YAMAHA

OWNER'S MANUAL

⚠ Read this manual carefully before operating this vehicle.

WORLD RAID TÉNÉRÉ

MOTORCYCLE

XTZ690D (Ténéré 700 World Raid)

XTZ690D-U (Ténéré 700 World Raid 35kW)

BXD-F8199-E0

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EAU8156A

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

EAU81578

For Europe

Declaration of Conformity:

Hereby, YAMAHA MOTOR ELECTRONICS Co., Ltd. declares that the radio equipment type, IMMOBILIZER, BXD-00 is in compliance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address:
https://global.yamaha-motor.com/eu_doc/

Frequency band: 134.2 kHz
The maximum radio frequency power: 49.0 [dBμV/m]

Manufacturer:
YAMAHA MOTOR ELECTRONICS Co., Ltd.
1450-6 Mori, Mori-machi, Shuchi-Gun, Shizuoka, 437-0292 Japan

Importer:
YAMAHA MOTOR EUROPE N.V.
Koolhovenlaan 101, 1119 NC Schiphol-Rijk, 1117 ZN, Schiphol, the Netherlands

For UK

UK CA Declaration of Conformity:

Hereby, YAMAHA MOTOR ELECTRONICS Co., Ltd. declares that the radio equipment type, IMMOBILIZER, BXD-00 is in compliance with the Radio Equipment Regulations 2017.
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YAMAHA MOTOR EUROPE N.V., BRANCH UK
Units A2-A3, Kingswey Business Park, Forsyth Road, Woking, Surrey. GU21 5SA. United Kingdom.

For Europe

Declaration of Conformity:

Hereby, YAMAHA MOTOR CO., LTD declares that the radio equipment type, Communication Control Unit, YE97-A00 is in compliance with Directive 2014/53/EU.
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https://global.yamaha-motor.com/eu_doc/

Frequency band: 2402~2480 MHz
The maximum radio frequency power:
Bluetooth 4.2 0.84 dBm
Bluetooth 5.0 0.83 dBm

Manufacturer:
PT Chao Long Motor Parts Indonesia
JL.MERANTI 1 BLOK, L2 NO. 5-6 DELTA SILICON INDUSTRIAL
PARK LIPPO CIKARANG BEKASI 17550, INDONESIA

Importer:
YAMAHA MOTOR EUROPE N.V.
Koolhovenlaan 101, 1119 NC Schiphol-Rijk, 1117 ZN, Schiphol, the Netherlands

For UK

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Importer:
YAMAHA MOTOR EUROPE N.V., BRANCH UK
Units A2-A3, Kingswey Business Park, Forsyth Road, Woking, Surrey. GU21 5SA. United Kingdom.

EAUM5350

For Ukraine

справжнім PT.CHAO LONG MOTOR PARTS INDONESIA заявляє що тип радіообладнання (YE97-A00) відповідає Технічному регламенту радіообладнання. Повний текст декларації про відповідність доступний на веб-сайті за такою адресою: https://global.yamaha-motor.com/eu_doc/

Адреса виробника
JL. Meranti 1 Blok , L2 No.5-6 Delta Silicon Industrial Lippo Cikarang - Bekasi Indonesia 17550

Імпортер:
VIDI Motor
вул. Велика Кільцева, 60-а (ViDi Auto City), Київська обл., Софіївська Борщагівка 08131, Київ, Україна

ЗРОБЛЕНО В ІНДОНЕЗІЇ

EAUM5360

For Serbia

И 005 24

Compliance with Regulation (EU) 2023/1542 concerning batteries and wasted batteries

Importer:
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Koolhovenlaan 101, 1119 NC Schiphol-Rijk, 1117 ZN, Schiphol, the Netherlands

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EAU10103

Welcome to the Yamaha world of motorcycling!
As the owner of the XTZ690D/XTZ690D-U, you are benefiting from Yamaha's vast experience and newest technology regarding the design and manufacture of high-quality products, which have earned Yamaha a reputation for dependability.
Please take the time to read this manual thoroughly, so as to enjoy all advantages of your XTZ690D/XTZ690D-U. The Owner's Manual does not only instruct you in how to operate, inspect and maintain your motorcycle, but also in how to safeguard yourself and others from trouble and injury.
In addition, the many tips given in this manual will help keep your motorcycle in the best possible condition. If you have any further questions, do not hesitate to contact your Yamaha dealer.
The Yamaha team wishes you many safe and pleasant rides. So, remember to put safety first!
Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your motorcycle and this manual. If there is any question concerning this manual, please consult a Yamaha dealer.

EWA10032

⚠ WARNING

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

Important manual information

EAU10134

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

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

*Product and specifications are subject to change without notice.

EAUM5170

XTZ690D/XTZ690D-U
OWNER'S MANUAL
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Be a Responsible Owner

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

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

He or she should:

- Obtain thorough instructions from a competent source on all aspects of motorcycle operation.
- Observe the warnings and maintenance requirements in this Owner's Manual.
- Obtain qualified training in safe and proper riding techniques.
- Obtain professional technical service as indicated in this Owner's Manual and/or when made necessary by mechanical conditions.
- Never operate a motorcycle without proper training or instruction. Take a training course. Beginners should receive training from a certified instructor. Contact an authorized motorcycle 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 6-1 for a list of pre-operation checks.

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

  Therefore:
  - Wear a brightly colored jacket.
  - Use extra caution when you are approaching and passing through intersections, since intersections are the most likely places for motorcycle accidents to occur.
  - Ride where other motorists can see you. Avoid riding in another motorist's blind spot.
  - Never maintain a motorcycle without proper knowledge. Contact an authorized motorcycle dealer to inform you on basic motorcycle 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 motorcycle license.
  - Make sure that you are qualified and that you only lend your motorcycle to other qualified operators.

- Know your skills and limits. Staying within your limits may help you to avoid an accident.
- We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with the motorcycle and all of its controls.

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

Protective Apparel

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

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

Avoid Carbon Monoxide Poisoning

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

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

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

Maximum load:
174 kg (384 lb)

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

- Cargo and accessory weight should be kept as low and close to the motorcycle as possible. Securely pack your heaviest items as close to the center of the vehicle as possible and make sure to distribute the weight as evenly as possible on both sides of the motorcycle to minimize imbalance or instability.
- Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the motorcycle before riding. Check accessory mounts and cargo restraints frequently.
- Properly adjust the suspension for your load (suspension-adjustable models only), and check the condition and pressure of your tires.
- Never attach any large or heavy items to the handlebar, front fork, or front fender. These items, including such cargo as sleeping bags, duffel bags, or tents, can create unstable handling or a slow steering response.
- **This vehicle is not designed to pull a trailer or to be attached to a sidecar.**

Genuine Yamaha Accessories

Choosing accessories for your vehicle is an important decision. Genuine Yamaha accessories, which are available only from a Yamaha dealer, have been designed, tested, and approved by Yamaha for use on your vehicle.

Many companies with no connection to Yamaha manufacture parts and accessories or offer other modifications for Yamaha vehicles. Yamaha is not in a position to test the products that these

aftermarket companies produce. Therefore, Yamaha can neither endorse nor recommend the use of accessories not sold by Yamaha or modifications not specifically recommended by Yamaha, even if sold and installed by a Yamaha dealer.

Aftermarket Parts, Accessories, and Modifications

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

Keep the following guidelines in mind, as well as those provided under "Loading" when mounting accessories.

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

Aftermarket Tires and Rims

The tires and rims that came with your motorcycle were designed to match the performance capabilities and to provide the best combination of handling, braking, and comfort. Other tires, rims, sizes, and combinations may not be appropriate. Refer to page 8-14 for tire specifications and more information on replacing your tires.

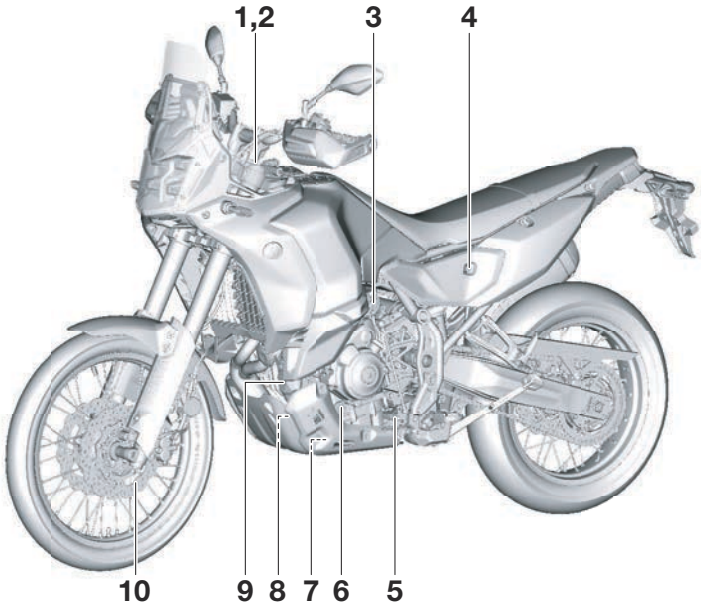
Transporting the Motorcycle

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

- Remove all loose items from the motorcycle.
- Check that the fuel cock (if equipped) is in the “OFF” position and that there are no fuel leaks.
- Point the front wheel straight ahead on the trailer or in the truck bed, and choke it in a rail to prevent movement.
- Shift the transmission in gear (for models with a manual transmission).
- Secure the motorcycle with tie-downs or suitable straps that are attached to solid parts of the motorcycle, such as the frame or upper front fork triple clamp (and not, for example, to rubber-mounted handlebars or turn signals, or parts that could break). Choose the location for the straps carefully so the straps will not rub against painted surfaces during transport.
- The suspension should be compressed somewhat by the tie-downs, if possible, so that the motorcycle will not bounce excessively during transport.

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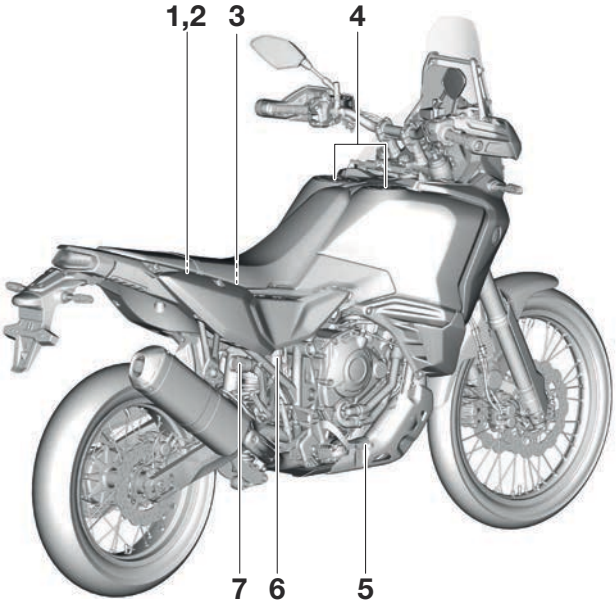
Left view



1. Spring preload adjuster (page 5-35)
2. Rebound damping force adjuster (page 5-35)
3. Canister (page 8-9)
4. Seat lock (page 5-34)
5. Shift pedal (page 5-27)
6. Engine oil level check window (page 8-9)
7. Engine oil drain bolt (page 8-9)
8. Engine oil filter cartridge (page 8-9)
9. Coolant reservoir (page 8-11)
10. Compression damping force adjuster (page 5-35)

EAU10421

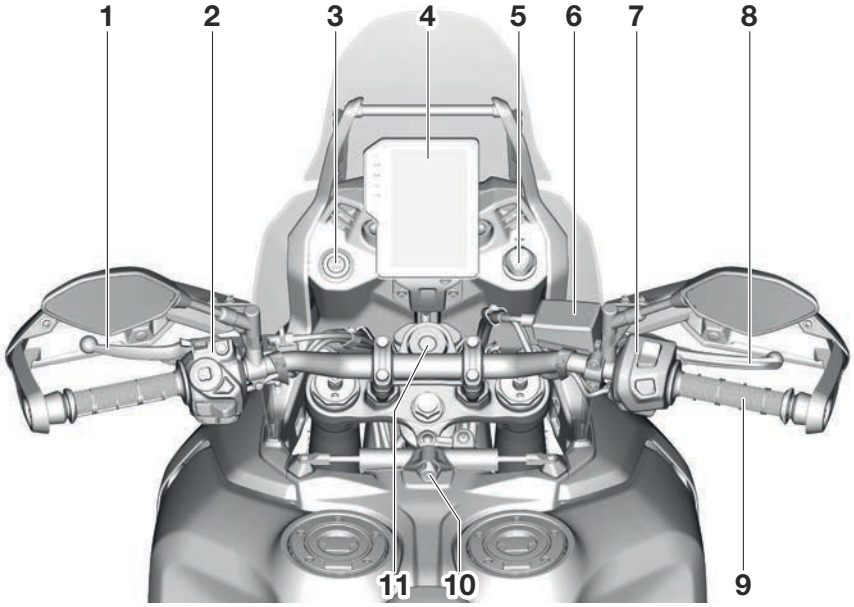
Right view



1. Main fuse (page 8-29)
2. Fuse box (page 8-29)
3. Battery (page 8-28)
4. Fuel tank caps (page 5-30)
5. Brake pedal (page 5-29)
6. Rear brake fluid reservoir (page 8-19)
7. Shock absorber assembly spring preload adjusting knob (page 5-38)

EAU10431

Controls and instruments



1. Clutch lever (page 5-27)
2. Left handlebar switches (page 5-3)
3. “ABS” button (page 5-5)
4. Multi-function meter unit (page 5-10)
5. USB Type-C jack (page 5-41)
6. Front brake fluid reservoir (page 8-19)
7. Right handlebar switches (page 5-3)
8. Brake lever (page 5-28)
9. Throttle grip (page 8-24)
10. Steering damper (page 5-40)
11. Main switch/steering lock (page 5-2)

EAUA9251

Electronic vehicle control systems

This vehicle incorporates numerous sensors and controls such as an IMU (inertial measurement unit) to sense and react to forces along the longitudinal (front-to-back), lateral (left-to-right), and vertical (up-and-down) axes. Lean angle and G-force accelerations are also detected. This information is processed multiple times a second and the related physical systems are automatically adjusted as necessary. The following functions represent individual modes which can be turned on/off or adjusted to suit various riders and riding conditions.

SC (Stability control system)

SC consists of TCS (traction control system) and SCS (slide control system). These can be independently adjusted or turned on/off all together by turning off TCS in the menu system.
When any of the SC systems engage while riding, the stability control indicator "SC" will flash.

PWR (Power delivery)

PWR consists of 2 different control maps which regulate throttle valve opening in relation to the degree of throttle grip operation.
PWR can be set 1-2. Level 1 is the sportiest setting and level 2 is the mildest.

TCS (Traction control system)

TCS helps maintain traction when accelerating. If sensors detect that the rear wheel is starting to slip (uncontrolled spinning), TCS assists by regulating engine power as needed until traction is restored.
TCS automatically adjusts according to the vehicle's lean angle. To maximize acceleration, when the vehicle is upright a less amount of traction control is applied. When cornering, a greater amount of traction control is applied.
TCS has multiple setting levels.
"TCS OFF": traction control off.
"TCS-1 STREET": maximum system intervention.
"TCS-2 OFF-ROAD": reduced system intervention.

TIP

- TCS may engage when the vehicle travels over a bump.
- You may notice slight changes in engine and exhaust sounds when TCS or other electronic vehicle control systems engage.
- When the main switch is turned on, TCS automatically turns on. TCS can be turned on/off manually only when the main switch is turned on and the vehicle is stopped.
- Turn TCS off to help free the rear wheel if the vehicle gets stuck in mud, sand, or other soft surfaces.

EWA15433

⚠ WARNING

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

caution and avoid especially slippery surfaces.

ECA16801

NOTICE

Use only the specified tires. (See page 8-14.) Using different sized tires will prevent the traction control system from controlling tire rotation accurately.

SCS (Slide control system)

SCS regulates engine power output when a sideward slide is detected in the rear wheel. It adjusts power output based on the lean angle of the vehicle. This system supports TCS (traction control system) to contribute to a smoother ride.
SCS has multiple setting levels.
"SCS OFF": slide control off.
"SCS-1 STREET": maximum system intervention.
"SCS-2 OFF-ROAD": reduced system intervention.

QS (Quick shifter) (if equipped)

QS allows for clutch lever-less, electronically-assisted shifting. When the sensor on the shift rod detects the appropriate motion in the shift pedal, engine power output is momentarily adjusted to allow for the gear change to occur.
QS does not operate when the clutch lever is pulled, therefore normal shifting can be done even when QS is set to on. Check the quick shifter indicator for current status and usability information.

Quick shifter usability	Indicator
Upshifting OK	QS ▲▽
Downshifting OK	QS △▼
Quick shifter cannot be used	QS △▽
Quick shifter turned off	QS △▽

Upshifting conditions

- Vehicle speed of at least 20 km/h (12 mi/h)
- Engine speed of at least 2100 r/min
- Engine speed sufficiently below the red zone

Downshifting conditions

- Vehicle speed of at least 20 km/h (12 mi/h)
- Engine speed of at least 2000 r/min
- Engine speed sufficiently away from red zone

TIP

- "QS △" and "QS ▽" can be individually set.
- Shifting into or out of neutral must be done using the clutch lever.

BC (Brake control system)

BC regulates hydraulic brake pressure for the front and rear wheels when the brakes are applied. This system has two settings:

- OFF: Only the standard ABS (anti-lock brake system), which adjusts brake pressure based on vehicle speed and wheel speed data. The standard ABS (anti-lock brake system) designed to engage and maximize braking when the vehicle is upright.
- ON: ABS (Anti-lock brake system) and cornering assist braking are both active. In addition to the

standard ABS, it suppresses the increase in brake pressure when unavoidable abrupt braking occurs during cornering, making the vehicle's recovery to upright position more gradual. Also, additional data from the IMU regulates applied brake power depending on lean angle in order to increase the feeling of stability and to suppress wheel lock.

See page 5-29 for more information on the Brake System.

TIP

- When the rear wheel anti-lock braking system is disabled, the BC (brake control system) is also disabled.
- For skilled riders or when track riding, a variety of conditions may cause BC to brake faster than expected for a desired cornering speed or intended cornering line.
- BC is designed for usage on paved roads. Do not use BC when riding offroad.
- BC is automatically OFF when entering "Raid" theme. However it can be turned on manually in the settings menu.

EWA22532

⚠ WARNING

- **Even with BC ON, strong braking during cornering may result in wheel slippage and loss of balance. Please decelerate sufficiently before entering corners.**
- **Do not use BC on roads other than public roads, as BC may not operate properly and an accident may result.**

EAUA5243

Cruise control system

This model is equipped with a cruise control system designed to maintain a set cruising speed.

