# **YAMAHA**

OWNER'S MANUAL

# FARIOOO

Oviver a manufactured assessment of 392 by Vensus Poter Ce, Ltd.

1st Edition June 136.2

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FZR1000
OWNER'S MANUAL
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Printed in Japan

# ilsl

Congratulations on your purchase of the Yamaha FZR1000. 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.

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INTRODUCTION

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that must be taken to avoid tamer motorcycle

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



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

#### **A** 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.

EUU00000

#### NOTE

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

EUU13800

#### 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.

Engine i motivatura califeration di accesso di la

EUU60100

# **▲** WARNING

PLEASE READ THIS MANUAL CARE-FULLY AND COMPLETELY BEFORE OPERATING THIS MOTORCYCLE.

CONTENTS

EUU75802

# A WARNING

Certain components used in the construction of this machine contain asbestos. Asbestos may be found in gaskets and heat insulators. Breathing asbestos dust is hazardous to health. When servicing parts containing asbestos, consult a Yamaha dealer.

Feet hose absorber mich with 1897

EAA30001			
To by market maritim is (	CONTEN	TS	
THINK OF YOUR SAFETY		"FUEL" (Reserve) switch	
DESCRIPTION	2-1	Shift pedalFront brake lever	. 4-/
MOTORCYCLE IDENTIFICATION		Rear brake pedal	
Identification numbers record Vehicle identification number		Fuel tank capStarter lever (CHOKE)	
(For Spain)		Steering lockParking	
(Except for Spain)	3-2	Seat	
Engine serial number	3-3	Helmet holder	
CONTROL FUNCTIONS	4-1	Cowling removal	4-13
Main switch	4-1	Front fork	4-14
Indicator lights	4-2	Rear shock absorber	4-14
Oil level indicator circuit check	4-3	Exup	4-15
Speedometer		Sidestand/clutch switch operation	4-16
Engine temperature gauge	4-5	check	4-17

PRE-OPERATION CHECKS 5-1 Parkir	ng6-7
Brakes 5-3	Tinempostosi bibli sasis
	DIC MAINTENANCE AND
	REPAIR 7-1
	kit 7-1
	dic maintenance/lubrication 7-3
	e specifications
	e oil
	ng system 7-11
	ic fan 7-15
Lights and signals 5-12 Air file	ter 7-15
	rator adjustment 7-17
Fuel 5-12 Idle s	peed adjustment 7-18
Throt	tle cable adjustment 7-19
OPERATION AND IMPORTANT Valve	clearance adjustment 7-19
RIDING POINTS 6-1 Spark	plug inspection 7-20
Starting the engine 6-1 Front	brake lever position
	ment
Shifting 6-4 Rear I	orake adjustment 7-21
Recommended shift point 6-5 Brake	light switch adjustment 7-22
Engine break-in 6-5 Check	king the front and rear
brake	pads7-23

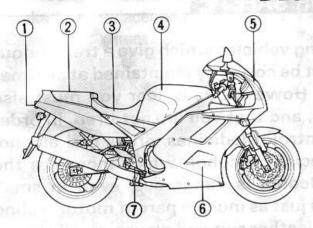
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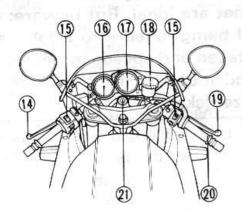
Inspecting the brake fluid level 7-23	Battery 7-36
Brake fluid replacement 7-25	Battery maintenance 7-37
Clutch adjustment 7-25	Fuse replacement 7-38
Drive chain slack check 7-25	Headlight 7-39
Drive chain slack adjustment 7-26	Taillight bulb replacement 7-39
Drive chain lubrication 7-28	Front wheel removal 7-39
Cable inspection and lubrication 7-28	Front wheel installation 7-41
Throttle cable and grip	Rear wheel removal 7-42
lubrication 7-29	Rear wheel installation 7-44
Brake and shift pedals 7-29	Troubleshooting 7-45
Brake and clutch levers 7-29	Troubleshooting chart 7-46
Sidestand 7-29	Semect
Rear suspension 7-29	CLEANING AND STORAGE 8-1
Front fork inspection 7-30	A. Cleaning 8-1
Front fork adjustment7-30	B. Storage 8-2
Rear shock absorber 7-31	HOANG ROWING
Rear shock absorber adjustment 7-32	SPECIFICATIONS 9-1
Recommended combinations of the	and the second of the second o
front fork and the rear shock	WIRING DIAGRAM
absorber settings 7-35	Recognise Assistancial and Assistance Section 2
Steering inspection	Farmer and Alexander
Wheel bearings 7-36	

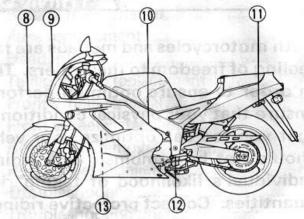
# A THINK OF YOUR SAFETY:

Both motorcycles and mopeds are fascinating vehicles which give a tremendous feeling of freedom to their riders. They must be correctly maintained at all times in order to ensure optimum performance. However, as a rider you must also ensure that your physical condition is good, and that you are not tired, in order that you too can optimize your vehicle control. Medicines, drugs and alcohol should not be combined with riding, especially alcohol, which increases the individual's likelihood of taking risks. Alcohol is dangerous, even in small quantities. Correct protective riding gear is just as much a part of motorcycling safety as the safety belt is in the car; a good leather suit and gloves, sturdy boots and a good quality, properly fitting crash helmet are ideal. But beware: good protective clothing can result in the individual being lulled into a false sense of security. When this happens more risks are taken and speeds increase... this particularly applies in wet weather. The good motorcyclist therefore rides defensively and protectively in order to minimize risks.

# DESCRIPTION







- 1. Tail/brake light
- Seat cover
- 3. Seat
- Fuel tank
- 5. Upper cowl
- Lower cowl
- Brake pedal
- 8. Headlight
- 9. Auxiliary light (Except for F)
- 10. Starter lever(CHOKE) 21. Main switch

- Helmet holder
- 12. Shift pedal
- 13. Radiator
- 14. Clutch lever
- 15. Handlebar switches
- 16. Speedometer
  - 17. Tachometer
  - 18. Engine temperature gauge
  - 19. Brake lever
  - 20. Throttle grip

# MOTORCYCLE IDENTIFICATION

EAA60800

#### Identification numbers record

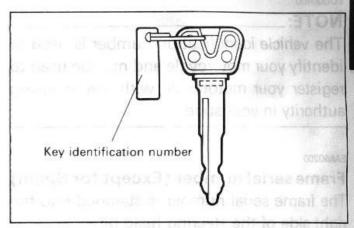
1. KEY IDENTIFICATION NUMBER:

2. VEHICLE IDENTIFICATION NUMBER: FRAME SERIAL NUMBER:

3. ENGINE SERIAL NUMBER:

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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 Spain)

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

EUU00400

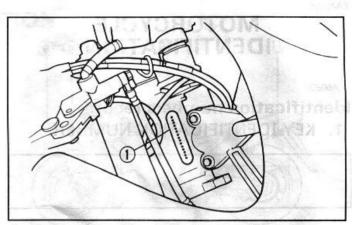
#### NOTE:

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.

EAA60200

Frame serial number (Except for Spain)
The frame serial number is stamped into the right side of the steering head pipe.

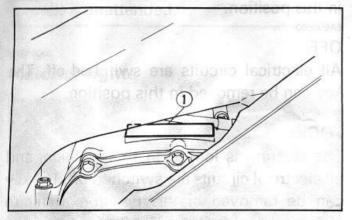
tumber in the spaces of avided to assist you



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

#### 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.

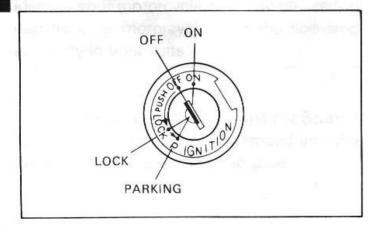
EAB00000

#### **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.

EAB00701

#### 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 4-10) for operation instructions.

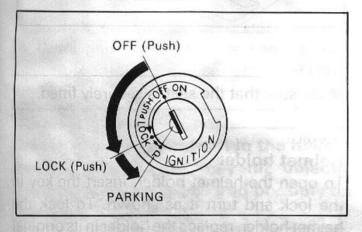
EAB01200

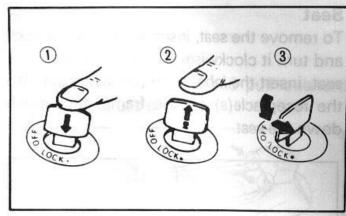
#### PARKING:

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. EAC30401

#### 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 and release it, turn it counterclockwise to "LOCK," and remove it. To release the lock, turn the key to "OFF".





1. Push

2. Release

3. Turn

EUU61400

### **▲** WARNING

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

EAC35101

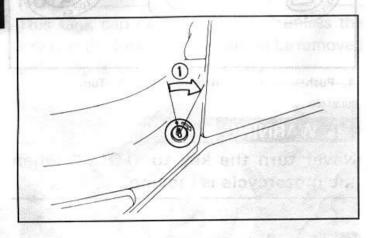
#### Parking

With the main switch in the "LOCK" position, push the key into the main switch, release it, and then turn to the "P" position.

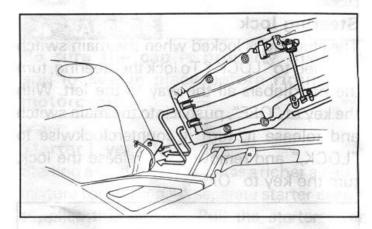
EAC40801

#### Seat

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



1. Open



EUU01700

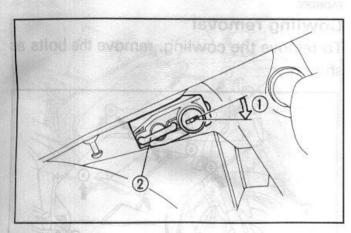
NOTE:

Make sure that the seat is securely fitted.

