



 Read this manual carefully before operating this vehicle.

 Baca buku panduan dengan teliti sebelum mengendalikan motosikal ini.

 在使用这电单车以前，请充分使用这小手册

**OWNER'S MANUAL**  
**BUKU PANDUAN PEMILIK**  
使用手册

**XMAX**


**CDZ250-A**

**BPW2-F8199-30**


EALJ46091

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

EALJ46091

 **Baca buku panduan dengan teliti sebelum mengendalikan motosikal ini. Buku panduan diberi bersama dengan pembelian motosikal.**

EALJ46091

 **在使用这电单车以前，请充分使用这小手册。这手册须付与电单车一起。**

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# Introduction

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EAU10084

Congratulations on your purchase of the Yamaha CZD300S/CZD300SC. This model is the result of Yamaha's vast experience in the production of fine sporting, touring, and pacesetting racing machines. It represents the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields.

This manual will give you an understanding of the operation, inspection, and basic maintenance of this motorcycle. If you have any questions concerning the operation or maintenance of your motorcycle, please consult a Yamaha dealer.

The design and manufacture of this Yamaha motorcycle fully comply with the emissions standards for clean air applicable at the date of manufacture. Yamaha has met these standards without reducing the performance or economy of operation of the motorcycle. To maintain these high standards, it is important that you and your Yamaha dealer pay close attention to the recommended maintenance schedules and operating instructions contained within this manual.

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.

EWA10012

## WARNING

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**Please read this manual and the “YOU AND YOUR MOTORCYCLE: RIDING TIPS” booklet carefully before operating this motorcycle. Do not attempt to operate this motorcycle until you have attained adequate knowledge of its controls and operating features. Regular inspections and careful maintenance, along with good operating techniques, will help ensure that you safely enjoy the capabilities and reliability of this motorcycle.**



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## Important manual information

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EAU10134

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>	<b>A TIP provides key information to make procedures easier or clearer.</b>

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

## Important manual information

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EALN0770

**CDZ250-A  
OWNER'S MANUAL**  
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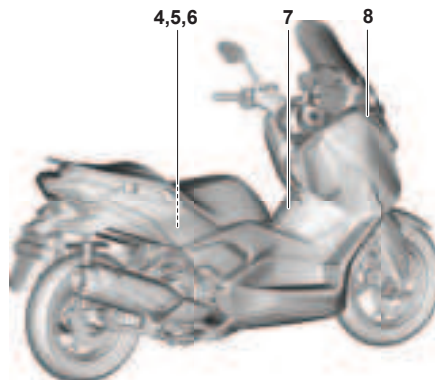
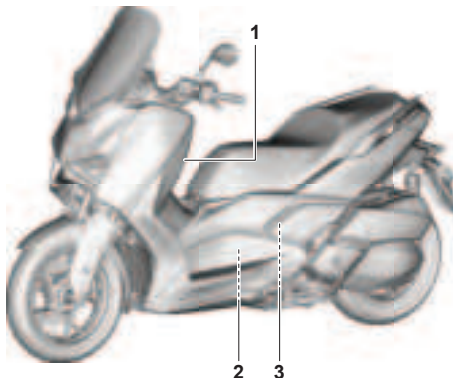
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## Location of important labels

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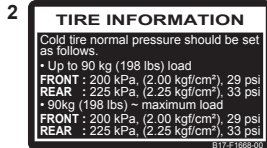
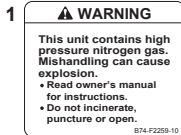
Read and understand all of the labels on your vehicle. They contain important information for safe and proper operation of your vehicle. Never remove any labels from your vehicle. If a label becomes difficult to read or comes off, a replacement label is available from your Yamaha dealer.





## Location of important labels

1



## Safety information

EAU1026B

2

### Be a Responsible Owner

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

Scooters 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 scooter.

He or she should:

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

- Never operate a scooter without proper training or instruction. Take a training course. Beginners should receive training from a certified instructor. Contact an authorized scooter dealer to find out about the training courses nearest you.

### Safe Riding

Perform the pre-operation checks each time you use the vehicle to make sure it is in safe operating condition. Failure to inspect or maintain the vehicle properly increases the possibility of an accident or equipment damage. See page 7-1 for a list of pre-operation checks.

- This scooter is designed to carry the operator and a passenger.
- The failure of motorists to detect and recognize scooters in traffic is the predominating cause of automobile/scooter accidents. Many accidents have been caused by an automobile driver who did not see the scooter. 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 scooter accidents to occur.
- Ride where other motorists can see you. Avoid riding in another motorist's blind spot.
- Never maintain a scooter without proper knowledge. Contact an authorized scooter dealer to inform you on basic scooter maintenance. Certain maintenance can only be carried out by certified staff.

- Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current driver's license.
- Make sure that you are qualified and that you only lend your scooter 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 scooter where there is no traffic until you have become thoroughly familiar with the scooter and all of its controls.
- Many accidents have been caused by error of the scooter 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 scooter.
- 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 scooter is designed for on-road use only. It is not suitable for off-road use.

**Protective Apparel**

The majority of fatalities from 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 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.

## Safety information

2

### **Avoid Carbon Monoxide Poisoning**

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

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

- Do not run engine indoors. Even if you try to ventilate engine exhaust with fans or open windows and doors, carbon monoxide can rapidly reach dangerous levels.
- Do not run engine in poorly ventilated or partially enclosed areas such as barns, garages, or carports.

- Do not run engine outdoors where engine exhaust can be drawn into a building through openings such as windows and doors.

### **Loading**

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

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

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

<p><b>Maximum load:</b> 171 kg (377 lb)</p>
---

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

- Cargo and accessory weight should be kept as low and close to the scooter 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 scooter to minimize imbalance or instability.
- Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the scooter 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 scooter. 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 scooter due to aerodynamic effects. Wind may attempt to lift the scooter, or the scooter 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 scooter's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

## Safety information

### Aftermarket Tires and Rims

The tires and rims that came with your scooter were designed to match the performance capabilities and to provide the best combination of handling, braking, and comfort. Other tires, rims, sizes, and combinations may not be appropriate. Refer to page 9-20 for tire specifications and more information on replacing your tires.

### Transporting the Scooter

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

- Remove all loose items from the scooter.
- 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 scooter with tie-downs or suitable straps that are attached to solid parts of the scooter, 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 lo-

cation 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 scooter will not bounce excessively during transport.

EAU57600

### 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.

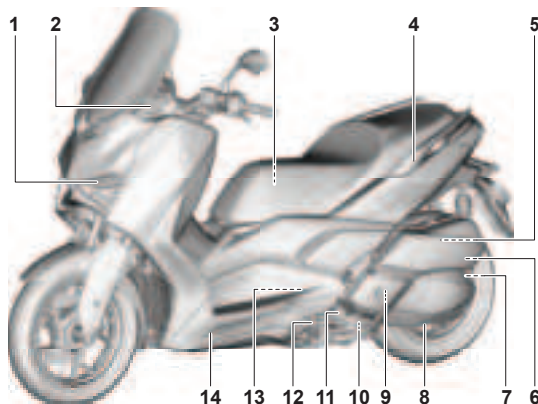
- Always wear a helmet, gloves, trousers (tapered around the cuff and ankle so they do not flap), and a brightly colored jacket.
- Do not carry too much luggage on the scooter. An overloaded scooter is unstable. Use a strong cord to secure any luggage to the carrier (if equipped). A loose load will affect the stability of the scooter and could divert your attention from the road. (See page 2-3.)

# Description

EAU10411

## Left view

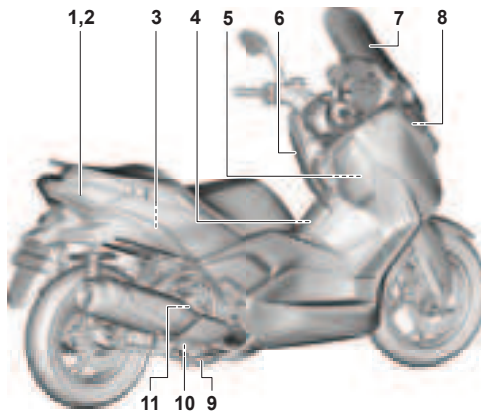
3



- |  |   |
|--|---|
| 1. Headlight (page 9-32)   | 9. V-belt case air filter element (page 9-16) |
| 2. Front turn signal light   | 10. Engine oil drain bolt (page 9-10)         |
| 3. Tool kit (page 9-2)   | 11. Engine oil filter element (page 9-10)     |
| 4. Grab bar (page 8-3)   | 12. Sidestand (page 6-35)                     |
| 5. Air filter element (page 9-16)                                    | 13. Spark plug (page 9-9)                     |
| 6. Shock absorber assembly spring preload adjusting ring (page 6-34) | 14. Coolant reservoir (page 9-14)             |
| 7. Final transmission oil filler cap (page 9-13)                     |   |
| 8. Final transmission oil drain bolt (page 9-13)                     |   |



## Right view



- 1. Tail light
- 2. Rear turn signal light
- 3. Rear storage compartment (page 6-31)
- 4. Fuel tank cap (page 6-28)
- 5. Battery (page 9-29)
- 6. Storage compartment A (page 6-31)
- 7. Windscreen (page 9-30)
- 8. Fuses (page 9-30)

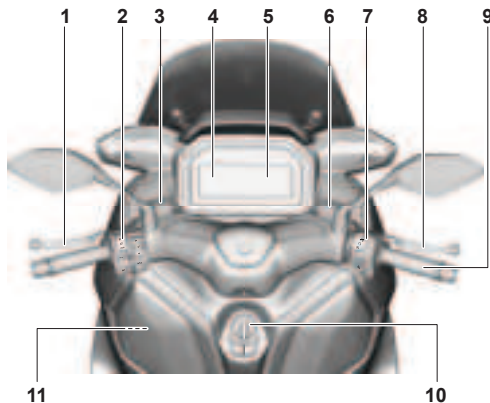
- 9. Centerstand (page 9-27)
- 10. Engine oil level check window (page 9-10)
- 11. Engine oil filler cap (page 9-10)

# Description

EAU10431

## Controls and instruments

3



1. Rear brake lever (page 6-25)

2. Left handlebar switches (page 6-23)

3. Rear brake fluid reservoir (page 9-24)

4. Main display (page 6-3)

5. Infotainment display (page 6-5)

6. Front brake fluid reservoir (page 9-24)

7. Right handlebar switches (page 6-23)

8. Front brake lever (page 6-25)

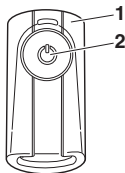
9. Throttle grip (page 9-20)

10. Main switch (page 4-8)

11. USB Type-C jack (page 6-35)

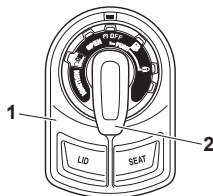
### Smart key system

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 4-5.)



1. Smart key
2. Smart key button

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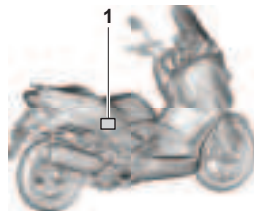


1. Main switch
2. Main switch knob

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.)

## Special features

- 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 9-37.)

### 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.

### Part 15 of FCC Rules

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of this device.

### FCC WARNING

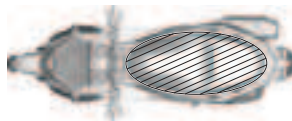
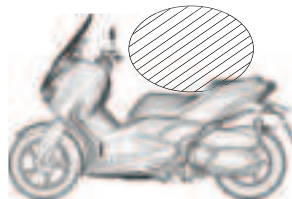
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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### Operating range of the smart key system

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



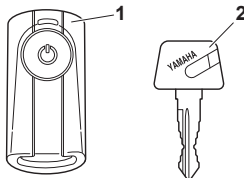
If the smart key is turned off, the vehicle will not recognize the smart key even if it is within operating range. If the smart key battery is discharged, the

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

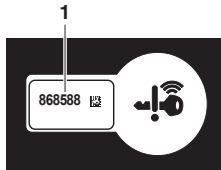
### TIP

- 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 keys and mechanical keys



1. Smart key  
2. Mechanical key



1. Identification number card

### WARNING

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

Included with the vehicle is one smart key, two mechanical keys, and one identification number card.

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 9-37.) **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

## Special features

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

ECA21573

### NOTICE

4

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.**

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### TIP

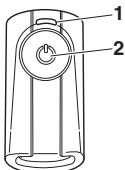
- The smart key battery life is approximately two years, but this may vary according to operating conditions.
- Replace the smart key battery when the smart key system indicator light flashes for 20 seconds when the vehicle is turned on, or when the smart key indicator light does not come on when the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

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

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

### Smart key

EUAJ3101



1. Smart key indicator light
2. Smart key button



#### **WARNING**

EWA22271

- **KEEP OUT OF REACH OF CHILDREN**

The smart key contains a coin/button cell battery.

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

#### **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.

#### 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

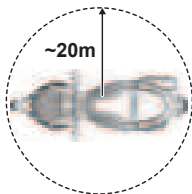
Push the smart key button to operate the answer-back function remotely. The beeper will sound twice and all of the turn signal lights will flash twice. This feature is convenient for locating your vehicle in a parking lot and other areas.

