



OWNER'S MANUAL

**⚠ Read this manual carefully
before operating this vehicle.**

TRICITY

MOTORCYCLE

MWS155-A (Tricity 155)

BGD-F8199-21

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

Welcome to the Yamaha world of motorcycling!

As the owner of the MWS155-A, 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 MWS155-A. 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.



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.
	A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	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.

EAU37432

**MWS155-A
OWNER'S MANUAL
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Location of important labels

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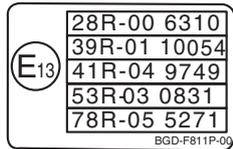
1

Read and understand all of the labels on your vehicle. They contain important information for safe and proper operation of your vehicle. Never remove any labels from your vehicle. If a label becomes difficult to read or comes off, a replacement label is available from your Yamaha dealer.

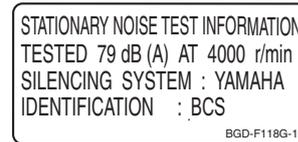


Location of important labels

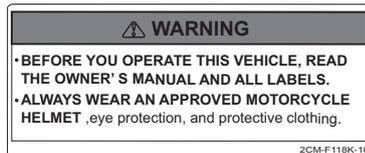
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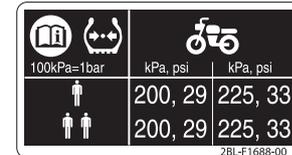
2



3



4



EAU60750

2 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 8-1 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.
- 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.

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.

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.

Safety information

2

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.

<p>Maximum load: 167 kg (368 lb)</p>

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

sible 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

Safety information

appropriate. Refer to page 10-17 for tire specifications and more information on replacing your tires.

2

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 2-3.)

Description

EAU10411

Left view

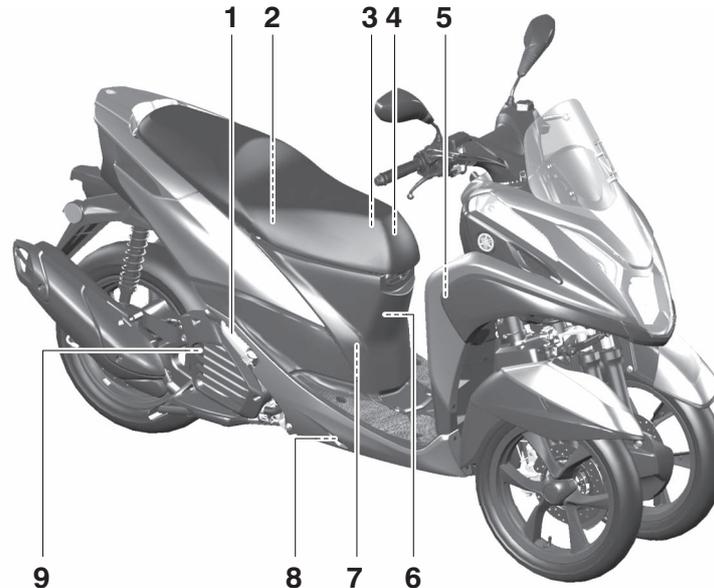
3



1. Luggage hook (page 7-18)
2. Passenger footrest (page 7-15)
3. Storage compartment (page 7-16)
4. Air filter element (page 10-14)
5. Final transmission oil filler cap (page 10-12)
6. Final transmission oil drain bolt (page 10-12)
7. V-belt case air filter element (page 10-14)
8. Engine oil drain bolt A (page 10-10)

9. Engine oil drain bolt B (page 10-10)

Right view

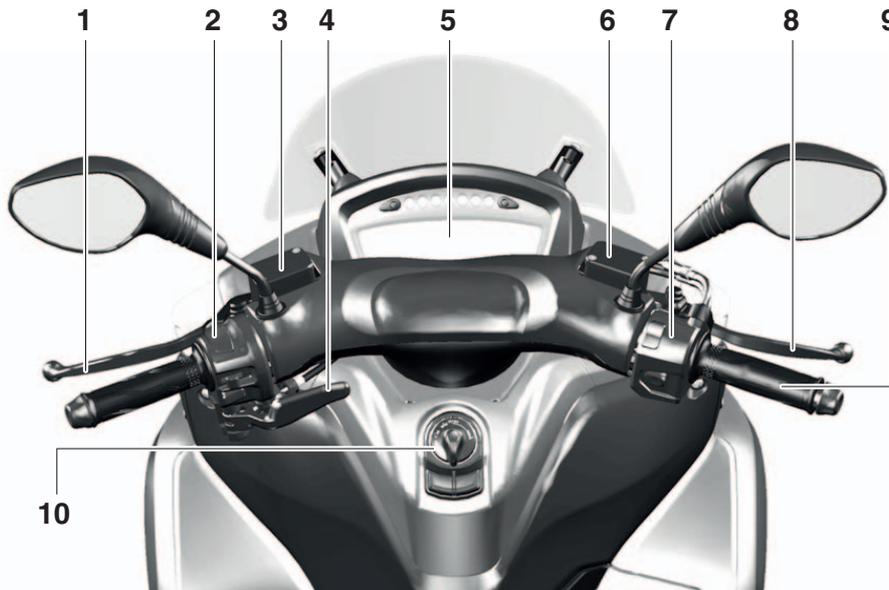


1. Passenger footrest (page 7-15)
2. Fuel tank cap (page 7-12)
3. Tool kit (page 10-2)
4. Fuse box (page 10-29)
5. Accessory box (page 7-17)
6. Battery (page 10-28)
7. Spark plug (page 10-8)
8. Coolant reservoir (page 10-13)

9. Engine oil filler cap (page 10-10)

Controls and instruments

3



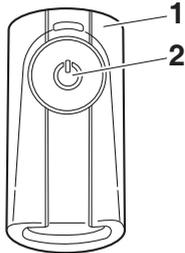
1. Rear brake lever (page 7-9)
2. Left handlebar switches (page 7-8)
3. Rear brake fluid reservoir (page 10-22)
4. Parking brake lever (page 7-10)
5. Multi-function meter unit (page 7-3)
6. Front brake fluid reservoir (page 10-22)
7. Right handlebar switches (page 7-8)
8. Front brake lever (page 7-9)

9. Throttle grip (page 10-17)
10. Main switch/steering lock

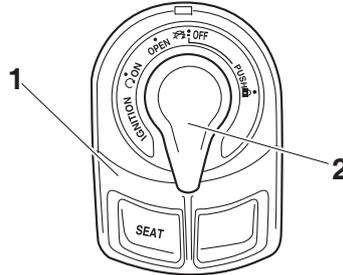
Smart key system

EAU76444

The smart key system enables you to operate the vehicle without using a mechanical key. In addition, there is an answer-back function to help you locate the vehicle in a parking lot. (See page 4-5.)



1. Smart key
2. Smart key button

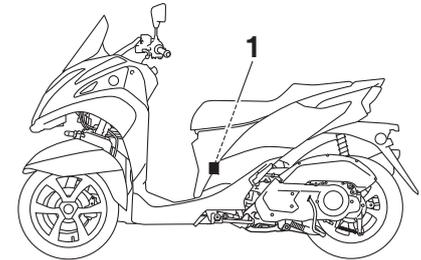


1. Main switch
2. Main switch knob

EWA14704

WARNING

- Keep implanted pacemakers or cardiac defibrillators, as well as other electric medical devices away from the vehicle mounted antenna (see illustration).
- Radio waves transmitted by the antenna may affect the operation of such devices when close by.
- If you have an electric medical device, consult a doctor or the device manufacturer before using this vehicle.



1. Vehicle mounted antenna

ECA24080

NOTICE

The smart key system uses weak radio waves. The smart key system may not work in the following situations.

- The smart key is placed in a location exposed to strong radio waves or other electromagnetic noise
- There are facilities nearby that are emitting strong radio waves (TV or radio towers, power plants, broadcasting stations, airports, etc.)

Smart key system

4

- You are carrying or using communication equipment such as radios or mobile phones in close proximity of the smart key
- The smart key is in contact with or covered by a metallic object
- Other vehicles equipped with a smart key system are nearby

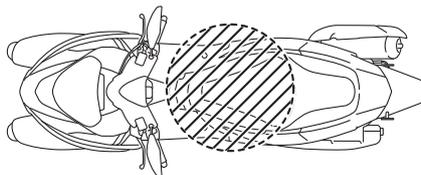
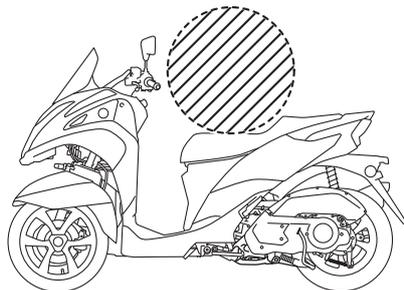
In such situations, move the smart key to another location and perform the operation again. If it still does not work, operate the vehicle in emergency mode. (See page 10-35.)

TIP

To preserve vehicle battery power, the smart key system turns off approximately 9 days after the vehicle was last used (the answer-back function is disabled). In this situation, simply push the main switch knob to turn the smart key system back on.

Operating range of the smart key system EAU76453

The approximate operating range of the smart key system is shown below.



smart key system may not work or its operating range may become very short.

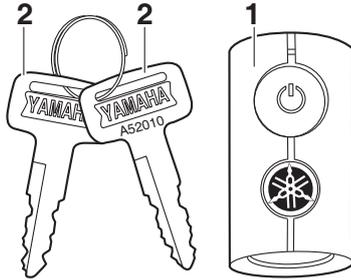
TIP

- Do not place the smart key in a storage compartment.
- Always carry the smart key with you.
- Turn the smart key off when leaving the vehicle.

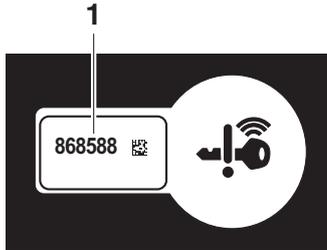
If the smart key is turned off, the vehicle will not recognize the smart key even if it is within operating range. If the smart key battery is discharged, the

Handling of the smart key and mechanical keys

EAWN2460



1. Smart key
2. Mechanical key



1. Identification number card

EWA17952

! WARNING

- The smart key should be carried with you. Do not store it on the vehicle.
- When the smart key is within operating range, exercise due care because other people not carrying the smart key can start the engine and operate the vehicle.

Included with the vehicle is one smart key, two mechanical keys, and one identification number card. Keep one mechanical key and the identification number card in a safe place separate from the vehicle.

If the vehicle battery is discharged, the mechanical key can be used to open the seat to charge or replace the battery. Therefore it is recommended that you carry one mechanical key together with the smart key.

If the smart key and the smart key system identification number are both lost or damaged, the entire smart key system will need to be replaced. To prevent this, it is recommended that you

write down the identification number in case the identification number card is lost.

ECA21573

NOTICE

The smart key has precision electronic components. Observe the following precautions to prevent possible malfunction or damage.

- Do not place or store the smart key in a storage compartment. The smart key may be damaged from road vibrations or excessive heat.
- Do not drop, bend, or subject the smart key to strong impacts.
- Do not submerge the smart key in water or other liquids.
- Do not place heavy items or excessive stress on the smart key.
- Do not leave the smart key in a place exposed to direct sunlight, high temperature or high humidity.
- Do not grind or attempt to modify the smart key.

Smart key system

4

- **Keep the smart key away from strong magnetic fields and magnetic objects such as key holders, TVs, and computers.**
- **Keep the smart key away from electric medical equipment.**
- **Do not allow oils, polishing agents, fuel, or any strong chemicals to come in contact with the smart key. The smart key body may become discolored or cracked.**

TIP

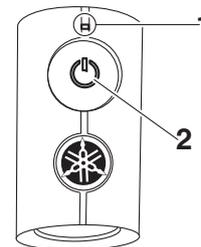
- The smart key battery life is approximately two years, but this may vary according to operating conditions.
- Replace the smart key battery when the smart key system indicator light flashes for 20 seconds when the vehicle is turned on, or when the smart key indicator light does not come on when the smart key button is pushed. (See page 4-6.) After changing the smart key battery, if the smart key system

still does not operate, check the vehicle battery and then have a Yamaha dealer check the vehicle.

- If the smart key continually receives radio waves, the smart key battery will discharge quickly. (For example, when placed in the vicinity of electrical products such as televisions, radios, or computers.)
- You can register up to six smart keys for the same vehicle. See a Yamaha dealer regarding spare smart keys.
- If a smart key is lost, contact a Yamaha dealer immediately to prevent the vehicle from being stolen, etc.

Smart key

EAU98960



1. Smart key system indicator light
2. Smart key button



EWA22270

WARNING

- **KEEP OUT OF REACH OF CHILDREN**
The smart key contains a coin/button cell battery.

- **Swallowing can lead to chemical burns, perforation of soft tissue, and death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.**

EWA17952

WARNING

- **The smart key should be carried with you. Do not store it on the vehicle.**
- **When the smart key is within operating range, exercise due care because other people not carrying the smart key can start the engine and operate the vehicle.**

To turn the smart key on or off

Push the smart key button for approximately 1 second to turn the smart key on or off. When the smart key is turned off, the vehicle cannot be operated even if the smart key is within operating range. To operate the vehicle, turn the smart key on and bring it within operating range.

To check whether the smart key is turned on or off

Push the smart key button to confirm the current operating status of the smart key.

If the smart key indicator light:

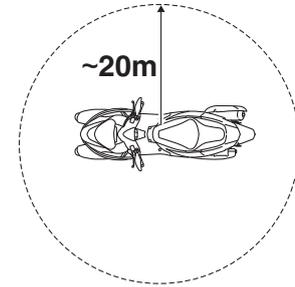
- Comes on quickly for 0.1 seconds: The smart key is turned on.
- Comes on slowly for 0.5 seconds: The smart key is turned off.

Remote answer-back function

Push the smart key button to operate the answer-back function remotely. The beeper will sound twice and all of the turn signal lights will flash twice. This feature is convenient for locating your vehicle in a parking lot and other areas.

Operating range of the answer-back function

The approximate operating range of the answer-back function is as shown.



As the smart key system uses weak radio waves, the operating range may be affected by the surrounding environment.

To turn the answer-back beeper on or off

The beeper, which sounds when the answer-back function is operated, can be turned on or off according to the following procedure.

1. Turn the smart key on and bring it within operating range.
2. Turn the main switch to “OFF”, and then push the main switch knob once.
3. While the smart key system indicator light is on, push and hold the knob again for 5 seconds.

Smart key system

EAU98980

EWA20632

4. When the beeper sounds, the setting is complete.

If the beeper:

- Sounds twice: The beeper is turned off.
- Sounds once: The beeper is turned on.

Replacing the smart key battery

Have a Yamaha dealer replace the battery in the following situations:

- The smart key system indicator light flashes for about 20 seconds when the power of the vehicle is turned on.
- The answer-back function does not operate or its operating range is very short.