EAC50001

#### Helmet holder

To open the helmet holder, insert the key in the lock and turn it as shown. To lock the helmet holder, replace the holder in its original position.



1. Open

2. Helmet holder

EUU72900

al

#### **A** WARNING

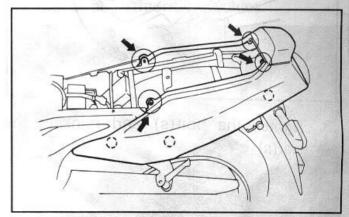
Never ride with a helmet in the helmet holder. The helmet may hit objects, causing loss of control and possibly an accident.

EAC72501

#### Side cover

#### Removal:

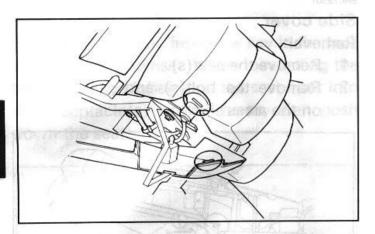
- 1. Remove the seat(s).
- Remove the bolt(s) and pull outward on the areas shown.



3. Remove the side cover while lowering it slightly.

#### Installation:

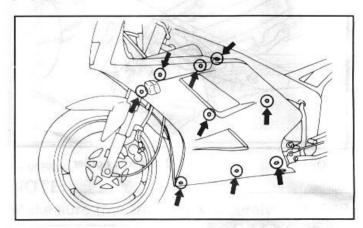
- 1. Fit the side cover pawl into the hole in the end cover.
- 2. Insert the side cover projection into the grommets in the frame holes.

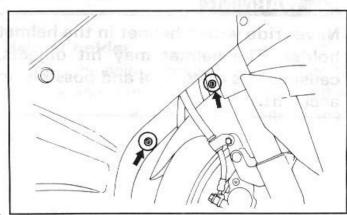


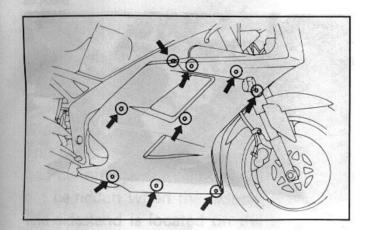
Tighten the bolt(s) and reinstall the seat(s). EAD60300

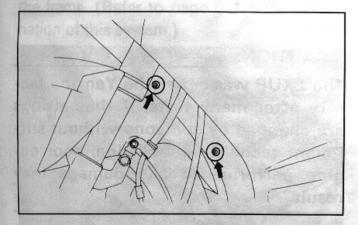
### Cowling removal

To remove the cowling, remove the bolts as shown.





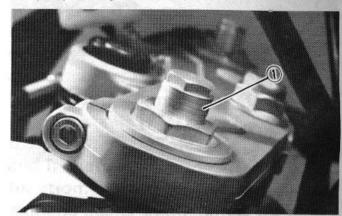




EAC81101

# Front fork (Secretaria Secretaria Secretaria

The spring preload of the front fork can be adjusted to suit the rider's preference, motorcycle's load (ex: optional accessories etc.) and road conditions. Refer to page 7-30 for proper adjustment procedures.



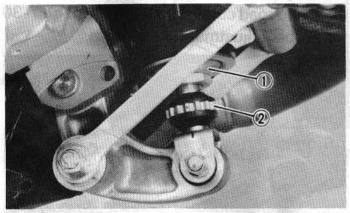
1. Spring preload adjuster

EAC90001 VISWOQ e38millu Jauenza) 9UXI

# Rear shock absorber

The spring preload and the damping force of the rear shock absorber can be adjusted to suit the rider's preference, motorcycle's

load (ex: optional accessories etc.) and riding conditions. Refer to page 7-32 for proper adjustment procedures.

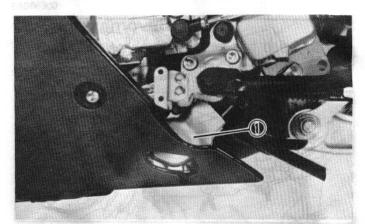


- 1. Spring preload adjuster
- 2. Damping force adjuster

EAB02500

#### EXUP (Exhaust ultimate powervalve)

This model is equipped with an EXUP system within the exhaust pipe. This valve is always activated by a computer-controlled servomotor in accordance with engine rpm.



1. EXUP

EUU42800

#### **CAUTION:**

The EXUP was set at the Yamaha factory after many tests. If the settings are changed by someone without sufficient technical knowledge, poor engine performance and damage may result. EUU42900

#### **CAUTION:**

If the EXUP does not operate, ask a Yamaha dealer to inspect.

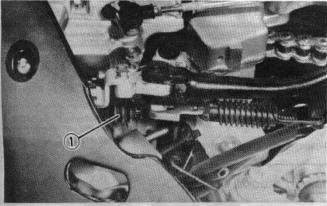
EAD30101

IS

ay

#### 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 6-1 for an explanation of this system.)



1. Sidestand switch

EUU68901

**▲** WARNING

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

EAD30800

# 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.

EUU69100

# **A** WARNING

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

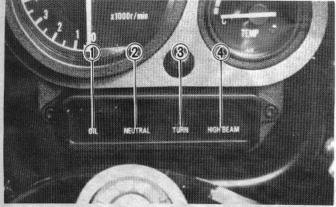
EUU00700

NOTE:\_

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

EAB10000

#### Indicator lights



- 1. "OIL LEVEL" indicator light
- 2. "NEUTRAL" indicator light
- 3. "TURN" indicator light
- 4. "HIGH BEAM" indicator light

EAB12200

"TURN" indicator light (green):

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

EAB10200

"NEUTRAL" indicator light (green):

This indicator comes on when the transmission is in neutral.

EAB10300

"HIGH BEAM" indicator light (blue):

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

EAB10600

"OIL LEVEL" indicator light (red):

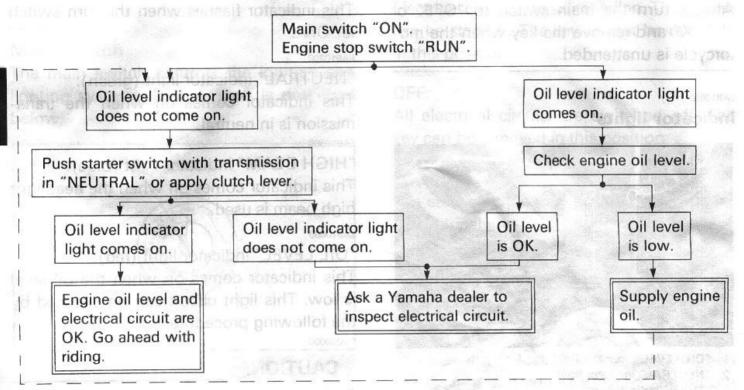
This indicator comes on when the oil level is low. This light circuit can be checked by the following procedure.

EUU30000

#### **CAUTION:**

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

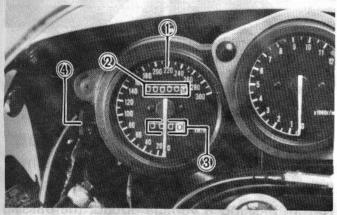
#### Oil level indicator circuit check



EAB40002

#### Speedometer Speedo

The speedometer shows riding speed. This speedometer is equipped with an odometer and trip odometer. The trip odometer can be reset to "O" 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.

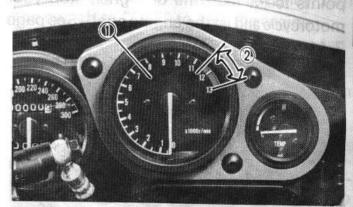


- 1. Speedometer 3. Trip odometer
- 2. Odometer
- 4. Reset knob headwint gives a signal to the driver of the

EAB40200

# Tachometer San Malegare enigna

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



1. Tachometer

2. Red zone

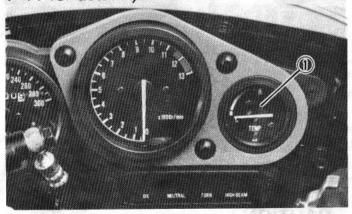
EUU30400

#### **CAUTION:**

Do not operate in the red zone Red zone: 11,500 r/min and above EAB50100

#### 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 7-11 for details.)



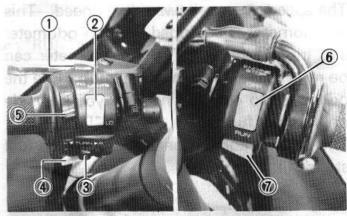
Engine temperature gauge
EUU30500

#### **CAUTION:**

When the engine is overheated, do not continue riding.

EAB60000

#### Handlebar switches:



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

EAB61001

#### "PASS" switch

Before 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.

# "LIGHTS" (Dimmer) switch

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

EAB62101

# "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. ting circurrent off syntohi

EAB60200

# "HORN" switch

Press the switch to sound the horn.

### "LIGHTS" switch

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

EAB60901

# "ENGINE STOP" switch

The engine stop switch is a safety device for use in an emergency such as when the motorcycle overturns or if trouble occurs in the throttle system. Turn the switch to "RUN" to start the engine. In case of emergency, turn the switch to "OFF" to stop the engine.

EAB60701

### "START" switch

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

EUU30700

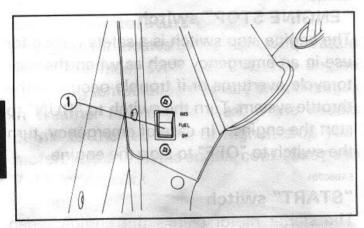
#### CAUTION:

See starting instructions starting the engine.

EAB62201

# "Fuel" (Reserve) switch

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



1. "FUEL" (Reserve) switch

**EUU12900** 

NOTE:

When the switch is turned to "RES", about 3.4 L (0.7 Imp gal, 0.9 US gal) remain in the fuel tank.