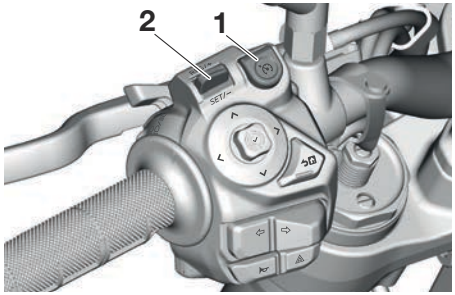
The cruise control system operates only when riding in 3rd gear or higher, at speeds between about 40 km/h (25 mi/h) and 180 km/h (110 mi/h) or 140 km/h (87 mi/h) for 35 kW restricted vehicles.

EWA22860

⚠ WARNING

- **Improper use of the cruise control system may result in loss of control, which could lead to an accident. Do not activate the cruise control system in heavy traffic, poor weather conditions, or among winding, slippery, hilly, rough or gravel roads.**
- **When traveling uphill or downhill, the cruise control system may not be able to maintain the set cruising speed.**
- **To prevent accidentally activating the cruise control system, turn it off when not in use. Make**

sure that the cruise control system indicator " " is off.



1. Cruise control power button " "
2. Cruise control setting switch "RES/+/SET/–"

Activating the cruise control system

1. Press the cruise control/YVSL button "MODE" to turn on the system. The cruise control indicator " " and the set speed indicator "---" km/h will come on to indicate that's the system is on standby.
2. Press the "SET/–" side of the cruise control/YVSL setting switch to activate the cruise control system. The vehicle's current speed will become the set cruising speed and displayed green in the set speed indicator "100" km/h. The cruise control indicator " " will also turn green.

TIP

If the cruise control indicator " " comes on in amber, have a Yamaha dealer inspect the vehicle.

Adjusting the set cruising speed

While the cruise control system is active, press the "RES/+" side of the cruise control/YVSL setting switch to increase the set cruising speed or the "SET/–" side to decrease the set speed. Both the vehicle speed and the speed shown in the set speed indicator "100" km/h will change accordingly.

TIP

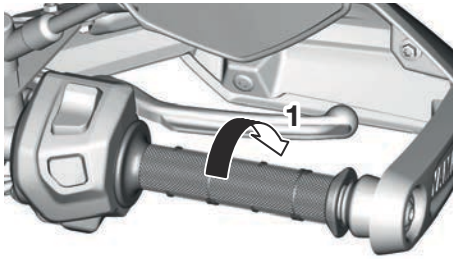
Pressing the setting switch once will change the set speed in increments of 1 km/h (1 mi/h). Hold down the "RES/+" or "SET/–" side of the cruise control/YVSL setting switch to increase or decrease the speed by increments of 10 km/h (10 mi/h) until the switch is released.

You can also manually increase your traveling speed using the throttle. After you have accelerated, you can set a new cruising speed by pressing the "SET/–" side of the cruise control/YVSL setting switch. If you do not set a new cruising speed, when you return the throttle grip, the vehicle will decelerate to the previously set cruising speed.

Deactivating the cruise control system

Perform any of the following actions to deactivate the cruise control system and place it on standby. When the system enters standby, both the cruise control indicator " " and the set speed indicator "100" km/h will lose green status.

- Turn the throttle grip past the fully closed position in the deceleration direction.



1. Deceleration direction

- Apply the front or rear brake.
- Disengage the clutch.
- Shift gears.

TIP

Traveling speed decreases as soon as the cruise control system is deactivated; unless the throttle grip is turned.

Using the resume function

Press the "RES/+" side of the cruise control/YVSL setting switch to reactivate the cruise control system from standby. The traveling speed will return to the previous set cruising speed. Both the cruise control indicator " " and the set speed indicator "100 km/h" will turn green.

EWA16351

WARNING

It is dangerous to use the resume function when the previously set cruising speed is too high for current conditions.

Turning off the cruise control system

At any time, press the cruise control/YVSL button "MODE" to turn off the cruise control system completely. Both the cruise control indicator " " and the set speed indicator "100 km/h" will go off.

TIP

Whenever the cruise control system or the vehicle power is turned off, the previously set cruising speed is erased. You will not be able to use the resume function until a new cruising speed has been set.

Automatic deactivation of the cruise control system

The cruise control system is electronically controlled and linked with other control systems. The cruise control system will automatically deactivate under the following conditions:

- The cruise control system is not able to maintain the set cruising speed (such as when going up a steep hill).
- Wheel slip or wheel spin is detected. (If the traction control system is on, traction control will engage.)
- Engine operation switch "⊠/◠/⊛" is set to "⊠".
- Engine is stopped.
- Side stand is lowered.

If the cruise control system turns off under the above conditions, the cruise control indicator " " and the set speed indicator "100 km/h" will flash for 4 seconds before turning off.

To use the cruise control system again, press the cruise control/YVSL button "MODE" to turn on the system.

TIP

When traveling uphill or downhill, the cruise control system may, in some cases, fail to maintain the set cruising speed.

- When the vehicle is traveling uphill, the actual traveling speed may

become lower than the set cruising speed. If this occurs, accelerate to the desired traveling speed using the throttle.

- When the vehicle is traveling downhill, the actual traveling speed may become higher than the set cruising speed. If this occurs, the cruise control/YVSL setting switch cannot be used to adjust the set cruising speed. To reduce the traveling speed, apply the brakes. When the brakes are applied, the cruise control system will become deactivated.

EAUA4335

Yamaha variable speed limiter (YVSL)

This model is equipped with the Yamaha variable speed limiter (YVSL) which limits the vehicle to a maximum speed set by the rider.

The YVSL can be set to any speed limit between and . When the set speed limit is reached, the engine output is restricted to keep the vehicle from exceeding set speed limit without throttle control.

EWA22900

WARNING

- **Improper use of the YVSL system may result in loss of control, which could lead to an accident. Do not activate the YVSL system in heavy traffic, poor weather conditions, or among winding, slippery, hilly, rough or gravel roads.**
- **The YVSL system may not be able to maintain the set speed limit when traveling uphill, downhill, or under sudden acceleration.**
- **Confirm whether the YVSL system is ON/OFF before use.**
- **To prevent accidentally activating the YVSL system, turn it off when not in use. Make sure that the YVSL display is off.**



1. YVSL indicator "LIM"
2. Set speed indicator

TIP

In some cases, the YVSL system may not be able to maintain the set speed limit when the vehicle is traveling downhill, under sudden acceleration, or immediately following a gear shift.

- If the vehicle exceeds the set speed limit by 5 km/h (3 mi/h) or more for more than 3 seconds, the YVSL indicator "LIM" and the set speed indicator "100 km/h" will flash until

the vehicle speed decreases to within the limit.
- If the vehicle traveling speed becomes higher than the set speed limit, apply the brakes.

When the YVSL disengages, engine output is gradually derestricted to ensure a smooth transition to full rider control of the throttle.

Activating and setting the YVSL

1. Press the cruise control/YVSL button "MODE" located on the left handlebar. The cruise control indicator " " will come on.
2. Press the cruise control/YVSL button "MODE" a second time to switch to YVSL standby mode. The YVSL indicator "LIM" and the set speed indicator "100 km/h" will come on.
3. Push the "SET–" side of the cruise control/YVSL setting switch to activate the YVSL. The YVSL indicator "LIM" will come on in green and the speed limit will be set to your current traveling speed which will be shown on the set speed indicator.

TIP

- Pressing the cruise control/YVSL button "MODE" while the cruise control system is active and the cruise control indicator " " is on will also switch to the YVSL standby mode.
- The cruise control system and the YVSL system cannot both be active at the same time.

Adjusting the speed limit

While the YVSL is activated, push the "RES+" side of the cruise control/YVSL setting switch to increase the set speed limit or the "SET–" side to decrease the set speed limit.

TIP

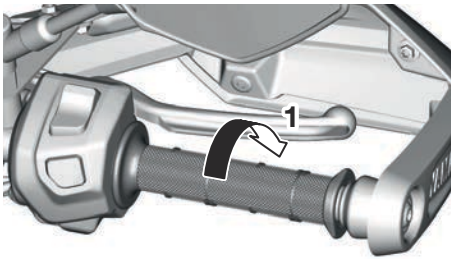
Pushing the cruise control/YVSL setting switch once will change the set speed in increments of approximately 1 km/h (1 mi/h). Holding the setting switch will change the set speed in increments of 10 km/h (10 mi/h).

Deactivating the YVSL

When the YVSL is disengaged, engine output is gradually derestricted to ensure a smooth transition to full rider control of the throttle.

Perform one of the following operations to deactivate the YVSL:

- Turn the throttle grip past the closed position in the deceleration direction. Both the YVSL indicator "LIM" and the set speed indicator "100 km/h" will lose green status, and the system will return to standby mode.



1. Deceleration direction

- Press the cruise control/YVSL button "MODE" located on the left handlebar. The YVSL indicator and set speed indicator will go off.

Using the resume function

Push the "RES+" side of the cruise control/YVSL setting switch to reactivate the YVSL when in standby mode. The speed limit will return to the previously set speed limit.

EWA21210

WARNING

It is dangerous to use the resume function when the previously set speed limit is too low for current conditions.

TIP

Pressing the cruise control/YVSL button "MODE" while the YVSL system is operating will turn the system off completely and erase the previously set speed limit.

You will not be able to use the resume function until a new speed limit has been set.

EAUA1773

ESS (emergency stop signaling) system

When sudden deceleration occurs this system automatically activates to cause all turn signal lights to flash rapidly.

This provides additional warning to surrounding vehicles that your vehicle is decelerating rapidly.

The ESS system then deactivates under the following conditions:

- When the brakes are released.
- When sudden deceleration is no longer detected.

EWA22680

WARNING

The ESS system is not a collision prevention system. Avoid unnecessary hard braking and prioritize safe driving.

TIP

- The ESS system only activates when it detects sudden braking while the vehicle is traveling at speeds of 50 km/h (31 mi/h) or higher.
- ESS does not activate when the hazard lights are already activated.
- If the ESS is activated while one of the turn signal lights is already flashing, the ESS takes priority, causing all turn signals to flash rapidly.
- ESS does not operate when the ABS indicator light is on.

EAUA8433

CCU (Communication Control Unit)

This vehicle is equipped with a CCU (Communication Control Unit) that enables wireless Bluetooth connection between the vehicle and your smartphone via the MyRide app. Through this connection, the following connectivity functions can be accessed in the vehicle display:

- Turn by Turn GPS navigation (page 5-19)
- Telephone (page 5-21)
- Audio player (page 5-20)
- Smartphone notifications (page 5-22)
- Weather information (page 5-20)
- Clock automatic update (page 5-25)

Connectivity functions are accessed via the menu system (page 5-20).

EWA21415

⚠ 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 or operating your smartphone.**
- **Changing settings while riding can distract the operator and increase the risk of an accident.**
- **Never take your hands off the handlebars while riding.**

TIP

- The CCU takes some time to initiate and stabilize the Bluetooth connection after the vehicle power is turned on or the vehicle battery is reconnected.
- Some connectivity functions need to be activated on the connected smartphone before they become functional in the menu system.
- Some connectivity functions may not be available depending on your smartphone and/or OS (operating system) version.
- Some music, SNS, and other smartphone applications and headsets devices may not function and/or display properly.
- The following may interfere with connectivity functions:
  - Smartphone network connection is too busy.
  - The smartphone GPS signal is unstable.
  - Bluetooth connection is unstable.
  - Too many other devices connected to the smartphone at once.
- The Bluetooth connection may not work in the following situations:
  - In locations exposed to strong radio waves or other electromagnetic noise.
  - Near facilities emitting strong radio waves, such as TV and radio towers, power plants, broadcasting stations, airports, etc.
- Only one smartphone can be connected to the CCU at one time.
- If more than one phone has been registered in the CCU, then the first phone within reach will be connected.

Initial setup: MyRide app

MyRide is a free app which is needed to complete the connection between the CCU and your smartphone.
After pairing the CCU and the MyRide app, the smartphone is registered in the CCU. When the app is connected to the CCU, the smartphone battery level indicator "" and the MyRide app indicator "App" will come on. (See page 5-11.)
Scan the QR code below and download the MyRide app, or search for it by name in an app store.

Android iOS

The CCU can be paired to your smartphone by:

- Entering the VIN (vehicle identification number) in the MyRide app. (See page 11-1.)
- Use the MyRide app to scan the QR code on the CCU. (See page 4-3.)

TIP

- Once paired, the smartphone is registered in the CCU. The next time the vehicle is turned on and the MyRide app is active, the connection will be automatically established.
- Use of MyRide is subject to your agreement to the MyRide terms of use.
- The MyRide 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.
- Some connectivity and/or display functions may change with later updates to the MyRide app and therefore differ from the contents of this manual.

Initial setup: Turn by Turn navigation

EWA21401

WARNING

- **Always stop the vehicle before operating the navigation system.**

4

- **Always concentrate on riding by keeping your eyes and mind on the road.**



This vehicle is equipped with a Turn by Turn navigation system that provides route guidance through visual and textual prompts. To use the Turn by Turn navigation system, follow the prompts within the MyRide app to set GPS permissions and agree to the Google terms of service.

TIP

- Navigation data in the MyRide app is obtained via Google Maps. Use of Google Maps is subject to your agreement to the Google Maps terms of use. Yamaha shall not be liable for any damages resulting from the use of Google.
- The MyRide app's GPS access permissions must be set to "Always allow" in your smartphone's settings.
- While route guidance is active, the weather information at the destination will be displayed.

Initial setup: Bluetooth headset

Some connectivity features require a headset to be connected to the smartphone to function properly. Follow your headset manufacturer instructions to pair/connect to your smartphone.

EWA23130

⚠ WARNING

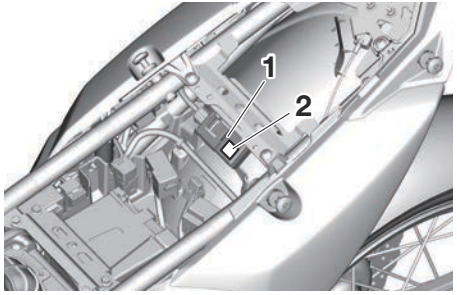
Keep volume levels low enough to maintain awareness of your surroundings and ensure safety.

EAUA8400

Scanning the CCU QR code

To pair your smartphone with the vehicle by scanning the CCU QR code complete the following procedure:

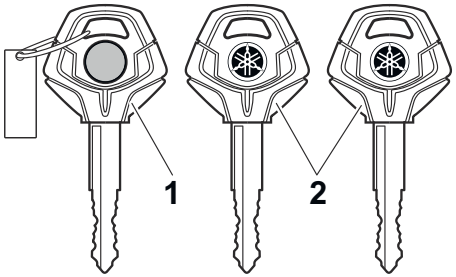
1. Remove the seat. (See page 5-34.)
2. Find the CCU and scan its QR code with the app.



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

EAU1097C

Immobilizer system



1. Code re-registering key (red dot)
2. Standard keys (black bow)

This vehicle is equipped with an immobilizer system to help prevent theft by re-registering codes in the standard keys. This system consists of the following:

- a code re-registering key
- two standard keys
- a transponder (in each key)
- an immobilizer unit (on the vehicle)
- an ECU (on the vehicle)
- a system indicator light (page 5-7)

About the keys

The code re-registering key is used to register codes in each standard key. Store the code re-registering key in a safe place. Use a standard key for daily operation.

When key replacement or re-registering is necessary, bring the vehicle and the code re-registering key along with any remaining standard keys to a Yamaha dealer to have them re-registered.

TIP

- Keep the standard keys as well as keys of other immobilizer systems away from the code re-registering key.
- Keep other immobilizer system keys away from the main switch as they may cause signal interference.

ECA11823

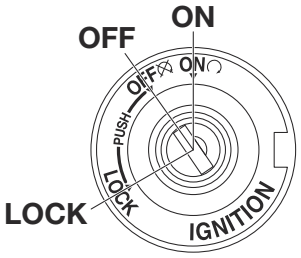
NOTICE

DO NOT LOSE THE CODE RE-REGISTERING KEY! CONTACT YOUR DEALER IMMEDIATELY IF IT IS LOST! If the code re-registering key is lost, the existing standard keys can still be used to start the vehicle. However, registering a new standard key is impossible. If all keys have been lost or damaged, the entire immobilizer system must be replaced. Therefore, handle the keys carefully.

- **Do not submerse in water.**
- **Do not expose to high temperatures.**
- **Do not place near magnets.**
- **Do not place near items that transmit electrical signals.**
- **Do not handle roughly.**
- **Do not grind or alter.**
- **Do not disassemble.**
- **Do not put two keys of any immobilizer system on the same key ring.**

EAU10475

Main switch/steering lock



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

TIP

Be sure to use the standard key (black bow) for regular use of the vehicle. To minimize the risk of losing the code re-registering key (red bow), keep it in a safe place and only use it for code re-registering.

EAU85050

ON

All electrical circuits are supplied with power and the vehicle lights are turned on. The engine can be started. The key cannot be removed.

TIP

- To prevent battery discharge, do not leave the key in the on position without the engine running.
- The headlight comes on automatically when the engine is started.
- The headlight will stay on until the key is turned to “OFF”, even if the engine stalls.

EAU10664

OFF

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

EWA10062

⚠ WARNING

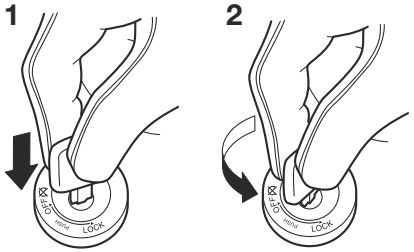
Never turn the key to “OFF” or “LOCK” while the vehicle is moving. Otherwise the electrical systems will be switched off, which may result in loss of control or an accident.

EAU73803

LOCK

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

To lock the steering



1. Push.
2. Turn.

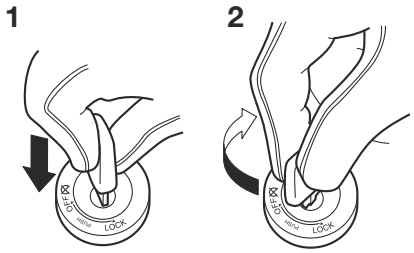
1. Turn the handlebars all the way to the left.
2. With the key in the “OFF” position, push the key in and turn it to “LOCK”.

3. Remove the key.

TIP

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

To unlock the steering



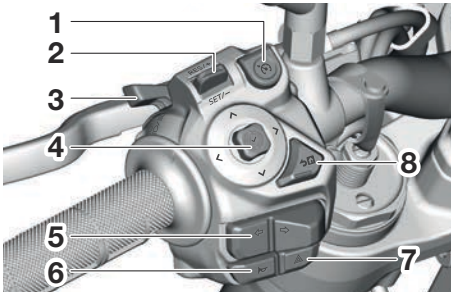
1. Push.
2. Turn.

