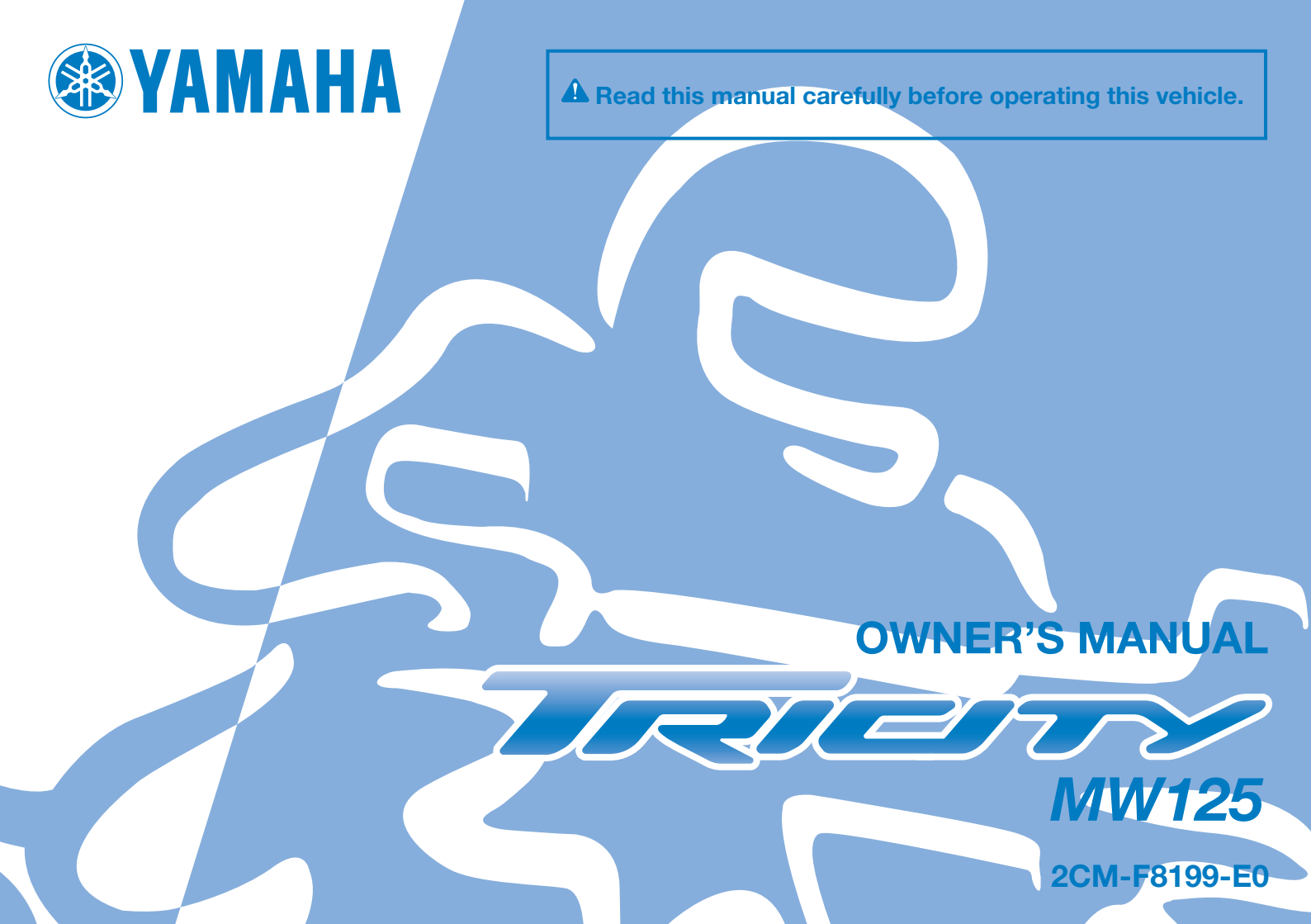
YAMAHA

⚠ Read this manual carefully before operating this vehicle.



OWNER'S MANUAL

TRICITY

MW125

2CM-F8199-E0

EAU46091

⚠ Read this manual carefully before operating this vehicle. This manual should stay with this vehicle if it is sold.

EAU60580

Welcome to the Yamaha world of motorcycling!
As the owner of the MW125, 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 MW125. The Owner's Manual does not only instruct you in how to operate, inspect and maintain your vehicle, 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 vehicle 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!
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 vehicle and this manual. If there is any question concerning this manual, please consult a Yamaha dealer.

EWA17780

⚠ WARNING

Please read this manual carefully and completely before operating this vehicle.

IMPORTANT MANUAL INFORMATION

EAU10134

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 avoided, 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.

*Product and specifications are subject to change without notice.

IMPORTANT MANUAL INFORMATION

EAU37432

MW125
OWNER'S MANUAL

TABLE OF CONTENTS

EAU60750

Be a Responsible Owner

As the vehicle's owner, you are responsible for the safe and proper operation of your vehicle.

This is a leaning multi-wheel vehicle.

The safe use and operation of this vehicle is 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 vehicle.

He or she should:

- Obtain thorough instructions from a competent source on all aspects of this vehicle's 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.
- Never operate a vehicle without proper training or instruction. Take a training course. Beginners should receive training from a certified instructor. Contact a Yamaha dealer to find out about the training courses nearest you.

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 vehicle is designed to carry the operator and a passenger.
- The failure of motorists to detect and recognize scooters and motorcycles in traffic is the predominating cause of automobile and such smaller vehicle accidents. Many accidents have been caused by an automobile driver who did not see the smaller vehicle. 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 such smaller vehicle accidents to occur.
  - Ride where other motorists can see you. Avoid riding in another motorist's blind spot.
  - Never maintain a vehicle without proper knowledge. Contact a Yamaha dealer to inform you on basic vehicle maintenance. Certain maintenance can only be carried out by certified staff.
- Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current driver's license.
  - Make sure that you are qualified and that you only lend your vehicle 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 vehicle where there is no traffic until you have become thoroughly familiar with the vehicle and all of its controls.

- Many accidents have been caused by error of the vehicle 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 vehicle.
  - 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 vehicle is designed for on-road use only. It is not suitable for off-road use.

Protective Apparel

The majority of fatalities from scooter and 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, substantial shoes, 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 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.

Carbon Monoxide is a colorless, odorless, tasteless gas which may be present even if you do not see or smell any engine exhaust. Deadly levels of carbon monoxide can collect rapidly and you can quickly be overcome and unable to save yourself. Also, deadly levels of carbon monoxide can linger for hours or days in enclosed or poorly ventilated areas. If you experience any symptoms of carbon monoxide poisoning, leave the area immediately, get fresh air, and SEEK MEDICAL TREATMENT.

- 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 areas such as barns, garages, or carports.
- Do not run engine outdoors where engine exhaust can be drawn into a building through openings such as windows and doors.

Loading

Adding accessories or cargo to your vehicle can adversely affect stability and handling if the weight distribution of the vehicle is changed. To avoid the possibility of an accident, use extreme caution when adding cargo or accessories to your vehicle. Use extra care when riding a vehicle 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 vehicle:

The total weight of the operator, passenger, accessories and cargo must not exceed the maximum load limit. **Operation of an overloaded vehicle could cause an accident.**

Maximum load:
169 kg (373 lb)

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

- Cargo and accessory weight should be kept as low and close to the vehicle 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 vehicle to minimize imbalance or instability.
- Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the vehicle before riding. Check accessory mounts and cargo restraints frequently.
  - Properly adjust the suspension for your load (suspension-adjustable models only), and check the condition and pressure of your tires.
  - Never attach any large or heavy items to the handlebar, front fork, or front fender. Such items can create unstable handling or a slow steering response.
- **This vehicle is not designed to pull a trailer or to be attached to a sidecar.**

Genuine Yamaha Accessories

Choosing accessories for your vehicle is an important decision. Genuine Yamaha accessories, which are avail-

able only from a Yamaha dealer, have been designed, tested, and approved by Yamaha for use on your vehicle.
Many companies with no connection to Yamaha manufacture parts and accessories or offer other modifications for Yamaha vehicles. Yamaha is not in a position to test the products that these aftermarket companies produce. Therefore, Yamaha can neither endorse nor recommend the use of accessories not sold by Yamaha or modifications not specifically recommended by Yamaha, even if sold and installed by a Yamaha dealer.

Aftermarket Parts, Accessories, and Modifications

While you may find aftermarket products similar in design and quality to genuine Yamaha accessories, recognize that some aftermarket accessories or modifications are not suitable because of potential safety hazards to you or others. Installing aftermarket products or having other modifications performed to your vehicle that change any of the vehicle's design or operation characteristics can put you and others at greater risk of serious injury or death. You are responsible for injuries related to changes in the vehicle.
Keep the following guidelines in mind, as well as those provided under "Loading" when mounting accessories.

- Never install accessories or carry cargo that would impair the performance of your vehicle. 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 vehicle due to aerodynamic effects. Wind may attempt to lift the vehicle, or the vehicle 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 vehicle's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

Aftermarket Tires and Rims

The tires and rims that came with your vehicle were designed to match the performance capabilities and to provide the best combination of handling, braking, and comfort. Other tires, rims, sizes, and combinations may not be

appropriate. Refer to page 6-17 for tire specifications and more information on replacing your tires.

Transporting the Vehicle

Be sure to observe the following instructions before transporting the vehicle in another vehicle.

- Remove all loose items from the vehicle.
- Point the front wheels straight ahead on the trailer or in the truck bed, and choke it in a rail to prevent movement.
- Secure the vehicle with tie-downs or suitable straps that are attached to solid parts of the vehicle, such as the frame or upper front fork triple clamp (and not, for example, to rubber-mounted handlebars or turn signals, or parts that could break). Choose the location for the straps carefully so the straps will not rub against painted surfaces during transport.
- The suspension should be compressed somewhat by the tie-downs, if possible, so that the vehicle will not bounce excessively during transport.

EAU60590

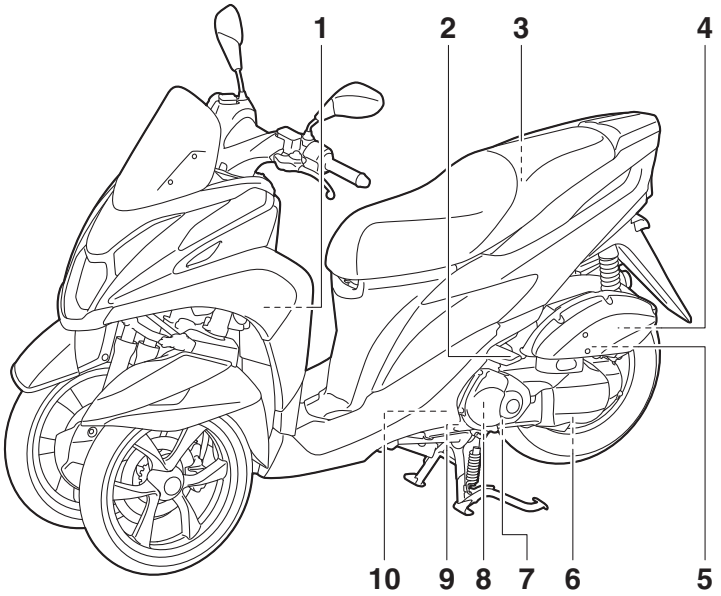
Further safe-riding points

- Be sure to signal clearly when making turns.
- Braking can be extremely difficult on a wet road. Avoid hard braking, because the vehicle could slide. Apply the brakes slowly when stopping on a wet surface.
- Slow down as you approach a corner or turn. Once you have completed a turn, accelerate slowly.
- Be careful when passing parked cars. A driver might not see you and open a door in your path.
- Railroad crossings, streetcar rails, iron plates on road construction sites, and manhole covers become extremely slippery when wet. Slow down and cross them with caution. Keep the vehicle upright, otherwise it could slide out from under you.
- The brake pads or linings could get wet when you wash the vehicle. After washing the vehicle, check the brakes before riding.

- Always wear a helmet, gloves, trousers (tapered around the cuff and ankle so they do not flap), and a brightly colored jacket.
- Do not carry too much luggage on the vehicle. An overloaded vehicle is unstable. Use a strong cord to secure any luggage to the carrier (if equipped). A loose load will affect the stability of the vehicle and could divert your attention from the road. (See page 1-3.)