EAB70201

# Clutch lever man as a min (1) 22 Though

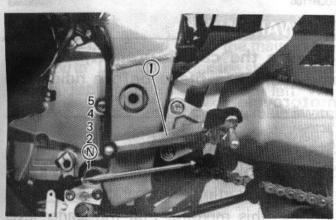
This model is provided with a hydraulic clutch. The clutch lever is located on the left handlebar and the starting circuit cut-off switch is incorporated in the clutch lever holder. Pull the clutch lever toward the handlebar to disengage the clutch, and release the lever to engage the clutch. The lever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

EAB80001

# Shift pedal and sound to sound and agent

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

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



1. Shift pedal

N. Neutral

EAB90401 19791 BRIT (LEFT), QUI DOMINIVI

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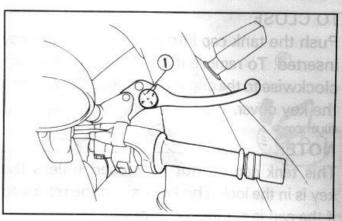
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th

#### Front brake lever

The front brake lever is located on the right handlebar. Pull it toward the handlebar to activate the front brake. The front brake lever is equipped with a lever position adjuster. Refer to page 7-21 for adjustment.



1. Lever position adjuster

EAB90101

#### Rear brake pedal

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

EAC00501

#### Fuel tank cap

TO OPEN:

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

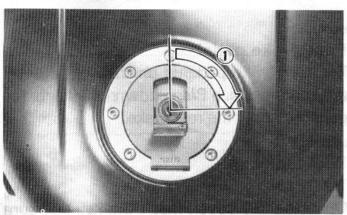
#### TO CLOSE:

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

EUU01200

#### 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.



1. Open

EUU61100

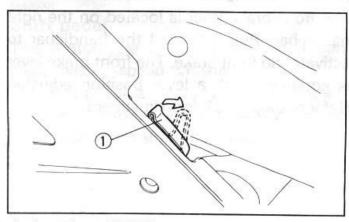
### **A** WARNING

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

EAC20501

#### Starter lever (CHOKE)

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



4-9 1. Starter lever (CHOKE)

# PRE-OPERATION CHECKS

Before using this motorcycle, check the following points:

Item	Routine	Page	
Front brake	Check operation, free play, fluid level, and brake fluid leakage.  Top-up with DOT#4 brake fluid if necessary.	5-3~5-4,	
Rear brake	Check operation, free play, fluid level, and fluid leakage. Top-up with DOT#4 (or #3) brake fluid if necessary.	7-21~7-25	
Clutch	Check operation, fluid level, and fluid leakage.  Top-up with DOT#4 (or #3) brake fluid if necessary.	5-3~5-4, 7-23~7-25	
Throttle grip/Housing	Check for smooth operation. Lubricate/Adjust if necessary.	5-4, 7-19, 7-29	
Engine oil	Check oil level/add oil as required.	5-4, 7-7~7-11	
Coolant reservoir tank	Check coolant level/top up as required.	5-5, 7-11~7-14	
Drive chain	Check chain slack and condition. Adjust if necessary.	5-5, 7-25~7-28	
heels/Tires Check tire pressure, wear, damage.		5-6~5-12, 7-39~7-44	
Control/Meter cable	Check for smooth operation. Lubricate if necessary.	7-28	
Brake and shift pedal shafts	Check for smooth operation. Lubricate if necessary.	7-29	
Brake and clutch lever pivots	Check for smooth operation. Lubricate if necessary.	7-29	

- New tires have a relatively low grip on the road surface until they have been slightly worn. Therefore, approx. 100km (60 mi) should be traveled at normal speed before any high-speed riding is done.
- Before any high-speed runs, the tires should de warmed-up the tires sufficiently.
- Always inflate to the correct tire pressure according to the operating conditions.

EAE94100

#### Tubeless tires and cast wheels

replacement. Other dres may

ieque la palimina :

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

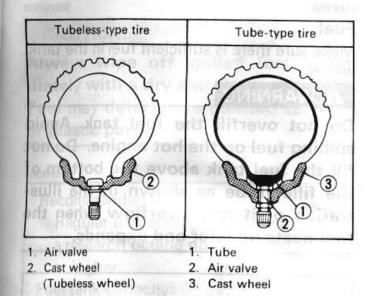
EUU68600

# **A** 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.

Tire	Wheel Stutte and a	
TUBELESS	SUITABLE FOR TUBELESS TIRES	
	7.00	
TR412	p day of a	

The tires and wheels are marked as shown.



Tube-type Wheel

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→ Tube-type Tires only Tubeless Wheel

→ Tube-type or Tubeless tires

GERMANY AND AUSTRIA:
IT IS NOT ALLOWED TO USE TUBE-TYPE
TIRES ON A MOTORCYCLE ORIGINALLY
EQUIPPED WITH TUBELESS TIRES.

EUU68700

# **A** WARNING

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

After installing a tire;

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

- Always inspect the wheels before a ride. Check for cracks, bends, or warpage of the 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.
- 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.

Check the operation of the headlight switch.

turn switch, brake light switch, horn switch,

statel switch, main switch, etc.

 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 7-6 to find the correct torque.

EAE70000

# Lights and signals

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

EAE70700

#### **Switches**

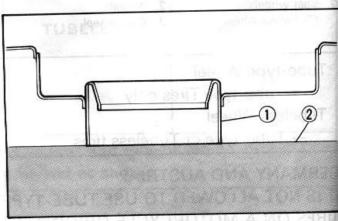
Check the operation of the headlight switch, turn switch, brake light switch, horn switch, starter switch, main switch, etc. EAE80000

#### Fuel

Make sure there is sufficient fuel in the tank.

#### **A** 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 leve

EUU39302

#### CAUTION:

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

EAE81400

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ne

Recommended fuel:

Regular unleaded gasoline with a research octane number of 91 or higher.

Fuel tank capacity:

Total:

19.0 L (4.2 Imp gal, 5.0 US gal) Reserve:

3.4 L (0.7 Imp gal, 0.9 US gal)

EUU12700

#### NOTE GIAS GOTTAGGO

- 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.

tor any length of time in a closed

time Always operate a vour marercycle if are area with adequets

area. The exhaust fumes are

horoughly familiar with all open

controls and their functions.

a Yamaha dealer regarden an

or function that you do not

ltom o de	Routine	Page
Item Sidestand pivot	Check for smooth operation. Lubricate if necessary.	7-29
Fittings/fasteners	Check all chassis fittings and fasteners. Tighten/Adjust, if necessary.	5-12, 7-6
Fuel tank	Check fuel level/top-up as required.	5-12~5-13
Lights and signals	Check for proper operation.	5-12, 7-39

#### 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.

alosh of talk a stal

# **WARNING**

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

EAE12101

# Brakes (See page 7-21 for details)

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

# **A** WARNING

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

Brake fluid Check the brake fluid level. Add fluid if necessary. Recommended brake fluid: DOT #4

EUU13500

NOTE:

If DOT #4 is not available, #3 can be used for the rear brake only.

Check the disc pads. Refer to page 7-23.

EUU02201

leakage is found : STON

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

EAE11601

# Brake/Clutch fluid leakage

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

returns by spring force when released

a Yamaha dealer to make any necessary ad

EUU37801

## **CAUTION:**

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

EUU62500

# **A WARNING**

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

EAE30200

Throttle grip (See page 7-19 for details)

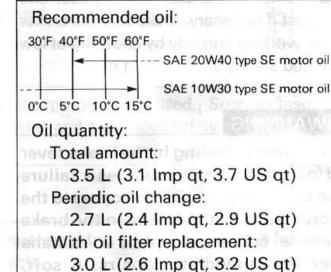
Turn the throttle grip to see if it operates properly, and check the free play. If the free play is incorrect, adjust it. Make sure the grip returns by spring force when released. Ask a Yamaha dealer to make any necessary adjustments.

EAE40100

Engine oil (See page 7-7 for details)

Make sure the engine oil is at the specified

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



EUU08000

NOTE:

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

EAE60001

#### 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 7-11 for details.)

EUU62600

# **WARNING**

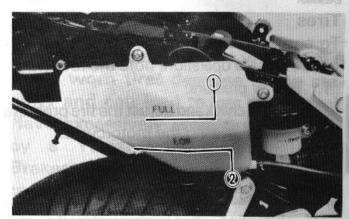
Do not remove the radiator cap when the engine is hot.

EUU30900

PI

#### **CAUTION:**

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



1. "FULL" level

2. "LOW" level

Reservoir tank capacity: 0.4 L (0.35 Imp qt, 0.42 US qt)

EAE50001

# Chain (See page 7-25 for details)

Check the general condition of the chain and the chain slack before every ride. Lubricate and adjust the chain as necessary. EAE95501

#### **Tires**

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

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

EUU67500

# **A WARNING**

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

Basic weight: With oil and full fuel tank	235 kg (518 lb)	
Maximum load*:	205 kg (452 lb)(D)(S)(F)(A) 185 kg (408 lb)(SF)(E) 174 kg (384 lb)	
Cold tire pressure:	Front	Rear
Up to 90 kg (198 lb) load*	250 kPa (2.5 kgf/cm <sup>2</sup> , 36 psi)	250 kPa (2.5 kgf/cm <sup>2</sup> , 36 psi)
90 kg (198 lb) ~ And Maximum load*	250 kPa (2.5 kgf/cm <sup>2</sup> , 36 psi)	290 kPa (2.9 kgf/cm², 42 psi)
High speed riding	250 kPa (2.5 kgf/cm², 36 psi)	290 kPa (2.9 kgf/cm <sup>2</sup> , 42 psi)

<sup>\*</sup>Load is the total weight of cargo, rider, passenger, and accessories.

EUU67701

# **A** WARNING

Proper loading of your motorcycle is important for several characteristics of your motorcycle; such as handling, braking, performance and safety. Do not carry loosely packed items that can shift. Securely pack your heaviest

items close to the center of the motorcycle, and distribute the weight evenly from side to side. Properly adjust the suspension for your load, and check the condition and pressure of your tires. NEVER OVERLOAD YOUR MOTORCYCLE. Make sure the total weight of the cargo, rider, passenger, and accessories (fairing, saddlebags, etc. if approved for this model) does not exceed the maximum load of the motorcycle. Operation of an overloaded motorcycle could cause tire damage, an accident, or even injury.

