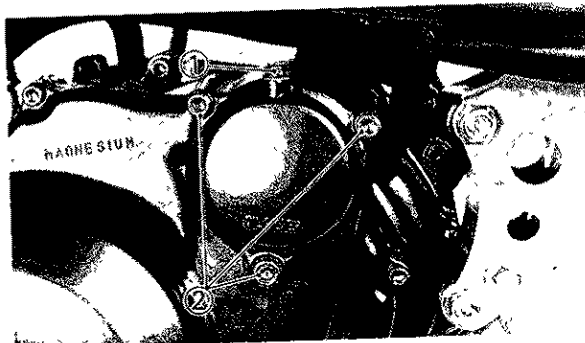
WARNING

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



1 Drain bolt



1 Air bleed screw

2 Filter cover screw

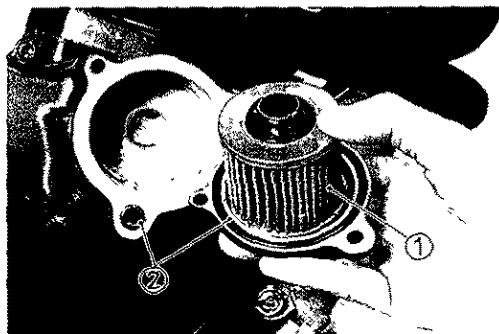
- d. Check each gasket. If damaged, replace.
- e. Remove the other filter cover screws and remove the oil filter cover. Replace the filter element.

EUU06800

NOTE:

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

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



1 Filter element

2 O-ring

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

Tightening torque:

Drain bolt (crankcase):

30 Nm (3.0 m•kg, 22 ft•lb)

Drain bolt (oil tank):

18 Nm (1.8 m•kg, 13 ft•lb)

Filter cover screw:

10 Nm (1.0 m•kg, 7.2 ft•lb)

Air bleed screw:

5 Nm (0.5 m•kg, 3.6 ft•lb)

- h. Add engine oil. Install the oil tank filler cap and tighten it.

Oil capacity: See page 6-4

Recommended oil: See page 6-4

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

EUU37700

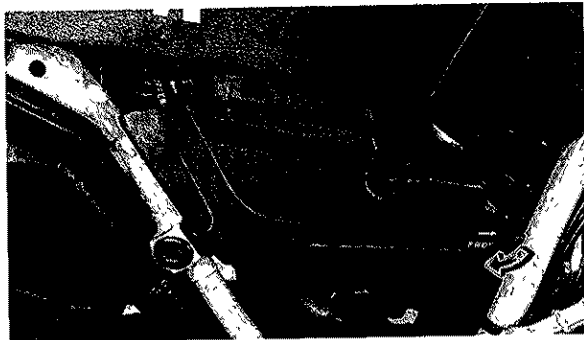
CAUTION:

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

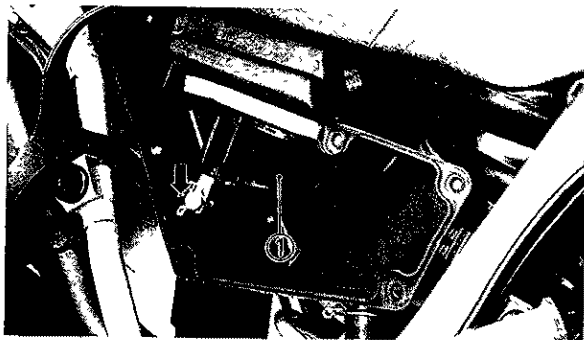
1. Remove the air bleed screw from oil filter cover.
2. Start the engine and keep it idling until oil flows out of the bleed hole. If no oil comes out after a lapse of one minute, turn off the engine immediately so it will not seize. In such a case go to the nearest Yamaha dealer for repairs.
3. After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

Air filter

1. Remove the right side cover.
2. Remove the air filter case fitting band and the filter case cover.



3. Remove the wing bolt.
4. Pull out the element.



1 Air filter element

5. Remove the element from its guide, and clean it with solvent. After cleaning, remove the remaining solvent by squeezing the element.
6. Apply recommended oil to the entire surface of the filter and squeeze out the excess oil. The element should be wet but not dripping.

Recommended oil:

SAE 10W30 motor oil

7. When installing the element in its case, be sure its sealing surface matches the sealing surface of the case so there is no air leak.
8. The element should be cleaned at the specified intervals. It should be cleaned more often if the machine is operated in dusty or wet areas.

EUU32600

CAUTION:

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

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.

EUU13700

NOTE: _____

A diagnostic tachometer must be used for this procedure.

EUU33000

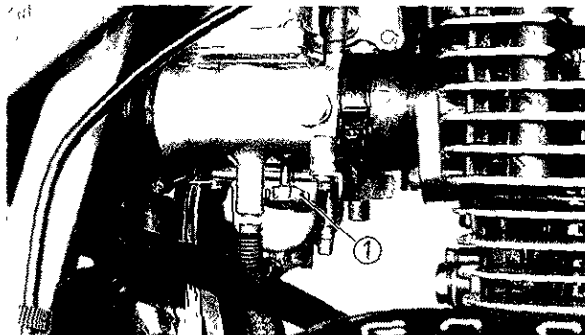
CAUTION: _____

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

Idle speed adjustment

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

Standard idle speed:
1,300 ~ 1,400 r/min



1 Throttle stop screw

EUJ04500

NOTE:

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

EAH92200

Throttle cable adjustment

EUJ06400

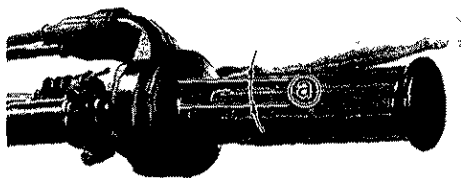
NOTE:

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 free play is incorrect, ask a Yamaha dealer to make adjustment.

