YAMAHA

OWNER'S MANUAL

E115M

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INTRODUCTION

Welcome to the Yamaha world of motorcycling!
As the owner of the JYM110-2, you are benefiting from Yamaha's vast experience and newest technology regarding the design and manufacture of high-quality products, which have earned Yamaha a reputation for dependability. Please take the time to read this manual thoroughly, so as to enjoy all advantages of your JYM110-2 . The Owner's Manual does not only instruct you in how to operate, inspect and maintain your motorcycle, but also in how to safeguard yourself and others from trouble and injury.
In addition, the many tips given in this manual will help keep your motorcycle in the best possible condition. If you have any further questions, do not hesitate to contact your Yamaha dealer.
The Yamaha team wishes you many safe and pleasant rides. So, remember to put safety first!

IMPORTANT MANUAL INFORMATION

JYM110-2
OWNER'S MANUAL

1st edition, October 2014

Printed in Malaysia

IMPORTANT MANUAL INFORMATION

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

⚠	**This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.**
⚠ WARNING	**A WARNING indicates a hazardous situation which, if not avoid, could result in death or serious injury.**
NOTICE	**A NOTICE indicates special precautions that must be taken to avoid damage to the vehicle or other property.**
TIP	A TIP provides key information to make procedures easier or clearer.

TIP

- This manual should be considered a permanent part of this motorcycle and should remain with it even if the motorcycle is subsequently sold.
- Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your motorcycle and this manual. If you have any questions concerning this manual, please consult your Yamaha dealer.

⚠ WARNING

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

* Product and specification are subject to change without notice.

TABLE OF CONTENTS

⚠ SAFETY INFORMATION

Be a Responsible Owner

As the vehicle's owner, you are responsible for the safe and proper operation of your motorcycle.
Motorcycles are single-track vehicles. Their safe use and operation are dependent upon the use of proper riding techniques as well as the expertise of the operator. Every operator should know the following requirements before riding this motorcycle.

He or she should:

- Obtain thorough instructions from a competent source on all aspects of motorcycle operation.
- Observe the warnings and maintenance requirements in this Owner's Manual.
- Obtain qualified training in safe and proper riding techniques.
- Obtain professional technical service as indicated in this Owner's Manual and/or when made necessary by mechanical conditions.

Safe Riding

Perform the pre-operation checks each time you use the vehicle to make sure it is in safe operating condition. Failure to inspect or maintain the vehicle properly increases the possibility of an accident or equipment damage. See page 4-1 for a list of pre-operation checks.

- This motorcycle is designed to carry the operator and a passenger.
- The failure of motorists to detect and recognize motorcycles in traffic is the predominating cause of accidents. Many accidents have been caused by an automobile driver who did not see the motorcycle. Making yourself conspicuous appears to be very effective in reducing the chance of this type of accident.

Therefore:

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

- Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current motorcycle license.
  - Make sure that you are qualified and that you only lend your motorcycle to other qualified operators.
  - Know your skills and limits. Staying within your limits may help you to avoid an accident.
  - We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with the motorcycle and all of its controls.
- Many accidents have been caused by error of the motorcycle operator. A typical error made by the operator is veering wide on a turn due to excessive speed or undercornering (insufficient lean angle for the speed).
  - Always obey the speed limit and never travel faster than warranted by road and traffic conditions.
  - Always signal before turning or changing lanes. Make sure that other motorists can see you.
- The posture of the operator and passenger is important for proper control.
  - The operator should keep both hands on the handlebar and both feet on the operator footrests during operation to maintain control of the motorcycle.
  - The passenger should always hold onto the operator, the seat strap or grab bar, if equipped, with both hands and keep both feet on the passenger footrests.

- Never carry a passenger unless he or she can firmly place both feet on the passenger footrests.

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

Protective apparel

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

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

Avoid Carbon Monoxide Poisoning

All engine exhaust contains carbon monoxide, a deadly gas. Breathing carbon monoxide can cause headaches, dizziness, drowsiness, nausea, confusion, and eventually death.

Therefore:

- Do not run engine indoors. Even if you try to ventilate engine exhaust with fans or open windows and doors, carbon monoxide can rapidly reach dangerous levels.
- Do not run engine in poorly ventilated or partially enclosed area such as barns, garages, or carpoch.
- Do not run engine outdoors where engine exhaust can be drawn into a building through openings such as windows and doors.

- If you experience any symptoms of carbon monoxide poisoning, leave the area immediately, get fresh air, and seek medical treatment.

- Gasoline is highly flammable.

Therefore:

- Always turn the engine off when refueling.
- Take care not to spill any gasoline on the engine or exhaust when refueling.
- Never refuel while smoking or in the vicinity of an open flame.

- If you swallow any gasoline or inhaled a great amount of the vapour or gasoline get into the eye, see your doctor immediately.
- If any gasoline splashes on your skin or clothing, immediately wash the affected area with soap and water, and change your clothes.

Loading and accessories

Adding accessories or cargo to your motorcycle can adversely affect stability and handling if the weight distribution of the motorcycle is changed. To avoid the possibility of an accident, use extreme caution when adding cargo or accessories to your motorcycle. Use extra care when riding a motorcycle that has added cargo or accessories. Here, along with the information about accessories below, are some general guidelines to follow if loading cargo to your motorcycle:

Loading

The total weight of the operator, passenger, accessories and cargo must not exceed the maximum load limit.

Maximum load:
153kg

When loading within this weight limit, keep the following in mind:

- Cargo and accessory weight should be kept as low and close to the motorcycle as possible. Securely pack your heaviest items as close to the center of the vehicle as possible and make sure to distribute the weight as evenly as possible on both sides of the motorcycle to minimize imbalance or instability.
- Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the motorcycle before riding. Check accessory mounts and cargo restraints frequently.
  - Never attach any large or heavy items to the handlebar, frontfork, or front fender. These items, including such cargo as sleeping bags, duffel bags, or tents, can create unstable handling or a slow steering response.
  - Properly adjust the suspension for your load, and check the condition and pressure of your tires.

Accessories

Genuine Yamaha accessories have been specifically designed, tested, and approved by Yamaha for use on your vehicle. Since Yamaha is not in a position to test all others aftermarket accessories available, you must personally be responsible for the proper selection, installation and use of non-Yamaha accessories. Use extreme caution when selecting and installing any accessories.

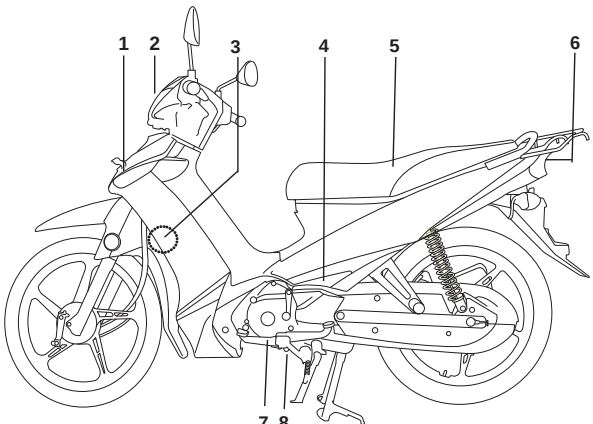
Keep the following guidelines in mind, when mounting accessories.

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

Modifications

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

Left view



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3. Starter (choke) lever (page 3-6)
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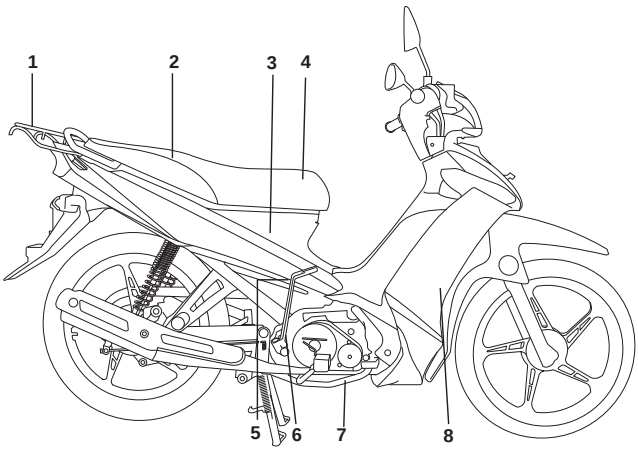

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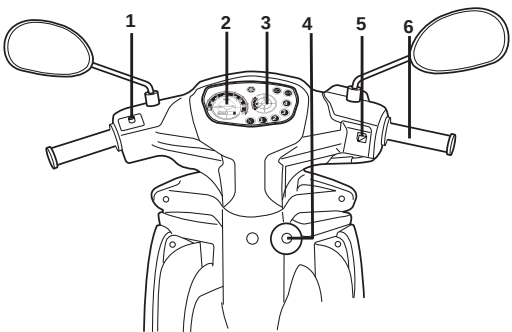
Controls and instruments



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Main switch/steering lock

The main switch/steering lock controls the ignition and lighting systems, and is used to lock the steering. The various positions are described below.

Main Switch
ON

All electrical systems are supplied with power, the meter lighting comes on and the engine can be started. The key cannot be removed.

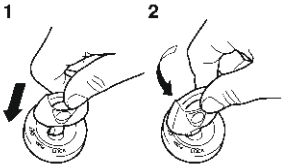
OFF

All electrical systems are off. The key can be removed.

LOCK

The steering is locked, and all electrical systems are off. The key can be removed.

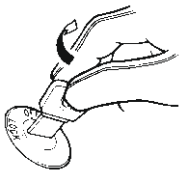
To lock the steering



1. Push.
2. Turn.

1. Turn the handlebars all the way to the left.
2. Push the key in from the “OFF” position, and then turn it to “LOCK” while still pushing it.
3. Remove the key.

To unlock the steering



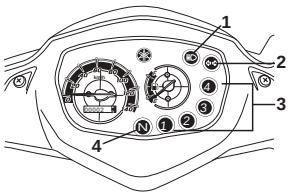
1. Turn.

Insert the key in, and then turn it to “OFF”.

