



## OWNER'S MANUAL

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



**MOTORCYCLE**

***GPD155D-A***

**BTM-FU199-E0**

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**nabp.**

ผู้ใดมิไว้ในครอบครอง หรือ ใช้ซึ่งเครื่องวิทยุคมนาคมหรือตั้งสถานีวิทยุคมนาคมนี้ ต้องได้รับใบอนุญาตจากเจ้าพนักงานออกใบอนุญาต หากฝ่าฝืน มาตรา 6 หรือมาตรา 11 มีความผิดตามมาตรา 23 แห่งพระราชบัญญัติวิทยุคมนาคม พ.ศ. 2498 ต้องระวางโทษปรับไม่เกินหนึ่งแสนบาท หรือจำคุกไม่เกินห้าปี หรือทั้งปรับทั้งจำ



**nabp.** | โทรคมนาคม  
กำกับดูแลเพื่อประชาชน  
Call Center 1210 (Inswr)

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

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Welcome to the Yamaha world of motorcycling!

As the owner of the GPD155D-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 GPD155D-A. The Owner's Manual does not only instruct you in how to operate, inspect and maintain your motorcycle, but also in how to safeguard yourself and others from trouble and injury.

In addition, the many tips given in this manual will help keep your motorcycle in the best possible condition. If you have any further questions, do not hesitate to contact your Yamaha dealer.

The Yamaha team wishes you many safe and pleasant rides. So, remember to put safety first!

Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your motorcycle and this manual. If there is any question concerning this manual, please consult a Yamaha dealer.



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**Please read this manual carefully and completely before operating this motorcycle.**

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# Important manual information

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

|                                                                                                 |                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <b>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.</b> |
|  <b>WARNING</b> | <b>A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.</b>                                                                          |
| <b>NOTICE</b>                                                                                   | <b>A NOTICE indicates special precautions that must be taken to avoid damage to the vehicle or other property.</b>                                                                        |
| <b>TIP</b>                                                                                      | A TIP provides key information to make procedures easier or clearer.                                                                                                                      |

\*Product and specifications are subject to change without notice.

EAUN0430

**GPD155D-A  
OWNER'S MANUAL  
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Manufacturing  
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# Location of important labels

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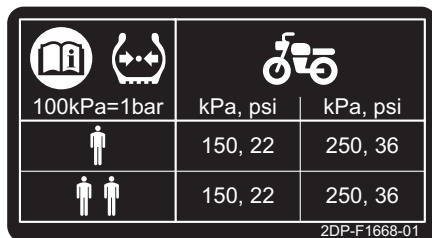
1

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.



# Location of important labels

1



2



3



## Be a Responsible Owner

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

Motorcycles are single-track vehicles. Their safe use and operation are dependent upon the use of proper riding techniques as well as the expertise of the operator. Every operator should know the following requirements before riding this motorcycle.

He or she should:

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

## Safe Riding

Perform the pre-operation checks each time you use the vehicle to make sure it is in safe operating condition. Failure to inspect or maintain the vehicle properly increases the possibility of an accident or equipment damage. See page 6-1 for a list of pre-operation checks.

- This motorcycle is designed to carry the operator and a passenger.

## TIP

Dispose of the removed battery in accordance with local regulations.

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

## Therefore:

- Wear a brightly colored jacket.

- Use extra caution when you are approaching and passing through intersections, since intersections are the most likely places for motorcycle accidents to occur.
- Ride where other motorists can see you. Avoid riding in another motorist's blind spot.
- Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current driver's license.
- Make sure that you are qualified and that you only lend your motorcycle to other qualified operators.
- Know your skills and limits. Staying within your limits may help you to avoid an accident.
- We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with the motorcycle and all of its controls.

- Many accidents have been caused by error of the motorcycle operator. A typical error made by the operator is veering wide on a turn due to excessive speed or undercornering (insufficient lean angle for the speed).
- Always obey the speed limit and never travel faster than warranted by road and traffic conditions.
- Always signal before turning or changing lanes. Make sure that other motorists can see you.
- The posture of the operator and passenger is important for proper control.
- The operator should keep both hands on the handlebar and both feet on the operator footrests during operation to maintain control of the motorcycle.
- The passenger should always hold onto the operator, the seat strap or grab bar, if equipped, with both hands and keep both feet on the passenger footrests.

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

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

### **Protective Apparel**

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

- Always wear an approved helmet.
- Wear a face shield or goggles. Wind in your unprotected eyes could contribute to an impairment of vision that could delay seeing a hazard.
- The use of a jacket, substantial shoes, trousers, gloves, etc., is effective in preventing or reducing abrasions or lacerations.
- Never wear loose-fitting clothes, otherwise they could catch on the control levers or wheels and cause injury or an accident.

- Always wear protective clothing that covers your legs, ankles, and feet. The engine or exhaust system become very hot during or after operation and can cause burns.
- A passenger should also observe the above precautions.

### **Avoid Carbon Monoxide Poisoning**

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

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

## Safety information

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

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

**Operation of an overloaded vehicle could cause an accident.**

**Maximum load:**  
166 kg (366 lb)

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

- Cargo and accessory weight should be kept as low and close to the motorcycle as possible. Securely pack your heaviest items as close to the center of the vehicle as possible and make sure to distribute the weight as evenly as possible on both sides of the motorcycle to minimize imbalance or instability.
- Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the motorcycle

before riding. Check accessory mounts and cargo restraints frequently.

- 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 available 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 motorcycle. Carefully inspect the accessory before using it to make sure that it does not in any way reduce ground clearance or cornering clearance, limit suspension travel, steering travel or control operation, or obscure lights or reflectors.
- Accessories fitted to the handlebar or the front fork area can create instability due to improper weight distribution or aerodynamic changes. If accessories are added to the handlebar or front fork area, they must be as lightweight as possible and should be kept to a minimum.
- Bulky or large accessories may seriously affect the stability of the motorcycle due to aerodynamic effects. Wind may attempt to lift the motorcycle, or the motorcycle may become unstable in cross winds. These

accessories may also cause instability when passing or being passed by large vehicles.

- Certain accessories can displace the operator from his or her normal riding position. This improper position limits the freedom of movement of the operator and may limit control ability, therefore, such accessories are not recommended.
- Use caution when adding electrical accessories. If electrical accessories exceed the capacity of the motorcycle's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

### **Aftermarket Tires and Rims**

The tires and rims that came with your motorcycle were designed to match the performance capabilities and to provide the best combination of handling, braking, and comfort. Other tires, rims, sizes, and combinations

## Safety information

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may not be appropriate. Refer to page 9-19 for tire specifications and more information on replacing your tires.

### Transporting the Motorcycle

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

- Remove all loose items from the motorcycle.
- Point the front wheel straight ahead on the trailer or in the truck bed, and choke it in a rail to prevent movement.
- Secure the motorcycle with tie-downs or suitable straps that are attached to solid parts of the motorcycle, 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 motorcycle will not bounce excessively during transport.

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### 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 scooter 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 scooter upright, otherwise it could slide out from under you.
- The brake pads or linings could get wet when you wash the scooter. After washing the scooter, 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 scooter. An overloaded scooter is unstable. Use a strong cord to secure any luggage to the carrier (if equipped). A loose load will affect the stability of the scooter and could divert your attention from the road. (See page 2-3.)

### Helmets

Operating this vehicle without an approved motorcycle helmet increases your chances of a severe head injury or death in the event of an accident. The majority of fatalities from motorcycle or scooter accidents are the result of head injuries. The use of a safety helmet is the single most critical factor in the prevention or reduction of head injuries.

#### Always select an approved motorcycle helmet

Pay attention to the following when choosing a motorcycle helmet.

- The helmet must meet the safety standard “TIS”.
- The helmet size must match the size of the rider’s head.
- Never subject a helmet to heavy shocks.

#### Wearing the helmet correctly

Always connect the chin strap. In the case of an accident, the helmet has a much less chance of coming off if the chin strap is connected.

EAAU0033

#### Correct usage



ZAAU0003

#### Wrong usage



ZAAU0007

#### Types of helmets and their usage

- Half-type: use only for riding at low speeds

## Safety information

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2



ZAUU0004



ZAUU0006

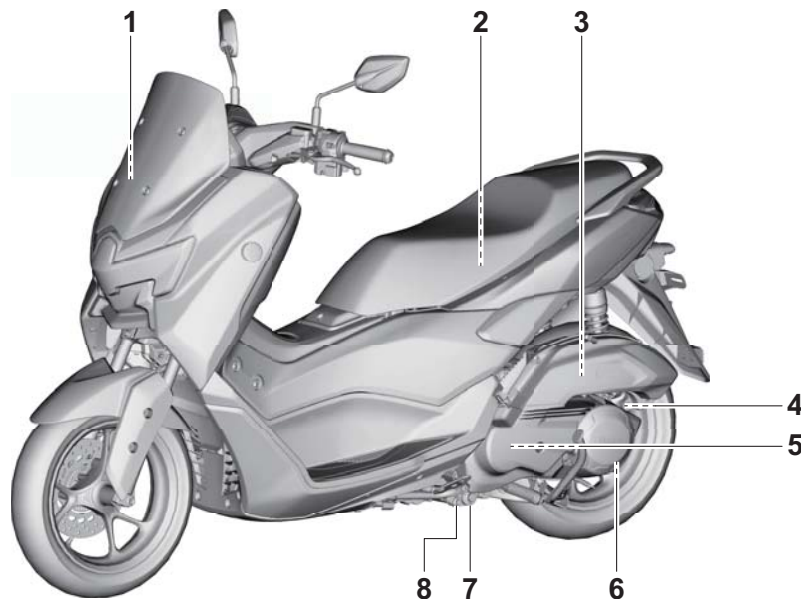
- Full-type: use only for riding at low to mid-range speeds



ZAUU0005

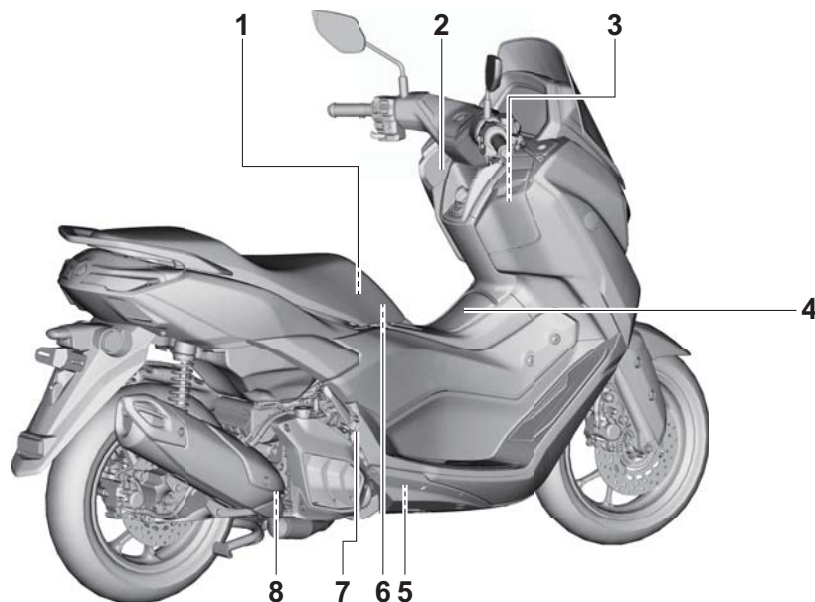
- Full-face-type: use for riding at mid-range to high speeds

## Left view



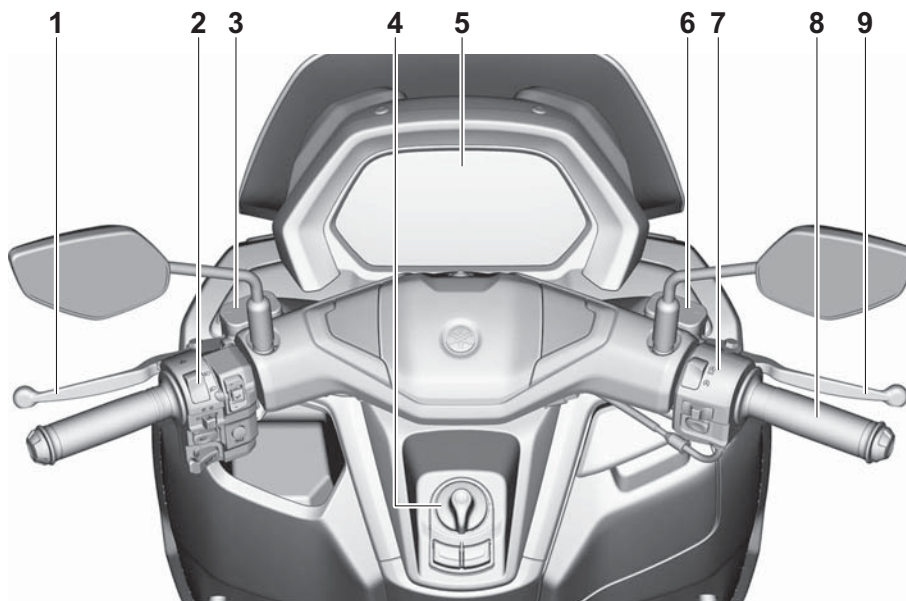
1. Fuse box (page 9-29)
2. Rear storage compartment (page 6-31)
3. Air filter element (page 9-16)
4. Final transmission oil filler cap (page 9-13)
5. V-belt case air filter element (page 9-16)
6. Final transmission oil drain bolt (page 9-13)
7. Engine oil drain bolt B (page 9-11)
8. Engine oil drain bolt A (page 9-11)

## Right view

**3**

1. Battery (page 9-27)
2. Storage compartment A (page 6-31)
3. Storage compartment B (page 6-31)
4. Fuel tank cap (page 6-27)
5. Coolant reservoir (page 9-14)
6. Tool kit (page 9-1)
7. Spark plug (page 9-9)
8. Engine oil dipstick (page 9-11)

## Controls and instruments



1. Rear brake lever (page 6-24)

2. Left handlebar switches (page 6-21)

3. Rear brake fluid reservoir (page 9-22)

4. Main switch (page 4-10)

5. Multi-function meter unit

6. Front brake fluid reservoir (page 9-22)

7. Right handlebar switches (page 6-21)

8. Throttle grip (page 9-18)

9. Front brake lever (page 6-23)

# Special features

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## YECVT (Yamaha Electronically Controlled Continuously Variable Transmission)

EAU2381

This vehicle is equipped with YECVT, an electronically controlled continuously variable transmission. Users can choose between two different driving modes based on their preferences and driving conditions. The YECVT can also be induced to quickly lower its ratio by a set amount hereafter referred to as a “step”, producing an effect that mimics downshifting gears in a geared vehicle. It can downshift by a maximum of 3 steps at a time. Users can initiate downshifts in two ways when stronger acceleration or engine braking is desired.

ECA15902

### NOTICE

**Carefully check and understand the operation contents of each switch before operating. (See page 6-23.)**

## Driving Mode

### S mode

Higher engine speeds and suitable for sporty riding.

### T mode

Lower engine speeds and suitable for normal riding.

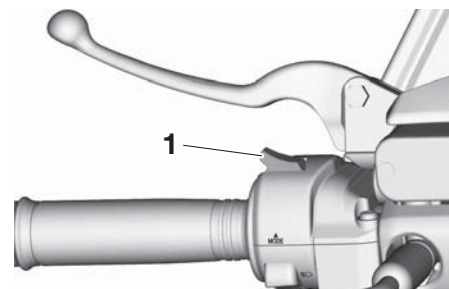
## Downshifts

A downshift can be initiated by: opening the throttle quickly or pressing the “SHIFT” switch on the handlebar.

## Switching driving modes

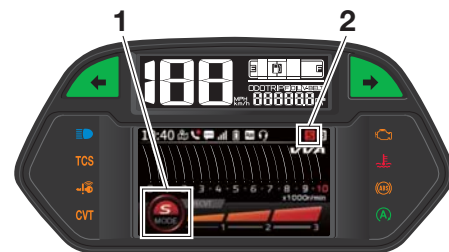
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The driving mode can be switched by operating the “MODE” switch. Each time you press the “MODE” switch, the driving mode switches between S mode and T mode.



1. “MODE” switch

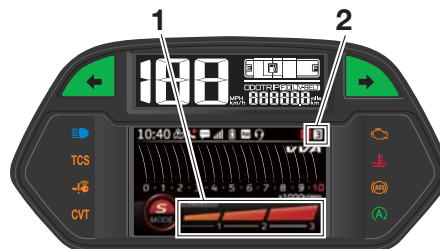
The current driving mode is indicated by the driving mode indicator icon. The Tachometer visualizer on the infotainment display also contains a driving mode display.



1. Driving mode display
2. Driving mode indicator icon

## TIP

- When the vehicle power is turned on, the previously selected riding mode is selected again.
- If you press the “MODE” switch while the transmission is already downshifted, the driving mode will not be switched but the downshifted state will be canceled.



1. Downshift status display
2. Downshift status indicator icon

## Downshifting

The transmission can downshift in both S mode and T mode. There are two different methods for downshifting; accelerator downshift and switch downshift.

The current downshift step level is indicated by the downshift status indicator icon. The Tachometer visualizer on the infotainment display also contains a downshift status display.

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### Accelerator downshift

Quickly open the throttle to downshift one step for stronger acceleration. This method is useful for starting off from a stop.

## TIP

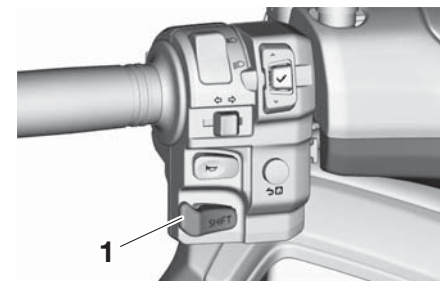
This method can only downshift one step. To downshift further, the switch downshift must be used.

### Switch downshift

Press the “SHIFT” switch to downshift 1 step, you can downshift to a maximum of 3 steps.

Use the switch downshift when you want to accelerate quickly, climb uphill or apply engine braking.

The “SHIFT” switch can be operated while either accelerating or decelerating.



1. “SHIFT” switch

## TIP

If the “SHIFT” switch is operated in the following situations, the YECVT will prevent the downshift from occurring and the downshift status indicator icon will flash.

- When a downshift will cause the engine to overrev.

## Special features

EAUJA3150

4

- When an accelerator downshift has not already been performed and the vehicle speed is 15 km/h (9.0 mi/h) or less.
- If the ECU cannot detect whether engine rpm is increasing or decreasing.

### How to downshift for stronger acceleration

While riding, quickly open the throttle or press the “SHIFT” switch once to downshift 1 step.

After downshifting the first step, you can press the “SHIFT” switch to downshift more for additional acceleration.

### TIP

Downshifted status while accelerating will be canceled if the following conditions occur:

- Throttle is closed completely
- “MODE” switch is pressed

### How to downshift for stronger deceleration

While riding with the throttle completely closed, press the “SHIFT” switch to decelerate by engine braking.

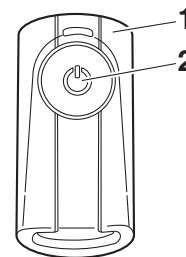
### TIP

Downshifted status while decelerating will be canceled if the following conditions occur:

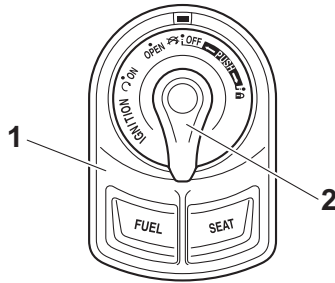
- Throttle is closed completely after being opened once
- “MODE” switch is pressed
- Vehicle speed decreases to 15 km/h (9.0 mi/h) or less

## Smart key system

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 4-7.)



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.)

- 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 9-36.)

### **TIP**

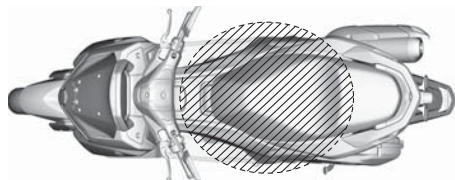
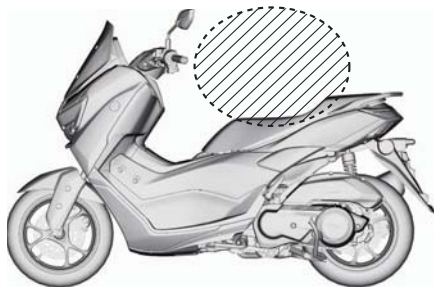
To preserve vehicle battery power, the smart key system turns off approximately 9 days after the vehicle was last used (the answer-back function is disabled). In this situation, simply push the main switch knob to turn the smart key system back on.