1. Smart key system indicator light “”

Specified battery:
CR2025

WARNING

Danger of explosion if battery is incorrectly replaced

- Replace only with the same or equivalent type.
- Please check and obey all local laws and regulations for the disposal of batteries or accumulations.
- Never dispose of battery in fire or mechanical crushing or cutting.
- If battery is incorrectly discarded or heated to high temperature (100 °C (212 °F) or higher), gas may be generated inside battery, causing electrolyte leak, internal short circuit, heat generation, explosion and violent flaring.

Do not expose Hand Unit to excessive heat such as sunshine, fire or the like.

Do not ingest the battery, Chemical Burn Hazard

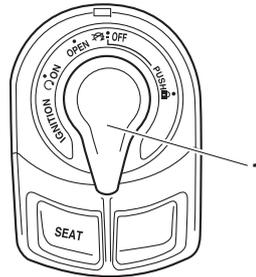
- This product contains a coin/button cell battery. If the coin/button cell battery is swallowed or placed inside any part of the body, it can cause severe internal burns in just 2 hours and can lead to death. Keep new and used batteries away from children.
- If the battery compartment does not close securely, stop using the product and keep it away from children.
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical action.

The caution mark of ISO 7000-0434 is located on the case.

 : This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Main switch

EAUN2101



1. Main switch knob



1. Smart key system indicator light “”

The main switch is used to turn the vehicle power ON/OFF, lock/unlock the steering, and open the seat. After pushing the main switch knob (and confirmation with the smart key has

taken place), the main switch can be turned while the smart key system indicator light is on (approximately 4 seconds).

EWA18720

WARNING

Never turn the main switch to “OFF”, “”, or “OPEN” while the vehicle is moving. Otherwise the electrical systems will be switched off, which may result in loss of control or an accident.

TIP

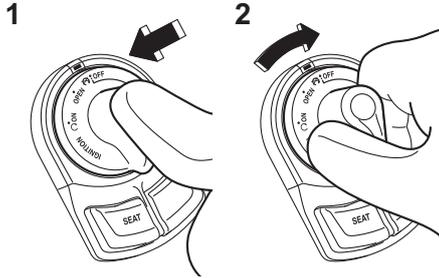
Do not push the main switch knob repeatedly or turn the main switch back and forth excessively (beyond normal use). To protect the main switch from damage, the smart key system will temporarily disable, and the smart key system indicator light will flash. If this occurs, wait until the indicator light stops flashing, and then operate the main switch.

The main switch positions are described below.

Smart key system

EAU76502

ON



1. Push.
2. Turn.

All electrical circuits are supplied with power, and the engine can be started.

To turn the vehicle power on

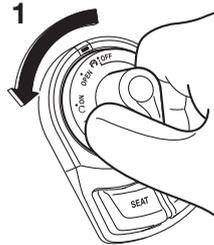
1. Turn the smart key on and bring it within operating range.
2. Push the main switch knob and the smart key indicator light will come on for approximately 4 seconds.
3. While the smart key system indicator light is on, turn the main switch to "ON". All of the turn signal lights will flash twice and the vehicle power will turn on.

TIP

- If the vehicle battery voltage is low, the turn signal lights will not flash.
- See "Emergency mode" on page 10-35 for information on turning the vehicle power on without the smart key.

EAU76511

OFF



1. Turn.

All electrical systems are off.

To turn the vehicle power off

1. With the smart key turned on and within operating range, turn the main switch to "OFF".

2. The turn signal lights flash once and the vehicle power turns off.

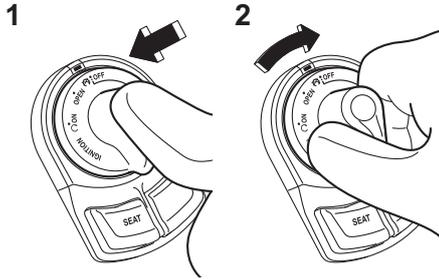
TIP

When the main switch is turned to "OFF" but the smart key cannot be confirmed (the smart key is either outside operation range or has been turned off), the beeper will sound for 3 seconds and the smart key system indicator light will flash for 30 seconds.

- During this 30 seconds, the main switch can be freely operated.
- After 30 seconds, the vehicle power will turn off automatically.
- To turn the vehicle power off immediately, push the main switch knob four times within 2 seconds.

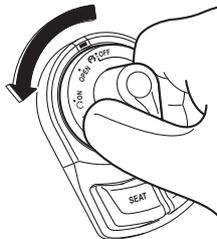
OPEN (open)

EAU79110



1. Push.
2. Turn.

The seat can be opened.
To open the seat, push the “SEAT” button, and then lift the rear of the seat.



TIP

Make sure that the seat is securely closed before starting off.

Open position reminder

To prevent you from accidentally leaving the vehicle unlocked by walking away with the main switch still in the “OPEN” position, the smart key system beeper will sound under the following conditions.

- When the main switch has been in the open position for 3 minutes
- If the smart key is turned off while the main switch is in the open position
- If you walk out of range of the smart key system with the main switch in the open position

If the beeper sounds after 3 minutes, turn the main switch to “OFF” or “”. If the beeper sounds because the smart key was turned off or moved out of range, turn the smart key on and walk back into range.

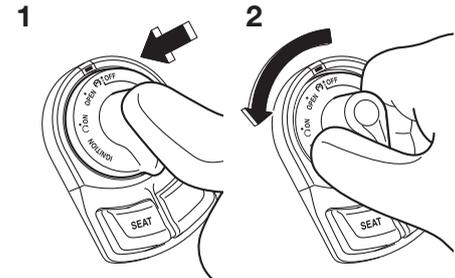
TIP

- The beeper will turn off after 1 minute.
- The seat can also be opened with the mechanical key. (See page 7-16.)

(lock)

EAU76521

4



1. Push.
2. Turn.

The steering is locked and all electrical systems are off.

To lock the steering

1. Turn the handlebar all the way to the left.

Smart key system

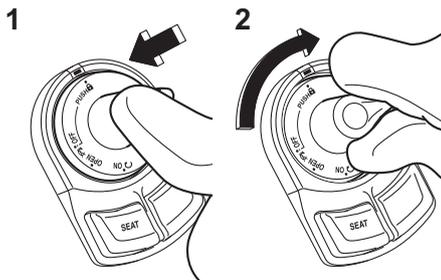
2. With the smart key turned on and within operating range, push the main switch knob.
 3. While the smart key system indicator light is on, push and turn the main switch to "🔒".
2. While the smart key system indicator light is on, push and turn the main switch to the desired position.

4

TIP

If the steering will not lock, try turning the handlebar back to the right slightly.

To unlock the steering



1. Push.
2. Turn.

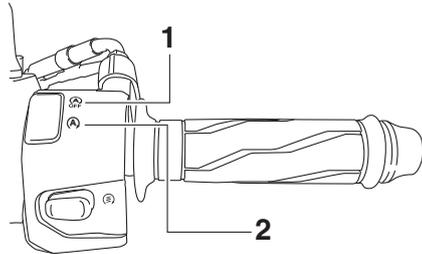
1. With the smart key turned on and within operating range, push the main switch knob.

Stop and Start System

EAU76826



1. Stop and Start System indicator light “(A)”



1. OFF “(A)”
2. ON “(A)”

The Stop and Start System stops the engine automatically when the vehicle is stopped in order to prevent noise, control exhaust emissions, and reduce fuel consumption.

When the rider turns the throttle grip slightly, the engine restarts automatically and the vehicle starts off.

ECA23961

NOTICE

When parking the vehicle or leaving the vehicle unattended, be sure to turn the main switch off. If the Stop and Start System is left turned on, the battery could become discharged and it may not be possible to restart the engine due to insufficient battery voltage.

TIP

- Although the engine normally stops at the same time as the vehicle, there may be a delay when operating the vehicle under 10 km/h, such as in heavy traffic.
- If you think the battery voltage is low because the engine cannot be started using the starter switch or for some other reason, do not turn on the Stop and Start System.
- Have a Yamaha dealer check the battery at the intervals specified in the periodic maintenance chart.

EAU76671

Stop and Start System operation

EAU76687

Activating the Stop and Start System

1. Turn the main switch on.



2. Set the Stop and Start System switch to “(A)”.
3. The Stop and Start System activates and the indicator light comes on when the following conditions are met:
 - The Stop and Start System switch is set to “(A)”.
 - After the engine was warmed up, the engine was left idling for a certain period.

Stop and Start System

- The vehicle has traveled at a speed of 10 km/h or higher.



5

1. On
4. To turn off the Stop and Start System, set the Stop and Start System switch to “A”.

TIP

- To preserve battery power, the Stop and Start System may not activate.
- If the Stop and Start System does not activate, have a Yamaha dealer check the battery.

EAU76832

Stop the engine

The engine will stop automatically when the following conditions are met:

- The Stop and Start System switch is set to “A”.
- The “A” indicator light on the multi-function meter is on.
- The vehicle is stopped with the throttle grip fully returned.

At this time, the “A” indicator light starts flashing to indicate that the engine is currently stopped by the Stop and Start System.

EAU76704

Restart the engine

If the throttle grip is turned while the Stop and Start System indicator light is flashing, the engine will automatically restart and the “A” indicator light will stop flashing.

EWA18731

! WARNING

Do not turn the throttle grip too much or too quickly when the Stop and Start System is activated and the engine is stopped. Otherwise, the vehicle could start moving unexpectedly after the engine restarts.

TIP

- When the sidestand is lowered, the Stop and Start System is deactivated.
- If the Stop and Start System does not operate correctly, have a Yamaha dealer check the vehicle.

EAU76711

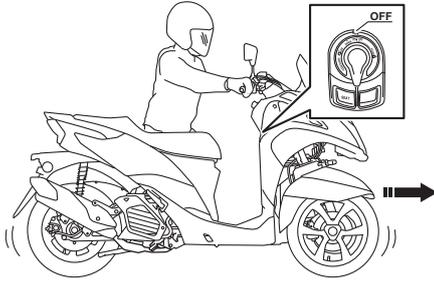
Precautions when using the Stop and Start System

In order to prevent accidents due to improper operation, carefully read and observe the following precautions.

EWA18741

! WARNING

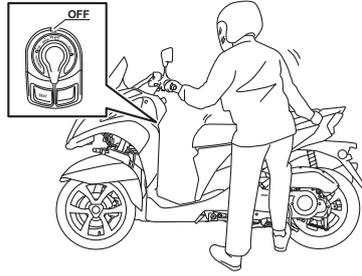
When walking while pushing the vehicle, be sure to turn the main switch off. If the vehicle is pushed while the Stop and Start System is left turned on, the engine could start and the vehicle could start moving if the throttle grip is turned accidentally.



EWA18751

⚠ WARNING

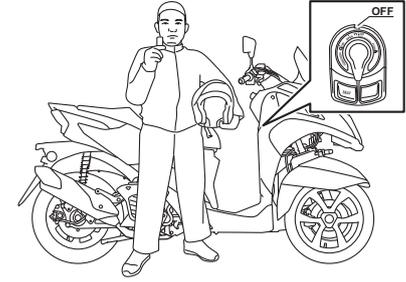
When placing the vehicle on the centerstand, be sure to turn the main switch off. If the vehicle is placed on the centerstand while the Stop and Start System is left turned on, the engine could start and the vehicle could start moving if the throttle grip is turned accidentally.



EWA18771

⚠ WARNING

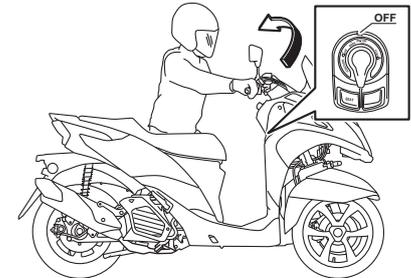
- When leaving the vehicle unattended, be sure to turn the main switch off.
- Do not leave the Stop and Start System turned on when parking the vehicle. Otherwise, the engine could start and the vehicle could start moving if the throttle grip is turned accidentally.



EWA18781

⚠ WARNING

Before performing maintenance, be sure to turn the main switch off. If maintenance is performed while the Stop and Start System is turned on, the engine could start and the vehicle could start moving if the throttle grip is turned.



Special features

CCU (Communication Control Unit)

EAAU2331

This model is equipped with a CCU that allows your vehicle and smartphone to connect using Bluetooth wireless technology and the MyRide App.

With this connection, notifications from apps, incoming phone calls and missed calls are signaled to you, and the battery level of your smartphone is displayed.

6

WARNING

EWAN0070

- Always stop the vehicle before operating your smartphone.
- Never take your hands off the handlebars while riding.
- Always concentrate on riding by keeping your eyes and mind on the road.

NOTICE

ECAN0150

The Bluetooth connection may not work in the following situations.

- In a location exposed to strong radio waves or other electro-magnetic noise.
- At facilities nearby that are emitting strong radio waves (TV or radio towers, power plants, broadcasting stations, airports, etc.).

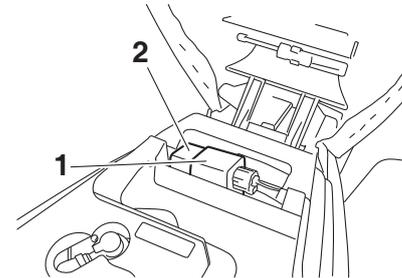
Pairing the CCU and your smartphone

1. Install the MyRide App on your smartphone and activate it.

TIP

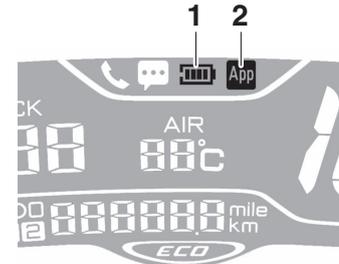
The MyRide App can be downloaded from an App store.

2. Open the seat. (See page 7-15.)
3. Pull out the CCU and scan its QR code with the MyRide App.



1. CCU (Communication Control Unit)
2. CCU QR Code

4. When pairing is complete, the App connect icon and smartphone battery level meter will come on.



1. Smartphone battery level meter
2. App connect icon

TIP

- Once paired, the smartphone is registered in the CCU. The next time the vehicle is turned on and the MyRide App is active, the connection will be automatically executed.
 - Only one smartphone can be connected to the CCU at a time.
 - If more than one phone has been registered in the CCU, then the first phone within reach will be connected.
-

Instrument and control functions

Indicator lights and warning lights

EAU4939Y



1. Coolant temperature warning light “”
2. ABS warning light “”
3. High beam indicator light “”
4. Turn signal indicator light “”
5. Smart key system indicator light “”
6. Stop and Start System indicator light “”
7. Malfunction indicator light “”

Turn signal indicator light “”

EAUM4390

This indicator light flashes when a turn signal light is flashing.