# 2. Tire inspection

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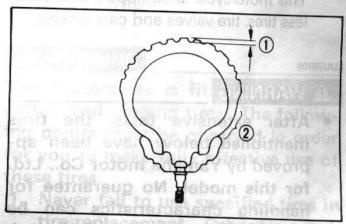
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Always check the tires before operating the motorcycle. If center tread depth reaches the limit as shown, if the tire has a nail or glass fragments in it, or if the side wall is cracked, contact a Yamaha dealer immediately and have him replace the tire.

EUU67901

# **A** WARNING

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



have a danger of burshing

1. Tread depth 2. Side wall

high-speeds

Minimum tire tread depth (front and rear)

1.0 mm (0.04 in)

EUU12600

#### NOTE:

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

3. Tire information

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

EUU76700

# **A** WARNING

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

- The use of tire valves and valve cores other than listed below could cause tire deflation during extreme high speed riding. Always use genuine parts or their equivalent for replacement.
- Be sure to install the valve caps securely, as these are important to prevent air pressure leakage during extreme high speed riding.

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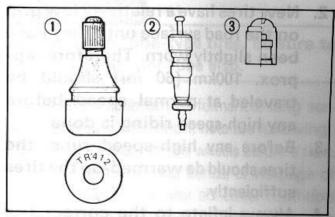
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Manufacture	Size	Туре
Bridgestone	130/60 VR17-V280	CY17
Dunlop	130/60 VR17-V280	K510F
Pirelli	130/60 ZR17	MP7S
Michelin	130/60 ZR17	A59X
Metzeler	130/60 ZR17	ME33

#### REAR:

Manufacture	Size	Type
Bridgestone	170/60 VR17-V280	CY20
Dunlop	170/60 VR17-V280	K510
Pirelli	170/60 ZR17	MP7S
Michelin	170/60 ZR17	M59X
Metzeler	170/60 ZR17	ME55A

	Type	
Tire valve	TR412	
Valve core	#9000A (Genuine)	



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

EUU77601

# **A** WARNING

This motorcycle is fitted with super high-speed running tires. The following points must be observed in order for you to make fully effective use of these tires.

 Never fail to use specified tires in tire replacement. Other tires may have a danger of bursting at super high-speeds.

# OPERATION AND IMPORTANT RIDING POINTS

EUU67200

# **A** 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

# **A** WARNING

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

EAF17600

## Starting the engine

EUU02800

NOTE:

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

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

EUU69200 ure **WARNING** re-Before going through the following can steps, check the function of the sidehen stand switch and clutch switch. (Refer to page 4-17.) an anismist to are TURN MAIN SWITCH TO "ON" AND ENGINE STOP SWITCH TO "RUN" ing IF TRANSMISSION IS IN NEUTRAL IF TRANSMISSION IS IN GEAR AND SIDESTAND IS DOWN AND SIDESTAND IS UP PUSH STARTER SWITCH; PULL IN CLUTCH LEVER AND PUSH **ENGINE WILL START** STARTER SWITCH; ENGINE WILL START ename (als location, introduction entere avoidably wait at leaves once at their them the adden RETRACT SIDESTAND AND finely attempt should be tag short as possible PUT TRANSMISSION IN GEAR to present the better uncorrected and reverse the MOTORCYCLE CAN BE RIDDEN MOTORCYCLE CAN BE RIDDEN iams:

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- Turn the main switch to "ON" and the engine stop switch to "RUN".
- 2. 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.

- 3. Fully open the starter (CHOKE) and completely close the throttle grip.
- 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.

EUU35500

# **CAUTION:**

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

After starting the engine, turn back the starter (CHOKE) to the halfway position.

NOTE:	S STOV
For maximum engine life, neven hard with a cold engine!	
6. After the engine is warm, starter completely.  EUU02700  NOTE:	
The engine is warm when it remaily to the throttle with the stoff.	
EAF10800 NO TIE COLO FOR THAT LEE	
Starting a warm engine	
The starter (CHOKE) is not rec	
the engine is warm.	sevicembri
EUU31400 projoto troeffed airde pe	
CAUTION: VAS 10 1018	ago sitioni
See "Break-in section" price	or to oper-

ating the motorcycle for the first time.

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EUU18700

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EAF20002

## 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 4-7)

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.

EUU31501

#### CAUTION:

 Do not coast for long periods with the engine off, and do not tow the motorcycle a long distance. Even with gears in neutral, the transmission is only properly lubricated when the engine is running. Inadequate lubrication may damage the transmission.

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

# its travel (you will feel a stop villed 00002Aa Recommended shift point (For switzerland only)

The recommended shift points are shown in the table below.

alaen pnoi	Acceleration shift point km/h (mi/h)
1st → 2nd	23 (14)
2nd → 3rd	36 (22)
3rd → 4th	50 (31)
4th → 5th	60 (37)

EUU06600

## NOTE: \_

When shifting two gears down from 4th to 2nd, bring your motorcycle to a speed of 35 km/h (21 mi/h).

EAF30000

## 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.

EAF30700

- 0 ~ 150 km (0 ~ 90 mi):
   Avoid operation above 5,000 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.
- 150 ~ 500 km (90 ~ 300 mi):
   Avoid prolonged operation above 6,000 r/min. Rev the motorcycle freely through the gears, but do not use full throttle at any time.
- 500 ~ 1,000 km (300 ~600 mi):
   Avoid prolonged full throttle operation.
   Avoid cruising speeds in excess of 7,000 r/min.

EUU32000

## **CAUTION:**

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

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

EUU38700

## **CAUTION:**

Never let engine speeds enter the red zone.

EUU32200

## **CAUTION:**

If any engine trouble should occur during the break-in period, consult a Yamaha dealer immediately. EAF40000

## **Parking**

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

EUU63000

# **▲ 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.

Ca

# 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 CONSIDER-ATION THAT WEATHER, TERRAIN, GE-OGRAPHICAL LOCATIONS, AND A VA-RIETY OF INDIVIDUAL USES ALL TEND TO DEMAND THAT EACH OWNER ALTER THIS TIME SCHEDULE TO SHORTER IN-TERVALS TO MATCH THE ENVIRON-MENT. The most important points of motorcycle inspection, adjustment, and lubrication are explained in the following pages.

EUU63200

# **A** WARNING

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.

E

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

Recommended oil:

30°F 40°F 50°F 60°F

SAE 20W40 type SE motor oil

30°C 5°C 10°C 15°C

Oil quantity:

Total amount:

3.5 L (3.1 Imp qt, 3.7 US qt)

Periodic oil change:

2.7 L (2.4 Imp qt, 2.9 US qt)

With oil filter replacement:

3.0 L (2.6 Imp qt, 3.2 US qt)

EUU08000

## NOTE:

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

EUU32301

# **CAUTION:**

Do not put in any chemical additives. Engine oil also lubricates the clutch and additives could cause clutch slippage.

EUU32400

#### **CAUTION:**

Be sure no foreign material enters the crankcase.

- j. Start the engine and warm up for a few minutes. While warming up, check for oil leakage. If oil leakage is found, stop the engine immediately, and check for the cause.
- k. After the engine is started, the oil indicator light should go off if oil is filled to proper level.

EUU35100

#### **CAUTION:**

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

I. Install the lower cowl.

EAH52401

## Cooling system

If your motorcycle overheats

EUU70501

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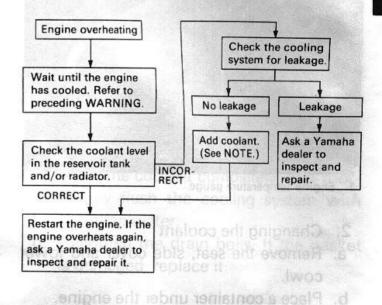
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# **WARNING**

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. Open the radiator cap as follows. Wait until the engine has cooled. Place a thick rag like a towel over the radiator cap and slowly rotate the cap counterclockwise to the detent. This procedure allows any res-

idual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counter-clockwise and remove it.

If overheating is detected, perform the following checks.

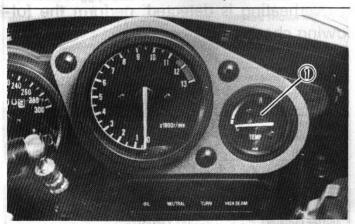


Remove the cover and radiator cap

EUU04300

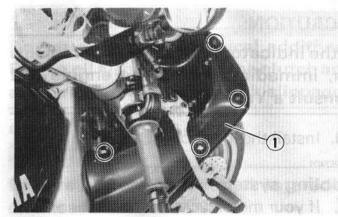
## NOTE:\_

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.

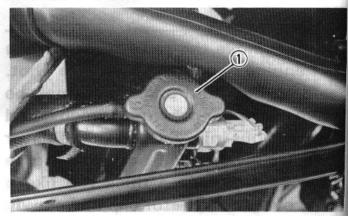


1. Engine temperature gauge

- 2. Changing the coolant
- Remove the seat, side cover and lower cowl.
- b. Place a container under the engine.
- c. Remove the cover and radiator cap.

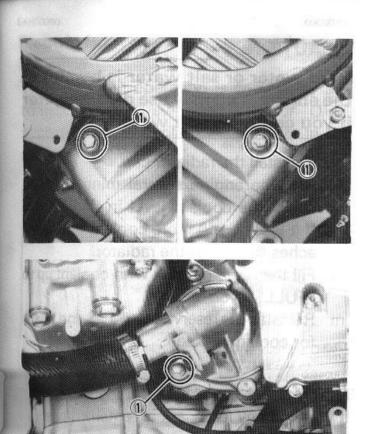


1. Cover



Radiator cap

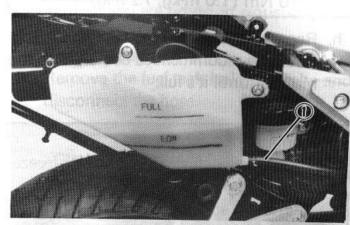
d. Remove the drain bolts.