⚠ WARNING

Never turn the key to “OFF” or “LOCK” while the motorcycle is moving, otherwise the electrical systems will be switched off, which may result in loss of control or an accident. Make sure that the motorcycle is fully stopped before turning the key to “OFF” or “LOCK”.

Indicator lights



1. High beam Indicator light
2. Turn signal Indicator light
3. Gear position indicator light
4. Neutral Indicator light

High beam indicator light " ≡D "

This indicator light comes on when the high beam of the headlight is switched on.

Turn signal indicator light " ⇦ ⇨ "

This indicator light flashes when the turn signal switch is pushed to the left or right.

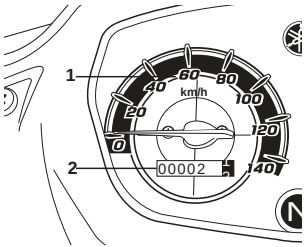
Gear position indicator lights "1", "2", "3", and "4"

The respective indicator light comes on when the transmission is in the 1st, 2nd, 3rd or 4th gear position.

Neutral indicator light " N "

This indicator light comes on when the transmission is in the neutral position.

Speedometer Unit



1. Speedometer
2. Odometer

The speedometer unit is equipped with a speedometer and an odometer. The speedometer shows riding speed. The odometer shows the total distance traveled.

Fuel gauge

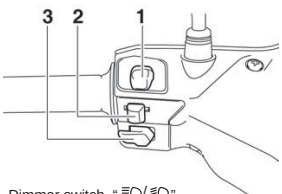
The fuel gauge indicates the amount of fuel in the fuel tank. The needle moves towards "E" (Empty) as the fuel level decreases. If this occurs, refuel as soon as possible.

TIP

- If the motorcycle is under long operation, please ensure that there is always fuel in the fuel tank.
- The main switch must be turned to "ON" for the fuel gauge to display an accurate fuel level reading.

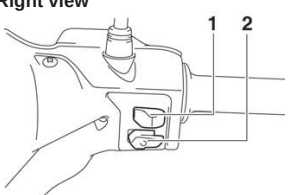
Handlebar switches

Left view



1. Dimmer switch " ≣D/≣D "
2. Turn signal switch " ⇦/⇨ "
3. Horn switch " "

Right view



1. Lighting switch " ☼ / ≡D ⊄≡ / ● "
2. Starter switch " Ⓢ "

Dimmer switch " ≣D/≣D "

Set this switch to " ≣D " for the high beam and to " ≣D " for the low beam.

Turn signal switch " ⇦/⇨ "

To signal a right-hand turn, push this switch to " ⇨ ". To signal a left-hand turn, push this switch to " ⇦ ". When released, the switch returns to the center position. To cancel the turn signal lights, push the switch in after it has returned to the center position.

Horn switch " "

Press this switch to sound the horn.

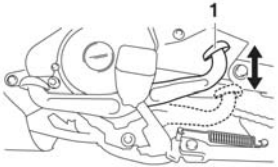
Starter switch " Ⓢ "

Push this switch to crank the engine with the starter. See page 5-1 for starting instructions prior to starting the engine.

Lighting switch " ☼ / ≡D ⊄≡ / ● "

Switch to the " ☼ ", headlight, front position light, tail light, instrument light are lit.
Switch to the "≡D ⊄≡", front position light, tail light, instrument light are lit.
Switch to the " ● ", headlight, front position light, tail light, instrument light are disconnected does not lit.

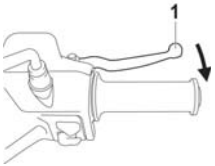
Shift pedal



1. Shift pedal

The shift pedal is located on the left side of the motorcycle. This motorcycle is equipped with a constant-mesh 4 speed transmission.

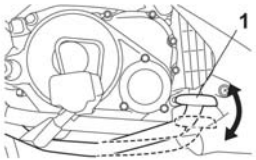
Brake lever



1. Brake lever

The brake lever is located on the right side of the handlebar. To apply the front brake, pull the lever towards the throttle grip.

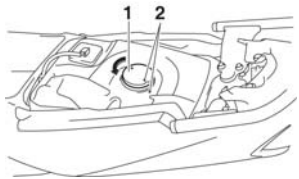
Brake pedal



1. Brake pedal

The brake pedal is on the right side of the motorcycle. To apply the rear brake, press down on the brake pedal.

Fuel tank cap



1. Fuel tank cap.
2. " △ " mark

The fuel tank cap is located under the seat. (Please refer to page 3-6).

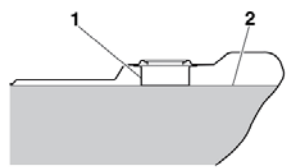
To remove the cap, turn it counter-clockwise and pull it out.

To install the fuel tank cap, insert it back into the opening and turn it clockwise until the "△" mark on the cap and tank is aligned.

⚠ WARNING

Make sure that the fuel tank cap is properly installed before riding. Leaking fuel is a fire hazard.

Fuel



1. Fuel tank filler tube
2. Fuel level

Make sure that there is sufficient fuel in the tank. Fill the fuel tank to the bottom of the filler tube as shown.

⚠ WARNING

- **Do not overfill the fuel tank, otherwise it may overflow when the fuel warms up and expands.**
- **Avoid spilling fuel on the hot engine.**

NOTICE

Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.

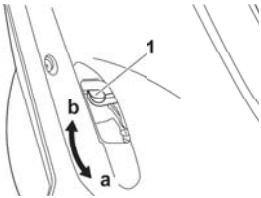
Recommended fuel:
93 or above unleaded gasoline fuel
Fuel tank capacity:
4.2 L

NOTICE

Use only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts, such as the valves and piston rings, as well as to the exhaust system.

Yamaha motors designed this motorcycle for use of 93 or above unleaded fuel. Using the unleaded fuel can prolong the life of your motorcycle and avoid expensives repair job.

Starter (choke) lever " ⌐ "



1. Starter (choke) lever " ⌐ "

Starting a cool engine require more air-fuel mixing, this mixture is provided by the choke.

Shift the handle to position (a), to activate the choke.
Shift the handle to position (b), to deactivate the choke.
When starting a cool engine shift the handle to position (a) and when the engine is running, shift it back to position (b).

Catalytic converter

This vehicle is equipped with a catalytic converter in the exhaust pipe.

⚠ WARNING

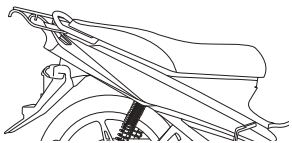
The exhaust pipe will be hot after operation. Make sure that the exhaust pipe is cool down before doing any maintenance work.

NOTICE

The following precautions must be observed, to prevent a fire hazard or burns:

- Use only unleaded gasoline. The use of leaded gasoline will cause unrepairable damage to the catalytic converter.
- Do not park the vehicle near possible fire hazards such as dry grass or other materials that can easily caught fire.
- Engine idle time not too long.
- Do not allow the engine to idle more than a few minutes. Long idling can cause a build-up of heat.

Motorcycle rack



⚠ WARNING

- **The goods placed on the motorcycle rack should not exceed the 3kg limit.**
- **Total maximum weight that can be carry on the motorcycle should not exceed 150 kgs.**

3

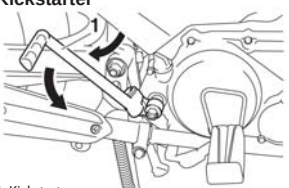
Sidestand

The sidestand is located on the left side of the frame. Raise the sidestand or lower it with your foot while holding the vehicle upright.

⚠ WARNING

The vehicle must not be ridden with the sidestand down, or if the sidestand cannot be properly moved up (or does not stay up), the sidestand could come into contact with the ground and may result in a possible loss of control.

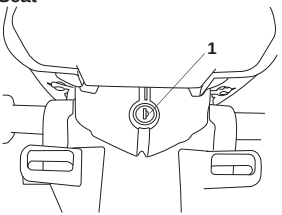
Kickstarter



1. Kickstarter

If the engine fails to start by pushing the start switch, try to start it by using the kickstarter. To start the engine, fold out the kickstarter lever, move it down lightly with your foot until the gears engage, and then push it down smoothly but forcefully.

Seat



1. Seat lock

To open the seat

1. Place the motorcycle on the centerstand.
2. Insert the key into the seat lock switch, and then turn the key.
3. Open the seat.

TIP

Do not push inward when turning the key.

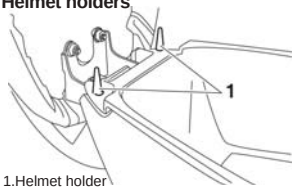
To close the seat

1. Fold the seat down, and then push it down to lock it in place.
2. Remove the key from the seat lock if the motorcycle is left unattended.

TIP

Make sure that the seat is properly secured before riding.

Helmet holders



1.Helmet holder

The helmet holders are located under the seat.

To secure a helmet to a helmet holder

1. Open the seat.
2. Attach a helmet to a helmet holder, and then securely close the seat.

⚠ WARNING

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

To remove the helmet from the helmet holder.

1. Open the seat.
2. Remove the helmet from the helmet holder, and then close the seat.

The condition of a vehicle is the owner's responsibility. Vital components can start to deteriorate quickly and unexpectedly, even if the vehicle remains unused (for example, as a result of exposure to the elements). Any damage, fluid leakage or loss of tire air pressure could have serious consequences. Therefore, it is very important, in addition to a thorough visual inspection, to check the following points before each ride.

TIP

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

⚠ WARNING

If any item in the Pre-operation check list is not working properly, have it inspected and repaired before operating the vehicle.