High beam indicator light “”

EAU88310

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

Coolant temperature warning light

EAUU2370

“”

This warning light comes on if the engine overheats. If this occurs, stop the engine immediately and allow the engine to cool. See page 10-34 for further instructions.

NOTICE

ECA10022

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

TIP

When the vehicle is turned on, this light should come on for a few seconds and then go off. Otherwise, have a Yamaha dealer check the vehicle.

Malfunction indicator light (MIL)

EAU91840

“”

This light comes on or flashes if a problem is detected in the engine or other vehicle control system. If this occurs, have a Yamaha dealer check the on-board diagnostic system. The electrical circuit of the warning light can be checked by turning the vehicle power on. The light should come on for a few

seconds, and then go off. If the light does not come on initially when the vehicle power is turned on, or if the light remains on, have a Yamaha dealer check the vehicle.

ECA26820

NOTICE

If the MIL starts flashing, reduce engine speed to prevent exhaust system damage.

TIP

The engine is sensitively monitored by the on-board diagnostic system to detect deterioration or malfunction of the emission control system. Therefore the MIL may come on or flash due to vehicle modifications, lack of maintenance, or excessive/improper use of the motorcycle. To prevent this, observe these precautions.

- Do not attempt to modify the software of the engine control unit.
- Do not add any electrical accessories that interfere with engine control.

- Do not use aftermarket accessories or parts such as suspension, spark plugs, injectors, exhaust system, etc.
- Do not change the drivetrain specifications (chain, sprockets, wheels, tires, etc.).
- Do not remove or alter the O2 sensor, air induction system, or exhaust parts (catalysts or EXUP, etc.).
- Maintain the drive chain properly.
- Maintain correct tire pressure.
- Maintain proper brake pedal height to prevent rear brake from dragging.
- Do not operate the vehicle in an extreme manner. For example, repeated or excessive opening and closing of the throttle, racing, burnouts, wheelies, extended half-clutch use, etc.

ABS warning light “”

EAU88890

This warning light comes on when the vehicle is first turned on, and goes off after starting riding. If the warning light comes on while riding, the anti-lock brake system may not work correctly.

EWA16043

WARNING

If the ABS warning light does not turn off after reaching 10 km/h (6 mi/h), or if the warning light comes on while riding:

- Use extra caution to avoid possible wheel lock during emergency braking.
- Have a Yamaha dealer check the vehicle as soon as possible.

TIP

The ABS warning light may come on while revving the engine with the vehicle on its centerstand, but this does not indicate a malfunction.

Smart key system indicator light

EAUN2772

“”

This indicator light communicates the status of the smart key system. When the smart key system is operating normally, this indicator light will be off. If there is an error in the smart key system, the indicator light will flash. The indicator light will also flash when communication between the vehicle and smart key takes place and when certain smart key system operations are carried out.

Stop and Start System indicator light “”

EAUN2830

This indicator light comes on when the Stop and Start System activates. The indicator light will flash when the engine is automatically stopped by the Stop and Start System.

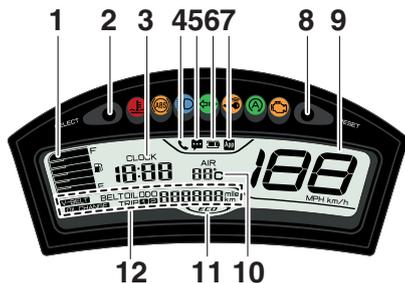
TIP

Even if the Stop and Start Switch is set to “”, this indicator light may not come on. (See page 5-1.)

Instrument and control functions

Multi-function meter unit

EAU86813



1. Fuel meter
2. Selection button “SELECT”
3. Clock
4. Incoming call notification icon “☎”
5. Incoming notification icon “✉”
6. Smartphone battery level meter
7. App connect icon
8. Reset button “RESET”
9. Speedometer
10. Air temperature display
11. Eco indicator “ECO”
12. Multi-function display

WARNING

EWA12423

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.

Incoming call notification icon “☎”

EAU96560

This icon flashes when there is an incoming call to the connected smartphone. If you do not answer the call, the icon stays on until you turn the vehicle off.

TIP

This function works only when the smartphone is connected to the vehicle.

Incoming notification icon “✉”

EAU96550

This icon flashes for 10 seconds when the connected smartphone receives an SMS, E-mail or other notification. After that, the icon stays on until you turn the vehicle off.

TIP

- This function works only when the smartphone is connected to the vehicle.

- Notification setting is needed for each application at the connected smartphone in advance.

App Connect icon

EAUN3051

This icon comes on when CCU and smartphone is connected via MyRide App.

TIP

Even if the smartphone is not connected, when the vehicle is turned on, this icon should come on for a few seconds. Otherwise have a Yamaha dealer check the CCU and the electrical circuit.

Smartphone battery level meter

EAUN2874

This meter indicates the current battery level of the connected smartphone. The display segments of the meter disappear from full to blank as the battery level decreases. When approximately 10% or less of the battery remains, the last segment starts flashing.

Instrument and control functions

TIP

Even if the smartphone is not connected, when the vehicle is turned on, this icon should come on for a few seconds. Otherwise have a Yamaha dealer check the CCU and the electrical circuit.

EAU2261

Switching the display units

The display units can be switched between kilometers and miles.

To switch the display units

1. With the “SELECT” button, display the odometer.
2. Press and hold the “SELECT” button to switch the display units between km/h and MPH.

Speedometer

EAU86831

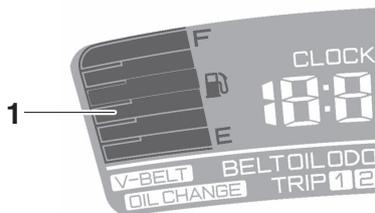


1. Speedometer

The speedometer shows the vehicle's traveling speed.

Fuel meter

EAU86841



1. Fuel meter

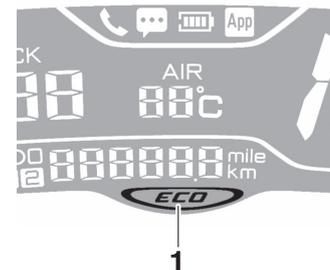
The fuel meter indicates the amount of fuel in the fuel tank. The display segments of the fuel meter disappear from “F” (full) towards “E” (empty) as the fuel level decreases. When approximately 1.6 L (0.42 US gal, 0.35 Imp.gal) of fuel remains, the last segment starts flashing. Refuel as soon as possible.

TIP

If a problem is detected in the electrical circuit, the fuel level segments will flash repeatedly. If this occurs, have a Yamaha dealer check the vehicle.

Eco indicator

EAU90821



1. Eco indicator light “ECO”

Instrument and control functions

This indicator comes on when the vehicle is being operated in an environmentally friendly, fuel-efficient manner. The indicator goes off when the vehicle is stopped.

TIP

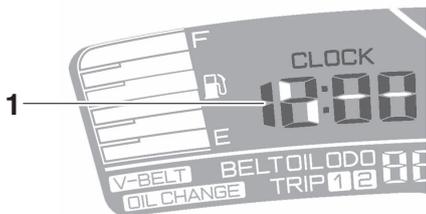
Consider the following tips to reduce fuel consumption:

- Avoid high engine speeds during acceleration.
- Travel at a constant speed.
- Select the transmission gear that is appropriate for the vehicle speed.

7

Clock

EAU87290



1. Clock

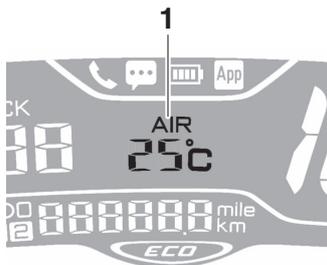
The clock uses a 12-hour time system.

To set the clock

1. Push both the “SELECT” button and “RESET” button until the hour digits start flashing.
2. Use the “RESET” button to set the hours.
3. Push the “SELECT” button and the minute digits start flashing.
4. Use the “RESET” button to set the minutes.
5. Push the “SELECT” button to confirm the settings.

Air temperature display

EAUJ2270



1. Outside air temperature display

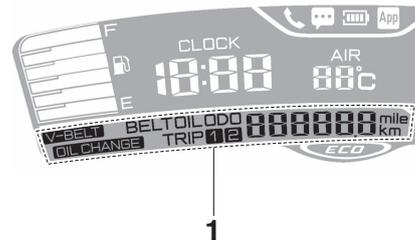
This display shows the air temperature from -9°C to 50°C in 1°C increments. The temperature displayed may vary from the ambient temperature.

TIP

- When the external temperature exceeds the display range., “--” is 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.

Multi-function display

EAUJ2361



1. Multi-function display

The multi-function display is equipped with the following:

- an odometer (ODO)
- two tripmeters (TRIP 1 and TRIP 2)
- a fuel reserve tripmeter (F)
- an oil change tripmeter (OIL TRIP)
- a V-belt replacement tripmeter (BELT TRIP)

Push the “SELECT” button to change the display in the following order:

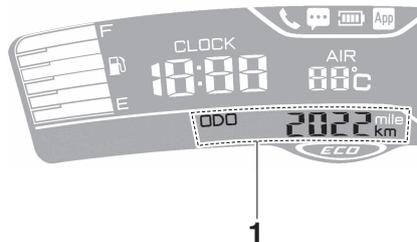
ODO → TRIP (1) → TRIP (2) → F → OIL TRIP → BELT TRIP → ODO

TIP _____

The fuel reserve tripmeter appears only when you are low on fuel.

Odometer

EAU86891



1. Odometer

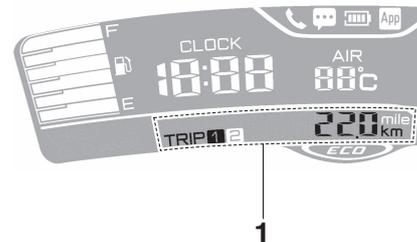
The odometer shows the total distance traveled by the vehicle.

TIP _____

The odometer will lock at “999999” and cannot be reset.

Tripmeters

EAU88050



1. Tripmeter

The tripmeters show the distance traveled since they were last reset.

To reset a tripmeter, change the display to the tripmeter you want to reset, and then push the “RESET” button until it is reset.

TIP _____

The tripmeters will reset and continue counting after 9999.9 is reached.

Instrument and control functions

Fuel reserve tripmeter

EAU87600



1

1. Fuel reserve tripmeter

If the last segment of the fuel meter starts flashing, the display automatically changes to the fuel reserve tripmeter “TRIP F” and starts counting the distance traveled from that point.

To reset the fuel reserve tripmeter, push the “RESET” button until it is reset.

TIP

If you do not reset the fuel reserve tripmeter manually, it will reset automatically and disappear from the display after refueling and traveling 5 km (3 mi).

Oil change tripmeter

EAU02280



2

1

1. Oil change tripmeter
2. Oil change indicator “OIL CHANGE”

This tripmeter shows the distance traveled since the last engine oil change. The oil change indicator “OIL CHANGE” will flash at the initial 1000 km (600 mi), the next 5000 km (3125 mi), and then every 6000 km (3750 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 to four

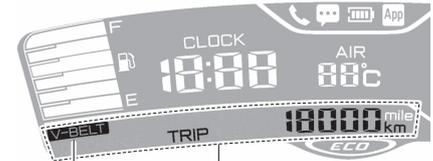
seconds. The oil change tripmeter will be reset and the oil change indicator will turn off.

TIP

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 oil change indicator to come on at the correct time.

V-belt replacement tripmeter

EAU87700



1

2

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

This tripmeter shows the distance traveled since the V-belt was last replaced. The V-belt replacement indicator “V-

BELT” will flash at every 18000 km (10500 mi) to indicate that the V-belt should be replaced.

To reset both the tripmeter and the indicator, select the V-belt replacement tripmeter, and then push the “RESET” button until “V-BELT” and the tripmeter start flashing. While “V-BELT” and the tripmeter are flashing, push the “RESET” button until the tripmeter is reset.

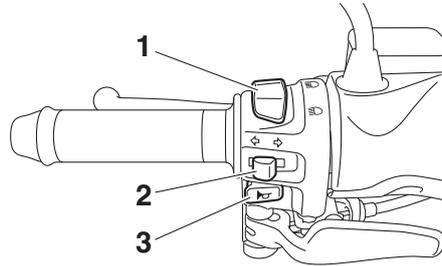
TIP

When the V-belt is replaced, the tripmeter and indicator must be reset. Otherwise, the V-belt replacement indicator will not come on at the correct time.

Handlebar switches

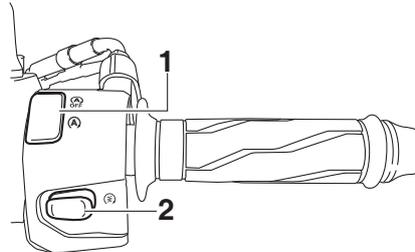
EAU1234T

Left



1. Dimmer switch “ \equiv O/ \equiv O”
2. Turn signal switch “ \leftarrow / \rightarrow ”
3. Horn switch “ ♫ ”

Right



1. Stop and Start System switch “ Ⓐ / Ⓐ_{OFF} ”
2. Start switch “ Ⓐ ”

Dimmer switch “ \equiv O/ \equiv O”

EAU12402

Set this switch to “ \equiv O” for the high beam and to “ \equiv O” for the low beam.

Turn signal switch “ \leftarrow / \rightarrow ”

EAU12461

To signal a right-hand turn, push this switch to “ \rightarrow ”. To signal a left-hand turn, push this switch to “ \leftarrow ”. When released, the switch returns to the center position. To cancel the turn signal lights, push the switch in after it has returned to the center position.

Horn switch “ ♫ ”

EAU12501

Press this switch to sound the horn.

Start switch “ Ⓐ ”

EAU12722

With the sidestand up, push this switch while applying the front or rear brake to crank the engine with the starter. See page 9-2 for starting instructions prior to starting the engine.

Instrument and control functions

Stop and Start System switch

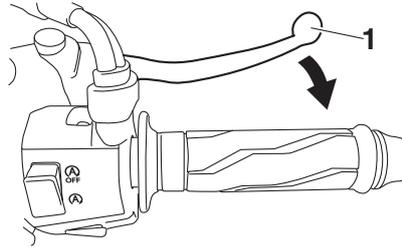
EAU76391

“(A)/_{OFF}(A)”

To turn on the Stop and Start System, set the switch to “(A)”. To turn off the Stop and Start System, set this switch to “_{OFF}(A)”.

Front brake lever

EAU12902

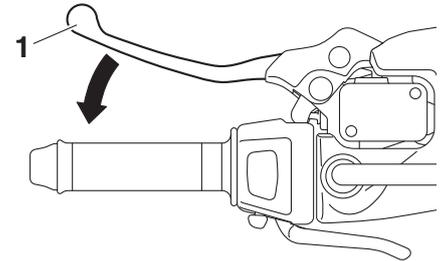


1. Front brake lever

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.