#### Operating range of the answer-back function

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

## Special features

4



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:

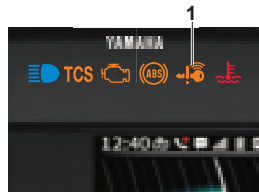
- Sounds twice: The beeper is turned off.
- Sounds once: The beeper is turned on.

## Replacing the smart key battery

EAUJA3112

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

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



1. Smart key system indicator light " " "



### **WARNING**


EWA22830

This battery contains combustible materials such as lithium metal and organic electrolyte. The following cautions should be followed in order to use this battery safely:

- Do not short circuit the battery
- Do not charge the battery
- Do not soak the battery in water
- Do not deform or damage the battery
- Do not modify the battery in any way

Specified battery:  
CR2032

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

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

### **WARNING**

EWA20632

Danger of explosion if battery is incorrectly replaced

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

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

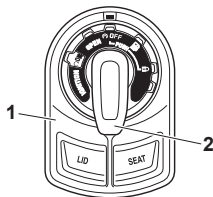
**Do not ingest the battery, Chemical Burn Hazard**

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

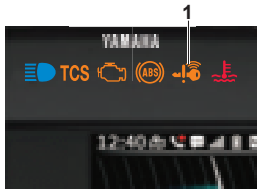
## Special features

### Main switch

EALJA3120



1. Main switch
2. 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 and storage compartment A. 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”, “LOCK”, 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

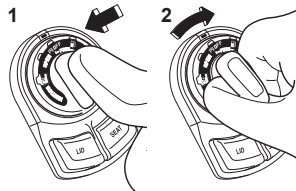
#### TIP

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

EALJA2160



1. Push.
2. Turn.

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

#### To turn the vehicle power on

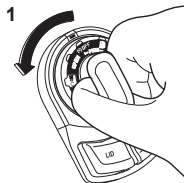
1. Turn the smart key on and bring it within operating range.
2. Push the main switch knob and the smart key indicator light will come on for approximately 4 seconds.
3. While the smart key system indicator light is on, turn the main switch to “ON”. All of the turn signal lights will flash twice and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

## Special features

### TIP

- If the vehicle battery voltage is low, the turn signal lights will not flash.
- See “Emergency mode” on page 9-37 for information on turning the vehicle power on without the smart key.

### OFF



1. Turn.

All electrical systems are off.

### To turn the vehicle power off

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

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

### TIP

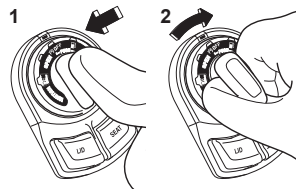
When the main switch is turned to “OFF” but the smart key cannot be confirmed (the smart key is either outside operation range or has been turned off), the beeper will sound for 3 seconds and the smart key system indicator light will flash for 30 seconds.

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

### OPEN (open)

Power is supplied to the main switch. The seat and storage compartment A can be opened.

### To open the seat and storage compartment A

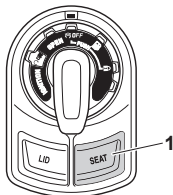


1. Push.
2. Turn.

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, turn the main switch to “OPEN”.
3. To open the seat, push the “SEAT” button, and then lift the rear of the seat.

## Special features

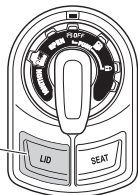
4



1. "SEAT" button



4. To open storage compartment A, push the "LID" button.



1. "LID" button



1. Storage compartment A

### TIP

Make sure that the seat and storage compartment are securely closed before starting off.

### Open position reminder

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

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

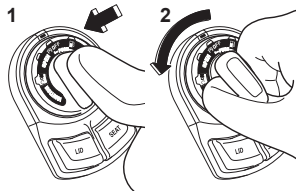
If the beeper sounds after 3 minutes, turn the main switch to "OFF" or "LOCK". If the beeper sounds because the smart key was turned off or moved out of range, turn the smart key on and walk back into range.

### TIP

- The beeper will turn off after 1 minute.
- The seat can also be opened with the mechanical key. (See page 6-31.)

EALUA2180

### “🔒” (lock)



1. Push.
2. Push and turn.

The steering is locked and all electrical systems are off.

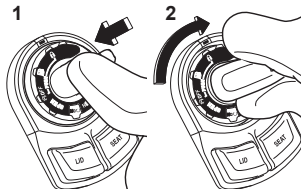
### To lock the steering

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 “🔒”.

### TIP

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

### To unlock the steering



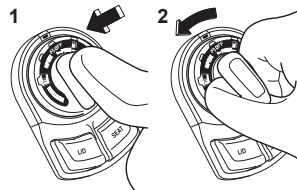
1. Push.
2. Push and turn.

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.

EALUA3140

### “🛢️” (fuel tank cap lid)

### To open the fuel tank cap lid



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, turn the main switch to “🛢️”.

### To close the fuel tank cap lid

Push the fuel tank cap lid down until it is closed.

## Special features

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EWA21301

### **WARNING**

Make sure that the fuel tank cap is properly closed before operating the vehicle. Leaking fuel is a fire hazard.

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## Smartphone Connectivity System

### Smart features: Introduction

EAU99096

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.**

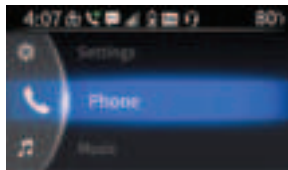
This vehicle is equipped with an extensive suite of smart features utilizing your smartphone, connected to the vehicle through a communication control unit (CCU) and the Yamaha Motorcycle Connect app on your phone.

- 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 6-18)
- 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 6-24). 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. “Y” 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 “Y” button to cycle between the 3 home screens or return to the previous screen in the menu system.
- Long press the “Y” 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 “Y” 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.



# Smartphone Connectivity System

EAUN4181

## Compliance with FCC rules and regulation

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### FCC CAUTION:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

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.

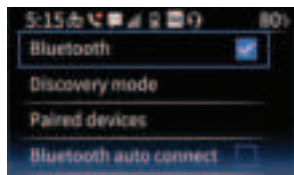
- In a location exposed to strong radio waves or other electromagnetic noise.

## Smartphone Connectivity System

5

- 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”.

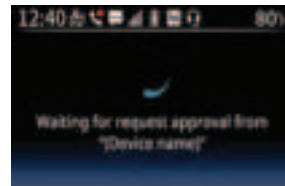


4. Open the Yamaha Motorcycle Connect app and navigate to the “Pairing” screen. Follow the instructions on the app to detect the CCU and pair/connect with it.

### 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 “^”/“v” 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 (M-C) 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.)

## Smartphone Connectivity System

### 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 6-6 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.

## Smartphone Connectivity System

- 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.

### 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 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 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 headset's 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.

## Smartphone Connectivity System

### 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

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).

EAU99124

#### 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 “v” 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.

## Smartphone Connectivity System

- 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.
- **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.**

### 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 6-9). The call audio will play through the connected Bluetooth headset.

EWA21420

### WARNING

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

EAU99213

### Connection troubleshooting

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.



## Smartphone Connectivity System

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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 Street-Cross app.

# Instrument and control functions

## Indicator lights and warning lights



1. Left turn signal indicator light “

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

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

## Coolant temperature warning light “ 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 9-36.)

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

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

## Engine trouble warning light “ 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.

## ABS warning light “ 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.

## 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.



## Instrument and control functions

- Have a Yamaha dealer check the vehicle as soon as possible.

### TIP

If the engine is revved while the brakes are applied or the vehicle is on its centerstand (if equipped), the ABS warning light may come on. If this happens, turn the vehicle power off and then back on again to reset the ABS warning light.

### Traction control system indicator light “TCS”

This indicator light will flash when traction control has engaged.

If the traction control system is turned off, this indicator light will come on.

### 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.

### Smart key system indicator light “”

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.

EAUN2772

### Dual Displays

EAU99271



1. Main display
2. Infotainment display

### 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.

EWA21412

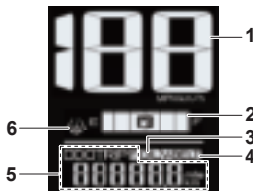
## Instrument and control functions

- **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.

6

### Main display



EALUA3160

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

### TIP

The display units can be changed in the menu system on the infotainment display. (See page 6-19.)

### 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 (625 mi), then 6000 km (3500 mi) and then every 6000 km (3500 mi) thereafter. When it appears, change the engine oil. (See page 6-21.)

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

This indicator will flash every 20000 km (12500 mi). When it appears have a Yamaha dealer replace the V-Belt.

## Instrument and control functions

### 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 6-21.)

### Icy road warning indicator

The icy road warning indicator will flash when the detected air temperature is 3 °C (37 °F) or lower.

### TIP

In some riding conditions, this indicator may not flash when the actual air temperature reaches 3°C (37 °F) or lower

### Odometer/Tripmeters

This section of the display contains an odometer (ODO), two tripmeters (TRIP 1,2), 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 6-21.)

### Odometer (ODO)

The odometer shows the total distance traveled by the vehicle.

### TIP

ODO will lock at 999999 and cannot be reset.

### Tripmeters (TRIP 1,2)

Shows the distance traveled since it was last set to zero.

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.

# Instrument and control functions

EALUA3180

## 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 6-18.)

- 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 6-19.)
- The display units for the navigation system are locked to match the region settings on the connected smartphone.



## Home screens

There are 4 home screens for the infotainment display:

- visualizer home screen
- navigation home screen
- vehicle information home screen
- windscreen control 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 variations of visualizer home screen: “Tachometer”, “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 press the “✓” switch to shortcut to “⌚ Meter display” in the menu system.

## Instrument and control functions

### Tachometer visualizer

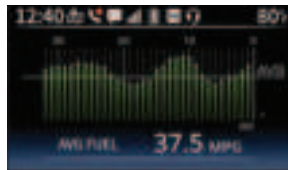


The tachometer visualizer shows the engine speed, as measured by the rotational velocity of the crankshaft, in revolutions per minute (r/min).

#### TIP

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

### ECO visualizer



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

### Speed visualizer



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 cur-

rent 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.

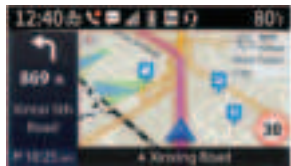
### Navigation home screen



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

## Instrument and control functions

### Default view



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

### 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.

### TIP

- While on the navigation home screen, long press the “v” switch to shortcut 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 connection error may be displayed when using the navigation home screen (iOS only).

### Turn list



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

### Vehicle information home screen



The vehicle information display provides the following information:

- ☑ Average speed (AVG SPEED)

## Instrument and control functions

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

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

Short press the “v” switch to open the menu system and navigate to “Settings” → “Information / Reset” → “Vehicle info.” to reset individual items. (See page 6-20.)

### TIP

While on the vehicle information home screen, long press the “v” switch to shortcut 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 6-19). 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 6-19). When using miles, the instantaneous fuel consumption is displayed in “MPG”.

### Trip timer (TRIP TIME)

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

### Air temperature (AIR)

The air temperature is displayed from -9 °C (16 °F) to 50 °C (122 °F) in 1 °C (1 °F) increments. The temperature displayed may vary from the actual ambient temperature.

### TIP

- “---” will be displayed if the detected temperature is lower than -9 °C (16 °F).
- “---” will be displayed if the detected temperature is higher than 50 °C (122 °F).

### 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).

## Instrument and control functions

### 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.

### Windscreen control home screen



This home screen enables control of the windscreen. Hold the “^”/“v” switches to adjust the windscreen position up/down.

#### TIP

If the windscreen is adjusted continuously for an extended time, the system will overheat and disable itself until cooled.

### 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 “v” switch to open the menu system and navigate to “Settings” → “Clock” → “Manual Adjustment”. (See page 6-18.)

### Indicator icons



#### 1. Indicator icons

### Navigation connection indicator icon “Navigation”

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

### Telephone indicator icon “Phone”

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 “Notification”

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.




## Instrument and control functions

### 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.

#### 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.

: 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.

### Grip warmer indicator icon “” (if equipped)


The grip warmers can be used when the engine is running. There are 3 customizable temperature presets that can be selected by navigating to “ Grip Warmer” in the menu system. (See page 6-22.)

The presets can be customized between 10 different temperature levels by navigating to “ Settings” → “Grip Warmer Settings” in the menu system. (See page 6-19.)

The icon displays the current temperature setting:

Icon off: Grip warmer off.

: Low preset

: Medium preset

: High preset

#### TIP

When the engine is idling or at low r/min, power to the grip warmers is reduced.

ECA17932


### NOTICE


- Be sure to wear gloves when using the grip warmers.


## Instrument and control functions

EALUA3191

- Do not use the grip warmers in warm weather.
- If the handlebar grip or throttle grip becomes worn or damaged, stop using the grip warmers and replace the grips.

Seat heater indicator icon “


The seat heater can be used when the engine is running. There are 3 customizable temperature presets that can be selected by navigating to “ Seat Heater” in the menu system. (See page 6-22.)