EAU10411

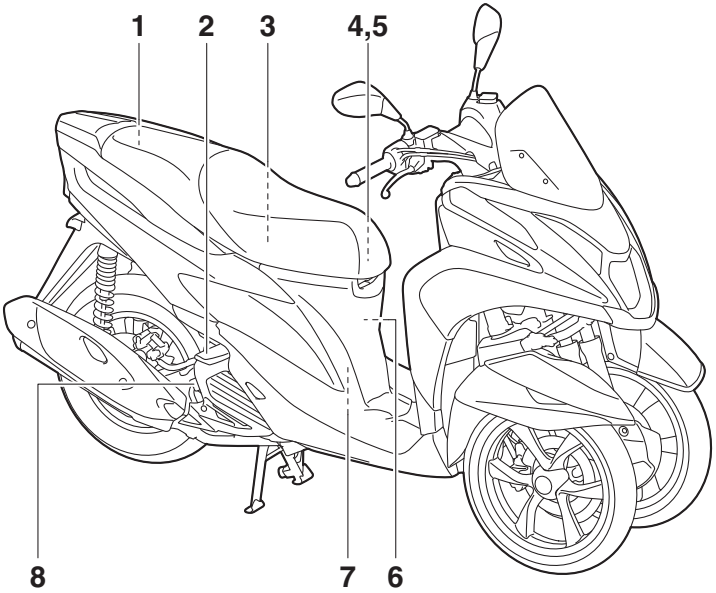
Left view



1. Luggage hook (page 3-14)
2. Passenger footrest (page 3-13)
3. Storage compartment (page 3-13)
4. Air filter element (page 6-14)
5. Final transmission oil filler cap (page 6-12)
6. Final transmission oil drain bolt (page 6-12)
7. Engine oil drain bolt A (page 6-10)
8. V-belt case air filter element (page 6-14)
9. Engine oil drain bolt B (page 6-10)
10. Coolant reservoir (page 6-13)

EAU10421

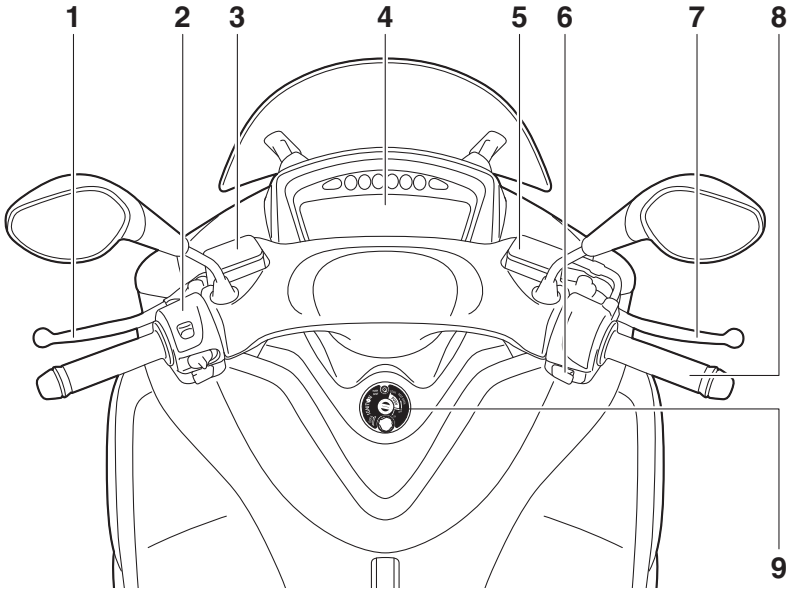
Right view



1. Owner's tool kit (page 6-2)
2. Passenger footrest (page 3-13)
3. Fuel tank cap (page 3-9)
4. Main fuse (page 6-27)
5. Fuse box (page 6-27)
6. Battery (page 6-26)
7. Spark plug (page 6-8)
8. Engine oil filler cap (page 6-10)

EAU10431

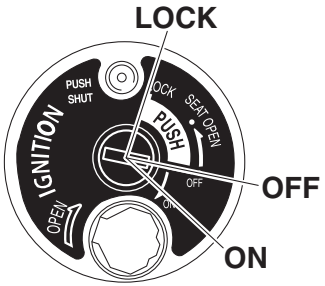
Controls and instruments



1. Rear brake lever (page 3-9)
2. Left handlebar switches (page 3-8)
3. Rear brake fluid reservoir (page 6-20)
4. Multi-function meter unit (page 3-4)
5. Front brake fluid reservoir (page 6-20)
6. Start switch (page 3-8)
7. Front brake lever (page 3-8)
8. Throttle grip (page 6-16)
9. Main switch/steering lock (page 3-1)

EAUN0263

Main switch/steering lock



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

TIP

The main switch/steering lock is equipped with a keyhole shutter. (See page 3-2 for keyhole shutter opening and closing procedures.)

EAUT1972

ON

All electrical circuits are supplied with power; the meter lighting, taillight, and auxiliary lights come on, and the engine can be started. The key cannot be removed.

TIP

The headlight comes on automatically when the engine is started and stays on until the key is turned to "OFF" or the sidestand is moved down.

EAU10662

OFF

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

EWA10062

⚠ WARNING

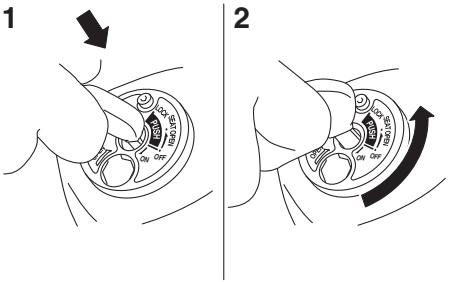
Never turn the key to "OFF" or "LOCK" while the vehicle is moving. Otherwise the electrical systems will be switched off, which may result in loss of control or an accident.

EAU10685

LOCK

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

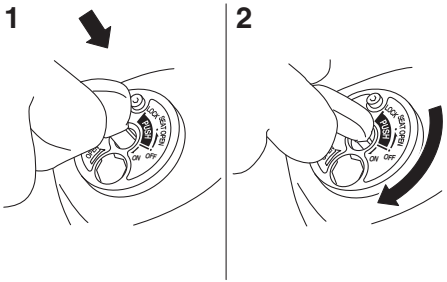
To lock the steering



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

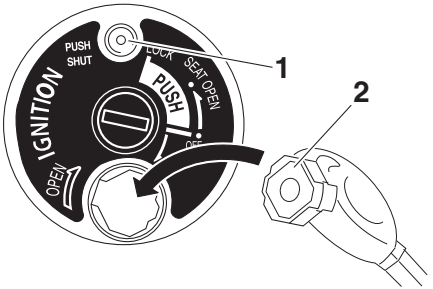


1. Push.
2. Turn.

Push the key in, and then turn it to "OFF" while still pushing it.

EAUN0352

Keyhole shutter



1. "PUSH SHUT" button
2. Key head

To open the keyhole shutter

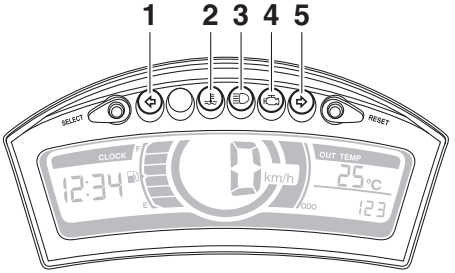
Insert the key head into the keyhole shutter receptacle as shown, and then turn the key to the right to open the keyhole shutter.

To close the keyhole shutter

Press the "PUSH SHUT" button to close the keyhole shutter.

EAU49396

Indicator lights and warning lights



1. Left turn signal indicator light "⇦"
2. Coolant temperature warning light "🌡"
3. High beam indicator light "≡D"
4. Engine trouble warning light "🔧"
5. Right turn signal indicator light "⇨"

EAU11031

Turn signal indicator lights "⇦" and "⇨"

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

EAU11081

High beam indicator light "≡D"

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

EAU11447

Coolant temperature warning light "🌡"

This warning light comes on if the engine overheats. If this occurs, stop the engine immediately and allow the engine to cool.

The electrical circuit of the warning light can be checked by turning the key to "ON". The warning light should come on for a few seconds, and then go off.

If the warning light does not come on initially when the key is turned to "ON", or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

ECA10022

NOTICE

Do not continue to operate the engine if it is overheating.

TIP

- For radiator-fan-equipped vehicles, the radiator fan(s) automatically switch on or off according to the coolant temperature in the radiator.
- If the engine overheats, see page 6-33 for further instructions.

EAU11506

Engine trouble warning light "🔧"

This warning light comes on or flashes if a problem is detected in the electrical circuit monitoring the engine. If this occurs, have a Yamaha dealer check the self-diagnosis system. (See page 3-3 for an explanation of the self-diagnosis device.)

The electrical circuit of the warning light can be checked by turning the key to "ON". The warning light should come on for a few seconds, and then go off.

If the warning light does not come on initially when the key is turned to "ON", or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

EAU12095

Self-diagnosis device

This model is equipped with a self-diagnosis device for various electrical circuits.

If a problem is detected in any of those circuits, the engine trouble warning light will come on or flash. If this occurs, have a Yamaha dealer check the vehicle.

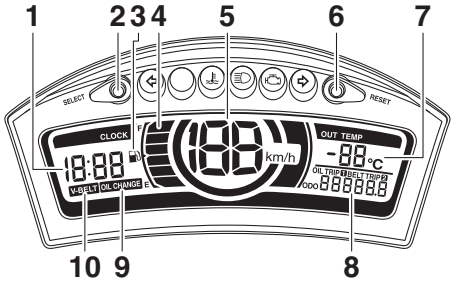
ECA11171

NOTICE

To prevent engine damage, be sure to consult a Yamaha dealer as soon as possible if this occurs.

Multi-function meter unit

EAUU1730



1. Clock
2. “SELECT” button
3. Fuel level warning indicator “⛽”
4. Fuel meter
5. Speedometer
6. “RESET” button
7. Outside air temperature display
8. Odometer/tripmeters
9. Oil change indicator “OIL CHANGE”
10. V-belt replacement indicator “V-BELT”

EWA12423

⚠ WARNING

Be sure to stop the vehicle before making any setting changes to the multi-function meter unit. Changing settings while riding can distract the operator and increase the risk of an accident.

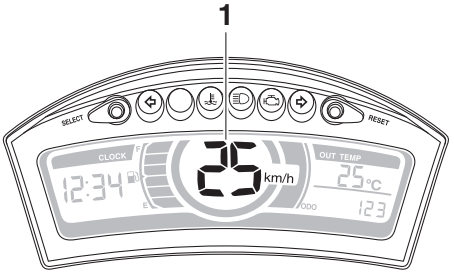
The multi-function meter unit is equipped with the following:

- a speedometer
- a fuel meter
- a clock
- an outside air temperature display
- an odometer
- two tripmeters
- a fuel reserve tripmeter
- an oil change tripmeter
- a V-belt replacement tripmeter
- an oil change indicator
- a V-belt replacement indicator

TIP

- Be sure to turn the key to “ON” before using the “SELECT” and “RESET” buttons.
- For the UK only: To switch the speedometer and odometer/tripmeter displays between kilometers and miles, press the “SELECT” button for at least one second.
- If the coolant temperature warning light and engine trouble warning light remain on during the initial display mode, have the battery charged by a Yamaha dealer.

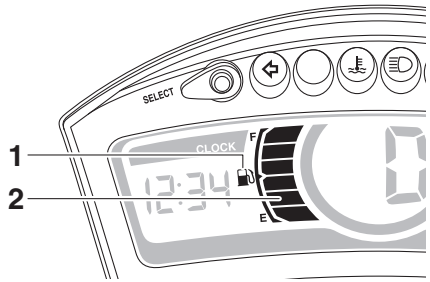
Speedometer



1. Speedometer

The speedometer shows the vehicle’s traveling speed.

Fuel meter



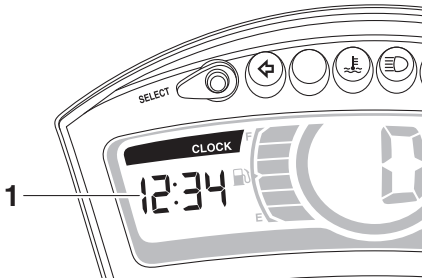
1. Fuel level warning indicator "⛽"
2. Fuel meter

The fuel meter indicates the amount of fuel in the fuel tank. The display segments of the fuel meter disappear towards "E" (Empty) as the fuel level decreases. When the bottom segment of the fuel meter and fuel level warning indicator "⛽" start flashing, refuel as soon as possible. When the key is turned to "ON", all of the display segments of the fuel meter will appear for a few seconds, and then the fuel meter shows the actual fuel level.

TIP

This fuel meter is equipped with a self-diagnosis system. If a problem is detected in an electrical circuit, all the display segments and fuel level warning indicator start flashing. If this occurs, have a Yamaha dealer check the electrical circuit.

Clock

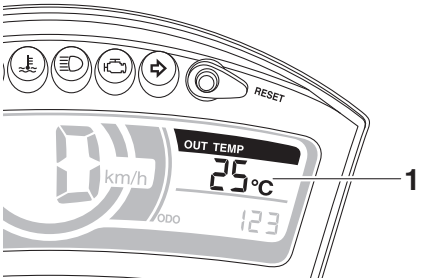


1. Clock

To set the clock:

1. Push the "SELECT" button and "RESET" button together for at least two seconds.
2. When the hour digits start flashing, push the "RESET" button to set the hours.
3. Push the "SELECT" button, and the minute digits will start flashing.
4. Push the "RESET" button to set the minute digits.
5. Push the "SELECT" button and then release it to start the clock.

Outside air temperature display "OUT TEMP"



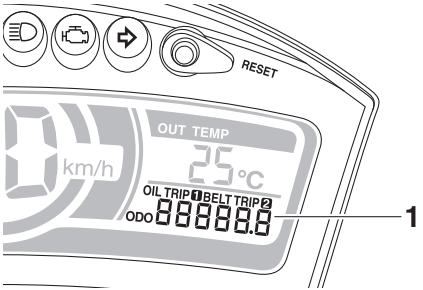
1. Outside air temperature display

This display shows the outside air temperature from –10 °C to 40 °C in 1 °C increments. The temperature displayed may vary from the actual outside air temperature.

TIP

- If the outside air temperature falls below –10 °C, a lower temperature than –10 °C will not be displayed.
- If the outside air temperature climbs above 40 °C, a higher temperature than 40 °C will not be displayed.
- The accuracy of the temperature reading may be affected when riding slowly [approximately under 20 km/h (12 mi/h)] or when stopped at traffic signals, railroad crossings, etc.