# Special features

## Operating range of the smart key system

EAUJA2140

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



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

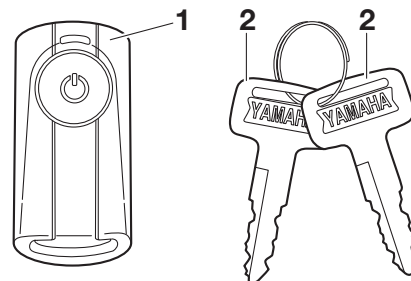
smart key system may not work or its operating range may become very short.

### TIP

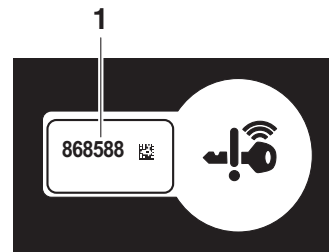
- Do not place the smart key in a storage compartment.
- Always carry the smart key with you.
- Turn the smart key off when leaving the vehicle.

## Handling of the smart key and mechanical keys

EAUJA2260



1. Smart key
2. Mechanical key



1. Identification number card

### **WARNING**

EWA17952

- 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.

If the vehicle battery is discharged, the mechanical key can be used to open the seat. **Carry one mechanical key in addition to the smart key.**

If the smart key is lost or the smart key battery has discharged, the identification number can be used to operate the vehicle in emergency mode. (See page 9-36.) **Write down the identification number in case of emergency.**

If the smart key is lost and the smart key system identification number is unknown, the entire smart key system will

need to be replaced at considerable cost. **Keep the identification number card in a safe place.**

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.

- 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 4-8.) After changing the smart key battery, if the smart key system

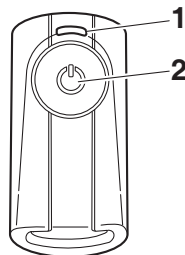
## Special features

4

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.

### Smart key



1. Smart key indicator light
2. Smart key button

### 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.**

EAUJA2150

EWA17952

### 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:

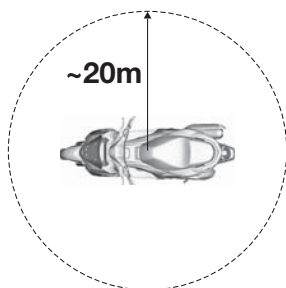
- Comes on quickly for 0.1 seconds: The smart key is turned on.
- Comes on slowly for 0.5 seconds: The smart key is turned off.

### 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. Within 9 seconds of pushing the knob, push and hold the knob again for 5 seconds.
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.

## Smart key battery



1. Smart key system indicator light " "

If the smart key system indicator light flashes for 20 seconds when the vehicle is first turned on, the smart key battery is low and should be replaced. Also, if the answer-back function does not work or its operating range is very short, replace the battery soon.

EWA14724

## WARNING

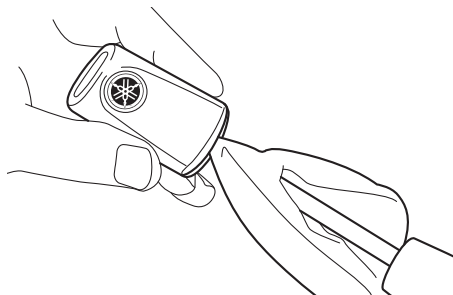
- The battery and other removable parts may cause injury if swallowed. Keep the battery and other removable parts away from children.

## Special features

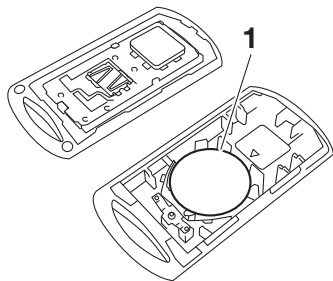
- Do not expose the battery to direct sunlight or other heat sources.

### To replace the smart key battery

1. Open the smart key case as shown.



2. Remove the battery.



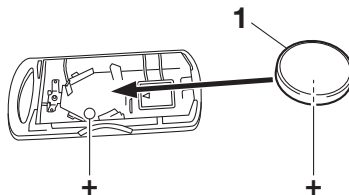
1. Battery

### TIP

Dispose of the removed battery in accordance with local regulations.

3. Note the polarity of the battery and install it with the positive “+” side facing downwards as shown.

**Specified battery:**  
CR2032



1. Battery

4. Gently snap the smart key case closed.

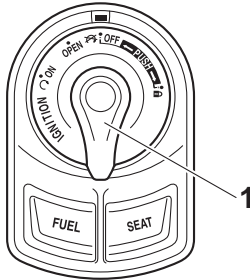
### NOTICE

- Use a cloth when opening the smart key case with a screwdriver. Direct contact with hard objects may damage or scratch the smart key.
- Take precautions to prevent the waterproof seal from being damaged or contaminated by dirt.
- Do not touch the internal circuits and terminals. This may cause malfunctions.
- Do not apply excessive force to the smart key when replacing the battery.
- Make sure the battery is installed correctly. Confirm the direction of the positive “+” side of the battery.

ECA15785

## Main switch

EAU2280



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/fuel tank lid. 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).

### **! 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.**

EWA18720

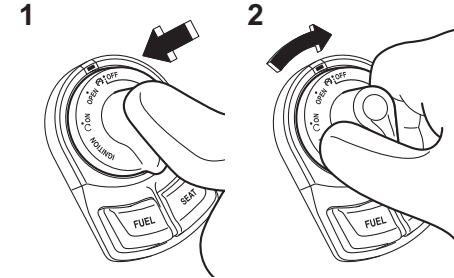
### **TIP**

Do not push the main switch knob repeatedly or turn the main switch back and forth beyond normal use. Otherwise, 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 before operating the main switch again.

The main switch positions are described below.

## ON

EAU2160



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.

# Special features

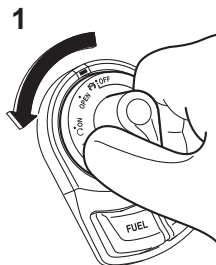
4

## TIP

- If the vehicle battery voltage is low, the turn signal lights will not flash.
- See “Emergency mode” on page 9-36 for information on turning the vehicle power on without the smart key.

## OFF

EAUA2170



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.

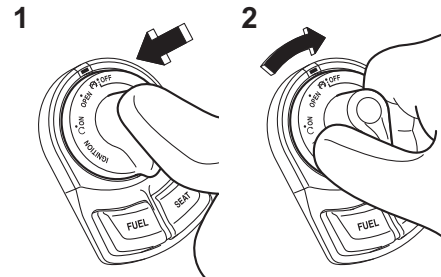
- During this 30 seconds, the main switch can be freely operated.
- After 30 seconds, the vehicle power will turn off automatically.
- To turn the vehicle power off immediately, push the main switch knob four times within 2 seconds.

EAUA2310

## OPEN

The fuel tank cap lid and the seat can be opened:

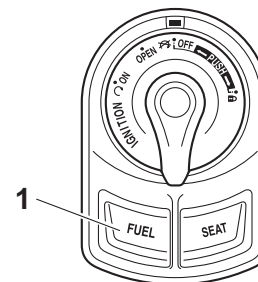
1. With the smart key on and within operating range, push the main switch knob.
2. While the smart key system indicator light is on, turn the main switch to “OPEN”.



1. Push.

2. Turn.

## To open the fuel tank cap lid



1. “FUEL” button

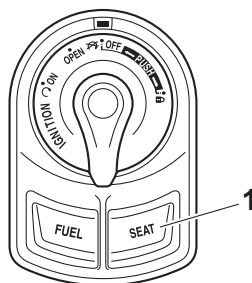


Push the “FUEL” button to open the fuel tank cap lid.  
After refueling, push the fuel tank cap lid until it is closed.

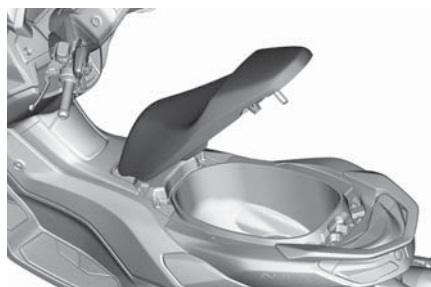
### TIP

See page 6-27 for fuel tank cap removal and installation procedures.

### To open the seat



1. “SEAT” button



Push the “SEAT” button, and then lift the rear of the seat.  
To close the seat, push down on the rear to lock it in position.

### TIP

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

- The seat can also be opened with the mechanical key. (See page 6-31.)

### 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.

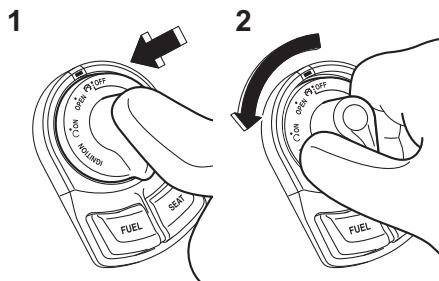
### TIP

- The beeper will turn off after 1 minute.

# Special features

## “i” (lock)

EAU2180



1. Push.
2. Turn.

The steering is locked and all electrical systems are off.

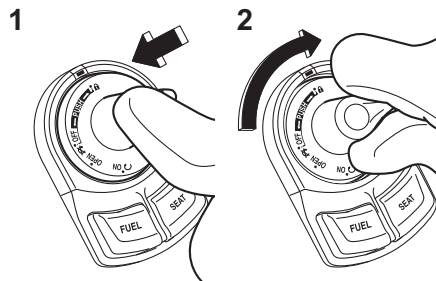
## To lock the steering

1. Turn the handlebar all the way to the left.
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 “i”.

## 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.
2. While the smart key system indicator light is on, push and turn the main switch to the desired position.

## Stop and Start System

EAU2240



1. Stop and Start System indicator light “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 dis-**

charged 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.

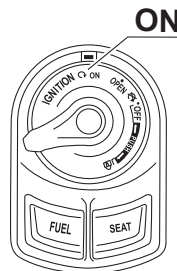
## Stop and Start System operation

EAUA2190

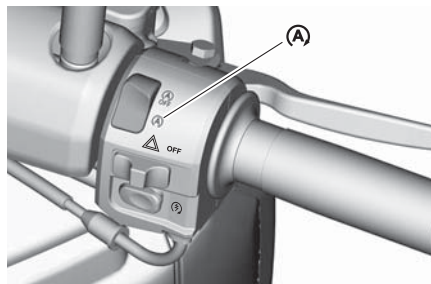
### Activating the Stop and Start System

EAUA2210

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

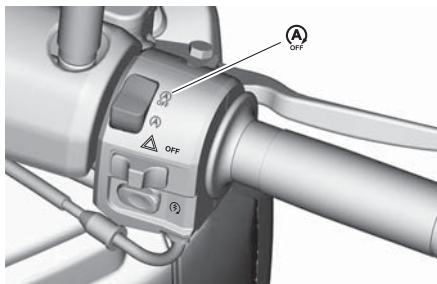


1. On

4. To turn off the Stop and Start System, set the Stop and Start System switch to "A".

## Special features

4



### 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.

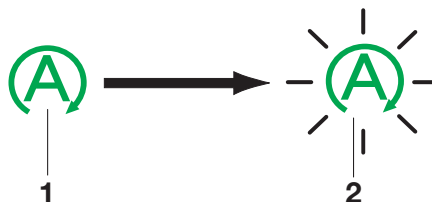
EAUA2250

### 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.

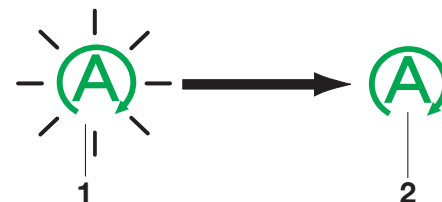


1. On
2. Flashing

EAUA2220

### 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.

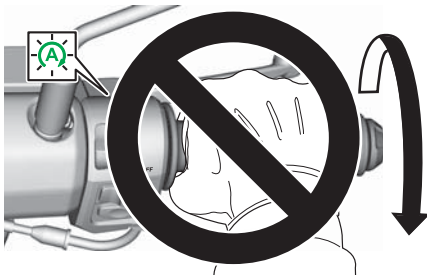


1. Flashing
2. Off

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.

EAUJ2230

## 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.

## Special features

4



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.



## Smart features: Introduction

EAUN4400

EWA21412

### **⚠ WARNING**

- **Failure to pay attention while riding could result in death or serious injury. Always concentrate on riding by keeping your eyes and mind on the road.**
- **Stop the vehicle before making any settings changes.**
- **Changing settings while riding can distract the operator and increase the risk of an accident.**
- **Never take your hands off the handlebars while riding.**
- **Keep volume levels low enough to maintain awareness of your surroundings and ensure safety.**

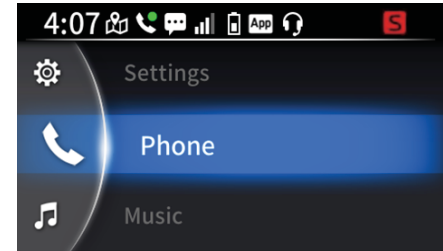
This vehicle is equipped with an extensive suite of smart features utilizing your smartphone, connected to the vehicle through a communication control unit (CCU) and the Yamaha Motorcycle Connect app on your phone.

- GPS navigation (requires Garmin StreetCross) (page 5-5)
- Telephone (page 5-7)

- Audio player (page 6-12)
- Smartphone notifications (page 6-15)
- Weather information (page 6-16)
- Clock automatic update (page 6-19)
- Language settings (page 5-2)

### **TIP**

- Some features may not be available depending on your smartphone. Some music and SNS applications may not function properly in combination with other applications.
- The CCU takes approximately 10 seconds to initiate its Bluetooth function after the vehicle power is turned on. Related functions will be grayed out in the menu system during this time.

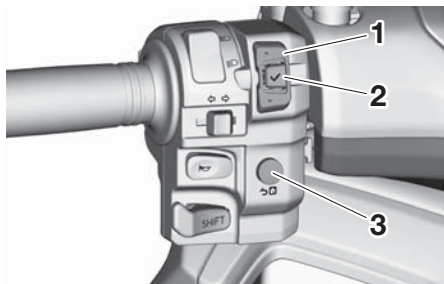


Smart features are accessed via the menu system on the infotainment display (page 6-11). The menu system and all related features are controlled using the “^”/“v”/“✓” switches and the “ ” button (page 6-22).

First, please read how to operate the basic menu controls in the next section, and then an initial setup and connection of a smartphone must be completed.

# Smartphone Connectivity System

## Menu system controls



1. “^”/“v” switches
2. “✓” switch
3. “home” button

This manual uses the following terms to describe the usage of the menu controls:

|             |                                         |
|-------------|-----------------------------------------|
| Short press | Briefly press the switch or button      |
| Long press  | Press the switch or button for 1 second |

### Menu system basic operations:

- Use the “^”/“v” switches to highlight and adjust menu items.
- Short press the “✓” switch to open the menu system from the home screen or execute a selection in the menu system.

- Short press the “home” button to cycle between the 3 home screens or return to the previous screen in the menu system.
- Long press the “home” button to exit the menu system and return to the home screen.

### TIP

When the navigation system is not connected, the navigation home screen cannot be cycled to using the “home” button.

## Yamaha Motorcycle Connect app



Yamaha Motorcycle Connect is a free app which is needed to complete the connection between the CCU and your

smartphone. The app can be searched by name and downloaded from your smartphone application store.

### TIP

- Use of Yamaha Motorcycle Connect is subject to your agreement to the Yamaha Motorcycle Connect terms of use.
- The Yamaha Motorcycle Connect app may not function on all smartphones or OS (operating system) versions.
- Navigation and other features require GPS access permissions to be set as “Always allow” on your smartphone.
- Every smartphone operates differently; refer to your individual device instructions regarding connectivity, Bluetooth discovery, app permissions, and other settings.

EAU99109

## Initial setup

This section describes the basic setup procedures to connect your smartphone to the CCU and start using smart features.

1. Download/install the Yamaha Motorcycle Connect app on your smartphone via an application store. Complete the installation and pair/connect it to the CCU via Bluetooth.



2. To use the navigation system, download/install the Garmin StreetCross app. Complete the installation and pair/connect it to the CCU via Bluetooth.



3. To use the audio/phone/navigation system route guidance, pair/connect a Bluetooth headset to your smartphone. (See page 5-6.).

Yamaha Motorcycle Connect pairing

ECAN0150

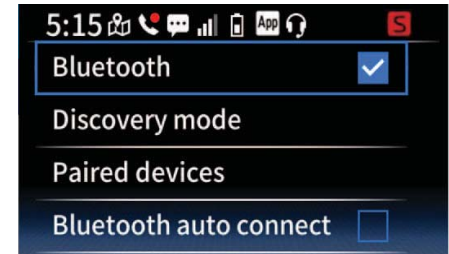
### NOTICE

The Bluetooth connection may not work in the following situations.

- In a location exposed to strong radio waves or other electromagnetic noise.

- At facilities nearby that are emitting strong radio waves (TV or radio towers, power plants, broadcasting stations, airports, etc.).

1. Download and install the Yamaha Motorcycle Connect app on your smartphone.
2. Short press the “✓” switch to open the menu system. Navigate to: “Settings” → “Connection” → “Bluetooth”.



3. Make sure there is a blue checkmark next to “Bluetooth” and select “Discovery mode”.

# Smartphone Connectivity System

5

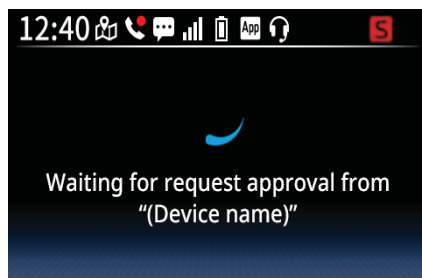


4. Open the Yamaha Motorcycle Connect app and navigate to the "Pairing" screen. Follow the instructions on the app to detect the CCU and pair/connect with it.

## TIP

After making the CCU discoverable, a pairing must be completed within 3 minutes or the process will fail. If a failure occurs, select "Discovery mode" again to retry.

5. A request for Bluetooth pairing will appear with a passkey matching the one displayed on the smartphone. Use the "▲"/"▼" switches to highlight "Yes" and then short press the "✓" switch.



6. Accept the pairing request on your smartphone.

## TIP

- After the passkey appears, the pairing must be confirmed within 30 seconds or it will time out. If a failure occurs, select "Discovery mode" again to retry.
- When connected, the Yamaha Motorcycle Connect indicator icon "App" will appear on the top of the infotainment display and also next to the connected smartphone device name in the "Paired devices" list. (See page 6-17.)

## TIP

- A request will appear on your smartphone to share contact information with the vehicle. If you decline to upload the data to the CCU and/or allow access to notifications, you can do so later in your smartphone's settings.
- If a Bluetooth pairing record is deleted from the smartphone, then the corresponding pairing record must be deleted from the "Paired devices" list in order to pair again successfully.
- If a Bluetooth pairing record is deleted from the "Paired devices" list, then the corresponding pairing record must be deleted from the smartphone in order to pair again successfully.
- The first time the vehicle is paired with the Yamaha Motorcycle Connect app, the menu system language will change to match the language selected in the app. When first installed, the app adopts the system language of the

smartphone. If the language is not supported by the CCU, then English will be automatically selected.

- Once paired, the Yamaha Motorcycle Connect app will open automatically when a Bluetooth connection is established and will connect to the CCU automatically (This functionality varies by smartphone and/or OS versions. Refer to the Yamaha Motorcycle Connect app for more details).

## Navigation system: Garmin StreetCross

EWA21401

### **WARNING**

- **Always stop the vehicle before operating the navigation system.**
- **Always concentrate on riding by keeping your eyes and mind on the road.**



This vehicle is equipped with a navigation system which provides visual and audio route guidance. To use the navigation system, you must first download the Garmin StreetCross app from an application store on a smartphone and then register for its service. See page 6-7 for more information about operating the navigation system.

### TIP

- Use of the Garmin StreetCross app is subject to your agreement to the Garmin StreetCross terms of use.
- Yamaha shall not be liable for any damages resulting from the use of the Garmin StreetCross app.