The presets can be customized between 10 different temperature levels by navigating to “ Settings” → “Seat Heater Settings” in the menu system. (See page 6-19.)

The icon displays the current temperature setting:

Icon off: Seat heater off.

: Low preset

: Medium preset

: High preset

### TIP

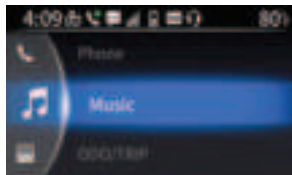
When the engine is idling or at low r/min, power to the seat heater is reduced.





ECA23980

### NOTICE





- Be sure to wear protective clothing that covers your hip and legs when using the seat heater.
- If the ambient temperature is 20 °C (68 °F) or higher, do not set the seat heater to the high setting.
- If the seat becomes worn or damaged, stop using the seat heater and replace the seat.

## Menu system




The menu system for this vehicle is controlled with the “”/“”/“” switches and “

### Menu system basic operations:










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



6

## Instrument and control functions

- Long press the “

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.)
 “Seat Heater” (if equipped)	Adjust seat heater presets. (See page 6-22.)


 “Grip Warmer” (if equipped)	Adjust grip warmer presets. (See page 6-22.)
 “Wind Screen”	Adjust the windscreen up and down.

### “ Phone”




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

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

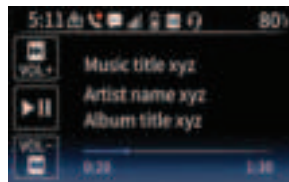
Short press the “” switch to end the call.

### 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 vol-

ume 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 “”/“” switches to adjust the volume.

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

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

## Instrument and control functions

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


6

### “ ODO/TRIP”





This module controls which item is displayed on the odometer/tripmeters section of the main display. (See page 6-4.)

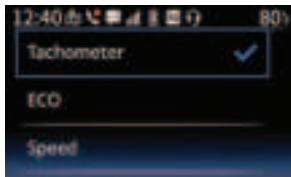
Short press the “” switch to select a highlighted item, it will be displayed on the odometer/tripmeter section of the main display and the menu will return to the previous screen.

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

### TIP

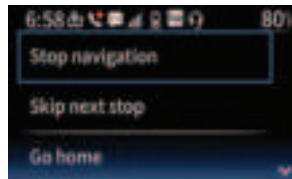
- The odometer cannot be reset.
- With “ ODO/TRIP” highlighted in the top menu, long press the “” switch to reset all tripmeters at once.

### “ Meter display”



This module allows selection of which visualizer is displayed on the visualizer home screen. (See page 6-5.)

### “ Navigation”



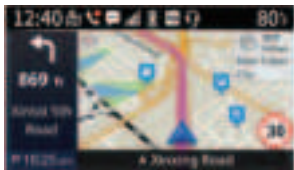
This module contains a list of commands for the navigation system: (See page 6-6.)

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

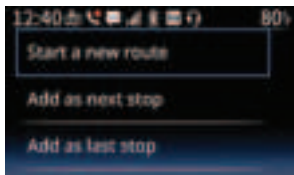
### TIP

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

## Instrument and control functions



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

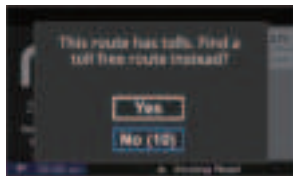


If route guidance is already active when a command is used to select a destination, the following options will be available:

“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.

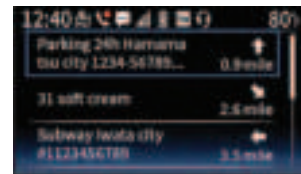
“Navigation” → “Go home”

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”



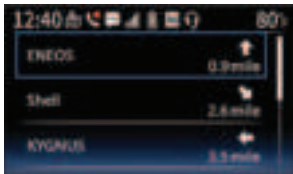
Shows a list of saved locations and their distance from current location (must have saved locations in the Garmin StreetCross).

## Instrument and control functions

### 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.

### “Navigation” → “Nearby Gas stations”

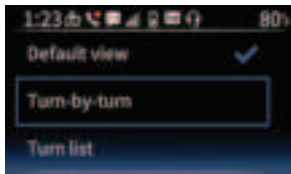


Shows a list of nearby gas stations and their distance from current location.

### TIP

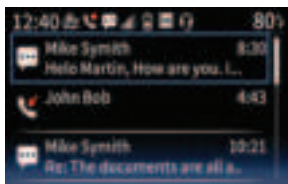
If route guidance is in progress, arrows appear showing direction to the gas stations. The current direction of travel is indicated by the upwards arrow.

### “Navigation” → “Change view”



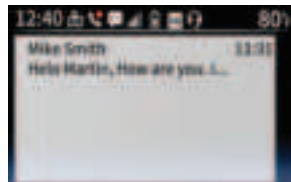
This module changes the navigation system display mode (Default view/Turn list/Turn-by-turn). After selection, the navigation home screen will open in the selected display mode.

### “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

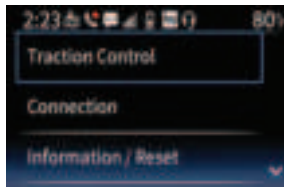


This module displays weather information at your current location. Short press the “^”/“v” switches to change the timeframe of the weather information (hourly/daily).

### TIP

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

### Settings

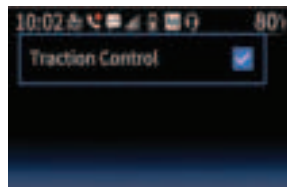


The Settings menu contains the following:

“Traction Control”	Activate/Deactivate traction control. (See page 6-16.)
“Connection”	Manage Bluetooth connections. (See page 6-17.)
“Clock”	Adjust time/set automatic update. (See page 6-18.)
“Brightness”	Change brightness of infotainment display screen. (See page 6-18.)
“Unit”	Change the display units. (See page 6-19.)
“Seat Heater Settings” (if equipped)	Customize seat heater presets. (See page 6-19.)
“Grip Warmer Settings” (if equipped)	Customize grip warmer presets. (See page 6-19.)
“System information”	View CCU unit ID. (See page 6-20.)

“Legal information”	View software licenses. (See page 6-20.)
“Information / Reset”	View/reset tripmeters and other settings. (See page 6-21.)

### Settings → “Traction Control”



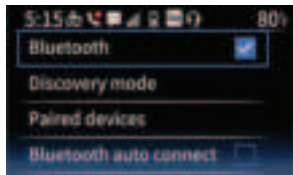
Short press the “✓” switch to turn the traction control system ON/OFF. The checkmark indicates ON. See page 6-27 for more information about the traction control system.

### TIP

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

## Instrument and control functions

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



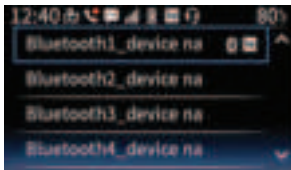
6



### “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.

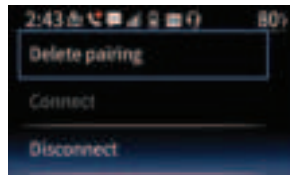


Paired smartphones are listed here. The Yamaha Motorcycle Connect app symbol “” next to a device name indicates that the app is currently connected to the CCU. The Bluetooth symbol “” next to a device name indicates that Garmin StreetCross is currently connected to the CCU.

### 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



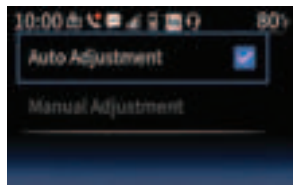
## Instrument and control functions

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 → “Clock”

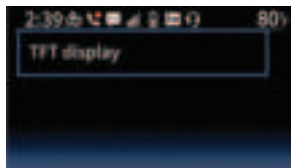


The clock can be set to auto-adjust in sync with a smartphone. “Auto Adjustment” ON is indicated by the checkmark and requires a connection with the Yamaha Motorcycle Connect app. (See page 5-2.) “Manual Adjustment” allows the clock to be calibrated manually.



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.

### ⚙️ Settings → “Brightness”



The multi-function meter is equipped with a sensor to detect ambient lighting conditions and adjust the brightness levels of the displays. This module also allows you to manually set the screen brightness levels.

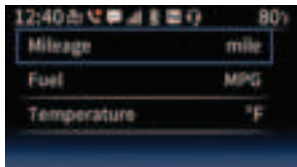
### TIP

- As the brightness settings are adjusted in the menu, the screen brightness will change in real time.
- If the temperature of the displays 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.

The display brightness setting has 3 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.

## Instrument and control functions

### “Settings” → “Unit”



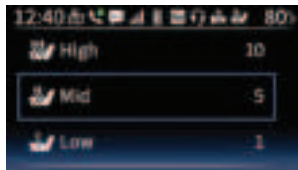
The selected display units are shown. The display units can be selected as follows:

- “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.

### “Settings” → “Seat Heater Settings” (if equipped)



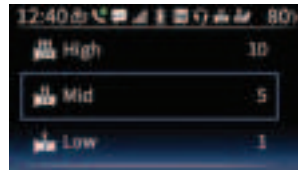
The three seat heater presets can be customized here. Short press the “✓” switch to select the desired preset (Low/Mid/High).



Short press the “^”/“v” switches to adjust the heat level from 1-10. Short press the “✓” switch to confirm the settings and return to the previous menu.

When finished, long press the “✓” switch to exit the menu system.

### “Settings” → “Grip Warmer Settings” (if equipped)



The three grip warmer presets can be customized here. Short press the “✓” switch to select the desired preset (Low/Mid/High).



## Instrument and control functions

Short press the “^”/“v” switches to adjust the heat level from 1-10. Short press the “v” switch to confirm the settings and return to the previous menu.

When finished, long press the “v” switch to exit the menu system.

### “Settings” → “System information”

This module displays the current system software version.

#### “Unit ID”

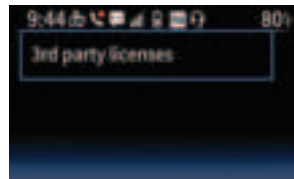


This module contains a QR code with the CCU's unit identification number. The “^”/“v” switches control the brightness of the QR code. Short press the “v” switch to return to the previous menu.

#### TIP

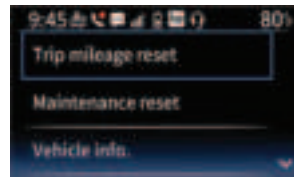
The CCU's unit ID is only required for dealer service operations.

### “Settings” → “Legal information”



Third-party license agreements can be viewed here.

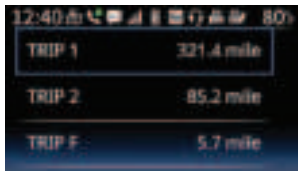
### “Settings” → “Information / Reset”



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

## Instrument and control functions

### "Trip mileage reset"

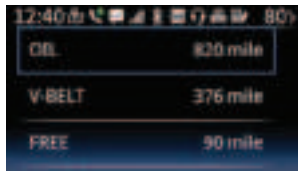


This module allows reset of the tripmeters on the main display. Short press the “^”/“v” switches to highlight an item. Long press the “v” switch to reset the item. Confirm by selecting “OK”.

#### **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**

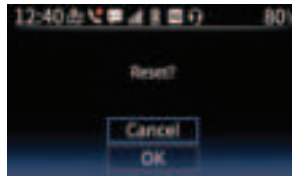
When the “OIL” and “V-BELT” items are reset, the Oil change indicator “OIL” and the V-Belt replacement indicator “V-BELT” on the main display will go off.

### "Vehicle info."



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

### "Reset (Others)"



This module mass resets the following to the default settings:

## Instrument and control functions

- 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.

### “ Seat Heater” (if equipped)




Short press the “”/“” switches to cycle the seat heater between OFF and 3 presets (Low/Mid/High). The presets can be customized between 10 different temperature levels in “ Settings” → “Seat Heater Settings”. (See page 6-19.)

The seat heater indicator icon on the top right of the display shows the currently selected seat heater preset.




Short press the “” switch to finalize the setting and return to the previous menu.

### TIP


While in this module, long press the “” switch to shortcut to “Seat Heater Settings”.

### “ Grip Warmer” (if equipped)




Short press the “”/“” switches to cycle the grip warmer between OFF and 3 presets (Low/Mid/High). The presets can be customized between 10 different temperature levels in “ Settings” → “Grip Warmer Settings”. (See page 6-19.)

The grip warmer indicator icon on the top right of the display shows the currently selected grip warmer preset.

Short press the “” switch to finalize the settings and return to the previous menu.

### TIP

While in this module, long press the “” switch to shortcut to “Grip Warmer Settings”.

### “Wind Screen”



## Instrument and control functions

This module enables control of the windscreen. Hold the “^”/“v” switches to adjust the windscreen position up/down.

Short press the “✓” switch to finalize the settings and return to the previous menu.

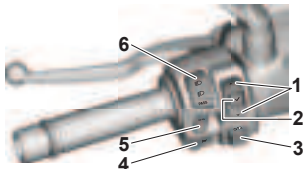
### TIP

If the windscreen is adjusted continuously for an extended time, the system will overheat and disable itself until cooled.