Push the key in and turn it to "OFF".

EAU6605B

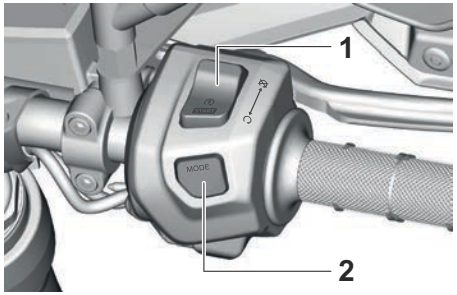
Handlebar switches

Left

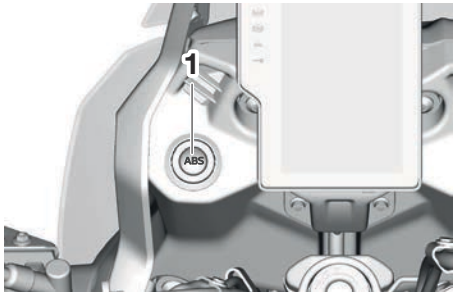


1. Cruise control power button " "
2. Cruise control setting switch "RES/+/SET/–"
3. Dimmer/Pass switch " / "
4. Joystick " "
5. Turn signal switch " / "
6. Horn switch " "
7. Hazard switch " "
8. Home button " "

Right



1. Engine operation switch " / / "
2. "MODE" button

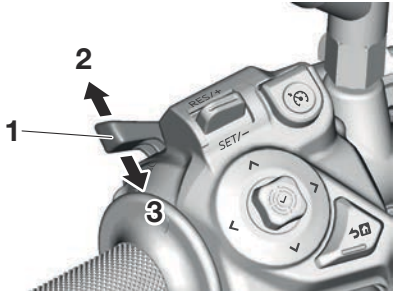


1. "ABS" button

5

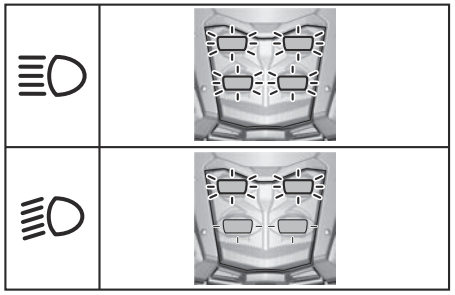
EAUA6020

Dimmer/Pass switch "≣O/≣O"



1. Dimmer/Pass switch "≣O/≣O"
2. Direction A
3. Direction B

Push this switch outward (direction A) to turn the high beam on. Push this switch inward (direction B) to return to low beam.
While the headlights are set to low beam, push the switch inwards (direction B) to momentarily flash the high beam.



TIP

When the headlights are set to low beam, the two bottom headlights are on in a low power setting.

EAUA1741

Turn signal switch "⇦/⇨"

This switch controls the turn signal lights. This is a 2-stage switch, meaning that pressing it soft or hard has a different effect.
Soft press: Lightly press the switch in the direction you wish to signal, until a soft click is felt. The corresponding turn signal light will flash three times and stop.
Hard press: Firmly press the switch in the direction you wish to signal, until a stronger click is felt. The corresponding turn signal light will flash continuously until all of the following conditions occur:

- The vehicle travels approx. 150 m (490 ft).
- More than 15 seconds has elapsed.
- The vehicle speed is more than 5 km/h (3 mi/h).

ECA28520

NOTICE

Depending on the conditions, the turn signal may not automatically turned off within the specified time or distance travelled.

To cancel a turn signal manually, press the switch a second time in the same direction.

EAU66030

Horn switch "📯"

Press this switch to sound the horn.

EAUA9170

Engine operation switch "⊠/⟳/⟳"

To crank the engine with the starter, set this switch to run "⟳", and then push the switch down towards start "⟳".

See page 7-2 for starting instructions prior to starting the engine.
Set this switch to stop "⊠" to stop the engine in case of an emergency, such as when the vehicle overturns.

TIP

This manual sometimes refers to the three positions of this switch as individual switches.
"⊠": Stop switch
"○": Run switch
"㊋": Start switch

EAU91671

Hazard switch "⚠"

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.

ECA10062

NOTICE

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

EAUA1930

Cruise control switches

See page 3-3 for an explanation of the cruise control system.

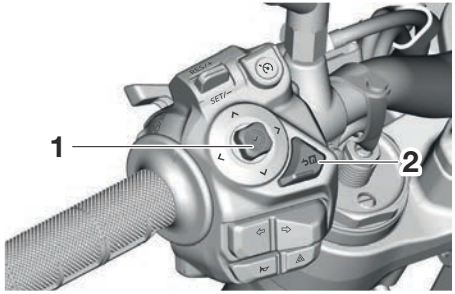
EAUA5491

"MODE" button

Short press this button to open the MODE display pop-up at the bottom of the main screen.
See page 5-16 for more information.

EAUA5110

Joystick "✔" and home button "↩⌂"



1. Joystick "✔"
2. Home button "↩⌂"

These are used to control the display/menu system.
This manual uses the following terms to describe the usage of the menu controls:

Short press	Briefly press the joystick or button
Long press	Press the joystick or button for 1 second

See pages 5-10 and 5-20 for more detailed explanations of their function.

EAUA5122

"ABS" button

This button deactivates/activates the anti-lock brake system (ABS).

To deactivate the ABS:
Press and hold the “ABS” button for 2 seconds. The ABS will deactivate to ABS OFF or REAR ABS OFF depending on the previous setting in the MODE display. (See page 5-16.)
The ABS OFF indicator light “ ” will come on and the ABS mode indicator will appear as “ABS OFF” / “REAR ABS OFF”.

To activate the ABS:
Short press the “ABS” button. The ABS OFF indicator light “ ” will go off and the ABS mode indicator will go off.

TIP

- The “ABS” button does not function when the vehicle is in motion.
- When the ABS reactivates, the ABS mode indicator and the ABS OFF indicator light “ ” will go off.

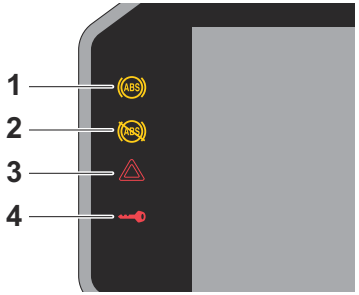
EAUA5932

Indicator lights and warning lights

ECA29090

NOTICE

If an indicator or warning is signaling a problem or abnormal condition, then stop all vehicle operation immediately. Have a Yamaha dealer inspect the vehicle.



1. ABS warning light “ ”
2. ABS OFF indicator light “ ”
3. Hazard indicator light “ ”
4. Immobilizer system indicator light “ ”

EAUA6590

Hazard indicator light “ ”

This indicator light flashes when the hazard switch “ ” is on.

EAU91850

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.

EWA16043

WARNING

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

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

EAUA6030

ABS OFF indicator light “ ”

This indicator light comes on when the anti-lock brake system has been manually disabled, the ABS mode indicator comes on at the same time. (See page 5-11.)

TIP

The ABS will remain disabled until:

- The main switch is turned off.

- The “ABS” button is pressed while the vehicle is not moving.
- The ABS is reactivated via the menu system while the vehicle is not moving.

EWA21100

⚠ WARNING

Always ride on paved roads with the ABS turned on. Turn the ABS off only when riding on non-paved surfaces.

EAUA0280

Immobilizer system indicator light “ ”

When the main switch is turned off and 30 seconds have passed, the indicator light will flash steadily to indicate the immobilizer system is enabled. After 24 hours have passed, the indicator light will stop flashing, however the immobilizer system is still enabled.

TIP

When the vehicle is turned on, this 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.

Transponder interference

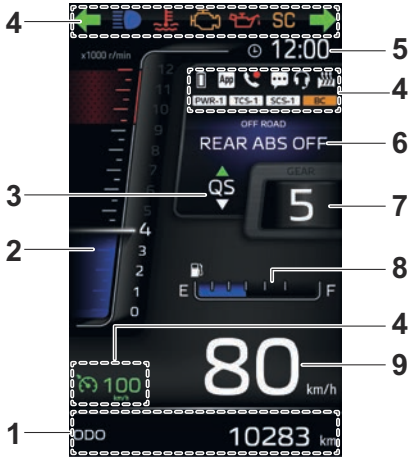
If the immobilizer system indicator light flashes in the pattern, slowly 5 times then quickly 2 times, this could be caused by transponder interference. If this occurs, try the following.

1. Make sure there are no other immobilizer keys close to the main switch.
2. Use the code re-registering key to start the engine.
3. If the engine starts, turn it off, and try starting the engine with the standard keys.
4. If one or both of the standard keys do not start the engine, take the vehicle and all 3 keys to a Yamaha dealer to have the standard keys re-registered.

EAUM5280

Display

Explorer

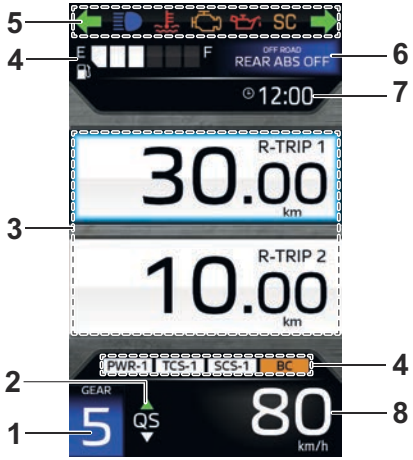


Street



1. Vehicle information display
2. Tachometer
3. Quick shifter indicator “QS” (if equipped)
4. Indicator icons
5. Clock
6. ABS mode indicator
7. Transmission gear display
8. Fuel meter
9. Speedometer
10. Coolant temperature meter

Raid



1. Transmission gear display
2. Quick shifter indicator “QS” (if equipped)
3. Raid tripmeters
4. Fuel meter
5. Indicator icons
6. ABS mode indicator
7. Clock
8. Speedometer

EAUM5524

Main display screen

The main screen of the display has three different themes; “Explorer”, “Street” and “Raid”. (See page 5-8.) Some functions are not available in all themes. (See page 5-21.)

EWA18210

⚠ WARNING

Stop the vehicle before making any setting changes. Changing settings while riding can distract the operator and increase the risk of an accident.

TIP

- This model uses a thin-film-transistor liquid-crystal display (TFT LCD) 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 display units can be switched between kilometers/miles and Celsius/Fahrenheit. (See page 5-24.)

Speedometer

The speedometer shows the vehicle’s traveling speed.

Tachometer

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

ECA10032

NOTICE

Do not operate the engine in the tachometer red zone.
Red zone: 9400 r/min and above

Fuel meter

The fuel meter indicates the amount of fuel in the fuel tanks. The display segments of the meter disappear from “F” (full) towards “E” (empty) as the fuel level decreases.
When the last segment starts flashing, refuel as soon as possible.

TIP

If all the fuel meter display segments flash repeatedly, have a Yamaha dealer inspect the vehicle.

ECAE0121

NOTICE

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

Coolant temperature meter

The coolant temperature meter indicates the radiator coolant temperature. When the coolant is too hot, the top segment will flash.

TIP

The coolant temperature meter is only available in the “Street” theme.

Clock “⏲”

The clock uses a 12-hour time system.

TIP

In “Raid” theme, the clock function is part of the information display. (See page 5-15.)

Transmission gear display

This shows which gear the transmission is in. This model has 6 gears and a

neutral position. The neutral position is indicated by "N".

TIP

If a malfunction occurs, "-" will be shown.

ABS mode indicator

This indicator shows the currently selected ABS mode. There are 3 ABS modes which can be changed with the "MODE" button and the MODE display. (See page 5-16.)

ABS status	Indicated on display
ABS is on	The indicator is off
Rear wheel ABS is off	"REAR ABS OFF" and "OFF ROAD"
ABS is off	"ABS OFF" and "OFF ROAD"

Indicator icons

Coolant temperature warning indicator ""

This indicator is shown when the coolant temperature is too high. Stop the vehicle and turn off the engine. Allow the engine to cool.

TIP

If this indicator comes on frequently or stays on even when the engine is cold, have a Yamaha dealer inspect the vehicle.

ECA10022

NOTICE

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

Stability control indicator "SC"

This indicator flashes when the TCS (traction control system), or SCS (slide control system) engage. If stability control is set to OFF, the indicator will come on.

TIP

If this indicator does not come on or remains on, have a Yamaha dealer check the vehicle.

ECA28471

NOTICE

When turning the main switch on, avoid any movement or vibration of the vehicle as it may interfere with the initialization of the IMU. If this occurs, the traction control system will not operate and the stability control indicator light "SC" will come on until the IMU can initialize.

Oil pressure warning indicator ""

This indicator is shown when the engine oil pressure is low. When the vehicle power is first turned on, engine oil pressure has yet to build up, therefore this indicator will show until the engine has been started.

TIP

If a malfunction is detected, the oil pressure warning icon will flash repeatedly.

ECA26410

NOTICE

Do not continue to operate the engine if the oil pressure is low.

Malfunction indicator (MIL) ""

This icon comes on or flashes if a problem is detected in the engine or other vehicle control system. If this occurs, have a Yamaha dealer inspect the vehicle.

TIP

When the vehicle is turned on, this icon should come on briefly and then go off. If it does not come on, or if it remains on, have a Yamaha dealer inspect the vehicle.

ECA26820

NOTICE

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

TIP

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

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

High beam indicator “ ”

This indicator is shown when the high beam of the headlight is on.

Turn signal indicators “ ”/“ ”

Each indicator flashes when its corresponding turn signal lights are flashing.

PWR mode indicator “ PWR-1 ”

This indicator displays the currently selected PWR (power delivery) mode.

The PWR modes can be adjusted with the “MODE” button and the MODE display. (See page 5-16.)

TCS mode indicator “ TCS-1 ”

This indicator displays the currently selected TCS (traction control system) mode. When the traction control system is off, the TCS mode indicator will be off and the stability control indicator “SC” will come on.

The TCS can be adjusted with the “MODE” button and the MODE display. (See page 5-16.)

SCS mode indicator “ SCS-1 ”

This indicator displays the currently selected SCS (slide control system) mode.

The SCS modes can be adjusted with the “MODE” button and the MODE display. (See page 5-16.)

BC indicator “ BC ”
This indicator comes on if BC (brake control system) is deactivated.

ECA28551

NOTICE

When turning the main switch on, avoid any movement or vibration of the vehicle as it may interfere with the initialization of the IMU. If this occurs, the brake control system will not operate and the BC indicator “ BC ” will come on until the IMU can initialize.

Cruise control indicator “ / / ”
This icon comes on if the cruise control system is on standby, turns green when the system is active, or amber if there is an error.
For more information on the cruise control system see page 3-3.

TIP

The cruise control system is disabled in “Raid” theme.

YVSL indicator “ / / ”
This icon comes on if the YVSL system is on standby, turns green when the system is active, or amber if there is an error.

TIP

The YVSL system is disabled in “Raid” theme.

Set speed indicator “ 0 km/h / 0 km/h ”
This indicator displays the current set speed of the cruise control system or YVSL system. This icon comes on if the cruise control system or YVSL system is on standby and turns green when the system is active.
For more information on the cruise control system, see page 3-3.
For more information on the YVSL system, see page 3-6.

Smartphone battery level indicator “ ”
This indicator displays the connected smartphone’s current battery level.

- Icon off: No smartphone connected.
- “ ”: The center bar moves up and down to indicate the battery level. When the battery level is low, the center bar will turn red.

TIP

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

MyRide app indicator “App”
This indicator comes on when the MyRide app is successfully connected to the vehicle.

Phone indicator “”/“”
This icon comes on green when there is an active call and red when there is a missed call. The missed call icon will disappear when the vehicle power is turned ON/OFF or when the “Received Call” list is opened in the menu system. (See page 5-21.)

Message indicator “”
This icon comes on when the connected smartphone receives an SNS, E-mail or other notification. It will remain on until the vehicle power is turned off

or until the “Message” list is opened in the menu system. (See page 5-22.)

TIP

- This function works only when a smartphone is connected to the CCU via the MyRide app.
- Permission to access notifications must be granted to the MyRide app on your smartphone.

Headset indicator “🎧”
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.

Quick shift indicator “QS”(if equipped)
This icon and accompanying arrow icons indicate the status of the quick shifter.
Respective arrow icon off: the quick shifter is disabled.
▲: the system is active for upshifts but cannot currently quickshift.
▼: the system is active for downshifts but cannot currently quickshift.
▲: quick upshift available.
▼: quick downshift available.

TIP

- The upshift and downshift functions are independent and can be activated separately in the menu system. (See page 5-25.)
- For more information on the quick shifter see page 3-2 and 5-28.

Grip warmer indicator “♨”(if equipped)
The grip warmers can be used when the engine is running. There are 3 customizable temperature presets that can be customized between 10 different temperature levels. (See page 5-23.)
The icon displays the current temperature setting:
▭: Grip warmer off
♨: Low preset
♨: Medium preset
♨: High preset

ECA17932

NOTICE

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

Raid tripmeters (“Raid” theme only)
“R-TRIP 1” and “R-TRIP 2” show the distance traveled since they were last set to zero. Short press “✔” to cycle between “R-TRIP 1” and “R-TRIP 2”. Operate the joystick up-down to increment the tripmeter value up/down manually.

TIP

- Holding the joystick up-down will increase the increment speed.
- “R-TRIP 1” and “R-TRIP 2” will reset to 0 and begin counting again after 999.9 has been reached.
- “R-TRIP 1” and “R-TRIP 2” will reset to 0 and begin counting again when the “Raid” theme is selected or when the “All Reset” function is used.

Information display

The information display is a section of the main screen which contains various functions and information to aid the operator of the vehicle.

The information display items are:

"ODO": odometer
"TRIP 1": tripmeter 1
"TRIP 2": tripmeter 2
"TRIP CD": countdown tripmeter
"TRIP F": fuel reserve tripmeter
"INST FUEL": instantaneous fuel consumption
"AVG FUEL": average fuel consumption
"COOLANT": coolant temperature
"AIR": air temperature

Operate the joystick up-down to cycle the items.

For "Raid" theme, the information display items are:

"ODO": odometer
"🕒": clock
"⏱": chronometer

TIP

- The "TRIP 1", "TRIP 2", "TRIP CD", "TRIP F", and "AVG FUEL" items can be individually reset. The "TRIP CD" item can also be adjusted.
- In "Street" theme, two items are displayed at once.

To reset information display items:

If a displayed item can be reset, short pressing "✔" will highlight the item. Once highlighted, long press "✔" and the item will reset.

Odometer "ODO":

The odometer shows the total distance traveled by the vehicle.