Free play:

2 ~ 5 mm (0.08 ~ 0.20 in)



a 2 ~ 5 mm (0.08 ~ 0.20 in)

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.

Decompression cable adjustment

The decompression cable becomes longer with use, resulting in improper decompression function. To prevent this, the decompression cable must be adjusted regularly. This adjustment, however, should be left to a Yamaha dealer.

Spark plug inspection

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

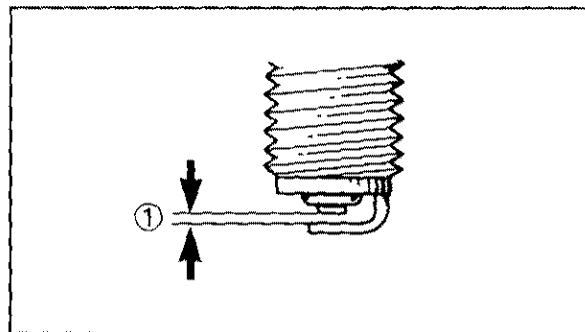
The ideal color on the white porcelain insulator around the center electrode is a medium to light tan color for a machine that is being ridden normally. Do not attempt to diagnose any problems yourself. Instead, take the machine to a Yamaha dealer. You should periodically remove and inspect the spark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

Standard spark plug:
DP7EA-9 (NGK)

Before installing the 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:

17.5 Nm (1.75 m•kg, 12.5 ft•lb)

EUU03800

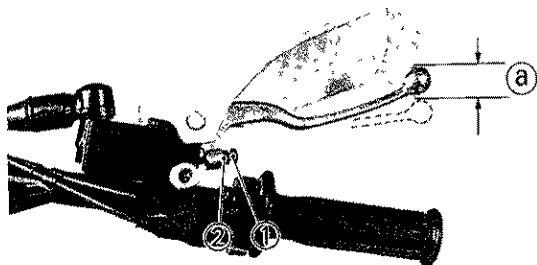
NOTE:

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.

Front brake adjustment

The free play at the end of the front brake lever should be 5~8 mm (0.2~0.3 in).

1. Loosen the lock nut.
2. Turn the adjuster so that the brake lever movement at the lever end is 5~8 mm (0.2~0.3 in) before the adjuster contacts the master cylinder piston.
3. After adjusting, tighten the lock nut.



1 Adjuster
a 5~8 mm (0.2~0.31 in)

2 Lock nut

⚠ WARNING

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

⚠ WARNING

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

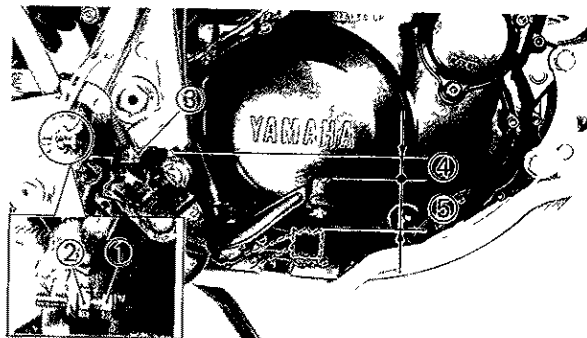
Rear brake adjustment

EUU64300

⚠ WARNING

For brake pedal adjustment, be sure to proceed as follows (it is advisable to have a Yamaha dealer make this adjustment).

1. Pedal height.
 - a. Loosen the adjuster lock nut (for pedal height)
 - b. By turning the adjuster clockwise or counterclockwise, adjust the brake pedal position so that its top end is approx. 10 mm (0.4 in) below the top of the footrest.
 - c. Secure the adjuster lock nut.



- 1 Adjuster bolt (for pedal height)
- 2 Lock nut
- 3 Footrest
- 4 Pedal height 10 mm (0.4 in)
- 5 Free play 20 ~ 30 mm (0.8 ~ 1.2 in)

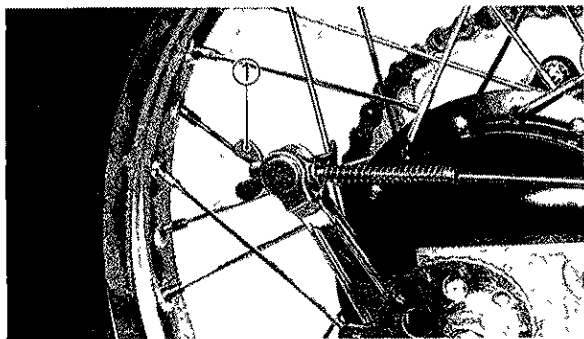
EUU64400

⚠ WARNING

After adjusting the pedal height adjust brake pedal free play.

2. Free play

The rear brake should be adjusted to suit the rider's preference; but free play at the brake pedal end must be 20~30 mm (0.8~1.2 in). Turn the adjuster on the brake rod clockwise to reduce play; turn the adjuster counterclockwise to increase play.