PRE-OPERATION CHECKS

Pre-operation check list

ITEM	CHECKS OR REPAIRS	PAGE
Battery	• Check the electrolyte and battery water level. • Check battery lead connections and voltage. • Replace battery if necessary.	6-20
Front drum brake	• Check the operating conditions and adjust the brake lever free play. • Replace brake shoe if necessary.	6-14, 6-15
Rear drum brake	• Check the operating conditions and adjust the brake pedal free play. • Replace brake shoe if necessary.	6-14, 6-15
Wheels	• Check for damage.	6-13
Tires	• Check tire condition and tread depth. • Replace if necessary. • Check tires air pressure. • Rectify if necessary.	6-11, 6-12
Drive chain	• Check for chain slack, alignment and condition. • Adjust and thoroughly lubricate chain.	6-15, 6-16, 6-17
Steering bearing	• Check bearing free play and steering for roughness. • Replace if necessary.	6-20
Front fork	• Check the operating conditions and for oil leakage.	6-18
Shock absorber assembly	• Check the operating conditions and for oil leakage.	–
Front rear brake switch	• Check the operating conditions.	6-14
Moving parts and cable	• Lubricate.	6-17, 6-18, 6-18
Throttle grip housing and cable	• Check the operating conditions and free play. • Adjust the throttle cable free play if necessary. • Lubricate the throttle grip housing and cable.	6-17
Light, signal and switches	• Check operation. • Adjust headlight beam.	–

ITEM	CHECKS OR REPAIRS	PAGE
Exhaust pipe	• Check for abnormal noise. • Check for loose bolts and nuts.	–

OPERATION AND IMPORTANT RIDING POINTS

Read the Owner's Manual carefully to become familiar with all controls. If there is a control or function you do not understand, ask your Yamaha dealer.

⚠ WARNING

Become thoroughly familiar with all operating controls and their functions before riding, to prevent loss of control and hurting yourself.

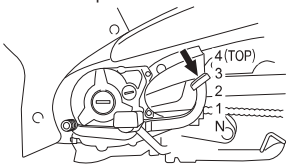
5

Starting the engine

⚠ WARNING

- **Before starting out, make sure that the sidestand is up to prevent it from touching the ground.**

1. Turn the key to "ON".
2. Shift the transmission into the neutral position.



N. Neutral position

TIP:
When the transmission is in the neutral position, the neutral indicator light should be on, otherwise have a Yamaha dealer check the electrical circuit.

3. Start the engine by pushing the start switch or by kicking the kickstarter lever down.

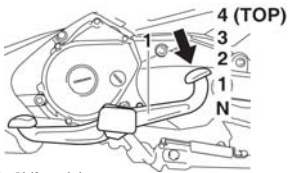
TIP:
If the engine fails to start in cold weather, turn on the choke lever during starting and return it back to the original position when the engine is running. (See page 3-6).

TIP:
If the engine fails to start by pushing the start switch, release the switch, wait a few seconds, and then try again. Each starting attempt should be as short as possible to preserve the battery. Do not crank the engine more than 10 seconds on any one attempt. If the engine does not start with the starter motor, try using the kickstarter.

NOTICE

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

Shifting



1. Shift pedal

N. Neutral position

Shifting gears lets you control the amount of engine power available for starting off, accelerating, climbing hills, etc.The gear positions are shown in the illustration.

TIP

To shift the transmission into the neutral position, press the shift pedal down repeatedly until it reaches the end of its travel, and then slightly raise it.

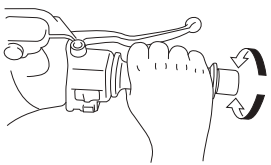
Starting and acceleration

1. Close the throttle grip during starting.

⚠ WARNING

During gear shifting, fully closed the throttle grip to prevent the transmission gear from getting damage.

2. Shift to gear one.
3. Increase the throttle grip gradully to increase the accelaration.
4. When the motorcycle attain a higher speed, close the throttle grip.
5. Shift to the second gear.
6. Increase the throttle grip gradually to increase the accelaration.
7. Shift to a higher gear as in earlier procedure.
8. Increase or decrease the throttle grip to manipulate the accelaration and speed. Turning towards oneself, increases the speed and turning away from oneself reduces the speed.

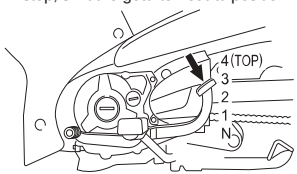


Increasing speed gear shifting chart

Gear	Speed
1st gear	0 ~ 20 km/h
2nd gear	20 ~ 40 km/h
3rd gear	30 km/h ~
4th gear (Max.)	40 km/h ~

Deceleration and braking

1. Close the throttle grip to reduce the speed and applied the brake for both the hand and leg braking system.
2. When the motorcycle comes to a full stop, shift the gear to neutral position.



Decreasing speed gear shifting chart

Gear	Speed
4th gear to 3rd gear	0 ~ 40 km/h
3rd gear to 2nd gear	0 ~ 30 km/h
2nd gear to 1st gear	0 ~ 15 km/h

Tips for reducing fuel consumption

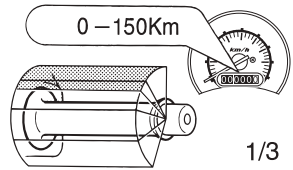
Fuel consumption depends largely on your riding style. Consider the following tips to reduce fuel consumption:

- Shift up swiftly, and avoid high engine speeds during acceleration.
- Do not rev the engine while shifting down, and avoid high engine speeds with no load on the engine.
- Turn the engine off instead of letting it idle for an extended length of time (e.g., in traffic jams or at railroad crossings).

Engine break-in

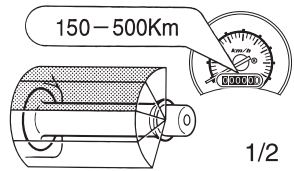
There is never a more important period in the life of your engine than the period between 0 and 1000 km. For this reason, you should read the following material carefully. Since the engine is brand new, do not put an excessive load on it for the first 1000 km. The various parts in the engine wear and polish themselves to the correct operating clearances. During this period, prolonged full-throttle operation or any condition that might result in engine overheating must be avoided.

0-150 km



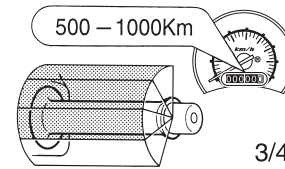
Avoid prolonged operation above 1/3 throttle. After every hour of operation, stop the engine, and then let it cool for five to ten minutes. Vary the engine speed from time to time. Do not operate the engine at one set throttle position.

150-500 km



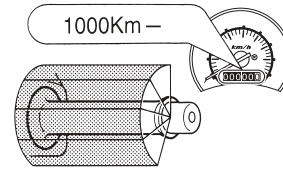
Avoid prolonged operation above 1/2 throttle. Rev the engine freely through the gears, but do not use full throttle at any time.

500-1000 km



Avoid prolonged operation above 3/4 throttle.

1000km and beyond



Avoid prolonged full-throttle operation. Vary the engine speed occasionally.

NOTICE

After 1000 km of operation, the engine oil must be changed, the oil filter cartridge or element replaced, and the oil strainer cleaned. If any engine trouble should occur during the engine break-in period, immediately have a Yamaha dealer check the vehicle.

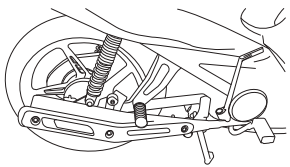
Parking

When parking, stop the engine, and then remove the key from the main switch.

⚠ WARNING

- Since the engine and exhaust system can become very hot, park in a place where pedestrians or children are not likely to touch them.
- Do not park on a slope or on softground, otherwise the vehicle may overturn.
- Do not park the vehicle near possible fire hazards such as dry grass or other materials that can easily caught fire.

Engine emissions



This motorcycle comes with two air insulation system (AIS) for the protection of the enviroment and the exhaust pipe is located inside together with the catalytic converter, matching the country exhaust standard.
If large amount of incomplete combustion gas mixture flows into the catalytic converter it will produces reburning phenomenon and causes overheating of the exhaust pipe and accelerate the aging of the catalytic converter.To prevent this phenomenon and other damage from occurring, please note the following:

NOTICE

- Use 93 or higher unleaded fuel. Leaded fuel will cause the catalytic converter to damage.
- When in runing mode, do not switch off the main switch. Doing so might cause the motorcycle to crash.
- If the motorcycle fuel system or the lighting system is not functioning properly, the catalytic converter might get heated up.
- After running the engine for long time, the exhaust pipe will get heated up. Be careful not to touch it.
- Be careful not to sprinkle or splashes fuel onto the hot exhaust pipe to prevent fire from occuring.

PERIODIC MAINTENANCE AND MINOR REPAIR

Safety is an obligation of the owner. Periodic inspection, adjustment and lubrication will keep your vehicle in the safest and most efficient condition possible. The most important points of inspection, adjustment, and lubrication are explained on the following pages.
The intervals given in the periodic maintenance and lubrication chart should be simply considered as a general guide under normal riding conditions. However, depending on the weather, terrain, geographical location, and individual use, the maintenance intervals may need to be shortened.

⚠ WARNING

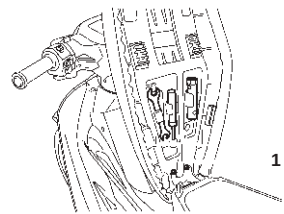
Failure to properly maintain the vehicle or performing maintenance activities incorrectly may increase your risk of injury or death during service or while using the vehicle. If you are not familiar with vehicle service, have a Yamaha dealer perform the service.

⚠ WARNING

Turn off the engine when performing maintenance unless otherwise specified.

- **A running engine has moving parts that can catch on body parts or clothing and electrical parts that can cause shocks or fires.**
- **Running the engine while servicing can lead to eye injury, burns, fire, or carbon monoxide poisoning, possibly leading to death.**

Owner's tool kit



1. Owner's tool kit

The owner's tool kit is located under the seat. (See page 3-7.)
The service information included in this manual and the tools provided in the owner's tool kit are intended to assist you in the performance of preventive maintenance and minor repairs. However, additional tools such as a torquewrench may be necessary to perform certain maintenance work correctly.

TIP

If you do not have the tools or experience required for a particular job, get a Yamaha dealer perform it for you.

⚠ WARNING

Modifications not approved by Yamaha may cause loss of performance and render the vehicle unsafe for use.
Do not attempt the following modification.