- The smartphone must remain unlocked and the Garmin StreetCross app must be kept in the foreground in order to ensure the smartphone does not sleep (lock). If another app's function moves the Garmin StreetCross app to the background (phone call, alarm, etc.) the smartphone may sleep (lock) and the navigation may stop.
- The Garmin StreetCross app's GPS access permissions must be set to "Always allow" on your smartphone's settings.
- The Garmin StreetCross app may not work on all smartphones or OS (operating system) versions.
- While route guidance is active, the weather information at the destination will be displayed. If the destination is more than 1 hour away, the weather information will be from a location 1 hour away on route to the destination.

# Smartphone Connectivity System

## Garmin StreetCross pairing

ECAN0150

### NOTICE

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.).

1. Download and install the Garmin StreetCross app on your smartphone.
2. Make sure the Yamaha Motorcycle Connect is connected to the CCU.
3. Open the Garmin StreetCross app and tap “” to open the connection menu and follow the instructions in the app to pair/connect to the CCU.



### TIP

When connected, the navigation connection indicator icon “” will appear on the top of the infotainment display and the “” icon will appear next to the connected smartphone device name in the “Paired devices” list. (See page 6-17.)

### Bluetooth Headset Pairing

Follow your headsets manufacturer instructions to pair/connect to your smartphone. When the headset connection is detected by the Yamaha Motorcycle Connect app, the Headset indicator icon “” will appear on the top of the infotainment display.

### TIP

When the using headset voice function, the Bluetooth connection between the smartphone and the CCU may become unstable. See the Yamaha Motorcycle Connect app for more details.

## Telephone

EAU99124

This vehicle is equipped with a telephone function that requires both a smartphone and a Bluetooth headset. The smartphone must be paired and connected to both the CCU and a Bluetooth headset (page 5-3).

### Receiving phone calls:



When a phone call is received to the connected smartphone, the ringtone will play through the connected headset and the incoming call screen will replace the current screen on the display. Short press the “^” switch to answer the call and the display will change to the active call screen. Short press the “v” switch to reject the call.

The active phone call indicator icon “☎” will appear for the duration of the call.



Use the “^” switch to increase the call volume and the “v” switch to decrease the call volume. Short press the “✓” switch to end the call.

### TIP

- For some smartphone models, the call volume cannot be adjusted using the handlebar switches. In this case, the volume adjustment will be grayed out on the active call screen.
- When a phone call is active and a second incoming call is accepted, the first call will be put on-hold until the second call is ended.

- For some smartphones, when a call is active and a second incoming call is rejected, the displayed caller ID might change to the second caller ID.
- For some smartphones, rejecting a call with the “✓” switch will not function correctly. The end call icon may be grayed out or using the end call icon will accept the call instead. In this case, operate the smartphone directly to end the call.

### Making phone calls:

To make a phone call, you must start the phone call directly on your smartphone. Once active, the active call screen will be accessible under “☎ Phone” in the menu system (page 6-12) and the active call indicator will appear at the top of the infotainment display (page 6-10). The call audio will play through the connected Bluetooth headset.

EWA21420

### ! WARNING

- **Do not use your smartphone while the vehicle is in motion.**

# Smartphone Connectivity System

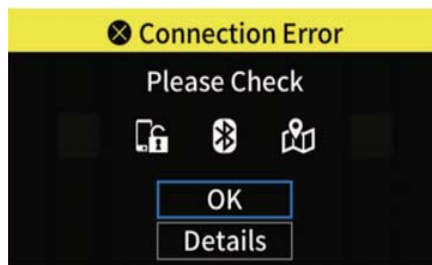
5

- **Never take your hands off the handlebars while riding.**
- **Always concentrate on riding by keeping your eyes and mind on the road.**
- **Keep volume levels low enough to maintain awareness of your surroundings and ensure safety.**

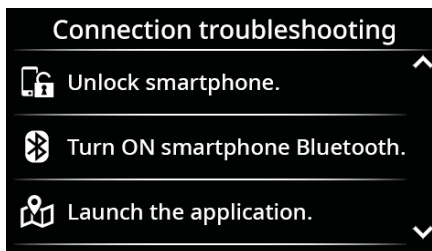
## Connection troubleshooting

EAU99213

If a connection error occurs between the smartphone, Yamaha Motorcycle Connect app, Garmin StreetCross app and/or CCU, the following screen is displayed.



Select “Details” and check the connection as instructed on the screen.

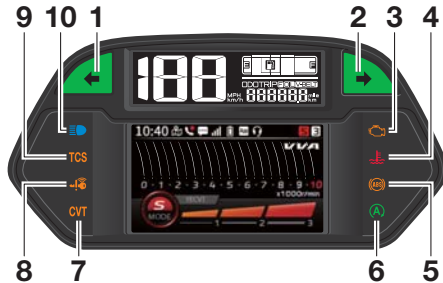


If the error persists, try the following:

1. Turn OFF the vehicle power. After 20 seconds, turn ON the vehicle power again.
2. Turn OFF the smartphone's Bluetooth. Then turn it ON again.
3. Delete Bluetooth pairing information from both smartphone and vehicle.
4. Reboot the Yamaha Motorcycle Connect app and Garmin StreetCross app.

## Indicator lights and warning lights

EAU77129



1. Left turn signal indicator light “”
2. Right turn signal indicator light “”
3. Engine trouble warning light “”
4. Coolant temperature warning light “”
5. ABS warning light “”
6. Stop and Start System indicator light “”
7. YECVT warning light “”
8. Smart key system indicator light “”
9. Traction control system indicator light “”
10. High beam indicator light “”

### Turn signal indicator lights “” and “”

EAU88900

Each indicator light will flash when its corresponding turn signal lights are flashing.

### High beam indicator light “”

EAU88900

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

### Coolant temperature warning light “”

EAU88880

This warning light comes on when the engine is overheating. If this occurs, stop the engine immediately and allow the engine to cool. (See page 9-35.)

For vehicles with a radiator fan, the radiator fan(s) automatically switch on or off according to the coolant temperature.

### TIP

When the vehicle is turned on, the light will come on for a few seconds, and then go off. If the light does not come on, or if the light remains on, have a Yamaha dealer check the vehicle.

### NOTICE

ECA10022

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

### Engine trouble warning light “”

EAU89430

This warning light comes on 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.

### 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 vehicle.

# Instrument and control functions

## 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.

EAU88931

## Traction control system indicator light “”

This indicator light will flash when traction control has engaged.

If the traction control system is turned off, this indicator light will come on. (See page 6-25.)

## TIP

When the vehicle is turned on, the light should come on for a few seconds and then go off. If the light does not come on, or if the light remains on, have a Yamaha dealer check the vehicle.

EAU2390

## YECVT warning light “”

The YECVT warning light comes on under the following conditions:

- If a malfunction occurs with the YECVT system
- If the battery voltage drops below 10V
- If a malfunction occurs in the FI system
- If the engine stops due to a communication error between the smart key and the vehicle
- When the engine stops due to lowering the sidestand while the engine is running



1. YECVT warning light “”

## TIP

- When the vehicle power is turned ON, the YECVT warning light comes on for a few seconds and then goes off. If the light does not turn on or remains on, have a Yamaha dealer check the vehicle.
- If the vehicle power is turned off while riding, or if the engine stops due to any malfunction while riding, the YECVT warning light will come on or flash.

## NOTICE

ECA28570

If the YECVT warning light comes on, stop the vehicle immediately in a safe place and have a Yamaha dealer check the vehicle.

## 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 “”

EAUN2831

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 4-14.)

## Dual Displays

EAU99271



1. Main display
2. Infotainment display

## WARNING

EWA21412

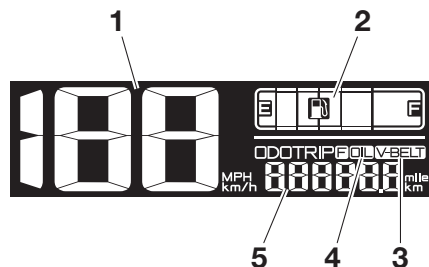
- Failure to pay attention while riding could result in death or serious injury. Always concentrate on riding by keeping your eyes and mind on the road.
- Stop the vehicle before making any settings changes.
- Changing settings while riding can distract the operator and increase the risk of an accident.
- Never take your hands off the handlebars while riding.

# Instrument and control functions

- **Keep volume levels low enough to maintain awareness of your surroundings and ensure safety.**

This vehicle is equipped with a multi-function-meter unit containing 2 separate display screens. The Main display contains basic information essential to operating the vehicle. The Infotainment display contains periphery vehicle information, a menu system and smart features.

## Main display



1. Speedometer
2. Fuel meter
3. V-Belt replacement indicator "V-BELT"
4. Oil change indicator "OIL"
5. Odometer/tripmeters

## TIP

The display units can be changed in the menu system on the infotainment display. (See page 6-20.)

## Speedometer

The speedometer shows the vehicle's traveling speed.

## 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 the fuel decreases to the reserve level, then the last segment of the fuel meter will start flashing, refuel as soon as possible.

ECAE0121

## NOTICE

**Do not let the vehicle run completely out of fuel. This may cause damage to the catalytic converter.**

## Oil change indicator "OIL"

This indicator will flash at the initial 1000 km (600 mi), then 3000 km (1800 mi) and then every 4000 km (2500 mi) thereafter. When it appears, change the engine oil. (See page 6-18.)

## V-Belt replacement indicator "V-BELT"

This indicator will flash every 25000 km (15500 mi). When it appears have a Yamaha dealer replace the V-Belt.

## TIP

To turn off the oil change and V-belt replacement indicators after maintenance has been performed, use the “Maintenance reset” function in the infotainment display menu system. (See page 6-18.)

## Odometer/Tripmeters

This section of the display contains an odometer (ODO), a tripmeter (TRIP), and a fuel reserve tripmeter (TRIP F). The items are displayed one at a time. The item which is displayed can be selected using the “ODO/TRIP” function of the infotainment display menu system. (See page 6-13.)

## TIP

The tripmeters can be reset using the “Settings” → “Information / Reset” → “Trip mileage reset” function of the infotainment display menu system. (See page 6-18.)

## Odometer (ODO)

The odometer shows the total distance traveled by the vehicle.

## TIP

ODO will lock at 999999 and cannot be reset.

## Tripmeter (TRIP)

TRIP shows the distance traveled since it was last set to zero.

TRIP will reset to 0 and begin counting again after 9999.9 has been reached.

## Fuel reserve tripmeter (TRIP F)

When the fuel is above the reserve level, TRIP F will show as “\_ \_.”. When the fuel tank reserve level has been reached, TRIP F will begin recording the distance traveled from that point. After refueling and traveling some distance, TRIP F will automatically reset.

## Infotainment display

The infotainment display provides the rider with easy access to smart features, vehicle information, and settings. It is controlled with the “^”/“v”/“✓” switches and “→” button. (See page 5-2.)

When the main switch is turned on, a warning will appear on the infotainment display. After reading it, short press the “✓” switch to accept. The display will then transition your last selected home screen.

## TIP

- This display is a thin-film-transistor liquid-crystal display (TFT LCD), designed for good contrast and readability in various lighting conditions. However, due to the nature of this technology, it is normal for a small number of pixels to be inactive.
- The brightness level of the infotainment display can be adjusted in the menu system. (See page 6-20.)

# Instrument and control functions

- If the display becomes too hot, the screen brightness levels will automatically reduce to avoid damage to the components.
- The display units can be switched between kilometers-miles and Celsius-Fahrenheit. (See page 6-20.)
- The display units for the navigation system are locked to match the region settings on the connected smartphone.

## ⚠ WARNING

Failure to pay attention while riding could result in death or serious injury. Always concentrate on riding by keeping your eyes and mind on the road. Read the Owner's Manual.

ACCEPT

## Home screens

There are 3 home screens for the infotainment display:

- visualizer home screen
- navigation home screen
- vehicle information home screen

Short press the “” button to cycle between the home screens.

While a home screen is displayed, short press the “” switch to open the menu system

## Visualizer home screen

There are three types of visualizer home screen: “Tachometer/ECVT”, “ECO”, and “Speed”. To select which visualizer is displayed, short press the “” switch to open the menu system and navigate to “ Meter display”. (See page 6-13.)

## TIP

While on the visualizer home screen, long pressing the “” switch shortcuts to “ Meter display” in the menu system.

## “Tachometer/ECVT”



This screen contains a tachometer visualizer, driving mode display, and downshift status display.

## Tachometer visualizer

The tachometer visualizer shows the engine speed, as measured by the rotational velocity of the crankshaft, in revolutions per minute (r/min).

## TIP

The tachometer visualizer is for reference only. The resolution of the tachometer visualizer is not as detailed as a traditional tachometer.

# Instrument and control functions

## Driving mode display

Indicates the currently selected driving mode (“S MODE” or “T MODE”).

## Downshift status display

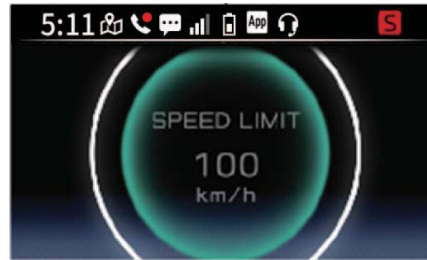
Indicates the current downshift status. Depending on the number of downshifted steps, the number of bars increases.

## “ECO”



A live visual representation of the instant and average fuel consumption of the vehicle

## “Speed”



The speed limit on the road currently being traveled on is indicated with text and by the outer circle. The inner circle expands/contracts to indicate the current vehicle speed. When the speed limit is reached/exceeded, the outer circle will change color to orange.

## TIP

The speed limit is obtained via the navigation system. If the Garmin Street-Cross app is not connected or if the speed limit for the current road is otherwise unavailable, then the speed limit and outer circle will not be shown.

## Navigation home screen



There are 3 display modes for route guidance: “Default view”, “Turn-by-turn”, and “Turn list”.

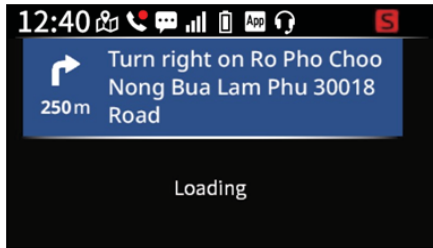
## “Default view”



In “Default view” mode: the “^”/“v” switches zoom in/out.

# Instrument and control functions

## “Turn list”



6

In “Turn list” mode: the “^”/“v” switches scroll up/down the list of turns on the route.

## “Turn-by-turn”



Short press the “v” switch to open the menu system and navigate to “Navigation” → “Change view” to switch

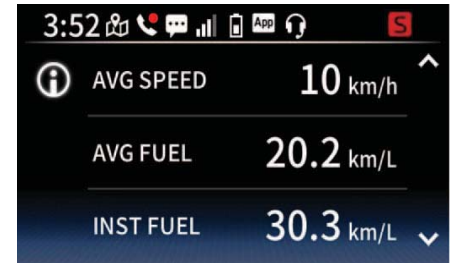
between the display modes. (See page 6-13.)

## TIP

- While on the navigation home screen, long pressing the “v” switch shortcuts to “Navigation” in the menu system.
- If the Bluetooth connection becomes unstable, the navigation screen may automatically change to the “Turn-by-turn” mode or freeze with a loading animation. When the connection improves, the navigation screen will return to the former setting.
- For some smartphones, using the phone function while navigation is in progress may display a connection error after returning to the navigation screen. If this happens, follow the instructions on the display. (See page 5-8.)
- If the connected smartphone’s AI assistant function is deactivated in the smartphones’s settings, and a headset is also connected, a con-

nection error may be displayed when using the navigation home screen (iOS only).

## Vehicle information home screen



The vehicle information display provides the following information:

- Average speed (AVG SPEED)
- Average fuel consumption (AVG FUEL)
- Instantaneous fuel consumption (INST FUEL)
- Trip timer (TRIP TIME)
- Coolant temperature (COOLANT)
- Battery voltage (BATTERY)

Use the “^”/“v” switches to scroll up/down the list of items.

Short press the “✓” switch to open the menu system and navigate to “⚙ Settings” → “Information / Reset” → “Vehicle info.” to reset individual items. (See page 6-18.)

**TIP**  
While on the vehicle information home screen, long pressing the “✓” switch shortcuts to “⚙ Settings” → “Information / Reset” → “Vehicle info.” in the menu system.

## Average speed (AVG SPEED)

Displays the average traveling speed since last reset.

## Average fuel consumption (AVG FUEL)

When using kilometers, the average fuel consumption display can be set to “km/L” or “L/100km” (page 6-20). When using miles, the average fuel consumption is displayed in “MPG”.

## Instantaneous fuel consumption (INST FUEL)

When using kilometers, the instantaneous fuel consumption display can be set to “km/L” or “L/100km” (page

6-20). When using miles, the instantaneous fuel consumption is displayed in “MPG”.

**TIP**  
The instantaneous fuel consumption function should be used for general reference only. Do not use this figure to estimate the distance that can be traveled on the current tank of fuel.

## Trip timer (TRIP TIME)

Displays the running time (Main switch ON) since the timer was manually reset.

## Coolant temperature (COOLANT)

The coolant temperature is displayed from -30 °C (-22 °F) to 125 °C (257 °F) in 1 °C (1 °F) increments.

**TIP**

- If the vehicle coolant temperature is below -30 °C (-22 °F) the coolant temperature display will read “-30”.
- If the vehicle coolant temperature exceeds 125 °C (257 °F) the coolant temperature display will continue flashing to read “Hi”.

- The coolant temperature warning light will come on if the coolant temperature exceeds 125 °C (257 °F).

## Battery voltage (BATTERY)

Shows the current voltage of the battery.

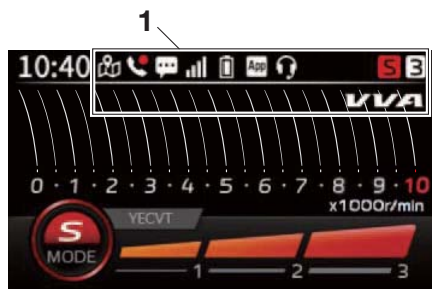
**TIP**  
If the battery voltage is more than 16.0V or less than 9.0V, “--.-” is displayed.

## **Clock**

The clock uses a 12-hour time system. The clock can be updated automatically from connected smartphones. The clock can also be set manually; short press the “✓” switch to open the menu system and navigate to “⚙ Settings” → “Clock” → “Manual Adjustment”. (See page 6-19.)

# Instrument and control functions

## Indicator icons



1. Indicator icons

### Navigation connection indicator icon “”

This icon comes on when the Garmin StreetCross app is connected.

### Telephone indicator icon “”/“”

This icon comes on green when there is an active call and red when there is a recent missed call. The missed call icon will disappear when the missed call is confirmed by navigating to “ Navigation” in the menu system.

### Notification indicator icon “”

This icon comes on when the connected smartphone receives an SNS, E-mail or other notification. After that, the icon stays on until you turn the vehicle off or check the notifications by navigating to “ Notification” in the menu system.

## TIP

- This function works only when the smartphone is connected to the vehicle via the Yamaha Motorcycle Connect app.
- Permission to access notifications must be granted to the Yamaha Motorcycle Connect app on the smartphone.

### Network connectivity indicator icon “”

This icon indicates connected smartphone's network connection status. Icon off: No smartphone connected.

: A smartphone is connected but has no network connectivity.

: A smartphone is connected and has network connectivity. The icon's segments indicate the signal strength.

## TIP

This icon may not operate with some models of smartphone, even if the connected smartphone has network connectivity.

### Smartphone battery level indicator icon “”

This icon indicates the connected smartphone's battery level.

Icon off: No smartphone connected.

: The center bar moves up and down to indicate the battery level.

: Smartphone connected and charging via USB.

## TIP

The battery level indicated by the icon may not always be consistent with the battery level displayed on the smartphone.

### Yamaha Motorcycle Connect indicator icon “”

This icon comes on when the Yamaha Motorcycle Connect app is successfully connected to the CCU.

**App:** The icon turns yellow if the connected smartphone becomes overheated.

**TIP** \_\_\_\_\_  
If there is a communication error between the multi-function meter and the CCU, this icon will flash yellow.