1. Adjuster

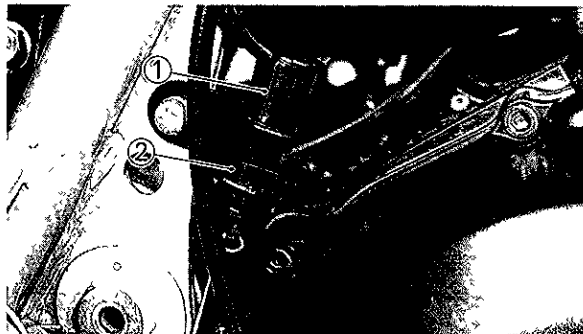
⚠ WARNING

1. **The rear brake pedal adjustment must be checked anytime the chain is adjusted or rear wheel is removed and then reinstalled.**
2. **Check the operation of the brake light after adjusting the rear brake.**

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 Adjusting nut

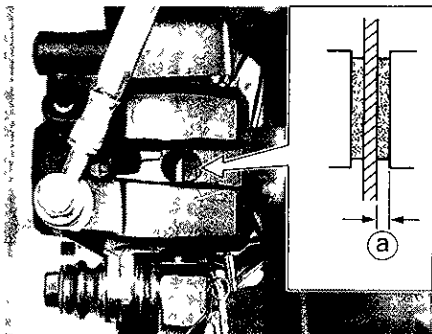
EAH81400

Checking the front brake pads and rear brake shoes

EAH84400

FRONT

Check the brake pads for damage and wear. If the thickness is less than the specified value, have a Yamaha dealer replace the pads.

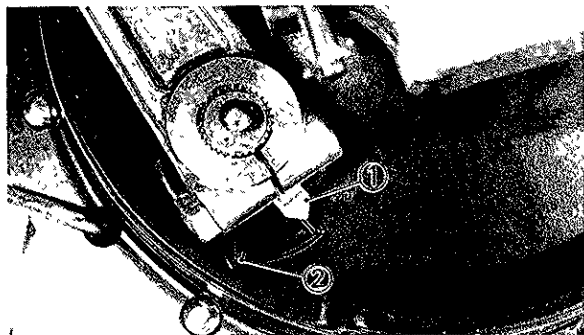


a Wear limit 0.8 mm (0.031 in)

EAH82600

REAR

To check, look at the wear indicator while depressing the brake pedal. If the indicator reaches the wear limit line, ask a Yamaha dealer to replace the shoes.



1 Wear indicator

2 Wear limit

EAH88200

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.

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

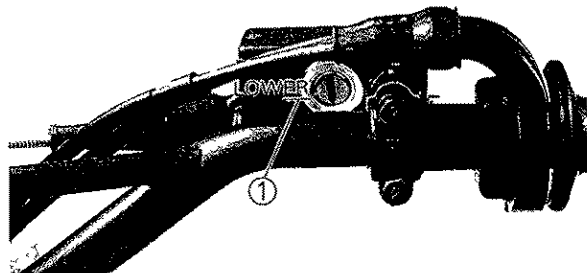
- 2 Use only the designated quality brake fluid; otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance.

Recommended brake fluids: DOT #4

EUU13100

NOTE: _____

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



1 Lower level

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.

Normally, once the clutch cable length adjuster (crankcase) is properly set; the only adjustment required is maintenance of free play at the clutch cable length adjuster (handlebar lever).

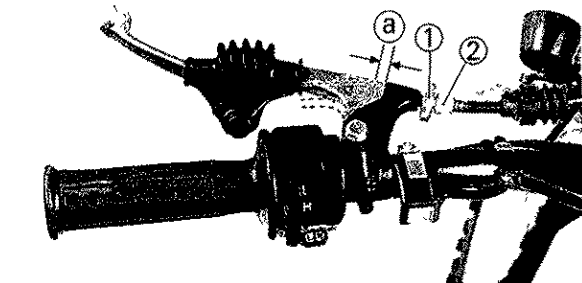
Free play adjustment

The clutch should be adjusted to suit the rider's preference; but free play at the lever pivot should be 2~3 mm (0.08~0.12 in).

Loosen either the handlebar lever adjuster lock nut or the cable length adjuster lock nut. Turn the cable length adjuster either in or out until proper lever free play is achieved.

Clutch lever free play:

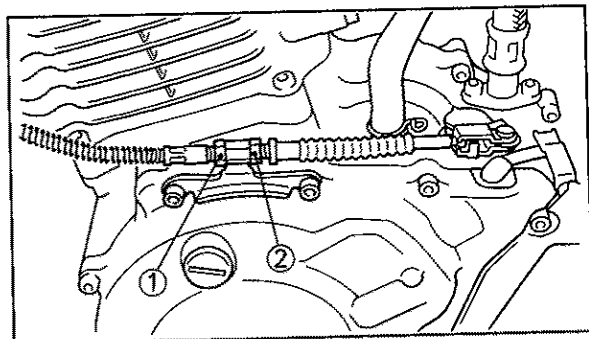
2~3 mm (0.08~0.12 in)



1 Lock nut

2 Adjuster

a. 2~3 mm
(0.08~0.12 in)



1 Adjuster

2 Lock nut

EA140800

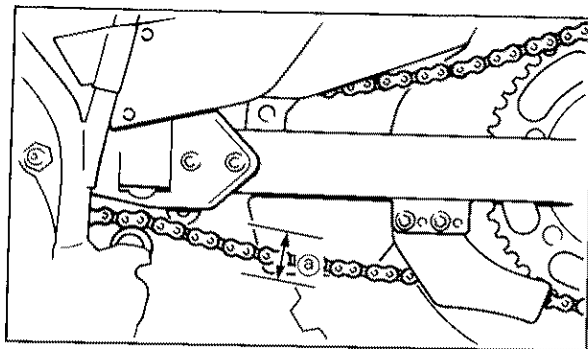
Drive chain slack check

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 machine must stand vertically with its 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 20 ~ 30 mm (0.8 ~ 1.2 in). If the deflection exceeds 30 mm (1.2 in) adjust the chain slack.