- **Modify the carburetor fuel intake mixture.**
- **Modify the exhaust pipe system.**
- **Modify the carburetor bore diameter.**
- **Remove parts or change the engine system.**

Periodic maintenance and care chart

TIP:

- When mileage reached 12000 km, repeat the maintenance intervals at 6000 km or half year once otherwise 12000 km or a year.
- Change engine oil for the first time at 1000 km, thereafter at every 2000 km.
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING (x 1000km)					After 12000km	
				1	2	5.5	8.5	12	Every 6000km Or 1/2 year	Every 12000km Or 1 year
1	*	**Fuel line**	• Check fuel and vacuum hoses for cracks or damage.	√	√	√	√	√	√	
2		**Spark plug**	• Check condition (replace if have problem). • Clean and regap.	√	√	√	√	√	√	
			• Replace.					√		√
3	*	**Valves**	• Check valve clearance. • Adjust.	√				√		√
4		**Air filter**	• Clean. • Replace when necessary.	√	√	√	√	√	√	
5		**Clutch**	• Check operation. • Adjust.	√	√	√	√	√	√	
6	*	**Battery**	• Check the electrolyte and battery water level. • Check battery lead connections and voltage. • Replace battery if necessary.	√	√	√	√	√	√	
7		**Front brake**	• Check operation and adjust brake lever free play.	√	√	√	√	√	√	
			• Replace brake shoes.	Whenever worn to the limit						
8		**Rear brake**	• Check operation and adjust brake pedal free play.	√	√	√	√	√	√	
			• Replace brake shoes.	Whenever worn to the limit						
9	*	**Wheels**	• Check for damage.	√	√	√	√	√	√	

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING (x 1000km)					After 12000km	
				1	2	5.5	8.5	12	Every 6000km Or 1/2 year	Every 12000km Or 1 year
10	*	Tires	• Check tread depth and for damage. • Replace if necessary. • Check tires air pressure. • Correct if necessary.	√	√	√	√	√	√	
11	*	Wheel bearings	• Check bearing for looseness or damage.	√				√		√
12	*	Swingarm	• Check operation and for excessive play. • Lubricate with lithium-soap-based grease.	√				√		√
13		Drive chain	• Check chain slack, alignment and condition. • Adjust and thoroughly lubricate chain with specified lubricant.	Every 1000 km and after washing the motorcycle or riding in the rain						
14	*	Steering bearings	• Check bearing play and steering for roughness. • Lubricate with lithium-soap-based grease.	√	√	√	√	√	√	
15	*	Engine and chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened.	√	√	√	√	√	√	
16		Sidestand, Centerstand	• Check operation. • Lubricate.	√	√	√	√	√	√	
17	*	Front fork	• Check operation and for oil leakage.	√	√	√	√	√	√	
18	*	Shock absorber assembly	• Check operation and shock absorber for oil leakage.	√	√	√	√	√	√	
19	*	Connecting and pivot arms joints	• Check operation.	√	√	√	√	√	√	
			• Lubricate with lithium-soap-based grease.			√		√		
20	*	Fuel Injection	• Adjust engine idling speed.	√	√	√	√	√	√	
21	*	Engine oil	• Change.	√	Every 2000km					
			• Check oil level and vehicle for oil leakage.	Every 2000km						

6

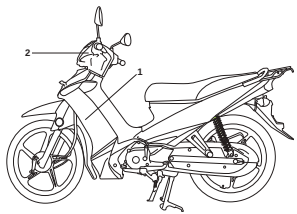
NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING (x 1000km)					After 12000km	
				1	2	5.5	8.5	12	Every 6000km Or 1/2 year	Every 12000km Or 1 year
22	*	**Oil filter element**	• Clean.	Every 2000km						
23	*	**Front and rear brake switches**	• Check operation.	√	√	√	√	√	√	
24		**Moving parts and cables**	• Lubricate.	√	√	√	√	√	√	
25	*	**Throttle grip housing and cable**	• Check operation and free play. • Adjust the throttle cable free play if necessary. • Lubricate the throttle grip housing and cable.	√	√	√	√	√	√	
26	*	**Air induction system**	• Check the air cut-off valve, reed valve, and hose for damage. • Replace any damaged parts if necessary.	√	√	√	√	√	√	
27	*	**Lights, signals and switches**	• Check operation. • Adjust headlight beam.	√	√	√	√	√	√	
28		**Exhaust pipe**	• Check for abnormality sound. • Check for loosens bolts and nuts.	√	√	√	√	√	√	

TIP

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

Removing and installing the cowlings and panel

The cowling and panels shown need to be removed to perform some of the maintenance jobs described in this chapter. Refer to this section each time the cowling or a panel needs to be removed and installed.

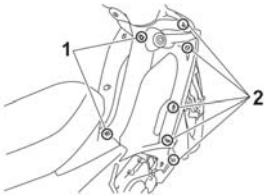


1. Cowling
2. Panel

Removing and installing the cowling

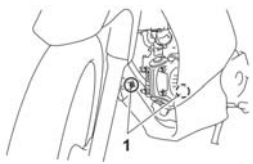
To remove the cowling

1. Remove group A screws (2 pcs).
2. Remove group B screws (10 pcs).



1. Group A screws (x2)
2. Group B screws (x10)

3. Remove group C screws (2 pcs).
4. Remove the cowling.

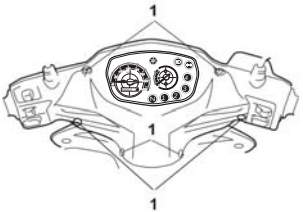


1. Group C screws (x2)

To install the cowling

1. Place the cowling in the original position.
2. Install the screws.

Removing and installing the panel



1. Group C screws (x6)

To remove the panel

1. Remove the screws (6 pcs).
2. Remove the panel.

To install the panel

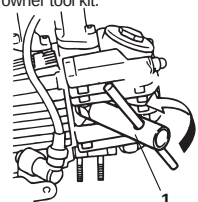
1. Place the panel in the original position.
2. Install the screws.

Checking the spark plug

The spark plug is an important engine component, which is easy to check. Since heat and deposits will cause any spark plug to slowly erode, the spark plug should be removed and checked in accordance with the periodic maintenance and lubrication chart. In addition, the condition of the spark plug can reveal the condition of the engine.

To remove the spark plug.

1. Remove the spark plug cap.
2. Remove the spark plug as shown with the spark plug wrench included in the owner tool kit.



1. Spark plug wrench

Checking the spark plug

1. Check that the porcelain insulator around the center electrode of the spark plug is a medium-to-light tan (the ideal color when the vehicle is ridden normally).

TIP

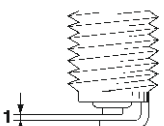
If the spark plug shows a distinctly different color, the engine could be defective. Do not attempt to diagnose such problems yourself. Instead, have a Yamaha dealer check the vehicle.

2. Check the spark plug for electrode erosion and excessive carbon or other deposits, and replace it if necessary.

Specified spark plug:
NGK/CR6HSA

To install the spark plug

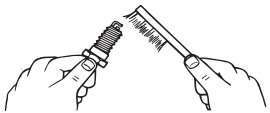
1. Measure the spark plug gap with a wire thickness gauge and, if necessary, adjust the gap to specification.



1.Spark plug gap

Spark plug gap:
0.6–0.7 mm

2. Clean the surface of the spark and its mating surface, and then wipe off any grime from the spark plug threads.



3. Install the spark plug with the spark plug wrench, and then tighten it to the specified torque.

Tightening torque:
Spark plug:
12.5 Nm

TIP

If a torque wrench is not available when installing a spark plug, a good estimate of the correct torque is 1/4~1/2 turn past finger tight. However, the spark plug should be tightened to the specified torque as soon as possible.

4. Install the spark plug cap.

Engine Oil

The engine oil level should be checked before each ride. In addition, the oil must be changed in the periodic maintenance and lubrication chart.

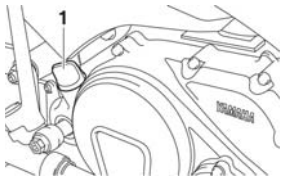
To check the engine oil level

1. Place the vehicle on the centerstand.

TIP

Make sure that the vehicle is positioned straight up when checking the oil level. A slight tilt to the side can result in a false reading.

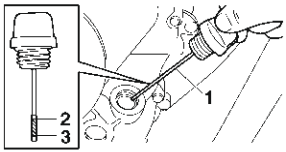
2. Start the engine, warm it up for several minutes, and then turn it off.
3. Wait a few minutes until the oil settles, remove the oil filler cap, wipe the dipstick clean, insert it back into the oil filler hole (without screwing it in), and then remove it again to check the oil level.



1. Engine oil filler cap

TIP

The engine oil should be between the minimum and maximum level marks.

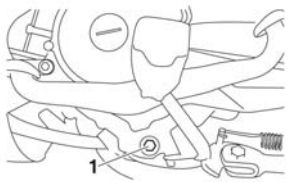


1. Dipstick
2. Maximum level mark
3. Minimum level mark

4. If the engine oil is at or below the minimum level mark, add sufficient oil of the recommended type to raise it to the correct level.
5. Insert the dipstick into the oil filler hole, and then tighten the oil filler cap.

To change the engine oil

1. Start the engine, warm it up for several minutes, and then turn it off.
2. Place an oil pan under the engine to collect the used oil.
3. Remove the engine oil filler cap and drain bolt to drain the oil, from the crankcase.

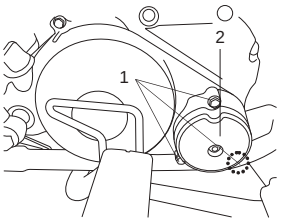


1. Engine oil drain bolt

TIP

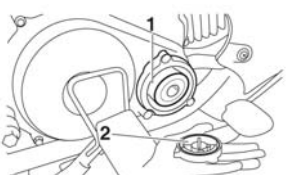
Skip step 4-6 if the oil filter element is not being replaced.