1. Drain bolt 13wol (18voo off listenie) .n

cover and seat

 Disconnect the reservoir tank hose on the reservoir tank side, and drain the reservoir tank of it's coolant.



1. Reservoir tank hose

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

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Tightening torque:

Drain bolt:

10 Nm (1.0 m·kg, 7.2 ft·lb)

h. Reconnect the reservoir tank hose.

 Pour the recommended coolant into the radiator until it's full.

Recommended coolant:

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

Coolant and water mixed ratio: 50/50%

Total amount:

2.4 L (2.1 Imp qt, 2.5 US qt)

Reservoir tank capacity:

0.4 L (0.35 Imp qt, 0.42 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.

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

EUU04400

#### NOTE:

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

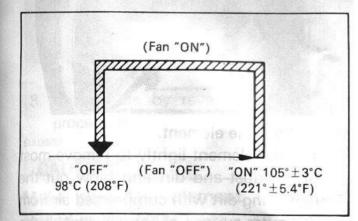
n. Reinstall the cover, lower cowl, side cover and seat.

EAH70000

#### Electric fan 200 mill nis and syome 4.3

### Operation

The electric fan operation is completely automatic. It will be switched "ON" or "OFF" according to the coolant temperature in the radiator.

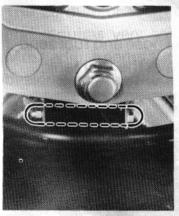


EAH67100

#### Air filter

The air filter element should be cleaned at the specified intervals. It should be cleaned more frequently if you are riding in unusually wet or dusty areas.

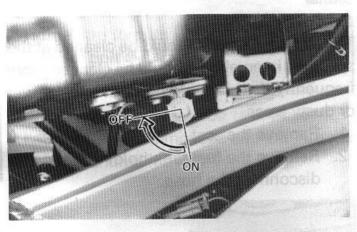
- 1. Remove the seat.
- Remove the fuel tank holding bolts and disconnect the hose.





1. Drain hose

3. Turn the fuel cock lever to "OFF".



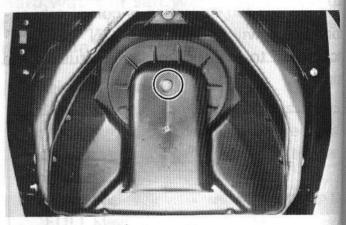
 Disconnect the fuel hose and fuel sender lead and then remove the fuel tank.





1. Fuel hose

Remove the air filter case cover by removing the screws.



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



Reassemble by reversing the removal procedure.

EUU35701

# **CAUTION:**

Make sure the element is properly seated in the filter case.

EUU42400

## CAUTION:

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

EAH90001

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

EUU33001

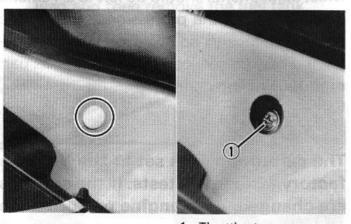
## **CAUTION:**

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

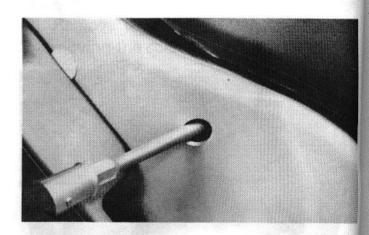
#### EAH90100

## Idle speed adjustment

- 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.
- 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: 900 ~ 1,100 r/min 1,000 ~ 1,100 r/min (CH)(A)

EUU04500

NOTE:

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

## Throttle cable adjustment

EUU06400

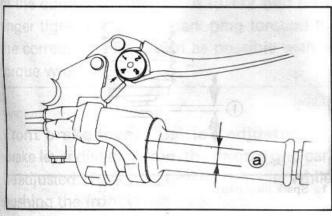
NOTE:

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

Adjust the throttle cable by turning the adjuster so that proper free play at the throttle grip is obtained.

Free play:

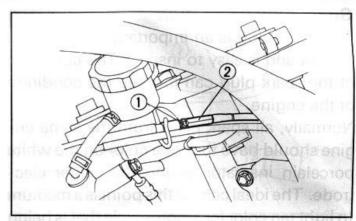
 $3 \sim 7 \text{ mm} (0.12 \sim 0.28 \text{ in})$ 



a. Free play

d

Ilt



1. Lock nut

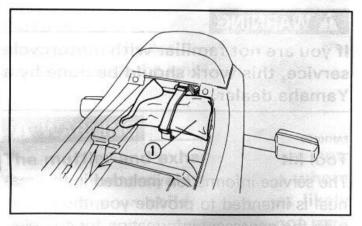
2. Adjuster

- Loosen the lock nut.
- Turn the adjuster in or out until specified free play is obtained.
- Tighten the lock nut.

EAH90800 TO THE CONTROL HE STATE OF STA

# 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 pro-7-19 fessional Yamaha service technician.



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

# **A 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.

TIME SCHEDUL TO SI

EAH20101

## Spark plug inspection

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

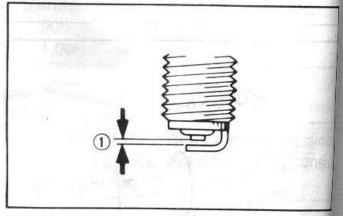
Normally, all spark plugs from the same engine should have the same color on the white porcelain insulator around the center electrode. The ideal color at this point is a medium to light tan color for a motorcycle that is being ridden normally. If one spark plug shows a distinctly different color, there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

Standard spark plug: DR8ES-L (NGK) X24ESR-U (NIPPONDENSO)

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

Spark plug gap:  $0.6 \sim 0.7 \text{ mm} (0.024 \sim 0.028 \text{ in})$ 



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)

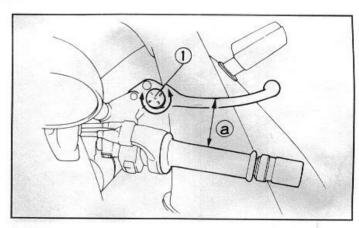
EUU03801

#### NOTE:

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

EAH87201

# 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.



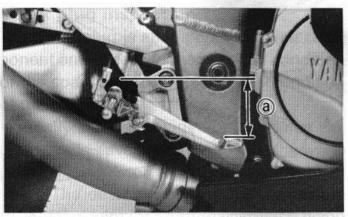
1. Lever position adjuster

a. Gripping distance

EAH80401

# Rear brake adjustment

The top of the brake pedal should be positioned 60 mm (2.36 in) below the top of the footrest. If not, ask a Yamaha dealer to adjust it.



a. 60 mm (2.36 in)

EUU79300

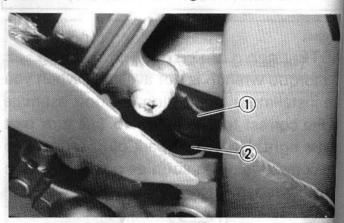
# **A** WARNING

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

EAH83301

## Brake light switch adjustment

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



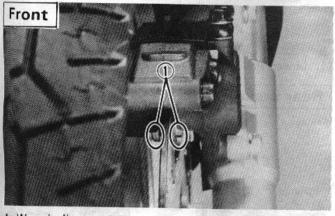
1. Main body

2. Adjusting nut

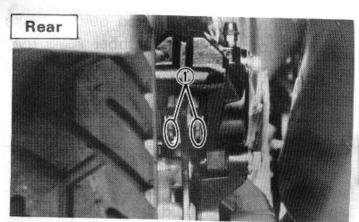
EAH83601

# Checking the front and rear brake pads

A wear indicator is provided on each brake. This indicator allows checking of brake pad wear without disassembling the brake. Apply the brake and inspect the wear indicator. If the indicator is ALMOST in contact with the disc plate, ask a Yamaha dealer to replace the pads.



1. Wear indicator



1. Wear indicator

EAH89500

# Inspecting the brake fluid level

Insufficient brake fluid may let air enter the brake/clutch system, possibly causing the brakes/clutch to become ineffective. Before riding, check the brake fluid level and replenish when necessary. Observe these precautions:

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

Recommended brake fluids: DOT#4

EUU17500

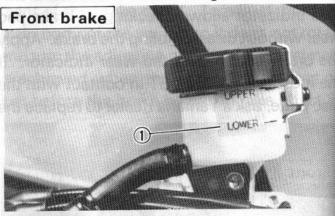
NOTE:

(Rear brake, clutch fluid only)

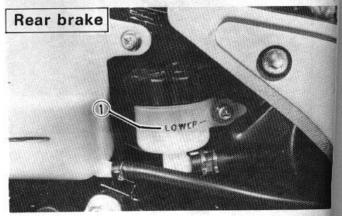
If DOT #4 is not available, #3 can be used.

- Refill with the same type of brake fluid.
   Mixing fluids may result in a harmful chemical reaction and lead to poor brake/clutch performance.
- Be careful that water does not enter the master cylinder when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.
- Brake fluid may deteriorate painted surfaces or plastic parts. Always clean up spilled fluid immediately.

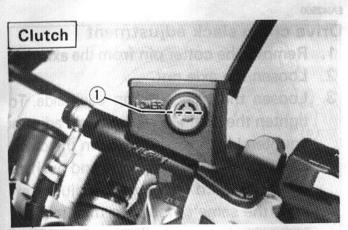
6. Have a Yamaha dealer check the cause if the brake fluid level goes down.



1. Lower level



1. Lower level



1. Lower level

EAH83501

# Brake fluid replacement

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

FA100701

## Clutch adjustment

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

EAI40801

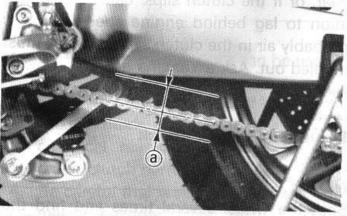
#### Drive chain slack check

EUU04801

#### NOTE:

Spin the wheel several times and find the tightest position of the chain. Check and/or adjust the chain slack while it's in this tightest position.