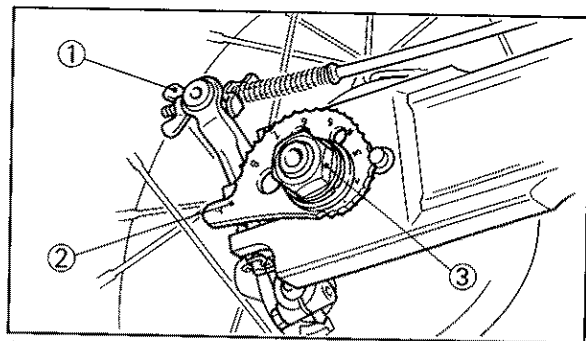
a 20 ~ 30 mm (0.8 ~ 1.2 in)

EAI41100

Drive chain slack adjustment

1. Loosen the rear brake adjuster
2. Loosen the rear wheel axle nut

3. Turn chain puller both left and right, until axle is situated in same puller slot position.



1 Adjuster 2 Chain puller 3 Axle nut

EUU33300

CAUTION:

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

- 4 After adjusting, be sure to tighten the axle nut.

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

5. Adjust the free play in the brake pedal.

EUU64500

⚠ WARNING

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

EAI40700

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 machine 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.

EAI10700

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 the throttle housing to the handlebar. Once these two are removed, the end of the cable can be held high to pour in several drops of lubricant. With the throttle grip disassembled, coat the metal surface of the grip assembly with a suitable all-purpose grease.

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.

EAI31300

Rear suspension

Lubricate the pivoting parts.

Recommended lubricant:
Lithium soap base grease

EAI20500

Front fork inspection

EUU65700

⚠ WARNING

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

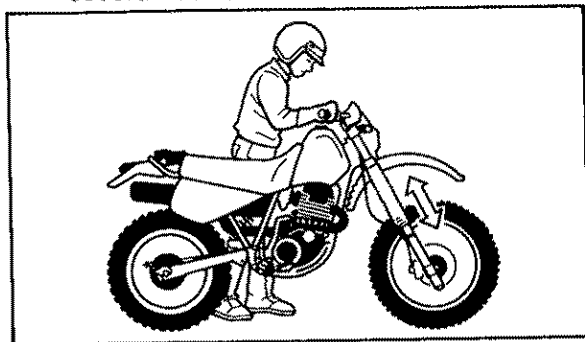
1. Visual check

Check any scratch/damage on the inner tube and excessive oil leakage with the front fork.

2. Operation check

Place the machine on a level place

- Hold the machine on an upright position with a rider's hands on the handlebar and apply the front brake.
- Pump the front fork up and down for several times.



EUU42500

CAUTION

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

Front fork adjustment

EUU66900

⚠ WARNING

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

1. Front fork air pressure adjustment.

- Elevate the front wheel by placing a suitable stand under the engine.

EUU05000

NOTE:

When checking and adjusting the air pressure, there should be no weight on the front end of the machine.

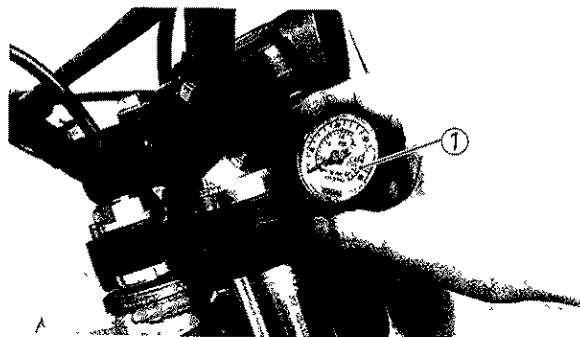
- Remove the valve cap from each fork.
- Using the air check gauge, check and adjust the air pressure
If the air pressure is increased, the suspension becomes stiffer, and if decreased, it becomes softer.

To increase:

Use an air pump or pressurized air supply

To decrease:

Release the air by pushing the valve.



1 Air check gauge

NOTE: _____

An optional air check gauge is available. Please ask a nearby Yamaha dealer.

P/No. 2X4-2811A-00.

Standard air pressure:

0 kPa (0 kg/cm², 0 psi)

Maximum air pressure:

120 kPa (1.2 kg/cm², 17 psi)

CAUTION: _____

Never exceed the maximum pressure, or oil seal damage may occur.

WARNING _____

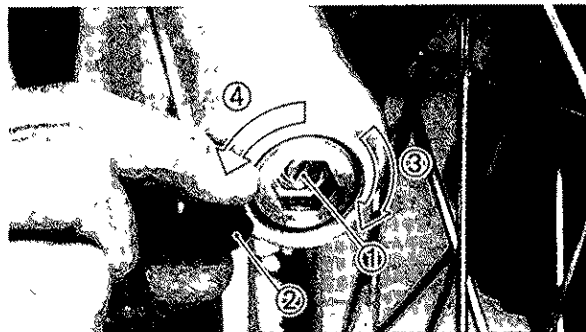
The difference between both the left and right tubes should be 10 kPa (0.1 kg/cm², 1.4 psi) or less.

d. Install the valve caps securely.