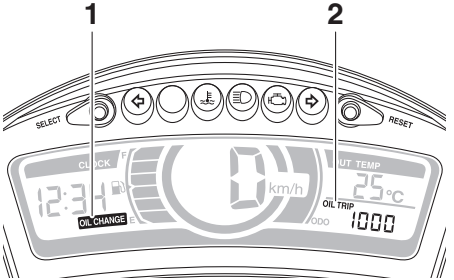
Odometer and tripmeter modes



1. Odometer/tripmeters

Push the "SELECT" button to switch the display between the odometer mode "ODO", the tripmeter modes "TRIP 1" and "TRIP 2", the oil change tripmeter mode "OIL TRIP" and the V-belt replacement tripmeter mode "BELT TRIP" in the following order:
ODO → TRIP 1 → TRIP 2 → OIL TRIP → BELT TRIP → ODO
When approximately 1.6 L (0.42 US gal, 0.35 Imp.gal) of fuel remains in the fuel tank, the bottom segment of the fuel meter and fuel level warning indicator will start flashing, and the display will automatically change to the fuel reserve tripmeter mode "F" and start counting the distance traveled from that point. In this case, pushing the "SELECT" button switches the display between the various tripmeter and odometer modes in the following order:
F → TRIP 1 → TRIP 2 → OIL TRIP → BELT TRIP → ODO → F
To reset tripmeters 1, 2, or the fuel reserve tripmeter, select it by pushing the "SELECT" button, and then push the "RESET" button for at least one second. If you do not reset the fuel reserve tripmeter manually, it will reset itself automatically and the display will return to the prior mode after refueling and traveling 5 km (3 mi).
To reset the oil change tripmeter or V-belt replacement tripmeter, select it by pushing the "SELECT" button, and then push the "RESET" button for three to four seconds.

Oil change indicator "OIL CHANGE"

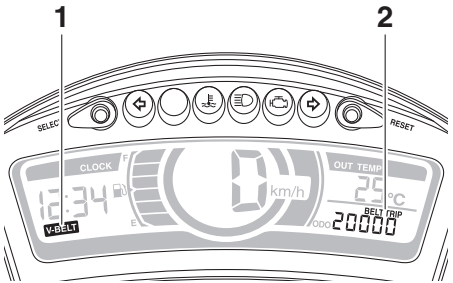


1. Oil change indicator "OIL CHANGE"
2. Oil change tripmeter

This indicator will come on at the initial 1000 km (600 mi), then at 4000 km (2500 mi) and every 4000 km (2500 mi) thereafter to indicate that the engine oil should be changed.

After changing the engine oil, reset the oil change indicator and the oil change tripmeter. To reset them both, select the oil change tripmeter, and then push the “RESET” button for one second. While “OIL CHANGE” is flashing, push the “RESET” button for three seconds. The oil change tripmeter will be reset and the oil change indicator will go off. If the engine oil is changed before the oil change indicator comes on (i.e., before the periodic oil change interval has been reached), the oil change tripmeter must be reset for the next periodic oil change to be indicated at the correct time.

V-belt replacement indicator “V-BELT”



1. V-belt replacement indicator “V-BELT”
2. V-belt replacement tripmeter

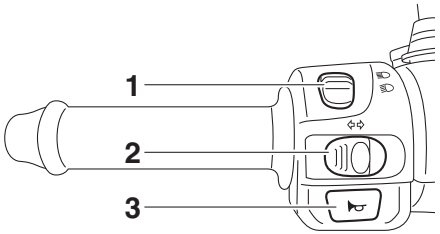
This indicator come on at every 20000 km (12500 mi) to indicate that the V-belt should be replaced.
If the V-belt replacement indicator has come on, after replacing the V-belt, reset the V-belt replacement indicator and the V-belt replacement tripmeter. To reset them both, select the V-belt replacement tripmeter, and then push the “RESET” button for one second. While “V-BELT” is flashing, push the “RESET” button for three to four seconds. The V-belt replacement tripmeter will be reset and the V-belt replacement indicator will go off.

If the V-belt is replaced before the V-belt replacement indicator comes on (i.e., before the periodic V-belt replacement interval has been reached), the V-belt replacement tripmeter must be reset for the next periodic V-belt replacement to be indicated at the correct time.

EAU1234H

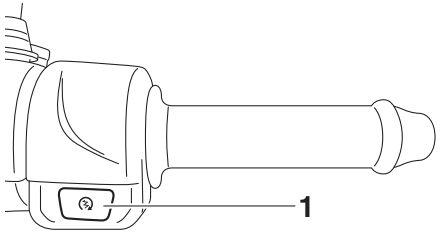
Handlebar switches

Left



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

Right



1. Start switch "㊋"

EAU12401

Dimmer switch "≣○/≣○"

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

EAU12461

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.

EAU12501

Horn switch "📯"

Press this switch to sound the horn.

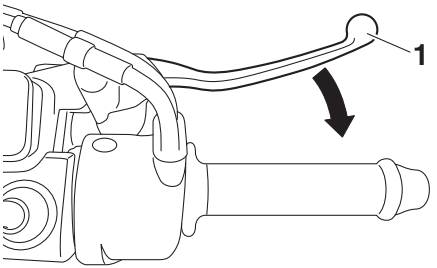
EAU12722

Start switch "㊋"

With the sidestand up, push this switch while applying the front or rear brake to crank the engine with the starter. See page 5-1 for starting instructions prior to starting the engine.

EAU12902

Front brake lever

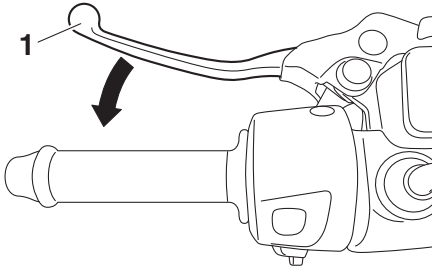


1. Front brake lever

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

EAUS1963

Rear brake lever



1. Rear brake lever

The rear brake lever is located on the left handlebar grip. To apply the rear brake, pull the lever toward the handlebar grip.

This model is equipped with a unified brake system.

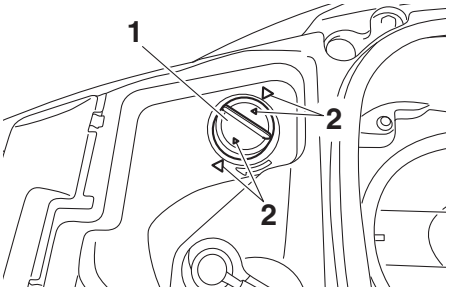
When pulling the rear brake lever, the rear brake and a portion of the front brake are applied. For full braking performance, apply both brake levers simultaneously.

TIP

- As the unified brake system is mechanical, additional free play can be felt in the front brake lever when the rear brake lever is being pulled.
- The unified brake system does not function when the front brake is applied alone.

EAU37473

Fuel tank cap



1. Fuel tank cap
2. "△" mark

To remove the fuel tank cap

1. Open the seat. (See page 3-12.)
2. Turn the fuel tank cap counterclockwise and pull it off.

To install the fuel tank cap

1. Insert the fuel tank cap into the tank opening and turn it clockwise until the "△" marks on the cap and tank are aligned.
2. Close the seat.

EWA11092

⚠ WARNING

Make sure that the fuel tank cap is properly closed after filling fuel. Leaking fuel is a fire hazard.

EAU13222

Fuel

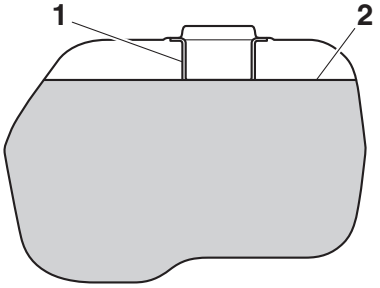
Make sure there is sufficient gasoline in the tank.

EWA10882

⚠ WARNING

Gasoline and gasoline vapors are extremely flammable. To avoid fires and explosions and to reduce the risk of injury when refueling, follow these instructions.

1. Before refueling, turn off the engine and be sure that no one is sitting on the vehicle. Never refuel while smoking, or while in the vicinity of sparks, open flames, or other sources of ignition such as the pilot lights of water heaters and clothes dryers.
2. Do not overfill the fuel tank. When refueling, be sure to insert the pump nozzle into the fuel tank filler hole. Stop filling when the fuel reaches the bottom of the filler tube. Because fuel expands when it heats up, heat from the engine or the sun can cause fuel to spill out of the fuel tank.



1. Fuel tank filler tube
2. Maximum fuel level

3. Wipe up any spilled fuel immediately. ***NOTICE:*** **Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.** [ECA10072]
4. Be sure to securely close the fuel tank cap.

EWA15152

⚠ WARNING

Gasoline is poisonous and can cause injury or death. Handle gasoline with care. Never siphon gasoline by mouth. If you should swallow some gasoline or inhale a lot of gasoline vapor, or get some gasoline in your eyes, see your doctor immedi-

ately. If gasoline spills on your skin, wash with soap and water. If gasoline spills on your clothing, change your clothes.

EAU53012

Recommended fuel:
Regular unleaded gasoline (Gasohol (E10) acceptable)
Fuel tank capacity:
6.6 L (1.74 US gal, 1.45 Imp.gal)

ECA11401

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.

Your Yamaha engine has been designed to use regular unleaded gasoline with a research octane number of 95 or higher. If knocking (or pinging) occurs, use a gasoline of a different brand or premium unleaded fuel. Use of unleaded fuel will extend spark plug life and reduce maintenance costs.

Gasohol

There are two types of gasohol: gasohol containing ethanol and that containing methanol. Gasohol containing ethanol can be used if the ethanol content does not exceed 10% (E10). Gasohol containing methanol is not recommended by Yamaha because it can cause damage to the fuel system or vehicle performance problems.

EAU13434

Catalytic converter

This model is equipped with a catalytic converter in the exhaust system.

EWA10863

⚠ WARNING

The exhaust system is hot after operation. To prevent a fire hazard or burns:

- **Do not park the vehicle near possible fire hazards such as grass or other materials that easily burn.**
- **Park the vehicle in a place where pedestrians or children are not likely to touch the hot exhaust system.**
- **Make sure that the exhaust system has cooled down before doing any maintenance work.**
- **Do not allow the engine to idle more than a few minutes. Long idling can cause a build-up of heat.**

ECA10702

NOTICE

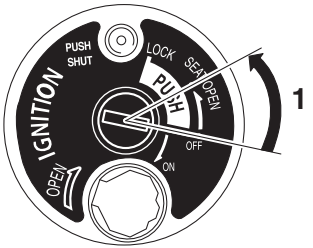
Use only unleaded gasoline. The use of leaded gasoline will cause unrepairable damage to the catalytic converter.

EAU60620

Seat

To open the seat

1. Place the vehicle on the centerstand.
2. Insert the key into the main switch, and then turn it counterclockwise to "SEAT OPEN".



1. Open.

TIP

Do not push inward when turning the key.

3. Fold the seat up.

To close the seat

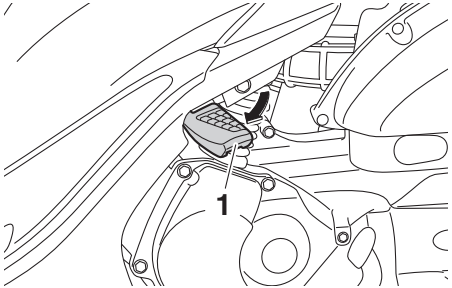
1. Fold the seat down, and then push it down to lock it in place.
2. Remove the key.

TIP

Make sure that the seat is properly secured before riding.

EAUT3711

Passenger footrest

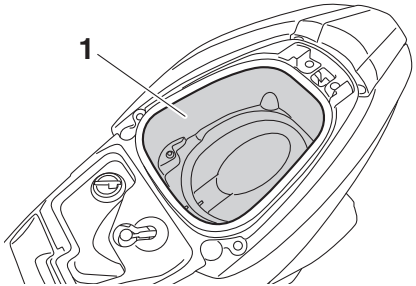


1. Passenger footrest

To use the passenger footrest, pull it out as shown.
To retract the passenger footrest, push it back to original position.

EAU61130

Storage compartment



1. Storage compartment

There is a storage compartment under the seat. (See page 3-12.)

EWA10962

⚠ WARNING

- **Do not exceed the load limit of 5 kg (11 lb) for the storage compartment.**
- **Do not exceed the maximum load of 169 kg (373 lb) for the vehicle.**

ECA21150

NOTICE

Keep the following points in mind when using the storage compartment.

- **Since the storage compartment accumulates heat when exposed to the sun and/or the engine heat, do not store anything susceptible to heat, consumables or flammable items inside it.**
- **To avoid humidity from spreading through the storage compartment, wrap wet articles in a plastic bag before storing them in the compartment.**
- **Since the storage compartment may get wet while the vehicle is being washed, wrap any articles stored in the compartment in a plastic bag.**
- **Do not keep anything valuable or breakable in the storage compartment.**

To store a helmet in the storage compartment, place the helmet with the front facing backward.

TIP

- Some helmets cannot be stored in the storage compartment because of their size or shape.

- Do not leave your vehicle unattended with the seat open.

EAU61380

Luggage hook

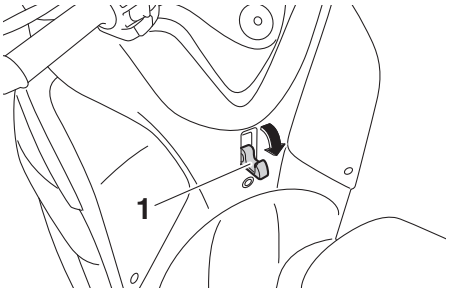
To use the luggage hook, pull it out as shown.

To retract the luggage hook, push it back to its original position.

EWAT1032

⚠ WARNING

- **Do not exceed the load limit of 1.0 kg (2.2 lb) for the luggage hook.**
- **Do not exceed the maximum load of 169 kg (373 lb) for the vehicle.**



1. Luggage hook

EAU15306

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.

TIP

The built-in sidestand switch is part of the ignition circuit cut-off system, which cuts the ignition in certain situations. (See the following section for an explanation of the ignition circuit cut-off system.)