6

### Handlebar switches

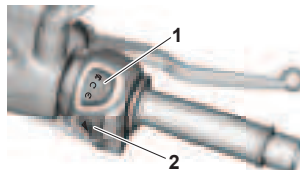
#### Left



1. “^”/“v” switches
2. “✓” switch
3. “50” button
4. Horn switch “📢”
5. Turn signal switch “↩/↪”
6. Dimmer/Pass switch “☰/☲/PASS”

EAU1234U

#### Right



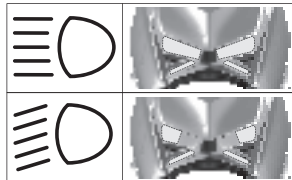
1. Stop/Run/Start switch “⊗/⊙/⊛”
2. Hazard switch “⚠”

EAU54203

### Dimmer/Pass switch “☰/☲/PASS”

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

To flash the high beam, push the switch down towards “PASS” while the headlights are on low beam.



## Instrument and control functions

### Turn signal switch “↵/↶”

EAU12461

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 “🔊”

EAU12501

Press this switch to sound the horn.

### Stop/Run/Start switch “🛑/🔄/🚦”

EAU54213

To crank the engine with the starter, set this switch to “🔄”, and then push the switch down towards “🚦”. See page 8-2 for starting instructions prior to starting the engine.

Set this switch to “🛑” to stop the engine in case of an emergency, such as when the vehicle overturns or when the throttle cable is stuck.

### Hazard switch “⚠️”

EAU13951

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.

The hazard lights can be turned on or off only when the main switch is in the “ON” position. You can turn the main switch to the “OFF” or “LOCK” position, and the hazard lights will continue to flash. To turn off the hazard lights, turn the main switch to the “ON” position and operate the hazard switch again.

#### NOTICE

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

ECA10062

### Menu switches

EAUN3911



1. “^”/“v” switches
2. “✓” switch
3. “☰” 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 “^”/“v” switches to highlight and adjust menu items.

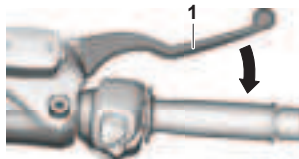
## Instrument and control functions

- 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.

6

### Front brake lever

EAU12902

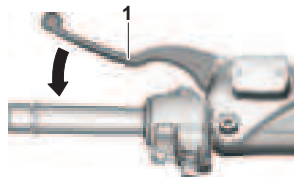


1. Front brake lever

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

### Rear brake lever

EAU12952



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.

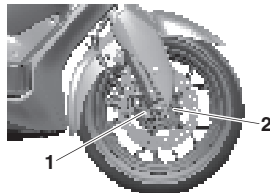
### TIP

- 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.

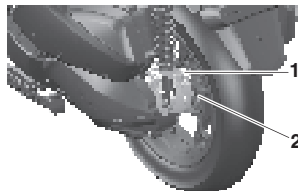
ECA20100

### NOTICE

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



1. Front wheel sensor
2. Front wheel sensor rotor



1. Rear wheel sensor
2. Rear wheel sensor rotor

# Instrument and control functions

6

## Traction control system

EAUN3963

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.

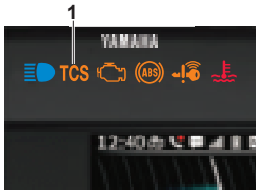


### WARNING

EWA18860

**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.**

## Setting the traction control system



1. Traction control system indicator “**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.

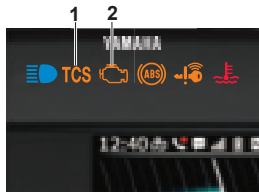
ECA16801


### NOTICE

**Use only the specified tires. (See page 9-20.) 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 “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

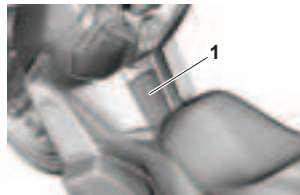
If the “TCS” indicator light remains on after resetting, the vehicle may still be ridden; however, have a Yamaha dealer check the vehicle as soon as possible.

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

## Fuel tank cap

### To remove the fuel tank cap

1. With the smart key turned on and within operating range, turn the main switch to “” to open the fuel tank cap lid.



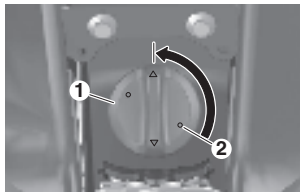
1. Fuel tank cap lid

2. Turn the fuel tank cap counter-clockwise until the release mark “o” aligns with “▽”, and then pull the cap off.

## Instrument and control functions

EWA11092

EAU13213



1. Fuel tank cap
2. Release mark "o"

6

### **WARNING**

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

## Fuel

Make sure there is sufficient gasoline in the tank.

EWA10882

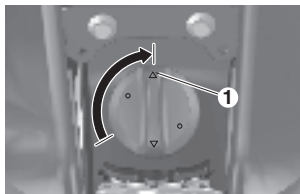
### **WARNING**

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

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

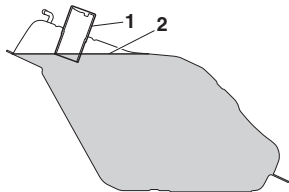
### To install the fuel tank cap

1. Insert the fuel tank cap onto the tank opening and turn it clockwise until the install mark "△" aligns with "▽".



1. Install mark "△"
2. Close the fuel tank cap lid.

## Instrument and control functions



1. Fuel tank filler tube
2. Maximum fuel level

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

### **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.

EAU63161

#### **Recommended fuel:**

Regular unleaded gasoline (E10 acceptable)

#### **Fuel tank capacity:**

13 L (3.4 US gal, 2.9 Imp.gal)

ECA11401

### **NOTICE**

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

Your Yamaha engine has been designed to use regular unleaded gasoline with a research octane number of 91 or higher. If knocking (or pinging) occurs, use a gasoline of a different brand or premium unleaded fuel. Use of unleaded fuel will extend spark plug life and reduce maintenance costs.

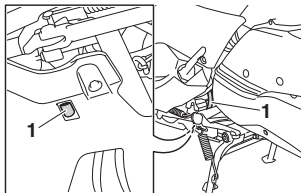
### **Gasohol**

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

# Instrument and control functions

## Fuel tank overflow hose

EAU58301



1. Fuel tank overflow hose

6

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.



**WARNING**

EWA10863

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.

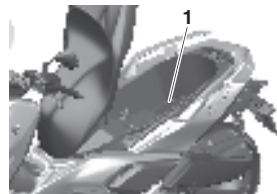
## Storage compartments

EAU4420

This model is equipped with 2 storage compartments. The front storage compartments and rear storage compartment are located as shown.



1. Storage compartment A



1. Rear storage compartment

**TIP**

- Storage compartment A can only be opened using the smart key system.
- The seat/rear storage compartment can be opened using the smart key system or the mechanical key.
- The light in the rear storage compartment only comes on when the vehicle power is on.
- Some helmets cannot be stored in the rear storage compartment because of their size or shape.

### Storage compartment A

To open storage compartment A: with the smart key turned on and within operating range, turn the main switch to "OPEN" and then push the "LID" button.

To close storage compartment A, push the storage compartment lid until it is closed.

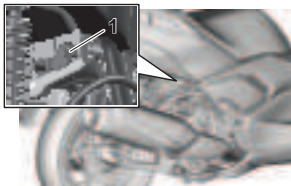
### Seat/rear storage compartment

To open the seat/rear storage compartment via the main switch

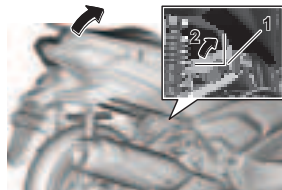
With the smart key turned on and within operating range, turn the main switch to “OPEN”, and then push the “SEAT” button.

To open the seat/rear storage compartment with the mechanical key

1. Open the keyhole cover.



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



1. Seat lock
2. Unlock.

**TIP**

Be sure to close the seat and all storage compartments before starting off.

ECA24020

## NOTICE

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

ECA21150

## NOTICE

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

## Instrument and control functions

- Since the storage compartment accumulates heat when exposed to the sun and/or the engine heat, do not store anything susceptible to heat, consumables or flammable items inside it.
- To avoid humidity from spreading through the storage compartment, wrap wet articles in a plastic bag before storing them in the compartment.
- Since the storage compartment may get wet while the vehicle is being washed, wrap any articles stored in the compartment in a plastic bag.
- Do not keep anything valuable or breakable in the storage compartment.
- Do not exceed the maximum load of 171 kg (377 lb) for the vehicle.

EWAN0090



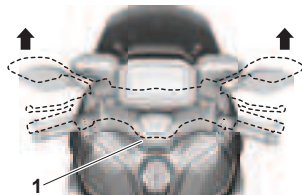
### WARNING

- Do not exceed the load limit of 1.0 kg (2.2 lb) for storage compartment A.
- Do not exceed the load limit of 5.0 kg (11 lb) for the rear storage compartment.

EAU46833

### Handlebar position

The handlebar can be adjusted to one of two positions to suit the rider's preference. Have a Yamaha dealer adjust the position of the handlebar.



1. Handlebar



### Adjusting the shock absorber assemblies

EAU14895

#### WARNING

EW10211

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

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

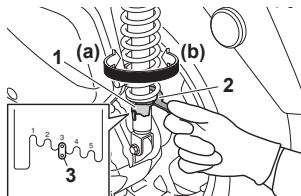
ECA10102

#### NOTICE

**To avoid damaging the mechanism, do not attempt to turn beyond the maximum or minimum settings.**

Adjust the spring preload as follows. 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 notch in the adjusting ring with the position indicator on the shock absorber.
- Use the spring preload adjusting tool included in the kit to make this adjustment.



1. Spring preload adjusting ring
2. Special wrench
3. Position indicator

#### Spring preload setting:

Minimum (soft):

1

Standard:

3

Maximum (hard):

5

### DC connectors

EAU70642

This vehicle is equipped with additional wiring and DC connector(s) for the installation of optional electric accessories.

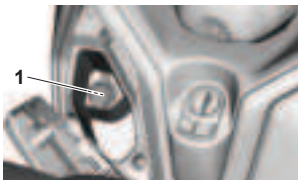
Consult a Yamaha dealer for more information regarding the location and capacity of the DC connector(s) and about what accessories are capable of being installed.

## Instrument and control functions

### USB Type-C jack

EAUA1832

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



1. USB Type-C jack

#### TIP

- Do not use the USB Type-C jack when the engine is off or it will drain the battery.
- Under some conditions, the device battery level may drop even while the USB is plugged in.

#### 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.

ECA28531

### Sidestand

EAU15306

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

#### TIP

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

EWA10242

#### WARNING

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

## Instrument and control functions

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

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EAUT1098

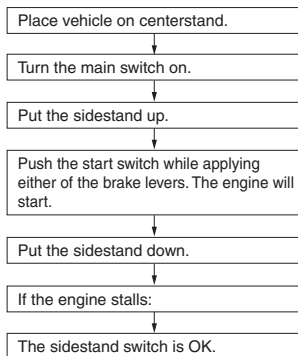
### Ignition circuit cut-off system

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

## Instrument and control functions

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6



### WARNING

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

## For your safety – pre-operation checks

EAU1559B

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

EWA11152

### **WARNING**

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

Before using this vehicle, check the following points:

ITEM	CHECKS	PAGE
Fuel	<ul style="list-style-type: none"><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>	6-29, 6-31
Engine oil	<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>	9-10
Final transmission oil	<ul style="list-style-type: none"><li>• Check vehicle for oil leakage.</li></ul>	9-13
Coolant	<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
Front brake	<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>	9-22, 9-23, 9-24

## For your safety – pre-operation checks

ITEM	CHECKS	PAGE
Rear brake	<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>	9-22, 9-23, 9-24
Throttle grip	<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>	9-20, 9-26
Control cables	<ul style="list-style-type: none"> <li>• Make sure that operation is smooth.</li> <li>• Lubricate if necessary.</li> </ul>	9-25
Wheels and tires	<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>	9-20, 9-22
Brake levers	<ul style="list-style-type: none"> <li>• Make sure that operation is smooth.</li> <li>• Lubricate lever pivoting points if necessary.</li> </ul>	9-26
Centerstand, sidestand	<ul style="list-style-type: none"> <li>• Make sure that operation is smooth.</li> <li>• Lubricate pivots if necessary.</li> </ul>	9-27
Chassis fasteners	<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>	—
Instruments, lights, signals and switches	<ul style="list-style-type: none"> <li>• Check operation.</li> <li>• Correct if necessary.</li> </ul>	—
Sidestand switch	<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>	6-35

## Operation and important riding points

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

### 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.

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 5400 r/min.

# Operation and important riding points

## Starting the engine

EAU78232

ECA24110

EAU78221

### NOTICE

ECA10251

See page 8-1 for engine break-in instructions prior to operating the vehicle for the first time.

In order for the ignition circuit cut-off system to enable starting, the side-stand must be up. (See page 6-36.)

1. Turn the main switch on and make sure that the stop/run/start switch is set to “○”.

The following warning lights and indicator lights should come on for a few seconds, then go off.