**Headset indicator icon “

This icon comes on if a Bluetooth headset is connected to the smartphone.**

**TIP** \_\_\_\_\_  
For some smartphones, this icon may go off during phone calls.

**Driving mode indicator icon “

Indicates the currently selected driving mode (“S MODE” or “T MODE”).**

**Downshift status indicator icon “

Indicates the current downshift status. Depending on the number of downshifted steps, the number increases.**

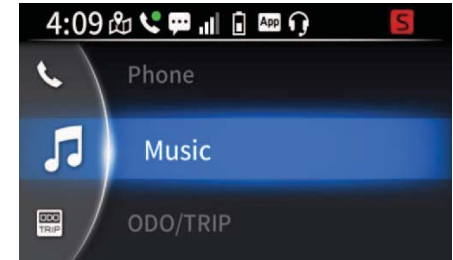
**TIP** \_\_\_\_\_  
When the YECVT prevents a downshift from occurring, the current step number will flash. If the YECVT is not in a downshifted state and the downshift to step 1 is prevented, “

**VVA (Variable valve actuation) icon “

This icon comes on when the VVA system has switched to the high-speed range while the tachometer visualizer is displayed.**

The VVA is efficient for good fuel economy and acceleration in both the low-speed and high-speed ranges.

## Menu system



The menu system for this vehicle is controlled with the “

### Menu system basic operations:

- Short press the “
6

# Instrument and control functions

6

- Long press the “☎” button to exit the menu system and return to the home screen.

The menu system is divided into the following main functions:

|                                                                                                         |                                                                                             |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
|  Phone (if call active) | Telephone function for an active call. (See page 6-12.)                                     |
|  Music                  | Opens audio player connected to smartphone. (See page 6-12.)                                |
|  ODO/TRIP               | Selection and reset for information display items on the main display. (See page 6-13.)     |
|  Meter display          | Selection of home screen visualizer type. (See page 6-13.)                                  |
|  Navigation             | Menu for the navigation system. (See page 6-13.)                                            |
|  Notification           | A list of received notifications and missed calls to connected smartphone. (See page 6-15.) |
|  Weather                | Displays local weather reports. (See page 6-16.)                                            |
|  Settings               | Adjust settings related to the vehicle's operation. (See page 6-16.)                        |

## ☎ Phone



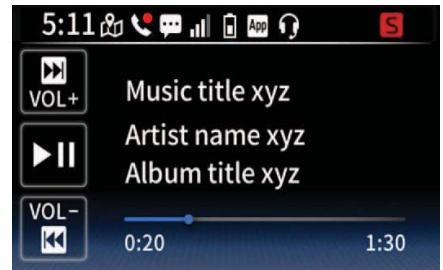
Selecting this module opens an active call screen. The contact name and call time are displayed.

Adjust the call volume with the “^”/“v” switches.

Short press the “✓” switch to end the call.

**TIP** \_\_\_\_\_  
Call volume control and/or ending call with the “✓” switch is not available for all makes and models of smartphones. If this function is unavailable, the volume adjustment and end call graphics on the left side of the screen will be grayed out. If this occurs, the call can be controlled directly on your smartphone.

## 🎵 Music



This opens an audio player which interfaces with your smartphone's audio player app.

Short press the “^”/“v” switches to adjust the volume.

Long press the “^”/“v” switches to skip to the next/previous track.

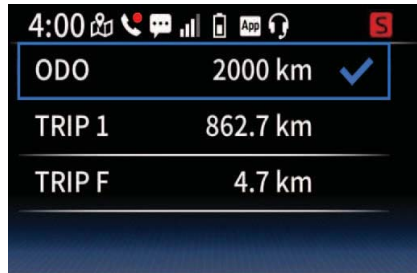
Short press the “✓” switch to play/pause the track.

**TIP** \_\_\_\_\_  
● All audio track information is imported from the music player application on your smartphone.  
● Depending on the smartphone and music player application, the audio player may start playing automatically, the track information

# Instrument and control functions

may not display, or the next/previous track and volume adjustment may not function.

## “ODO/TRIP”



This module controls which item is displayed on the odometer/tripmeters section of the main display. (See page 6-5.)

Short press the “✓” switch to select a highlighted item, it will be displayed on the odometer/tripmeter section of the main display and the menu will return to the previous screen.

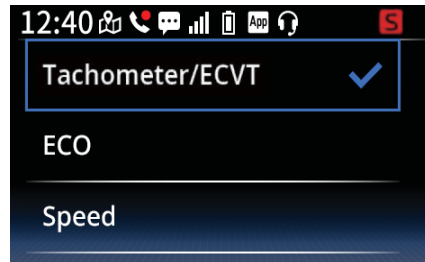
Long press the “✓” switch to reset the highlighted item.

## TIP

- The odometer cannot be reset.

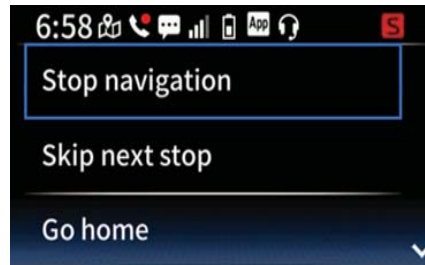
- With “ODO/TRIP” highlighted in the top menu, long press the “✓” switch to reset all tripmeters at once.

## “Meter display”



This module allows selection of which visualizer is displayed on the visualizer home screen. (See page 6-6.)

## “Navigation”



This module contains a list of commands for the navigation system: (See page 6-7.)

- “Stop navigation”
- “Skip next stop”
- “Go home”
- “Go to work”
- “Favorites”
- “Nearby Gas stations”
- “Change view”

## TIP

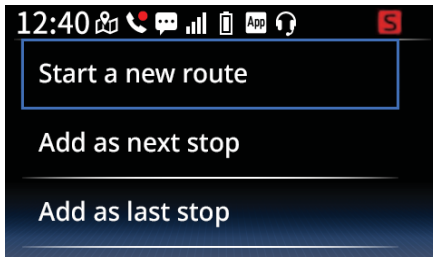
Except for the commands listed above, operate the navigation system using the Garmin StreetCross app on your smartphone.



When a command is used to select a destination, the navigation home screen will open and display the new/updated route.

# Instrument and control functions

6



If route guidance is already active when a command is used to select a destination, the following options will be available:

- “Start a new route”: Cancels previous route and sets route to new destination
- “Add as next stop”: Adds new destination as the next stop in the current route.
- “Add as last stop” Adds new destination as the last stop in the current route.



If a route requires a toll, you will be prompted to search for another route without tolls. Select “Yes” to find a route without tolls. Select “No” to accept the current route.

## TIP

After 10 seconds, the route (with tolls) will be selected automatically.

## “Navigation” → “Stop navigation”

Cancels the current route guidance and opens the navigation home screen.

## “Navigation” → “Skip next stop”

Skips the next stop in your planned route and opens the navigation home screen.

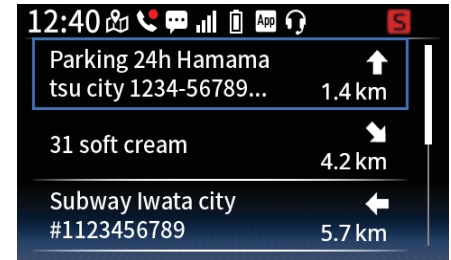
## “Navigation” → “Go home”

Sets route guidance for home location (home location must already be set in the Garmin StreetCross app).

## “Navigation” → “Go to work”

Sets route guidance for work location (work location must already be set in the Garmin StreetCross app).

## “Navigation” → “Favorites”



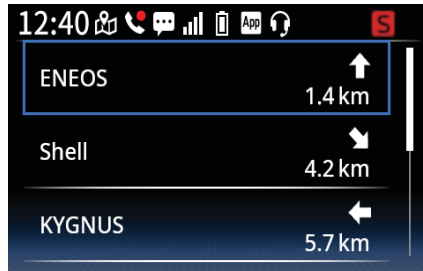
Shows a list of saved locations and their distance from current location (must have saved locations in the Garmin StreetCross).

## TIP

If route guidance is in progress, arrows appear showing the direction to the saved locations. The current direction of travel is indicated by the upwards arrow.

# Instrument and control functions

“Navigation” → “Nearby Gas stations”

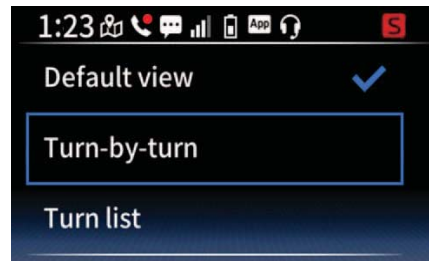


Shows a list of nearby gas stations and their distance from current location.

## TIP

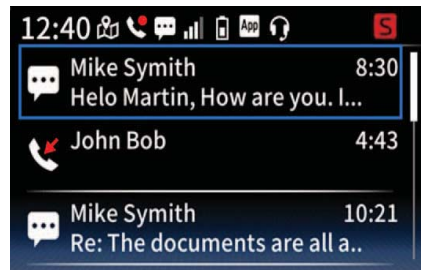
If route guidance is in progress, arrows appear showing direction to the gas stations. The current direction of travel is indicated by the upwards arrow.

“Navigation” → “Change view”



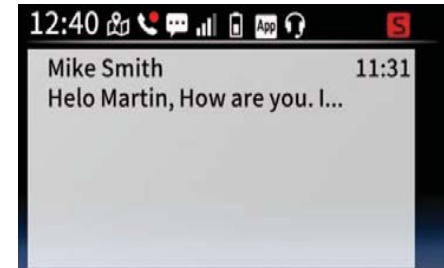
This module changes the navigation system display mode (Default view/Turn list/Turn-by-turn). After selection, the navigation home screen will open in the selected display mode.

“Notification”



This is a list of notifications (since connection to CCU) and missed calls from the connected smartphone. Select an

item to read the notification message on the infotainment display. When all notifications and missed calls have been viewed, the missed call indicator icon “☎” and message indicator icon will disappear.



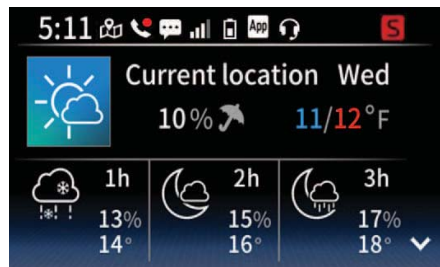
## TIP

- For some smartphones and/or applications, notifications may not function.
- The maximum number of stored items is 30. When the limit is reached, older items will be deleted.
- If a message is too long then not all of it will be displayed.
- Messages cannot be opened and read while the vehicle is in motion.

# Instrument and control functions

- Notification timestamps may be slightly different than when displayed on your smartphone.

## ☁ Weather



This module displays weather information at your current location. Short press the “^”/“v” switches to change the timeframe of the weather information (hourly/daily).

### TIP

The weather information in this module may be different than on the navigation home screen.

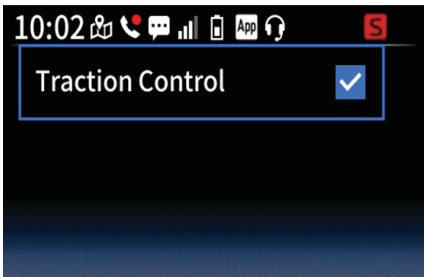
## ⚙ Settings



The Settings menu contains the following:

|                       |                                                                    |
|-----------------------|--------------------------------------------------------------------|
| “Traction Control”    | Activate/Deactivate traction control. (See page 6-16.)             |
| “Connection”          | Manage Bluetooth connections. (See page 6-17.)                     |
| “Information / Reset” | Reset vehicle information. (See page 6-18.)                        |
| “Clock”               | Adjust time/set automatic update. (See page 6-19.)                 |
| “Brightness”          | Change brightness of infotainment display screen. (See page 6-20.) |
| “Unit”                | Change the display units. (See page 6-20.)                         |
| “System information”  | View CCU unit ID. (See page 6-21.)                                 |
| “Legal information”   | View software licenses. (See page 6-21.)                           |

## ⚙ Settings → “Traction Control”

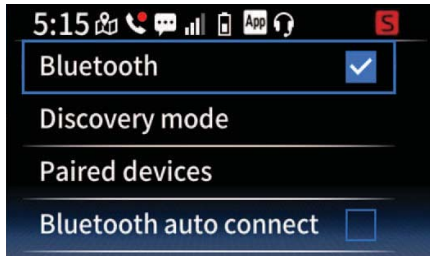


Short press the “✓” switch to turn the traction control system ON/OFF. The checkmark indicates ON. See page 6-25 for more information about the traction control system.

### TIP

The checkmark beside this setting will reappear after each time the vehicle power is turned ON.

“Settings” → “Connection” → “Paired devices”  
“Bluetooth”

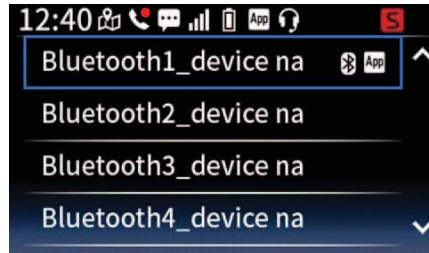


## “Bluetooth”

Turns the CCU’s Bluetooth ON/OFF. The checkmark indicates ON.

## “Discovery mode”

Puts the CCU in Bluetooth discovery mode when pairing a smartphone. See page 5-3 for more information about Bluetooth pairing.

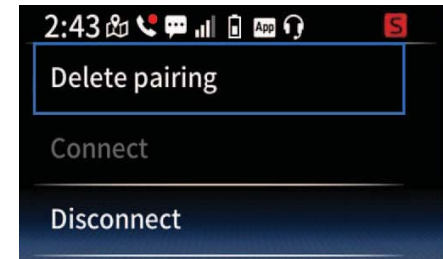


Paired smartphones are listed here. The Yamaha Motorcycle Connect app symbol “App” next to a device name indicates that the app is currently connected to the CCU. The Bluetooth symbol “B” next to a device name indicates that Garmin StreetCross is currently connected to the CCU.

## TIP

There is a maximum of 8 paired devices

Select a device name for more options:



“Delete pairing”: Deletes the selected paired device from the CCU memory.

“Connect”: Connect to the selected paired device.

“Disconnect”: Disconnect from the selected paired device

## TIP

If “Bluetooth auto connect” is on, the CCU may immediately reconnect to the smartphone after being disconnected.

## “Bluetooth auto connect”

Turns the Bluetooth automatic connection ON/OFF. The checkmark indicates ON. When the auto connect is ON, the CCU will automatically connect to the last connected device. If it

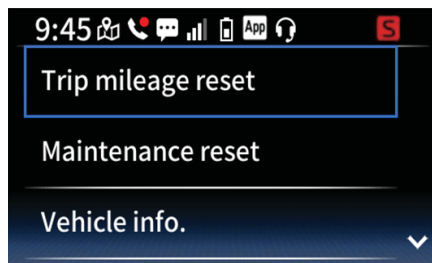
# Instrument and control functions

is not available, the CCU will attempt to connect to another device in the paired device list.

## TIP

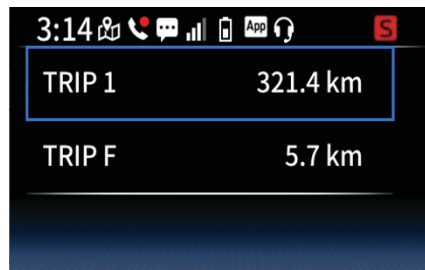
If “Bluetooth auto connect” is OFF, previously paired devices can be connected manually via the “Paired devices” list.

“Settings” → “Information / Reset”



This module allows the viewing and reset of tripmeters, maintenance tripmeters, vehicle information items, and the mass reset of other settings to factory defaults.

## “Trip mileage reset”

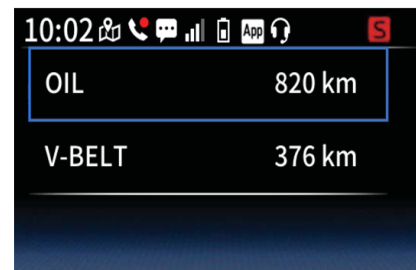


This module allows reset of the tripmeters on the main display. Short press the “^”/“v” switches to highlight an item. Long press the “v” switch to reset the item. Confirm by selecting “OK”.

## TIP

“TRIP F” can only be selected when the fuel is low. Otherwise the item is grayed out.

## “Maintenance reset”



This module allows reset of the maintenance tripmeters and their associated indicator icons. Short press the “^”/“v” switches to highlight an item. Short press the “v” switch to reset the item. Confirm by selecting “OK”.

## TIP

When the “OIL” and “V-BELT” items are reset, the Oil change indicator “OIL” and the V-Belt replacement indicator “V-BELT” on the main display will go off.

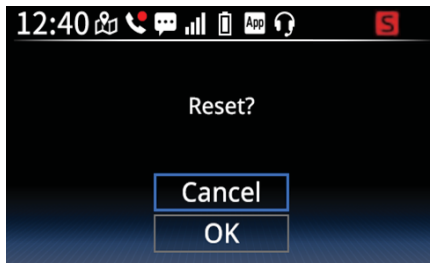
# Instrument and control functions

## “Vehicle info.”



This module allows reset of the vehicle information display items. Short press the “^”/“v” switches to highlight an item. Short press the “✓” switch to reset the item. Confirm by selecting “OK”.

## “Reset (Others)”



This module mass resets the following to the default settings:

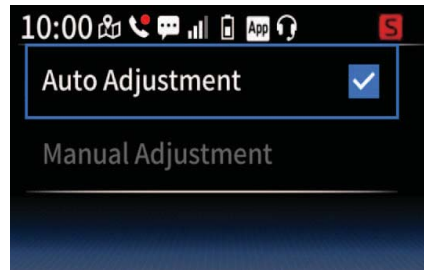
- TRIP TIME
- infotainment display home screen selection
- navigation view setting
- notification list
- weather info.
- Bluetooth settings
- clock
- language settings

Confirm by selecting “OK”.

## TIP

If “Reset (Others)” is executed, the corresponding pairing record must be deleted from the smartphone in order to pair again.

## “Settings” → “Clock”



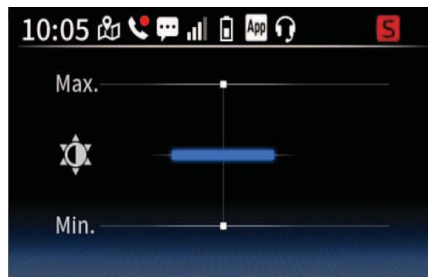
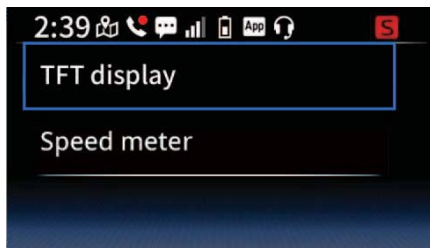
The clock can be set to auto-adjust in sync with a smartphone. “Auto Adjustment” ON is indicated by the checkmark and requires a connection with the Yamaha Motorcycle Connect app. (See page 5-2.) “Manual Adjustment” allows the clock to be calibrated manually.



To manually adjust the clock, Short press the “^”/“v” switches to adjust the highlighted item up/down. Short press the “✓” switch to set the item and continue to the next item in line. After the last item is set, select “OK” and the display will return to the previous menu.

# Instrument and control functions

“Settings” → “Brightness”

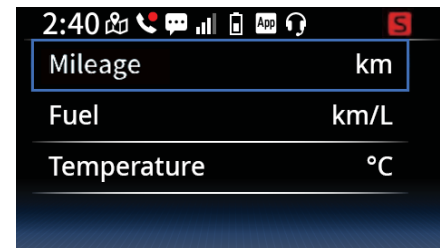


The infotainment display brightness setting has 3 levels.



The main display brightness setting has 6 levels. Short press the “^”/“v” switches to adjust the brightness setting up/down. Short press the “✓” switch to confirm the setting and return to the previous menu.

“Settings” → “Unit”



The selected display units are shown. The display units can be selected as follows:

- “Mileage”: “km” or “mile”
- “Fuel”: “km/L”, “L/100km” or “MPG”
- “Temperature”: “°C” or “°F”

## TIP

When “mile” is selected for the “Mileage” unit, the “Fuel” unit is automatically changed to “MPG”. At this time, the “Fuel” item is grayed out and cannot be selected.

6

This module allows you to change the screen brightness of the displays.  
“TFT display”: Brightness setting for the infotainment display  
“Speed meter”: Brightness setting for the main display

## TIP

- As the brightness settings are adjusted in the menu, the screen brightness will change in real time.
- If the temperature of the infotainment display become too high, the screen brightness will reduce automatically and cannot be adjusted. When the temperature lowers, the screen brightness will return to the previous setting.

## “Settings” → “System information”

This module displays the current system software version.