Rear brake lever

EAU51964



1. Rear brake lever

The rear brake lever is located on the left side of the handlebar. 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.

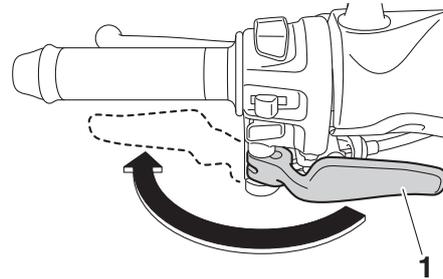
EAU74610

EWA18540

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.

Parking brake lever



1. Parking brake lever

To apply the parking brake

Push the parking brake lever to the left until it snaps into place.

To release the parking brake

Pull the parking brake lever towards you, and then push it back to the original position.

TIP

Be sure to check that the rear wheel does not move when the parking brake lever is applied.

⚠ WARNING

Never move the parking brake lever to the left while the vehicle is moving, otherwise loss of control or an accident may result. Make sure that the vehicle is stopped before moving the parking brake lever to the left.

Instrument and control functions

EAU1840

ABS

Your leaning multi-wheel vehicle's ABS (Anti-lock Brake System) features an electronic control system, which acts on each of the front and rear brakes independently.

Operate the brakes with ABS as you would conventional brakes. If the ABS is activated, a pulsating sensation may be felt at the brake levers. In this situation, continue to apply the brakes and let the ABS work; do not "pump" the brakes as this will reduce braking effectiveness.

EWA16051

⚠ WARNING

Always keep a sufficient distance from the vehicle ahead to match the riding speed even with ABS.

- **The ABS performs best with long braking distances.**
- **On certain surfaces, such as rough or gravel roads, the braking distance may be longer with the ABS than without.**

The ABS is monitored by an ECU, which will revert the system to conventional braking if a malfunction occurs.

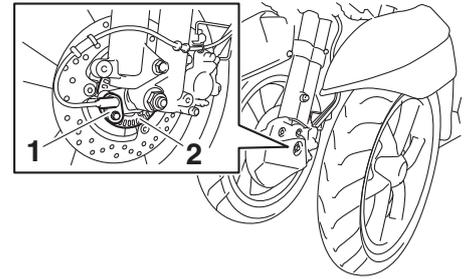
TIP

- The ABS performs a self-diagnosis test each time the vehicle first starts off after the key is turned to "ON" and the vehicle has traveled at a speed of 10 km/h (6 mi/h) or higher. During this test, a "clicking" noise can be heard from the front of the vehicle, and if either brake lever is even slightly applied, a vibration can be felt at the lever, but these do not indicate a malfunction.
- This ABS has a test mode which allows the owner to experience the pulsation at the brake levers when the ABS is operating. However, special tools are required, so please consult your Yamaha dealer.

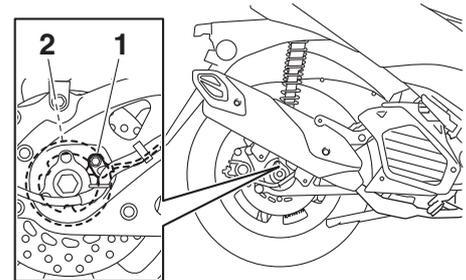
ECA20100

NOTICE

Be careful not to damage the wheel sensor or wheel sensor rotor; otherwise, improper performance of the ABS will result.



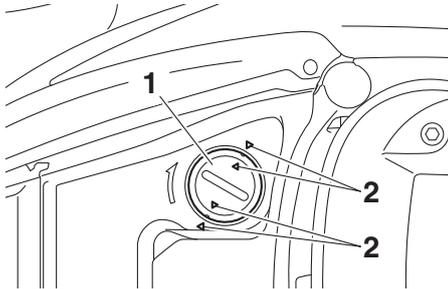
1. Front wheel sensor
2. Front wheel sensor rotor



1. Rear wheel sensor
2. Rear wheel sensor rotor

Fuel tank cap

EAU37474



1. Fuel tank cap
2. "△" mark

To remove the fuel tank cap

1. Open the seat. (See page 7-15.)
2. Turn the fuel tank cap counter-clockwise 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 cover are aligned.
2. Close the seat.

! WARNING

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

EWA11092

Fuel

Make sure there is sufficient gasoline in the tank.

EAU13213

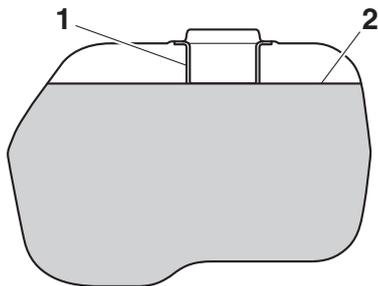
! WARNING

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

EWA10882

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. 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.

Instrument and control functions



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.

EAU76750

Recommended fuel:

Regular unleaded gasoline (E10 acceptable)

Fuel tank capacity:

7.2 L (1.9 US gal, 1.6 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.



TIP

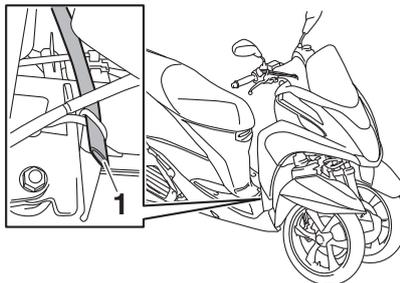
- This mark identifies the recommended fuel for this vehicle as specified by European regulation (EN228).
- Check that gasoline nozzle has the same identifier when fueling.

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.

Fuel tank overflow hose



1. Fuel tank overflow hose

Before operating the vehicle:

- Check the fuel tank overflow hose connection.
- Check the fuel tank overflow hose for cracks or damage, and replace it if necessary.
- Make sure that the end of the fuel tank overflow hose is not blocked, and clean it if necessary.
- Make sure that the end of the fuel tank overflow hose is positioned as shown.

TIP

See page 10-10 for canister information.

EAU80201

Catalytic converter

The exhaust system contains catalytic converter(s) to reduce harmful exhaust emissions.

⚠ 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.

EAU13435

EWA10863

Instrument and control functions

Seat

EAU89400

ECA24020

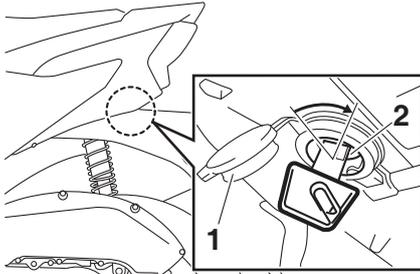
To open the seat

Via the main switch

Turn the main switch to “OPEN”, and then push the “SEAT” button. (See page 4-9.)

With the mechanical key

1. Open the keyhole cover.
2. Insert the mechanical key into the seat lock, and then turn it clockwise.



1. Keyhole cover
2. Seat lock

3. Lift the rear of the seat.

NOTICE

Make sure that the keyhole cover is installed when the mechanical key is not being used.

To close the seat

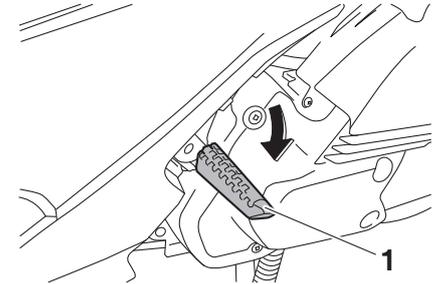
Push the rear of the seat down to lock it in place.

TIP

Make sure that the seat is properly secured before riding.

Passenger footrest

EAUT3711



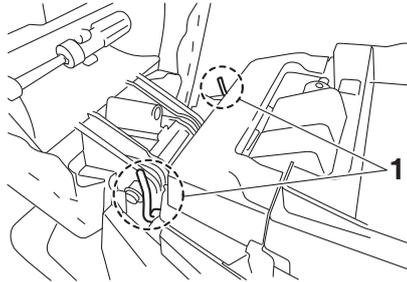
1. Passenger footrest

To use the passenger footrest, pull it out as shown.

To retract the passenger footrest, push it back to original position.

Helmet holders

EAU37482



1. Helmet holder

The helmet holders are located under the seat.

To secure a helmet to a helmet holder

1. Open the seat. (See page 7-15.)
2. Attach a helmet to a helmet holder, and then securely close the seat. **WARNING! Never ride with a helmet attached to the helmet holder, since the helmet may hit objects, causing loss of control and possibly an accident.** [EWA10162]

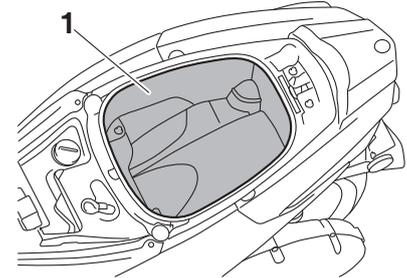
To release a helmet from a helmet holder

Open the seat, remove the helmet from the helmet holder, and then close the seat.

Storage compartment

EAU89052

The storage compartment is located under the seat. (See page 4-9.)



1. Storage compartment

TIP

- The seat/storage compartment can be opened using the smart key system or the mechanical key.
- Some helmets cannot be stored in the storage compartment because of their size or shape.

To open the seat/storage compartment via the main switch

Turn the main switch to “OPEN”, and then push the “SEAT” button.

Instrument and control functions

To open the seat/storage compartment with the mechanical key

1. Open the keyhole cover.
2. Insert the mechanical key into the seat lock, and then turn it clockwise.

TIP

Be sure to close the seat before starting off.

ECA24020

NOTICE

Make sure that the keyhole cover is installed when the mechanical key is not being used.

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.

EWA10962

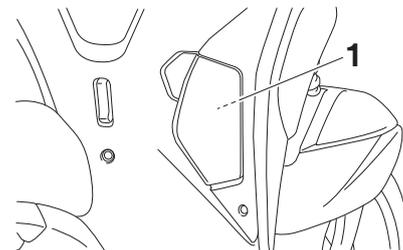
WARNING

- Do not exceed the load limit of 0.1 kg (0 lb) for the storage compartment.
- Do not exceed the maximum load of 167 kg (368 lb) for the vehicle.

EAU74411

Accessory box

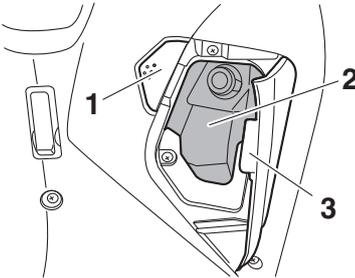
The accessory box is located as shown.



1. Accessory box

To open the accessory box

Push the accessory box button, and then open the accessory box lid.



1. Accessory box button
2. Accessory box
3. Accessory box lid

To close the accessory box

Fold the accessory box lid down.

EGA23690

NOTICE

Do not place heat-sensitive items in the accessory box. The accessory box can get hot when the vehicle is in direct sunlight.

EWA18530

WARNING

- Do not exceed the load limit of 0.15 kg (0.33 lb) for the accessory box.

- Do not exceed the maximum load of 167 kg (368 lb) for the vehicle.

Luggage hook

EAU61380

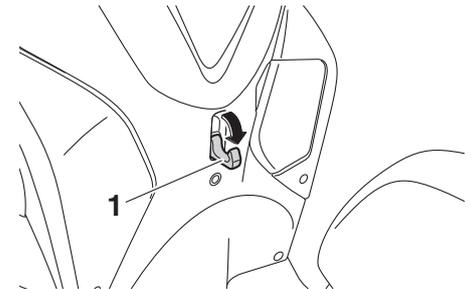
To use the luggage hook, pull it out as shown.

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

EWA1032

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 167 kg (368 lb) for the vehicle.



1. Luggage hook

Instrument and control functions

Power outlet

EAU94781

EWA21220

WARNING

To prevent electrical shock or short-circuiting, make sure that the cap is installed when the power outlet is not being used.

ECA27360

NOTICE

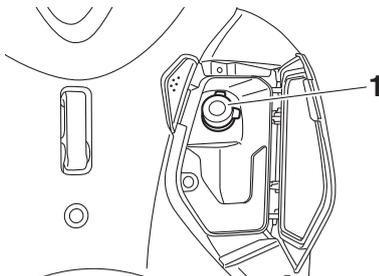
The accessory connected to the power outlet should not be used with the engine turned off, and the load must never exceed 12 W (1 A), otherwise the fuse may blow or the battery may discharge.

This vehicle is equipped with a power outlet in the accessory box.

A 12-V accessory connected to the power outlet can be used when the key is in the "ON" position and should only be used when the engine is running.

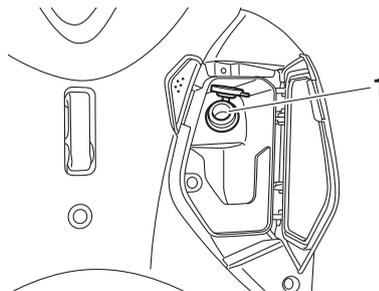
To use the power outlet

1. Open the accessory box lid. (See page 7-17.)
2. Turn the key to "OFF".
3. Remove the power outlet cap.



1. Power outlet cap

4. Turn the accessory off.
5. Insert the accessory plug into the power outlet.



1. Power outlet

6. Turn the key to "ON", and then start the engine. (See page 9-2.)
7. Turn the accessory on.

EAU76780

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.)
- When the sidestand is lowered, the Stop and Start System is deactivated.

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 respon-

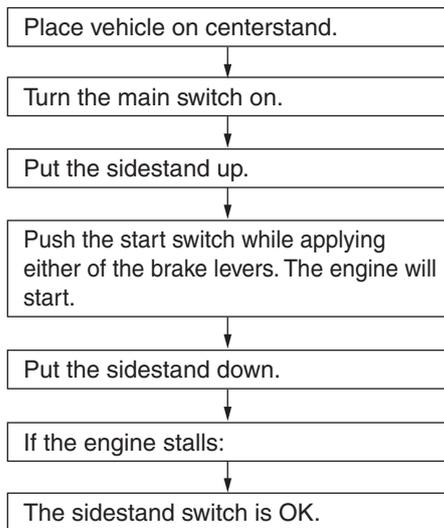
sibility of raising the sidestand before starting off. Therefore, check this system regularly and have a Yamaha dealer repair it if it does not function properly.

EAUT1098

Ignition circuit cut-off system

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

Instrument and control functions



WARNING

- The vehicle must be placed on the centerstand during this inspection.
- If a malfunction is found, have the vehicle inspected before riding.