4. Remove the oil filter element cover by removing the bolts.



1. Bolt
2. Oil filter element cover

5. Remove and replace the oil filter element and O-ring.



1. Oil filter element
2. O-ring

6. Install the oil filter element cover by installing the bolts, then tightening them to the specified torque.

Tightening torque:
Engine filter element cover bolt:
10 Nm

TIP

Make sure that the O-ring is properly seated.

7. Install the engine drain bolt, and then tighten the drain bolt to the specified torque.

Tightening torque:
Engine oil drain bolt:
20 Nm

8. Add the specified amount of the recommended engine oil, and then install and tighten the oil filler cap.

Recommended engine oil:
See page 8-1
Engine oil quantity:
Total amount: 1L
Periodic oil change: 0.80L

NOTICE

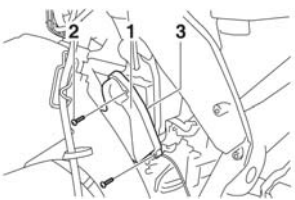
In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not mix any chemical additives.
Make sure that no foreign material enters the crankcase.

9. Start the engine, and then let it idle for several minutes while checking it for oil leakage. If oil is leaking, immediately turn the engine off and check for the cause.
10. Turn the engine off, and then check the oil level and adjust it if necessary.

Cleaning the air filter element

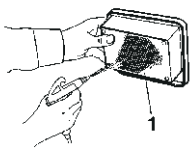
The air filter element should be cleaned at the intervals specified in the periodic maintenance and lubrication chart. Clean the air filter element more frequently if you are riding in unusually wet or dusty areas.

1. Remove the shin pads.
2. Remove the screw, remove the air filter case cap and then remove the air filter element out.



1. Air filter case cap
2. Screw
3. Air filter

3. Lightly tap the air filter element to remove most of the dust and dirt, and then blow the remaining dirt out with compressed air as shown. If the air filter element is damaged, replace it.



1. Air filter element

4. Insert the air filter element into the air filter case.

NOTICE

Make sure that the air filter element is properly seated in the air filter case. The engine should never be operated without the air filter element installed, otherwise the piston(s) and/or cylinder(s) may become excessively worn.

5. Install the air filter case cap and install the screws.

TIP

If dust or water collects in the air filter check hose, remove the clamp from it, and then remove the plug to drain the hose.

6. Install the shin pads.

Carburetor adjustment

The carburetor is an importance part of the engine which requires a very fine adjustment. Therefore, the carburetor adjustment should be carry out with the expertise and experience of a Yamaha dealer. However, as described in the next section, the owners can perform the following as specified in the periodic maintenance and minor repair.

NOTICE

The carburetor has been designed and extensively tested at Yamaha factory. Changing these settings without sufficient technical knowledge may result in engine performance degradation or damage to the engine.

Adjusting the engine idling speed

The engine idling speed must be checked and, if necessary, adjusted as per the intervals specified in the periodic maintenance and lubrication chart.
The engine should be warm up before making this adjustment.

TIP

When the engine is warm it will quickly responds to the throttle. A diagnostic tachometer is needed to make this adjustment.

1. Remove cowling. (See page 6-5.)
2. Attach the diagnostic tachometer to the spark plug lead. Check the engine idling speed and, if necessary, adjust it to specification by turning the idling adjust screw. To increase the engine idling speed, turn the screw to the right. To decrease the engine idling speed, turn the screw to the left.

Engine idling speed:
1400–1600 r/min

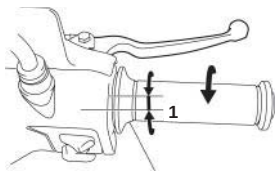
TIP

If the specified idling speed cannot be obtained as described above, have a Yamaha dealer make the adjustment.

3. Install the cowling.

6

Checking the throttle grip free play



1. Throttle grip free play

The throttle grip free play should measure 3.0–7.0 mm at the inner edge of the throttle grip. Periodically check the throttle grip free play and, if necessary, have a Yamaha dealer adjust it.

TIP

The engine idling speed must be correctly adjusted before checking and adjusting the throttle cable free play.

Valve clearance

The valve clearance changes with use, resulting in improper air-fuel mixture and/or engine noise. To prevent this from occurring, the valve clearance must be adjusted by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

Tires

To maximize the performance, durability, and safe operation of your motorcycle, note the following points regarding the specified tires.

Tire air pressure

The tire air pressure should be checked and, if necessary, adjusted before each ride.

⚠ WARNING

- The tire air pressure must be checked and adjusted on cold tires (i.e., when the temperature of the tires equals the ambient temperature).
- The tire air pressure must be adjusted in accordance with the riding speed and with the total weight of rider, passenger, cargo, and accessories approved for this model.

Tire air pressure (measured on cold tires):

1 person riding

Front:
200 kPa

Rear:
225 kPa

2 person riding

Front:
200 kPa

Rear:
280 kPa

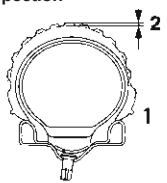
Maximum load*:
150 kg

⚠ WARNING

To maximize the performance, durability, and safe operation of your motorcycle, adhere to the following points.

- **Do not overload your motorcycle as it may damage your tire and make you lose control of your motorcycle. Make sure that your passenger, goods and yourself does not exceed the maximum load capacity.**
- **Do not carry loosely packed items that can easily shift.**
- **Securely pack your heaviest items close to the motorcycle and distribute the weight evenly from side to side.**
- **Adjust the tire pressure according to the load.**
- **Check the condition and pressure of the tire before riding.**

Tire inspection



1.Tire sidewall
2.Tire tread depth

The tires must be checked before each ride. If the tire shows crosswise lines (minimum tread depth), if the tire has a nail or glass fragments in it, or if the sidewall is cracked, have a Yamaha dealer replace the tire immediately.

Minimum tire tread depth (front and rear): 0.8 mm

TIP

The tire tread depth limits may differ from country to country. Always comply with the local regulations.

Tire information

Cast wheel and with tube tire.

⚠ WARNING

The front and rear tires should be of the same make and design, otherwise the handling characteristics of the vehicle cannot be guaranteed.

After extensive tests, only the tires listed below have been approved for this model by Yamaha Motor Co., Ltd.

Front tire:
Size:
70/90-17 M/C
Manufacturer/model:
WEI XING/209

Rear tire:
Size:
80/90-17 M/C
Manufacturer/model:
WEI XING/210

⚠ WARNING

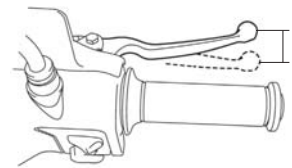
- **It is dangerous to ride with a worn-out tire. When a tire tread begins to show crosswise lines, have a Yamaha dealer replace the tire immediately.**
- **The replacement of all wheel and brake related parts, including the tires, should be left to a Yamaha dealer, who has the necessary professional knowledge and experience.**

Wheels

To maximize the performance, durability, and safe operation of your motorcycle, adhere to the following points regarding the specified wheels.

- The wheel rims should be checked for cracks, bends or warpage, and the spokes for looseness (for spoke wheel). If any damage is found, have a Yamaha dealer replace the wheel. Do not attempt even the smallest repair to the wheel. A deformed or cracked wheel must be replaced.
- Ride at moderate speeds after changing a tire since the tire surface must first be "broken in" for it to develop its optimal characteristics.

Checking the brake lever free play



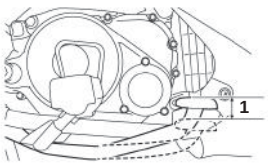
1. Brake lever free play

The brake lever free play should measure between 10-20 mm as shown in the diagram. Periodically check the brake lever free play and if necessary have a Yamaha dealer adjust it.

⚠ WARNING

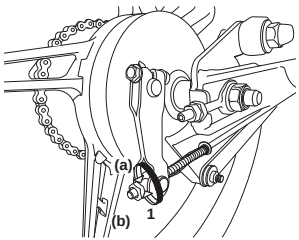
If the hand brake lever is not funtioning properly it will put you in a dangerous situation and may result in loss of control and accident. Do not ride the motorcycle until you have the motorcycle check by a Yamaha dealer.

Adjusting the brake pedal free play



1. Brake pedal free play

The brake pedal free play should measure 20.0–30.0 mm at the brake pedal end as shown. Periodically check the brake pedal free play and, if necessary, adjust it as follows. To increase the brake pedal free play, turn the adjusting nut in direction (a). To decrease the brake pedal free play, turn the adjusting nut in direction (b).

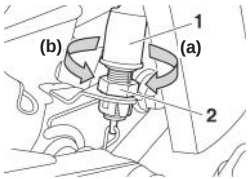


1. Brake pedal free play adjusting nut

⚠ WARNING

- After adjusting the drive chain slack or removing and installing the rear wheel, always check the brake pedal free play.
- If proper adjustment cannot be obtained as described, have a Yamaha dealer make this adjustment.
- After adjusting the brake pedal free play, check the operation of the brake light.

Adjusting the rear brake light switch



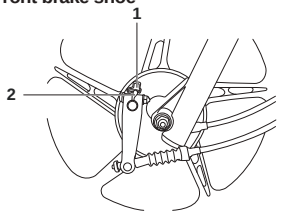
1. Rear brake light switch
2. Rear brake light switch adjusting nut

The rear brake light switch, which is activated by the brake pedal, is properly adjusted when the brake light comes on just before braking takes effect. If necessary, adjust the brake light switch as follows.Turn the adjusting nut while holding the rear brake light switch in place. To make the brake light come on earlier, turn the adjusting nut in direction (a). To make the brake light come on later, turn the adjusting nut in direction (b).

Checking the front and rear brake shoes

The front and rear brake shoes must be checked for wear at the intervals specified in the periodic maintenance and lubrication chart.

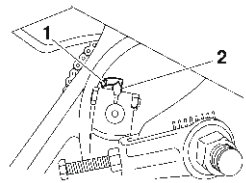
Front brake shoe



1. Brake shoe wear indicator
2. Brake shoe wear limit line

The front brake is provided with a wear indicator, which allows you to check the brake shoe wear without having to disassemble the brake. To check the brake shoe wear, check the position of the wear indicator while applying the brake. If a brake shoe has worn to the point that the wear indicator reaches the wear limit line, have a Yamaha dealer replace the brake shoes as a set.