- Engine trouble warning light
- Traction control system indicator light
- Smart key system indicator light

### TIP

The ABS warning light should come on and stay on until the vehicle reaches a traveling speed of 10 km/h (6 mi/h) or higher.

### NOTICE

If a warning or indicator light does not work as described above, have a Yamaha dealer check the vehicle.

2. Close the throttle.
3. While applying the front or rear brake, push the “” side of the stop/run/start switch. Release it when the engine starts.

### TIP

If the engine does not start, release the start switch after 5 seconds. Before pressing the start switch again, wait 10 seconds to allow battery voltage to restore.

ECA11043

### NOTICE

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

### TIP

This model is equipped with a lean angle sensor to stop the engine in case of a turnover. In this case, the engine trouble warning light will come on but this is not a malfunction. Before restarting the engine, turn the main switch off and then back on to reset the engine trouble warning light. Failing to do so will prevent the engine from starting even though the engine will crank when pushing the start switch.



## 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.

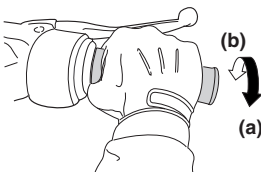


1. Grab bar

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



ZAUM0199

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

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.

# Operation and important riding points

## Braking

EAU60650

EAU17790



### 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

EAU1421


When parking, turn the vehicle power off, and then turn the smart key off.

### 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.

If the sidestand is lowered when the engine is running, the engine will stop and the beeper will sound for approximately 1 minute. To stop the beeper, turn the vehicle power off or raise the sidestand.

### TIP

- Before leaving the vehicle, be sure to turn the main switch to “OFF” or “”. Otherwise, the battery may discharge.
- The sidestand alarm beeper can be set to not activate. Please contact your Yamaha dealer.

## Operation and important riding points

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EWA10312



### **WARNING**

- Since the engine and exhaust system can become very hot, park in a place where pedestrians or children are not likely to touch them and be burned.
  - Do not park on a slope or on soft ground, otherwise the vehicle may overturn, increasing the risk of a fuel leak and fire.
  - Do not park near grass or other flammable materials which might catch fire.
-

## Periodic maintenance and adjustment

EAU17246

EWA15123

EAU17303

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.

9

### **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.**

EWA10322

### **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 2-3 for more information about carbon monoxide.**

EWA15461

### **WARNING**

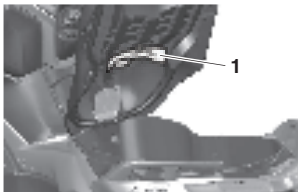
**Brake discs, calipers, drums, and linings can become very hot during use. To avoid possible burns, let brake components cool before touching them.**

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

## Periodic maintenance and adjustment

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

EAU48491

### TIP

- From 24000 mi (37000 km) or 36 months, repeat the maintenance intervals starting from 8000 mi (13000 km) or 12 months.
- Items marked with an asterisk require special tools, data and technical skills, have a Yamaha dealer perform the service.

EAU17602

### Periodic maintenance chart for the emission control system

No.	ITEM	ROUTINE	INITIAL	ODOMETER READINGS					
			600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months	
1	* Fuel line	<ul style="list-style-type: none"><li>• Check fuel hoses for cracks or damage.</li><li>• Replace if necessary.</li></ul>		√	√	√	√	√	
2	* Spark plug	<ul style="list-style-type: none"><li>• Check condition.</li><li>• Adjust gap and clean.</li></ul>		√	√	√	√	√	
		<ul style="list-style-type: none"><li>• Replace.</li></ul>	Every 12000 mi (19000 km)						
3	* Valve clearance	<ul style="list-style-type: none"><li>• Check and adjust.</li></ul>	Every 12000 mi (19000 km)						
4	* Fuel injection	<ul style="list-style-type: none"><li>• Check engine idle speed.</li></ul>	√	√	√	√	√	√	
5	* Exhaust system	<ul style="list-style-type: none"><li>• Check for leakage.</li><li>• Tighten if necessary.</li><li>• Replace gasket(s) if necessary.</li></ul>	√	√	√	√	√	√	
6	* Evaporative emis- sion control system	<ul style="list-style-type: none"><li>• Check control system for dam- age.</li><li>• Replace if necessary.</li></ul>	Every 12000 mi (19000 km)						

# Periodic maintenance and adjustment

EAU67553

## General maintenance and lubrication chart

No.	ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
			600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 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	• Replace.	Every 12000 mi (19000 km)					
3	* Pre air filter element	• Clean.	Every 12000 mi (19000 km)					
4	* Sub air filter element	• Replace.	Every 12000 mi (19000 km)					
5	Air filter check hose	• Clean.	✓	✓	✓	✓	✓	✓
6	V-belt case air filter element	• Clean.		✓	✓	✓	✓	✓
7	* Front brake	<ul style="list-style-type: none"> <li>Check operation, fluid level, and for fluid leakage.</li> <li>Replace brake pads if necessary.</li> </ul>	✓	✓	✓	✓	✓	✓
8	* Rear brake	<ul style="list-style-type: none"> <li>Check operation, fluid level, and for fluid leakage.</li> <li>Replace brake pads if necessary.</li> </ul>	✓	✓	✓	✓	✓	✓
9	* Brake hoses	<ul style="list-style-type: none"> <li>Check for cracks or damage.</li> <li>Check for correct routing and clamping.</li> </ul>		✓	✓	✓	✓	✓
		• Replace.	Every 4 years					
10	* Brake fluid	• Change.	Every 2 years					
11	* Wheels	<ul style="list-style-type: none"> <li>Check runout and for damage.</li> <li>Replace if necessary.</li> </ul>		✓	✓	✓	✓	✓

## Periodic maintenance and adjustment

No.                      ITEM                      ROUTINE			INITIAL	ODOMETER READINGS					
			600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months	
12	*    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>		✓	✓	✓	✓	✓	
13	*    Wheel bearings	<ul style="list-style-type: none"><li>• Check bearings for smooth operation.</li><li>• Replace if necessary.</li></ul>		✓	✓	✓	✓	✓	
14	*    Steering bearings	<ul style="list-style-type: none"><li>• Check bearing assemblies for looseness.</li></ul>	✓	✓	✓	✓	✓	✓	
		<ul style="list-style-type: none"><li>• Moderately repack with lithium-soap-based grease.</li></ul>	Every 12000 mi (19000 km)						
15	*    Chassis fasteners	<ul style="list-style-type: none"><li>• Check all chassis fitting and fasteners.</li><li>• Correct if necessary.</li></ul>		✓	✓	✓	✓	✓	
16	Front brake lever pivot shaft	<ul style="list-style-type: none"><li>• Apply silicone grease lightly.</li></ul>		✓	✓	✓	✓	✓	
17	Rear brake lever pivot shaft	<ul style="list-style-type: none"><li>• Apply silicone grease lightly.</li></ul>		✓	✓	✓	✓	✓	
18	Centerstand and sidestand pivots	<ul style="list-style-type: none"><li>• Check operation.</li><li>• Apply lithium-soap-based grease lightly.</li></ul>		✓	✓	✓	✓	✓	
19	*    Sidestand switch	<ul style="list-style-type: none"><li>• Check operation and replace if necessary.</li></ul>	✓	✓	✓	✓	✓	✓	



## Periodic maintenance and adjustment

No.	ITEM	ROUTINE	INITIAL	ODOMETER READINGS					
			600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months	
20	* Front fork	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√	
21	* Shock absorber assemblies	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√	
22	Engine oil	• Check oil level and vehicle for oil leakage.	√	√	√	√	√	√	
		• Change.	When the oil change indicator flashes						
23	Engine oil filter element	• Replace.	√	Every 12000 mi (19000 km)					
24	* Cooling system	• Check coolant level and vehicle for coolant leakage.		√	√	√	√	√	
		• Change coolant.	Every 3 years						
25	* Final transmission oil	• Check vehicle for oil leakage.	√	√	√	√	√	√	
		• Change.	√	Every 12000 mi (19000 km)					
26	* V-belt	• Replace.	When the V-belt replacement indicator flashes						
27	* Front and rear brake switches	• Check operation.	√	√	√	√	√	√	
28	* Control cables	• Lubricate.		√	√	√	√	√	
29	* Throttle grip	• Check operation. • Check throttle grip free play, and adjust if necessary. • Lubricate cable and grip housing.		√	√	√	√	√	

## Periodic maintenance and adjustment

No.	ITEM	ROUTINE	INITIAL	ODOMETER READINGS					
			600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months	
30	* Lights, signals and switches	<ul style="list-style-type: none"><li>• Check operation.</li><li>• Adjust headlight beam.</li></ul>	√	√	√	√	√	√	

EAU82340

### TIP

- Engine air filter and V-belt air filter
  - The engine air filter uses a disposable oil-coated paper element. This element cannot be cleaned with compressed air, it must be replaced.
  - All filter elements must be serviced more frequently if you often ride in the rain or dusty conditions.
- Hydraulic brake service
  - Regularly check the brake fluid levels and replenish the reservoirs as needed.
  - Replace the internal components of the brake master cylinders and calipers, and change the brake fluid every two years.
  - Replace the brake hoses every four years or sooner if cracked or damaged.

## Periodic maintenance and adjustment

EAU18773

### Removing and installing panels

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

EAUN4430

#### Panel A

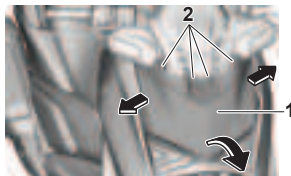
##### To remove the panel

1. Remove the windscreen by removing the screws.



1. Windscreen

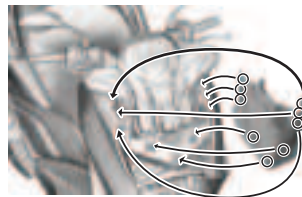
2. Remove the panel by removing the screws, and then pull the panel outward and slide it forward as shown.



1. Panel A
2. Screw

##### To install the panel

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

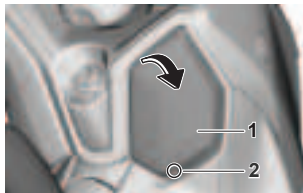


#### Panel B

##### To remove the panel

Remove the screw, and then pull the panel outward and slide it forward as shown.

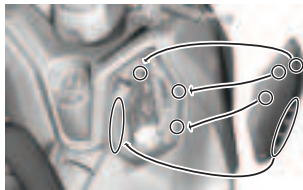
## Periodic maintenance and adjustment



1. Panel B
2. Screw

### To install the panel

Place the panel in the original position, and then install the screw.



### Checking the spark plug

EAU19623

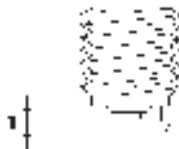
The spark plug is an important engine component, which should be checked periodically, preferably by a Yamaha dealer. Since heat and deposits will cause any spark plug to slowly erode, it should be removed and checked in accordance with the periodic maintenance and lubrication chart. In addition, the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

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

If the spark plug shows signs of electrode erosion and excessive carbon or other deposits, it should be replaced.

**Specified spark plug:**  
NGK/LMAR8A-9

Before installing a spark plug, the spark plug gap should be measured with a wire thickness gauge and, if necessary, adjusted to specification.



1. Spark plug gap

### Spark plug gap:

0.8–0.9 mm (0.031–0.035 in)

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

### Tightening torque:

Spark plug:

13 N·m (1.3 kgf·m, 9.6 lb·ft)

## Periodic maintenance and adjustment

### 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.

### Canister



1. Canister
2. Canister breather hose

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

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

EAU36113

### Engine oil and oil filter element

EAU79021

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

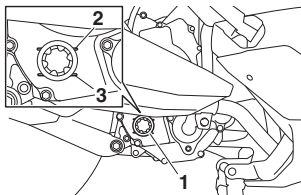
#### To check the engine oil level

1. Place the vehicle on a level surface and hold it in an upright position. 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 for the oil level to settle for an accurate reading, and then check the oil level through the check window located at the bottom-right side of the crankcase.

### TIP

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

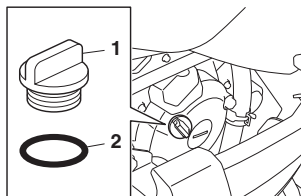
## Periodic maintenance and adjustment



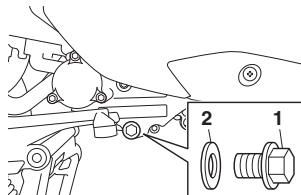
1. Engine oil level check window
2. Maximum level mark
3. Minimum level mark

4. If the engine oil is below the minimum level mark, add sufficient oil of the recommended type to raise it to the correct level.

3. Remove the engine oil filler cap and its O-ring, and then remove the engine oil drain bolt and its gasket to drain the oil from the crankcase.
4. Check the O-ring for damage, and replace it if necessary.



1. Engine oil filler cap
2. O-ring

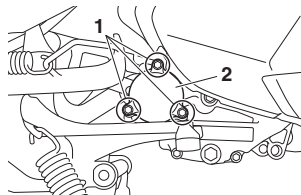


1. Engine oil drain bolt
2. Gasket

### TIP

Skip steps 5–7 if the oil filter element is not being replaced.