TIP

The odometer will lock at 999999 km (621370 mi) and cannot be reset.

Tripmeters "TRIP 1" / "TRIP 2":

"TRIP 1" and "TRIP 2" show the distance traveled since they were last set to zero.

TIP

"TRIP 1" and "TRIP 2" will reset to 0 and begin counting again after 9999.9 has been reached.

Countdown tripmeter "TRIP CD":

Counts down from a set distance. Reset the countdown tripmeter and the first digit will flash. Operate the joystick up-down to adjust the flashing digit, short press "✔" to confirm and the next digit will flash. Repeat this until the third digit is confirmed and the tripmeter is set.

When the set mileage has been travelled, "0.0" will flash 10 times and then remain. If another information display item is being displayed, the countdown tripmeter will supersede it, flash 10 times, and then return to the previously displayed item.

TIP

The maximum set value is 900.0 km (600.0 mi).

Fuel reserve tripmeter "TRIP F":

When the fuel tank reserve level has been reached, "TRIP F" appears automatically and begins recording distance traveled from that point.

After refueling and traveling some distance, "TRIP F" will disappear.

Instantaneous fuel consumption “INST FUEL”:
The instantaneous fuel consumption display can be set to “km/L”, “L/100km” or “MPG” in the menu system. (See page 5-24.)

TIP

If traveling at speeds under 10 km/h (6 mi/h), “--.-” will be displayed. If the units are set to miles “---.-” will be displayed.

Average fuel consumption “AVG FUEL”:
The average fuel consumption display can be to “km/L”, “L/100km” or “MPG” in the menu system. (See page 5-24.)

TIP

After resetting the average fuel consumption display, “--.-” will be shown until the vehicle has traveled 1 km (0.6 mi). If the units are set to miles “---.-” will be displayed.

Coolant temperature “COOLANT”:
The coolant temperature is displayed from 39 °C (103 °F) to 117 °C (243 °F) in 1 °C (1 °F) increments.

TIP

- If the vehicle coolant temperature is below 39 °C (103 °F) the coolant temperature display will read “Low Temp”
- If the vehicle coolant temperature is above 117 °C (243 °F) the coolant temperature display will read “High Temp”

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 displayed temperature may differ from the actual ambient temperature due to the vehicle temperature and other factors.

TIP

“---” will be displayed if the detected temperature is higher or lower than the display range.

Chronometer “⏱” (“Raid” theme only):
Timer function. After using the “All reset” function in the “Raid” theme menu system (See page 5-25.), the timer will begin counting after the vehicle has travelled 3 meters. Short press “✔” to pause and resume the timer.

TIP

Starting from “00:00:00” (hours:minutes:seconds), the timer will reset and continue at “99:59:59”.

MODE display



Short press the “MODE” button to open a popup at the bottom of the main screen. The following items are contained in the MODE display:

- PWR mode
- TCS mode
- SCS mode
- ABS mode

PWR mode
Changes the engine throttle map between:
"PWR-1 SPORT": Maximum throttle response.
"PWR-2 EXPLORE": Smoother throttle response.

TCS mode
Sets the traction control system OFF/1/2. Press and hold the joystick down to turn TCS OFF.
"TCS OFF": traction control off.
"TCS-1 STREET": maximum system intervention.
"TCS-2 OFF ROAD": reduced system intervention.

TIP
The vehicle must be stopped to turn TCS OFF.

SCS mode
Sets the slide control system OFF/1/2. Press and hold the joystick down to turn SCS OFF.
"SCS OFF": slide control off.
"SCS-1 STREET": maximum system intervention.
"SCS-2 OFF ROAD": reduced system intervention.

TIP
The vehicle must be stopped to turn SCS OFF.

BC mode
Sets the brake control system OFF/ON. Press and hold the joystick down to turn BC OFF.

TIP
The vehicle must be stopped to turn BC OFF.

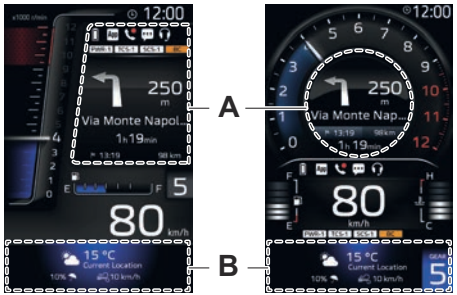
ABS mode
Changes the anti-lock braking system to different settings.
ON: Anti-lock braking system is active.
REAR OFF: Anti-lock braking system is active only for the front wheel.
OFF: Anti-lock braking system is deactivated.

TIP
- The vehicle must be stopped to make changes to the ABS settings.
- The ABS will remain disabled until:
  - The main switch is turned off.
  - The "ABS" button is pressed while the vehicle is not moving.
  - The ABS is reactivated via the MODE display while the vehicle is not moving.

EWA21100

WARNING
Always ride on paved roads with the ABS turned on. Turn the ABS off only when riding on non-paved surfaces.

Connectivity display



When a connectivity function is active, it will be displayed in area A or B, as shown above, on the main display.

"Phone", "Music" and "Weather" can be displayed in area A or B.
"Turn by Turn" can only be displayed in area A.
If "Turn by Turn" is displayed in area A then "Phone", "Music" and "Weather" can only be displayed in area B.
The functions are displayed in the following priority order:

- "Phone" (highest)
- "Turn by Turn"
- "Music"
- "Weather" (lowest)

TIP

- The CCU takes some time to initiate its Bluetooth function after the vehicle power is turned on or the battery is reconnected. Until then, the connectivity items will be greyed out in the side menu.
- Some connectivity features need to be activated on the connected smartphone before they become functional in the side menu.
- Some features may not be available depending on your smartphone and/or OS version.
- Some music, SNS, and other smartphone applications and headset devices may not function and/or display properly.
- The following may interfere with connectivity functions:
  - Smartphone network connection is too busy.
  - The smartphone GPS signal is unstable.
  - Bluetooth connection is unstable.
  - Too many other devices connected to the smartphone at once.
- Phone calls will override all other functions, and also the menu system, until the call is ended. After a call is ended, the connectivity display will then return to the previously displayed function (if any).
- "Turn by Turn", "Music", and "Weather" are activated/deactivated via the menu system.
- Opening the menu system will override area B. When the menu is closed, area B will return to the previously displayed function (if any).

"Phone"

EWA21420

WARNING

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



When a phone call is received to a connected smartphone, the ringtone will play through the connected headset and a telephone function will appear in the connectivity display. Select the green phone icon to answer the call.

The phone indicator "" will remain on for the duration of the call.
Select the red phone icon to reject the call. The phone indicator "" will appear.
When a phone call is active, select the red phone icon to end the call.

TIP

- It is recommended to use the vehicle phone function instead of operating the smartphone directly. Otherwise, it may not display and/or function properly.
- For some smartphones, rejecting a call will not function correctly. The end call icon may be grayed out or using the end call icon will accept the call instead. If an error occurs, select the back icon to exit the error screen.
- If too many contacts are registered in the smartphone, only the phone number may be displayed.

" Turn by Turn"



The Turn by Turn navigation function provides real-time route guidance by displaying essential navigation information on the vehicle's connectivity display. The areas 1-5, shown above, will display the following information if it is available:

- Estimated time of arrival (area 1): Shows the time of day when the vehicle is expected to reach the destination.
- Estimated travel time remaining (area 2): Displays the remaining travel time until the destination is reached.
- Distance to destination (area 3): Indicates how far the vehicle is from the destination.
- Navigation icon (area 4): Displays an icon indicating the next navigation maneuver (e.g., turn left, turn right).
- Road name (area 5): Displays the name of and distance to the next road or street for the upcoming navigation maneuver, if available.

Navigation must be set using the MyRide app.

EWA21420

WARNING

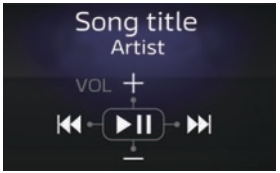
- **Do not use your smartphone while the vehicle is in motion.**
- **Never take your hands off the handlebars while riding.**
- **Always concentrate on riding by keeping your eyes and mind on the road.**
- **Keep volume levels low enough to maintain awareness of your surroundings and ensure safety.**

TIP

Navigation data in the MyRide app is obtained via Google Maps. Use of Google Maps is subject to your agreement to the Google Maps terms of use. Yamaha shall not be liable for any

damages resulting from the use of Google Maps.

"♫ Music"

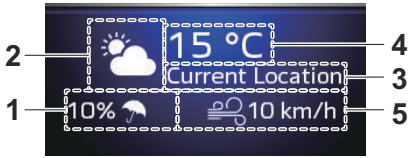


The music player utilizes your smartphone's audio player app.
While the music player is open, operate the joystick up-down to adjust the volume. Operate the joystick left to skip back and right to skip ahead. Short press "✔" to play/pause.

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.

" Weather"



Activates local weather information in the connectivity display, showing the following information if it is available: precipitation chance (area 1), weather type (area 2), location (area 3), temperature (area 4), and windspeed (area 5).

TIP

If navigation is set, the displayed weather information will be for the destination.

EAUM5531

Menu system

The first layer of the menu system is a pop-up that appears on the bottom of the main display screen. All other menu screens replace the main display screen with a full-screen view. While the menu system is full-screen, the main display items are relocated/hidden as shown:



1. Pop-up menu

To open the pop-up menu from the main display:
Short press the home button "⌂".

Menu system operation:

- Operate the joystick left-right-up-down to highlight and adjust menu items.
- Short press "✔" to select an item.
- Short press the home button "⌂" to cancel/return to previous.
- Long press the home button "⌂" to close the menu system.

In "Explorer" and "Street" themes, the menu system is organized as follows:

"Settings"	Adjust settings related to the display's operation. (See page 5-24.)
"Themes"	Change between display themes. (See page 5-21.)
"Phone"	Incoming/missed call settings. (See page 5-21.)
"Message"	Incoming/missed notification settings. (See page 5-22.)
"Turn by Turn"	Activate Turn by Turn route guidance. (See page 5-23.)
"Music"	Access simple pop-up audio player. (See page 5-23.)
"Weather"	View weather information. (See page 5-23.)
"Grip Warmer" (if equipped)	Control the grip warmers. (See page 5-23.)

TIP

If a smartphone is not connected to the vehicle, "Music", "Turn by Turn", "Weather", "Message", and "Phone" will be grayed out.

In "Raid" theme, the menu system is organized as follows:

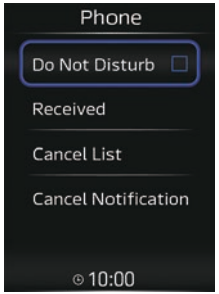
"Raid settings"	Contains settings for "Raid" theme and its associated functions. (See page 5-26.)
"Themes"	Change between display themes. (See page 5-21.)
"Grip Warmer" (if equipped)	Control the grip warmers. (See page 5-23.)
"Raid reset"	Resets the Raid chronometer, "R-TRIP 1" and "R-TRIP 2". (See page 5-27.)

"Themes"



This menu allows you to switch between display themes. Select a theme and the display will return to the main screen in that theme.

"Phone"



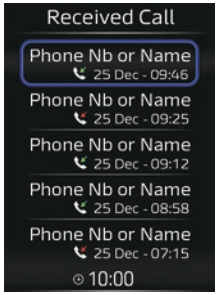
TIP

If a smartphone is not connected to the vehicle, this menu will be grayed out/ not accessible.

"Do Not Disturb"

When this item is checked, all incoming call pop-ups are disabled. When a call is received, the phone indicator "" will come on to indicate a missed call.

"Received Call"



If a call was accepted, the icon shall be represented by a phone handset with a green arrow. If the call was missed or rejected, the icon shall be represented by a phone handset with a red arrow.

TIP

The "Received Call" list data is cleared every time the vehicle power is turned OFF.

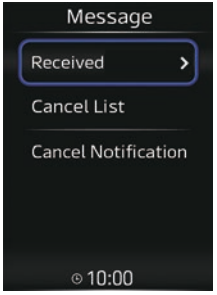
"Cancel List"

Selecting this item clears all data from the "Received Call" list.

"Cancel Notification"

Selecting this item clears the phone indicator "" from the display.

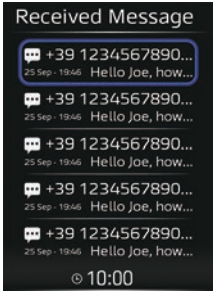
" Message"



TIP

If a smartphone is not connected to the vehicle, this menu will be grayed out/ not accessible.

"Received Message"



Up to 10 push notifications from the connected smartphone can be displayed. Each received notification shows the following information if it is available: date received, time received, sender or app name, the first 15 digits of the notification contents.

TIP

- If too many notifications are received at once, some of them may not show in the list.

- Depending on the smartphone and/or applications, notifications may be disabled or messages displayed on the side menu may differ from the contents on the connected smartphone.
- If the Bluetooth connection is unstable, notifications may be delayed in appearing or may not function properly.
- Time stamps for notifications may differ from the time stamps displayed on the smartphone.
- The "Received Message" list data is cleared every time the vehicle power is turned OFF.

"Cancel List"
Selecting this item clears all data from the "Received Message" list.

"Cancel Notification"
Selecting this item clears the message indicator " " from the display.

" Turn by Turn"
Activates Turn by Turn route guidance in the connectivity display. (See page 5-19.)

TIP
If navigation is not set in the MyRide app or if a smartphone is not connected to the vehicle, this item will be grayed out/not accessible.

" Music"
Activates an audio player in the connectivity display. (See page 5-20.)

TIP
If a smartphone is not connected to the vehicle, this item will be grayed out/not accessible.

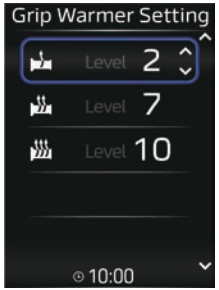
" Weather"
Activates local weather information in the connectivity display. (See page 5-20.)

TIP
If a smartphone is not connected to the vehicle, this item will be grayed out/not accessible.

" Grip Warmer"(if equipped)



With this item highlighted, operate the joystick up-down to cycle between grip warmer OFF and 3 presets.
Short press "✔" to access the grip warmer settings screen.



TIP
The grip warmer settings can only be accessed while the vehicle is stopped.

The 3 grip warmer presets can be customized with temperature levels from 1-10.

5

1. Highlight a preset and short press "✔" to select the highlighted preset.
2. Operate the joystick up/down to adjust the preset temperature level. Short press "✔" to confirm and deselect the preset.
3. When finished adjusting the settings, short press the home button "⌂" to return to the main display screen.

"⚙ Settings"



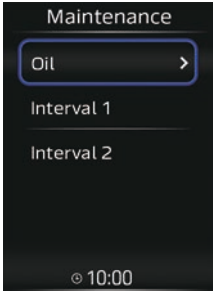
The settings menu is divided into the following modules:

"Maintenance"	Set maintenance tripmeters. (See page 5-24.)
"Unit"	Change measurement units. (See page 5-24.)
"Brightness"	Adjust display brightness. (See page 5-25.)
"Clock"	Set clock. (See page 5-25.)
"Quick Shift"(if equipped)	Quick shifter settings. (See page 5-25.)
"All Reset"	Reset system settings. (See page 5-25.)

TIP

If the vehicle is not equipped with a quick shifter, "Quick Shift" will be grayed out

"Maintenance"



This module allows you to record distance traveled between engine oil changes "Oil", and two other maintenance intervals of your choice "Interval 1" / "Interval 2".

After maintenance to one of the items has been completed, short press "✔" to select it and then long press "✔" to reset it.

"Unit"



This module allows you to change the measurement units. Each of the three items contain a sub-menu where the desired unit is selected.

TIP

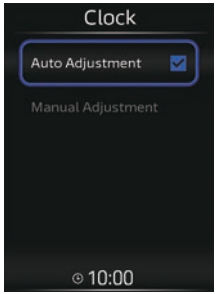
If "mile" is selected as a speed unit, "MPG" will be automatically set as the fuel economy unit and the menu item will be greyed out.

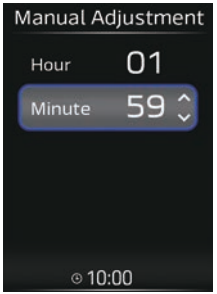
“Brightness”



This module allows you to adjust the screen brightness between 3 different levels.

“Clock”





This module allows you to set the 12-hour clock. The hours and minutes are set individually.

“Quick Shift”(if equipped)



The quick shifter is divided into “QS △” (upshift) and “QS ▽” (downshift) items. Each item can be adjusted to: OFF, 1 or 2.

Setting 1: Can quick shift only while accelerating (“QS △”) or decelerating (“QS ▽”).
Setting 2: Can quick shift while accelerating or decelerating.
“OFF” turns the respective upshift or downshift function off, and the clutch lever must then be used when shifting in that direction.

TIP

“QS △” / “QS ▽” ON/OFF status is reflected by the quick shifter indicator. (See page 5-11.)

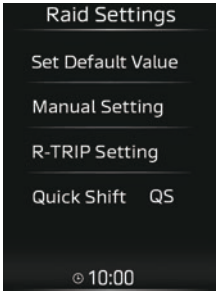
“All Reset”



This module allows you to reset all of the following at once: tripmeters (not

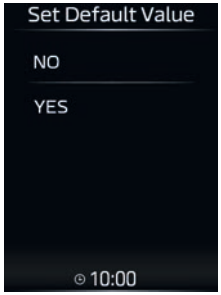
including maintenance tripmeters), and all measurement units.

“Raid settings”



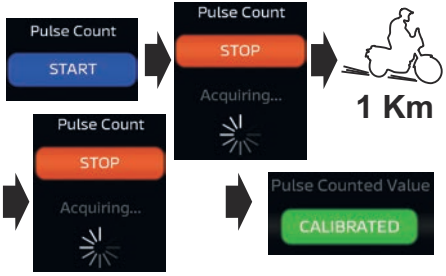
“Set Default Value”	Reset R-TRIP detection parameter to factory default. (See page 5-26.)
“Manual Setting”	Calibrate R-TRIP detection parameter. (See page 5-26.)
“R-TRIP Setting”	Set R-TRIP display decimals. (See page 5-27.)
“Quick Shift”(if equipped)	Quick shifter settings. (See page 5-25.)

“Set Default Value”



This function resets the number of sensor pulses used to measure 1 km (for “R-TRIP 1” and “R-TRIP 2”) back to its default value (for OEM wheel dimensions).