Rear brake shoe



1. Brake shoe wear limit line
2. Brake shoe wear indicator

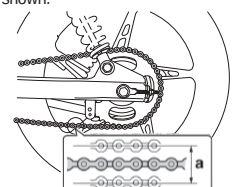
The rear brake is provided with a wear indicator, which allows you to check the brake shoe wear without having to disassemble the brake. To check the brake shoe wear, check the position of the wear indicator while applying the brake. If a brake shoe has worn to the point that the wear indicator reaches the wear limit line, have a Yamaha dealer replace the brake shoes as a set.

Drive chain slack

The drive chain slack should be checked before each ride and adjusted if necessary.

To check the drive chain slack

1. Place the motorcycle on the centerstand.
2. Shift the transmission into the neutral position.
3. Remove the screw (x4) and the drive chain housing.
4. Spin the rear wheel several times to locate the tightest portion of the drive chain.
5. Measure the drive chain slack as shown.



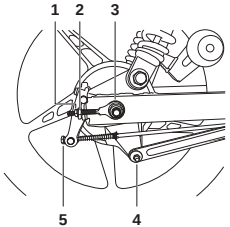
a. Drive chain slack

Drive chain slack:
25.0-35.0 mm

6. If the drive chain slack is incorrect, adjust it as follows.

To adjust the drive chain slack

1. Loosen the brake pedal free play adjusting nut , the brake torque rod nut and axle nut.

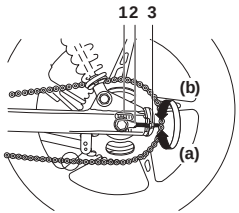


1. Drive chain slack adjusting bolt
2. Drive chain slack locknut
3. Axle nut
4. Brake torque rod nut
5. Brake pedal free play adjusting nut

2. Loosen the axle nut, then loosen the locknut at each end of the swingarm.
3. To tighten the drive chain, turn the adjusting nut at each end of the swingarm in direction (a). To loosen the drive chain, turn the adjusting nut at each end of the swingram in direction (b), and then push the rear wheel forward.

TIP

Using the alignment marks on each side of the swingarm, make sure that both chain pullers are in the same position for proper wheel alignment.



1. Alignment marks
2. Drive chain slack locknut
3. Drive chain slack adjusting bolt

NOTICE

Improper drive chain slack will overload the engine as well as other vital parts of the motorcycle and can lead to chain slippage or breakage. To prevent this from occurring, keep the drive chain slack within the specified limits.

4. Tighten both locknuts, and then tighten the axle nut and brake torque rod nut to their specified torque.

Tightening torques:
Axle nut:
60 Nm
Brake torque rod nut:
19 Nm

5. Adjust the brake pedal free play. (See page 6-14.)

Cleaning and lubricating the drive chain

The drive chain must be cleaned and lubricated at the invervals specified in the periodic maintenance and lubrication chart, otherwise it will quickly wear out, especially when riding in dusty or wet areas. Service the drive chain as follows.

NOTICE

The drive chain must be lubricated after washing the motorcycle, riding in the rain or riding in wet areas.

1. Remove the screw (x4), remove drive chain cover.
2. Clean the drive chain with kerosene and a small soft brush.
3. Wipe the drive chain dry.
4. Thoroughly lubricate the drive chain with a special chain lubricant.
5. Install drive chain cover and screw (x4).

Checking and lubricating the control cable

The operation of all control cables and the condition of the cables should be checked before each ride, and the cables and cable end should be lubricated if necessary. If a cable is damaged or does not move smoothly, have a Yamaha dealer check or replace it.

Recommeded lubricant:
Engine oil

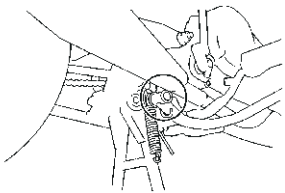
⚠ WARNING

Damage to the outer sheath may interfere with proper cable operation and will cause the inner cable to rust. Replace a damaged cable as soon as possible to prevent unsafe conditions.

Checking and lubricating the throttle grip and cable

The operation of the throttle grip should be checked before each ride. In addition, the cable should be lubricated at the intervals specified in the periodic maintenance chart.

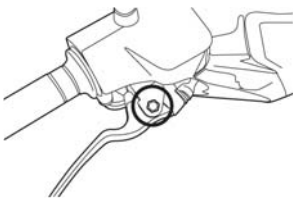
Checking and lubricating the brake pedal



The operation of the brake pedal should be checked before each ride, and the pedal pivot should be lubricated if necessary.

Recommeded lubricant:
Lithium-soap-based grease
(general type lubricant)

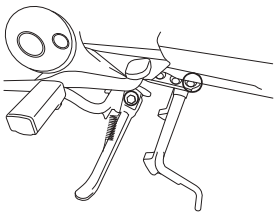
Checking and lubricating the brake lever



The operation of the brake lever should be checked before each ride, and the lever pivot should be lubricated if necessary.

Recommeded lubricant:
Lithium-soap-based grease
(general type lubricant)

Checking and lubricating the centerstand and sidestand



The operation of the centerstand and sidestand should be checked before each ride, and the pivots and metal-to-metal contact surfaces should be lubricated if necessary.

⚠ WARNING

If the centerstand or sidestand does not move up and down smoothly, have a Yamaha dealer check or repair it.

Recommeded lubricant:
Lithium-soap-based grease
(general type lubricant)

Lubricating the swingarm pivots

The swingarm pivots must be lubricated at the intervals specified in the periodic maintenance and lubrication chart.

Recommeded lubricant:
Lithium-soap-based grease

Checking the front fork

The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

To check the condition

Check the inner tubes for scratches, damage and excessive oil leakage.

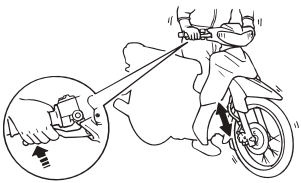
To check the operation

1. Place the vehicle on a level surface and hold it in an upright position.

⚠ WARNING

To avoid injury securely support the vehicle so that there is no danger of it falling over.

2. While applying the front brake, push down hard on the handlebars several times to check if the front fork compresses and rebounds smoothly.



NOTICE

If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.

Checking the steering

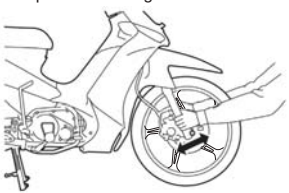
Worn or loose steering bearings may cause danger. Therefore, the operation of the steering must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

1. Place a stand under the engine to raise the front wheel off the ground.

⚠ WARNING

To avoid injury securely support the vehicle so that there is no danger of it falling over.

2. Hold the lower ends of the front fork legs and try to move them forward and backward. If any free play can be felt, have a Yamaha dealer check or repair the steering.



Checking the wheel bearings

The front and rear wheel bearings must be checked at the intervals specified in the periodic maintenance and lubrication chart. If there is play in the wheel hub or if the wheel does not turn smoothly, have a Yamaha dealer check the wheel bearings.

Battery

Battery need proper care or it may lost its power and damage. Before every ride battery must be check its connection and condition according to periodic maintenance chart.

To check the battery fluid level

1. Place the vehicle on a level surface and hold it in an upright position.

NOTICE

To check the battery fluid level, vehicle must be an upright position.

2. Checking the battery fluid level.

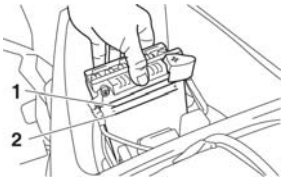
NOTICE

Battery fluid level should be between the minimum and maximum level marks.

3. If the battery fluid level is lower than the minimum level mark, release the battery fastener, and then remove the battery cover.
4. Refill with distilled water, until the maximum level mark.

NOTICE

Only use distilled water, because pipe water contained mineral and can damage the battery.



1. Maximum level mark
2. Minimum level mark

⚠ WARNING

- **Electrolyte is poisonous and dangerous since it contains sulfuric acid, which causes severe burns. Avoid any contact with skin, eyes or clothing and always shield your eyes when working near batteries. In case of contact, administer the following FIRST AID.**
  - **External: Flush with plenty of water.**
  - **Internal: Drink large quantities of water or milk and immediately call a physician.**
  - **Eyes: Flush with water for 15 minutes and seek prompt medical attention.**
- **Batteries produce explosive hydrogen gas. Therefore, keep sparks, flames, cigarettes, etc., away from the battery and provide sufficient ventilation when charging it in an enclosed space.**
- **Be careful not to spill electrolyte on the drive chain, as this may weaken the drive chain and shorten the life of the drive chain, and may lead to accidents.**
- **Keep this and all batteries out of the reach of children.**

5. Check the battery connection and condition, adjusting if necessary.
6. Place the battery cover to original position, and then install the battery fastener.
7. Close the seat.

To store the battery

1. If the vehicle will not be used for more than one month, remove the battery, fully charge it, and then place it in a cool, dry place.

NOTICE

When removing the battery, be sure the key is turned to "OFF", then disconect the negative lead before disconnecting the positive lead.

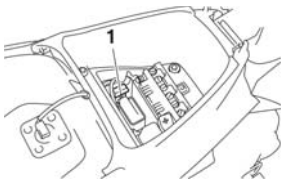
2. If the battery will be stored for more than two months, check it at least once a month and fully charge it if necessary.
3. Fully charge the battery before installation.
4. After installation, make sure that the battery leads are properly connected to the battery terminals.

NOTICE

If the vent pipe is not placed properly, and the frame is exposed to electrolyte or gas expelled from the battery, the frame structure and the surface may suffer damage.

Replacing the fuse

The fuse holder is located under the seat. (See page 3-7.)



1. Spare fuse

If the fuse is blown, replace it as follows.

1. Turn the key to "OFF" and turn off all electrical circuits.
2. Remove the blown fuse, and then install a new fuse of the specified amperage.