To check the chain slack the motorcycle must be held straight up with both wheels on the ground and without rider. Check the slack at the position shown in the illustration. Normal slack is approximately  $15 \sim 20 \text{ mm}$  (0.6  $\sim 0.8 \text{ in}$ ). If the slack exceeds 20 mm (0.8 in), adjust.



a. 15~20 mm (0.6~0.8 in)

#### EAI42500

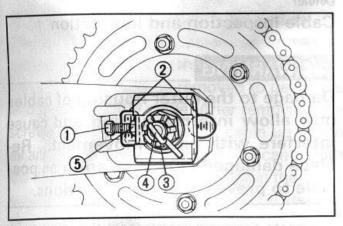
# Drive chain slack adjustment

- 1. Remove the cotter pin from the axle nut.
- 2. Loosen the axle nut.
- 3. Loosen the lock nuts on each side. To tighten the chain, turn the chain adjuster counterclockwise. To loosen the chain, turn the adjuster clockwise 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 these marks to align the rear wheel.

EUU33301

## **CAUTION:**

Too little chain slack will overload the engine and other vital parts. Keep the slack within the specified limits.



1. Lock nut

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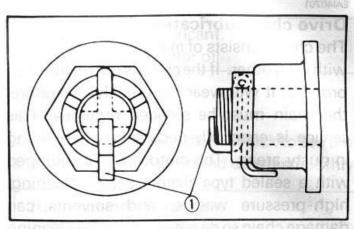
n

e

- 3. Axle nut
- 2. Marks for alignment
- Cotter pin
- 5. Adjuster
- 4. After adjusting, be sure to tighten the lock nuts and the axle nut.

# Axle nut torque: 150 Nm (15.0 m·kg, 110 ft·lb)

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



1. Cotter pin

EUU64700

# **A** WARNING

Always use a new cotter pin on the axle nut.

EAI40701

#### **Drive chain lubrication**

The chain consists of many parts which work with each other. If the chain is not maintained properly, it will wear out quickly, Therefore, the chain must be serviced regularly. This service is especially necessary when riding in dusty areas. This motorcycle is equipped with a sealed type chain. Steam cleaning, high-pressure washes, and solvents can damage chain so do not use these for cleaning it. 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 sealed chain.

EAI10701

# Cable inspection and lubrication

EUU6460

# **WARNING**

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

Lubricate the inner cable and the cable end If it does not operate smoothly, ask a Yamahi dealer to replace them.

Recommended lubricant: SAE 10W30 motor oil EAI10201

## Throttle cable and grip lubrication

The throttle twist grip assembly should be greased at the time that the cable is lubricated. since the grip must be removed to get at the end of the throttle cable. After removing the screws, hold the end of the cable up in the air and put in several drops of lubricant. With the throttle grip disassembled, coat the metal surface of the grip assembly with a suitable all-purpose grease.

EAI30601

Brake and shift pedals Lubricate the pivoting parts.

Recommended lubricant: SAE 10W30 motor oil

Brake and clutch levers Lubricate the pivoting parts. Recommended lubricant: SAE 10W30 motor oil

EAI31101

#### Sidestand

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

Recommended Jubricant: SAE 10W30 motor oil

EUU70401

# **A** WARNING

the sidestand does not smoothly, consult a Yamaha dealer.

EAI31900

## Rear suspension

Lubricate the pivoting parts.

Recommended lubricant: Molybdenum disulfide grease

### PERIODIC MAINTENANCE/LUBRICATION

ot

Unit	km	(miles	١
OIIIL.	KIII.	(11111105	1

REPORT OF THE PARTY OF THE PART	V		CATTOR OF THE PARTY OF THE PART	it. km (miles
Wall and Hygon was trop	15618 3),000/11/26561		EVERY	
Item Para B	Remarks	Break-in 1,000 (600)	6,000 (4,000) or 6 months	12,000 (8,000) or 12 months
Valve(s)*	Check valve clearance. Adjust if necessary.	EVER'	Y 42,000 (28	3,000)
Spark plug(s)	Check condition. Clean or replace if necessary.	0	0	0
Air filter	Clean. Replace if necessary.	and Later	0	0
Carburetor*	Check idle speed/synchronization/starter operation. Adjust if necessary.	0	100 oads	laoriaO s F
Fuel line*	Check fuel hose for cracks or damage. Replace if necessary.	Remor	o men	Cooling sy
Fuel filter*08) UUG YMana	Check condition. Replace if necessary.			Isrlo OirO
Engine oil	Replace (Warm engine before draining).	0	0	0
Engine oil filter*	Replace.	h man O	T CIBINOTE	0 13
Brake*	Check operation/fluid leakage/See NOTE. Correct if necessary.	ga Joett.	0	puer opig
Clutch*	Check operation/fluid leakage/See NOTE. Correct if necessary.	nut seerit wit	intro O moor	0
Rear arm pivot*	Check rear arm assembly for looseness. Correct if necessary. Moderately repack every 24,000 (16,000) or 24 months.***	nes grense.	triplew mu adenum dist	fall o
Rear suspension link pivots*	Check operation. Apply grease lightly every 24,000 (16,000) or 24 months.***			0
Wheel*	Check balance/damage/runout. Repair if necessary.	72.	0	0
Wheel bearings*	Check bearings assembly for looseness/damage. Replace if damaged.	1 11 11 11	0	0

EAI20501

### Front fork inspection

EUU65700

### **A** WARNING

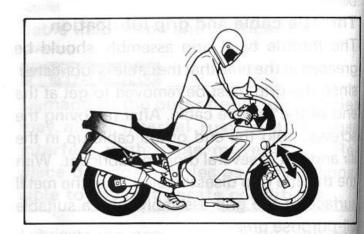
Securely support the motorcycle so there is no danger of it falling over.

- Visual check
   Check for scratches/damage on the inner tube and excessive oil leakage from the front fork.
- Operation check Place the motorcycle on a level place.
- a. Hold the motorcycle in an upright position and apply the front brake.
  - Stroke the front forks up and down several times.

EUU42500

### **CAUTION:**

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



EAI56301

### Front fork adjustment

This front fork is equipped with a spring preload adjuster.

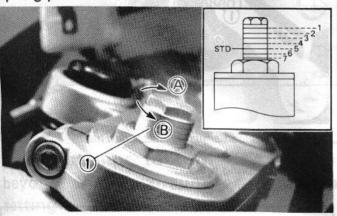
EUU66901

### **A** WARNING

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

Adjust spring preload as follows.

Turn adjuster in direction (A) to increase spring preload and in direction (B) to decrease spring preload.



- 1. Spring preload adjuster
- A. Increase spring preload
- B. Decrease spring preload

EUU43001

#### **CAUTION:**

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

free Pro-	HARD				STD	SC	FT
Adjusting position	1	2	3	4	5	6	7

EAI51502

Rear shock absorber

EUU67301

### **A** 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.

- Do not tamper with or attempt to open the cylinder assembly.
- 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.

- Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.
- 4. Take your shock absorber to a Yamaha dealer for any service.

EAI59900

#### Rear shock absorber adjustment

This shock absorber is equipped with a spring preload and damping force adjuster.

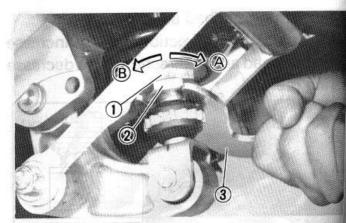
- Adjust spring preload as follows.
- a. Loosen the lock nut.

EUU05200

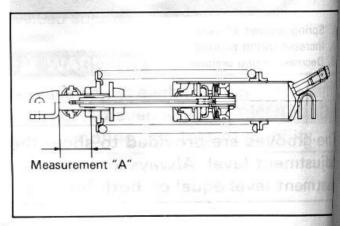
### NOTE:

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

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



- 1. Spring preload adjuster
- 2. Lock nut
- 3. Special wrench
- A. Increase spring preload
- B. Decrease spring preload



Measurement "A"
Standard length (installed):
40.5 mm (1.59 in)
Minimum length (installed):
37.5 mm (1.48 in)
Maximum length (installed):
47.5 mm (1.87 in)

EUU36300

### **CAUTION:**

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

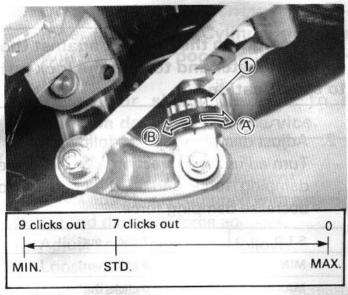
Tightening torque: 55 Nm (5.5 m·kg, 40 ft·lb) EUU36400

### **CAUTION:**

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

S.T.D.	7 clicks out*
MIN.	9 clicks out*
MAX.	0 clicks out*

<sup>\*:</sup> From fully turned in position.



- 1. Damping force adjuster
- A. Increase damping force
- B. Decrease damping force

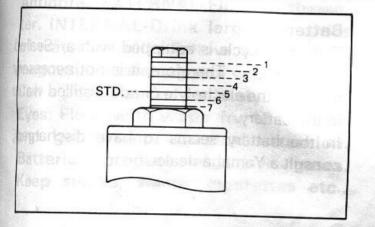
### **CAUTION:**

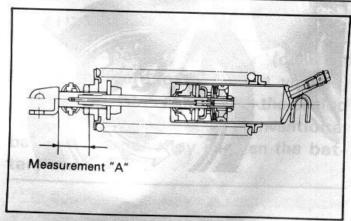
Don't turn out the adjuster more than 9 clicks from the fully turned-in position.