For your safety – pre-operation checks

EAU1559B

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	<ul style="list-style-type: none">• Check fuel level in fuel tank.• Refuel if necessary.• Check fuel line for leakage.• Check fuel tank overflow hose for obstructions, cracks or damage, and check hose connection.	7-12, 7-14
Engine oil	<ul style="list-style-type: none">• Check oil level in engine.• If necessary, add recommended oil to specified level.• Check vehicle for oil leakage.	10-10
Final transmission oil	<ul style="list-style-type: none">• Check vehicle for oil leakage.	10-12
Coolant	<ul style="list-style-type: none">• Check coolant level.• If necessary, add recommended coolant to specified level.• Check cooling system for leakage.	10-13
Front brake	<ul style="list-style-type: none">• 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.	10-21, 10-22

For your safety – pre-operation checks

ITEM	CHECKS	PAGE
Rear brake	<ul style="list-style-type: none"> • 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. 	10-21, 10-22
Throttle grip	<ul style="list-style-type: none"> • 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. 	10-17, 10-24
Control cables	<ul style="list-style-type: none"> • Make sure that operation is smooth. • Lubricate if necessary. 	10-24
Wheels and tires	<ul style="list-style-type: none"> • Check for damage. • Check tire condition and tread depth. • Check air pressure. • Correct if necessary. 	10-17, 10-19
Brake levers	<ul style="list-style-type: none"> • Make sure that operation is smooth. • Lubricate lever pivoting points if necessary. 	10-24
Centerstand, sidestand	<ul style="list-style-type: none"> • Make sure that operation is smooth. • Lubricate pivots if necessary. 	10-25
Chassis fasteners	<ul style="list-style-type: none"> • Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary. 	–
Instruments, lights, signals and switches	<ul style="list-style-type: none"> • Check operation. • Correct if necessary. 	–
Sidestand switch	<ul style="list-style-type: none"> • Check operation of ignition circuit cut-off system. • If system is not working correctly, have Yamaha dealer check vehicle. 	7-19

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



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

EAU16842

Engine break-in

There is never a more important period in the life of your engine than the period between 0 and 1600 km (1000 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 1600 km (1000 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.

EAU74660

0–1000 km (0–600 mi)

Avoid prolonged operation above 1/3 throttle. **NOTICE: After 1000 km (600 mi) of operation, be sure to replace the engine oil and clean the oil strainer, and replace the final transmission oil.** [ECA23650]

1000–1600 km (600–1000 mi)

Avoid prolonged operation above 1/2 throttle.

1600 km (1000 mi) and beyond

The vehicle can now be operated normally.

ECA10271

NOTICE

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

Operation and important riding points

Starting the engine

EAAU2342

The ignition circuit cut-off system will enable starting when the sidestand is up.

To start the engine

1. Turn the main switch on.
2. Confirm the indicator and warning light(s) come on for a few seconds, and then go off. (See page 7-1.)

TIP

Do not start the engine if the malfunction indicator light remains on.

ECA26710

NOTICE

Do not continue to operate the vehicle if a warning light remains on. Have a Yamaha dealer check the vehicle.

3. Close the throttle completely.
4. While applying the front or rear brake, push the start switch.

5. Release the start switch when the engine starts, or after 5 seconds. Wait 10 seconds before pressing the switch again to allow battery voltage to restore.

ECA11043

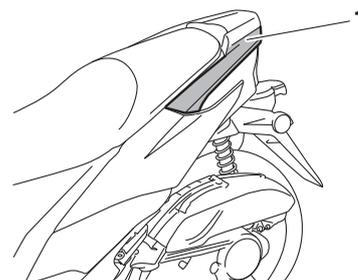
NOTICE

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

Starting off

EAU60640

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.

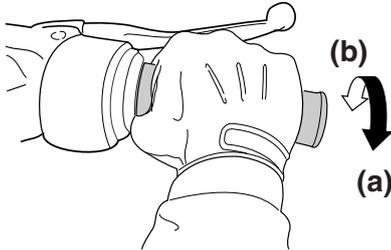


1. Grab bar

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.

Acceleration and deceleration

EAU16782



ZALUM0199

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).

Braking

EAU60650

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.

Tips for reducing fuel consumption

EAU16821

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).

Operation and important riding points

EAU76803

Parking

When parking, turn the vehicle power off. After turning off the main switch, be sure to remove the key and take it with you.

EWA18840

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.
- If the Stop and Start System is left turned on, the battery could become discharged and it may not be possible to restart the engine due to insufficient battery voltage.

Periodic maintenance and adjustment

EUA1824

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 2-2 for more information about carbon monoxide.**

EWA10331

WARNING

This scooter is designed for use on paved roads only. If this scooter is operated in abnormally dusty, muddy or wet conditions, the air filter element should be cleaned or replaced more frequently, otherwise rapid engine wear may result. Consult a Yamaha dealer for proper maintenance intervals.

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.

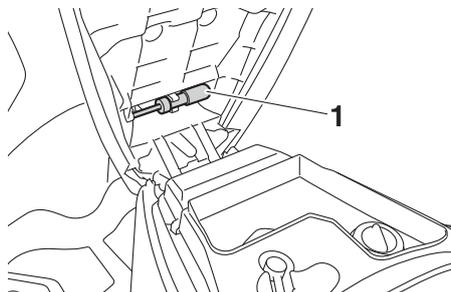
Periodic maintenance and adjustment

EAU17303

EAU85230

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.

Tool kit



1. Tool kit

The tool kit is in the location shown. The information included in this manual and the tools provided in the tool kit are intended to assist you in the performance of preventive maintenance and minor repairs. However, a torque wrench and other tools are necessary to perform certain maintenance work correctly.

TIP

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

Periodic maintenance and adjustment

EAU74580

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.

EAU2290

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	<ul style="list-style-type: none"> • Check fuel hoses for cracks or damage. • Replace if necessary. 		√	√	√	√	√
2	* Spark plug	<ul style="list-style-type: none"> • Check condition. • Adjust gap and clean. 		√		√		
		<ul style="list-style-type: none"> • Replace. 			√		√	
3	* Valve clearance	<ul style="list-style-type: none"> • Check and adjust. 	Every 12000 km (7200 mi)					
4	* Fuel injection	<ul style="list-style-type: none"> • Check and adjust engine idle speed. 	√	√	√	√	√	√
5	* Exhaust system	<ul style="list-style-type: none"> • Check for leakage. • Tighten if necessary. • Replace gasket if necessary. 	Every 12000 km (7200 mi)					
6	* Evaporative emission control system	<ul style="list-style-type: none"> • Check control system for damage. • Replace if necessary. 			√		√	

Periodic maintenance and adjustment

EAUU2301

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	* Diagnostic system check	<ul style="list-style-type: none"> Perform dynamic inspection using Yamaha diagnostic tool. Check the error codes. 	√	√	√	√	√	√
2	Air filter element	<ul style="list-style-type: none"> Replace. 	Every 20000 km (12000 mi)					
3	Air filter case check hose	<ul style="list-style-type: none"> Clean. 	√	√	√	√	√	
4	* V-belt case air filter element	<ul style="list-style-type: none"> Clean. Replace if necessary. 		√	√	√	√	√
5	* Battery	<ul style="list-style-type: none"> Check electrolyte level and specific gravity. Make sure that the breather hose is properly routed. 		√	√	√	√	√
6	* Front brake	<ul style="list-style-type: none"> Check operation, fluid level, and for fluid leakage. Replace brake pads if necessary. 	√	√	√	√	√	√
7	* Rear brake	<ul style="list-style-type: none"> Check operation, fluid level, and for fluid leakage. Replace brake pads if necessary. 	√	√	√	√	√	√
8	* Brake hoses	<ul style="list-style-type: none"> Check for cracks or damage. Check for correct routing and clamping. 		√	√	√	√	√
		<ul style="list-style-type: none"> Replace. 	Every 4 years					
9	* Brake fluid	<ul style="list-style-type: none"> Change. 	Every 2 years					

10

Periodic maintenance and adjustment

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	* Parking brake	<ul style="list-style-type: none"> • Check operation. • Check rubber boot. • Check cable length and adjust if necessary. 	√	√	√	√	√	√
11	* Wheels	<ul style="list-style-type: none"> • Check runout and for damage. • Replace if necessary. 		√	√	√	√	
		<ul style="list-style-type: none"> • Balance the front wheels. 	Whenever the tires or wheels have been changed or replaced.					
12	* Tires	<ul style="list-style-type: none"> • Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary. 		√	√	√	√	√
13	* Wheel bearings	<ul style="list-style-type: none"> • Check bearing for looseness or damage. 		√	√	√	√	
14	* Steering system	<ul style="list-style-type: none"> • Check bearing play and steering for roughness. • Check steering tie rod, and replace if necessary. 	√	√	√	√	√	
		<ul style="list-style-type: none"> • Lubricate with lithium-soap-based grease. 	Every 24000 km (14000 mi)					
15	* Leaning system	<ul style="list-style-type: none"> • Check bearing for looseness or damage. 	√	√	√	√	√	
16	* Chassis fasteners	<ul style="list-style-type: none"> • Make sure that all nuts, bolts and screws are properly tightened. 		√	√	√	√	√
17	Front and rear brake lever pivot shaft	<ul style="list-style-type: none"> • Lubricate with silicone grease. 		√	√	√	√	√

Periodic maintenance and adjustment

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)	
18	* Unified brake system	<ul style="list-style-type: none"> Lubricate link pivots and moving parts with silicone grease. Lubricate cable end with lithium-soap-based grease. 		√	√	√	√	
19	Sidestand, centerstand	<ul style="list-style-type: none"> Check operation. Lubricate with lithium-soap-based grease. 		√	√	√	√	√
20	* Sidestand switch	<ul style="list-style-type: none"> Check operation and replace if necessary. 	√	√	√	√	√	√
21	* Front fork	<ul style="list-style-type: none"> Check operation and for oil leakage. Replace if necessary. 		√	√	√	√	
22	* Shock absorber assemblies	<ul style="list-style-type: none"> Check operation and for oil leakage. Replace if necessary. 		√	√	√	√	
23	Engine oil	<ul style="list-style-type: none"> Change (warm engine before draining). Check oil level and vehicle for oil leakage. 	√	√	√	√	√	√
24	* Engine oil strainer	<ul style="list-style-type: none"> Clean. 	√		√		√	
25	* Final transmission oil	<ul style="list-style-type: none"> Check vehicle for oil leakage. 	√	√	√	√	√	
		<ul style="list-style-type: none"> Change. 	√	Every 12000 km (7200 mi)				
26	* Cooling system	<ul style="list-style-type: none"> Check coolant level and vehicle for coolant leakage. 		√	√	√	√	√
		<ul style="list-style-type: none"> Change. 	Every 3 years					
27	* V-belt	<ul style="list-style-type: none"> Replace. 	Every 18000 km (10500 mi)					

Periodic maintenance and adjustment

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)	
28	* Front and rear brake switches	• Check operation.	√	√	√	√	√	√
29	* Moving parts and cables	• Lubricate.		√	√	√	√	√
30	* Throttle grip housing and cable	• Check operation and free play. • Adjust the throttle cable free play if necessary. • Lubricate the throttle grip housing and cable.		√	√	√	√	√
31	* Lights, signals and switches	• Check operation. • Adjust headlight beam.	√	√	√	√	√	√

EAU72781

TIP

Air filters

- The engine air filter uses a disposable oil-coated paper element. This element cannot be cleaned with compressed air, doing so will only damage it.
- If you often ride in the rain or in dusty areas, have the engine air filter and V-belt air filter elements serviced more frequently.

Hydraulic brake service

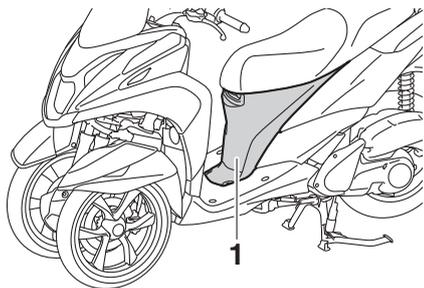
- Regularly check the brake fluid levels in the reservoirs, and refill as necessary.
- Replace the internal components of the brake master cylinders and calipers, and change the brake fluid every 2 years.
- Replace the brake hoses every 4 years, or sooner if cracked or damaged.

Periodic maintenance and adjustment

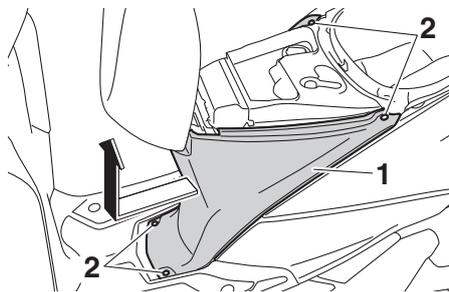
Removing and installing the panel

EAU18752

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.



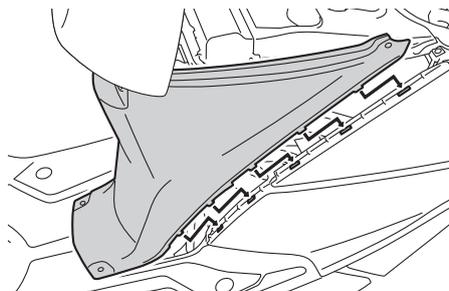
1. Panel A



1. Panel A
2. Screw

To install the panel

1. Place the panel in the original position while closing the seat slightly, and then install the screws.



2. Close the seat.

EAU56942

To remove the panel

1. Open the seat. (See page 7-15.)
2. Remove the screws, and pull the panel off while closing the seat slightly as shown.

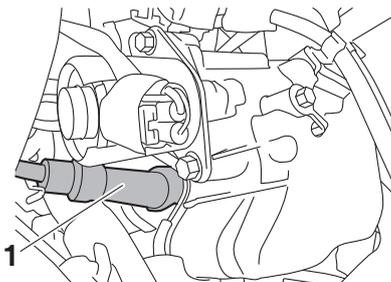
EAUT2077

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

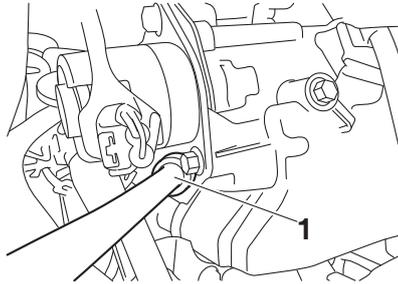
1. Remove panel A. (See page 10-8.)
2. Remove the spark plug cap.



1. Spark plug cap

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

Periodic maintenance and adjustment



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

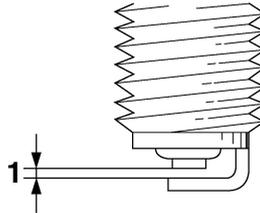
If the spark plug shows a distinctly different color, the engine could be operating improperly. Do not attempt to diagnose such problems yourself. Instead, have a Yamaha dealer check the vehicle.

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

Specified spark plug:

NGK/CPR8EA-9

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:

0.8–0.9 mm (0.031–0.035 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 N·m (1.3 kgf·m, 9.6 lb·ft)

TIP

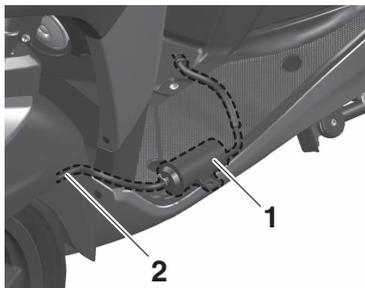
If a torque wrench is not available when installing a spark plug, a good estimate of the correct torque is 1/4–1/2 turn past finger tight. However, the spark plug should be tightened to the specified torque as soon as possible.