Specified fuse:
7.50 A

NOTICE

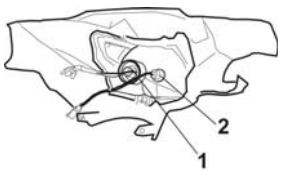
Do not use a fuse of a higher amperage rating than recommended to avoid causing extensive damage to the electrical system and possibly a fire.

3. Turn the key to "ON" and turn on the electrical circuits to check if the devices operate.
4. If the fuse immediately blows again, have a Yamaha dealer check the electrical system.

Replacing the headlight bulb or front position light bulb

If the headlight bulb or front position light bulb burns out, please replace as follows.

1. Remove the panel. (See page 6-6.)

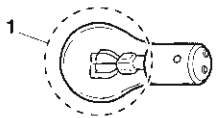


1. Headlight holder
2. Front position light holder

2. Remove the headlight / front position light holder by pushing it inward and turning counterclockwise, and then remove the defective bulb.
3. Place the new bulb into position, and then secure it with the bulb holder.
4. Install the panel.
5. Have a Yamaha dealer adjust the headlight beam if necessary.

⚠ WARNING

Headlight bulbs get very hot. Therefore, keep the flammable products away from a lit headlight bulb, and do not touch the bulb until it has cooled down.



1. Do not touch the glass part of the bulb.

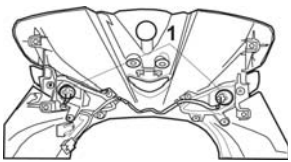
NOTICE

Do not touch the glass part of the headlight bulb to keep it free from oil, otherwise the transparency of the glass, the luminosity of the bulb, and the bulb life will be adversely affected. Thoroughly clean off any dirt and fingerprints on the headlight bulb using a cloth moistened with alcohol or thinner.

Replacing a front turn signal light bulb

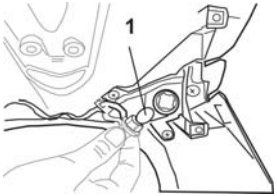
NOTICE

Recommend a Yamaha dealer to complete this work.



1. Front turn signal light bulb socket

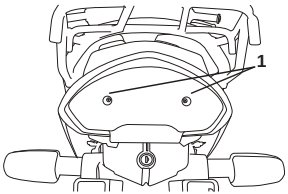
1. Place the motorcycle on the centerstand.
2. Remove the cowlings. (See page 6-5.)
3. Remove the socket (together with the bulb) by turning it counterclockwise.
4. Remove the defective bulb.



1. Front turn signal light bulb

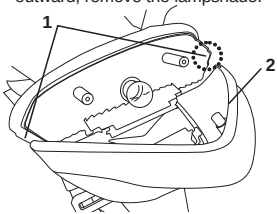
5. Insert a new bulb into the socket.
6. Install the socket (together with the bulb) by turning it clockwise.
7. Install the cowlings.

Replacing a rear turn signal light / tail light / brake light bulb



1. Screw

1. Remove the screw, lampshade on both sides of the hook pulling slightly outward, remove the lampshade.



1. Hook (x2)
2. Lampshade

2. Remove the burn out light bulb by pushing it in and turning it counterclockwise.
3. Insert a new light bulb into the socket, push it in, and then turn it clockwise until it stops.
4. Install the screw and lampshade.
5. If the lampshade cannot be removed or installed, suggest removing the surrounding parts.

NOTICE

Do not over tighten the screw, otherwise the lens may break.

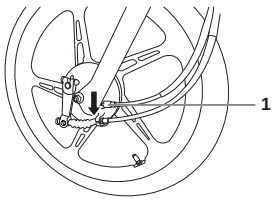
Front wheel

To remove the front wheel

WARNING

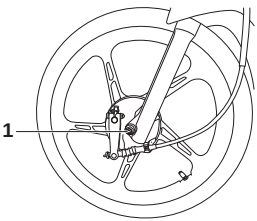
- **Better give to Yamaha dealer to repair the wheel.**
- **To avoid injury, securely support the vehicle so there is no danger of it falling over.**

1. Place the motorcycle on the centerstand.
2. Disconnect the speedometer cable from the front wheel.



1. Speedometer cable

3. Remove the axle nut.



1. Axle nut

4. Pull the wheel axle out, and then remove the wheel.

To install the front wheel

1. Lift the wheel up between the fork legs.
2. Insert the wheel axle and when installing the washer make the wheel slant slightly out, then install the axle nut.
3. Take the motorcycle off the centerstand so that the front wheel is on the ground.
4. Tighten the axle nut to the specified torque.

Tightening torque:
Axle nut:
40 Nm

5. While applying the front brake, push down hard on the handlebars several times to check if the front fork compresses and rebounds smoothly.
6. Connect the speedometer cable.

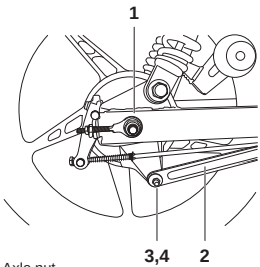
Rear wheel

To remove the rear wheel

WARNING

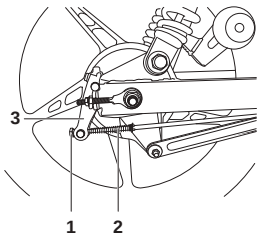
- **Better give to Yamaha dealer repair the wheel.**
- **To avoid injury, securely support the vehicle so there is no danger of it falling over.**

1. Loosen the axle nut.
2. Loosen the brake pedal free play adjusting nut.



1. Axle nut
2. Brake torque rod
3. Brake torque rod cotter
4. Brake torque rod bolt and nut

3. Loosen the brake torque rod nut at the brake shoe plate.
4. Remove the brake torque rod by removing the cotter pin, nut, washer and bolt.
5. Place the motorcycle on the centerstand.



1. Brake pedal free play adjusting nut
2. Brake rod
3. Brake camshaft lever

6. Remove the brake pedal free play adjusting nut, and then disconnect the brake rod from the brake camshaft lever.
7. Remove the axle nut, and then pull the wheel axle out.
8. Push the wheel forward, and then remove the drive chain from the rear sprocket.

TIP

The drive chain does not need to be disassembled in order to remove and install the wheel.

9. Remove the wheel.

To install the rear wheel

1. Install the drive chain onto the rear sprocket.
2. Insert the wheel axle from righthand side, install the wheel.
3. Install the axle nut.
4. Install the brake rod onto the brake camshaft lever, and then install the brake pedal free play adjusting nut onto the brake rod.
5. Connect the brake torque rod to the brake shoe plate by installing the bolt, washer and nut.
6. Adjusting the drive chain slack. (See page 6-15.)
7. Take the motorcycle off the centerstand so that the rear wheel is on the ground.
8. Tighten the brake torque rod nut and axle nut to the specified torque.

Tightening torque:
Brake torque rod nut:
19 Nm
Axle nut:
60 Nm

9. Insert one new cotter.
10. Adjust the brake pedal free play.(See page 6-14.)

⚠ WARNING

After adjusting the brake pedal free play, check the operation of the brake light.

Troubleshooting

Although Yamaha motorcycles receive a thorough inspection before shipment from the factory, trouble may occur during operation. Any problem in the fuel, compression, or ignition systems, for example, can cause poor starting and loss of power.

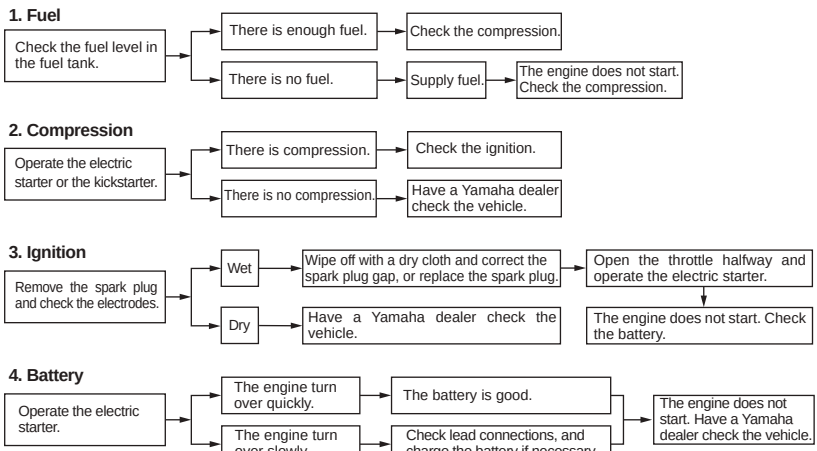
The following troubleshooting charts represent quick and easy procedures for checking these vital systems yourself. However, should your motorcycle require any repair, take it to a Yamaha dealer, whose skilled technicians have the necessary tools, experience, and know-how to service the motorcycle properly.

Use only genuine Yamaha replacement parts. Imitation parts may look like Yamaha parts, but they are often inferior, have a shorter service life and can lead to expensive repair bills.

Troubleshooting charts

WARNING

Keep away from open flames and do not smoke while checking or operating on the fuel system.



MOTORCYCLE CARE AND STORAGE

Matte colour warning

NOTICE:

Some models are equipped with matte colored finished parts. Be sure to consult a Yamaha dealer for advice on what products to use before cleaning the vehicle. Using a brush, harsh chemical products or cleaning compounds when cleaning these parts will scratch or damage their surface. Wax also should not be applied to any matte colored finished parts.

7

Care

While the open design of a motorcycle reveals the attractiveness of the technology, it also makes it more vulnerable. Rust and corrosion can develop even if high-quality components are used. A rusty exhaust pipe may go unnoticed on a motorcycle, however, it detracts from the overall appearance of a motorcycle. Frequent and proper care does not only comply with the terms of the warranty, but it will also keep your motorcycle looking good, extend its life and optimize its performance.