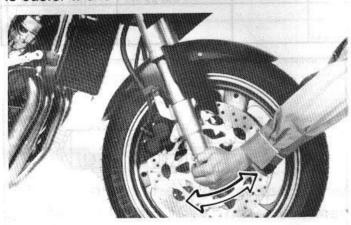
**EUU3**5400

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		en en	Loading condition		
	Spring preload adjuster	Spring preload adjuster Measurement "A"	Damping force adjuster	Solo rider	With passenger	With accessories equipment	With accessories equipment
1	4~7	37.5 ~ 42.5 mm (1.48 ~ 1.67 in)	5 ∼ 9 clicks turns out	Fatty lor to		O the Disviol	and passenger
2	2~5	40 ~ 45 mm (1.57 ~ 1.77 in)	4 ∼ 7 clicks turns out	сыоп	igén mago	0	W PAR TESUAR
3	1~4	42.5 ~ 47.5 mm (1.67 ~ 1.87 in)	3 ∼ 6 clicks turns out		echarg	20 12 11 11 11 11 11 11 11 11 11 11 11 11	0







### **A** WARNING

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

EAI60201

### Wheel bearings

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.

EAI84901

### 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 discharged consult a Yamaha dealer.

#### CAUTION:

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

EUU65800

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### **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.

EAI85000

### **Battery maintenance**

 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:**

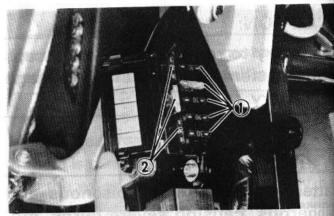
A special battery charger (constant voltage/ampere or constant voltage) is required for recharging the sealed type battery. Using a conventional battery charger may shorten the battery life.

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. a sisjoyatotom adt garlyner fo

EAI92900

## Fuse replacement

- 1. The fuse box is located inside the left side not cover. In project yould ent agred on
- 2. If any fuse is blown, turn off the ignition switch and the switch of 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.



cid. Avaid contact

2. Spare fuse

EUU34400

### **CAUTION:**

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

### Specified fuse:

Main: 30A
Head: 20A
Signal: 10A
Fan: 10A
Ignition: 10A

EAI85800

#### Headlight

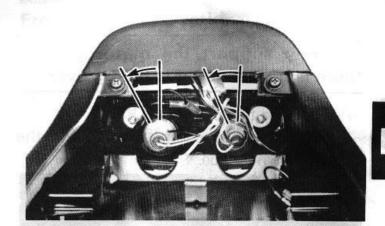
If the headlight beam adjustment or headlight bulb replacement is necessary, consult a Yamaha dealer.

EAJ10801

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### Taillight bulb replacement

- 1. Remove the seat.
- 2. Remove the tool kit.
- To remove the socket, turn it counterclockwise.



- 4. To remove the defective bulb, turn it counterclockwise.
- Push a new bulb into the socket and turn it clockwise.
- 6. Install the socket and turn it clockwise.
- 7. Install the tool kit and seat.

EAJ27500

#### Front wheel removal

EUU66201

### A WARNING

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

Management of the second secon

		1.5	EVERY	
Item	Remarks Octification	Break-in 1,000 (600)	6,000 (4,000) or 6 months	12,000 (8,000) or 12 months
Steering bearing*	Check bearings assembly for looseness. Correct if necessary. Moderately repack every 24,000 (16,000) or 24 months.**	X5 O	6	0
Front forks*	Check operation/oil leakage. Repair if necessary.	UNIOSELLY D	0	0
Rear shock absorber*	Check operation/oil leakage. Repair if necessary.	III PARTY	0	0
Cooling system	Check coolant leakage. Repair if necessary. Replace coolant every 24,000 (16,000) or 24 months.	I fosilo	0	0
Drive chain	Check chain slack/alignment. Adjust if necessary. Clean and lube.	EV	'ERY 500 (30	00)
Fittings/Fasteners*	Check all chassis fittings and fasteners. Correct if necessary.	0	0	0
Sidestand*	Check operation. Repair if necessary.	0	0	0
Sidestand switch*	Check operation. Clean or replace if necessary.	0	0	0

<sup>\*:</sup> It is recommended that these items be serviced by a Yamaha dealer.

<sup>\*\*:</sup> Medium weight wheel bearing grease.

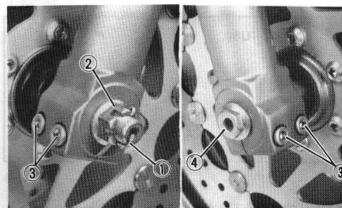
<sup>\*\*\*:</sup> Molybdenum disulfide grease.

- 1. Remove the lower cowl.
- 2. Remove the speedometer cable from the front wheel side.

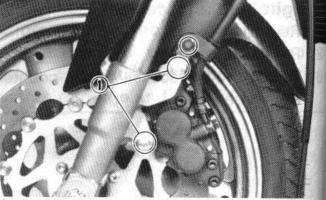


1. Speedometer cable

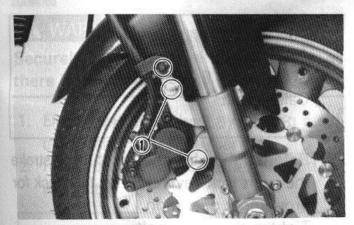
- 3. Remove the axle nut cotter pin.
- 4. Loosen the pinch bolts, axle nut and caliper bolts.



- 1. Cotter pin
- 3. Pinch bolt 4. Axle
- 2. Axle nut
- 5. Elevate the front wheel by placing a suitable stand under the engine.
- 6. Remove the calipers.



7-40 1. Caliper bolt



1. Caliper bolt

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#### NOTE:\_

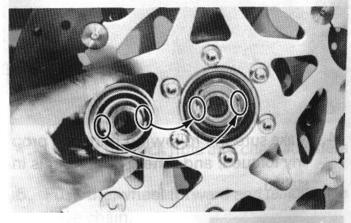
Do not depress the brake lever when the caliper is off the disc as the brake pads will be forced shut.

Remove the axle nut and wheel axle. Make sure the motorcycle is properly supported. EAJ28700

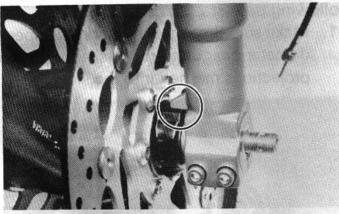
#### Front wheel installation

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

 Make sure the wheel hub and the speedometer gear unit are installed with the projections meshed into the slots.



 Make sure there is enough gap between the brake pads before installing the caliper(s) onto the brake disc(s). Make sure the slot in the speedometer gear unit fits over the stopper on the front fork outer tube.



 Make sure the following parts are properly torqued, and a new cotter pin is installed.

EUU78000

### A WARNING

Always use a new cotter pin.

Tightening torque:

Axle nut

48 Nm (4.8 m·kg, 35 ft·lb)

Caliper bolt

35 Nm (3.5 m·kg, 25 ft·lb)

- Before tightening the pinch bolt, stroke the front fork several times to check for proper fork operation.
- 6. Tighten the pinch bolt.

Pinch bolt torque:

20 Nm (2.0 m·kg, 14 ft·lb)

EAJ36901

Rear wheel removal

EUU66201

### **A** WARNING

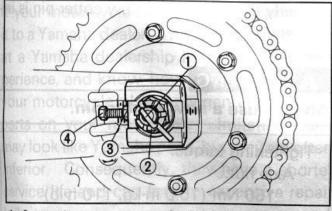
It is advisable to have a Yamaha deale service the wheel.

or

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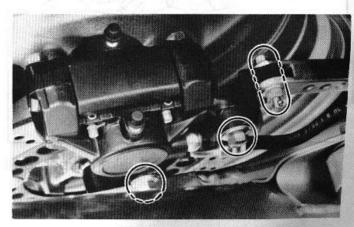
Securely support the motorcycle so there is no danger of it falling over.

- 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.

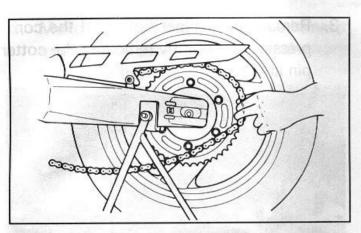


- 1. Cotter pin
- 3. Adjuster
- 2. Axle nut
- 4. Lock nut

3. Remove the caliper bolts and the compression bar bolt by removing the cotter pin and nut.



- 4. Loosen the lock nuts and chain adjusters on each side.
- 5. Push the wheel forward and remove the drive chain. bets 1992 ets 199180 bris



- While supporting the brake caliper, pull out the wheel axle.
- 7. Remove the wheel assembly.

#### NOTE:

Do not depress the brake pedal when the disc and caliper are separated.

EUU05600

#### NOTE: \_

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

EAJ60700

### Rear wheel installation

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

- Make sure there is enough gap between the brake pads before installing the car iper onto the brake disc.
- 2. Adjust the drive chain.
- Make sure the following parts are properly torqued, and a new cotter pin is in stalled.

EUU78000

### **A WARNING**

Always use a new cotter pin.

Tightening torque:

Axle nut:

150 Nm (15.0 m·kg, 110 ft·lb)

Caliper bolt:

35 Nm (3.5 m·kg, 25 ft·lb)

Compression bar bolt:

30 Nm (3.0 m·kg, 22 ft·lb)

EAJ50002

#### Troubleshooting

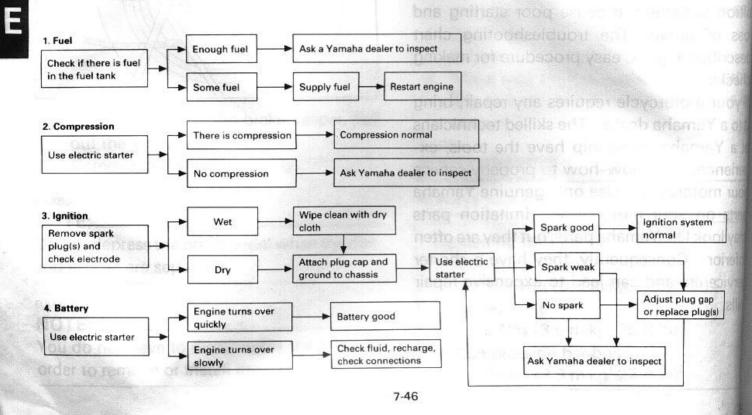
Although Yamaha motorcycles receive a rigid inspection before shipment from the factory, trouble may occur during operation.