“Manual Setting”



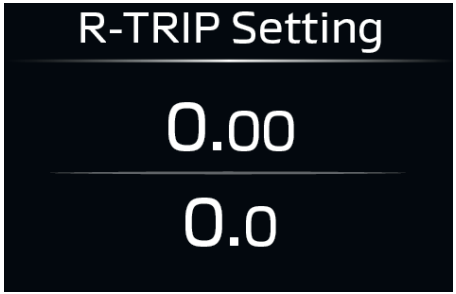
This function sets the value for the number of sensor pulses used to measure 1 km (for “R-TRIP 1” and “R-TRIP 2”) when wheels of non-standard dimensions are used.

a. Short press “✔” to highlight the “START” item. When highlighted, the “START” item shrinks in size.
b. Long press “✔” to start the calibration.
c. Drive the vehicle for 1 km (measured independently from the vehicle multi-function meter). When 1 km has been travelled, highlight the “STOP” item and long press “✔” to stop the calibration.

TIP

- This menu screen will not automatically exit when the vehicle moves.
- Even if the measurement units are set to MPH, pulse calibration must be measured using 1 km.

"R-TRIP Setting"



This module allows selection of how many decimals "R-TRIP 1" and "R-TRIP 2" display.

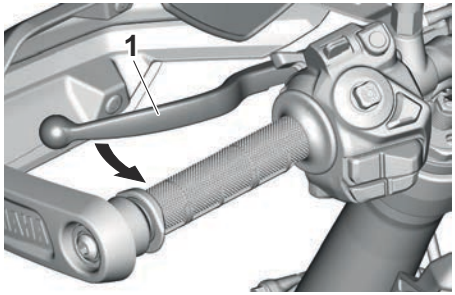
"Raid Reset"



If this item is selected, the chronometer and "R-TRIP" values will reset to zero.

EAU12823

Clutch lever



1. Clutch lever

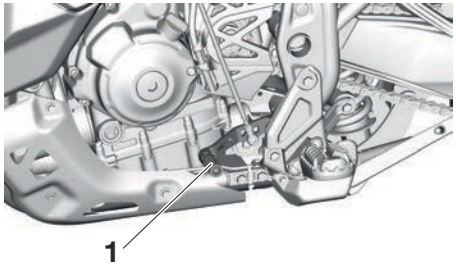
To disengage the drivetrain from the engine, such as when shifting gears, pull the clutch lever toward to the handlebar. Release the lever to engage the clutch and transmit power to the rear wheel.

TIP

The lever should be pulled rapidly and released slowly for smooth shifting. (See page 7-3.)

EAU12876

Shift pedal



1. Shift pedal

The shift pedal is located on the left side of the motorcycle. To shift the transmission to a higher gear, move the shift pedal up. To shift the transmission to a lower gear, move the shift pedal down. (See page 7-3.)

EAUA6040

Quick shifter (if equipped)

QS allows for clutch lever-less, electronically-assisted shifting. When the sensor on the shift rod detects the appropriate motion in the shift pedal, engine power output is momentarily adjusted to allow for the gear change to occur.

QS does not operate when the clutch lever is pulled, therefore normal shifting can be done even when QS is set to on. Check the quick shifter indicator for current status and usability information.

Quick shifter usability	Indicator
Upshifting OK	QS ▲▽
Downshifting OK	QS △▼
Quick shifter cannot be used	QS △▽
Quick shifter turned off	QS △▽

Upshifting conditions

- Vehicle speed of at least 20 km/h (12 mi/h)
- Engine speed of at least 2100 r/min
- Engine speed sufficiently below the red zone

Downshifting conditions

- Vehicle speed of at least 20 km/h (12 mi/h)
- Engine speed of at least 2000 r/min
- Engine speed sufficiently away from red zone

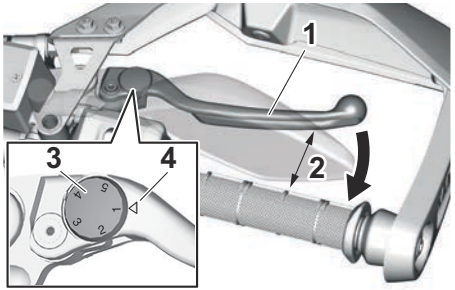
TIP

- "QS △" and "QS ▽" can be individually set.
- Shifting into or out of neutral must be done using the clutch lever.

EAU26827

Brake lever

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



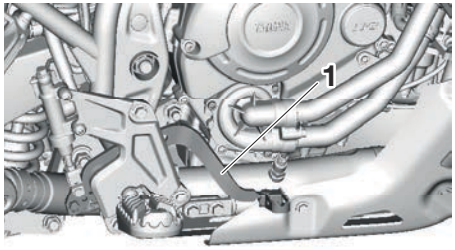
1. Brake lever
2. Distance between brake lever and throttle grip
3. Brake lever position adjusting dial
4. Match mark

The brake lever is equipped with a brake lever position adjusting dial. To adjust the distance between the brake lever and the throttle grip, push the brake lever away from the throttle grip and rotate the adjusting dial. Make sure the setting number on the adjusting dial

aligns with the match mark on the brake lever.

EAU12944

Brake pedal



1. Brake pedal

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

EAUM4101

ABS

The anti-lock brake system (ABS) acts on the front and rear brakes independently.

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.**

How to operate the brakes

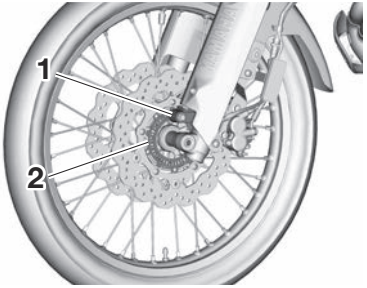
Operate the brake lever and brake pedal the same as you would conventional brakes. If wheel slip is detected while braking, ABS will activate and a pulsating sensation may be felt at the brake lever or brake pedal. Continue to apply the brakes and let the ABS work. Do not pump the brakes as this will reduce braking effectiveness.

- The ABS performs a self-check when you first start off. During this time a clicking noise from the hydraulic unit may be audible, and if the brake lever or brake pedal is applied a vibration can be felt, but this is not a malfunction.
- The brake system will revert to a conventional brake system in case of ABS malfunction.

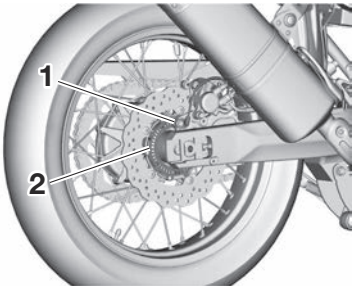
ECA20100

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

TIP

When riding off-road, the ABS can be disabled.

EWAM1050

⚠ WARNING

Always ride on paved roads with the ABS turned on. Riding on public roads with the ABS disabled may be illegal and void your insurance. Turn the ABS off only when riding on non-paved surfaces.

EAUM4481

Fuel tank caps



1. Fuel tank cap lock cover
2. Unlock.

To open a fuel tank cap

Open a fuel tank cap lock cover, insert the key, and then turn it 1/4 turn clockwise. The lock will be released and the fuel tank cap can be opened.

To close the fuel tank cap

With the key still inserted, push down on the fuel tank cap. Turn the key 1/4 turn counterclockwise, remove it, and then close the lock cover.

TIP

The fuel tank caps cannot be closed unless the key is in the lock. In addition,

the key cannot be removed if the caps are not properly closed and locked.

EWA11092

⚠ WARNING

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

EAUM4491

Fuel

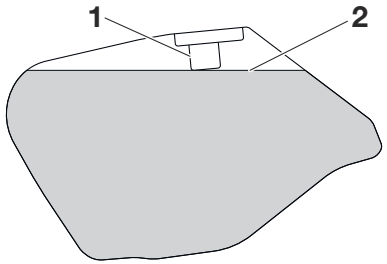
Make sure there is sufficient gasoline in the tanks.

EWA10882

⚠ WARNING

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

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



1. Fuel tank filler tube
2. Maximum fuel level

3. When you don't need to refuel completely, only fill up the left side tank. When the main switch is turned on and the side stand is up, the fuel tank levels will equalize within a few minutes. If you need to refuel to maximum, start by filling up the left-side tank, and then fill up the right-side tank.
4. 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]
5. Be sure to securely close the fuel tank cap.

EWA15152

⚠ WARNING

Gasoline is poisonous and can cause injury or death. Handle gasoline with care. Never siphon gasoline by mouth. If you should swallow some gasoline or inhale a lot of gasoline vapor, or get some gasoline in your eyes, see your doctor immediately. If gasoline spills on your skin, wash with soap and water. If gasoline spills on your clothing, change your clothes.

EAU86072

Your Yamaha engine was designed to use unleaded gasoline with a research octane number of 90 or higher. If engine knocking or pinging occurs, use a gasoline of a different brand or higher octane rating.

Recommended fuel:
Unleaded gasoline (E10 acceptable)
Octane number (RON):
90
Fuel tank capacity:
23 L (6.1 US gal, 5.1 Imp.gal)
Fuel tank reserve:
3.2 L (0.84 US gal, 0.70 Imp.gal)



TIP

- This mark identifies the recommended fuel for this vehicle as specified by European regulation (EN228).
- Confirm the gasoline pump nozzle has the same fuel identification mark.

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.

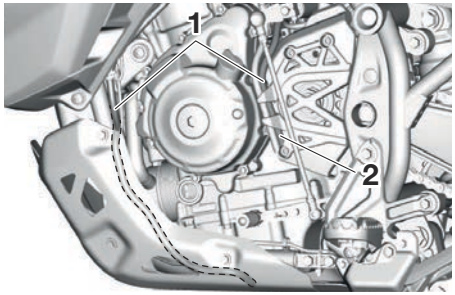
ECA11401

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.

EAUM5580

Fuel tank overflow hoses



1. Fuel tank overflow hose
2. Blue mark

The overflow hoses drain excess gasoline and direct it safely away from the vehicle.
Before operating the vehicle:

- Check the fuel tank overflow hoses connection.
- Check the fuel tank overflow hoses for cracks or damage, and replace them if necessary.
- Make sure that the fuel tank overflow hoses are not blocked, and clean them if necessary.
- Make sure that the fuel tank overflow hoses are positioned as shown.

TIP

See page 8-9 for canister information.

EAU13435

Catalytic converter

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

EWA10863

⚠ WARNING

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

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

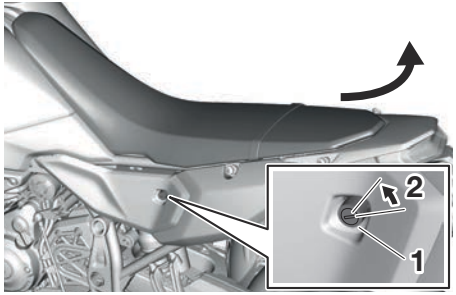
5

EAU32981

Seat

To remove the seat

1. Insert the key into the seat lock, and then turn it counterclockwise.

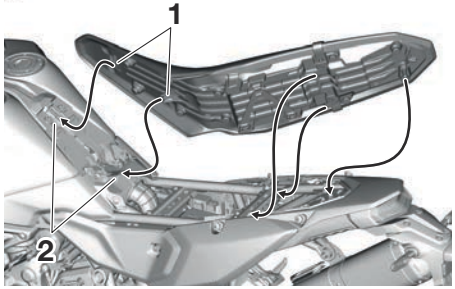


1. Seat lock
2. Unlock.

2. While holding the key in that position, lift the rear of the seat up, and then pull the seat off.

To install the seat

1. Insert the projection on the front of the seat into the seat holder as shown.



1. Projection
2. Seat holder

2. Push the rear of the seat down to lock it in place.
3. Remove the key.

TIP

Make sure that the seat is properly secured before riding.

EAU90940

Adjusting the headlight beams

The headlight beam can be adjusted to raise or lower the height of the headlight beams. It may be necessary to adjust the headlight beams to increase visibility and help prevent blinding oncoming drivers when carrying more or less load than usual. Obey local laws and regulations concerning headlight adjustment.

If headlights require adjustment, consult a Yamaha dealer.

EAUA6050

Adjusting the front fork

EWA10181

⚠ WARNING

Always adjust both fork legs equally, otherwise poor handling and loss of stability may result.

This front fork is equipped with spring preload adjuster, rebound damping force adjuster and compression damping force adjuster.

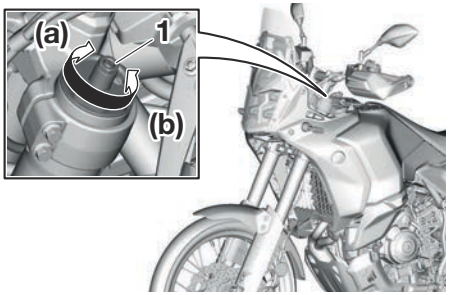
ECA10102

NOTICE

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

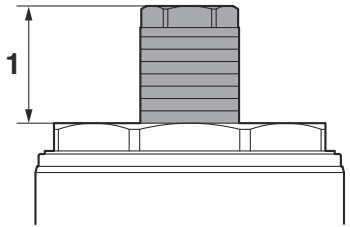
Spring preload

Turn the adjuster in direction (a) to increase the spring preload.
Turn the adjuster in direction (b) to decrease the spring preload.



1. Spring preload adjuster

The spring preload setting is determined by measuring distance A, shown in the illustration. The shorter distance A is, the higher the spring preload; the longer distance A is, the lower the spring preload.

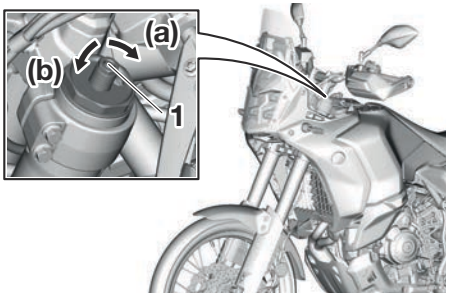


1. Distance A

Spring preload setting:
Minimum (soft):
Distance A = 19.0 mm (0.75 in)
Standard:
Distance A = 19.0 mm (0.75 in)
Maximum (hard):
Distance A = 4.0 mm (0.16 in)

Rebound damping force

Turn the adjuster in direction (a) to increase the rebound damping force.
Turn the adjuster in direction (b) to decrease the rebound damping force.
To set the rebound damping force, turn the adjuster in direction (a) until it stops, and then count the clicks in direction (b).



1. Rebound damping force adjuster

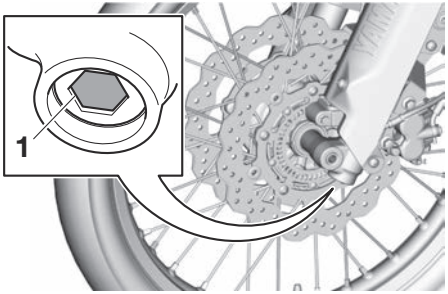
Rebound damping setting:
Minimum (soft):
23 click(s) in direction (b)
Standard:
18 click(s) in direction (b)
Maximum (hard):
0 click(s) in direction (b)

TIP

- When turning the damping force adjuster in direction (a), the 0 click position and the 1 click position may be the same.
- When turning the damping force adjuster in direction (b), it may click beyond the stated specifications, however such adjustments are ineffective and may damage the suspension.

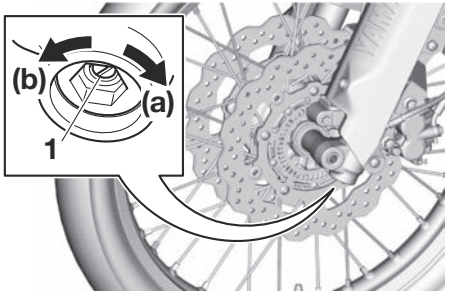
Compression damping force

1. Remove the rubber cap by pulling it out of the front fork leg.



1. Rubber cap

2. Turn the adjuster in direction (a) to increase the compression damping force. Turn the adjuster in direction (b) to decrease the compression damping force. To set the compression damping force, turn the adjuster in direction (a) until it stops, and then count the clicks in direction (b).



1. Compression damping force adjuster

Compression damping setting:
Minimum (soft):
19 click(s) in direction (b)
Standard:
11 click(s) in direction (b)
Maximum (hard):
0 click(s) in direction (b)

3. Install the rubber cap.

TIP

- When turning the damping force adjuster in direction (a), the 0 click position and the 1 click position may be the same.
- When turning the damping force adjuster in direction (b), it may click beyond the stated specifications, however such adjustments are

ineffective and may damage the suspension.

EAU14796

Front fork bleeding

When riding in extremely rough conditions, the air temperature and pressure in the front fork will rise and harden the suspension. If this occurs, bleed the air from each fork leg.

EWA10201

WARNING

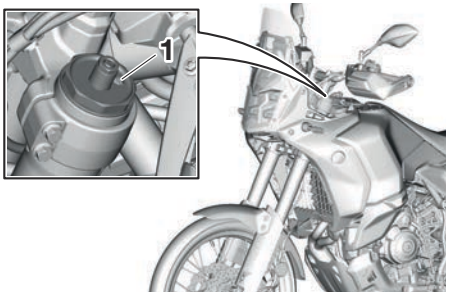
Always bleed both fork legs, otherwise poor handling and loss of stability may result.

1. If possible, elevate the vehicle so the front wheel is off the ground. (See page 8-31.)

TIP

When bleeding the front fork, do not apply any pressure or weight on the front end of the vehicle.

2. Remove the bleed screws and allow all of the air to escape from each fork leg.



1. Bleed screw

3. Install the bleed screws.
4. Lower the front wheel so that it is on the ground, and then put the sidestand down.

EAUM4121

Adjusting the shock absorber assembly

This shock absorber assembly is equipped with a spring preload adjuster and rebound and compression damping force adjusters.

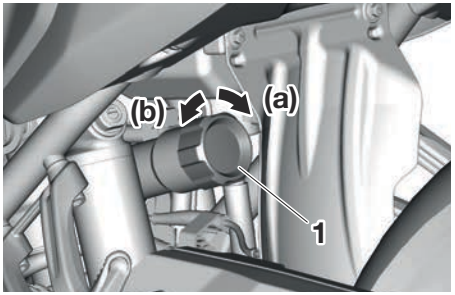
ECA10102

NOTICE

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

Spring preload

Turn the adjuster in direction (a) to increase the spring preload.
Turn the adjuster in direction (b) to decrease the spring preload.
To set the spring preload, turn the adjuster in direction (b) until it stops, and then count the clicks in direction (a).



1. Spring preload adjuster

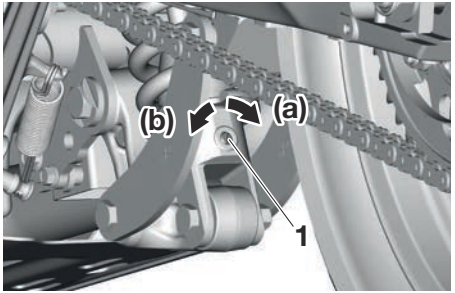
Spring preload setting:
Unit for adjustment:
Adjusting knob position
Minimum (soft):
0
Standard:
10
Maximum (hard):
24

TIP

- When turning the spring preload adjuster in direction (b), the 0 click position and the 1 click position may be the same.
- When turning the spring preload adjuster in direction (a), it may click beyond the stated specifications, however such adjustments are ineffective and may damage the suspension.