EWA10242

⚠ WARNING

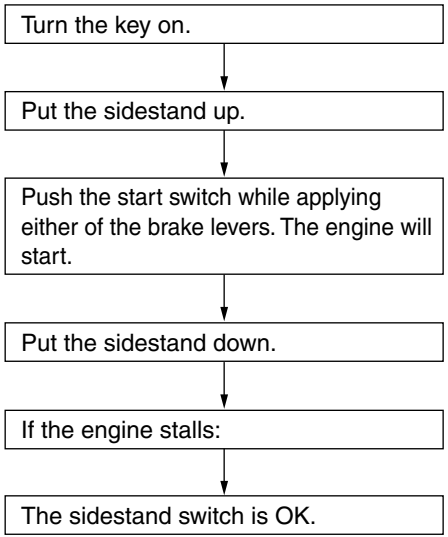
The vehicle must not be ridden with the sidestand down, or if the sidestand cannot be properly moved up (or does not stay up), otherwise the sidestand could contact the ground and distract the operator, resulting in a possible loss of control. Yamaha's ignition circuit cut-off system has been designed to assist the operator in fulfilling the responsibility of raising the sidestand before starting off. Therefore, check

this system regularly and have a Yamaha dealer repair it if it does not function properly.

EAUT1096

Ignition circuit cut-off system

Check the operation of the sidestand switch according to the following procedure.



⚠ WARNING

- **The vehicle must be placed on the center-stand during this inspection.**
- **If a malfunction is noted, have a Yamaha dealer check the system before riding.**

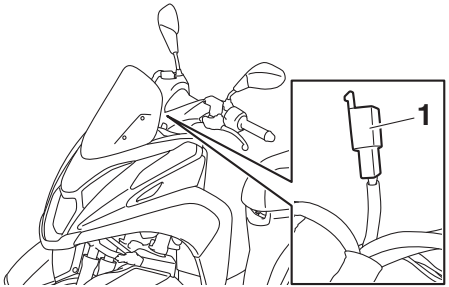
EAU61140

Auxiliary DC connector

ECA21160

NOTICE

The accessory connected to the auxiliary DC connector should not be used with the engine turned off, and the load must never exceed 120 W (10 A), otherwise the fuse may blow or the battery may discharge.



1. Auxiliary DC connector

This vehicle is equipped with an auxiliary DC connector. A 12–V accessory connected to the auxiliary DC connector can be used when the key is in the “ON” position.

FOR YOUR SAFETY – PRE-OPERATION CHECKS

EAU15598

Inspect your vehicle each time you use it to make sure the vehicle is in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in the Owner's Manual.

EWA11152

⚠ WARNING

Failure to inspect or maintain the vehicle properly increases the possibility of an accident or equipment damage. Do not operate the vehicle if you find any problem. If a problem cannot be corrected by the procedures provided in this manual, have the vehicle inspected by a Yamaha dealer.

Before using this vehicle, check the following points:

ITEM	CHECKS	PAGE
Fuel	• Check fuel level in fuel tank. • Refuel if necessary. • Check fuel line for leakage.	3-10
Engine oil	• Check oil level in engine. • If necessary, add recommended oil to specified level. • Check vehicle for oil leakage.	6-10
Final transmission oil	• Check vehicle for oil leakage.	6-12
Coolant	• Check coolant level in reservoir. • If necessary, add recommended coolant to specified level. • Check cooling system for leakage.	6-13
Front brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear. • Replace if necessary. • Check fluid level in reservoir. • If necessary, add specified brake fluid to specified level. • Check hydraulic system for leakage.	6-20, 6-20

ITEM	CHECKS	PAGE
Rear brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear. • Replace if necessary. • Check fluid level in reservoir. • If necessary, add specified brake fluid to specified level. • Check hydraulic system for leakage.	6-20, 6-20
Throttle grip	• Make sure that operation is smooth. • Check throttle grip free play. • If necessary, have Yamaha dealer adjust throttle grip free play and lubricate cable and grip housing.	6-16, 6-22
Control cables	• Make sure that operation is smooth. • Lubricate if necessary.	6-22
Wheels and tires	• Check for damage. • Check tire condition and tread depth. • Check air pressure. • Correct if necessary.	6-17, 6-18
Brake levers	• Make sure that operation is smooth. • Lubricate lever pivoting points if necessary.	6-23
Centerstand, sidestand	• Make sure that operation is smooth. • Lubricate pivots if necessary.	6-23
Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.	—
Instruments, lights, signals and switches	• Check operation. • Correct if necessary.	—
Sidestand switch	• Check operation of ignition circuit cut-off system. • If system is not working correctly, have Yamaha dealer check vehicle.	3-14

EAU15952

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.

EWA10272

⚠ WARNING

Failure to familiarize yourself with the controls can lead to loss of control, which could cause an accident or injury.

EAU45311

TIP

This model is equipped with a lean angle sensor to stop the engine in case of a turnover. To start the engine after a turnover, be sure to turn the main switch to "OFF" and then to "ON". Failing to do so will prevent the engine from starting even though the engine will crank when pushing the start switch.

EAU60631

Starting the engine

ECA10251

NOTICE

See page 5-3 for engine break-in instructions prior to operating the vehicle for the first time.

In order for the ignition circuit cut-off system to enable starting, the sidestand must be up.
See page 3-15 for more information.

1. Turn the key to "ON".
   The following warning lights should come on for a few seconds, then go off.
   - Engine trouble warning light
   - Coolant temperature warning light

ECA15485

NOTICE

If a warning light does not come on initially when the key is turned to "ON", or if a warning light remains on, see page 3-2 for the corresponding warning light circuit check.

2. Close the throttle completely.

3. Start the engine by pushing the start switch while applying the front or rear brake.
   If the engine fails to start, release the start 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.

ECA11043

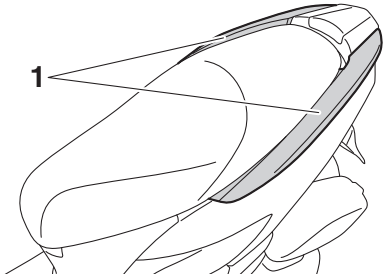
NOTICE

For maximum engine life, never accelerate hard when the engine is cold!

EAU60640

Starting off

1. While pulling the rear brake lever with your left hand and holding the grab bar with your right hand, push the vehicle off the centerstand.

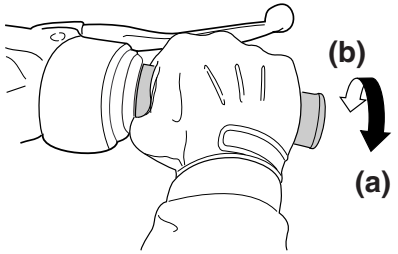


1. Grab bar

2. Sit astride the seat, and then adjust the rear view mirrors.
3. Switch the turn signals on.
4. Check for oncoming traffic, and then slowly turn the throttle grip (on the right) in order to take off.
5. Switch the turn signals off.

EAU16782

Acceleration and deceleration



ZAUM0199

The speed can be adjusted by opening and closing the throttle. To increase the speed, turn the throttle grip in direction (a). To reduce the speed, turn the throttle grip in direction (b).

EAU60650

Braking

EWA17790

⚠ WARNING

- **Avoid braking hard or suddenly (especially when leaning over to one side), otherwise the vehicle may skid or overturn.**
- **Railroad crossings, streetcar rails, iron plates on road construction sites, and manhole covers become extremely slippery when wet. Therefore, slow down when approaching such areas and cross them with caution.**
- **Keep in mind that braking on a wet road is much more difficult.**
- **Ride slowly down a hill, as braking downhill can be very difficult.**

1. Close the throttle completely.
2. Apply both front and rear brakes simultaneously while gradually increasing the pressure.

EAU16821

Tips for reducing fuel consumption

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

- Avoid high engine speeds during acceleration.
- 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, at traffic lights or at railroad crossings).

EAU16831

Engine break-in

There is never a more important period in the life of your engine than the period between 0 and 1000 km (600 mi). 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 (600 mi). The various parts in the engine wear and polish themselves to the correct operating clearances. During this period, prolonged full-throttle operation or any condition that might result in engine overheating must be avoided.

EAU61040

0–150 km (0–90 mi)

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 (90–300 mi)
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 (300–600 mi)
Avoid prolonged operation above 3/4 throttle.
1000 km (600 mi) and beyond
Avoid prolonged full-throttle operation.
Vary the engine speed occasionally.
NOTICE: **After 1000 km (600 mi) of operation, be sure to change the engine oil and final transmission oil, and to clean the oil strainer.** [ECA16502]

ECA10271

NOTICE

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

EAU17214

Parking

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

EWA10312

⚠ 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 and be burned.**
- **Do not park on a slope or on soft ground, otherwise the vehicle may overturn, increasing the risk of a fuel leak and fire.**
- **Do not park near grass or other flammable materials which might catch fire.**

5

EAU17245

Periodic inspection, adjustment, and lubrication will keep your vehicle in the safest and most efficient condition possible. Safety is an obligation of the vehicle owner/operator. The most important points of vehicle inspection, adjustment, and lubrication are explained on the following pages.

The intervals given in the periodic maintenance charts 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.

EWA10322

⚠ 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 service.

EWA15123

⚠ 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. See page 1-2 for more information about carbon monoxide.**

EWA15461

⚠ WARNING

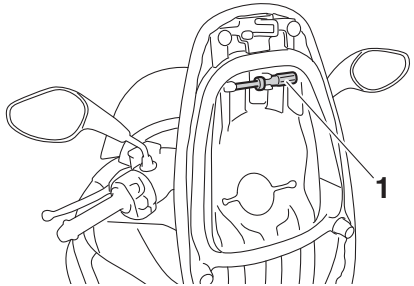
Brake discs, calipers, drums, and linings can become very hot during use. To avoid possible burns, let brake components cool before touching them.

EAU17303

Emission controls not only function to ensure cleaner air, but are also vital to proper engine operation and maximum performance. In the following periodic maintenance charts, the services related to emissions control are grouped separately. These services require specialized data, knowledge, and equipment. Maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual that is certified (if applicable). Yamaha dealers are trained and equipped to perform these particular services.

EAU39692

Owner's tool kit



1. Owner's tool kit

The owner's tool kit is located on the bottom of the seat. (See page 3-12.)
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 torque wrench may be necessary to perform certain maintenance work correctly.

TIP

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

EAU62050

TIP

- **The annual checks must be performed every year, except if a kilometer-based maintenance, or for the UK, a mileage-based maintenance, is performed instead.**
- From 20000 km (12000 mi), repeat the maintenance intervals starting from 4000 km (2400 mi).
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

EAU62061

Periodic maintenance chart for the emission control system

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING					ANNUAL CHECK
				1000 km (600 mi)	4000 km (2400 mi)	8000 km (4800 mi)	12000 km (7200 mi)	16000 km (9600 mi)	
1	*	**Fuel line**	• Check fuel hoses for cracks or damage.		√	√	√	√	√
2	*	**Spark plug**	• Replace.			√		√	
3	*	**Valves**	• Check valve clearance. • Adjust if necessary.	Every 12000 km (7200 mi)					
4	*	**Fuel injection**	• Check engine idle speed.	√	√	√	√	√	√
5	*	**Exhaust system**	• Check for leakage. • Tighten if necessary. • Replace gasket(s) if necessary.	Every 12000 km (7200 mi)					

EAU62100

General maintenance and lubrication chart

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING					ANNUAL CHECK
				1000 km (600 mi)	4000 km (2400 mi)	8000 km (4800 mi)	12000 km (7200 mi)	16000 km (9600 mi)	
1		**Air filter element**	• Replace.	Every 20000 km (12500 mi)					
2		**Air filter check hose**	• Clean.	√	√	√	√	√	
3	*	**V-belt case air filter element**	• Clean. • Replace if necessary.		√	√	√	√	
4	*	**Front brake**	• Check operation, fluid level and vehicle for fluid leakage.	√	√	√	√	√	√
			• Replace brake pads.	Whenever worn to the limit					
5	*	**Rear brake**	• Check operation, fluid level and vehicle for fluid leakage. • Check brake lever free play, and adjust if necessary.	√	√	√	√	√	√
			• Replace brake pads.	Whenever worn to the limit					
6	*	**Brake hoses**	• Check for cracks or damage. • Check for correct routing and clamping.		√	√	√	√	√
			• Replace.	Every 4 years					
7	*	**Brake fluid**	• Replace.	Every 2 years					
8	*	**Wheels**	• Check runout and for damage.		√	√	√	√	
			• Balance the front wheels.	Whenever the tires or wheels have been changed or replaced					
9	*	**Tires**	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		√	√	√	√	√

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING					ANNUAL CHECK
				1000 km (600 mi)	4000 km (2400 mi)	8000 km (4800 mi)	12000 km (7200 mi)	16000 km (9600 mi)	
10	*	**Wheel bearings**	• Check bearings for looseness or damage.		√	√	√	√	
11	*	**Steering system**	• Check bearing play and steering for roughness.	√	√	√	√	√	
			• Lubricate with lithium-soap-based grease.	Every 24000 km (14000 mi)					
			• Check steering tie rod, and replace if necessary.	√	√	√	√	√	
12	*	**Leaning system**	• Check bearing play.	√	√	√	√	√	
13	*	**Chassis fasteners**	• Make sure that all nuts, bolts and screws are properly tightened.	Every 12000 km (7200 mi)					
14		**Front brake lever pivot shaft**	• Lubricate with silicone grease.		√	√	√	√	
15		**Rear brake lever pivot shaft**	• Lubricate with silicone grease.		√	√	√	√	
16	*	**Unified brake system**	• Lubricate link pivots and moving parts with silicone grease.		√	√	√	√	
			• Lubricate cable end with lithium-soap-based grease.		√	√	√	√	
17		**Sidestand, centerstand**	• Check operation. • Lubricate with lithium-soap-based grease.		√	√	√	√	√
18	*	**Sidestand switch**	• Check operation.	√	√	√	√	√	√
19	*	**Front fork**	• Check operation and for oil leakage.		√	√	√	√	