### “Unit ID”



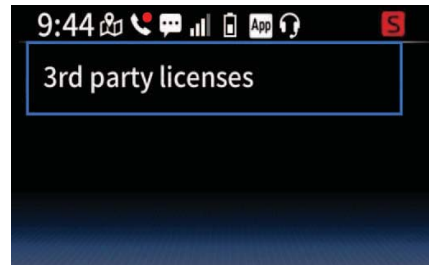
This module contains a QR code with the CCU's unit identification number. The “^”/“v” switches control the

brightness of the QR code. Short press the “v” switch to return to the previous menu.

### TIP

The CCU's unit ID is only required for dealer service operations.

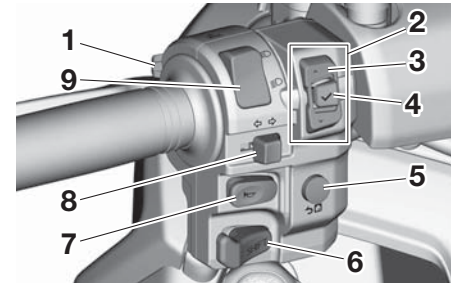
## “Settings” → “Legal information”



Third-party license agreements can be viewed here.

## Handlebar switches

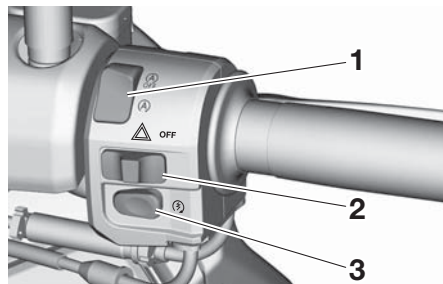
### Left



1. “MODE” switch
2. Meter switches
3. “^”/“v” switches
4. “v” switch
5. “>” button
6. “SHIFT” switch
7. Horn switch “>”
8. Turn signal switch “</>”
9. Dimmer switch “≡/≡”

# Instrument and control functions

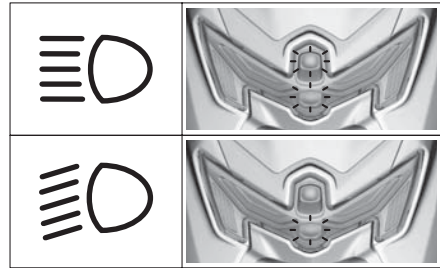
## Right



1. Stop and Start System switch “/”
2. Hazard lights switch “/OFF”
3. Start switch “”

## Dimmer switch “/”

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



## Turn signal switch “/”

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

## Horn switch “”

Press this switch to sound the horn.

## Start switch “”

With the sidestand up, push this switch while applying the front or rear brake to crank the engine with the starter. See page 8-2 for starting instructions prior to starting the engine.

## Hazard lights switch “/OFF”

With the main switch in the “” position, use this switch to turn on the hazard lights (simultaneous flashing of all turn signal lights).

The hazard lights are used in case of an emergency or to warn other drivers when your vehicle is stopped where it

might be a traffic hazard. Hazard lights can be turned on/off only when the vehicle power is on.

## NOTICE

**Do not use the hazard lights for an extended length of time with the engine not running, otherwise the battery may discharge.**

## Meter switches and “” button

These switches are used to control the various functions of the infotainment display and its menu system.

This manual uses the following terms to describe the usage of the menu controls:

|             |                                         |
|-------------|-----------------------------------------|
| Short press | Briefly press the switch or button      |
| Long press  | Press the switch or button for 1 second |

## Menu system basic operations:

- Use the “”/“” switches to highlight and adjust menu items.
- Short press the “” switch to open the menu system from the home screen or execute a selection in the menu system.

- Short press the “” button to cycle between the 3 home screens or return to the previous screen in the menu system.
- Long press the “” button to exit the menu system and return to the home screen.

EAUJ2331

## “MODE” switch

Press this switch to toggle between the two driving modes S mode and T mode.

### TIP

- When the vehicle power is turned on, the previously selected riding mode is selected again.
- If the “MODE” switch is pressed while YECVT is already downshifted, the driving mode will not be switched but the downshift status will be canceled.

See page 4-1 for more information on driving modes.

## “SHIFT” switch

Press this switch to downshift the YECVT one step. See page 4-2 for more information on YECVT and shifting.

EAUJ2340

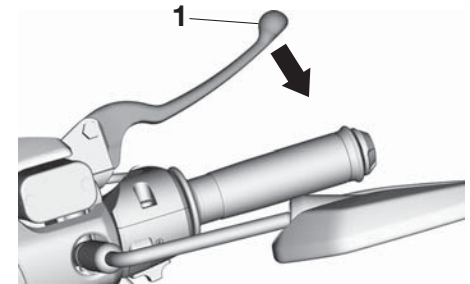
## Stop and Start System switch “/”

To turn on the Stop and Start System, set the switch to “”. To turn off the Stop and Start System, set this switch to “”.

EAU76391

## Front brake lever

EAU12902



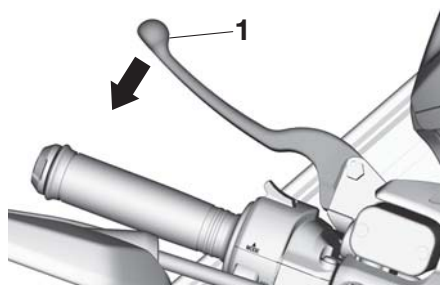
1. Front brake lever

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.

# Instrument and control functions

## Rear brake lever

EAU12952



6

1. Rear brake lever

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

## ABS

EAU78201

The Yamaha ABS (Anti-lock Brake System) features a dual electronic control system, which acts on 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-diagnostic test each time the vehicle first starts off after the main switch 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.**

EAUN3963

## Setting the traction control system



1. Traction control system indicator light “TCS”

When the vehicle is turned on, traction control is automatically turned on. To turn the traction control system off, see page 6-16.

### TIP

Turn the traction control system off to help free the rear wheel if the vehicle gets stuck in mud, sand, or other soft surfaces.

## Traction control system

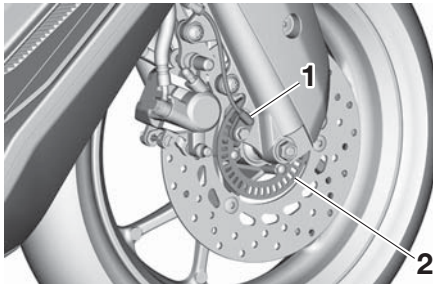
The traction control system helps maintain traction when accelerating on slippery surfaces, such as unpaved or wet roads. If sensors detect that the rear wheel is starting to slip (uncontrolled spinning), the traction control system assists by regulating engine power until traction is restored.

When traction control has engaged, the “**TCS**” indicator light will flash. You may notice changes in engine response or exhaust sound.

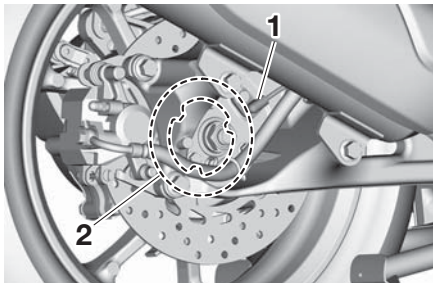
EWA18860

### ⚠ WARNING

**The traction control system is not a substitute for riding appropriately for the conditions. Traction control cannot prevent loss of traction due to excessive speed when entering turns, when accelerating hard at a sharp lean angle, or while braking, and cannot prevent front wheel slipping. As with any vehicle, approach surfaces that may be slippery with caution and avoid especially slippery surfaces.**



1. Front wheel sensor
2. Front wheel sensor rotor



1. Rear wheel sensor
2. Rear wheel sensor rotor

# Instrument and control functions

ECA16801

## NOTICE

Use only the specified tires. (See page 9-19.) Using different sized tires will prevent the traction control system from controlling tire rotation accurately.

## Resetting the traction control system

The traction control system will automatically disable under certain conditions; such as when a sensor fault is detected, or when only one wheel is allowed to rotate for more than a few seconds. Should this happen, the “TCS” indicator light will come on, and possibly the “” warning light, too.



1. Traction control system indicator light “TCS”
2. Engine trouble warning light “”

## TIP

When the vehicle is on the centerstand, do not rev the engine for an extended period of time. Otherwise, the traction control system will automatically disable and need to be reset.

If the traction control system automatically disables, try resetting it as follows.

1. Stop the vehicle and turn it off completely.
2. Wait a few seconds and then turn the vehicle power on.

3. The “TCS” indicator light should turn off and the system be enabled.

## TIP

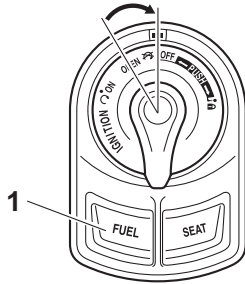
If the “TCS” indicator light remains on after resetting, the vehicle may still be ridden; however, have a Yamaha dealer check the vehicle as soon as possible.

4. Have a Yamaha dealer check the vehicle and turn off the “” warning light.

## Fuel tank cap

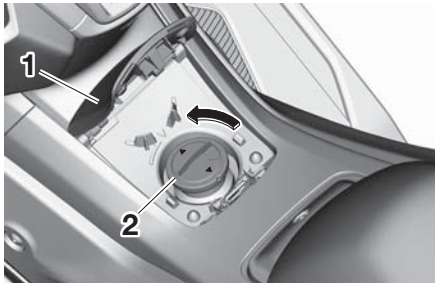
EAUN2571

To open the fuel tank cap lid, turn the main switch to “OPEN” position and push the “FUEL” button.



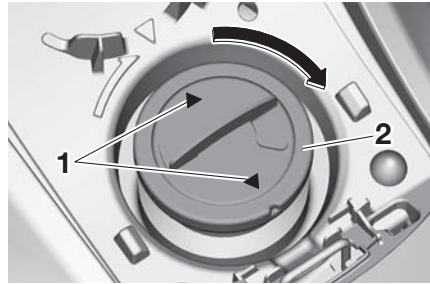
1. “FUEL” button

To open the the fuel tank cap, turn it counterclockwise and pull it off.



1. Fuel tank cap lid
2. Fuel tank cap

To install the fuel tank cap, turn it clockwise until the “△” mark is facing forward. Close the fuel tank cap lid.



1. “△” mark
2. Fuel tank cap

## **⚠ WARNING**

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

EWA10132

## Fuel

EAU13213

Make sure there is sufficient gasoline in the tank.

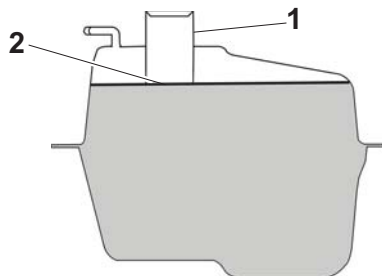
EWA10882

## **⚠ WARNING**

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

1. Before refueling, turn off the engine and be sure that no one is sitting on the vehicle. Never refuel while smoking, or while in the vicinity of sparks, open flames, or other sources of ignition such as the pilot lights of water heaters and clothes dryers.
2. Do not overfill the fuel tank. 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

6

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.

EAUU0045

### Recommended fuel:

Regular unleaded gasoline (E10 to E20 only)

### Fuel tank capacity:

7.1 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.

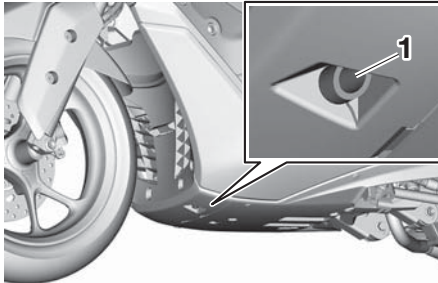
### Gasohol

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

EAU86150



1. Fuel tank overflow hose

The overflow hose drains excess gasoline and directs it safely away from the vehicle.

Before operating the vehicle:

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

## Catalytic converter

EAU13435

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

EWA10863

### **WARNING**

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

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

## Seat

EAU89401

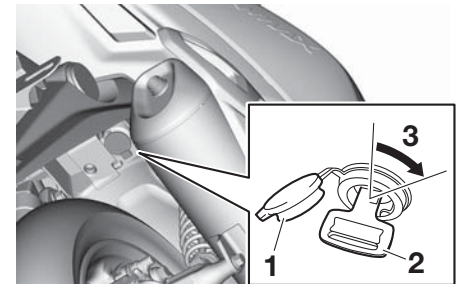
### To open the seat

#### Via the main switch

Turn the main switch to “OPEN”, and then push the “SEAT” button. (See page 4-11.)

#### 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. Unlock.

3. Lift the rear of the seat.

# Instrument and control functions

ECA24020

## NOTICE

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

## To close the seat

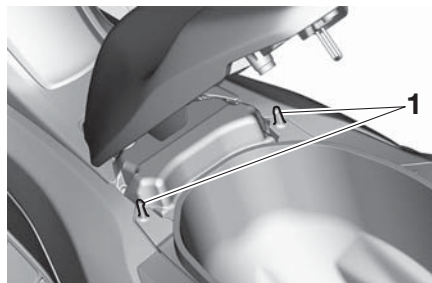
Push the rear of the seat down to lock it in place.

## TIP

Make sure that the seat is properly secured before riding.

EAU37482

## Helmet holders



1. Helmet holder

The helmet holders are located under the seat.

## To secure a helmet to a helmet holder

1. Open the seat. (See page 6-29.)
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]

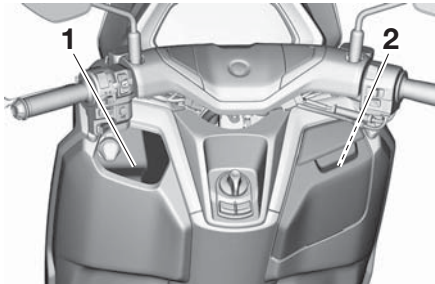
## To release a helmet from a helmet holder

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

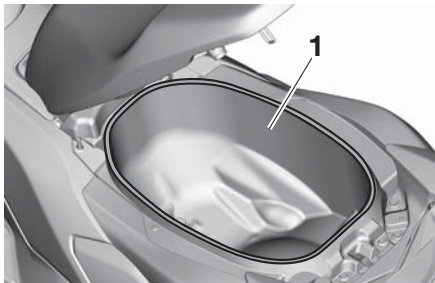
## Storage compartments

EAUN2612

This model is equipped with 3 storage compartments. The front storage compartments and rear storage compartment are located as shown.



1. Storage compartment A
2. Storage compartment B



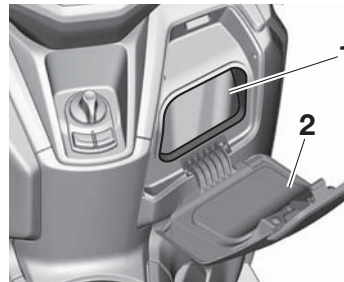
1. Rear storage compartment

### TIP

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

### Storage compartment B

To open storage compartment B, pull up the storage compartment lid to unlock it, and then open.



1. Storage compartment B
2. Lid

To close storage compartment B, push the storage compartment lid into the original position.

### Rear storage compartment

To open the rear storage compartment, turn the main switch to “OPEN”, and then push the “SEAT” button.

### TIP

Do not leave your vehicle unattended with the seat open.

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.

# Instrument and control functions

- 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.

## **WARNING**

EWA18950

- Do not exceed the load limit of 1.5 kg (3.3 lb) for storage compartment A.
- Do not exceed the load limit of 0.3 kg (1 lb) for storage compartment B.
- Do not exceed the load limit of 5.0 kg (11 lb) for the rear storage compartment.
- Do not exceed the maximum load of 166 kg (366 lb) for the vehicle.

## Adjusting the shock absorber assemblies

EAUN2821

Each shock absorber assembly is equipped with a spring preload adjusting ring.

EWA10211

## **WARNING**

Always adjust both shock absorber assemblies equally, otherwise poor handling and loss of stability may result.

## To adjust the spring preload

Use the screwdriver included in the tool kit.

Turn the adjusting ring in direction (a) to increase the spring preload.

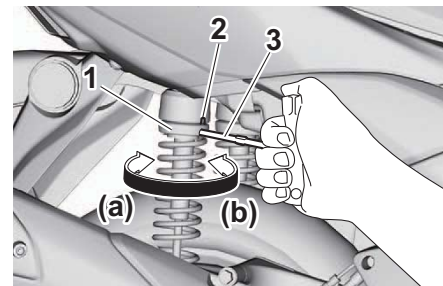
Turn the adjusting ring in direction (b) to decrease the spring preload.

Align the appropriate number (1 or 2) in the adjusting ring with the position indicator on the shock absorber.

ECAN0160

## **NOTICE**

Be sure to fully insert the screwdriver and hold it securely when twisting the adjusting ring.



1. Spring preload adjusting ring
2. Position indicator
3. Screwdriver

## **Spring preload setting:**

Position 1: Standard  
Position 2: Hard

## USB Type-C jack

EAU1831

This model is equipped with a 5 V 3 A USB Type-C jack. The USB Type-C jack can be used when the main switch is on.



1. USB Type-C jack

### TIP

Under some conditions, the device battery level may drop even while the USB is plugged in.

ECA28531

### NOTICE

- To protect the USB Type-C jack from water and collisions, install the cap when the jack is not being used.

- To prevent damage, avoid applying excessive force when opening and closing the USB jack cap.
- Ensure the USB jack cap is properly installed and do not use the USB Type-C jack when it rains or when washing the vehicle. If the USB Type-C jack gets wet, please dry it with the vehicle turned off before using it.
- Do not put tension or apply force to cables attached to the USB Type-C jack as it may cause damage.

## Sidestand

EAU76780

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.

### WARNING

EWA10242

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-

# Instrument and control functions

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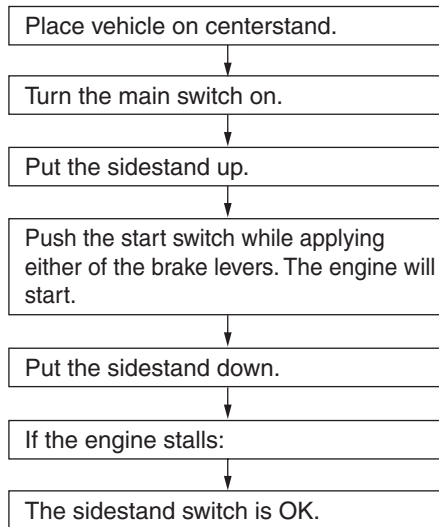
sibility of raising the sidestand before starting off. Therefore, check this system regularly and have a Yamaha dealer repair it if it does not function properly.