2. Damping adjustment:

- Remove the rubber cap from each fork.
- To increase the damping, turn the adjuster clockwise.

To decrease the damping, turn the adjuster counterclockwise.



- Adjuster
- Increase

- Rubber cap
- Decrease

Maximum: Fully turned-In position

S.T.D.:

13 clicks turns out from maximum

Minimum:

19 clicks turns out from maximum

EUU36300

CAUTION:

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

c. Install the rubber caps securely.

CAUTION:

Be sure to fit the rubber cap to prevent malfunction due to dust, lint, etc.

EA151501

Rear shock absorber

EUU67300

⚠ WARNING

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

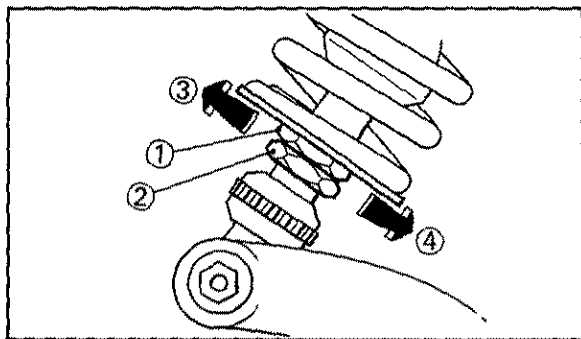
1. Do not tamper with or attempt to open the cylinder assembly.
2. Do not subject shock absorber to an open flame or other high heat source. This may cause the unit to explode due to excessive gas pressure.
3. Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping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

Rear shock absorber adjustment

1. Spring

The spring preload of the rear shock absorber can be adjusted to suit the rider's preference, weight, and the course conditions.

- Loosen the lock nut.
- To increase the preload, turn the adjuster clockwise. To decrease the preload, turn the adjuster counterclockwise.

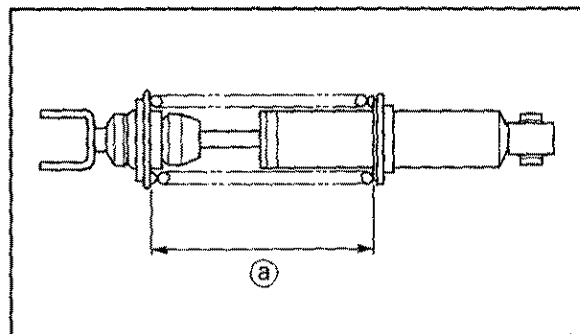


- | | |
|---------------------------|---------------------------|
| 1 Adjuster | 2 Lock nut |
| 3 Decrease spring preload | 4 Increase spring preload |

CAUTION:

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

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



a Measurement "A"

Measurement "A":

Standard length (installed).

222 mm (8.7 in)

Minimum length (installed):

215 mm (8.5 in)

Maximum length (installed):

228 mm (9.0 in)

EUU05200

NOTE:

When adjusting, use the special wrench.

Tightening torque

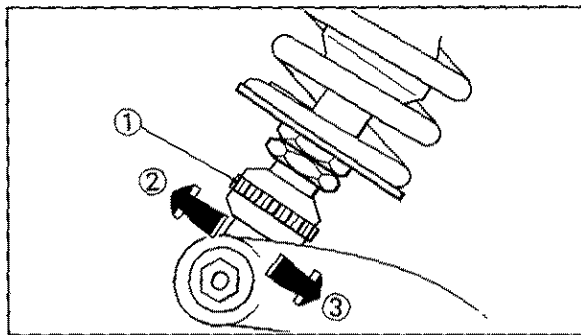
42 Nm (4 2 m•kg 30 ft•lb)

EUU36400

CAUTION:

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

- 2 Rebound damping force adjustment
To increase the rebound damping force, turn the adjuster clockwise. To decrease the rebound damping force, turn the adjuster counterclockwise



1 Damping adjuster

2 Decrease

3 Increase

Maximum. Fully turned-In position
S.T.D..

8 clicks turns out from maximum

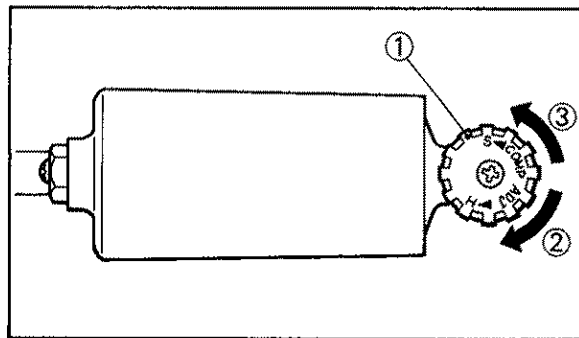
Minimum

24 clicks turns out from maximum

CAUTION:

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

3. Compression damping force adjustment:
 To increase the compression damping force, turn the adjuster clockwise.
 To decrease the compression damping force, turn the adjuster counterclockwise.