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING					ANNUAL CHECK
				1000 km (600 mi)	4000 km (2400 mi)	8000 km (4800 mi)	12000 km (7200 mi)	16000 km (9600 mi)	
20	*	**Shock absorber assemblies**	• Check operation and shock absorbers for oil leakage.		√	√	√	√	
21		**Engine oil**	• Change. • Check oil level and vehicle for oil leakage.	√	√	√	√	√	
22		**Engine oil strainer**	• Clean.	√	√	√	√	√	√
23	*	**Cooling system**	• Check coolant level and vehicle for coolant leakage.	√		√		√	√
			• Change coolant.	Every 3 years					
24		**Final transmission oil**	• Check vehicle for oil leakage.	√	√	√	√	√	
			• Change.	√	Every 12000 km (7200 mi)				
25	*	**V-belt**	• Replace.	Every 20000 km (12000 mi)					
26	*	**Front and rear brake switches**	• Check operation.	√	√	√	√	√	√
27		**Moving parts and cables**	• Lubricate.		√	√	√	√	√
28	*	**Throttle grip**	• Check operation. • Check throttle grip free play, and adjust if necessary. • Lubricate cable and grip housing.		√	√	√	√	√
29	*	**Lights, signals and switches**	• Check operation. • Adjust headlight beam.	√	√	√	√	√	√

EAU38263

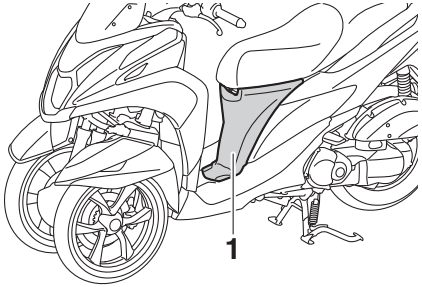
TIP

- Engine air filter and V-belt air filters
  - This model's engine air filter is equipped with a disposable oil-coated paper element, which must not be cleaned with compressed air to avoid damaging it.
  - The engine air filter element needs to be replaced and the V-belt air filter elements need to be serviced more frequently when riding in unusually wet or dusty areas.
- Hydraulic brake service
  - After disassembling the brake master cylinders and calipers, always change the fluid. Regularly check the brake fluid levels and fill the reservoirs as required.
  - Every two years replace the internal components of the brake master cylinders and calipers, and change the brake fluid.
  - Replace the brake hoses every four years and if cracked or damaged.

EAU18752

Removing and installing the panel

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



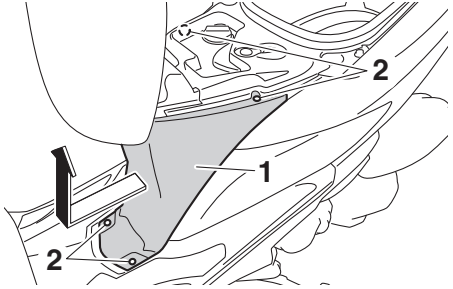
1. Panel A

EAU56941

Panel A

To remove the panel

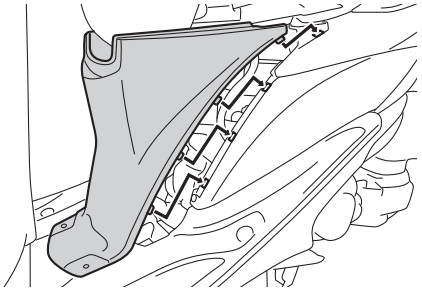
1. Open the seat. (See page 3-12.)
2. Remove the screws, and then pull the panel off as shown.



1. Panel A
2. Screw

To install the panel

1. Place the panel in the original position, and then install the screws.



2. Close the seat.

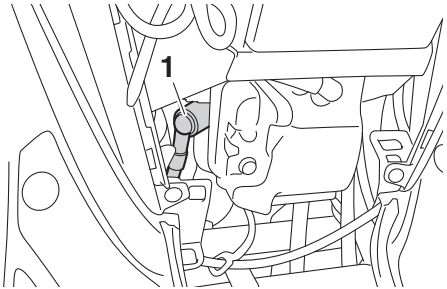
EAUT2074

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.

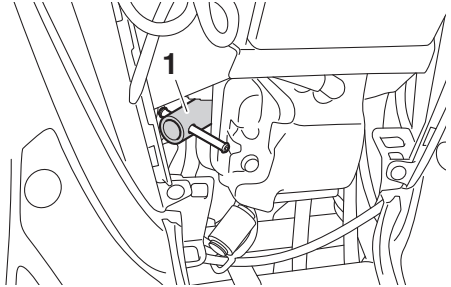
To remove the spark plug

1. Remove panel A. (See page 6-8.)
2. Remove the spark plug cap.



1. Spark plug cap

3. Remove the spark plug as shown, with a spark plug wrench available at a Yamaha dealer.



1. Spark plug wrench

To check 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).

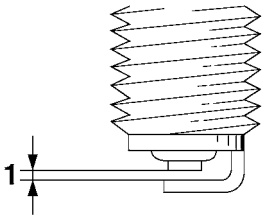
TIP

If the spark plug shows a distinctly different color, the engine could be operating improperly. 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/CR7E

3. 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:
0.7–0.8 mm (0.028–0.031 in)

To install the spark plug

1. Clean the surface of the spark plug gasket and its mating surface, and then wipe off any grime from the spark plug threads.
2. Install the spark plug with the spark plug wrench, and then tighten it to the specified torque.

Tightening torque:
Spark plug:
13 Nm (1.3 m·kgf, 9.4 ft·lbf)

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.

3. Install the spark plug cap.
4. Install the panel.

EAU61000

Engine oil and oil strainer

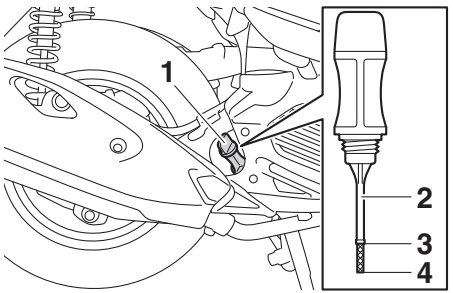
The engine oil level should be checked before each ride. In addition, the oil must be changed and the oil strainer cleaned at the intervals specified in the periodic maintenance and lubrication chart.

To check the engine oil level

1. Place the vehicle on the centerstand. 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 engine oil filler cap, wipe the engine oil dipstick clean, insert it back into the oil filler hole (without screwing it in), and then remove it again to check the oil level. **WARNING! The muffler and muffler protector become very hot during use. To avoid possible burns, let the muffler and protector cool before removing the oil filler cap.** [EWA17810]

TIP

The engine oil should be between the tip of the dipstick and the maximum level mark.

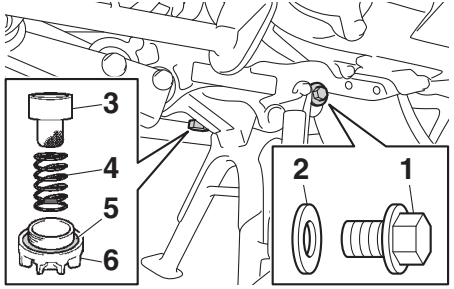


1. Engine oil filler cap
2. Engine oil dipstick
3. Maximum level mark
4. Tip of the engine oil dipstick

4. If the engine oil is not between the tip of the dipstick and the maximum 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 and clean the oil strainer

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 engine oil drain bolts A and B to drain the oil from the crankcase. ***NOTICE:*** **When removing the engine oil drain bolt B, the O-ring, compression spring, and oil strainer will fall out. Take care not to lose these parts.** [ECAT1022]



1. Engine oil drain bolt A
2. Gasket
3. Oil strainer
4. Compression spring
5. O-ring
6. Engine oil drain bolt B

4. Clean the engine oil strainer with solvent, and then check it for damage and replace it if necessary.
5. Check the O-ring for damage and replace it if necessary.
6. Install the engine oil strainer, compression spring, O-ring and engine oil drain bolt B.

TIP

Make sure that the O-ring is properly seated.

7. Install engine oil drain bolt A, and then tighten both drain bolts to their specified torques.

Tightening torque:
Engine oil drain bolt A:
22 Nm (2.2 m·kgf, 16 ft·lbf)
Engine oil drain bolt B:
20 Nm (2.0 m·kgf, 14 ft·lbf)

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

Recommended engine oil:
See page 8-1.
Oil quantity:
0.80 L (0.85 US qt, 0.70 Imp.qt)

TIP

Be sure to wipe off spilled oil on any parts after the engine and exhaust system have cooled down.

ECA11621

NOTICE

- **In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not mix any chemical additives. Do not use oils with a diesel specification of "CD" or oils of a higher quality than specified. In addition, do not use oils labeled "ENERGY CONSERVING II" or higher.**
- **Make sure that no foreign material enters the crankcase.**

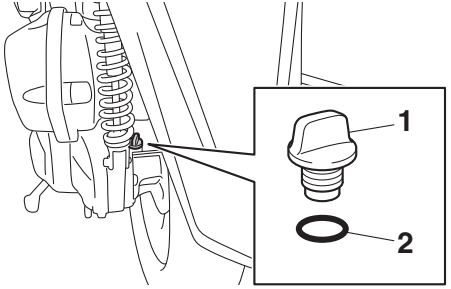
9. Start the engine, and then let it idle for several minutes while checking it for oil leakage. If oil is leaking, immediately turn the engine off and check for the cause.
10. Turn the engine off, and then check the oil level and correct it if necessary.
11. Reset the oil change tripmeter and oil change indicator "OIL CHANGE". (See page 3-6 for reset procedures.)

EAU60660

Final transmission oil

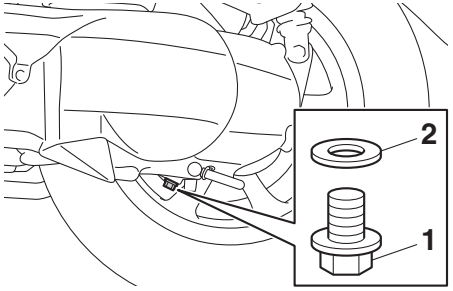
The final transmission case must be checked for oil leakage before each ride. If any leakage is found, have a Yamaha dealer check and repair the vehicle. In addition, the final transmission oil must be changed as follows at the intervals specified in the periodic maintenance and lubrication chart.

1. Start the engine, warm up the final transmission oil by riding the vehicle for several minutes, and then stop the engine.
2. Place the vehicle on the centerstand.
3. Place an oil pan under the final transmission case to collect the used oil.
4. Remove the final transmission oil filler cap and its O-ring from the final transmission case.



1. Final transmission oil filler cap
2. O-ring

5. Remove the final transmission oil drain bolt and its gasket to drain the oil from the final transmission case.



1. Final transmission oil drain bolt
2. Gasket

6. Install the final transmission oil drain bolt and its new gasket, and then tighten the bolt to the specified torque.

Tightening torque:
Final transmission oil drain bolt:
22 Nm (2.2 m·kgf, 16 ft·lbf)

7. Refill with the specified amount of the recommended final transmission oil. **WARNING! Make sure that no foreign material enters the final transmission case. Make sure that no oil gets on the tire or wheel.** [EWA11312]

Recommended final transmission oil:
See page 8-1.
Oil quantity:
0.20 L (0.21 US qt, 0.18 Imp.qt)

8. Install the final transmission oil filler cap and its new O-ring, and then tighten the oil filler cap.
9. Check the final transmission case for oil leakage. If oil is leaking, check for the cause.

EAU20071

Coolant

The coolant level should be checked before each ride. In addition, the coolant must be changed at the intervals specified in the periodic maintenance and lubrication chart.

EAU40155

To check the coolant level

1. Place the vehicle on the centerstand.

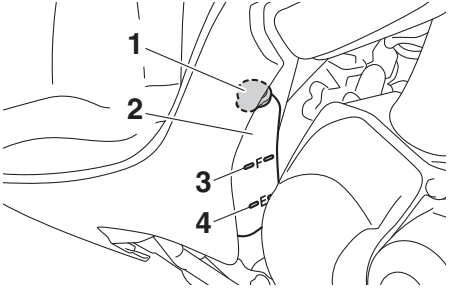
TIP

- The coolant level must be checked on a cold engine since the level varies with engine temperature.
- Make sure that the vehicle is positioned straight up when checking the coolant level. A slight tilt to the side can result in a false reading.

2. Check the coolant level in the coolant reservoir.

TIP

The coolant should be between the minimum and maximum level marks.



1. Coolant reservoir cap
2. Coolant reservoir
3. Maximum level mark
4. Minimum level mark

3. If the coolant is at or below the minimum level mark, remove the coolant reservoir cap.
4. Add coolant or distilled water to raise the coolant to the maximum level mark, install the coolant reservoir cap. **WARNING! Remove only the coolant reservoir cap. Never attempt to remove the radiator cap when the engine is hot.** [EWA15162] ***NOTICE:*** **If coolant is not available, use distilled water or soft tap water instead. Do not use hard water or salt water since it is harmful to the engine. If water has been used instead of coolant, replace it with coolant as soon as possible, otherwise the cooling system will not be protected against frost and corrosion. If water has been added to the coolant, have a Yamaha dealer check the antifreeze content of the coolant as soon as possible, otherwise the effectiveness of the coolant will be reduced.** [ECA10473]

Coolant reservoir capacity (up to the maximum level mark):
0.33 L (0.35 US qt, 0.29 Imp.qt)

EAU33032

Changing the coolant

The coolant must be changed at the intervals specified in the periodic maintenance and lubrication chart. Have a Yamaha dealer change the coolant. **WARNING! Never attempt to remove the radiator cap when the engine is hot.** [EWA10382]

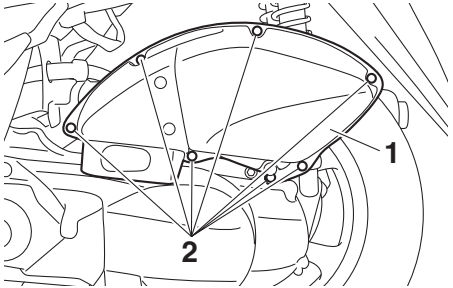
EAU60991

Air filter and V-belt case air filter elements

The air filter element should be replaced and the V-belt case air filter element should be cleaned at the intervals specified in the periodic maintenance and lubrication chart. Service the air filter elements more frequently if you are riding in unusually wet or dusty areas. The air filter check hose and V-belt case air filter check hose must be frequently checked and cleaned if necessary.