---

EAUT1098

## Ignition circuit cut-off system

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



## 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             |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Fuel</b>                   | <ul style="list-style-type: none"><li>• Check fuel level in fuel tank.</li><li>• Refuel if necessary.</li><li>• Check fuel line for leakage.</li><li>• Check fuel tank overflow hose for obstructions, cracks or damage, and check hose connection.</li></ul>                                                                                                                 | 6-27, 6-29       |
| <b>Engine oil</b>             | <ul style="list-style-type: none"><li>• Check oil level in engine.</li><li>• If necessary, add recommended oil to specified level.</li><li>• Check vehicle for oil leakage.</li></ul>                                                                                                                                                                                         | 9-11             |
| <b>Final transmission oil</b> | <ul style="list-style-type: none"><li>• Check vehicle for oil leakage.</li></ul>                                                                                                                                                                                                                                                                                              | 9-13             |
| <b>Coolant</b>                | <ul style="list-style-type: none"><li>• Check coolant level in reservoir.</li><li>• If necessary, add recommended coolant to specified level.</li><li>• Check cooling system for leakage.</li></ul>                                                                                                                                                                           | 9-14             |
| <b>Front brake</b>            | <ul style="list-style-type: none"><li>• Check operation.</li><li>• If soft or spongy, have Yamaha dealer bleed hydraulic system.</li><li>• Check brake pads for wear.</li><li>• Replace if necessary.</li><li>• Check fluid level in reservoir.</li><li>• If necessary, add specified brake fluid to specified level.</li><li>• Check hydraulic system for leakage.</li></ul> | 9-21, 9-21, 9-22 |

# For your safety – pre-operation checks

| ITEM                                             | CHECKS                                                                                                                                                                                                                                                                                                                                                                                | PAGE             |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Rear brake</b>                                | <ul style="list-style-type: none"> <li>• Check operation.</li> <li>• If soft or spongy, have Yamaha dealer bleed hydraulic system.</li> <li>• Check brake pads for wear.</li> <li>• Replace if necessary.</li> <li>• Check fluid level in reservoir.</li> <li>• If necessary, add specified brake fluid to specified level.</li> <li>• Check hydraulic system for leakage.</li> </ul> | 9-21, 9-21, 9-22 |
| <b>Throttle grip</b>                             | <ul style="list-style-type: none"> <li>• Make sure that operation is smooth.</li> <li>• Check throttle grip free play.</li> <li>• If necessary, have Yamaha dealer adjust throttle grip free play and lubricate cable and grip housing.</li> </ul>                                                                                                                                    | 9-18, 9-24       |
| <b>Control cables</b>                            | <ul style="list-style-type: none"> <li>• Make sure that operation is smooth.</li> <li>• Lubricate if necessary.</li> </ul>                                                                                                                                                                                                                                                            | 9-24             |
| <b>Wheels and tires</b>                          | <ul style="list-style-type: none"> <li>• Check for damage.</li> <li>• Check tire condition and tread depth.</li> <li>• Check air pressure.</li> <li>• Correct if necessary.</li> </ul>                                                                                                                                                                                                | 9-19, 9-20       |
| <b>Brake levers</b>                              | <ul style="list-style-type: none"> <li>• Make sure that operation is smooth.</li> <li>• Lubricate lever pivoting points if necessary.</li> </ul>                                                                                                                                                                                                                                      | 9-24             |
| <b>Centerstand, sidestand</b>                    | <ul style="list-style-type: none"> <li>• Make sure that operation is smooth.</li> <li>• Lubricate pivots if necessary.</li> </ul>                                                                                                                                                                                                                                                     | 9-25             |
| <b>Chassis fasteners</b>                         | <ul style="list-style-type: none"> <li>• Make sure that all nuts, bolts and screws are properly tightened.</li> <li>• Tighten if necessary.</li> </ul>                                                                                                                                                                                                                                | —                |
| <b>Instruments, lights, signals and switches</b> | <ul style="list-style-type: none"> <li>• Check operation.</li> <li>• Correct if necessary.</li> </ul>                                                                                                                                                                                                                                                                                 | —                |
| <b>Sidestand switch</b>                          | <ul style="list-style-type: none"> <li>• Check operation of ignition circuit cut-off system.</li> <li>• If system is not working correctly, have Yamaha dealer check vehicle.</li> </ul>                                                                                                                                                                                              | 6-33             |

# Operation and important riding points

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EAU15952

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

EWA10272

## **WARNING**

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

---

## 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.

EAU16842

EAU34323

## 0–1000 km (0–600 mi)

Avoid prolonged operation above 4500 r/min. **NOTICE: After 1000 km (600 mi) of operation, be sure to replace the engine oil, final transmission oil and the oil filter element.** [ECA12932]

## 1000–1600 km (600–1000 mi)

Avoid prolonged operation above 5500 r/min.

## 1600 km (1000 mi) and beyond

The vehicle can now be operated normally.

ECA10311

## **NOTICE**

- **Keep the engine speed out of the tachometer red zone.**
  - **If any engine trouble should occur during the engine break-in period, immediately have a Yamaha dealer check the vehicle.**
-

## Starting the engine

The ignition circuit cut-off system will enable starting only when the side-stand is up.

EAU86741

### 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 6-1.)

### TIP

- Do not start the engine if the engine trouble warning light remains on.
- The ABS warning light should come on and stay on until the vehicle reaches a speed of 10 km/h (6 mi/h).

ECA24110

### NOTICE

**If a warning or indicator light does not work as described above, 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!**

EAUN0073

ECAN0072

### NOTICE

**Do not ride through deep water, otherwise the engine may be damaged. Avoid puddles because they may be deeper than expected.**

# Operation and important riding points

## Starting off

EAU45093

1. While pulling the rear brake lever with your left hand and holding the grab bar with your right hand, push the scooter off the center-stand.

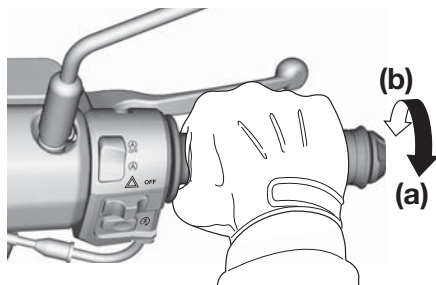


1. Grab bar

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

EAU16783



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).

ECA12682

### NOTICE

- **Use the brake when stopping on an uphill slope. Holding the vehicle at a stop with throttle operation will cause the clutch to heat up, causing damage to the clutch.**

- **Do not rev the throttle unnecessarily, otherwise the malfunction indicator light (MIL)/engine trouble warning light may come on.**

## 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).

## Parking

EAU77863

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

## Operation and important riding points

---

### TIP \_\_\_\_\_

Even when the vehicle is parked in a location partitioned by a fence or the glass window of a shop, if the smart key is within operating range, other people will be able to start the engine and operate the vehicle. Please turn the smart key off when leaving the vehicle. (See page 4-11.)

---

# Periodic maintenance and adjustment

EAU17246

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.**

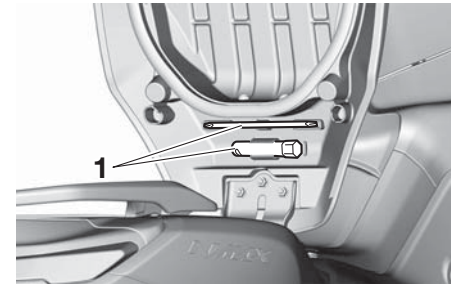
EWA15461

## **! WARNING**

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

EAU85230

## 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

EAUU0621

## TIP

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

## Periodic maintenance chart for the emission control system

EAUU1294

| NO. | ITEM             | CHECK OR MAINTENANCE JOB                                                             | ODOMETER READING (whichever comes first) |                           |                            |                             |                             | ANNUAL CHECK |
|-----|------------------|--------------------------------------------------------------------------------------|------------------------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|--------------|
|     |                  |                                                                                      | 1000 km<br>or<br>2 months                | 4000 km<br>or<br>6 months | 8000 km<br>or<br>10 months | 12000 km<br>or<br>14 months | 16000 km<br>or<br>18 months |              |
| 1   | * Fuel line      | • Check fuel hoses for cracks or damage.                                             |                                          | √                         | √                          | √                           | √                           | √            |
| 2   | * Fuel filter    | • Check condition.<br>• Replace if necessary.                                        | Every 12000 km (7500 mi)                 |                           |                            |                             |                             |              |
| 3   | Spark plug       | • Check condition.<br>• Clean and regap.                                             |                                          | √                         | √                          | √                           | √                           |              |
|     |                  | • Replace.                                                                           | Every 8000 km (5000 mi)                  |                           |                            |                             |                             |              |
| 4   | * Valves         | • Check valve clearance.<br>• Adjust if necessary.                                   |                                          |                           | √                          |                             | √                           |              |
| 5   | * Fuel injection | • Check engine idle speed.                                                           |                                          | √                         | √                          | √                           | √                           | √            |
| 6   | * Exhaust system | • Check for leakage.<br>• Tighten if necessary.<br>• Replace gasket(s) if necessary. |                                          | √                         | √                          | √                           | √                           | √            |

# Periodic maintenance and adjustment

EAUU1287

## General maintenance and lubrication chart

| NO. | ITEM                             | CHECK OR MAINTENANCE JOB                                                                                                                   | ODOMETER READING (whichever comes first) |                           |                            |                             |                             | ANNUAL CHECK |
|-----|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|--------------|
|     |                                  |                                                                                                                                            | 1000 km<br>or<br>2 months                | 4000 km<br>or<br>6 months | 8000 km<br>or<br>10 months | 12000 km<br>or<br>14 months | 16000 km<br>or<br>18 months |              |
| 1   | * Diagnostic system check        | <ul style="list-style-type: none"> <li>Perform dynamic inspection using Yamaha diagnostic tool.</li> <li>Check the error codes.</li> </ul> | √                                        | √                         | √                          | √                           | √                           | √            |
| 2   | Air filter element               | <ul style="list-style-type: none"> <li>Replace.</li> </ul>                                                                                 | Every 16000 km (10000 mi)                |                           |                            |                             |                             |              |
| 3   | Air filter check hose            | <ul style="list-style-type: none"> <li>Clean.</li> </ul>                                                                                   | √                                        | √                         | √                          | √                           | √                           |              |
| 4   | * V-belt case air filter element | <ul style="list-style-type: none"> <li>Clean.</li> <li>Replace if necessary.</li> </ul>                                                    |                                          | √                         | √                          | √                           | √                           |              |
| 5   | * Battery                        | <ul style="list-style-type: none"> <li>Check voltage.</li> <li>Charge if necessary.</li> </ul>                                             | √                                        | √                         | √                          | √                           | √                           | √            |
| 6   | * Front brake                    | <ul style="list-style-type: none"> <li>Check operation, fluid level and vehicle for fluid leakage.</li> </ul>                              | √                                        | √                         | √                          | √                           | √                           | √            |
|     |                                  | <ul style="list-style-type: none"> <li>Replace brake pads.</li> </ul>                                                                      | Whenever worn to the limit               |                           |                            |                             |                             |              |
| 7   | * Rear brake                     | <ul style="list-style-type: none"> <li>Check operation, fluid level and vehicle for fluid leakage.</li> </ul>                              | √                                        | √                         | √                          | √                           | √                           | √            |
|     |                                  | <ul style="list-style-type: none"> <li>Replace brake pads.</li> </ul>                                                                      | Whenever worn to the limit               |                           |                            |                             |                             |              |
| 8   | * Brake hoses                    | <ul style="list-style-type: none"> <li>Check for cracks or damage.</li> <li>Check for correct routing and clamping.</li> </ul>             |                                          | √                         | √                          | √                           | √                           | √            |
|     |                                  | <ul style="list-style-type: none"> <li>Replace.</li> </ul>                                                                                 | Every 4 years                            |                           |                            |                             |                             |              |
| 9   | * Brake fluid                    | <ul style="list-style-type: none"> <li>Change.</li> </ul>                                                                                  | Every 2 years                            |                           |                            |                             |                             |              |
| 10  | * Wheels                         | <ul style="list-style-type: none"> <li>Check runout and for damage.</li> </ul>                                                             |                                          | √                         | √                          | √                           | √                           |              |

# Periodic maintenance and adjustment

| NO. | ITEM                          | CHECK OR MAINTENANCE JOB                                                                                                                                                               | ODOMETER READING (whichever comes first) |                           |                            |                             |                             | ANNUAL CHECK |
|-----|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|--------------|
|     |                               |                                                                                                                                                                                        | 1000 km<br>or<br>2 months                | 4000 km<br>or<br>6 months | 8000 km<br>or<br>10 months | 12000 km<br>or<br>14 months | 16000 km<br>or<br>18 months |              |
| 11  | * Tires                       | <ul style="list-style-type: none"> <li>• Check tread depth and for damage.</li> <li>• Replace if necessary.</li> <li>• Check air pressure.</li> <li>• Correct if necessary.</li> </ul> |                                          | √                         | √                          | √                           | √                           | √            |
| 12  | * Wheel bearings              | <ul style="list-style-type: none"> <li>• Check bearings for looseness or damage.</li> </ul>                                                                                            |                                          | √                         | √                          | √                           | √                           |              |
| 13  | * Steering bearings           | <ul style="list-style-type: none"> <li>• Check bearing play and steering for roughness.</li> </ul>                                                                                     | √                                        | √                         | √                          | √                           | √                           |              |
|     |                               | <ul style="list-style-type: none"> <li>• Lubricate with lithium-soap-based grease.</li> </ul>                                                                                          | Every 24000 km (14000 mi)                |                           |                            |                             |                             |              |
| 14  | * Chassis fasteners           | <ul style="list-style-type: none"> <li>• Make sure that all nuts, bolts and screws are properly tightened.</li> </ul>                                                                  |                                          | √                         | √                          | √                           | √                           | √            |
| 15  | Front brake lever pivot shaft | <ul style="list-style-type: none"> <li>• Lubricate with silicone grease.</li> </ul>                                                                                                    |                                          | √                         | √                          | √                           | √                           | √            |
| 16  | Rear brake lever pivot shaft  | <ul style="list-style-type: none"> <li>• Lubricate with silicone grease.</li> </ul>                                                                                                    |                                          | √                         | √                          | √                           | √                           | √            |
| 17  | Sidestand, center-stand       | <ul style="list-style-type: none"> <li>• Check operation.</li> <li>• Lubricate with lithium-soap-based grease.</li> </ul>                                                              |                                          | √                         | √                          | √                           | √                           | √            |
| 18  | * Sidestand switch            | <ul style="list-style-type: none"> <li>• Check operation.</li> </ul>                                                                                                                   | √                                        | √                         | √                          | √                           | √                           | √            |
| 19  | * Front fork                  | <ul style="list-style-type: none"> <li>• Check operation and for oil leakage.</li> </ul>                                                                                               |                                          | √                         | √                          | √                           | √                           |              |
| 20  | * Shock absorber assemblies   | <ul style="list-style-type: none"> <li>• Check operation and shock absorbers for oil leakage.</li> </ul>                                                                               |                                          | √                         | √                          | √                           | √                           |              |

# Periodic maintenance and adjustment

| NO. | ITEM                            | CHECK OR MAINTENANCE JOB                                                                                               | ODOMETER READING (whichever comes first)                                  |                                       |                            |                             |                             | ANNUAL CHECK |
|-----|---------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------|----------------------------|-----------------------------|-----------------------------|--------------|
|     |                                 |                                                                                                                        | 1000 km<br>or<br>2 months                                                 | 4000 km<br>or<br>6 months             | 8000 km<br>or<br>10 months | 12000 km<br>or<br>14 months | 16000 km<br>or<br>18 months |              |
| 21  | Engine oil                      | • Change.                                                                                                              | √                                                                         | When the oil change indicator flashes |                            |                             |                             |              |
|     |                                 | • Check oil level and vehicle for oil leakage.                                                                         | Every 4000 km (2500 mi)                                                   |                                       |                            |                             |                             | √            |
| 22  | * Engine oil strainer           | • Clean.                                                                                                               | √                                                                         |                                       |                            |                             |                             | √            |
| 23  | * Cooling system                | • Check coolant level and vehicle for coolant leakage.                                                                 |                                                                           | √                                     | √                          | √                           | √                           | √            |
|     |                                 | • Change with Yamaha genuine coolant.                                                                                  | Every 3 years                                                             |                                       |                            |                             |                             |              |
| 24  | Final transmission oil          | • Check vehicle for oil leakage.                                                                                       | √                                                                         | √                                     | √                          | √                           | √                           |              |
|     |                                 | • Change.                                                                                                              | √                                                                         | Every 12000 km (7500 mi)              |                            |                             |                             |              |
| 25  | * V-belt                        | • Check for damage and wear.                                                                                           |                                                                           |                                       | √                          | √                           | √                           |              |
|     |                                 | • Replace.                                                                                                             | When the V-belt replacement indicator flashes [every 25000 km (15500 mi)] |                                       |                            |                             |                             |              |
| 26  | * V-belt secondary sheave       | • Lubricate.                                                                                                           | Every 12000 km (7500 mi)                                                  |                                       |                            |                             |                             |              |
| 27  | * Front and rear brake switches | • Check operation.                                                                                                     | √                                                                         | √                                     | √                          | √                           | √                           | √            |
| 28  | Moving parts and cables         | • Lubricate.                                                                                                           |                                                                           | √                                     | √                          | √                           | √                           | √            |
| 29  | * Throttle grip                 | • Check operation.<br>• Check throttle grip free play, and adjust if necessary.<br>• Lubricate cable and grip housing. |                                                                           | √                                     | √                          | √                           | √                           | √            |
| 30  | * Lights, signals and switches  | • Check operation.<br>• Adjust headlight beam.                                                                         | √                                                                         | √                                     | √                          | √                           | √                           | √            |

# Periodic maintenance and adjustment

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EAUN4510

## TIP

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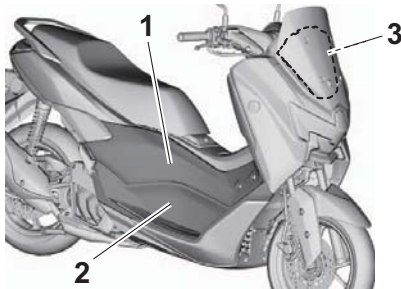
- Air filter
  - This model's air filter is equipped with a disposable oil-coated paper element, which must not be cleaned with compressed air to avoid damaging it.
  - The air filter element needs to be replaced more frequently when riding in unusually wet or dusty areas.
- V-belt case air filter
  - The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
- V-belt
  - The V-belt should be checked at the initial 7000 km (4300 mi) and every 4000 km (2500 mi) thereafter. Replace the V-belt if any damage or excessive wear is found. The V-belt needs to be replaced every 25000 km (15500 mi) even if there is not wear or damage.
- Hydraulic brake service
  - Regularly check and, if necessary, correct the brake fluid level.
  - Every two years replace the internal components of the brake master cylinders and calipers, and change the brake fluid.
  - Replace the brake hoses every four years and if cracked or damaged.
- Fuel system service
  - 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.
  - Replace the fuel filler cover every two years or if cracked or damaged.
  - Check the fuel filter for clogging or damage every 12000 km (7500 mi).
- Battery service
  - Check the condition and service the battery every 3 months.
  - Recharge the battery immediately if the voltage is less than 12.4 V.
  - If the battery tends to discharge, replace it immediately.

# Periodic maintenance and adjustment

## Removing and installing panels

EAU18773

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



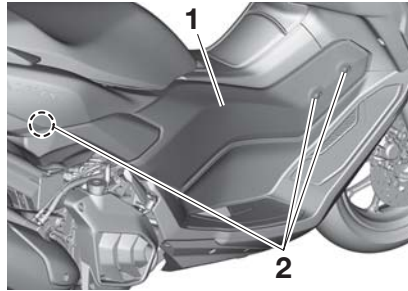
1. Panel A
2. Panel B
3. Panel C

### Panel A

#### To remove the panel

1. Remove the screws.

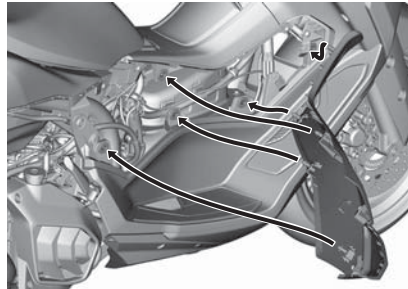
EAU2292



1. Panel A
  2. Screw
2. Extend the right passenger footrest, and then pull the panel outward.

#### To install the panel

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

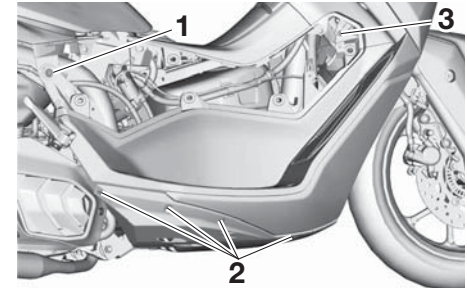


2. Retract the right passenger footrest to its original position.

### Panel B

#### To remove the panel

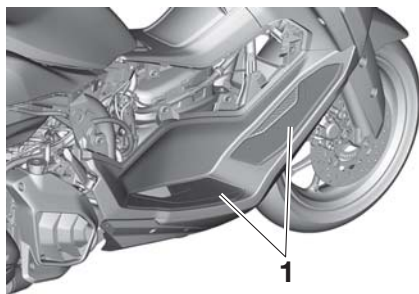
1. Remove panel A.
2. Remove the quick fasteners, the bolt and screw.



1. Bolt
2. Quick fastener
3. Screw

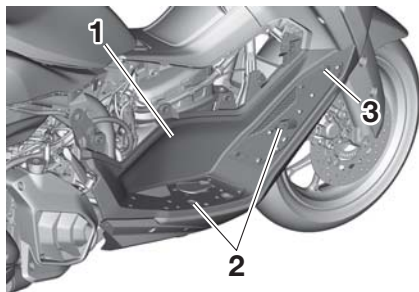
3. Remove the right floorboard mats by pulling them up.