Rebound damping force

Turn the adjuster in direction (a) to increase the rebound damping force.
Turn the adjuster in direction (b) to decrease the rebound damping force.
To set the rebound damping force, turn the adjuster in direction (a) until it stops, and then count the clicks in direction (b).



1. Rebound damping force adjuster

Rebound damping setting:
Unit for adjustment:
Click
Minimum (soft):
0
Standard:
11
Maximum (hard):
21

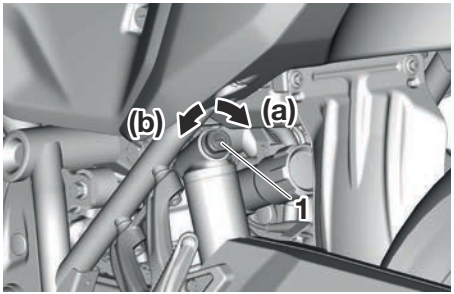
TIP

- When turning the damping force adjuster in direction (a), the 0 click position and the 1 click position may be the same.
- When turning the damping force adjuster in direction (b), it may click beyond the stated specifications, however such adjustments are ineffective and may damage the suspension.

Compression damping force

Turn the adjuster in direction (a) to increase the compression damping force.
Turn the adjuster in direction (b) to decrease the compression damping force.

To set the compression damping force, turn the adjuster in direction (a) until it stops, and then count the clicks in direction (b).



1. Compression damping force adjuster

Compression damping setting:
Unit for adjustment:
Click
Minimum (soft):
0
Standard:
14
Maximum (hard):
21

TIP

- When turning the damping force adjuster in direction (a), the 0 click position and the 1 click position may be the same.
- When turning the damping force adjuster in direction (b), it may click beyond the stated specifications, however such adjustments are ineffective and may damage the suspension.

EWA10222

⚠ WARNING

This shock absorber assembly contains highly pressurized nitrogen gas. Read and understand the following information before handling the shock absorber assembly.

- **Do not tamper with or attempt to open the cylinder assembly.**
- **Do not subject the shock absorber assembly to an open flame or other high heat source. This may cause the unit to explode due to excessive gas pressure.**
- **Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.**

- **Do not dispose of a damaged or worn-out shock absorber assembly yourself. Take the shock absorber assembly to a Yamaha dealer for any service.**

EAUM4503

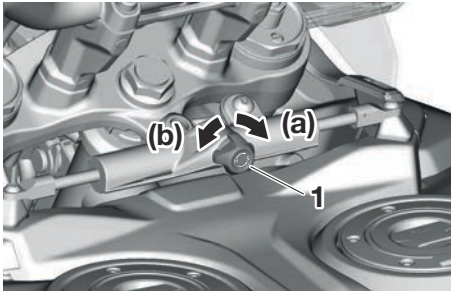
Adjusting the steering damper

ECA10102

NOTICE

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

To increase the steering damping force (hard), turn the knob in direction (a).
To decrease the damping force (soft), turn the knob in direction (b).

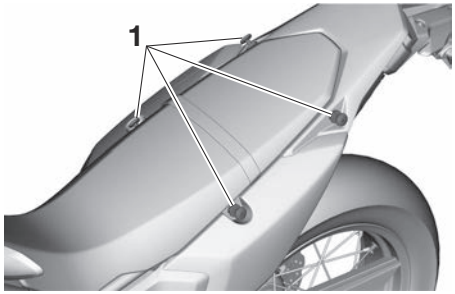


1. Knob

Steering damping force setting:
Minimum (soft):
16 turn(s) in direction (b)
Standard:
5 turn(s) in direction (b)
Maximum (hard):
0 turn(s) in direction (a)

EAU84680

Luggage strap holders



1. Luggage strap holder

Use the indicated strap points to secure luggage ties to the vehicle.

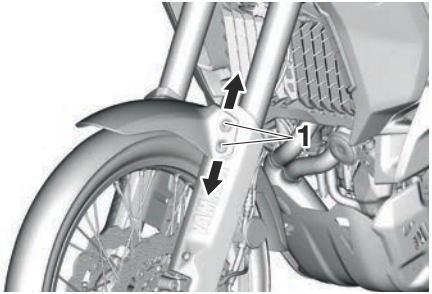
EAUM4130

Front fender

To suit the riding conditions, the front fender height can be adjusted.

To adjust the front fender height

1. Loosen the bolts on each side of the front fender.



1. Bolt

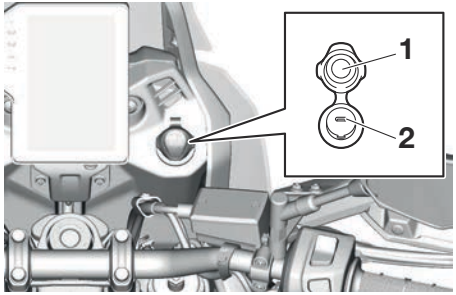
2. Move the front fender to the desired height.
3. Tighten the bolts to the specified torque.

Tightening torque:
Front fender bolt:
7.5 N·m (0.75 kgf·m, 5.6 lb·ft)

EAUA1833

USB Type-C jack

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 jack cap
2. USB Type-C jack

TIP

- This USB jack does not support fast charging or data transfer. Additionally, under certain temperature conditions, the supplied power may fall below the specified level.
- Do not use the USB Type-C jack when the engine is off or it will drain the battery.

5

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

ECA28531

NOTICE

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

EAU15306

Sidestand

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

TIP

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

EWA10242

⚠ WARNING

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

EAUA1272

Ignition circuit cut-off system

This system prevents in-gear engine starts unless the clutch lever is pulled and the sidestand is up. Also, it will stop the running engine should the sidestand be lowered while the transmission is in gear.

Periodically check this system via the following procedure.

TIP

- This check is most reliable if performed with a warmed-up engine.
- See pages 5-2 and 5-3 for switch operation information.

EAUA1281

With the engine turned off:
1. Move the sidestand down.
2. Set engine operation switch to run position.
3. Turn main switch to on position.
4. Shift transmission into neutral.
5. Push the start switch.

Does the engine start?

YES **NO** → The neutral switch may not be working. **The motorcycle should not be ridden** until checked by a Yamaha dealer.

With the engine still running:
6. Move the sidestand up.
7. Pull the clutch lever.
8. Shift transmission into gear.
9. Move the sidestand down.

Does the engine stall?

YES **NO** → The sidestand switch may not be working. **The motorcycle should not be ridden** until checked by a Yamaha dealer.

After the engine has stalled:
10. Move the sidestand up.
11. Pull the clutch lever.
12. Push the start switch.

Does the engine start?

YES **NO** → The clutch switch may not be working. **The motorcycle should not be ridden** until checked by a Yamaha dealer.

The system is OK. **The motorcycle can be ridden.**

⚠ WARNING

If a malfunction is found, have the vehicle inspected before riding.

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	• Check fuel level in fuel tank. • Refuel if necessary. • Check fuel line for leakage. • Check fuel tank breather/overflow hose for obstructions, cracks or damage, and check hose connection.	5-31, 5-33
Engine oil	• Check oil level in engine. • If necessary, add recommended oil to specified level. • Check vehicle for oil leakage.	8-9
Coolant	• Check coolant level in reservoir. • If necessary, add recommended coolant to specified level. • Check cooling system for leakage.	8-11
Front brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear. • Replace if necessary. • Check fluid level in reservoir. • If necessary, add specified brake fluid to specified level. • Check hydraulic system for leakage.	8-19, 8-19

ITEM	CHECKS	PAGE
Rear brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear. • Replace if necessary. • Check fluid level in reservoir. • If necessary, add specified brake fluid to specified level. • Check hydraulic system for leakage.	8-19, 8-19
Clutch	• Check operation. • Lubricate cable if necessary. • Check lever free play. • Adjust if necessary.	8-17
Throttle grip	• Check for smooth rotation and automatic return.	8-24
Control cables	• Make sure that operation is smooth. • Lubricate if necessary.	8-23
Drive chain	• Check chain slack. • Adjust if necessary. • Check chain condition. • Lubricate if necessary.	8-21, 8-23
Wheels and tires	• Check for damage. • Check tire condition and tread depth. • Check air pressure. • Correct if necessary.	8-14, 8-16
Brake and shift pedals	• Make sure that operation is smooth. • Lubricate pedal pivoting points if necessary.	8-24
Brake and clutch levers	• Make sure that operation is smooth. • Lubricate lever pivoting points if necessary.	8-25
Sidestand	• Make sure that operation is smooth. • Lubricate pivot if necessary.	8-25
Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.	—
Instruments, lights, signals and switches	• Check operation. • Correct if necessary.	—

ITEM	CHECKS	PAGE
Sidestand switch	• Check operation of ignition circuit cut-off system. • If system is not working correctly, have Yamaha dealer check vehicle.	5-42

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.

EAU16842

Engine break-in

There is never a more important period in the life of your engine than the period between 0 and 1600 km (1000 mi). For this reason, you should read the following material carefully.

Since the engine is brand new, do not put an excessive load on it for the first 1600 km (1000 mi). The various parts in the engine wear and polish themselves to the correct operating clearances. During this period, prolonged full-throttle operation or any condition that might result in engine overheating must be avoided.

EAU17094

0–1000 km (0–600 mi)

Avoid prolonged operation above 5000 r/min. ***NOTICE:*** **After 1000 km (600 mi) of operation, the engine oil must be changed and the oil filter cartridge or element replaced.**[ECA10303]

1000–1600 km (600–1000 mi)

Avoid prolonged operation above 6000 r/min.

1600 km (1000 mi) and beyond

The vehicle can now be operated normally.

ECA10311

NOTICE

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

EAUA9122

Starting the engine

The ignition circuit cut-off system will enable starting when:

- the transmission is in the neutral position or
- the transmission is in gear, the sidestand is up, and the clutch lever is pulled.

To start the engine:

1. Turn the main switch on and set the engine operation switch to the run position. (See page 5-3.)

TIP

For smart key equipped models: the smart key must be turned on and in range.

2. Confirm the appropriate display indicator(s) and meter indicator/warning light(s) come on, go off, and otherwise function as specified in this manual.
   - See page 5-6 for information about meter indicator and warning lights.
   - See page 5-10 for information about display indicators.

TIP

- Do not start the engine if any indicator or warning remains on, except for the oil pressure warning.
- The oil pressure warning should come on and stay on until the engine is started. After the engine is started, it should go off.
- If the oil pressure warning does not come on and stay on, do not start the engine.

ECA29080

NOTICE

If an indicator or warning is signaling a problem or abnormal condition, then stop all vehicle operation immediately. Have a Yamaha dealer inspect the vehicle.

3. Shift the transmission into the neutral position.
4. Start the engine by pushing the start switch.
5. Release the start switch when the engine starts, or after 5 seconds. Wait 10 seconds before pressing the switch again to allow battery voltage to restore.

ECA11043

NOTICE

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

7

EAU68221

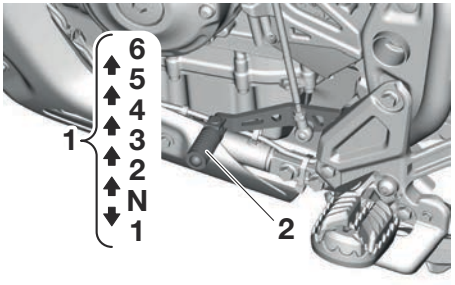
TIP

This model is equipped with:

- an inertial measurement unit (IMU). This unit stops the engine in case of a turnover. Turn the main switch off and then on before attempting to restart the engine. Failing to do so will prevent the engine from starting even though the engine will crank when pushing the start switch.
- an engine auto-stop system. The engine stops automatically if left idling for 20 minutes. If the engine stops, simply push the start switch to restart the engine.

EAU16675

Shifting



1. Gear positions
2. Shift pedal

Shifting gears lets you control the amount of engine power available for starting off, accelerating, climbing hills, etc.

The gear positions are shown in the illustration.

TIP

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

ECA10262

NOTICE

- **When shifting, press the shift pedal firmly until you feel the gear shift is complete.**
- **Even with the transmission in the neutral position, do not coast for long periods of time with the engine off, nor tow the motorcycle for long distances. The transmission is properly lubricated only when the engine is running. Inadequate lubrication may damage the transmission.**
- **Always use the clutch while changing gears to avoid damaging the engine, transmission, and drive train, which are not designed to withstand the shock of forced shifting.**

EAUA5310

To start out and accelerate

1. Pull the clutch lever to disengage the clutch.
2. Shift the transmission into first gear.

3. Open the throttle gradually, and at the same time, release the clutch lever slowly.
4. After starting out, close the throttle, and at the same time, quickly pull the clutch lever in.
5. Shift the transmission into second gear. (Make sure not to shift the transmission into the neutral position.)
6. Open the throttle part way and gradually release the clutch lever.
7. Follow the same procedure when shifting to the next higher gear.

EAUA5320

To decelerate

1. Release the throttle and apply both the front and the rear brakes smoothly to slow the motorcycle.
2. As the vehicle decelerates, shift to a lower gear.
3. When the engine is about to stall or runs roughly, pull the clutch lever in, use the brakes to slow the motorcycle, and continue to downshift as necessary.
4. Once the motorcycle has stopped, the transmission can be shifted into the neutral position and then the clutch lever can be released.

EWA17380

⚠ WARNING

- **Improper braking can cause loss of control or traction. Always use both brakes and apply them smoothly.**
- **Make sure that the motorcycle and the engine have sufficiently slowed before shifting to a lower gear. Engaging a lower gear when the vehicle or engine speed is too high could make the rear wheel lose traction or the engine to over-rev. This could cause loss of control, an accident and injury. It could also cause engine or drive train damage.**

EAU16811

Tips for reducing fuel consumption

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

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

EAU17214

Parking

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

EWA10312

WARNING

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

EAU17246

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

The intervals given in the periodic maintenance charts should be simply considered as a general guide under normal riding conditions. However, depending on the weather, terrain, geographical location, and individual use, the maintenance intervals may need to be shortened.

EWA10322

⚠ WARNING

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

EWA15123

⚠ WARNING

Turn off the engine when performing maintenance unless otherwise specified.

- **A running engine has moving parts that can catch on body parts or clothing and electrical parts that can cause shocks or fires.**
- **Running the engine while servicing can lead to eye injury, burns, fire, or carbon monoxide poisoning – possibly leading to death. See page 1-2 for more information about carbon monoxide.**

EWA15461

⚠ WARNING

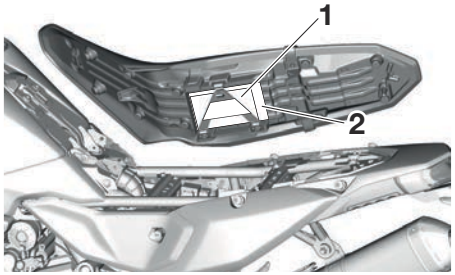
Brake discs, calipers, drums, and linings can become very hot during use. To avoid possible burns, let brake components cool before touching them.

EAU17303

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

Tool kit

EAUM4512



1. Tool kit
2. Storage pouch

The tool kit is in the location shown. Always be sure to install the pouch in the seat base compartment, then the tool kit and secure it by passing the band through the tool kit loop.
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.

EAU71033

Periodic maintenance charts

TIP

- Items marked with an asterisk should be performed by your Yamaha dealer because these items require special tools, data, and technical skills.
- From 50000 km (30000 mi), repeat the maintenance intervals starting from 10000 km (6000 mi).
- **The annual checks must be performed every year, except if a distance-based maintenance is performed instead.**

EAU71052

Periodic maintenance chart for the emission control system

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING					ANNUAL CHECK
				1000 km (600 mi)	10000 km (6000 mi)	20000 km (12000 mi)	30000 km (18000 mi)	40000 km (24000 mi)	
1	*	**Fuel line**	• Check fuel hoses for cracks or damage. • Replace if necessary.		√	√	√	√	√
2	*	**Spark plugs**	• Check condition. • Adjust gap and clean.		√		√		
			• Replace.			√		√	
3	*	**Valve clearance**	• Check and adjust.	Every 40000 km (24000 mi)					
4	*	**Fuel injection**	• Check engine idle speed.	√	√	√	√	√	√
			• Check and adjust synchronization.		√	√	√	√	√
5	*	**Exhaust system**	• Check for leakage. • Tighten if necessary. • Replace gaskets if necessary.	√	√	√	√	√	
6	*	**Evaporative emission control system**	• Check control system for damage. • Replace if necessary.			√		√	

8

EAU71354

General maintenance and lubrication chart

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING					ANNUAL CHECK
				1000 km (600 mi)	10000 km (6000 mi)	20000 km (12000 mi)	30000 km (18000 mi)	40000 km (24000 mi)	
1	*	**Diagnostic system check**	• Perform dynamic inspection using Yamaha diagnostic tool. • Check the error codes.	√	√	√	√	√	√
2	*	**Air filter element**	• Replace.			√		√	
3		**Air filter case check hose**	• Clean.	√	√	√	√	√	
4		**Clutch**	• Check operation. • Adjust.	√	√	√	√	√	
5	*	**Front brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.	√	√	√	√	√	√
6	*	**Rear brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.	√	√	√	√	√	√
7	*	**Brake hoses**	• Check for cracks or damage.		√	√	√	√	√
			• Replace.	Every 4 years					
8	*	**Brake fluid**	• Change.	Every 2 years					
9	*	**Wheels**	• Check runout, spoke tightness and for damage. • Tighten spokes if necessary.	√	√	√	√	√	
10	*	**Tires**	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		√	√	√	√	√
11	*	**Wheel bearings**	• Check bearing for looseness or damage.		√	√	√	√	

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING					ANNUAL CHECK
				1000 km (600 mi)	10000 km (6000 mi)	20000 km (12000 mi)	30000 km (18000 mi)	40000 km (24000 mi)	
12	*	Swingarm pivot bearings	• Check operation and for excessive play.		√	√	√	√	
			• Lubricate with lithium-soap-based grease.	Every 50000 km (30000 mi)					
13		Drive chain	• Check chain slack, alignment and condition. • Adjust and lubricate chain with a special O-ring chain lubricant thoroughly.	Every 1000 km (600 mi) and after washing the motorcycle, riding in the rain or riding in wet areas					
14	*	Steering bearings	• Check bearing assemblies for looseness.	√	√		√		
			• Moderately repack with lithium-soap-based grease.			√		√	
15	*	Steering damper	• Check operation and for oil leakage.		√	√	√	√	
16	*	Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened.		√	√	√	√	√
17		Brake lever pivot shaft	• Lubricate with silicone grease.		√	√	√	√	√
18		Brake pedal pivot shaft	• Lubricate with lithium-soap-based grease.		√	√	√	√	√
19		Clutch lever pivot shaft	• Lubricate with lithium-soap-based grease.		√	√	√	√	√
20		Shift pedal pivot shaft	• Lubricate with lithium-soap-based grease.		√	√	√	√	√
21		Sidestand	• Check operation. • Lubricate with molybdenum disulfide grease.		√	√	√	√	√
22	*	Sidestand switch	• Check operation and replace if necessary.	√	√	√	√	√	√

NO.		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING					ANNUAL CHECK
				1000 km (600 mi)	10000 km (6000 mi)	20000 km (12000 mi)	30000 km (18000 mi)	40000 km (24000 mi)	
23	*	**Front fork**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	
24	*	**Shock absorber assembly**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	
25	*	**Rear suspension relay arm and connecting arm pivoting points**	• Check operation.		√	√	√	√	
			• Lubricate with lithium-soap-based grease.			√		√	
26	*	**Engine oil**	• Change (warm engine before draining). • Check oil level and vehicle for oil leakage.	√	√	√	√	√	√
27	*	**Engine oil filter cartridge**	• Replace.	√		√		√	
28	*	**Cooling system**	• Check coolant level and vehicle for coolant leakage.		√	√	√	√	√
			• Change.	Every 3 years					
29	*	**Front and rear brake switches**	• Check operation.	√	√	√	√	√	√
30	*	**Moving parts and cables**	• Lubricate.		√	√	√	√	√
31	*	**Throttle grip**	• Check operation. • Lubricate throttle grip housing tube guides.		√	√	√	√	√
32	*	**Lights, signals and switches**	• Check operation. • Adjust headlight beam.	√	√	√	√	√	√

EAU72800

TIP

- Air filter
  - This model's air filter is equipped with a disposable oil-coated paper element, which must not be cleaned with compressed air to avoid damaging it.
  - The air filter element needs to be replaced more frequently when riding in unusually wet or dusty areas.
- Hydraulic brake service
  - Regularly check and, if necessary, correct the brake fluid level.
  - Every two years replace the internal components of the brake master cylinders and calipers, and change the brake fluid.
  - Replace the brake hoses every four years and if cracked or damaged.