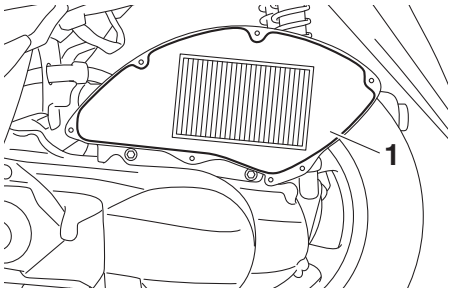
Replacing the air filter element

1. Place the vehicle on the centerstand.
2. Remove the air filter case cover by removing the screws.



1. Air filter case cover
2. Screw

3. Pull the air filter element out.



1. Air filter element

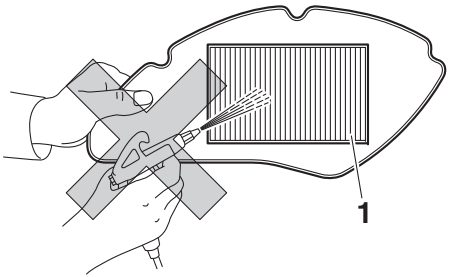
4. Insert a new air filter element into the air filter case. ***NOTICE:*** **Make sure that the air filter element is properly seated in the air filter case. The engine should never be operated without the air filter element installed, otherwise the piston(s) and/or cylinder(s) may become excessively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

[ECA10482]

5. Install the air filter case cover by installing the screws.

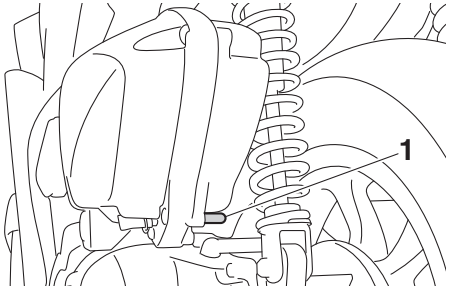
TIP

Check the air filter element for excessive dirt or damage and replace it if necessary.



1. Air filter element

Cleaning the air filter check hose

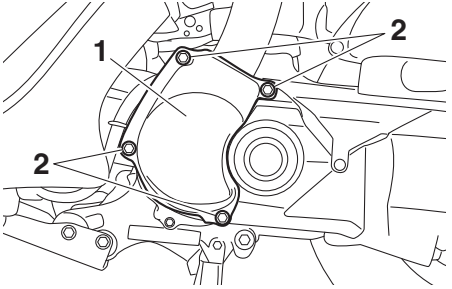


1. Air filter check hose

1. Check the hose on the rear side of the air filter case for accumulated dirt or water.
2. If dirt or water is visible, remove the hose from the clamp, clean it, and then install it.

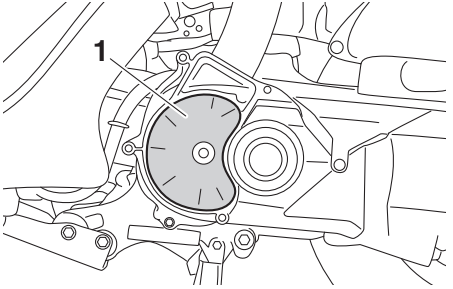
Cleaning the V-belt case air filter element

1. Place the vehicle on the centerstand.
2. Remove the bolts, and then pull the V-belt case air filter element cover outward and away from the V-belt case.

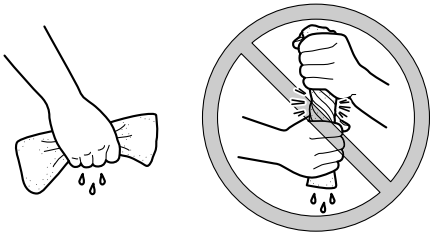


1. V-belt case air filter element cover
2. Bolt

3. Pull the V-belt case air filter element out, and then clean it with solvent. After cleaning, remove the remaining solvent by squeezing the element. **WARNING! Use only a dedicated parts cleaning solvent. To avoid the risk of fire or explosion, do not use gasoline or solvents with a low flash point.** [EWA10432] ***NOTICE:*** **To avoid damaging the air filter element, handle it gently and carefully, and do not twist it.** [ECA10522]



1. V-belt case air filter element



4. Apply oil of the recommended type to the entire surface of the sponge material, and then squeeze the excess oil out.

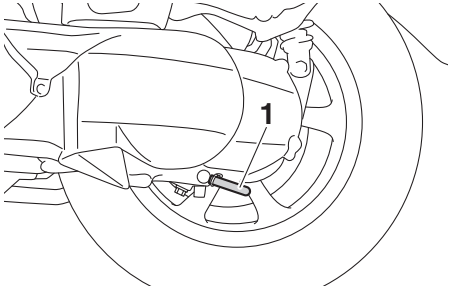
TIP

The air filter element should be wet but not dripping.

Recommended oil:
Yamaha foam air filter oil or other quality foam air filter oil

5. Insert the element into the V-belt case.
6. Install the air filter element cover by installing the bolts.

Cleaning the V-belt case air filter check hose

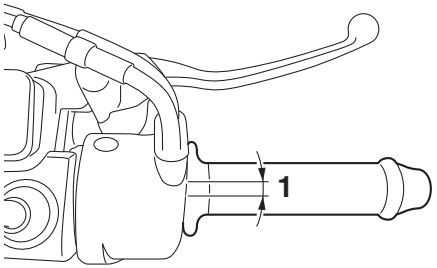


1. V-belt case air filter check hose

1. Check the hose on the rear side of the V-belt case for accumulated dirt or water.
2. If dirt or water is visible, remove the hose from the clamp, clean it, and then install it.

EAU21385

Checking the throttle grip free play



1. Throttle grip free play

The throttle grip free play should measure 3.0–7.0 mm (0.12–0.28 in) at the inner edge of the throttle grip. Periodically check the throttle grip free play and, if necessary, have a Yamaha dealer adjust it.

EAU21402

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.

EAU62200

Tires

Tires are the only contact between the vehicle and the road. Safety in all conditions of riding depends on a relatively small area of road contact. Therefore, it is essential to maintain the tires in good condition at all times and replace them at the appropriate time with the specified tires.

Tire air pressure

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

EWA10504

⚠ WARNING

Operation of this vehicle with improper tire pressure may cause severe injury or death from loss of control.

- **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.**

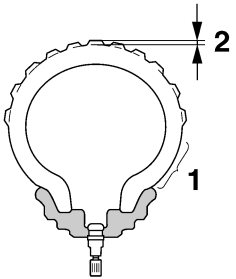
Tire air pressure (measured on cold tires):
Front:
175 kPa (1.75 kgf/cm², 25 psi)
Rear:
225 kPa (2.25 kgf/cm², 33 psi)
Maximum load*:
169 kg (373 lb)
* Total weight of rider, passenger, cargo and accessories

EWA10512

⚠ WARNING

Never overload your vehicle. Operation of an overloaded vehicle could cause an accident.

Tire inspection



1. Tire sidewall
2. Tire tread depth

The tires must be checked before each ride. If the center tread depth reaches the specified limit, 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):
1.6 mm (0.06 in)

TIP

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

EWA10472

⚠ WARNING

- **Have a Yamaha dealer replace excessively worn tires. Besides being illegal, operating the vehicle with excessively worn tires decreases riding stability and can lead to loss of control.**
- **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 to do so.**
- **Ride at moderate speeds after changing a tire since the tire surface must first be "broken in" for it to develop its optimal characteristics.**

Tire information

This model is equipped with tubeless tires and tire air valves.

Tires age, even if they have not been used or have only been used occasionally. Cracking of the tread and sidewall rubber, sometimes accompanied by carcass deformation, is an evidence of ageing. Old and aged tires shall be checked by tire specialists to ascertain their suitability for further use.

EWA10462

⚠ WARNING

The front and rear tires should be of the same make and design, otherwise the handling characteristics of the vehicle may be different, which could lead to an accident.

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

Front tire:
Size:
90/80-14M/C 43P
Manufacturer/model:
CHENG SHIN/M6231
Rear tire:
Size:
110/90-12 64P
Manufacturer/model:
CHENG SHIN/M6232

EAU61160

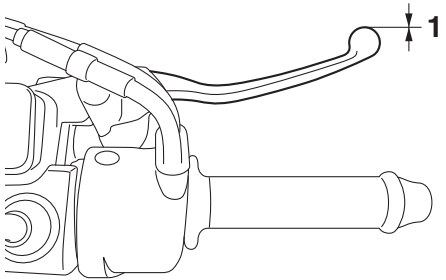
Cast wheels

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

- The wheel rims should be checked for cracks, bends, warpage or other damage before each ride. 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.
- The front wheels should be balanced whenever either the tires or wheels have been changed or replaced. An unbalanced wheel can result in poor performance, adverse handling characteristics, and a shortened tire life.

EAU49351

Checking the front brake lever free play



1. No brake lever free play

There should be no free play at the brake lever end. If there is free play, have a Yamaha dealer inspect the brake system.

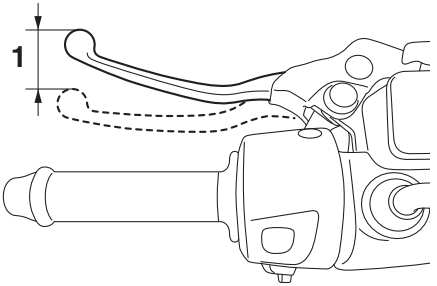
EWA14212

⚠ WARNING

A soft or spongy feeling in the brake lever can indicate the presence of air in the hydraulic system. If there is air in the hydraulic system, have a Yamaha dealer bleed the system before operating the vehicle. Air in the hydraulic system will diminish the braking performance, which may result in loss of control and an accident.

EAU60760

Checking the rear brake lever free play



1. Rear brake lever free play

Measure the rear brake lever free play as shown. Periodically check the brake lever free play and, if the free play is 20 mm (0.79 in) or more, have a Yamaha dealer check and adjust the brake system.

EWA10642

⚠ WARNING

An incorrect brake lever free play indicates a hazardous condition in the brake system. Do not operate the vehicle until the brake system has been checked or repaired by a Yamaha dealer.

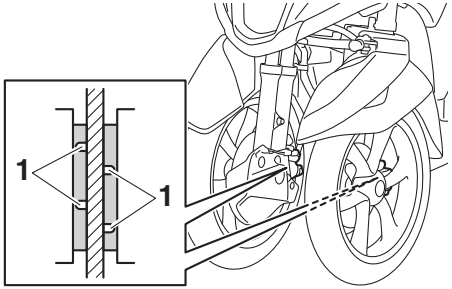
EAU22393

Checking the front and rear brake pads

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

EAU22432

Front brake pads

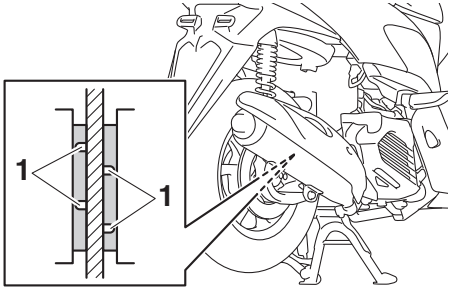


1. Brake pad wear indicator groove

Each front brake pad is provided with wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that the wear indicator grooves have almost disappeared, have a Yamaha dealer replace the brake pads as a set.

EAU36721

Rear brake pads



1. Brake pad wear indicator groove

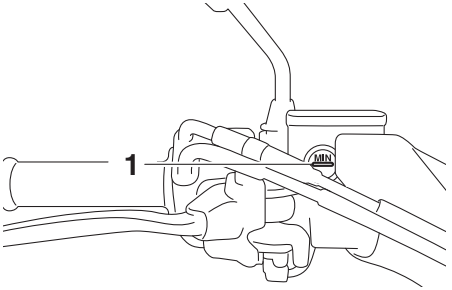
Each rear brake pad is provided with wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that the wear indicator grooves have almost disappeared, have a Yamaha dealer replace the brake pads as a set.

EAU22582

Checking the brake fluid level

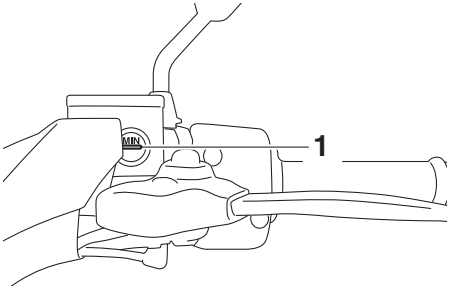
Before riding, check that the brake fluid is above the minimum level mark. Check the brake fluid level with the top of the reservoir level. Replenish the brake fluid if necessary.