Before cleaning

1. Cover the muffler outlet with a plastic bag after the engine has cooled down.
2. Make sure that all caps and covers as well as all electrical couplers and connectors, including the spark plug cap, are tightly installed.
3. Remove extremely stubborn dirt, like oil burnt onto the crankcase, with a degreasing agent and a brush, but never apply such products onto seals, gasket, sprockets, the drive chain and wheel axles. Always rinse the dirt and degreaser off with water.

Cleaning

NOTICE:

- Avoid using strong acidic wheel cleaners, especially on spoked wheels. If such products are used on hard-to-remove dirt, do not leave the cleaner on the affected area any longer than instructed. Also, thoroughly rinse the area off with water, immediately dry it, and then apply a corrosion protection spray.
- Improper cleaning can damage windshields, cowlings, panels and other plastic parts. Use only a soft, clean cloth or sponge with mild detergent and water to clean plastic.
- Do not use any harsh chemical products on plastic parts. Be sure to avoid using cloths or sponges which have been in contact with strong or abrasive cleaning products, solvent or thinner, fuel (gasoline), rust removers or inhibitors, brake fluid, antifreeze or electrolyte.
- Do not use high-pressure washers or steam-jet cleaners since they cause water seepage and deterioration in the following areas: seals (of wheel and swingarm bearings, fork and brakes), electric components (couplers, connectors, instruments, switches and lights), breather hoses and vents.
- For motorcycles equipped with a windshield: Do not use strong cleaners or hard sponges as they will cause dulling or scratching. Some cleaning compounds for plastic may leave scratches on the windshield. Test the product on a small hidden part of the windshield to make sure that it does not leave any marks. If the windshield is scratched, use a quality plastic polishing compound after washing.

After normal use

Remove dirt with warm water, a mild detergent, and a soft, clean sponge, and then rinse thoroughly with clean water. Use a toothbrush or bottlebrush for hard-to-reach areas. Stubborn dirt and insects will come off more easily if the area is covered with a wet cloth for a few minutes before cleaning.

After riding in the rain, near the sea or on salt sprayed roads

Since sea salt or salt sprayed on roads during winter are extremely corrosive in combination with water, carry out the following steps after each ride in the rain, near the sea or on salt sprayed roads.

1. Clean the motorcycle with cold water and a mild detergent, after the engine cooled down.

NOTICE

Do not use warm water since it increase the corrosive action of the salt.

2. Apply a corrosion protection spray on all metal, including chrome and nickel plated, surfaces to prevent corrosion.

After cleaning

1. Dry the motorcycle with a chamois or an absorbing cloth.
2. Immediately dry the drive chain and lubricate it to prevent it from rusting.
3. Use a chrome polish to shine chrome, aluminum and stainless steel parts, including the exhaust system. (Even the thermally induced discoloring of stainless-steel exhaust systems can be removed through polishing.)
4. To prevent corrosion, it is recommended to apply a corrosion protection spray on all metal, including chrome and nickel-plated, surfaces.
5. Use spray oil as a universal cleaner to remove any remaining dirt.
6. Touch up minor paint damage caused by stones, etc.
7. Wax all painted surfaces.
8. Let the motorcycle dry completely before storing or covering it.

⚠ WARNING

- **Make sure that there is no oil or wax on the brakes or tires.**
- **If necessary, clean the brake discs and brake linings with a regular brake disc cleaner or acetone, and wash the tires with warm water and a mild detergent. Before operating the motorcycle test its braking performance and cornering behavior.**

NOTICE

- **Apply spray oil and wax sparingly and make sure to wipe off any excess.**
- **Never apply oil or wax to any rubber and plastic parts, but treat them with a suitable care product.**
- **Avoid using abrasive polishing compounds as they will wear away the paint.**

TIP

Consult a Yamaha dealer for advice on what products to use.

7

Storage

Short-term

Always store your motorcycle in a cool, dry place and, if necessary, protect it against dust with a porous cover.

NOTICE

- **Storing the motorcycle in a poorly ventilated room or covering it with a tarp, while it is still wet, will allow water and humidity to seep in and cause rust.**
- **To prevent corrosion, avoid damp cellars, stables (because of the presence of ammonia) and areas where strong chemicals are stored.**

Long-term

Before storing your motorcycle for several months:

1. Follow all the instructions in the "Care" section of this chapter.
2. Fill up the fuel tank and add fuel stabilizer (if available) to prevent the fuel tank from rusting and the fuel from deteriorating.
3. Perform the following steps to protect the cylinder, piston rings, etc. from corrosion.
   a. Remove the spark plug cap and spark plug.
   b. Pour a teaspoonful of engine oil into the spark plug bore.
   c. Install the spark plug cap onto the spark plug, and then place the spark plug on the cylinder head so that the electrodes are grounded. (This will limit sparking during the next step.)
   d. Turn the engine over several times with the starter. (This will coat the cylinder wall with oil.)
   e. Remove the spark plug cap from the spark plug, and then install the spark plug and the spark plug cap.

⚠ WARNING

To prevent damage or injury from sparking, make sure to ground the spark plug electrodes while turning the engine over.

4. Lubricate all control cables and the pivoting points of all levers and pedals as well as of the sidestand/centerstand.
5. Check and, if necessary, correct the tire air pressure, and then lift the motorcycle so that both of its wheels are off the ground. Alternatively, turn the wheels a little every month in order to prevent the tires from becoming degraded in one spot.
6. Cover the muffler outlet with a plastic bag to prevent moisture from entering it.
7. Remove the battery and fully charge it. Store it in a cool, dry place and charge it once a month. Do not store the battery in an excessively cold or warm place [less than 0 °C or more than 30°C]. For more information on storing the battery, see page 6-20.

TIP

Make any necessary repairs before storing the motorcycle.

Dimensions:
Overall length:
1930mm
Overall width:
660mm
Overall height:
1040mm
Seat height:
760mm
Wheelbase:
1235mm
Ground clearance:
127mm
Minimum turning radius:
1590mm

Weight:
With oil and fuel:
97kg

Engine:
Engine type:
Air cooled 4-stroke, SOHC
Cylinder arrangement:
Forward-inclined single cylinder
Displacement:
113.7ml
Bore × stroke:
50.0 × 57.9mm
Compression ratio:
9:1
Starting system:
Electric starter and kickstarter
Lubrication system:
Wet sump

Engine oil:
Type:
SAE10W-30, SAE10W-40, SAE5W-30
Recommended engine oil grade:
API quality SF grade or higher
Engine oil quantity:
Periodic oil change 0.80L
Total Capacity 1.0L

Air filter:
Air filter element:
Dry element

Fuel:
Recommended fuel:
93 or above unleaded gasoline
Fuel tank capacity:
4.2L
Fuel tank storage:
2.8L

Spark plug (s):
Manufacturer/model:
NGK/CR6HSA
Spark plug gap:
0.6–0.7mm

Clutch:
Clutch type:
Wet, multiple-disc

Transmission:
Primary reduction system:
Slanter gear
Primary reduction ratio:
69/21
Secondary reduction system:
Drive chain
Secondary reduction ratio:
41/15
Transmission type:
Constant mesh 4-speed
Operation:
Left foot operation
Gear ratio:
1st:
34/12
2nd:
30/16
3rd:
23/17
4th:
23/22

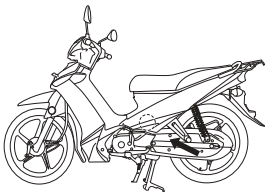
Chassis:
Frame type:
Steel tube underbone
Caster angle:
26.5°
Trail:
76.0mm

Front tire:
Type:
With tube
Size:
70/90-17 M/C
Manufacturer/model:
WEI XING/209

Rear tire:
Type:
With tube
Size:
80/90-17 M/C

Manufacturer/model:
WEI XING/210
Loading:
Maximum load:
150kg
Tire air pressure (measured on cold tires):
Loading condition:
One person riding
Front:
200 kPa
Rear:
225 kPa
Loading condition:
Two person riding
Front:
200 kPa
Rear:
280 kPa
Front wheel:
Wheel type:
Cast wheel
Rim size:
J17 x 1.40
Rear wheel:
Wheel type:
Cast wheel
Rim size:
J17 x 1.60
Front brake:
Type:
Drum brake
Operation:
Right hand operation
Rear brake:
Type:
Drum brake
Operation:
Right foot operation
Front suspension:
Type:
Telescopic Fork
Spring/shock absorber type:
Coil spring/oil damper
Travel:
100mm
Rear suspension:
Type:
Swingarm
Spring/shock absorber type:
Coil spring/oil damper
Travel:
70mm
Electrical system:
Ignition system:
Transistor coil ignition
Charging system:
AC magneto
Battery:
Voltage, capacity:
12V, 5.0Ah
Headlight:
Bulb type:
Incandescent
Bulb voltage, wattage × quantity:
Headlight:
12V, 35.0W × 1
Tail/brake light:
12V, 5.0W/21.0W × 1
Front turn signal light:
12V, 10.0W × 2
Rear turn signal light:
12V, 10.0W × 2
Position light:
12V, 3.0W × 1
Meter lighting:
12V, 1.7W × 1
Neutral indicator light:
12V, 1.7W × 1
High beam indicator light:
12V, 1.7W × 1
Turn signal indicator light:
12V, 1.7W × 1
Fuse:
Fuse:
7.5A

Product label



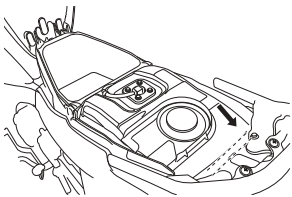
The product label is riveted at the bottom of the frame, after the front fender.

Vehicle identification number

The vehicle identification number is punched in the bottom seat cushion.

TIP:

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



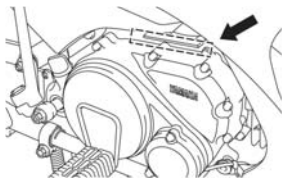
Identification numbers

Record the vehicle identification number and engine serial number in the spaces provided below for assistance when ordering spare parts from a Yamaha dealer or for reference in case the vehicle is stolen.

Vehicle identification number:

Engine serial number:

Engine serial number



The engine serial number is stamped into the crankcase.

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