# Periodic maintenance and adjustment

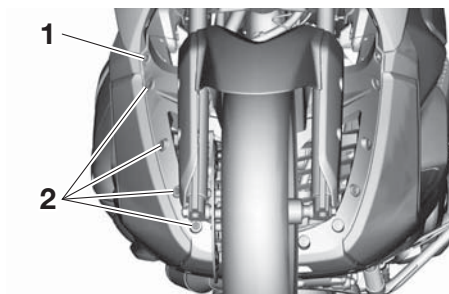


1. Footboard mat

4. Remove the bolts, screws and quick fasteners, then pull the panel outward.



1. Panel B  
2. Bolt  
3. Screw



1. Bolt  
2. Screw

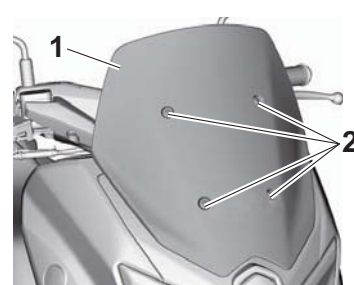
## To install the panel

1. Place the panel in the original position, and then install the bolts and screw.
2. Place the right floorboard mats in their original position and push them downward to secure them.
3. Install the screw, bolt and the quick fasteners.
4. Install panel A.

## **Panel C**

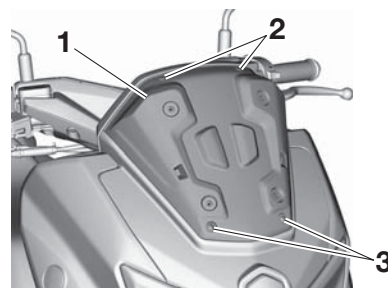
## To remove the panel

1. Remove the visor by removing the screws.



1. Visor  
2. Screw

2. Remove the panel by removing the screws and the quick fasteners.



1. Panel C  
2. Quick fastener  
3. Screw

# Periodic maintenance and adjustment

## To install the panel

1. Place the panel in the original position, and then install the quick fasteners and the screws.
2. Install the visor by installing the screws.

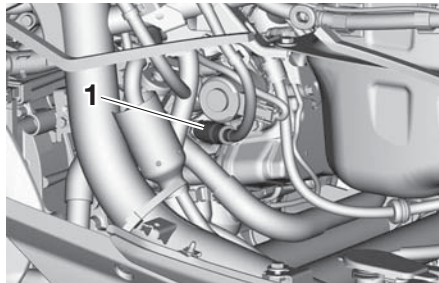
## Checking the spark plug

EAU67161

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.

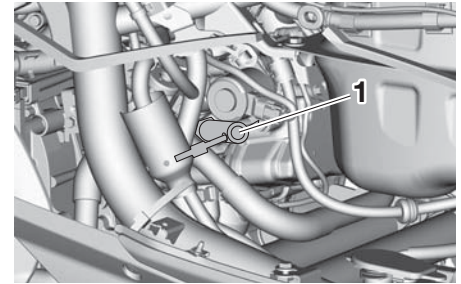
## To remove the spark plug

1. Place the vehicle on the center-stand.
2. Remove panels A and B. (See page 9-7.)
3. Remove the spark plug cap.



1. Spark plug cap

4. Remove the spark plug as shown, with the spark plug wrench included in the owner's tool kit.



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

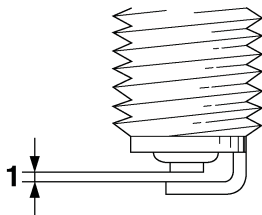
If the spark plug shows a distinctly different color, the engine could be operating improperly. Do not attempt to diagnose such problems yourself. Instead, have a Yamaha dealer check the vehicle.

# Periodic maintenance and adjustment

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)

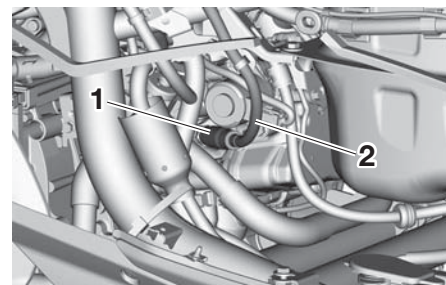
## TIP

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.

## TIP

Install the spark plug cap so that it is positioned as shown in the illustration and the spark plug lead does not contact any surrounding parts.



1. Spark plug cap
2. Spark plug lead

4. Install the panels.

EAU66996

## Engine oil and oil strainer

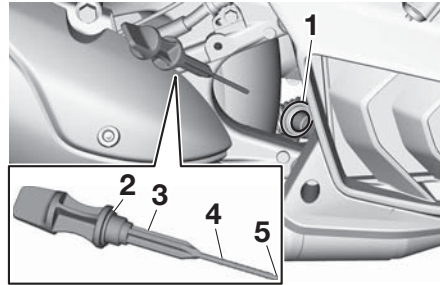
The engine oil level should be checked before each ride. In addition, the oil must be changed and the oil strainer cleaned at the intervals specified in the periodic maintenance and lubrication chart.

### To check the engine oil level

1. Place the vehicle on the 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. Oil filler hole
2. O-ring
3. Engine oil dipstick
4. Maximum level mark
5. Tip of the engine oil dipstick

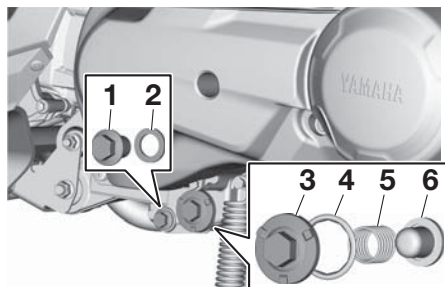
4. If the engine oil is not between the tip of the dipstick and the maximum level mark, add sufficient oil of the recommended type to raise it to the correct level.
5. Insert the dipstick into the oil filler hole, and then tighten the oil filler cap.

### 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]

# Periodic maintenance and adjustment



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

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:  
20 N·m (2.0 kgf·m, 15 lb·ft)

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

## Recommended engine oil:

See page 11-1.

## Oil quantity:

1.00 L (1.06 US qt, 0.88 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.**

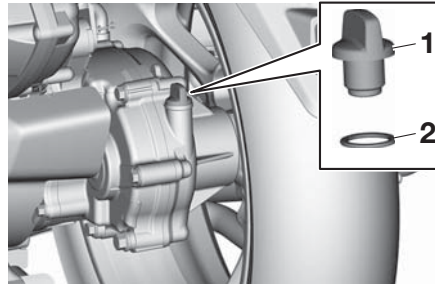
8. Start the engine, and then let it idle for several minutes while checking it for oil leakage. If oil is leaking, immediately turn the engine off and check for the cause.
9. Turn the engine off, and then check the oil level and correct it if necessary.
10. Reset the oil change tripmeter and oil change indicator "OIL". (See page 6-18 for reset procedures.)

EAU67822

## Final transmission oil

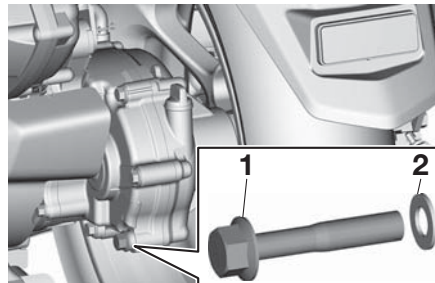
The final transmission case must be checked for oil leakage before each ride. If any leakage is found, have a Yamaha dealer check and repair your motorcycle. In addition, the final transmission oil must be changed as follows at the intervals specified in the periodic maintenance and lubrication chart.

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



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

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



1. Final transmission oil drain bolt
2. Gasket

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

### TIP

- Before installing the final transmission oil drain bolt and gasket, apply oil to them.
- Wipe off any excess oil afterwards.

### 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 11-1.

### Oil quantity:

0.10 L (0.11 US qt, 0.09 Imp.qt)

# Periodic maintenance and adjustment

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.

EAU20071

EAUN2930

### To check the coolant level

1. Place the vehicle on the center-stand.

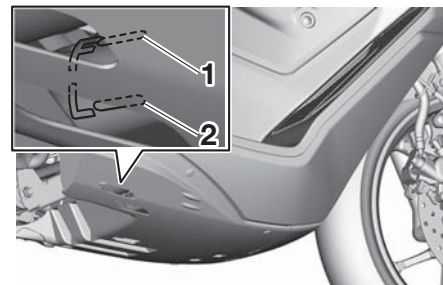
#### TIP

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

2. Check the coolant level in the coolant reservoir.

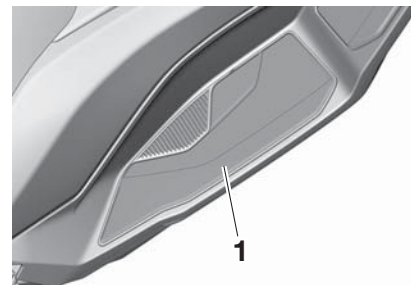
#### TIP

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



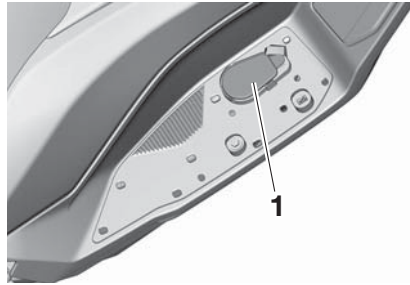
1. Maximum level mark
2. Minimum level mark

3. If the coolant is at or below the minimum level mark, remove the right floorboard mat by pulling it up.



1. Floorboard mat

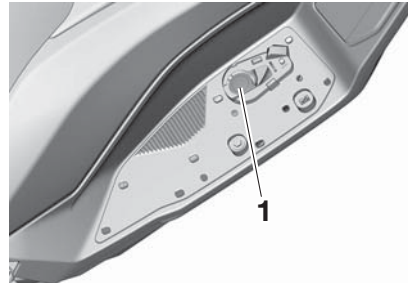
4. Remove the coolant reservoir cover.



1. Coolant reservoir cover

5. 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]



1. Coolant reservoir cap

**Coolant reservoir capacity (up to the maximum level mark):**  
0.13 L (0.14 US qt, 0.11 Imp.qt)

6. Install the coolant reservoir cover.
7. Place the right floorboard mat in the original position and push it downward to secure it.

## 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]

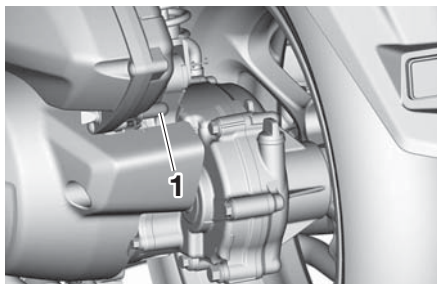
# Periodic maintenance and adjustment

EAUN2380

## 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

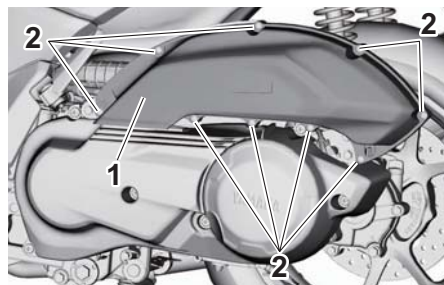
1. Check the hose on the rear side of the air filter case for accumulated dirt or water.
2. If dirt or water is visible, remove the hose from the clamp, clean it, and then install it.

### 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.

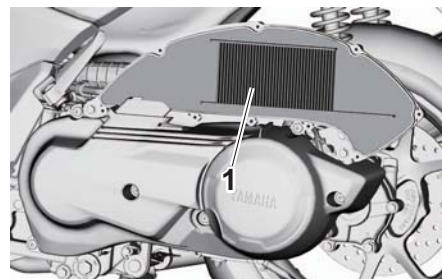
### Replacing the air filter element

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

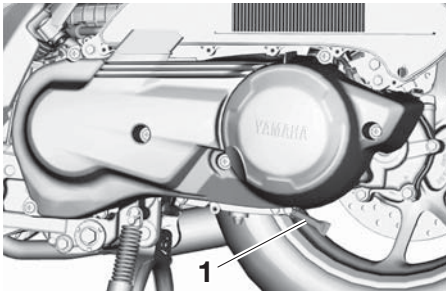
- The air filter element must be replaced at the intervals specified in the periodic maintenance chart.

# Periodic maintenance and adjustment

- 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

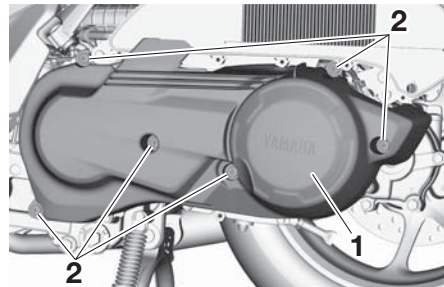
1. Check the hose on the rear side of the V-belt case for accumulated dirt or water.
2. If dirt or water is visible, remove the hose from the clamp, clean it, and then install it.

## 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.

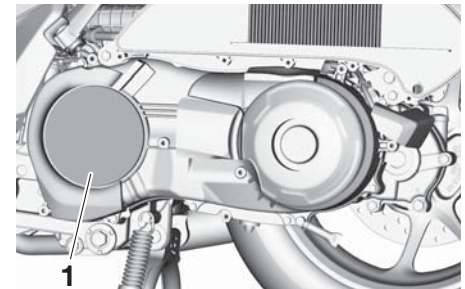
## Cleaning the V-belt case air filter element

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



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

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

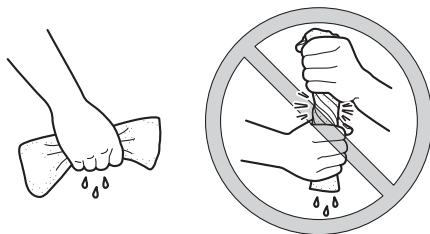


1. V-belt case air filter element

# Periodic maintenance and adjustment

EAU21386

EAU21403



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.

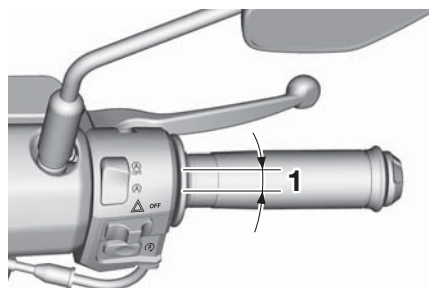
### Recommended oil:

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 bolts.

## Checking the throttle grip free play

Measure the throttle grip free play as shown.



1. Throttle grip free play

**Throttle grip free play:**  
3.0–5.0 mm (0.12–0.20 in)

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

## Valve clearance

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.

# Periodic maintenance and adjustment

## Tires

EAU82721

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

### Tire air pressure

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

EWA10504

### WARNING

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

- The tire air pressure must be checked and adjusted on cold tires (i.e., when the temperature of the tires equals the ambient temperature).
- The tire air pressure must be adjusted in accordance with the riding speed and with the total

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

### Cold tire air pressure:

#### 1 person:

Front:

150 kPa (1.50 kgf/cm<sup>2</sup>, 22 psi)

Rear:

250 kPa (2.50 kgf/cm<sup>2</sup>, 36 psi)

#### 2 persons:

Front:

150 kPa (1.50 kgf/cm<sup>2</sup>, 22 psi)

Rear:

250 kPa (2.50 kgf/cm<sup>2</sup>, 36 psi)

### Maximum load:

Vehicle:

166 kg (366 lb)

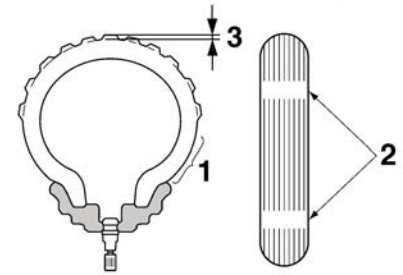
The vehicle's maximum load is the combined weight of the rider, passenger, cargo, and any accessories.

EWA10512

### WARNING

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

## Tire inspection



1. Tire sidewall
2. Tire wear indicator
3. Tire tread depth

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

### Minimum tire tread depth (front and rear):

1.0 mm (0.04 in)

# Periodic maintenance and adjustment

EWA10583

## WARNING

- It is dangerous to ride with a worn-out tire. When a tire tread begins to show crosswise lines, have a Yamaha dealer replace the tire immediately.
- The replacement of all wheel and brake-related parts, including the tires, should be left to a Yamaha dealer, who has the necessary professional knowledge and experience to do so.
- Ride at moderate speeds after changing a tire since the tire surface must first be “broken in” for it to develop its optimal characteristics.

## Tire information

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

Tires age, even if they have not been used or have only been used occasionally. Cracking of the tread and sidewall rubber, sometimes accompanied by carcass deformation, is an evidence of

ageing. Old and aged tires shall be checked by tire specialists to ascertain their suitability for further use.

EWA10462

## WARNING

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

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

### Front tire:

Size:

110/70-13M/C 48P

Manufacturer/model:

IRC/SS-570F

### Rear tire:

Size:

130/70-13M/C 63P

Manufacturer/model:

IRC/SS-560R

EAU21963

## Cast wheels

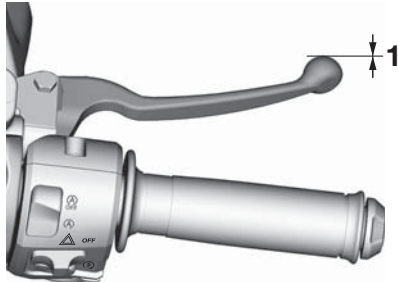
To maximize the performance, durability, and safe operation of your vehicle, note the following points regarding the specified wheels.

- The wheel rims should be checked for cracks, bends, warp-age 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 wheel should be balanced whenever either the tire or wheel has been changed or replaced. An unbalanced wheel can result in poor performance, adverse handling characteristics, and a shortened tire life.

## Checking the front and rear brake lever free play

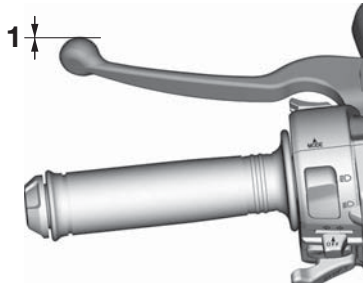
EAU50861

### Front



1. No brake lever free play

### Rear



1. No brake lever free play

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

EWA14212

### **! WARNING**

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

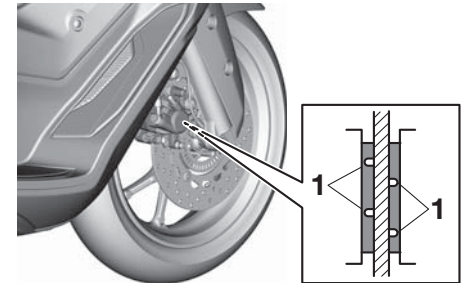
## Checking the front and rear brake pads

EAU22393

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

### Front brake pads

EAU22434



1. Brake pad wear indicator groove

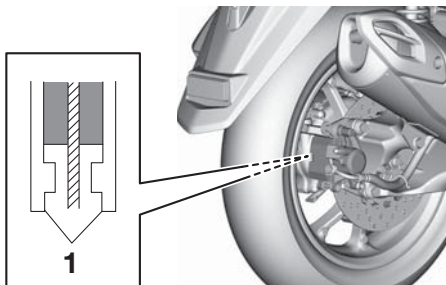
Each front brake pad is provided with wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that the wear

# Periodic maintenance and adjustment

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

## Rear brake pads

EAU22461



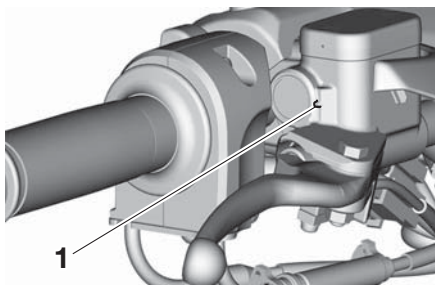
1. Brake pad wear indicator

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

EAU78790

Before starting off, confirm that the brake fluid is above the minimum level mark. (Position the handlebars so the brake fluid in the reservoir is level to the ground.) Replenish the brake fluid if necessary.



1. Minimum level mark

**Specified brake fluid:**  
YAMAHA GENUINE BRAKE FLUID  
DOT 4

EWA16011



**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 or dust 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, and dirt may clog the ABS hydraulic unit valves.

ECA17641

## NOTICE

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

As the brake pads wear, it is normal for the brake fluid level to gradually go down. A low brake fluid level may indicate worn brake pads 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 vehicle before further operation.

EAU22734

## Changing the brake fluid

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

EAUJ0311

## Checking the V-belt

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

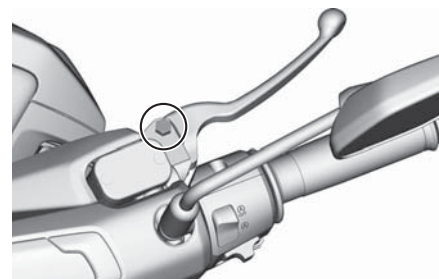
EAU49921

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.