Front brake



1. Minimum level mark

Rear brake



1. Minimum level mark

Specified brake fluid:
DOT 4

EWA15991

⚠ WARNING

Improper maintenance can result in loss of braking ability. Observe these precautions:

- **Insufficient brake fluid may allow air to enter the brake system, reducing braking performance.**
- **Clean the filler cap before removing. Use only DOT 4 brake fluid from a sealed container.**
- **Use only the specified brake fluid; otherwise, the rubber seals may deteriorate, causing leakage.**
- **Refill with the same type of brake fluid. Adding a brake fluid other than DOT 4 may result in a harmful chemical reaction.**
- **Be careful that water does not enter the brake fluid reservoir when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.**

ECA17641

NOTICE

Brake fluid may damage painted surfaces or plastic parts. Always clean up spilled fluid immediately.

As the brake pads wear, it is normal for the brake fluid level to gradually go down. A low brake fluid level may indicate worn brake pads and/or brake system leakage; therefore, be sure to check the brake pads for wear and the brake system for leakage. If the brake fluid level goes down suddenly, have a Yamaha dealer check the cause before further riding.

EAU22733

Changing the brake fluid

Have a Yamaha dealer change the brake fluid at the intervals specified in the periodic maintenance and lubrication chart. In addition, have the oil seals of the master cylinders and calipers as well as the brake hoses replaced at the intervals listed below or whenever they are damaged or leaking.

- Oil seals: Replace every two years.
- Brake hoses: Replace every four years.

EAU23098

Checking and lubricating the cables

The operation of all control cables and the condition of the cables should be checked before each ride, and the cables and cable ends should be lubricated if necessary. If a cable is damaged or does not move smoothly, have a Yamaha dealer check or replace it. **WARNING! Damage to the outer housing of cables may result in internal rusting and cause interference with cable movement. Replace damaged cables as soon as possible to prevent unsafe conditions.** [EWA10712]

Recommended lubricant:
Yamaha cable lubricant or other suitable cable lubricant

EAU49921

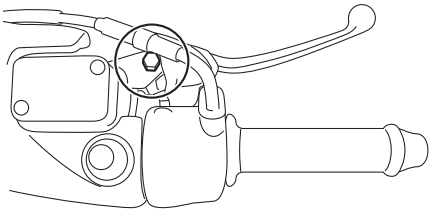
Checking and lubricating the throttle grip and cable

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

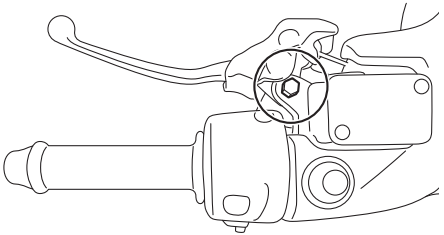
EAU23173

Lubricating the front and rear brake levers

Front brake lever



Rear brake lever

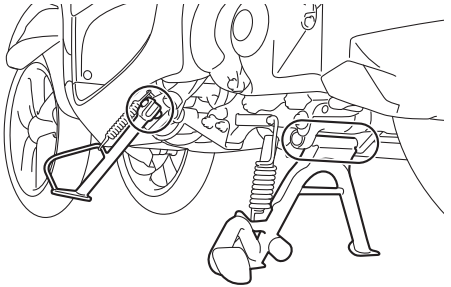


The pivoting points of the front and rear brake levers must be lubricated at the intervals specified in the periodic maintenance and lubrication chart.

Recommended lubricant:
Silicone grease

EAU23215

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.

EWA10742

⚠ WARNING

If the centerstand or sidestand does not move up and down smoothly, have a Yamaha dealer check or repair it. Otherwise, the centerstand or sidestand could contact the ground and distract the operator, resulting in a possible loss of control.

Recommended lubricant:
Lithium-soap-based grease

EAU23273

Checking the front fork

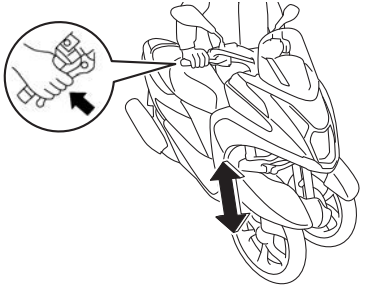
The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

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 there is no danger of it falling over.** [EWA10752]
2. While applying the front brake, push down hard on the handlebars several times to check if the front fork compresses and rebounds smoothly.



ECA10591

NOTICE

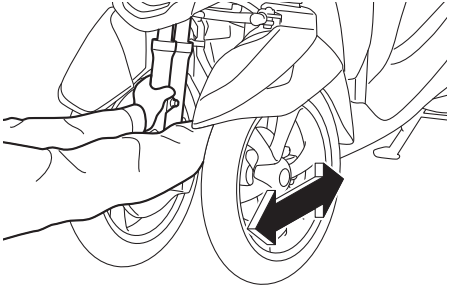
If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.

EAU45512

Checking the steering

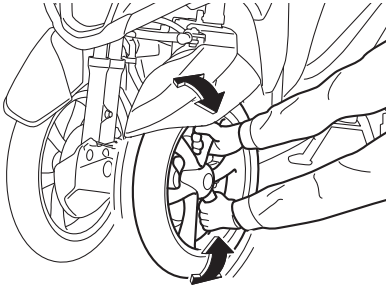
Worn or loose steering bearings may cause danger. Therefore, the operation of the steering must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

1. Place the vehicle on the centerstand. **WARNING! To avoid injury, securely support the vehicle so there is no danger of it falling over.** [EWA10752]
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.



EAU23292

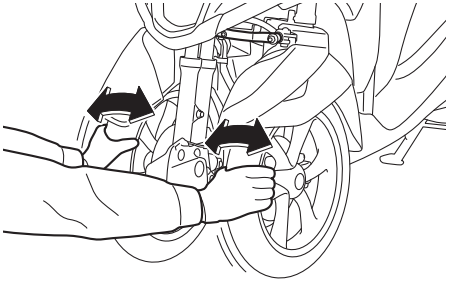
Checking the wheel bearings



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.

EAU61420

Checking the steering tie rod



The steering tie rod must be checked at the intervals specified in the periodic maintenance and lubrication chart. If there is play in the steering tie rod, have a Yamaha dealer check the tie rod.

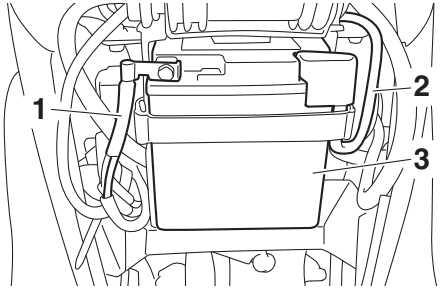
EAU61390

Checking the leaning system

The leaning system must be checked by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

EAU60690

Battery



1. Negative battery lead (black)
2. Positive battery lead (red)
3. Battery

The battery is located behind panel A. (See page 6-8.)
This model is equipped with a VRLA (Valve Regulated Lead Acid) battery. There is no need to check the electrolyte or to add distilled water. However, the battery lead connections need to be checked and, if necessary, tightened.

EWA10761

⚠ 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.**
- **KEEP THIS AND ALL BATTERIES OUT OF THE REACH OF CHILDREN.**

To charge the battery

Have a Yamaha dealer charge the battery as soon as possible if it seems to have discharged. Keep in mind that the

battery tends to discharge more quickly if the vehicle is equipped with optional electrical accessories.

ECA16522

NOTICE

To charge a VRLA (Valve Regulated Lead Acid) battery, a special (constant-voltage) battery charger is required. Using a conventional battery charger will damage the battery.

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 disconnect the negative lead before disconnecting the positive lead.** [ECA16303]
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. ***NOTICE:*** **When installing the battery, be sure the key is turned to "OFF", then connect the positive lead before connecting the negative lead.** [ECA16841]
4. After installation, make sure that the battery leads are properly connected to the battery terminals.

ECA16531

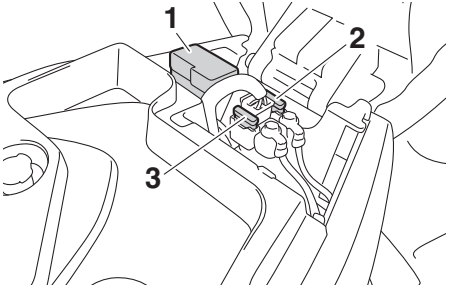
NOTICE

Always keep the battery charged. Storing a discharged battery can cause permanent battery damage.

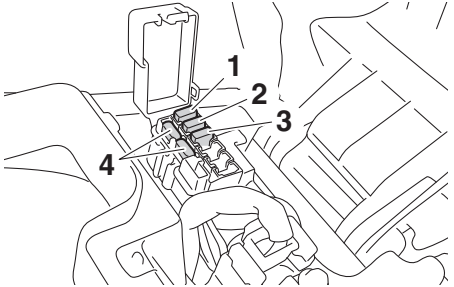
EAU60981

Replacing the fuses

The main fuse and the fuse box, which contains the fuses for the individual circuits, are located under the seat. (See page 3-12.)



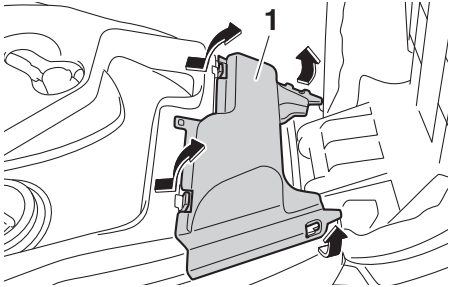
1. Fuse box
2. Spare main fuse
3. Main fuse



1. Backup fuse (for clock)
2. Signaling system fuse
3. Headlight fuse
4. Spare fuse

If a fuse is blown, replace it as follows.

1. Turn the key to “OFF” and turn off the electrical circuit in question.
2. Open the seat. (See page 3-12.)
3. Remove the fuse box cover as shown.



1. Fuse box cover

4. Remove the blown fuse, and then install a new fuse of the specified amperage. **WARNING! 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.** [EWA15132]

Specified fuses:
Main fuse:
20.0 A
Headlight fuse:
15.0 A
Signaling system fuse:
10.0 A
Backup fuse:
10.0 A

5. Turn the key to “ON” and turn on the electrical circuit in question to check if the device operates.
6. If the fuse immediately blows again, have a Yamaha dealer check the electrical system.
7. Install the fuse box cover, and then close the seat.

EAU23765

Replacing the headlight bulb

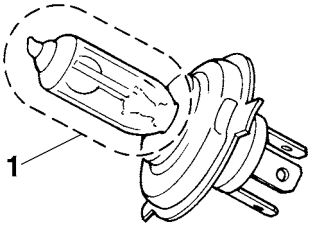
This model is equipped with a halogen bulb headlight. If the headlight bulb burns out, replace it as follows.

ECA10651

NOTICE

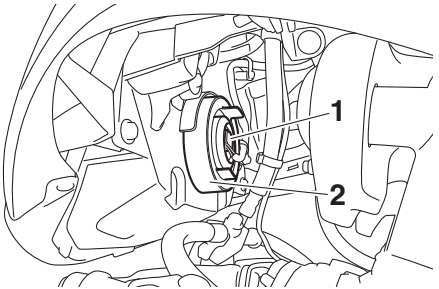
Take care not to damage the following parts:

- **Headlight bulb**
  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.
- **Headlight lens**
  Do not affix any type of tinted film or stickers to the headlight lens.
  Do not use a headlight bulb of a wattage higher than specified.



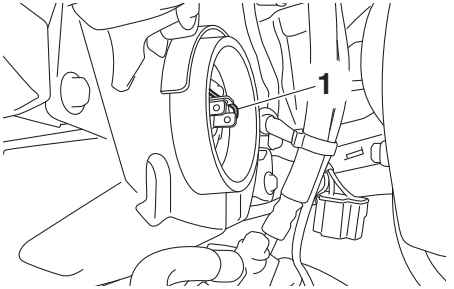
1. Do not touch the glass part of the bulb.

1. Disconnect the headlight coupler, and then remove the headlight bulb cover.



1. Headlight coupler
2. Headlight bulb cover

2. Unhook the headlight bulb holder, and then remove the burnt-out bulb.



1. Headlight bulb holder

3. Place a new headlight bulb into position, and then secure it with the bulb holder.
4. Install the headlight bulb cover, and then connect the coupler.
5. Have a Yamaha dealer adjust the headlight beam if necessary.

EAU24182

Tail/brake light

This model is equipped with an LED-type tail/brake light.
If the tail/brake light does not come on, have a Yamaha dealer check it.

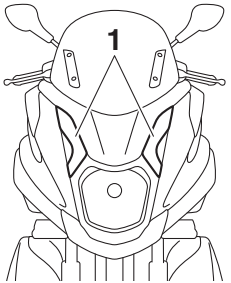
EAU61170

Turn signal light bulb

If a turn signal light does not come on, have a Yamaha dealer check its electrical circuit or replace the bulb.

EAU54501

Auxiliary light



1. Auxiliary light

This model is equipped with LED-type auxiliary lights.
If an auxiliary light does not come on, have a Yamaha dealer check it.

EAU60700

Troubleshooting

Although Yamaha vehicles 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 vehicle require any repair, take it to a Yamaha dealer, whose skilled technicians have the necessary tools, experience, and know-how to service the vehicle 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.