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



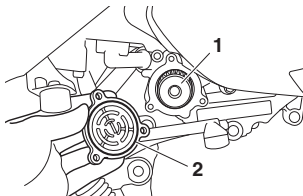
1. Bolt
2. Oil filter element cover

### To change the engine oil (with or without oil filter element replacement)

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.

## Periodic maintenance and adjustment

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



1. Oil filter element  
2. O-ring

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

### **Tightening torque:**

Oil filter element cover bolt:  
10 N·m (1.0 kgf·m, 7.4 lb-ft)

### **TIP**

Make sure that the O-ring is properly seated.

8. Install the engine oil drain bolt and its new gasket, and then tighten the bolt to the specified torque.

### **Tightening torque:**

Engine oil drain bolt:  
20 N·m (2.0 kgf·m, 15 lb-ft)

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

### **Recommended engine oil:**

See page 11-1.

### **Oil quantity:**

Oil change:

1.50 L (1.59 US qt, 1.32 Imp.qt)

With oil filter removal:

1.60 L (1.69 US qt, 1.41 Imp.qt)

11. 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.
12. Turn the engine off, wait a few minutes for the oil level to settle for an accurate reading, and then check the oil level and correct it if necessary.

### **TIP**

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

### **NOTICE**

**Make sure that no foreign material enters the crankcase.**

10. Install and tighten the oil filler cap and its O-ring.

ECA24060

## Periodic maintenance and adjustment

EALU85450

### Why Yamalube

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

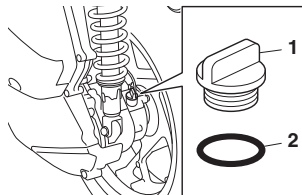
# YAMALUBE®

EALU20067

### Final transmission oil

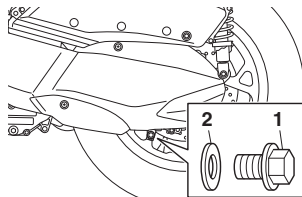
The final transmission case must be checked for oil leakage before each ride. If any leakage is found, have a Yamaha dealer check and repair the scooter. In addition, the final transmission oil must be changed as follows at the intervals specified in the periodic maintenance and lubrication chart.

1. Start the engine, warm up the final transmission oil by riding the scooter for several minutes, and then stop the engine.
2. Place the scooter 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



## Periodic maintenance and adjustment

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

### Tightening torque:

Final transmission oil drain bolt:  
20 N·m (2.0 kgf·m, 15 lb·ft)

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

### Recommended final transmission oil:

See page 11-1.

### Oil quantity:

0.20 L (0.21 US qt, 0.18 Imp.qt)

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

### 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.

EALU20071

### To check the coolant level

1. Place the vehicle on the center-stand.

### TIP

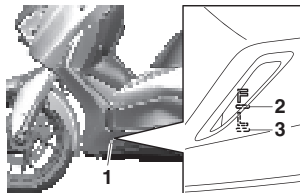
- The coolant level must be checked on a cold engine since the level varies with engine temperature.
- Make sure that the vehicle is positioned straight up when checking the coolant level. A slight tilt to the side can result in a false reading.

2. Check the coolant level through the check window.

### TIP

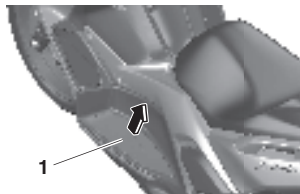
The coolant should be between the minimum and maximum level marks.

EALU78580



1. Coolant level check window
2. Maximum level mark
3. Minimum level mark

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

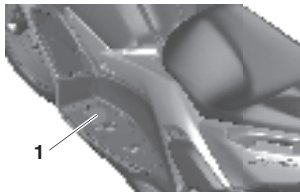


1. Floorboard mat

4. Remove the coolant reservoir cover.

## Periodic maintenance and adjustment

EAU33032



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):**  
0.18 L (0.19 US qt, 0.16 Imp.qt)

6. Install the coolant reservoir cover.
7. Place the left 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]

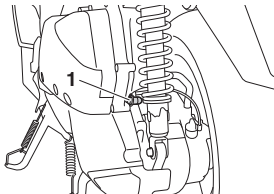
## Periodic maintenance and adjustment

EAU78575

### Air filter and V-belt case air filter elements

The air filter element and the sub air filter element should be replaced, and the pre air filter element 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 must be frequently checked and cleaned if necessary.

#### Cleaning the air filter check hose



1. Air filter check hose

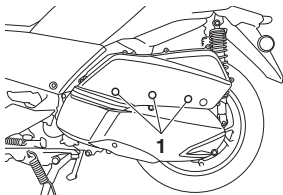
1. Check the hose on the rear side of the air filter case for accumulated dirt or water.
2. If dirt or water is visible, remove the hose from the clamp, clean it, and then install it.

#### 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.

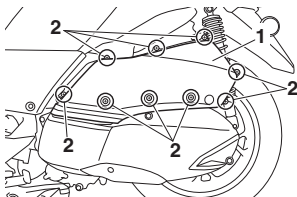
#### Replacing the air filter element and sub air filter element and cleaning the pre air filter element

1. Place the vehicle on the center-stand.
2. Remove the rubber plugs.



1. Rubber plug

3. Remove the air filter case cover by removing the screws.

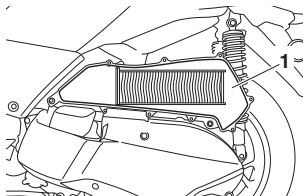


1. Air filter case cover

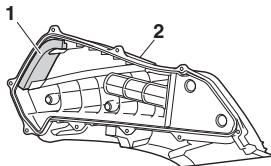
2. Screw

4. Pull the air filter element and sub air filter element out.

## Periodic maintenance and adjustment



1. Air filter element



1. Sub air filter element

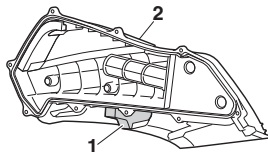
2. Air filter case cover

5. Insert a new sub air filter element into the air filter case cover.
6. 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.

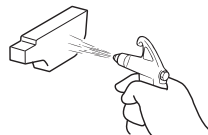
[ECA10482]

7. Pull the pre air filter element out, and then blow out the dirt with compressed air as shown.



1. Pre air filter element

2. Air filter case cover

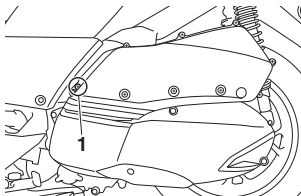


8. Check the pre air filter element for damage, and replace it if necessary.
9. Insert the pre air filter element into the air filter case cover.
10. Install the air filter case cover by installing the screws.

### TIP

The long screw should be installed as shown.

## Periodic maintenance and adjustment

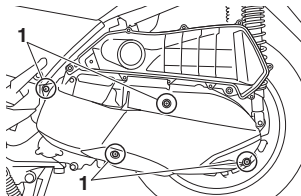


1. Long screw

11. Install the rubber plugs.

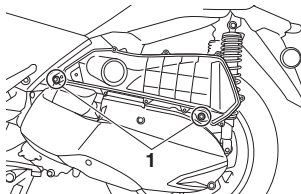
### Cleaning the V-belt case air filter element

1. Place the vehicle on the center-stand.
2. Remove the air filter case cover. (See the previous section.)
3. Remove the V-belt case cover screws.



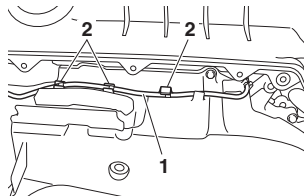
1. Screw

4. Remove the air filter case bolts.



1. Bolt

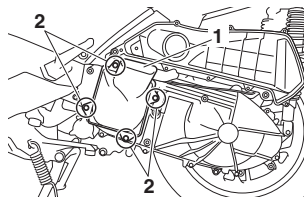
5. Lift up the air filter case slightly, remove the rear wheel sensor lead from the holder, and then remove the V-belt case cover.



1. Rear wheel sensor lead

2. Lead holder

6. Remove the V-belt case air filter cover by removing the bolts.

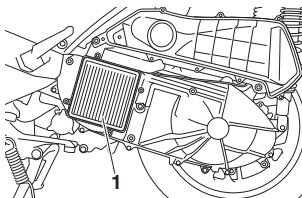


1. V-belt case air filter cover

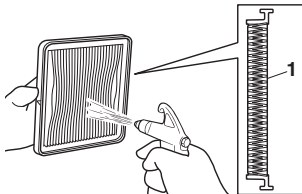
2. Bolt

## Periodic maintenance and adjustment

7. Remove the air filter element, and then blow out the dirt with compressed air from the clean side as shown.



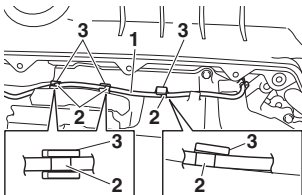
1. V-belt case air filter element



1. Clean side

8. Check the V-belt case air filter element for damage and replace it if necessary.

9. Insert the element into the V-belt case.
10. Install the V-belt case air filter cover by installing the bolts.
11. Install the rear wheel sensor lead into the holders, so that the white tape on the lead matches the holders as shown.



1. Rear wheel sensor lead
2. White tape
3. Lead holder

12. Install the air filter case bolts, and then tighten the bolts to the specified torque.

### Tightening torque:

Bolt:

10 N·m (1.0 kgf·m, 7.4 lb·ft)

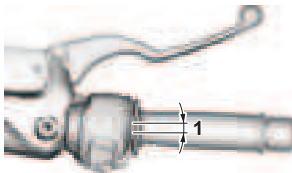
13. Install the V-belt case cover by installing the screws.
14. Install the air filter case cover by installing the screws.

## Periodic maintenance and adjustment

EAU21386

### 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.

EAU21403

### 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.

EAU64222

### Tires

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

#### Tire air pressure

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

EWA10504

#### **WARNING**

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

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

## Periodic maintenance and adjustment

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

### Cold tire air pressure:

#### Up to 90 kg (198 lb) load:

Front:

200 kPa (2.00 kgf/cm<sup>2</sup>, 29 psi)

Rear:

225 kPa (2.25 kgf/cm<sup>2</sup>, 33 psi)

#### 90 kg (198 lb) to maximum load:

Front:

200 kPa (2.00 kgf/cm<sup>2</sup>, 29 psi)

Rear:

225 kPa (2.25 kgf/cm<sup>2</sup>, 33 psi)

### Maximum load:

Vehicle:

171 kg (377 lb)

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

### Tire inspection



1. Tire sidewall
2. 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)

have a Yamaha dealer replace the tire immediately. Brakes, tires and related wheel parts replacement should also be left to a Yamaha dealer.

- 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.

### WARNING

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

### WARNING

- It is dangerous to ride with a worn-out tire. When a tire tread begins to show crosswise lines,



## Periodic maintenance and adjustment

### **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:

120/70-15 M/C 56P

Manufacturer/model:

DUNLOP/SCOOTSMART

#### **Rear tire:**

Size:

140/70-14 M/C 62P

Manufacturer/model:

DUNLOP/SCOOTSMART

EWA10462

### **Cast wheels**

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

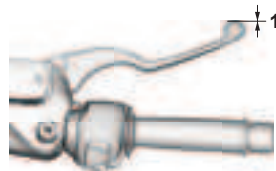
- The wheel rims should be checked for cracks, bends, warpage or other damage before each ride. If any damage is found, have a Yamaha dealer replace the wheel. Do not attempt even the smallest repair to the wheel. A deformed or cracked wheel must be replaced.
- The wheel should be balanced whenever either 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.

EAU21963

### **Checking the front and rear brake lever free play**

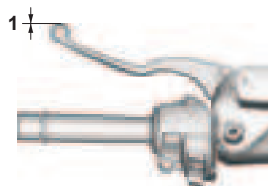
EAU50861

#### **Front**



1. No brake lever free play

#### **Rear**



1. No brake lever free play

## Periodic maintenance and adjustment

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

### **WARNING**

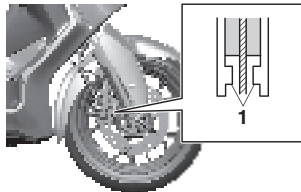
EWA14212

**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

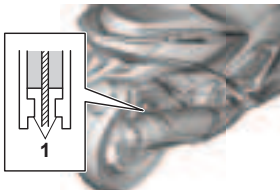
EALJ22312

#### Front brake



1. Brake pad wear indicator

#### Rear brake



1. Brake pad wear indicator

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

## Periodic maintenance and adjustment

### Checking the brake fluid level

EAU22585

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

#### TIP

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

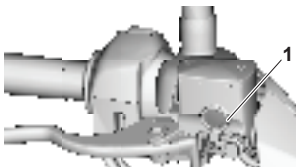
**Specified brake fluid:**  
DOT 4

#### NOTICE

ECA17641

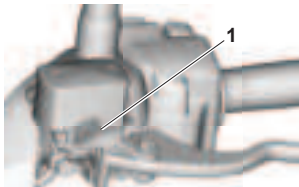
**Brake fluid may damage painted surfaces or plastic parts. Always clean up spilled fluid immediately.**

#### Front brake



1. Minimum level mark

#### Rear brake



1. Minimum level mark

As the brake pads wear, it is normal for the brake fluid level to gradually go down.