1 Adjuster

2 Increase

3 Decrease

Maximum: Fully turned-In position

S.T.D.:

10 clicks turns out from maximum

Minimum:

20 clicks turns out from maximum

EUU36300

CAUTION:

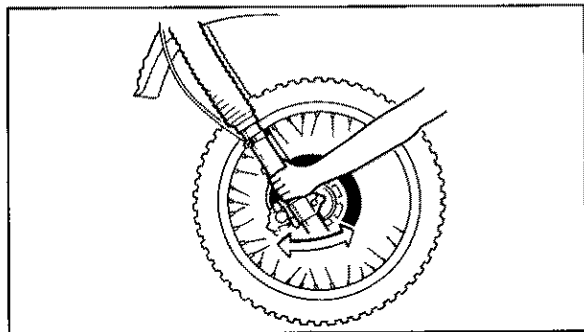
Never attempt to turn the adjuster beyond the maximum or minimum setting.

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 machine 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

Check the level of the battery electrolyte and see that the terminals are tight. Add distilled water if the electrolyte level is low.

CAUTION:

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

⚠ WARNING

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

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

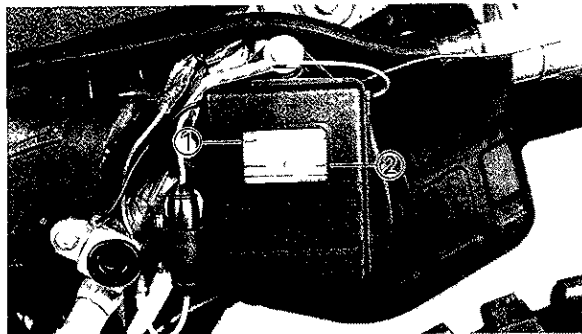
Eyes: Flush with water for 15 minutes and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes etc., away. Ventilate when charging or using in an enclosed space. Always shield your eyes when working near batteries.

KEEP OUT OF REACH OF CHILDREN.

Replenishing the battery fluid

A poorly maintained battery will deteriorate quickly. The battery fluid should be checked at least once a month.

1. The level should be between the upper and lower level marks. Use only distilled water if refilling is necessary.



1 Upper level

2 Lower level

EUU33800

CAUTION:

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

⚠ WARNING

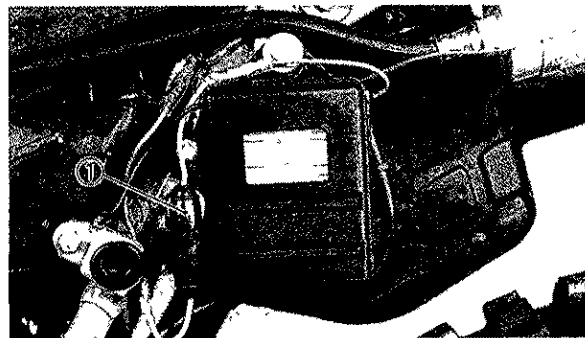
Battery fluid on the chain can cause premature failure and possibly an accident.

2. When the machine will not be used for a month or longer, remove the battery and store it in a cool, dark place. Completely recharge the battery before reusing.
3. If the battery will be stored for a longer period than the above, check the specific gravity of the fluid at least once a month and recharge the battery when it is too low.
4. Always make sure the connections are correct when putting the battery back in the machine.
Make sure the breather pipe is properly connected and is not damaged or obstructed.

Fuse replacement

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

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



1 Main fuse

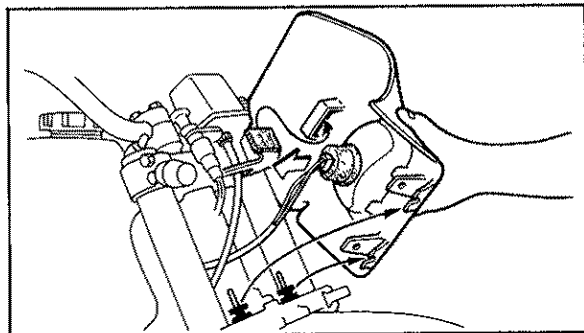
CAUTION:

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

Replacing the headlight bulb

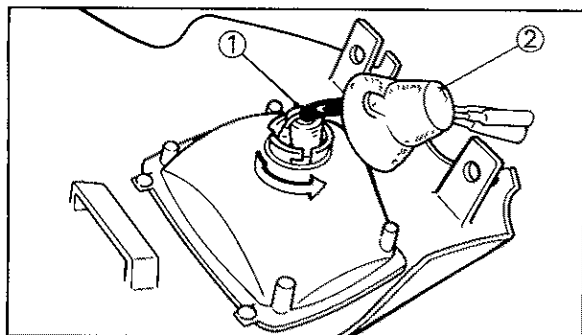
If the headlight bulb burns out, replace the bulb as follows:

1. Remove the headlight assembly.



- 2 Disconnect the leads, and remove the cover.

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



1 Bulb holder

2 Cover

EUU66000

⚠ WARNING

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

4. Slip a new bulb into position and secure it with the bulb holder.

5. Connect the headlight leads and install the headlight assembly to the frame.
6. If the headlight beam adjustment is necessary, ask a Yamaha dealer to make adjustment.