EAU19653

Checking the spark plugs

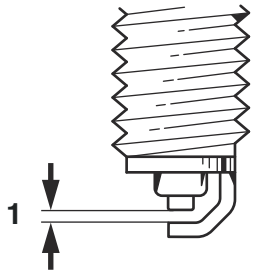
The spark plugs are important engine components, which should be checked periodically, preferably by a Yamaha dealer. Since heat and deposits will cause any spark plug to slowly erode, they should be removed and checked in accordance with the periodic maintenance and lubrication chart. In addition, the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

The porcelain insulator around the center electrode of each spark plug should be a medium-to-light tan (the ideal color when the vehicle is ridden normally), and all spark plugs installed in the engine should have the same color. If any 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 a 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)

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.

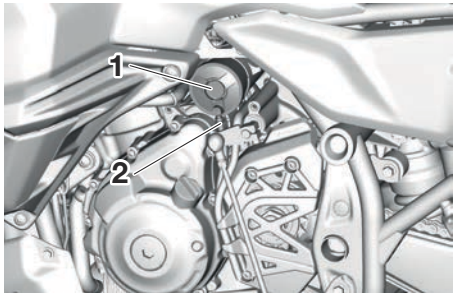
ECA10841

NOTICE

Do not use any tools to remove or install the spark plug cap, otherwise the ignition coil coupler may get damaged. The spark plug cap may be difficult to remove because the rubber seal on the end of the cap fits tightly. To remove the spark plug cap, simply twist it back and forth while pulling it out; to install it, twist it back and forth while pushing it in.

EAU36114

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.

EAU94853

Engine oil

The engine oil level should be checked before each ride. In addition, the engine oil must be changed and the oil filter cartridge replaced by your Yamaha dealer at the intervals specified in the periodic maintenance chart.

Recommended engine oil:
10W-40
Oil quantity:
Without oil filter cartridge replacement:
2.30 L (2.43 US qt, 2.02 Imp.qt)
With oil filter cartridge replacement:
2.60 L (2.75 US qt, 2.29 Imp.qt)
Oil change:
2.30 L (2.43 US qt, 2.02 Imp.qt)
With oil filter removal:
2.60 L (2.75 US qt, 2.29 Imp.qt)

ECA11621

NOTICE

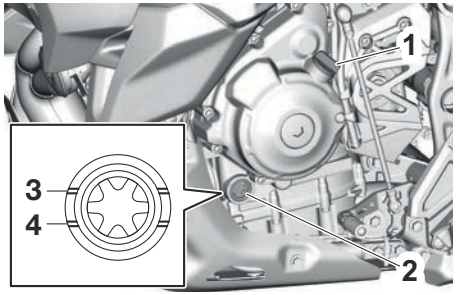
- **In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not mix any chemical additives. Do not use oils with a diesel specification of "CD" or oils of a higher quality than specified. In addition, do not use oils labeled "ENERGY CONSERVING II" or higher.**
- **Make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

To check the engine oil level

1. Start the engine, warm it up for several minutes, and then turn it off.
2. Wait a few minutes until the oil level settles and with the vehicle on a level surface, hold it upright for an accurate reading.
3. Check the oil level through the check window located at the bottom of the left-side of the crankcase.

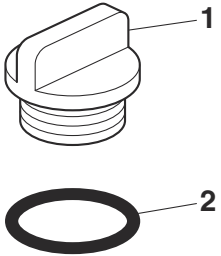
TIP

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



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

4. If the engine oil is at or below the minimum level mark, remove the oil filler cap and add oil.



1. Engine oil filler cap
2. O-ring

5. Check the O-ring for damage, and replace if necessary.
6. Install the engine oil filler cap.

To change the engine oil and the oil filter cartridge

Have a Yamaha dealer change the engine oil and the oil filter cartridge.

EAU85450

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®

EAUS1203

Coolant

The coolant level should be checked regularly. In addition, the coolant must be changed at the intervals specified in the periodic maintenance chart.

Recommended coolant:
YAMALUBE coolant
Coolant quantity:
Coolant reservoir (max level mark):
0.25 L (0.26 US qt, 0.22 Imp.qt)
Radiator (including all routes):
1.61 L (1.70 US qt, 1.42 Imp.qt)

TIP

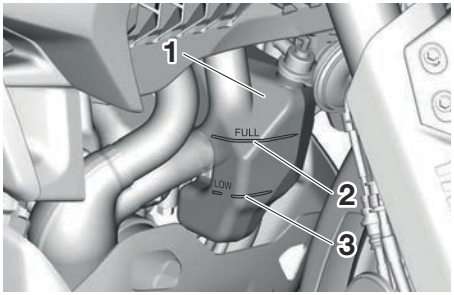
If genuine Yamaha coolant is not available, use an ethylene glycol antifreeze containing corrosion inhibitors for aluminum engines and mix with distilled water at a 1:1 ratio.

EAU20097

To check the coolant level

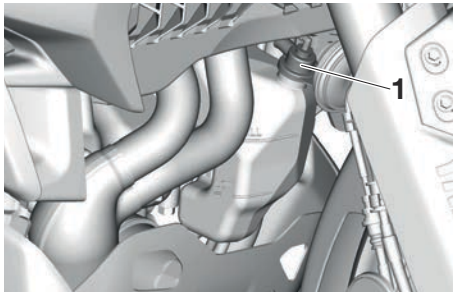
Since the coolant level varies with engine temperature, check when the engine is cold.

1. Park the vehicle on a level surface.
2. With the vehicle in an upright position, look at the coolant level in the reservoir.



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

3. If the coolant is at or below the minimum level mark, remove the coolant reservoir cap. **WARNING! Remove only the coolant reservoir cap. Never attempt to remove the radiator cap when the engine is hot.**[EWA15162]



1. Coolant reservoir cap

4. Add coolant to the maximum level mark. ***NOTICE:*** **If coolant is not available, use distilled water or soft tap water instead. Do not use hard water or salt water since it is harmful to the engine. If water has been used instead of coolant, replace it with coolant as soon as possible, otherwise the cooling system will not be protected against frost and corrosion. If water has been added to the coolant, have a Yamaha dealer check the antifreeze content of the coolant as soon as possible, otherwise the effectiveness of the coolant will be reduced.**[ECA10473]

8

5. Install the coolant reservoir cap.

EAU33032

Changing the coolant

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

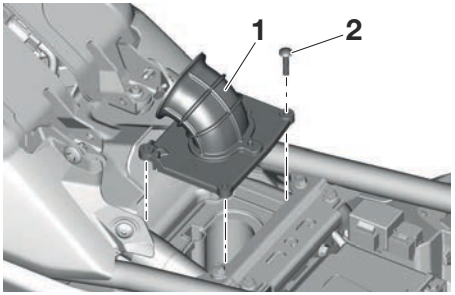
EAUM4270

Replacing the air filter element and cleaning the check hose

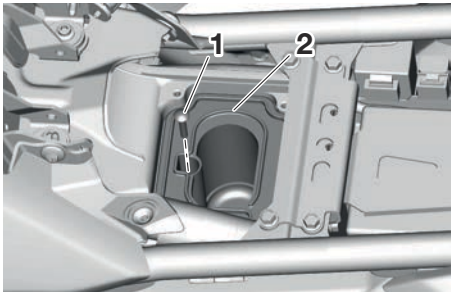
The air filter element must be replaced at the intervals specified in the periodic maintenance chart. Replace the air filter element more frequently if you often ride the rain or dusty areas. In addition, the air filter check hose should be frequently checked and cleaned if necessary.

To replace the air filter element

1. Remove the seat. (See page 5-34.)
2. Remove the air filter case cover by removing the screws, remove the screw securing the air filter element and then pull it out.



1. Air filter case cover
2. Screw



1. Screw
2. Air filter element

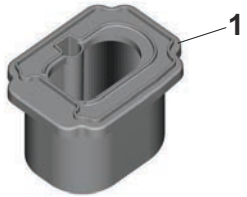
3. Check the air filter for damage or dirt and replace it if necessary.

ECA21220

NOTICE

- **The air filter element must be replaced at the intervals specified in the periodic maintenance chart.**
- **The air filter element should be replaced more frequently if you often ride in the rain or dusty areas.**

- **The air filter cannot be cleaned by blowing it with compressed air. It must be replaced.**

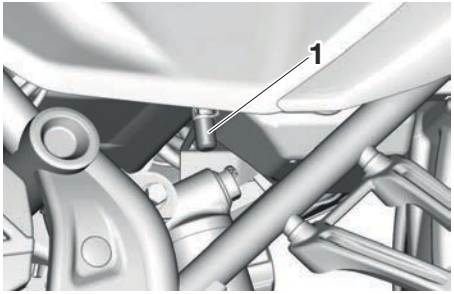


1. Air filter element

4. Insert the air filter element into the air filter case and secure it with the screw. ***NOTICE:*** **Make sure that the air filter element is properly seated in the air filter case. The engine should never be operated without the air filter element installed, otherwise the piston(s) and/or cylinder(s) may become excessively worn.**[ECA10482]
5. Install the air filter case cover by installing the screws.
6. Install the seat.

To clean the air filter check hose

1. Remove the air filter check hose under the air filter case.



1. Air filter check hose

2. Remove the hose, clean it, and then install it in its original position.

EAU44735

Checking the engine idling speed

Check the engine idling speed and, if necessary, have it corrected by a Yamaha dealer.

Engine idling speed:
1250–1450 r/min

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.

EAUM4220

Tires

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

Tire air pressure

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

EWA10504

⚠ WARNING

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

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

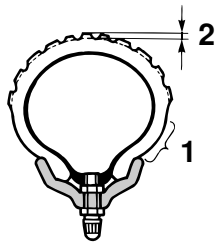
Cold tire air pressure:
1 person:
Front:
220 kPa (2.20 kgf/cm², 32 psi)
Rear:
250 kPa (2.50 kgf/cm², 36 psi)
2 persons:
Front:
220 kPa (2.20 kgf/cm², 32 psi)
Rear:
250 kPa (2.50 kgf/cm², 36 psi)
Off-road riding:
Front:
200 kPa (2.00 kgf/cm², 29 psi)
Rear:
200 kPa (2.00 kgf/cm², 29 psi)
Maximum load:
Vehicle:
174 kg (384 lb)
The vehicle's maximum load is the combined weight of the rider, passenger, cargo, and any accessories.

EWA10512

⚠ WARNING

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

Tire inspection



1. Tire sidewall
2. Tire tread depth

The tires must be checked before each ride. If the center tread depth reaches the specified limit, if the tire has a nail or glass fragments in it, or if the sidewall is cracked, have a Yamaha dealer replace the tire immediately.

Minimum tire tread depth (front and rear):
1.6 mm (0.06 in)

TIP

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

EWA17960

⚠ WARNING

- **It is dangerous to ride with a worn-out tire. When a tire tread depth reaches the specified limit, have a Yamaha dealer replace the tire immediately.**
- **The replacement of all wheel and brake-related parts, including the tires, should be left to a Yamaha dealer, who has the necessary professional knowledge and experience.**
- **It is not recommended to patch a punctured tube. If unavoidable, however, patch the tube very carefully and replace it as soon as possible with a high-quality product.**
- **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 tube tires.

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

EWA10462

⚠ WARNING

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

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

8

Front tire:
Size:
90/90-21 M/C 54V M+S A
Speed rating:
240 km/h (149 mph)
Manufacturer/model:
PIRELLI/SCORPION RALLY STR
Rear tire:
Size:
150/70 R18 M/C 70V M+S
Speed rating:
240 km/h (149 mph)
Manufacturer/model:
PIRELLI/SCORPION RALLY STR
Optional tire
Front tire:
Size:
90/90 – 21 M/C 54R M+S
Speed rating:
170 km/h (105 mph)
Manufacturer/model:
MICHELIN/ANAKEE WILD
Rear tire:
Size:
150/70 R18 M/C 70R M+S
Speed rating:
170 km/h (105 mph)
Manufacturer/model:
MICHELIN/ANAKEE WILD

The listed optional tire is designed for more off-road use than the original tire and the maximum speed rating is different from the original tire.

EWAM1060

⚠ WARNING

Never exceed the tire's maximum speed rating. Otherwise the tire may be damaged at high speed and could lead to an accident.

EAU21945

Spoke wheels

To maximize the performance, durability, and safe operation of the vehicle, note the following points.

- Check each wheel for cracks, deformation and other damage. If any damage is found, have the wheel inspected by your Yamaha dealer. Do not attempt to repair or straighten a bent or damaged wheel.
- Check the spokes for looseness. If any loose spokes are found, have the wheel adjusted by your Yamaha dealer. Improperly tightened spokes can cause wheel misalignment.
- Have the wheel balanced whenever the tire or tube has been replaced. An unbalanced wheel can result in adverse handling characteristics and shortened tire life.

EWA10611

⚠ WARNING

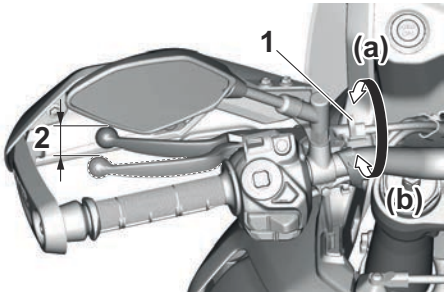
The wheels on this model are not designed for use with tubeless tires. Do

not attempt to use tubeless tires on this model.

EAU33893

Adjusting the clutch lever free play

Measure the clutch lever free play as shown.



1. Clutch lever free play adjuster
2. Clutch lever free play

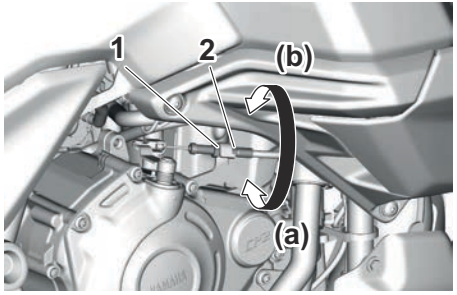
Clutch lever free play:
5.0–10.0 mm (0.20–0.39 in)

Periodically check the clutch lever free play and, if necessary, adjust it as follows.
To increase the clutch lever free play, turn the clutch lever free play adjusting bolt at the clutch lever in direction (a). To decrease the clutch lever free play, turn the adjusting bolt in direction (b).

TIP

If the specified clutch lever free play cannot be obtained as described above, proceed as follows.

1. Fully turn the adjusting bolt at the clutch lever in direction (a) to loosen the clutch cable.
2. Loosen the locknut at the crankcase.

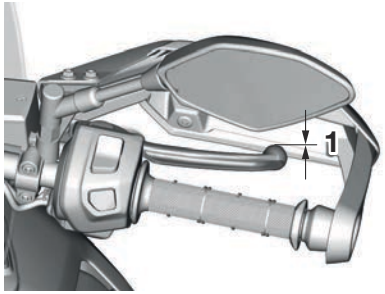


1. Locknut
2. Clutch lever free play adjuster

3. To increase the clutch lever free play, turn the clutch lever free play adjusting nut in direction (a). To decrease the clutch lever free play, turn the adjusting nut in direction (b).
4. Tighten the locknut.

EAU37914

Checking the brake lever free play



1. No brake lever free play

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

EWA14212

⚠ WARNING

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

EAU36505

Brake light switches

The brake light should come on just before braking takes effect. The brake light is activated by switches connected to the brake lever and brake pedal. Since the brake light switches are components of the anti-lock brake system, they should only be serviced by a Yamaha dealer.