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

EWA15991

#### WARNING

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

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

## Periodic maintenance and adjustment

### Changing the brake fluid

EAU22734

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

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

### Checking the V-belt

EAUJ0311

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

### 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

## Periodic maintenance and adjustment

### Checking and lubricating the throttle grip and cable

EAU49921

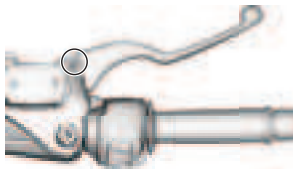
The operation of the throttle grip should be checked before each ride. In addition, the cable should be lubricated by a Yamaha dealer at the intervals specified in the periodic maintenance chart.

### Lubricating the front and rear brake levers

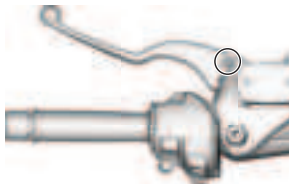
EAU23173

**Recommended lubricant:**  
Silicone grease

#### Front brake lever



#### Rear brake lever

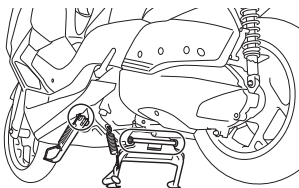


The pivoting points of the front and rear brake levers must be lubricated at the intervals specified in the periodic maintenance and lubrication chart.

## Periodic maintenance and adjustment

### Checking and lubricating the centerstand and sidestand

EAU23215



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

EWA10742

#### **WARNING**

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

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

### Checking the front fork

EAU23273

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

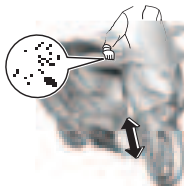
#### **To check the condition**

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.

## Periodic maintenance and adjustment



ECA10591

### NOTICE

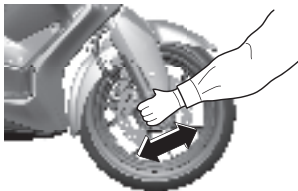
If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.

### Checking the steering

EAU45512

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.



### Checking the wheel bearings

EAU23292

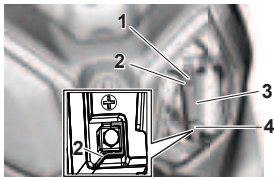


The front and rear wheel bearings must be checked at the intervals specified in the periodic maintenance and lubrication chart. If there is play in the wheel hub or if the wheel does not turn smoothly, have a Yamaha dealer check the wheel bearings.

## Periodic maintenance and adjustment

### Battery

EALUN4460



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

The battery is located behind panel B. (See page 9-8.)

9

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.

#### TIP

This model is equipped with caps attached to the battery terminals so as to prevent the nut from falling out when

removing the terminal bolts. When changing the battery, remove the caps from the old battery and install them on the new one.

EWA10761

#### WARNING

- **Electrolyte is poisonous and dangerous since it contains sulfuric acid, which causes severe burns. Avoid any contact with skin, eyes or clothing and always shield your eyes when working near batteries. In case of contact, administer the following FIRST AID.**
- **EXTERNAL:** Flush with plenty of water.
- **INTERNAL:** Drink large quantities of water or milk and immediately call a physician.
- **EYES:** Flush with water for 15 minutes and seek prompt medical attention.
- **Batteries produce explosive hydrogen gas. Therefore, keep sparks, flames, cigarettes, etc., away from the battery and pro-**

**vide sufficient ventilation when charging it in an enclosed space.**

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

#### To charge the battery

Have a Yamaha dealer charge the battery as soon as possible if it seems to have discharged. Keep in mind that the battery tends to discharge more quickly if the vehicle is equipped with optional electrical accessories.

ECA16522

#### NOTICE

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

#### To store the battery

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

**NOTICE:** When removing the



## Periodic maintenance and adjustment

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 connect the positive lead before connecting the negative lead. [ECA16842]
4. After installation, make sure that the battery leads are properly connected to the battery terminals.

ECA16531

### NOTICE

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

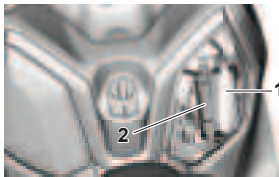
### Replacing the fuses

EALIN4440

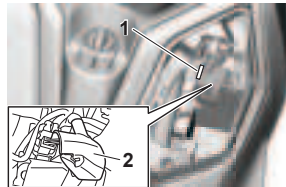
The main fuse is located under the panel B. (See page 9-8.)

To access the main fuse, proceed as follows.

1. Remove the panel B (See page 9-8.)
2. Remove the battery by removing the battery bracket.



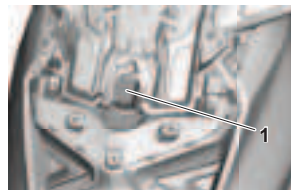
1. Battery bracket
2. Battery
3. Pull back the starter relay cover.
4. Pull out the main fuse.



1. Main fuse
2. Starter relay cover

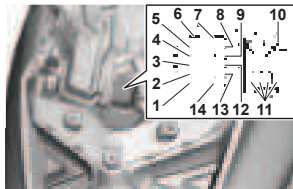
### TIP

To access the fuse box, remove panel A. (See page 9-8.)



1. Fuse box

## Periodic maintenance and adjustment



1. ABS motor fuse
2. ABS solenoid fuse
3. Windscreen motor fuse
4. Grip warmer fuse
5. Terminal fuse
6. Ignition fuse 2
7. Signaling system fuse 2
8. Signaling system fuse 1
9. ABS control unit fuse
10. Fuse puller
11. Spare fuse
12. Ignition fuse 1
13. Radiator fan motor fuse
14. Backup fuse

9

If a fuse is blown, replace it as follows.

1. Turn the main switch off and turn off the electrical circuit in question.

2. Remove the blown fuse, and then install a new fuse of the specified amperage. **WARNING! Do not use a fuse of a higher amperage rating than recommended to avoid causing extensive damage to the electrical system and possibly a fire.** [EWA15132]

### Specified fuses:

- Main fuse:
  - 30.0 A
- Terminal fuse 1:
  - 7.5 A
- Signaling system fuse:
  - 7.5 A
- Signaling system fuse 2:
  - 7.5 A
- Ignition fuse:
  - 7.5 A
- Ignition fuse 2:
  - 7.5 A
- Radiator fan motor fuse:
  - 7.5 A
- Grip warmer fuse:
  - 10.0 A
- Backup fuse:
  - 7.5 A
- ABS control unit fuse:
  - 7.5 A
- ABS motor fuse:
  - 30.0 A
- ABS solenoid fuse:
  - 20.0 A
- Windscreen motor fuse:
  - 20.0 A

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

## Periodic maintenance and adjustment

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

ECA27210

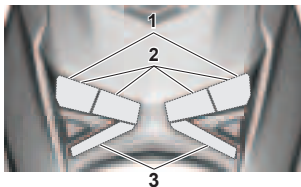
### NOTICE

**Do not drive while the fuse box cover is removed.**

### Vehicle lights

EAUN2261

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



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

ECA16581

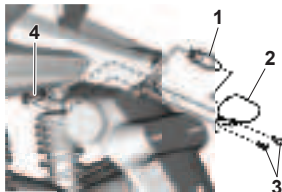
### NOTICE

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

### Replacing the license plate light bulb

EAU78560

1. Remove the license plate light unit by removing the bolts and plate, and then remove the license plate light bulb socket (together with the bulb) by pulling it out.



1. License plate light bulb socket
2. License plate light unit
3. Bolt
4. Plate

2. Remove the burnt-out bulb by pulling it out.

## Periodic maintenance and adjustment



1. License plate light bulb

3. Insert a new bulb into the socket.
4. Install the socket (together with the bulb) by pushing it in, and then install the license plate light unit by installing the plate and bolts.

### 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 4-5.)
- Is the smart key battery discharged? (See page 4-6.)
- Is the smart key battery installed correctly? (See page 4-6.)
- Is the smart key being used in a location with strong radio waves or other electromagnetic noise? (See page 4-1.)
- 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 9-29.)

EWA15142

## Periodic maintenance and adjustment

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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 9-37 for information on starting the engine without the smart key.

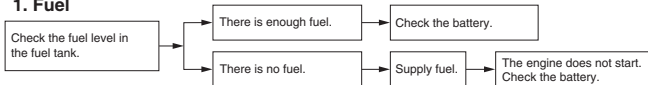
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# Periodic maintenance and adjustment

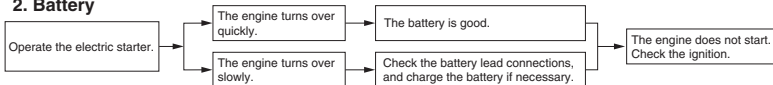
EAU86350

## Troubleshooting chart

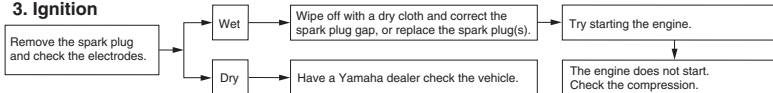
### 1. Fuel



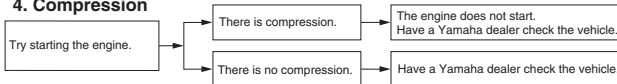
### 2. Battery



### 3. Ignition



### 4. Compression



## Periodic maintenance and adjustment

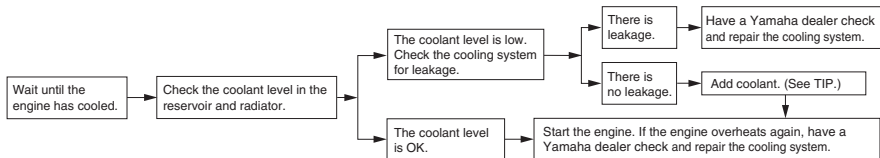
EAU86420

### Engine overheating

EWAT1041

#### **WARNING**

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



#### **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

EAU76564

### 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 "I" 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.



1. Smart key system indicator light "I"

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.





## Periodic maintenance and adjustment

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



The second digit has been set as “2”.



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

### TIP

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

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

- The identification number is not entered correctly.

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

## Scooter care and storage

### Matte color caution

EAU37834

#### NOTICE

ECA15193

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.

### Care

EAU96754

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

### Special care in winter

ECA28181

#### NOTICE

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

### TIP

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

ECA26280

#### NOTICE

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

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

## Scooter care and storage

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

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

### Before washing

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

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

[ECA26290]

### Washing

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

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

3. For windscreen-equipped vehicles: Clean the windscreen with a soft towel or sponge dampened with water and a pH neutral detergent. If necessary, use a high-quality windscreen cleaner or polish for motorcycles. **NOTICE: Never use any strong chemicals to clean the windscreen. Additionally, some cleaning compounds for plastic may scratch the windscreen, so be sure to test all cleaning products before general application.** [ECA27860]
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.

## Scooter care and storage

3. Use a chrome polish to shine chrome, aluminum, and stainless steel parts. Often the thermally induced discoloring of stainless steel exhaust systems can be removed through polishing.

4. Apply a corrosion protection spray on all metal parts including chrome or nickel-plated surfaces.

**WARNING! Do not apply silicone or oil spray to seats, hand grips, rubber foot pegs or tire treads. Otherwise these parts will become slippery, which could cause loss of control. Thoroughly clean the surfaces of these parts before operating the vehicle.** [EWA20651]

5. Treat rubber, vinyl, and unpainted plastic parts with a suitable care product.
6. Touch up minor paint damage caused by stones, etc.
7. Wax all painted surfaces using a non-abrasive wax or use a detail spray for motorcycles.

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

ECA26320

### NOTICE

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

EWA20660



### WARNING

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

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

- 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.

## Scooter care and storage

### Storage

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

EAUB4141

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 (YAMALUBE Stor-Rite 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.**
7. Lubricate all control cables, pivots, levers and pedals, as well as the sidestand and centerstand (if equipped).

[EWA10952]

## Scooter care and storage

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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

10

- If the battery will be removed, charge it once a month and store it in a temperate location between 32-90 °F (0-30 °C).
- See page 9-29 for more information on charging and storing the battery.