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

Periodic maintenance and adjustment

Canister

EAU36113



1. Canister
2. Canister breather hose

This model is equipped with a canister to prevent the discharging of fuel vapor into the atmosphere. Before operating this vehicle, make sure to check the following:

- Check each hose connection.
- Check each hose and canister for cracks or damage. Replace if damaged.
- Make sure that the canister breather is not blocked, and if necessary, clean it.

Engine oil and oil strainer

EAU61004

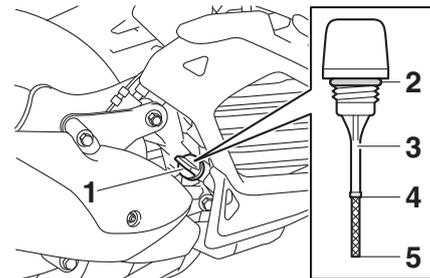
The engine oil level should be checked before each ride. In addition, the oil must be changed and the oil strainer cleaned at the intervals specified in the periodic maintenance and lubrication chart.

To check the engine oil level

1. Place the vehicle on the center-stand. 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. O-ring
3. Engine oil dipstick
4. Maximum level mark
5. 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. Check the O-ring for damage, and replace it if necessary.

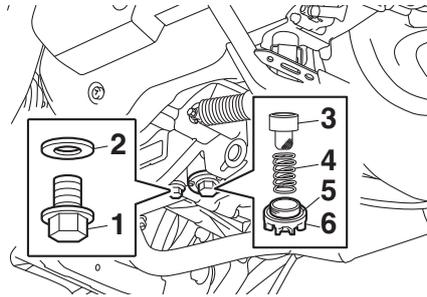
Periodic maintenance and adjustment

6. 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. Install the engine oil strainer, compression spring, new O-ring and engine oil drain bolt B.

TIP _____
Make sure that the O-ring is properly seated.

6. Install engine oil drain bolt A and its new gasket, and then tighten both drain bolts to their specified torques.

Tightening torque:

- Engine oil drain bolt A:
20 N·m (2.0 kgf·m, 15 lb·ft)
- Engine oil drain bolt B:
32 N·m (3.2 kgf·m, 24 lb·ft)

7. Refill with the specified amount of the recommended engine oil.

Recommended engine oil:

- See page 12-1.
- Oil quantity:**
0.90 L (0.95 US qt, 0.79 Imp.qt)

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

ECA24060

NOTICE _____
Make sure that no foreign material enters the crankcase.

8. Check the O-ring for damage, and replace it if necessary.

Periodic maintenance and adjustment

9. Install and tighten the engine oil filler cap.
10. 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.
11. Turn the engine off, and then check the oil level and correct it if necessary.
12. Reset the oil change tripmeter and oil change indicator “OIL CHANGE”.

Why Yamalube

YAMALUBE oil is a Genuine YAMAHA Part born of the engineers' passion and belief that engine oil is an important liquid engine component. We form teams of specialists in the fields of mechanical engineering, chemistry, electronics and track testing, and have them develop the engine together with the oil it will use. Yamalube oils take full advantage of the base oil's qualities and blend in the ideal balance of additives to make sure the final oil clears our performance standards. Thus, Yamalube mineral, semisynthetic and synthetic oils have their own distinct characters and value. Yamaha's experience gained over many years of research and development into oil since the 1960's helps make Yamalube the best choice for your Yamaha engine.

EAU85450

Final transmission oil

EAU60660

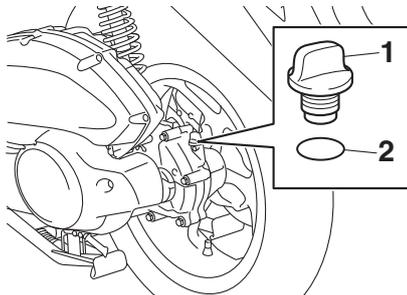
The final transmission case must be checked for oil leakage before each ride. If any leakage is found, have a Yamaha dealer check and repair the vehicle. In addition, the final transmission oil must be changed as follows at the intervals specified in the periodic maintenance and lubrication chart.

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.



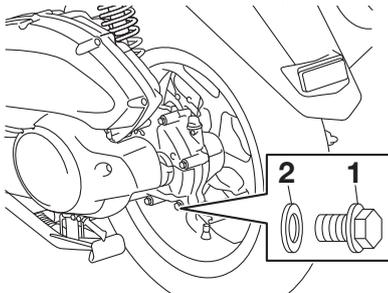
Periodic maintenance and adjustment

EAU20071



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:
20 N·m (2.0 kgf·m, 15 lb·ft)

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 12-1.

Oil quantity:

0.10 L (0.11 US qt, 0.09 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.

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.

EAU40047

To check the coolant level

1. Place the vehicle on the centerstand.

TIP

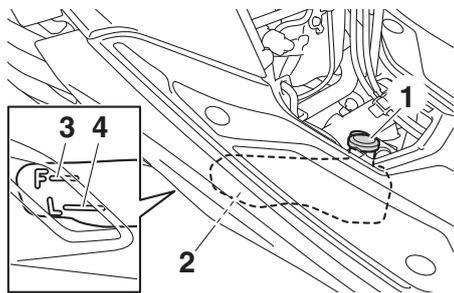
- The coolant level must be checked on a cold engine since the level varies with engine temperature.
- Make sure that the vehicle is positioned straight up when checking the coolant level. A slight tilt to the side can result in an incorrect reading.

2. Check the coolant level in the coolant reservoir.

TIP

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

Periodic maintenance and adjustment



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 panel A to access the coolant reservoir. (See page 10-8.)
4. Remove the coolant reservoir cap, add coolant to the maximum level mark, and then install the 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 anti-freeze 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):
0.13 L (0.14 US qt, 0.11 Imp.qt)

5. Install the panel.

Changing the coolant

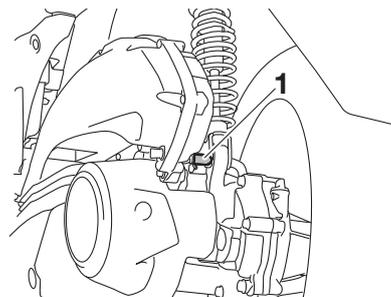
The coolant must be changed at the intervals specified in the periodic maintenance and lubrication chart. Have a Yamaha dealer change the coolant. **WARNING! Never attempt to remove the radiator cap when the engine is hot.** [EWA10382]

EAU67174

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.

Cleaning the air filter check hose



1. Air filter check hose

EAU33032

Periodic maintenance and adjustment

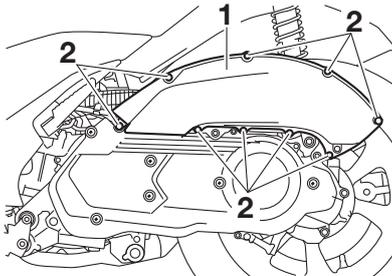
1. Check the hose on the rear side of the air filter case for accumulated dirt or water.
2. If dirt or water is visible, remove the hose from the clamp, clean it, and then install it.

TIP

If dirt or water was found in the check hose, be sure to check the air filter element for excessive dirt or damage and replace it if necessary.

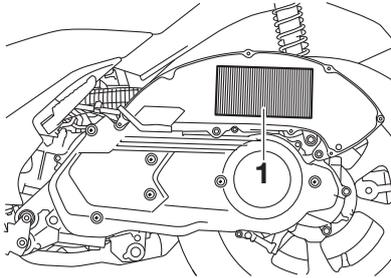
Replacing the air filter element

1. Place the vehicle on the center-stand.
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]

ECA21220

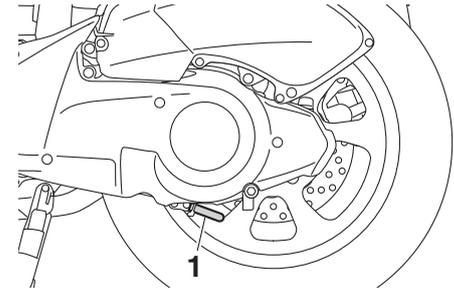
NOTICE

- The air filter element must be replaced at the intervals specified in the periodic maintenance chart.

- The air filter element should be replaced more frequently if you often ride in the rain or dusty areas.
- The air filter cannot be cleaned by blowing it with compressed air. It must be replaced.

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

Cleaning the V-belt case check hose



1. V-belt case 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.

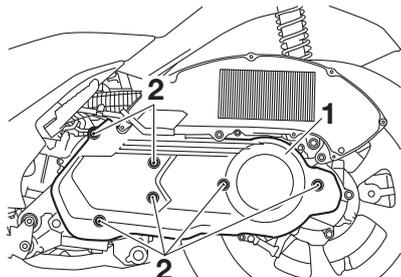
Periodic maintenance and adjustment

TIP

If dirt or water was found in the check hose, be sure to check the V-belt case air filter element for excessive dirt or damage and clean or replace it if necessary.

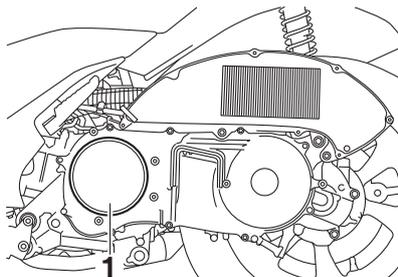
Cleaning the V-belt case air filter element

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

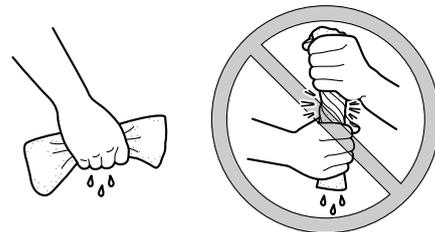


1. V-belt case air filter element cover
2. Screw

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

Recommended oil:

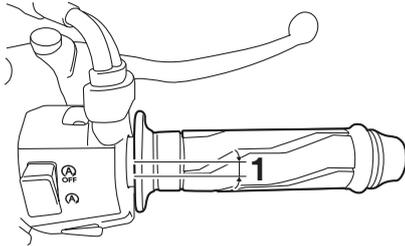
Yamaha foam air filter oil or other quality foam air filter oil

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

Checking the throttle grip free play

EAU21386

Measure the throttle grip free play as shown.



1. Throttle grip free play

Throttle grip free play:
3.0–7.0 mm (0.12–0.28 in)

Periodically check the throttle grip free play and, if necessary, have a Yamaha dealer adjust it.

Valve clearance

EAU21403

The valves are an important engine component, and since valve clearance changes with use, they must be checked and adjusted at the intervals specified in the periodic maintenance chart. Unadjusted valves can result in improper air-fuel mixture, engine noise, and eventually engine damage. To prevent this from occurring, have your Yamaha dealer check and adjust the valve clearance at regular intervals.

TIP

This service must be performed when the engine is cold.

Tires

EAU69761

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

Periodic maintenance and adjustment

EWA10472

weight of rider, passenger, cargo, and accessories approved for this model.

Cold tire air pressure:

1 person:

Front:

200 kPa (2.00 kgf/cm², 29 psi)

Rear:

225 kPa (2.25 kgf/cm², 33 psi)

2 persons:

Front:

200 kPa (2.00 kgf/cm², 29 psi)

Rear:

225 kPa (2.25 kgf/cm², 33 psi)

Maximum load:

Vehicle:

167 kg (368 lb)

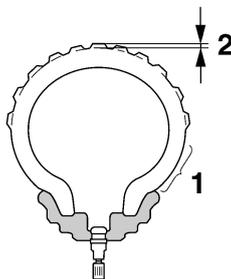
The vehicle's maximum load is the combined weight of the rider, passenger, cargo, and any accessories.

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):

1.5 mm (0.06 in)

TIP

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

⚠ 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 rubber 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:

IRC/SCT-003

Rear tire:

Size:

130/70-13M/C 63P

Manufacturer/model:

IRC/SCT-003

Cast wheels

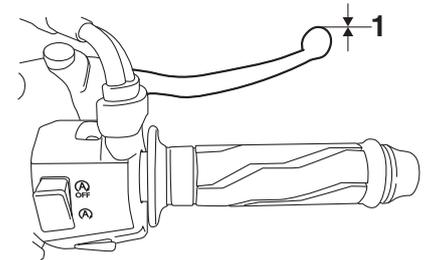
To maximize the performance, durability, and safe operation of your vehicle, note the following points regarding the specified wheels.

- 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.

EAU61160

Checking the front brake lever free play

EAU49351



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

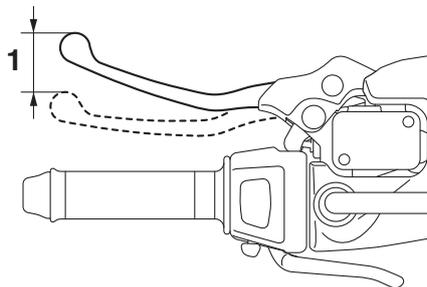
WARNING

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

Periodic maintenance and adjustment

braking performance, which may result in loss of control and an accident.

Checking the rear brake lever free play EAUJ60760



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.

Checking and adjusting the parking brake EAUJ2380

The parking brake must be checked and adjusted at the intervals specified in the periodic maintenance and adjustment chart, or sooner if the parking brake does not properly hold the wheel.

Periodically check that the parking brake holds the wheel as follows.

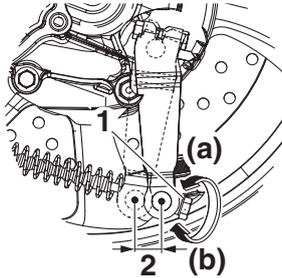
1. Stop the vehicle on a level surface, and then stop the engine.
2. Apply the parking brake. (See page 7-10.)
3. Try to push the vehicle forward and then backwards to confirm that the parking brake functions properly.
4. If the parking brake does not properly hold the wheel, adjust the parking brake cable.

Adjusting the parking brake

With the parking brake released, measure the camshaft lever free play as shown.

Periodic maintenance and adjustment

EAU22393



1. Adjusting nut
2. Camshaft lever free play

Camshaft lever free play:
4.5–5.5 mm (0.18–0.22 in)

To increase the camshaft lever free play, turn the adjusting nut in direction (a). To decrease the camshaft lever free play, turn the adjusting nut in direction (b). **WARNING! If proper adjustment cannot be obtained as described, have a Yamaha dealer make this adjustment.** [EWA16151]

After adjusting the camshaft lever free play, perform the following checks.

- Check the operation of the parking brake lever.