EWA15142

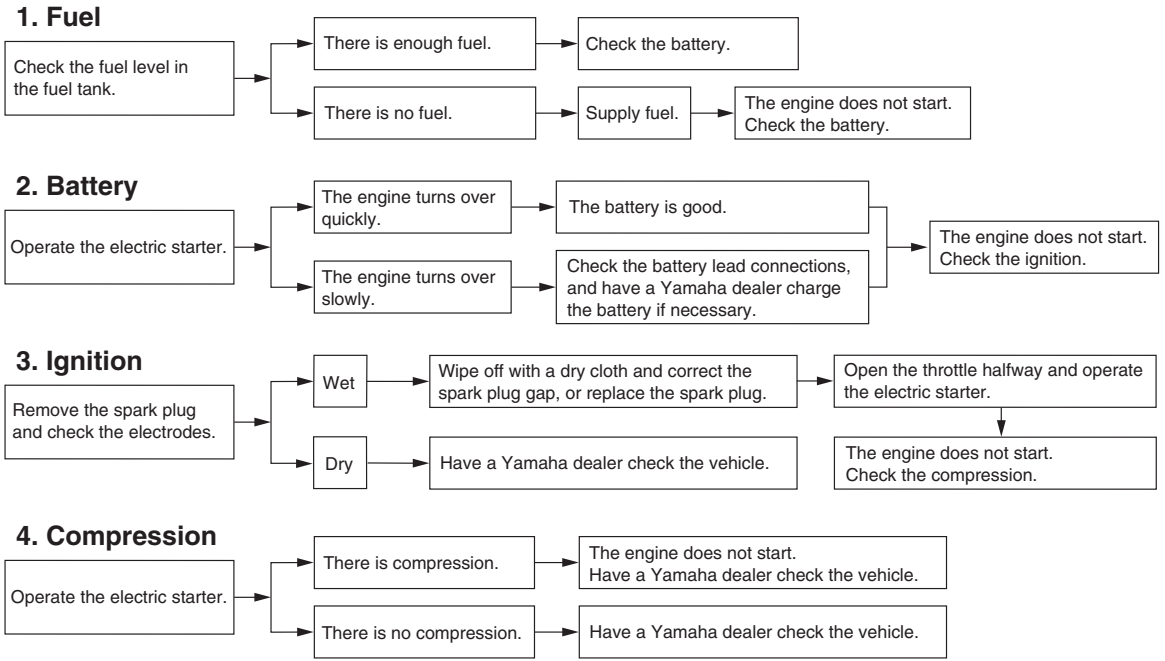
⚠ WARNING

When checking the fuel system, do not smoke, and make sure there are no open flames or sparks in the area, including pilot lights from water heaters or furnaces. Gasoline or gasoline vapors can ignite or explode, causing severe injury or property damage.

EAU61350

Troubleshooting charts

Starting problems or poor engine performance

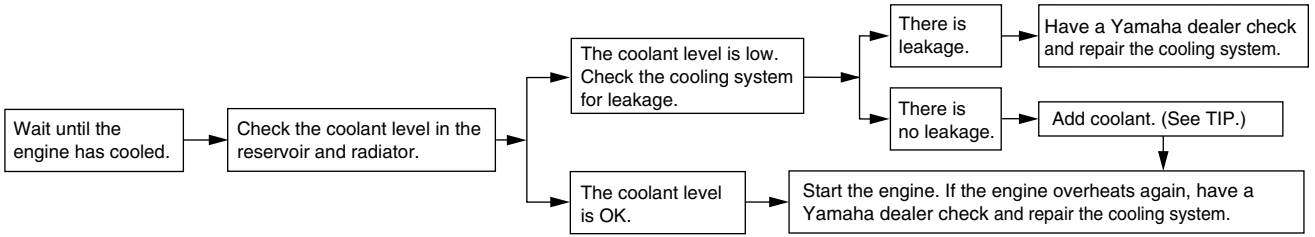


Engine overheating

EWAT1041

WARNING

- **Do not remove the radiator cap when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. Be sure to wait until the engine has cooled.**
- **Place a thick rag, like a towel, over the radiator cap, and then slowly rotate the cap counterclockwise to the detent to allow any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning it counterclockwise, and then remove the cap.**



TIP

If coolant is not available, tap water can be temporarily used instead, provided that it is changed to the recommended coolant as soon as possible.

EAU37834

Matte color caution

ECA15193

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.

EAUU1740

Care

While the open design of this vehicle 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 car, however, it detracts from the overall appearance of this vehicle. Frequent and proper care does not only comply with the terms of the warranty, but it will also keep your vehicle 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, gaskets and wheel axles. Always rinse the dirt and degreaser off with water.

Cleaning

ECA20970

NOTICE

- **Avoid using strong acidic wheel cleaners, especially on spoke 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 plastic parts (such as cowlings, panels, windshields, headlight lenses, meter lenses, etc.) and the mufflers. Use only a soft, clean cloth or sponge with water to clean plastic. However, if the plastic parts cannot be thoroughly cleaned with water, diluted mild detergent with water may be used. Be sure to rinse**

off any detergent residue using plenty of water, as it is harmful to plastic parts.

- **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 vehicles 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.**

ECAU0061

NOTICE

Use care when cleaning the radiator. High-pressure washers may damage the radiator fins. Do not spray the radiator fins at an angle, and always keep the nozzle at least 50 cm (20 in) away from the spins when spraying.

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.

TIP

Salt sprayed on roads in the winter may remain well into spring.

1. Clean the vehicle with cold water and a mild detergent after the engine has cooled down.***NOTICE:*** **Do not use warm water since it increases the corrosive action of the salt.** [ECA10792]
2. Apply a corrosion protection spray on all metal, including chrome- and nickel-plated, surfaces to prevent corrosion.

Cleaning the windshield

Avoid using any alkaline or strong acid cleaner, gasoline, brake fluid, or any other solvent. Clean the windshield with a cloth or sponge dampened with a mild detergent, and then wash it off

thoroughly with water. For additional cleaning, use Yamaha Windshield Cleaner or another high-quality windshield cleaner. Some cleaning compounds for plastics may leave scratches on the windshield. Before using such cleaners, test an area of the windshield which does not affect your visibility and which cannot be easily recognized.

After cleaning

1. Dry the vehicle with a chamois or an absorbing cloth.
2. 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.)
3. To prevent corrosion, it is recommended to apply a corrosion protection spray on all metal, including chrome- and nickel-plated surfaces.
4. Use spray oil as a universal cleaner to remove any remaining dirt.
5. Touch up minor paint damage caused by stones, etc.
6. Wax all painted surfaces.
7. Let the vehicle dry completely before storing or covering it.

EWA17830

⚠ WARNING

Contaminants on the brakes or tires can cause loss of control.

- **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 vehicle test its braking performance and cornering behavior.**

ECAU0022

NOTICE

- **Apply spray oil and wax sparingly and make sure to wipe off any excess.**
- **Never apply oil or wax to any rubber parts, plastic parts or headlight, taillight and meter lenses, 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.
- Washing, rainy weather or humid climates can cause the headlight lens to fog. Turning the headlight on for a short period of time will help remove the moisture from the lens.

Storage

EAU60721

Short-term

Always store your vehicle in a cool, dry place and, if necessary, protect it against dust with a porous cover. Be sure the engine and the exhaust system are cool before covering the vehicle.

ECA21170

NOTICE

- **Storing the vehicle 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 vehicle 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.** [EWA10952]
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 vehicle 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 (30 °F) or more than 30 °C (90 °F)]. For more information on storing the battery, see page 6-26.

TIP

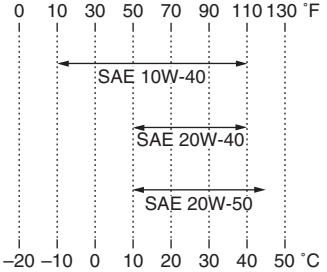
Make any necessary repairs before storing the vehicle.

Dimensions:
Overall length:
1905 mm (75.0 in)
Overall width:
735 mm (28.9 in)
Overall height:
1215 mm (47.8 in)
Seat height:
780 mm (30.7 in)
Wheelbase:
1310 mm (51.6 in)
Ground clearance:
120 mm (4.72 in)
Minimum turning radius:
2300 mm (90.6 in)

Weight:
Curb weight:
152 kg (335 lb)

Engine:
Engine type:
Liquid cooled 4-stroke, SOHC
Cylinder arrangement:
Single cylinder
Displacement:
124 cm^3
Bore × stroke:
52.4 × 57.9 mm (2.06 × 2.28 in)
Compression ratio:
10.9 : 1
Starting system:
Electric starter
Lubrication system:
Wet sump

Engine oil:
Recommended brand:
YAMALUBE
Type:
SAE 10W-40, 20W-40 or 20W-50



Recommended engine oil grade:
API service SG type or higher, JASO standard MA or MB
Engine oil quantity:
Periodic oil change:
0.80 L (0.85 US qt, 0.70 Imp.qt)

Final transmission oil:
Type:
YAMALUBE 10W-40 or SAE 10W-30 type SE motor oil
Quantity:
0.20 L (0.21 US qt, 0.18 Imp.qt)

Cooling system:
Recommended antifreeze:
YAMAHA GENUINE COOLANT only
Coolant reservoir capacity (up to the maximum level mark):
0.33 L (0.35 US qt, 0.29 Imp.qt)
Radiator capacity (including all routes):
0.37 L (0.39 US qt, 0.33 Imp.qt)

Air filter:
Air filter element:
Oil-coated paper element

Fuel:
Recommended fuel:
Regular unleaded gasoline (Gasohol (E10) acceptable)
Fuel tank capacity:
6.6 L (1.74 US gal, 1.45 Imp.gal)

Fuel injection:
Throttle body:
ID mark:
2CM1 00

Spark plug(s):
Manufacturer/model:
NGK/CR7E
Spark plug gap:
0.7–0.8 mm (0.028–0.031 in)

Clutch:
Clutch type:
Dry, centrifugal automatic

Transmission:
Primary reduction ratio:
1.000
Secondary reduction ratio:
9.533 (44/15 x 39/12)
Transmission type:
V-belt automatic

Chassis:
Frame type:
Underbone

Caster angle:
20.00 °
Trail:
68 mm (2.7 in)
Track:
385.0 mm (15.16 in)

Front tire:
Type:
Tubeless
Size:
90/80-14M/C 43P
Manufacturer/model:
CHENG SHIN/M6231

Rear tire:
Type:
Tubeless
Size:
110/90-12 64P
Manufacturer/model:
CHENG SHIN/M6232

Loading:
Maximum load:
169 kg (373 lb)
(Total weight of rider, passenger, cargo and accessories)

Tire air pressure (measured on cold tires):
Front:
175 kPa (1.75 kgf/cm², 25 psi)
Rear:
225 kPa (2.25 kgf/cm², 33 psi)

Front wheel:
Wheel type:
Cast wheel
Rim size:
14M/C x MT2.15

Rear wheel:
Wheel type:
Cast wheel
Rim size:
12 x MT2.15

Unified brake system:
Operation:
Activated by rear brake

Front brake:
Type:
Disc brake
Operation:
Right hand operation
Specified brake fluid:
YAMAHA GENUINE BRAKE FLUID (DOT 4)

Rear brake:
Type:
Disc brake
Operation:
Left hand operation
Specified brake fluid:
YAMAHA GENUINE BRAKE FLUID (DOT 4)

Front suspension:
Type:
Telescopic fork
Spring/shock absorber type:
Coil spring/oil damper
Wheel travel:
90 mm (3.5 in)

Rear suspension:
Type:
Unit swing
Spring/shock absorber type:
Coil spring/oil damper
Wheel travel:
89 mm (3.5 in)

Electrical system:
Ignition system:
TCI
Charging system:
AC magneto

Battery:
Model:
YTZ7V
Voltage, capacity:
12 V, 6.0 Ah

Headlight:
Bulb type:
Halogen bulb

Bulb voltage, wattage × quantity:
Headlight:
12 V, 55.0 W/60.0 W × 1
Tail/brake light:
LED
Front turn signal light:
12 V, 10.0 W × 2
Rear turn signal light:
12 V, 10.0 W × 2
Meter lighting:
LED
High beam indicator light:
LED
Turn signal indicator light:
LED
Coolant temperature warning light:
LED

Engine trouble warning light:
LED

Fuses:

Main fuse:
20.0 A
Headlight fuse:
15.0 A
Signaling system fuse:
10.0 A
Backup fuse:
10.0 A

EAU53562

Identification numbers

Record the vehicle identification number, engine serial number, and the model label information in the spaces provided below. These identification numbers are needed when registering the vehicle with the authorities in your area and when ordering spare parts from a Yamaha dealer.

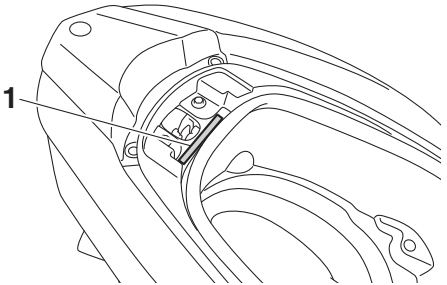
VEHICLE IDENTIFICATION NUMBER:

ENGINE SERIAL NUMBER:

MODEL LABEL INFORMATION:

EAU26411

Vehicle identification number



1. Vehicle identification number

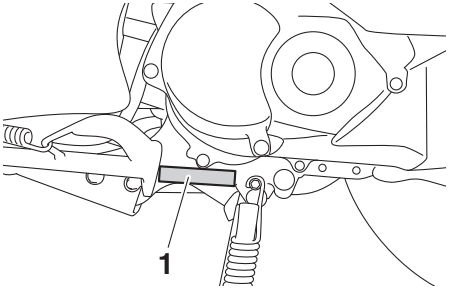
The vehicle identification number is stamped into the frame.

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.

EAUU1221

Engine serial number

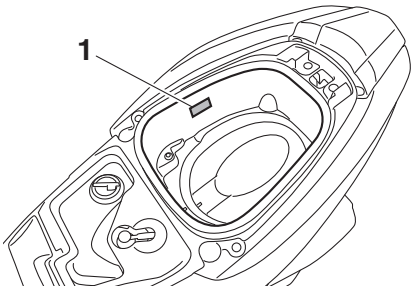


1. Engine serial number

The engine serial number is stamped on the bottom left side of the crankcase.

EAUT1441

Model label



1. Model label

The model label is affixed to the inside of the storage compartment. (See page 3-13.) Record the information on this label in the space provided. This information will be needed when ordering spare parts from a Yamaha dealer.

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Original instructions

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