# Specifications

## Dimensions:

- Overall length:  
2180 mm (85.8 in)
- Overall width:  
795 mm (31.3 in)
- Overall height:  
1410/1505 mm (55.5/59.3 in)
- Seat height:  
795 mm (31.3 in)
- Wheelbase:  
1540 mm (60.6 in)
- Ground clearance:  
135 mm (5.31 in)
- Minimum turning radius:  
2.6 m (8.53 ft)

## Weight:

- Curb weight:  
183 kg (403 lb)

## Engine:

- Combustion cycle:  
4-stroke
- Cooling system:  
Liquid cooled
- Valve train:  
SOHC
- Number of cylinders:  
Single cylinder
- Displacement:  
292 cm<sup>3</sup>
- Bore × stroke:  
70.0 × 75.9 mm (2.76 × 2.99 in)
- Starting system:  
Electric starter

## Engine oil:

Recommended brand:



- SAE viscosity grades:  
10W-40, 10W-50, 15W-40, 20W-40 or 20W-50
- Recommended engine oil grade:  
API service SG type or higher, JASO standard MA or MB
- Engine oil quantity:  
Oil change:  
1.50 L (1.59 US qt, 1.32 Imp.qt)  
With oil filter removal:  
1.60 L (1.69 US qt, 1.41 Imp.qt)

## Final transmission oil:

- Type:  
Motor oil SAE 10W-40 type SG or higher
- Quantity:  
0.20 L (0.21 US qt, 0.18 Imp.qt)

## Coolant quantity:

- Coolant reservoir (up to the maximum level mark):  
0.18 L (0.19 US qt, 0.16 Imp.qt)
- Radiator (including all routes):  
1.10 L (1.16 US qt, 0.97 Imp.qt)

## Fuel:

- Recommended fuel:  
Unleaded gasoline (E10 acceptable)
- Octane number (RON):  
90

Fuel tank capacity:

- 13 L (3.4 US gal, 2.9 Imp.gal)
- Fuel reserve amount:  
2.4 L (0.63 US gal, 0.53 Imp.gal)

## Fuel injection:

- Throttle body:  
ID mark:  
B741

## Front tire:

- Type:  
Tubeless
- Size:  
120/70-15 M/C 56P
- Manufacturer/model:  
DUNLOP/SCOOTSMART

## Rear tire:

- Type:  
Tubeless
- Size:  
140/70-14 M/C 62P
- Manufacturer/model:  
DUNLOP/SCOOTSMART

## Loading:

- Maximum load:  
171 kg (377 lb)  
(Total weight of rider, passenger, cargo and accessories)

## Front brake:

- Type:  
Hydraulic single disc brake

## Rear brake:

- Type:  
Hydraulic single disc brake

# Specifications

---

## **Front suspension:**

Type:

Telescopic fork

## **Rear suspension:**

Type:

Unit swing

## **Electrical system:**

System voltage:

12 V

## **Battery:**

Model:

GTZ8V

Voltage, capacity:

12 V, 7.0 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



### Identification numbers

EAU53562

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

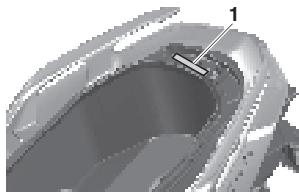
VEHICLE IDENTIFICATION NUMBER:

ENGINE SERIAL NUMBER:

MODEL LABEL INFORMATION:

### Vehicle identification number

EAU26411



1. Vehicle identification number

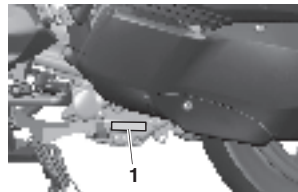
The vehicle identification number is stamped into the frame.

#### TIP

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

### Engine serial number

EAU26442

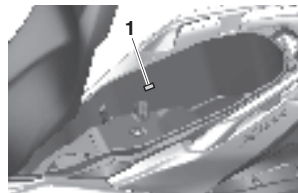


1. Engine serial number

The engine serial number is stamped into the crankcase.

### Model label

EAU26501



1. Model label

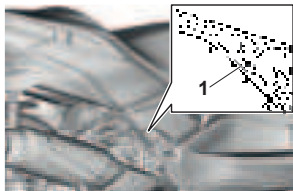
## Consumer information

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The model label is affixed to the inside of the rear storage compartment. (See page 6-31.) Record the information on this label in the space provided. This information will be needed when ordering spare parts from a Yamaha dealer.

EALJ48271

### Vehicle Emission Control Information label



1. Vehicle Emission Control Information label

The Vehicle Emission Control Information label is affixed at the location in the illustration. This label shows specifications related to exhaust emissions as required by federal law, state law and Environment Canada.

### Use of your vehicle data

This is a brief summary of how Yamaha (Yamaha Motor Co., Ltd., and Yamaha Motor Corporation, U.S.A.) uses your vehicle data. For more details, please review our Privacy Policy.

<https://yamaha-motor.com/privacy-policy>

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

This vehicle collects three types of vehicle 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 vehicle 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 legal obligations or lawful orders, and to establish or defend legal claims.

### How we disclose your vehicle data?

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

### How long will we retain your vehicle data?

We will retain your vehicle data for the shortest period of time possible/the time necessary to achieve the above listed purposes.

## Consumer information

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### How to contact us?

Any questions or complaints regarding the processing of your vehicle data can be submitted in writing to:

**Yamaha Motor Corporation, U.S.A.**

**Attn: Privacy Office**

**6555 Katella Avenue Cypress, California 90630-5101**

**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.

### Reporting safety defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Yamaha Motor Corporation, U.S.A. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Yamaha Motor Corporation, U.S.A.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to <http://www.safercar.gov>; or write to: Administrator, NHTSA, 1200 New Jersey Avenue, SE, West Building, Washington, DC 20590. You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

## Consumer information

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EAU26581

### Scooter noise regulation

#### **TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:**

Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

**“AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW.”**

These acts include tampering with the following systems; i.e., modification, removal, etc.

#### **Exhaust system**

- Muffler
- Exhaust pipe
- Silencer

#### **Intake system**

- Air cleaner case
- Air cleaner element
- Intake duct

## Consumer information

EAU26633

### Maintenance record

Copies of work orders and/or receipts for parts purchased and installed on your vehicle will be required to document that maintenance has been completed in accordance with the emissions warranty. The chart below is printed only as a reminder that maintenance work is required. It is not acceptable proof of maintenance work.

Maintenance interval	Date of service	Mileage	Servicing dealer name and address	Remarks
600 mi (1000 km) or 1 month				
4000 mi (7000 km) or 6 months				
8000 mi (13000 km) or 12 months				
12000 mi (19000 km) or 18 months				
16000 mi (25000 km) or 24 months				
20000 mi (31000 km) or 30 months				
24000 mi (37000 km) or 36 months				
28000 mi (43000 km) or 42 months				
32000 mi (49000 km) or 48 months				

## Consumer information

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Maintenance interval	Date of service	Mileage	Servicing dealer name and address	Remarks
36000 mi (55000 km) or 54 months				
40000 mi (61000 km) or 60 months				



## YAMAHA MOTOR CORPORATION, U.S.A. 2020 AND LATER MODEL SCOOTER LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants that each new Yamaha scooter purchased from an authorized Yamaha scooter dealer in the continental United States will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations.

**THE PERIOD OF WARRANTY** for Yamaha scooters shall be one (1) year from the date of purchase, with no mileage limitation, except for the battery, which is warranted for thirty (30) days from the date of purchase.

**DURING THE PERIOD OF WARRANTY** any authorized Yamaha scooter dealer will, free of charge, repair or replace, at Yamaha's option, any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the product's warranty period. All parts replaced under warranty become the property of Yamaha Motor Corporation, U.S.A.

**GENERAL EXCLUSIONS** from this warranty shall include any failures caused by:

- Competition or racing use.
- Installation of parts or accessories that are not qualitatively equivalent to genuine Yamaha parts.
- Abnormal strain, neglect, or abuse.
- Lack of proper maintenance and off-season storage as described in the Owner's Manual.
- Accident or collision damage.
- Modification to original parts.
- Damage due to improper transportation

**SPECIFIC EXCLUSIONS** from this warranty shall include parts replaced due to normal wear or routine maintenance.

**THE CUSTOMER'S RESPONSIBILITY** under this warranty shall be to:

- Operate and maintain the scooter as specified in the appropriate Owner's Manual, and

- Give notice to an authorized Yamaha scooter dealer of any and all apparent defects within ten (10) days after discovery, and make the machine available at that time for inspection and repairs at such dealer's place of business.

**WARRANTY TRANSFER:** To transfer any remaining warranty from the original purchaser to any subsequent purchaser, it is imperative that the machine be inspected and registered for warranty by an authorized Yamaha scooter dealer. In order for this warranty to remain in effect, this inspection and registration must take place within ten (10) days after transfer. A reasonable dealer-imposed fee may be charged for the inspection.

### EMISSIONS CONTROL SYSTEM WARRANTY

Yamaha Motor Corporation, U.S.A. also warrants to the ultimate purchaser and each subsequent purchaser of each Yamaha scooter covered by this warranty that the vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S. emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the periods listed immediately below. Failures other than those resulting from defects in material or workmanship which arise solely as a result of owner abuse and/or lack of proper maintenance are not covered by this warranty.

### ENGINE DISPLACEMENT

	PERIOD
Under 50cc	6,000 km (3,750 miles) or five years, whichever occurs first
50cc to 169cc	12,000 km (7,465 miles) or five years, whichever occurs first
170cc to 279cc	18,000 km (11,185 miles) or five years, whichever occurs first
280cc or over	30,000 km (18,641 miles) or five years, whichever occurs first

**YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.**

**SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.**

**THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.**

YAMAHA MOTOR CORPORATION, U.S.A.  
Post Office Box 6555  
Cypress, California 90630  
1-800-962-7926

## Consumer information

- [illegible]

It is important to keep in mind that, although the term "cognitive" is used, we are not talking about the cognitive system as such. Cognitive functions are not the same as mental functions, and the term "cognitive" is used here to refer to the mental functions that are involved in the cognitive system. The term "cognitive" is used here to refer to the mental functions that are involved in the cognitive system. The term "cognitive" is used here to refer to the mental functions that are involved in the cognitive system.

[illegible]

<sup>a</sup>Values are means ± SD; n = 6. \*P < 0.05 vs. control.

## CHAPTER 17

<sup>1</sup> Author for correspondence: Department of Neurology, University of California, San Francisco, 1601 Divisadero Street, Box 0804, San Francisco, CA 94143-0804, USA. Tel.: +1 415 355 5830; fax: +1 415 355 5834; e-mail: [neuro@uclink.berkeley.edu](mailto:neuro@uclink.berkeley.edu).

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<sup>3</sup>  $\Gamma = -\Delta\Gamma = \frac{1}{2}(\Delta\Gamma_1 + \Delta\Gamma_2)$ ,  $\Delta\Gamma_1 = \Delta\Gamma_2 = \frac{1}{2}\Delta\Gamma$ ,  $\Delta\Gamma = \Delta\Gamma_1 = \Delta\Gamma_2 = \frac{1}{2}\Delta\Gamma$ .

### YAMAHA EXTENDED SERVICE (Y.E.S.)

Keep your Yamaha protected even after your limited warranty expires with genuine Yamaha Extended Service (Y.E.S.).

- Y.E.S. is designed and administered by Yamaha Motor Corporation to provide maximum owner satisfaction. It provides uninterrupted factory-backed coverage for extra peace of mind.
- Y.E.S. is flexible. You choose the plan that's right for you: 12 months, 24 months, 36 months or, on certain models, even 48 months beyond your warranty period.
- Y.E.S. is designed and administered by the same Yamaha people who handle your warranty – and it shows in the comprehensive coverage benefits. There are no mileage limitations. Coverage isn't limited to "moving parts" or the "drivetrain" like many other plans. And Y.E.S. covers manufacturing defects just like the warranty. See the sample contract at your Yamaha dealer to see how comforting uninterrupted factory-backed protection can be.
- You don't have to pay anything for covered repairs. There's no deductible to pay, and repairs aren't "pro-rated." You don't have any "out-of-pocket" expenses for covered repairs.

- In addition, Travel and Recreation Interruption Protection (TRIP) is included at no extra cost. TRIP gives you up to \$250 reimbursement per occurrence for any reasonable expenses you incur because your Yamaha needs covered service: replacement vehicle rental, emergency towing, phone calls, even food and lodging when you are away from home. This superb coverage goes into effect when you purchase Y.E.S., so it applies to any warranty repairs as well as covered repairs during your entire Y.E.S. plan period.
- Y.E.S. coverage is honored at any authorized Yamaha dealer nationwide.
- Y.E.S. coverage is transferable to a new owner if you sell or trade-in. That can make your Yamaha much more valuable!

This excellent Y.E.S. plan coverage is only available to Yamaha owners like you, and only while your Yamaha is still within the Yamaha Limited Warranty period. So visit your authorized Yamaha dealer to get all the facts. They can show you how easy it is to protect your investment with Yamaha Extended Service.

## Consumer information

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We urge you to act now. You'll get the excellent benefits of TRIP coverage right away, and you'll rest easy knowing you'll have strong factory-backed protection even after your Yamaha Limited Warranty expires.

A special note:

If visiting your dealer isn't convenient, contact Yamaha with your VIN number and we'll be happy to help you get the Y.E.S. coverage you need.

Yamaha Service Marketing  
P.O. Box 6555  
Cypress, CA 90630  
1-(866)-YES-EXTD (1-866-937-3983)



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For your best ownership experience, think **Genuine Yamaha!**

**Genuine Yamaha Parts** – Genuine Yamaha replacement parts are the exact same parts as the ones originally equipped on your vehicle, providing you with the performance and durability you have come to expect. Why settle for aftermarket parts that may not provide full confidence and satisfaction?

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