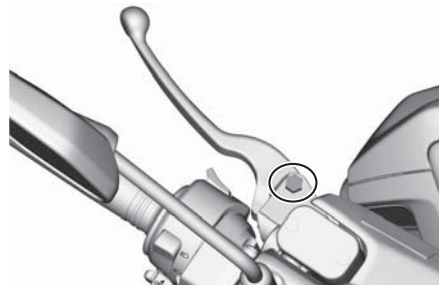
## Lubricating the front and rear brake levers

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

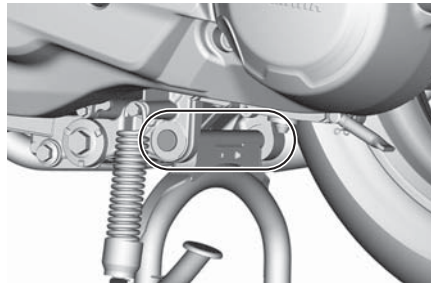
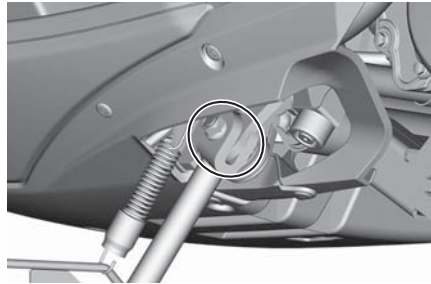
EAU23215

EWA10742

### **WARNING**

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

**Recommended lubricant:**  
Lithium-soap-based grease



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.

# Periodic maintenance and adjustment

EAU23273

## Checking the front fork

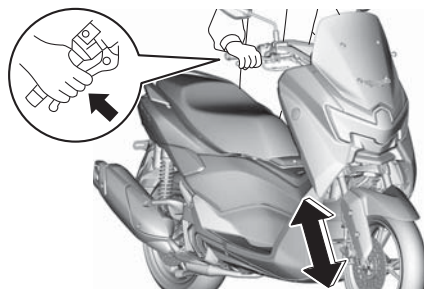
The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

### 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

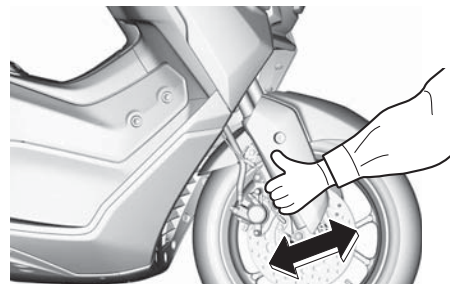
**If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.**

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 center-stand. **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

## Checking the wheel bearings

EAU23292



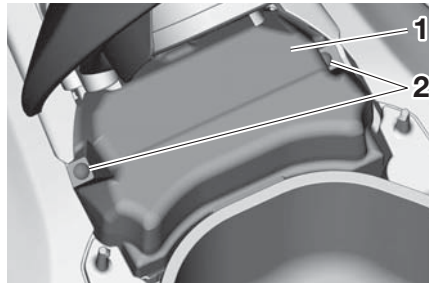
The front and rear wheel bearings must be checked at the intervals specified in the periodic maintenance and lubrication chart. If there is play in the wheel hub or if the wheel does not turn smoothly, have a Yamaha dealer check the wheel bearings.

## Removing the battery cover

EAUM1391

### To remove the battery cover

1. Open the seat. (See page 6-29.)
2. Remove the screws, and then take the cover off.



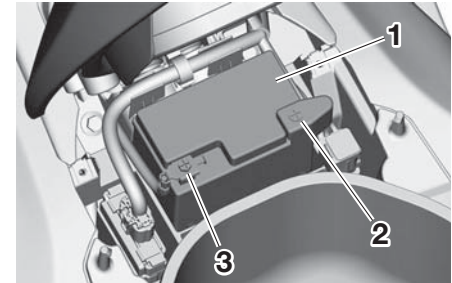
1. Battery cover
2. Screw

### To install the cover

1. Place the cover in the original position, and then install the screws.
2. Close the seat.

## Battery

EAU50292



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

The battery is located under the seat. (See page 6-29.)

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.

### WARNING

- **Electrolyte is poisonous and dangerous since it contains sulfuric acid, which causes severe**

EWA10761

# Periodic maintenance and adjustment

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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**

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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.

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## 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**

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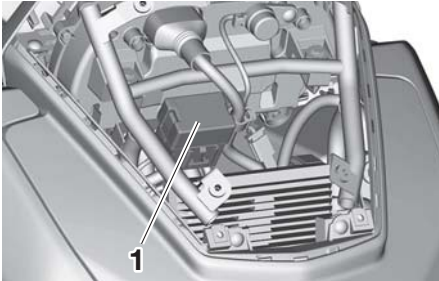
Always keep the battery charged. Storing a discharged battery can cause permanent battery damage.

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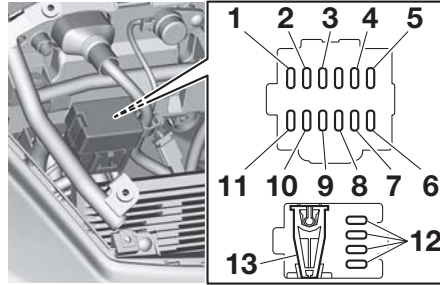
EAUA2910

## Replacing the fuses

The fuse box, which contain the fuses for the individual circuits, is located under panel C. (See page 9-7.)



1. Fuse box



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

### TIP

- There is a spare fuse on the back side of the fuse box cover.
- Use the fuse puller to remove fuses.

If a fuse is blown, replace it as follows.

1. Turn off the electrical circuit in question, and then turn off the main switch.
  2. Remove the panel C. (See page 9-7.)
  3. Remove the blown fuse using the fuse puller, 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]

# Periodic maintenance and adjustment

## Specified fuses:

Main fuse:

30.0 A

Headlight fuse:

7.5 A

Signaling system fuse:

7.5 A

Ignition fuse:

7.5 A

Smart key system fuse:

2.0 A

Auxiliary DC connector fuse:

7.5 A

ABS motor fuse:

30.0 A

ABS solenoid fuse:

15.0 A

ABS control unit fuse:

2.0 A

Backup fuse:

7.5 A

4. Turn the main switch on, and then turn on the electrical circuit in question to check if the device operates.

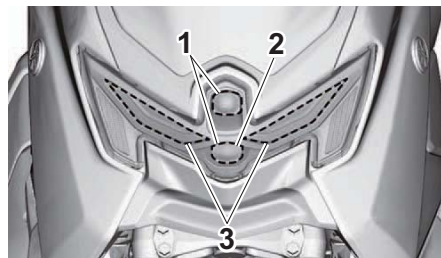
## TIP

If the fuse immediately blows again, have a Yamaha dealer check the electrical system.

5. Install the panel C. (See page 9-7.)

## Vehicle lights

EAU80380



1. Headlight (high beam)
2. Headlight (low beam)
3. Auxiliary light

Except for the license plate light bulb, this model's lights are all LED.

If an LED light does not come on, check the fuses and then have a Yamaha dealer check the vehicle. If the license plate light does not come on, check and replace the bulb. (See page 9-30.)

ECA16581

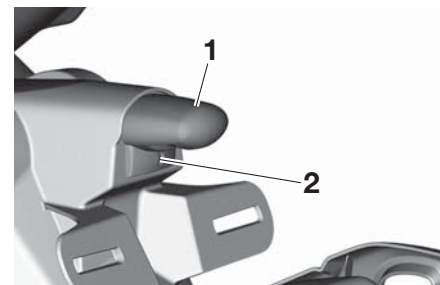
## NOTICE

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

## Replacing the license plate light bulb

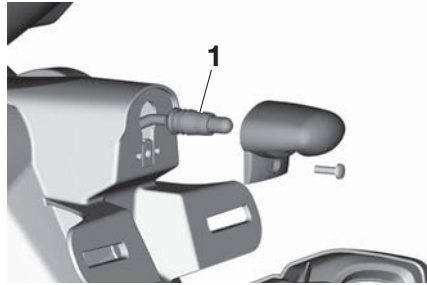
EAUM3511

1. Remove the license plate light unit by removing the screw.



1. License plate light unit
2. Screw

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



1. Socket

3. Remove the burnt-out bulb by pulling it out.
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 unit by installing the screw.

## Troubleshooting

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

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

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

### **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**

EAU60701

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

EAU76552

## Smart key system troubleshooting

Please check the following items when the smart key system does not work.

- Is the smart key turned on? (See page 4-7.)
- Is the smart key battery discharged? (See page 4-8.)
- Is the smart key battery installed correctly? (See page 4-8.)
- Is the smart key being used in a location with strong radio waves or other electromagnetic noise? (See page 4-3.)
- Are you using the smart key that is registered to the vehicle?
- Is the vehicle battery discharged? When the vehicle battery is discharged, the smart key system will not operate. Please have the vehicle battery charged or replaced. (See page 9-27.)

# Periodic maintenance and adjustment

If the smart key system does not work after checking the above items, have a Yamaha dealer check the smart key system.

## TIP

See Emergency mode on page 9-36 for information on starting the engine without the smart key.

EAU76843

## Stop and Start System trouble-shooting

If a problem occurs, check the following before taking the vehicle to a Yamaha dealer.

### The Stop and Start System indicator light does not come on.

1. Is the main switch turned on?
2. Is the Stop and Start System switch set to “”?
3. Was the engine warmed up sufficiently after starting?
4. After the engine was warmed up, was the engine left idling for a certain period of time?
5. Did the vehicle travel at a speed of 10 km/h or higher?

Even if the preceding conditions are met, the Stop and Start System may not activate in order to preserve battery power. In this case, continue to drive the vehicle.

In addition, the Stop and Start System indicator light does not come on if the engine trouble warning light is on.

If the Stop and Start System indicator light still does not come on after you checked the preceding conditions, have a Yamaha dealer check the vehicle as soon as possible.

### The Stop and Start System indicator light comes on, but the engine does not stop automatically.

1. Was the vehicle stopped completely?  
The engine may not stop automatically until the vehicle is stopped for a certain period of time. Try bringing the vehicle to a complete stop.
2. Is the throttle grip turned?  
The engine does not stop automatically if the throttle grip is not in the fully closed position.

Turn the throttle grip to the fully closed position.

If the engine still does not stop automatically after you checked the preceding conditions, have a Yamaha dealer check the vehicle as soon as possible.

### After the engine was stopped by the Stop and Start System, the engine does not restart even if the throttle grip is turned.

1. Is the Stop and Start System switch set to “”?  
If the Stop and Start System switch is set to “” while the Stop and Start System is activated, the Stop and Start System will be turned off.
2. Was the sidestand operated?  
When the sidestand is lowered, the Stop and Start System is deactivated.
3. Was the engine left stopped by the Stop and Start System for a long period of time?

## Periodic maintenance and adjustment

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If the engine is left stopped by the Stop and Start System for a long period of time, the battery could become discharged.

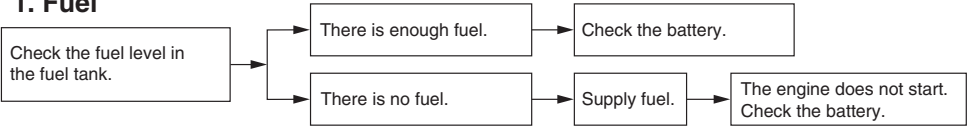
If the engine still does not restart after you checked the preceding conditions, have a Yamaha dealer check the vehicle as soon as possible.

# Periodic maintenance and adjustment

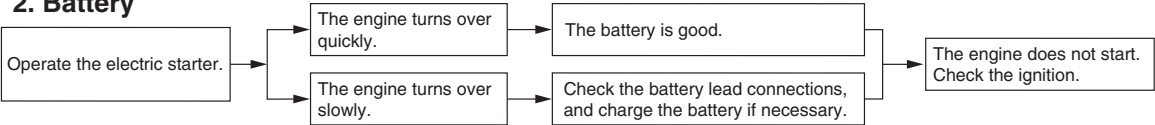
EAU86350

## Troubleshooting chart

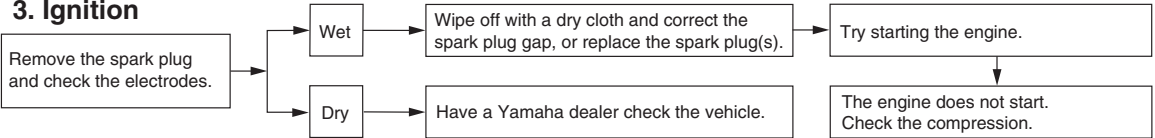
### 1. Fuel



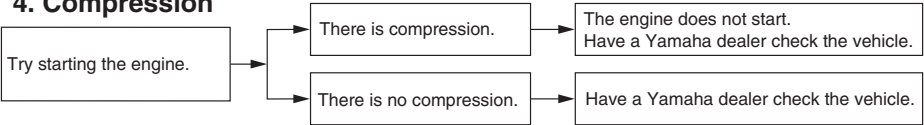
### 2. Battery



### 3. Ignition



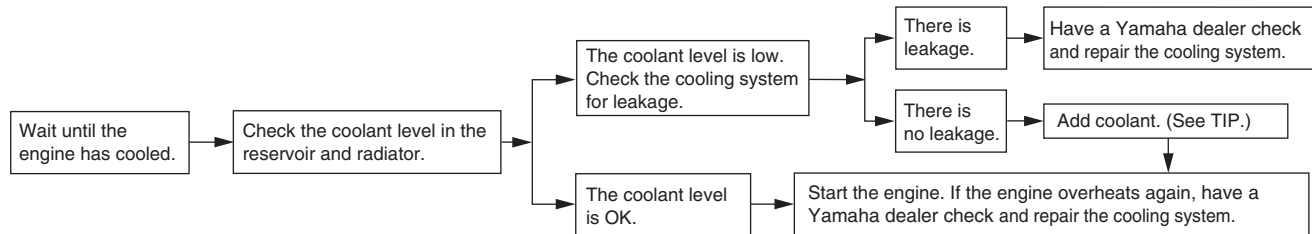
### 4. Compression



## Engine overheating

### WARNING

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



### TIP

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

# Periodic maintenance and adjustment

## 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.

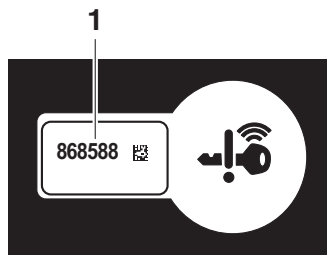
### To operate the vehicle in emergency mode

1. Stop the vehicle in a safe place and confirm the main switch is set to either “” or “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.

EAU76564



1. Smart key system indicator light “”
3. After the smart key system indicator light goes off, input the identification number as follows.



1. Identification number card
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.



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.

# Scooter care and storage

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## Matte color caution

EAU37834

ECA15193

### NOTICE

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

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## Care

EUA00990

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.

### TIP

- 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 wa-

ter seepage and deterioration of wheel bearings, brakes, transmission seals and electrical devices. Avoid high-pressure 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.

# Scooter care and storage

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.**
- **If necessary, clean the brake discs and pads with brake cleaner or acetone.**
- **Before riding at higher speeds, test the vehicle's braking performance and cornering behavior.**

EAU83472

## 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.

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 9-27 for more information on charging and storing the battery.

# Specifications

## Dimensions:

Overall length:  
1935 mm (76.2 in)  
Overall width:  
740 mm (29.1 in)  
Overall height:  
1200 mm (47.2 in)  
Seat height:  
770 mm (30.3 in)  
Wheelbase:  
1340 mm (52.8 in)  
Ground clearance:  
125 mm (4.92 in)  
Minimum turning radius:  
2.0 m (6.56 ft)

## Weight:

Curb weight:  
134 kg (295 lb)

## Engine:

Combustion cycle:  
4-stroke  
Cooling system:  
Liquid cooled  
Valve train:  
SOHC  
Number of cylinders:  
Single cylinder  
Displacement:  
155 cm<sup>3</sup>  
Bore × stroke:  
58.0 × 58.7 mm (2.28 × 2.31 in)  
Starting system:  
Electric starter

## 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:  
1.00 L (1.06 US qt, 0.88 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):  
0.50 L (0.53 US qt, 0.44 Imp.qt)

## Fuel:

Recommended fuel:  
Unleaded gasoline (E10 to E20 only)  
Octane number (RON):  
90  
Fuel tank capacity:  
7.1 L (1.9 US gal, 1.6 Imp.gal)  
Fuel reserve amount:  
1.7 L (0.45 US gal, 0.37 Imp.gal)

## Fuel injection:

Throttle body:  
ID mark:  
B651

## Front tire:

Type:  
Tubeless  
Size:  
110/70-13M/C 48P  
Manufacturer/model:  
IRC/SS-570F

## Rear tire:

Type:  
Tubeless  
Size:  
130/70-13M/C 63P  
Manufacturer/model:  
IRC/SS-560R

## Loading:

Maximum load:  
166 kg (366 lb)  
(Total weight of rider, passenger, cargo and  
accessories)

## Front brake:

Type:  
Hydraulic single 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:

LED

Rear turn signal light:

LED

Auxiliary light:

LED

License plate light:

5.0 W

# Consumer information

## Identification numbers

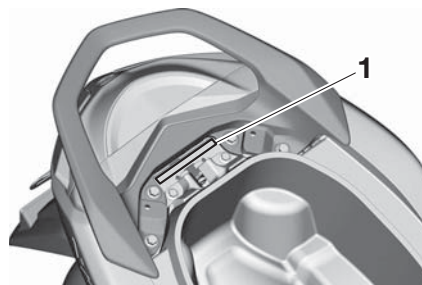
Record the vehicle identification number and the engine serial number in the spaces provided below for assistance when ordering spare parts from a Yamaha dealer or for reference in case the vehicle is stolen.

VEHICLE IDENTIFICATION NUMBER:

ENGINE SERIAL NUMBER:

EAU26366

## Vehicle identification number



1. Vehicle identification number

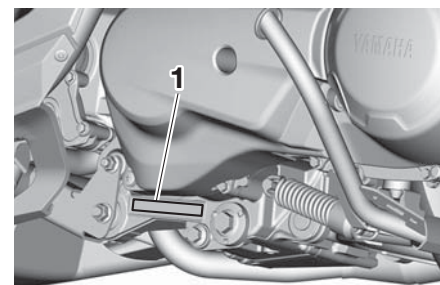
The vehicle identification number is stamped into the frame.

### TIP

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

EAU26411

## Engine serial number



1. Engine serial number

The engine serial number is stamped into the crankcase.

EAU26442

## Use of your data

This is a brief summary of how Yamaha (Yamaha Motor Co., Ltd., and the local subsidiaries) uses your data. For more details for Yamaha's use of your data, please see our Privacy Policy.

<https://global.yamaha-motor.com/en/privacy/>

## What data we collect? and How we collect your data?

This vehicle collects three types of data through integrated Engine Control Units (ECU):

(1) Vehicle Identification Number (VIN); (2) live data showing the performance of the vehicle such as engine/motor operating state, vehicle speed, mileage; and (3) other data showing the status of the vehicle such as diagnostic trouble code (DTC). The collected data will be uploaded to server at Yamaha Motor Co., Ltd. by attaching a special Yamaha diagnostic tool to the vehicle, only when maintenance checks or service procedures are performed.

## How will we use your data?

Yamaha use collected data from your vehicle, (1) to conduct adequate maintenance service including diagnostics, (2) to implement proper warranty claim judgement, (3) to conduct research and development of vehicle, (4) to provide and improve quality of products, features, and services, (5) to ensure our business purpose, and (6) to comply with requirements of laws and regulations.

## How we share your data?

We may share your data with: (i) our subsidiaries, affiliates, and business partners; (ii) dealers and distributors in your country or region, and (iii) contractors within the scope necessary to achieve the purpose of use described above.

## How to contact us

Any questions or complaints regarding the processing of your Personal Data can be submitted in writing to the local subsidiaries.

<https://global.yamaha-motor.com/link/>

## Consumer information

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The **SOLE PURPOSE** of above provided contact information is **TO RESPOND DATA PROCESSING INQUIRY** AND OTHER KINDS OF INQUIRIES **WILL NOT BE RESPONDED**. Please provide the following information for the proper handling of your inquiry: **(1) Your Name; (2) Your Email Address; (3) Your Country of Residence; and (4) Your VIN**. We will use your personal information provided only for the purpose of supporting your data processing inquiry.

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## Yamaha Motorcycle Connect