Front wheel removal

⚠ WARNING

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

EUU65700

⚠ WARNING

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

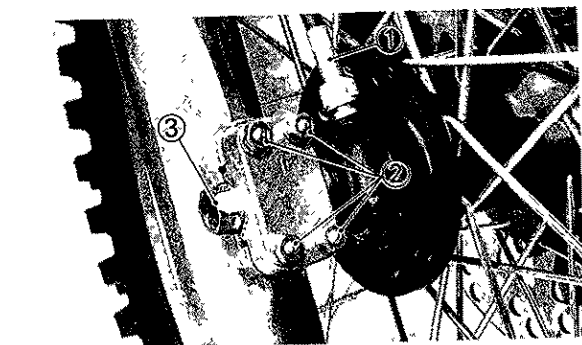
1. Elevate the front wheel by placing a suitable stand under the engine.
2. Remove the wire holder and speedometer cable.

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.

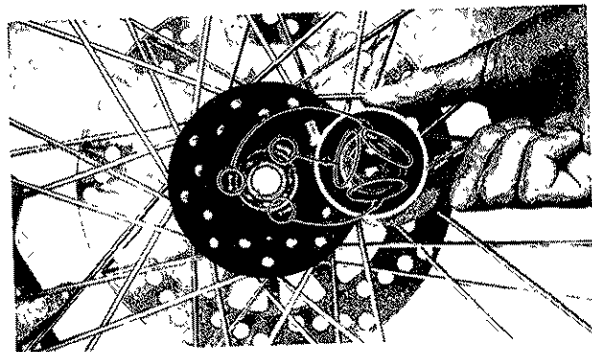


1. Speedometer cable 2 Axle holder nut 3 Wheel axle
3. Loosen the wheel axle holder nuts.
 4. Remove the axle and the front wheel. Make sure the machine is properly supported.

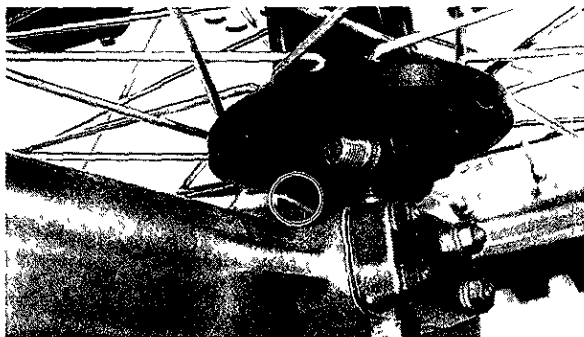
EUU05400

NOTE:

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



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

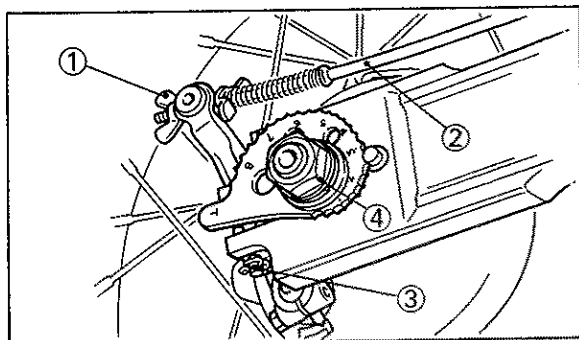
Axle holder nut torque:
8 Nm (0.8 m•kg, 5.8 ft•lb)

Rear wheel removal

WARNING

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

1. Elevate the rear wheel by placing a suitable stand under the engine
2. Remove the brake adjuster and brake rod from the brake cam lever
3. Loosen the axle nut.
4. Remove the rear arm end pins.
5. Push the wheel forward and remove the drive chain.
6. Remove the wheel assembly backward.

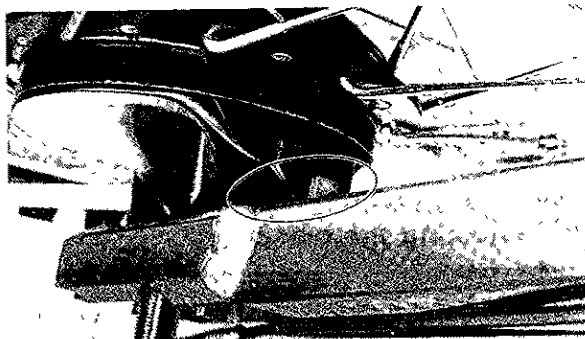


- 1 Adjuster 2 Brake rod 3 Rear arm end pin
4 Axle nut

Rear wheel installation

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

1. Be sure the swingarm boss correctly engages the locating slot on the brake shoe plate.



2. Make sure the right chain puller is installed with the number punched side outward.
3. Adjust the drive chain.
4. Make sure the axle nut is properly torqued.