Any problem in the fuel, compression, or ignition systems can cause poor starting and loss of power. The troubleshooting chart describes a quick, easy procedure for making checks.

If your motorcycle requires any repair, bring it to a Yamaha dealer. The skilled technicians at a Yamaha dealership have the tools, experience, and know-how to properly service your motorcycle. Use only genuine Yamaha parts on your motorcycle. Imitation parts may look like Yamaha parts, but they are often inferior. Consequently, they have a shorter service life and can lead to expensive repair bills.

#### A WARNING

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



NOTE:\_

Brake fluid replacement:

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

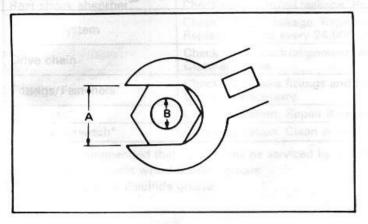
| September | Sept

EAH30100

### **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.



	Α	В	General torque specifications			
135	(Nut)	(Bolt)	Nm	m·kg	ft·lb	
1	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	
1	19 mm	14 mm	85	8.5	61	
1	22 mm	16 mm	130	13.0	94	

Item	F	Torque				
item	Nm	m·kg	ft·lb			
Spark plug	17.5	1.75	12.5			
Engine drain plug	43	4.3	31			
Oil filter	17	1.7	12			
Coolant drain bolt	10	1.0	7.2			
Front caliper bolt	35	3.5	25			
Front axle pinch bolt	20	2.0	14			
Front axle nut	48	4.8	35			
Rear wheel axle nut	150	15.0	110			
Rear caliper bolt	35	3.5	25			
Compression bar bolt	30	3.0	22			

#### EAH46500

### Engine oil

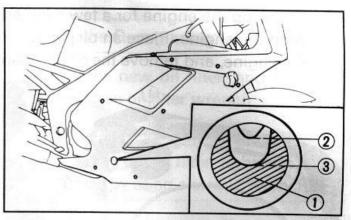
- 1. Oil level measurement
- a. Place the motorcycle on a level place and hold it in an upright position. Warm up the engine for several minutes.

EUU03901

NOTE:

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

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



- 1. Level window
- 3. Minimum level

2. Maximum level

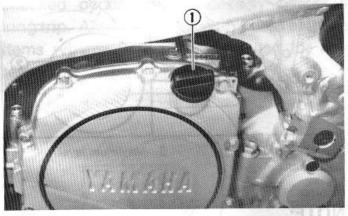
EUU04000

#### NOTE:

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

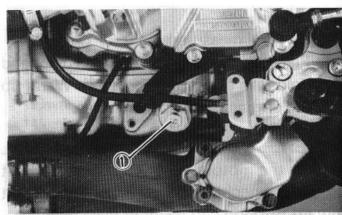
- c. The oil level should be between maximum and minimum marks. If the level is low, add oil to raise it to the proper level.
- 2. Engine oil and oil filter replacement
- a. Remove the lower cowl.

- b. Warm-up the engine for a few minutes.
- c. Stop the engine. Place an oil pan under the engine, and remove the oil filler cap.



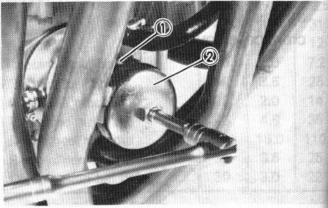
1. Oil filler cap

d. Remove the drain plug and drain the oil.



1. Drain plug

e. Remove the oil filter by using a oil filter wrench.



1. Oil filter

2. Oil filter wrench

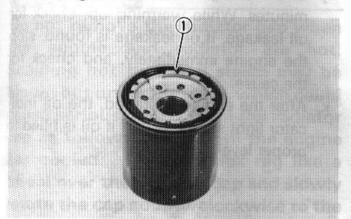
#### NOTE:

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

f. Reinstall the drain plug (make sure it is tight).

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

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



1. O-ring

EUU04101

#### NOTE:

Make sure the O-ring is seated properly.

h. Install the new oil filter, and tighten it by using an oil filter wrench.

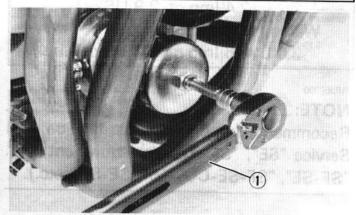
EUU13601

#### NOTE:

When installing the oil filter, tighten it to the proper torque by using a torque wrench.

Oil filter torque:

17 Nm (1.7 m·kg, 12 ft·lb)



g 1. Torque wrench

### CLEANING AND STORAGE

EAK01301

#### 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.
- 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.

EUU34601

#### CAUTION:

Excessive hose pressure may cause water seepage and deterioration of wheel bearings, front fork, 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.
- 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

 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

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### **A WARNING**

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

- 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 safekeeping).
- 5. Lubricate all control cables.

- Block up the frame to raise both wheels off the ground.
- Tie a plastic bag over the exhaust pipe outlet to prevent moisture from entering.
- 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.
- 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 repa	irs before storing the

motorcycle.

## elegated thou again of small ent ou SPECIFICATIONS

Picus Person Model obasid a	bns alod pulg a FZR1000 ii lie sero
Dimension: Overall length Overall width Overall height	2,205 mm (86.8 in) 745 mm (29.3 in) 1,170 mm (46.1 in)
Seat height Wheel base Minimum ground clearance	775 mm (30.5 in) 1,470 mm (57.9 in) 135 mm (5.3 in)
Basic weight: With oil and full fuel tank	235 kg (518 lb)
Minimum turning radius:	3,300 mm (129.9 in)
Engine: Type Model  Cylinder arrangement Displacement Bore × Stroke	Liquid cooled, 4-stroke, gasoline, DOHC 3LG5: (GB)(IRL) 3LH5: (CH)(A) 3GMC: (E) 3GMB: (DK)(B)(I)(GR)(NL)(N)(P)(S) 3LE5: (D)(SF) 3LF5: (F) Parallel 4-cylinder, Forward inclined 1002 cm <sup>3</sup> 75.5 × 56.0 mm (2.97 × 2.20 in)

( Model	FZR1000
Compression ratio Starting system Lubrication system Section 2000 100 100 100 100 100 100 100 100 10	12 : 1 Electric starter Wet sump
Ingine oil (4-cycle): perbantum Type	Right Supplied to the Control of the
30 40 50 60°F	SAE 20W40 type SE motor oil (If temperature does not go below 5°C/40°F)
0 5 10 15°C	SAE 10W30 type SE motor oil (If temperature does not go above 15°C/60°F)
Capacity Periodic oil change With oil filter replecement Total amount	2.7 L (2.4 Imp qt, 2.9 US qt) 3.0 L (2.6 Imp qt, 3.2 US qt) 3.5 L (3.1 Imp qt, 3.7 US qt)
Radiator capacity: (Including all routes)	2.4 L (2.1 Imp qt, 2.5 US qt)
Air filter:	Dry type element
Fuel: Type: Tank capacity Reserve amount	Regular unleaded gasoline 19 L (4.2 Imp gal, 5.0 US gal) 3.4 L (0.7 Imp gal, 0.9 US gal)
Carburetor: Type/manufacturer	BDST38/MIKUNI
# 170/60 VR17-V280 (Bridgestone, Durling) 170/60 ZR17 (Pinelli, Michelin, Wetzeler)	tion to

Model	FZR1000
Spark plug: Type/manufacturer Gap	DR8ES-L (NGK) or X24ESR-U (NIPPONDENSO) 0.6~0.7 mm (0.024~0.028 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 68/41 (1.659) Chain drive 47/17 (2.765) Constant mesh 5-speed Left foot operation 36/14 (2.571) 32/18 (1.778) 29/21 (1.381) 27/23 (1.174) 28/27 (1.037)
Chassis: Frame type Caster angle Trail  Tire: Type	Pressed backbone 26°25′ 108 mm (4.25 in)  Tubeless
Size — Front  Rear	130/60 VR17-V280 (Bridgestone, Dunlop) 130/60 ZR17 (Pirelli, Michelin, Metzeler) 170/60 VR17-V280 (Bridgestone, Dunlop) 170/60 ZR17 (Pirelli, Michelin, Metzeler)

Model	FZR1000
Brake: Front brake type Operation Rear brake type Operation  A WISAWA	Dual, disc brake Right hand operation Single, disc brake Right foot operation
Suspension: Front Rear	Telescopic fork Swing arm (Link suspension)
Shock absorber: Front Rear	Coil spring, oil damper Gas, Coil spring, oil damper
Wheel travel: Front Rear	120 mm (4.7 in) 130 mm (5.1 in)
Electrical: Ignition system Generator system Battery type/capacity	TCI (Digital) AC generator YTX14-BS/12V 12AH
Headlight type:	Quarz bulb

Model	FZR1000
Bulb wattage/quantity: Headlight Headlight Headlight Headlight Headlight Headlight Headlight Headlight Headlight	12V 60W/55W (F) 12V 55W/40W × 2 (GB)(IRL) 12V 55W × 2 12V 5W/21W × 2
Tail/brake light Flasher light Auxiliary light Meter light	12V 5W/21W × 2 12V 21W × 4 12V 4W (F) 12V 5W 12V 1.7W × 4
Indicator light wattage/quantity:  "NEUTRAL"  "HIGH BEAM"  "OIL LEVEL"  "TURN"  Indicator light wattage/quantity:  "NEUTRAL"  "All TAN mm 021	12V 3.4W 12V 3.4W 12V 3.4W 12V 3.4W
TCI (Digital) AC-ganerator YTX14-BS/12V 12AH	29/21 (1.3 as a saints 27/23 (1.1 as a saints 28/27 (1.02 as a saints) and tevanotare not a saints 28/27 (1.02 as a saints) and tevanotare

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