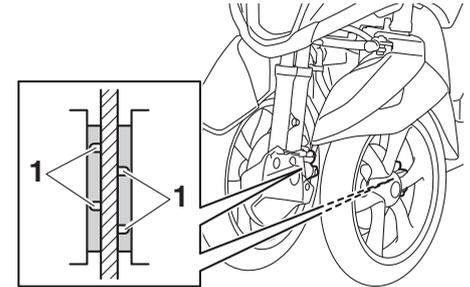
- Check that the parking brake holds the wheel when the parking brake is applied.
- Check that the rear wheel rotates smoothly when the parking brake is released and the handlebars turned completely to the left.

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.

EAU22434

Front brake pads



1. Brake pad wear indicator groove

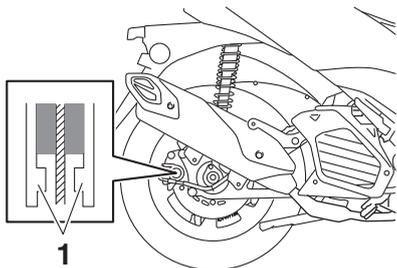
Each front brake pad is provided with wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that the wear

Periodic maintenance and adjustment

indicator grooves have almost disappeared, have a Yamaha dealer replace the brake pads as a set.

Rear brake pads

EAU22461



1. Brake pad wear indicator

Each rear brake pad is provided with a wear indicator, which allows you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the position of the wear indicator while applying the brake. If a brake pad has worn to the point that the wear indicator almost touches the brake disc, have a Yamaha dealer replace the brake pads as a set.

Checking the brake fluid level ^{EAU22585}

Before riding, check that the brake fluid is above the minimum level mark.

TIP

Make sure the reservoir is level with the ground when checking the fluid level.

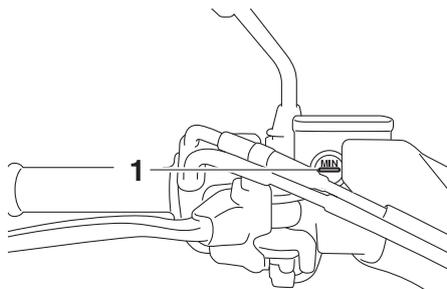
Specified brake fluid:
DOT 4

ECA17641

NOTICE

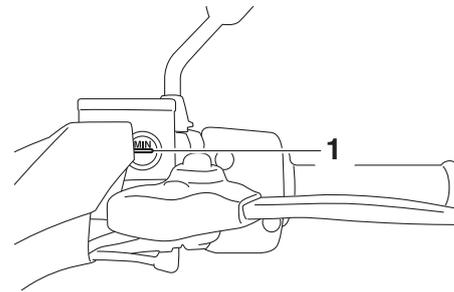
Brake fluid may damage painted surfaces or plastic parts. Always clean up spilled fluid immediately.

Front brake



1. Minimum level mark

Rear brake



1. Minimum level mark

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 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.

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.**

Changing the brake fluid

EAU22734

Have a Yamaha dealer change the brake fluid every 2 years. In addition, have the seals of the master cylinders and brake calipers, as well as the brake hoses replaced at the intervals listed below or sooner if they are damaged or leaking.

- Brake seals: every 2 years
- Brake hoses: every 4 years

Checking the V-belt

EAUJ0311

The V-belt must be checked and replaced by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

Periodic maintenance and adjustment

Checking and lubricating the cables

EAU23098

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

Checking and lubricating the throttle grip and cable

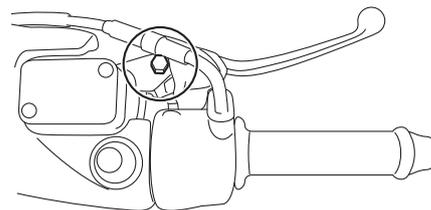
EAU49921

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.

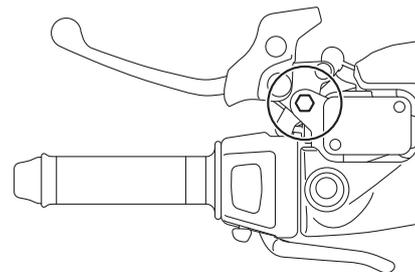
Lubricating the front and rear brake levers

EAU23173

Front brake lever



Rear brake lever



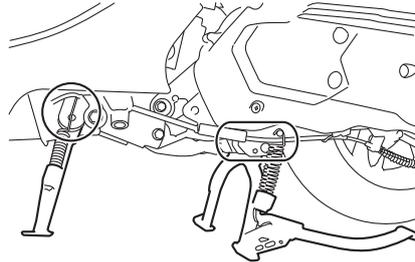
The pivoting points of the front and rear brake levers must be lubricated at the intervals specified in the periodic maintenance and lubrication chart.

Periodic maintenance and adjustment

Recommended lubricant:
Silicone grease

Checking and lubricating the centerstand and sidestand ^{EAU23215}

Recommended lubricant:
Lithium-soap-based grease



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.

Periodic maintenance and adjustment

EAU23273

Checking the front fork

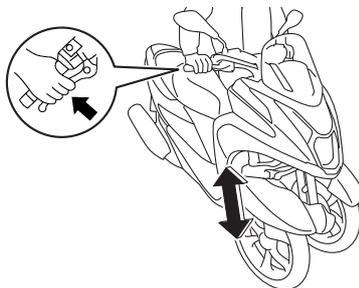
The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

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

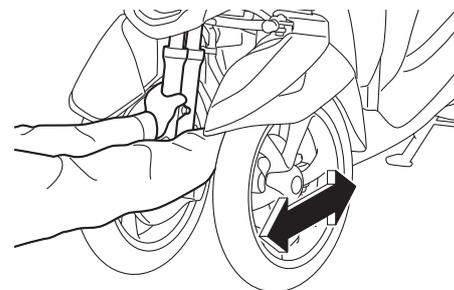
If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.

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.



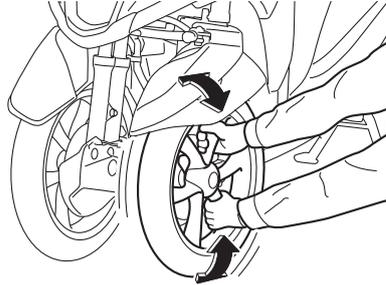
Periodic maintenance and adjustment

Lubricating the steering bearings EAU89070

The steering bearings must be lubricated by a Yamaha dealer at the intervals specified in the periodic maintenance chart.

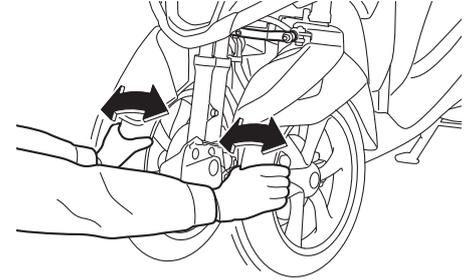
Recommended lubricant:
Lithium-soap-based grease

Checking the wheel bearings EAU84970



The front and rear wheel bearings must be checked by a Yamaha dealer at the intervals specified in the periodic maintenance chart.

Checking the steering tie rod EAU61420



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.

Periodic maintenance and adjustment

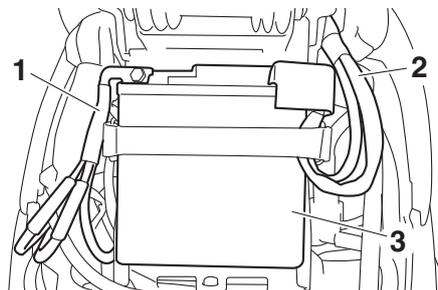
Checking the leaning system

EAU61390

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

Battery

EAU60691



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

The battery is located behind panel A. (See page 10-8.)

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 to turn the main switch off, then disconnect the negative lead before disconnecting the positive lead.^[ECA16304]
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 to turn the main switch off, then con-**

nect the positive lead before connecting the negative lead.

[ECA16842]

4. After installation, make sure that the battery leads are properly connected to the battery terminals.

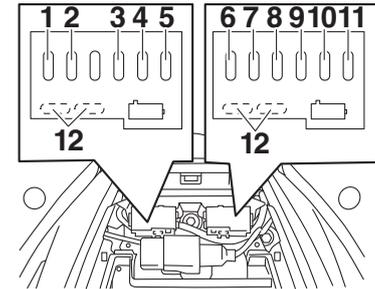
ECA16531

NOTICE

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

Replacing the fuses

The fuse boxes, which contain the fuse for the individual circuits, are located under the seat. (See page 7-15.)



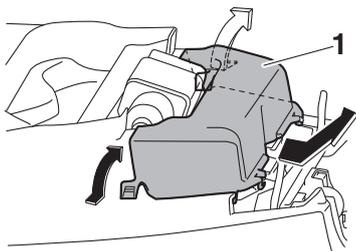
1. ABS solenoid fuse
2. ABS motor fuse
3. Smart key system fuse
4. Terminal fuse
5. Signaling system fuse
6. Fuel injection system fuse
7. Backup fuse
8. Main fuse
9. Ignition fuse
10. Headlight fuse
11. ABS control unit fuse
12. Spare fuse

If a fuse is blown, replace it as follows.

1. Turn the key to "OFF" and turn off the electrical circuit in question.

Periodic maintenance and adjustment

2. Open the seat. (See page 7-15.)
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]

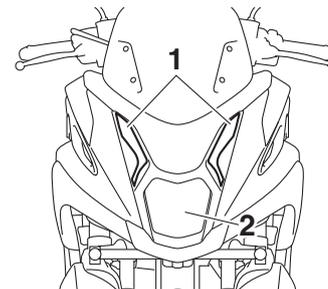
Specified fuses:

- Main fuse: 30.0 A
- Terminal fuse 1: 5.0 A
- Headlight fuse: 7.5 A
- Signaling system fuse: 7.5 A
- Ignition fuse: 7.5 A
- Smart key system fuse: 2.0 A
- ABS motor fuse: 30.0 A
- Fuel injection system fuse: 7.5 A
- ABS solenoid fuse: 20.0 A
- ABS control unit fuse: 5.0 A
- Backup fuse: 7.5 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.

Vehicle lights

This model is equipped with LED lights for headlights, auxiliary lights and brake/tail light. If a light does not come on, check the fuse and then have a Yamaha dealer check the vehicle.



1. Headlight
2. Auxiliary light

NOTICE

Do not affix any type of tinted film or stickers to the headlight lens.

EAUN2261

ECA16581

Turn signal light bulb

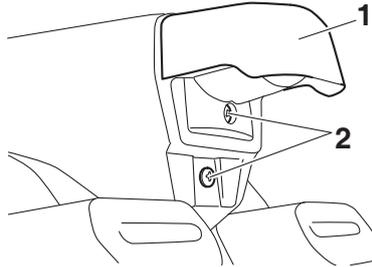
EAU61170

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

Replacing the license plate light bulb

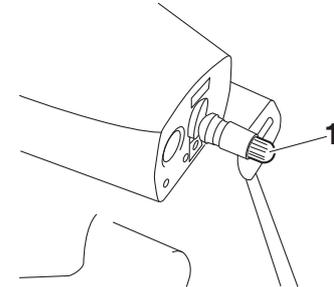
EAU89380

1. Remove the license plate light cover by removing the screws.



1. License plate light unit
2. Screw

2. Remove the license plate light bulb socket (together with the bulb) by pulling it out.



1. License plate light bulb socket

3. Remove the burnt-out bulb by pulling it out from the socket.
4. Insert a new bulb into the socket.
5. Install the socket (together with the bulb) by pushing it in.
6. Install the license plate light cover by installing the screws.

Periodic maintenance and adjustment

Troubleshooting

EAU60701

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

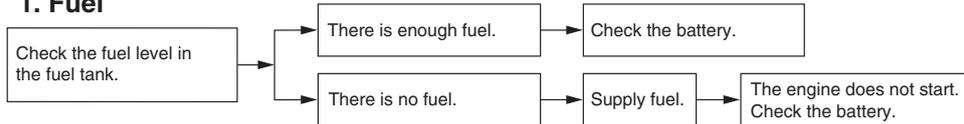
WARNING

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

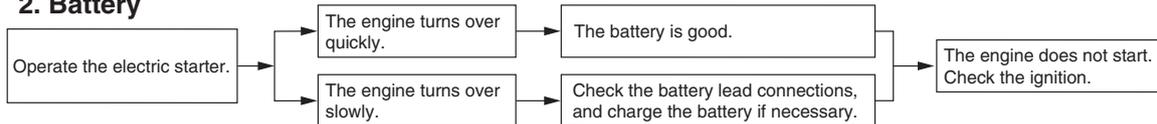
heaters or furnaces. Gasoline or gasoline vapors can ignite or explode, causing severe injury or property damage.

Troubleshooting chart

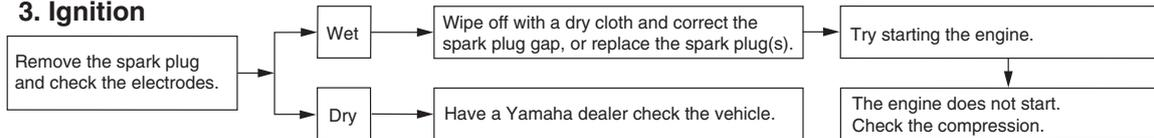
1. Fuel



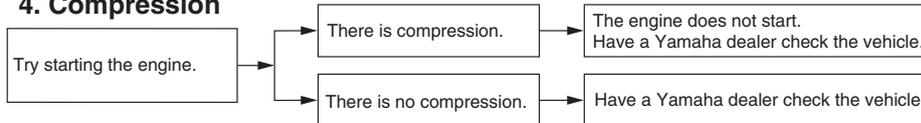
2. Battery



3. Ignition



4. Compression



Periodic maintenance and adjustment

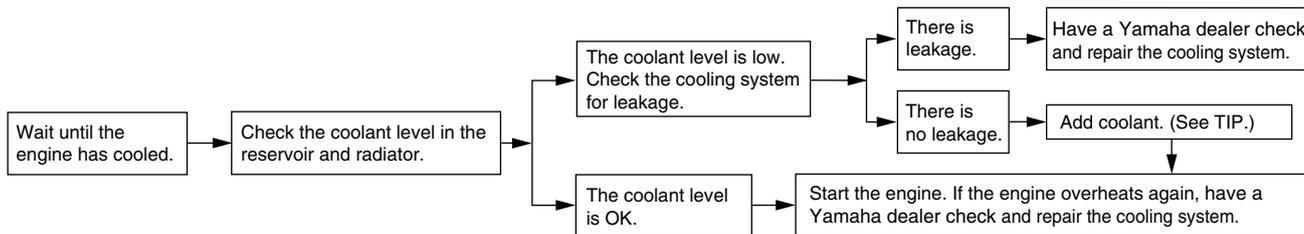
EAU86420

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.



10

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.

Periodic maintenance and adjustment

EAU76561

Emergency mode

When the smart key is lost or damaged, or its battery has discharged, the vehicle can still be turned on and the engine started. You will need the smart key system identification number.