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

5. Adjust the rear brake. (See page 8-16)

EUU64500

⚠ WARNING

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

EAJ50000

Troubleshooting

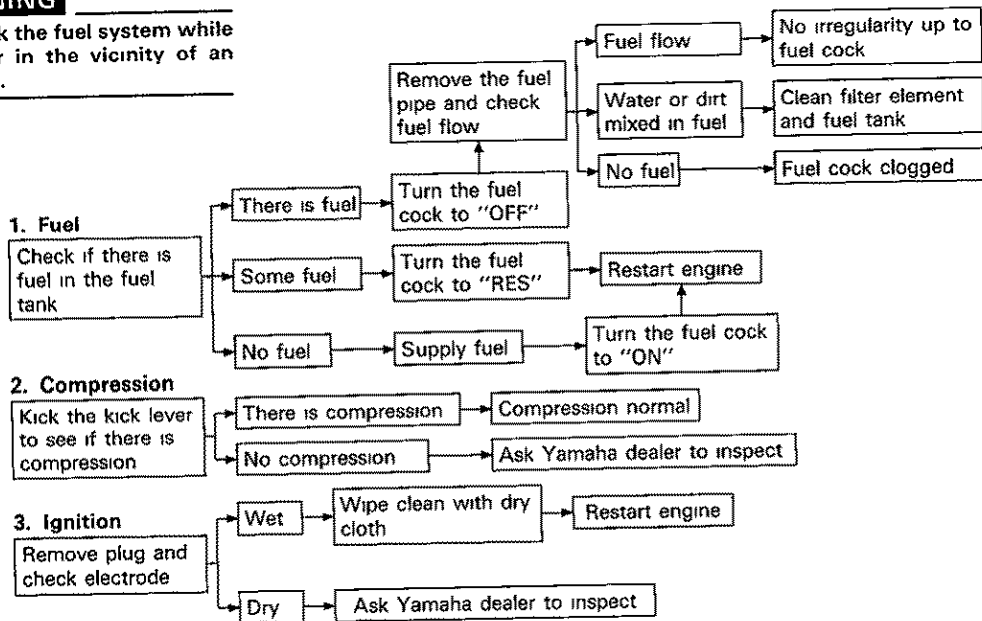
Although Yamaha machines receive a rigid inspection before shipment from the factory, trouble may occur during operation. Any problem in the fuel, compression, or ignition systems can cause poor starting and loss of power. The troubleshooting chart describes a quick, easy procedure for checking these systems.

If your machine requires any repair, bring it to a Yamaha dealer. The skilled technicians at a Yamaha dealer have the tools, experience, and know-how to properly service your machine. Use only genuine Yamaha parts on your machine. 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

▲ WARNING

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



CLEANING AND STORAGE

EAK00200

A. CLEANING

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

- 1 Before cleaning the machine:
 - a. Block off the end of 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

EUU34600

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

EAK01000

B. STORAGE

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

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

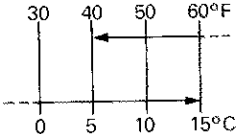
EUU05800

NOTE: _____

Make any necessary repairs before storing the machine.

SPECIFICATIONS

Model	TT600E
Dimension:	
Overall length	2,180 mm (85.8 in)
Overall width	870 mm (34.3 in)
Overall height	1,270 mm (50.0 in)
Seat height	935 mm (36.8 in)
Wheel base	1,485 mm (58.5 in)
Minimum ground clearance	300 mm (11.8 in)
Basic weight:	
With oil and full fuel tank	137 kg (302 lb)
Engine	
Type	Air cooled 4-stroke, gasoline SOHC
Model	3SW5
Cylinder arrangement	Single cylinder, Forward inclined
Displacement	595 cm ³
Bore × Stroke	95.0 × 84.0 mm (3.740 × 3.307 in)
Compression ratio	8.5 : 1
Starting system	Kick starter
Lubrication system	Dry sump

Model	TT600E
Engine oil (4-cycle) Type  Capacity Periodic oil change With oil filter replacement Total amount Oil tank	SAE 20W40 type SE motor oil (If temperature does not go below 5°C/40°F) SAE 10W30 type SE motor oil (If temperature does not go above 15°C/60°F) 2.0 L (1.8 Imp qt, 2.1 US qt) 2.1 L (1.9 Imp qt, 2.2 US qt) 2.4 L (2.1 Imp qt, 2.5 US qt) 1.9 L (1.7 Imp qt, 2.0 US qt)
Air filter	Wet type element
Fuel. Type Tank capacity Reserve amount	Regular gasoline For Australia Unleaded fuel only 11 L (2.4 Imp gal, 2.9 US gal) 3 L (0.7 Imp gal, 0.8 US gal)
Carburetor Type/manufacture	Y27PV × 1/TEI KEI

Model	TT600E
Spark plug: Type/manufacturer Gap	DP7EA-9/NGK 0.8 ~ 0.9 mm (0.031 ~ 0.035 in)
Clutch type:	Wet, multiple-disc
Transmission: Primary reduction system Primary reduction ratio Secondary reduction system Secondary reduction ratio Transmission type Operation	Spur gear 74/31 (2.387) Chain drive 50/14 (3.571) Constant mesh 5-speed Left foot operation
Gear ratio: 1st 2nd 3rd 4th 5th	30/13 (2.307) 27/17 (1.588) 24/20 (1.200) 21/22 (0.954) 21/27 (0.777)

Model	TT600E
Chassis Frame type Caster angle Trail	Diamond 28° 118 mm (4 65 in)
Tire Type Size — Front Rear	With tube 100/80-21-4PR 140/80-18-4PR
Brake Front brake type Operation Rear brake type Operation	Disc brake Right hand operation Drum brake Right foot operation
Suspension Front Rear	Telescopic fork Swing arm (New monocross suspension)
Shock Absorber Front Rear	Coil spring, Air, Oil damper Gas, Coil spring, Oil damper

Model	TT600E
Wheel travel: Front Rear	305 mm (12.0 in) 270 mm (10.6 in)
Electrical Ignition system Generator system Battery type/capacity	CDI magneto AC magneto 6N2/6V 2AH
Headlight type	Bulb
Bulb wattage/quantity Headlight Tail/brake light Flasher light Meter light	6V 25W/25W 6V 3W/10W 6V 8W × 4 6V 3W

YAMAHA MOTOR CO.,LTD.

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WIRING DIAGRAM