To operate the vehicle in emergency mode

1. Stop the vehicle in a safe place and turn the main switch to “OFF”.
2. Push the main switch knob for 5 seconds until the smart key system indicator light flashes once, then release it. Repeat two more times. The smart key system indicator light will come on for three seconds to indicate the transition to emergency mode.



1. Smart key system indicator light “A close-up of the smart key system indicator light. It is a rectangular light with a white background. On the left, the identification number '868588' is displayed. On the right, there is a key icon with a signal wave. A white callout line with the number '1' points to the top of the light.

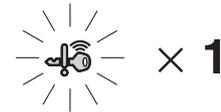
1. Identification number
4. Inputting the identification number is done by counting the number of flashes of the smart key system indicator light.

For example, if the identification number is 123456:

Push and hold the knob.



The smart key system indicator light will start to flash.



Release the knob after the smart key system indicator light flashes once.



The first digit of the identification number has been set as “1”.



Push and hold the knob again.



Periodic maintenance and adjustment

Release the knob after the smart key system indicator light flashes twice.



The second digit has been set as “2”.



Repeat the above procedure until all digits of the identification number have been set. The smart key system indicator light will flash for 10 seconds if the correct identification number was entered.

TIP

When one of the following situations applies, emergency mode will be terminated and the smart key system indicator light will flash quickly for 3 seconds. In this case, start over again from step 2.

- When there are no knob operations for 10 seconds during the identification number input process.
- When the smart key system indicator light is allowed to flash nine or more times.

- The identification number is not entered correctly.

-
5. While the smart key system indicator light is on, push the knob once more to complete emergency mode access. The smart key indicator light will go off and then come back on for approximately 4 seconds.
 6. While the smart key system indicator light is on, turn the main switch to “ON”. The vehicle can now be operated normally.

Matte color caution

EAU37834

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.

ECA15193

Care

EAU83446

Frequent, thorough cleaning of the vehicle will not only enhance its appearance but also will improve its general performance and extend the useful life of many components. Washing, cleaning, and polishing will also give you a chance to inspect the condition of the vehicle more frequently. Be sure to wash the vehicle after riding in the rain or near the sea, because salt is corrosive to metals.

Special care in winter

ECA28181

NOTICE

In cold weather, when roads may be salted as a de-icing method, it's important to clean the vehicle thoroughly to remove road salt and avoid corrosion. Wheel spokes, bolts/nuts and other unpainted metal parts can be especially vulnerable to corrosion from road salt. Apply an anti-corrosion product to any vulnerable parts after washing and drying the vehicle.

TIP

- The roads of heavy snowfall areas may be sprayed with salt as a de-icing method. This salt can stay on the roads well into spring, so be sure to wash the underside and chassis parts after riding in such areas.
- Genuine Yamaha care and maintenance products are sold under the YAMALUBE brand in many markets worldwide.
- See your Yamaha dealer for additional cleaning tips.

ECA26280

NOTICE

Improper cleaning can cause cosmetic and mechanical damage. Do not use:

- high-pressure washers or steam-jet cleaners. Excessive water pressure may cause water seepage and deterioration of wheel bearings, brakes, transmission seals and electrical devices. Avoid high-pressure

Vehicle care and storage

detergent applications such as those available in coin-operated car washers.

- **harsh chemicals, including strong acidic wheel cleaners, especially on spoke or magnesium wheels.**
- **harsh chemicals, abrasive cleaning compounds, or wax on matte-finished parts. Brushes can scratch and damage the matte-finish, use soft sponge or towel only.**
- **towels, sponges, or brushes contaminated with abrasive cleaning products or strong chemicals such as, solvents, gasoline, rust removers, brake fluid, or antifreeze, etc.**

Before washing

1. Park the vehicle out of direct sunlight and allow it to cool. This will help avoid water spots.
2. Make sure all caps, covers, electrical couplers and connectors are tightly installed.
3. Cover the muffler end with a plastic bag and a strong rubber band.

4. Pre-soak stubborn stains like insects or bird droppings with a wet towel for a few minutes.
5. Remove road grime and oil stains with a quality degreasing agent and a plastic-bristle brush or sponge. **NOTICE: Do not use degreasing agent on areas requiring lubrication such as seals, gaskets, and wheel axles. Follow product instructions.**

[ECA26290]

Washing

1. Rinse off any degreaser and spray down the vehicle with a garden hose. Use only enough pressure to do the job. Avoid spraying water directly into the muffler, instrument panel, air inlet, or other inner areas such as underseat storage compartments.
2. Wash the vehicle with a quality automotive-type detergent mixed with cool water and a soft, clean towel or sponge. Use an old toothbrush or plastic-bristle brush for hard-to-reach places. **NOTICE: Use cold water if the vehicle has**

been exposed to salt. Warm water will increase salt's corrosive properties. [ECA26301]

3. For windshield-equipped vehicles: Clean the windshield with a soft towel or sponge dampened with water and a pH neutral detergent. If necessary, use a high-quality windshield cleaner or polish for motorcycles. **NOTICE: Never use any strong chemicals to clean the windshield. Additionally, some cleaning compounds for plastic may scratch the windshield, so be sure to test all cleaning products before general application.** [ECA26310]
4. Rinse off thoroughly with clean water. Be sure to remove all detergent residues, as they can be harmful to plastic parts.

After washing

1. Dry the vehicle with a chamois or absorbent towel, preferably microfiber terrycloth.
2. For drive chain-equipped models: Dry and then lubricate the drive chain to prevent rust.

3. Use a chrome polish to shine chrome, aluminum, and stainless steel parts. Often the thermally induced discoloring of stainless steel exhaust systems can be removed through polishing.
4. Apply a corrosion protection spray on all metal parts including chrome or nickel-plated surfaces. **WARNING! Do not apply silicone or oil spray to seats, hand grips, rubber foot pegs or tire treads. Otherwise these parts will become slippery, which could cause loss of control. Thoroughly clean the surfaces of these parts before operating the vehicle.** [EWA20651]
5. Treat rubber, vinyl, and unpainted plastic parts with a suitable care product.
6. Touch up minor paint damage caused by stones, etc.
7. Wax all painted surfaces using a non-abrasive wax or use a detail spray for motorcycles.

8. When finished cleaning, start the engine and let it idle for several minutes to help dry any remaining moisture.
9. If the headlight lens has fogged up, start the engine and turn on the headlight to help remove the moisture.
10. Let the vehicle dry completely before storing or covering it.

ECA26320

NOTICE

- Do not apply wax to rubber or unpainted plastic parts.
- Do not use abrasive polishing compounds as they will wear away the paint.
- Apply sprays and wax sparingly. Wipe off excess afterwards.

EWA20660

WARNING

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

- Make sure there is no lubricant or wax on the brakes or tires.
- If necessary, wash the tires with warm water and a mild detergent.

Vehicle care and storage

Storage

Always store the vehicle in a cool, dry place. If necessary, protect it against dust with a porous cover. Be sure the engine and the exhaust system are cool before covering the vehicle. If the vehicle often sits for weeks at a time between uses, the use of a quality fuel stabilizer is recommended after each fill-up.

EAU83472

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 storage

Before storing the vehicle long term (60 days or more):

1. Make all necessary repairs and perform any outstanding maintenance.
 2. Follow all instructions in the Care section of this chapter.
 3. Fill up the fuel tank, adding fuel stabilizer according to product instructions. Run the engine for 5 minutes to distribute treated fuel through the fuel system.
 4. For vehicles equipped with a fuel cock: Turn the fuel cock lever to the off position.
 5. For vehicles with a carburetor: To prevent fuel deposits from building up, drain the fuel in the carburetor float chamber into a clean container. Retighten the drain bolt and pour the fuel back into the fuel tank.
 6. Use a quality engine fogging oil according to product instructions to protect internal engine components from corrosion. If engine fogging oil is not available, perform the following steps for each cylinder:
 - 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.)
WARNING! To prevent damage or injury from sparking, make sure to ground the spark plug electrodes while turning the engine over.
- [EWA10952]
- e. Remove the spark plug cap from the spark plug, and then install the spark plug and the spark plug cap.
7. Lubricate all control cables, pivots, levers and pedals, as well as the sidestand and centerstand (if equipped).
 8. Check and correct the tire air pressure, and then lift the vehicle so that all wheels are off the ground. Otherwise, turn the

wheels a little once a month in order to prevent the tires from becoming degraded in one spot.

9. Cover the muffler outlet with a plastic bag to prevent moisture from entering it.
10. Remove the battery and fully charge it, or attach a maintenance charger to keep the battery optimally charged. **NOTICE: Confirm that the battery and its charger are compatible. Do not charge a VRLA battery with a conventional charger.** [ECA26330]

TIP

- If the battery will be removed, charge it once a month and store it in a temperate location between 0-30 °C (32-90 °F).
 - See page 10-28 for more information on charging and storing the battery.
-

Specifications

Dimensions:

- Overall length:
1995 mm (78.5 in)
- Overall width:
750 mm (29.5 in)
- Overall height:
1215 mm (47.8 in)
- Seat height:
785 mm (30.9 in)
- Wheelbase:
1410 mm (55.5 in)
- Ground clearance:
125 mm (4.92 in)
- Minimum turning radius:
2.6 m (8.53 ft)

Weight:

- Curb weight:
172 kg (379 lb)

Engine:

- Combustion cycle:
4-stroke
- Cooling system:
Liquid cooled
- Valve train:
SOHC
- Number of cylinders:
Single cylinder
- Displacement:
155 cm³
- Bore × stroke:
58.0 × 58.7 mm (2.28 × 2.31 in)

Engine oil:

Recommended brand:



- SAE viscosity grades:
10W-40
- Recommended engine oil grade:
API service SG type or higher, JASO standard MA or MB
- Engine oil quantity:
Oil change:
0.90 L (0.95 US qt, 0.79 Imp.qt)

Final transmission oil:

- Type:
Motor oil SAE 10W-40 type SG or higher
- Quantity:
0.10 L (0.11 US qt, 0.09 Imp.qt)

Coolant quantity:

- Coolant reservoir (up to the maximum level mark):
0.13 L (0.14 US qt, 0.11 Imp.qt)
- Radiator (including all routes):
0.46 L (0.49 US qt, 0.40 Imp.qt)

Fuel:

- Recommended fuel:
Unleaded gasoline (E10 acceptable)
- Octane number (RON):
90
- Fuel tank capacity:
7.2 L (1.9 US gal, 1.6 Imp.gal)
- Fuel reserve amount:
1.6 L (0.42 US gal, 0.35 Imp.gal)

Fuel injection:

- Throttle body:
ID mark:
B2T1

Chassis:

- Track:
385 mm (15.2 in)

Front tire:

- Type:
Tubeless
- Size:
90/80-14M/C 43P
- Manufacturer/model:
IRC/SCT-003

Rear tire:

- Type:
Tubeless
- Size:
130/70-13M/C 63P
- Manufacturer/model:
IRC/SCT-003

Loading:

- Maximum load:
167 kg (368 lb)
(Total weight of rider, passenger, cargo and accessories)

Unified brake system:

- Operation:
Activated by rear brake

Front brake:

- Type:
Hydraulic disc brake

Rear brake:

Type:

Hydraulic single disc brake

Front suspension:

Type:

Telescopic fork

Rear suspension:

Type:

Unit swing

Electrical system:

System voltage:

12 V

Battery:

Model:

YTZ7V

Voltage, capacity:

12 V, 6.0 Ah (10 HR)

Bulb wattage:

Headlight:

LED

Brake/tail light:

LED

Front turn signal light:

10.0 W

Rear turn signal light:

10.0 W

Auxiliary light:

LED

License plate light:

5.0 W

Consumer information

Identification numbers

EAU53562

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.

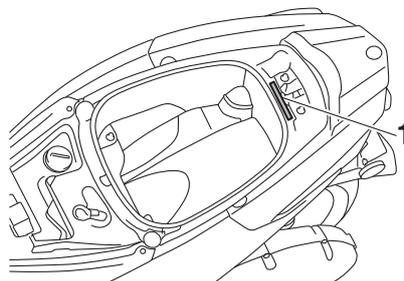
VEHICLE IDENTIFICATION NUMBER:

ENGINE SERIAL NUMBER:

MODEL LABEL INFORMATION:

Vehicle identification number

EAU26411



1. Vehicle identification number

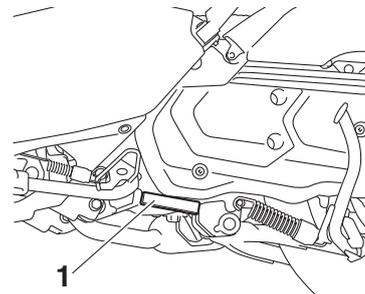
The vehicle identification number is stamped into the frame.

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.

Engine serial number

EAU1221

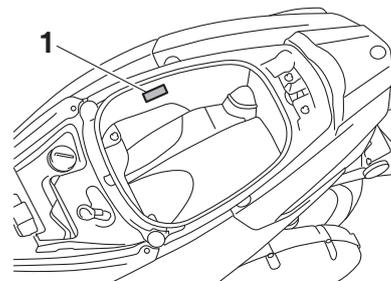


1. Engine serial number

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

Model label

EAUT1441

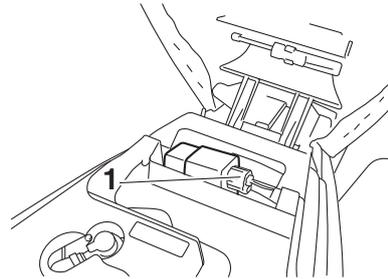


1. Model label

The model label is affixed to the inside of the storage compartment. (See page 7-16.) Record the information on this label in the space provided. This information will be needed when ordering spare parts from a Yamaha dealer.

Diagnostic connector

EAU69910



1. Diagnostic connector

The diagnostic connector is located as shown.

Vehicle data recording

EAU85400

This model's ECU stores certain vehicle data to assist in the diagnosis of malfunctions and for research, statistical analysis and development purposes.

Although the sensors and recorded data will vary by model, the main data points are:

- Vehicle status and engine performance data
- Fuel-injection and emission-related data

This data will be uploaded only when a special Yamaha diagnostic tool is attached to the vehicle, such as when maintenance checks or service procedures are performed.

Yamaha will not disclose this data to a third party except in the following cases. In addition, Yamaha may provide vehicle data to a contractor in order to outsource services related to the handling of vehicle data. Even in this case, Yamaha will require the contractor to

Consumer information

properly handle the vehicle data we provided and Yamaha will appropriately manage the data.

- With the consent of the vehicle owner
- Where obligated by law
- For use by Yamaha in litigation
- When the data is not related to an individual vehicle nor owner

EAU26571

Motorcycle noise regulation (for Australia)

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:

Owners are warned that the law may prohibit:

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

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