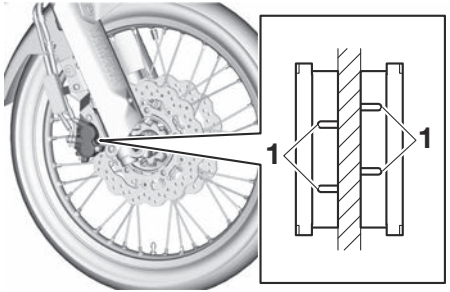
EAU22393

Checking the front and rear brake pads

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

EAU22434

Front brake pads

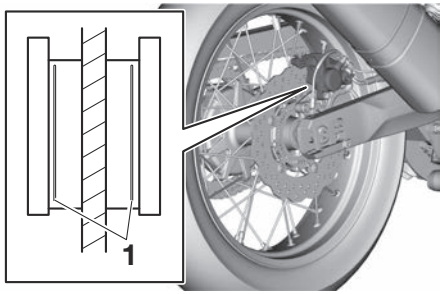


1. Brake pad wear indicator groove

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

EAU46292

Rear brake pads



1. Brake pad wear indicator groove

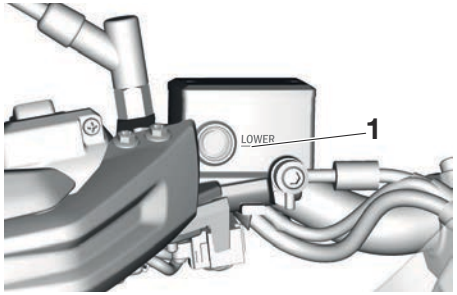
Each rear brake pad is provided with wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that a wear indicator groove almost appears, have a Yamaha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

EAU40262

Checking the brake fluid level

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

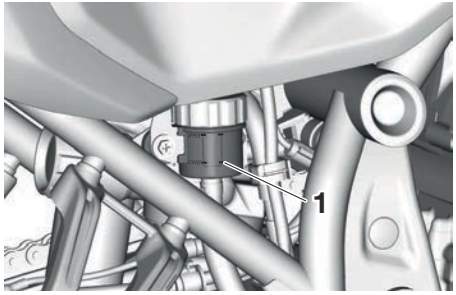
Front brake



1. Minimum level mark

8

Rear brake



1. Minimum level mark

Specified brake fluid:
DOT 4

EWA16011

⚠ WARNING

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

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

ECA17641

NOTICE

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

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

EAU22734

Changing the brake fluid

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

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

EAU22762

Drive chain slack

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

EAU60046

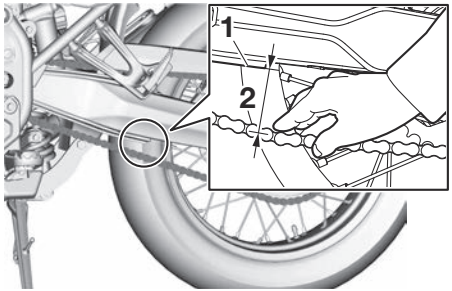
To check the drive chain slack

1. Place the motorcycle on the sidestand.

TIP

When checking and adjusting the drive chain slack, there should be no weight on the motorcycle.

2. Shift the transmission into the neutral position.
3. Push down on the drive chain under the end of the drive chain guard.
4. Measure distance A between the drive chain guard and the center of the chain as shown.



1. Drive chain guide
2. Distance A

Distance A:
43.0–48.0 mm (1.69–1.89 in)

5. If distance A is incorrect, adjust it as follows. ***NOTICE:*** **Improper drive chain slack will overload the engine as well as other vital parts of the motorcycle and can lead to chain slippage or breakage. If distance A is more than 55.0 mm (2.24 in), the chain can damage the frame, swingarm, and other parts. To prevent this from occurring, keep the drive chain slack within the specified limits.**[ECA23070]

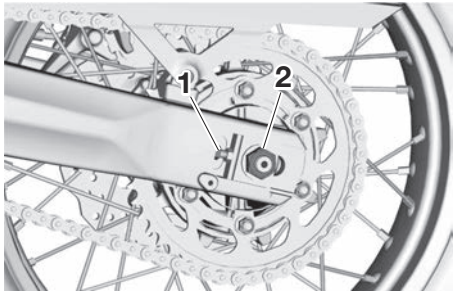
8

EAU74260

To adjust the drive chain slack

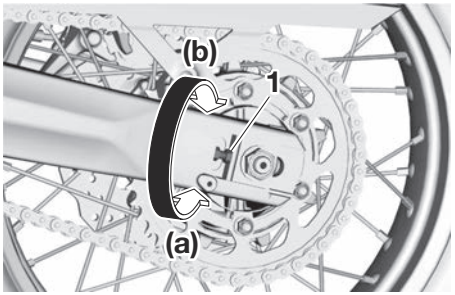
Consult a Yamaha dealer before adjusting the drive chain slack.

1. Loosen the axle nut and the locknut on each side of the swingarm.



1. Locknut
2. Axle nut

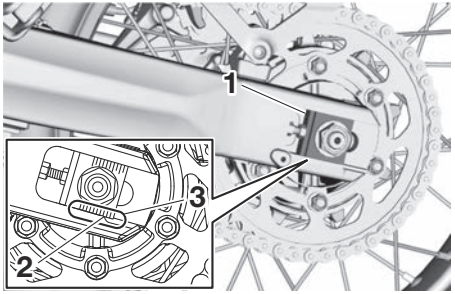
2. To tighten the drive chain, turn the drive chain slack adjusting bolt on each side of the swingarm in direction (a). To loosen the drive chain, turn the adjusting bolt on each side of the swingarm in direction (b), and then push the rear wheel forward.



1. Drive chain slack adjusting bolt

TIP

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



1. Drive chain puller
2. Position indicator
3. Alignment marks

3. Tighten the axle nut, then the locknuts to their specified torques.

Tightening torques:
Axle nut:
105 N·m (10.5 kgf·m, 77 lb·ft)
Locknut:
16 N·m (1.6 kgf·m, 12 lb·ft)

4. Make sure that the drive chain pullers are in the same position, the drive chain slack is correct, and the drive chain moves smoothly.

EAU23027

Cleaning and lubricating the drive chain

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

ECA10584

NOTICE

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

1. Clean the drive chain with a drive chain cleaner and a small soft brush. ***NOTICE:*** **To prevent damaging the O-rings, do not clean the drive chain with steam cleaners, high-pressure washers or inappropriate solvents.** [ECA11122]
2. Wipe the drive chain dry.
3. Thoroughly lubricate the drive chain with a special O-ring chain lubricant. ***NOTICE:*** **Do not use engine oil or any other lubricants for the drive chain, as they may contain substances that could damage the O-rings.** [ECA11112]

EAU23098

Checking and lubricating the cables

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

Recommended lubricant:
Yamaha cable lubricant or other suitable cable lubricant

EAU82490

Checking and lubricating the throttle grip

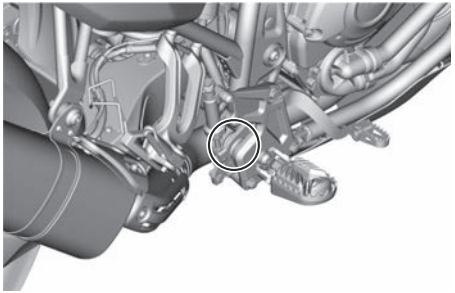
The operation of the throttle grip should be checked before each ride. In addition, the throttle grip housing should be lubricated by a Yamaha dealer at the intervals specified in the periodic maintenance chart.

EAU44276

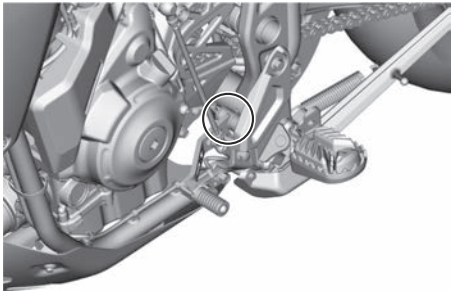
Checking and lubricating the brake and shift pedals

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

Brake pedal



Shift pedal



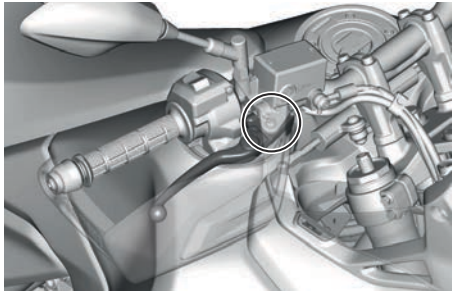
Recommended lubricant:
Lithium-soap-based grease

EAU23146

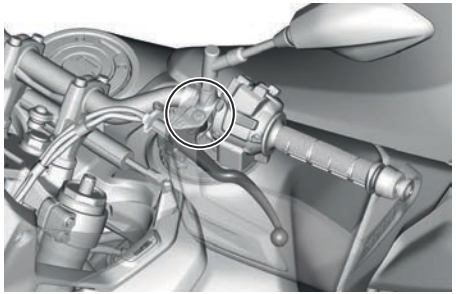
Checking and lubricating the brake and clutch levers

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

Brake lever



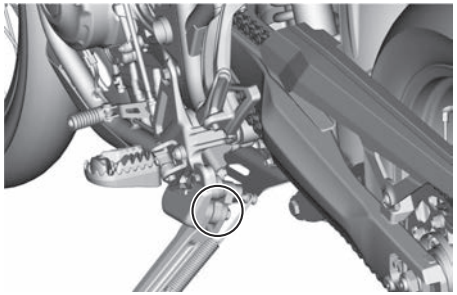
Clutch lever



Recommended lubricants:
Brake lever:
Silicone grease
Clutch lever:
Lithium-soap-based grease

EAU89101

Checking and lubricating the sidestand



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

EWA10732

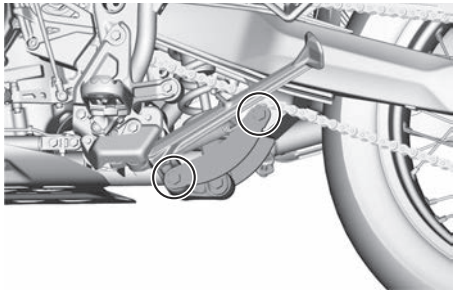
⚠ WARNING

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

Recommended lubricant:
Molybdenum disulfide grease

EAU23252

Lubricating the rear suspension

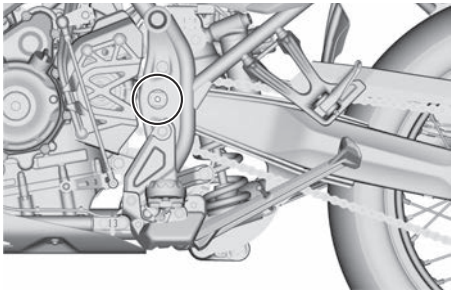


The pivoting points of the rear suspension must be lubricated by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

Recommended lubricant:
Lithium-soap-based grease

EAUM1653

Lubricating the swingarm pivots



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

Recommended lubricant:
Lithium-soap-based grease

EAU23273

Checking the front fork

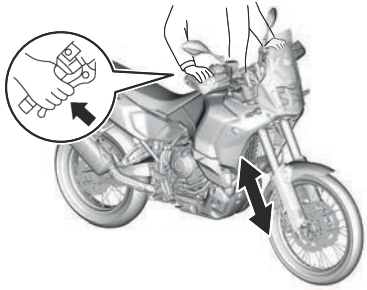
The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

To check the condition

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

To check the operation

1. Place the vehicle on a level surface and hold it in an upright position. **WARNING! To avoid injury, securely support the vehicle so there is no danger of it falling over.** [EWA10752]
2. While applying the front brake, push down hard on the handlebars several times to check if the front fork compresses and rebounds smoothly.



ECA10591

NOTICE

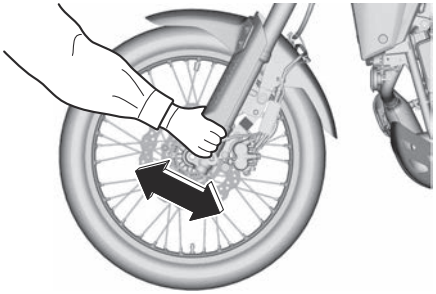
If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.

EAU23285

Checking the steering

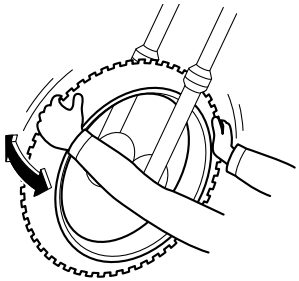
Worn or loose steering bearings may cause danger. Therefore, the operation of the steering must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

1. Raise the front wheel off the ground. (See page 8-31.) **WARNING! To avoid injury, securely support the vehicle so there is no danger of it falling over.**[EWA10752]
2. Hold the lower ends of the front fork legs and try to move them forward and backward. If any free play can be felt, have a Yamaha dealer check or repair the steering.



EAU23292

Checking the wheel bearings



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

8

EAUM5550

Battery

ECA22960

NOTICE

Use only the specified genuine YAMAHA battery. Using a different battery may cause the IMU to fail and the engine to stall.

The battery is located under the seat. (See page 5-34.)
This model is equipped with a VRLA (Valve Regulated Lead Acid) battery. There is no need to check the electrolyte or to add distilled water. However, the battery lead connections need to be checked and, if necessary, tightened.

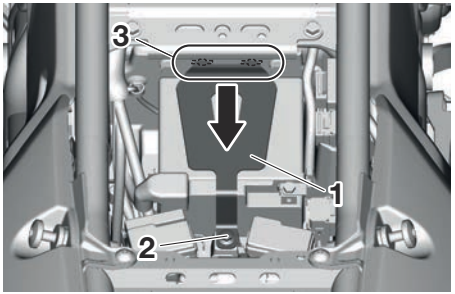
EWA10761

⚠ WARNING

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

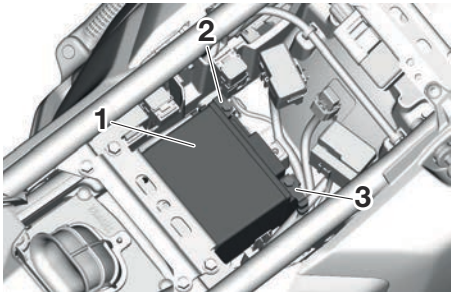
To remove the battery

1. Remove the seat. (See page 5-34.)
2. Remove the plate by removing the bolt and then sliding the plate out from the slots.



1. Plate
2. Bolt
3. Slot

3. First, disconnect the negative battery lead, and then the positive battery lead.
4. Remove the battery.



1. Battery
2. Negative battery lead (black)

3. Positive battery lead (red)

TIP

For installation, reverse the removal procedure.

To charge the battery

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

ECA16522

NOTICE

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

To store the battery

1. If the vehicle will not be used for more than one month, remove the battery, fully charge it, and then place it in a cool, dry place. ***NOTICE:*** **When removing the battery, be sure to turn the main switch off, then disconnect the negative lead before disconnecting the positive lead.** [ECA16304]
2. If the battery will be stored for more than two months, check it at least once a month and fully charge it if necessary.
3. Fully charge the battery before installation. ***NOTICE:*** **When installing the battery, be sure to turn the main switch off, then 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

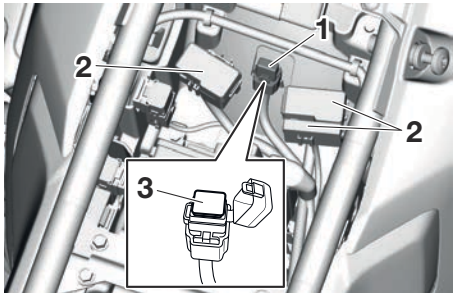
NOTICE

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

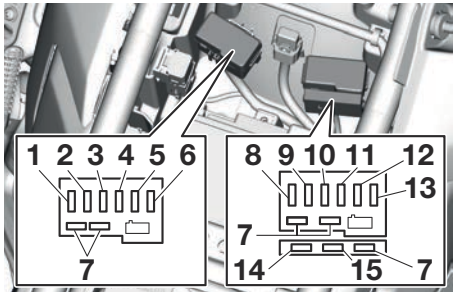
EAUM5560

Replacing the fuses

The main fuse and the fuse boxes, which contain the fuses for the individual circuits, are located under the seat. (page 5-34/8-28)



1. Cap
2. Fuse box
3. Main fuse



1. Ignition fuse
2. Headlight fuse
3. ABS control unit fuse
4. Ignition fuse 2
5. Signaling system fuse
6. Terminal fuse 1
7. Spare fuse
8. Fuel injection system fuse
9. Electronic throttle valve fuse
10. Backup fuse 2 (for ECU)
11. Backup fuse
12. Radiator fan motor fuse
13. Brake light fuse
14. ABS solenoid fuse
15. Cruise control fuse

If a fuse is blown, replace it as follows.

1. Turn the main switch to "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]

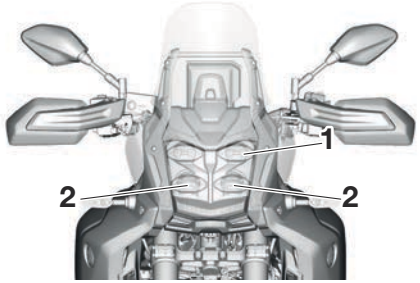
Specified fuses:

Main fuse:
50.0 A
Terminal fuse 1:
5.0 A
Headlight fuse:
7.5 A
Brake light fuse:
2.0 A
Signaling system fuse:
7.5 A
Ignition fuse:
10.0 A
Ignition fuse 2:
7.5 A
Radiator fan motor fuse:
15.0 A
ABS solenoid fuse:
15.0 A
Fuel injection system fuse:
10.0 A
ABS control unit fuse:
7.5 A
Cruise control fuse:
2.0 A
Backup fuse:
7.5 A
Backup fuse 2:
15.0 A
Electronic throttle valve fuse:
7.5 A

3. Turn the main switch to "ON" and turn on the electrical circuit in question to check if the device operates.
4. If the fuse immediately blows again, have a Yamaha dealer check the electrical system.

EAU80381

Vehicle lights



1. Headlight
2. Auxiliary light

Except for the license plate light bulb, this model's lights are all LED.
If an LED light does not come on, check the fuses and then have a Yamaha dealer check the vehicle. If the license plate light does not come on, check and replace the bulb. (See page 8-31.)

ECA16581

NOTICE

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

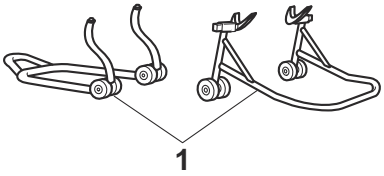
EAU24331

License plate light

If the license plate light does not come on, have a Yamaha dealer check the electrical circuit or replace the bulb.

EAUM4290

Supporting the motorcycle



1. Maintenance stand (example)

This model is not equipped with a centerstand. Use maintenance stands when removing the front or rear wheels or when performing any other maintenance that requires the motorcycle be upright.
Check that the motorcycle is in a stable and level position before starting any maintenance.

ECAM1210

NOTICE

Be sure to remove the rear arm maintenance spools (accessory) after using a maintenance stand.

If the rear arm spools are not removed, they may contact the exhaust system and cause damage.

EAU25873

Troubleshooting

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

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

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

EWA15142

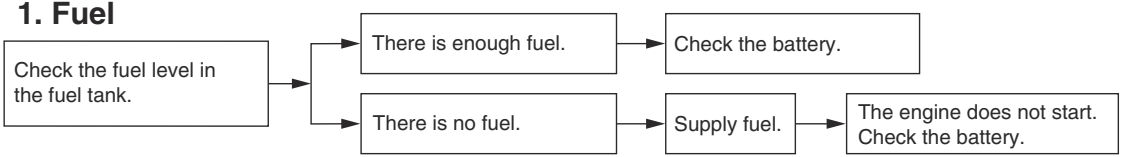
⚠ WARNING

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

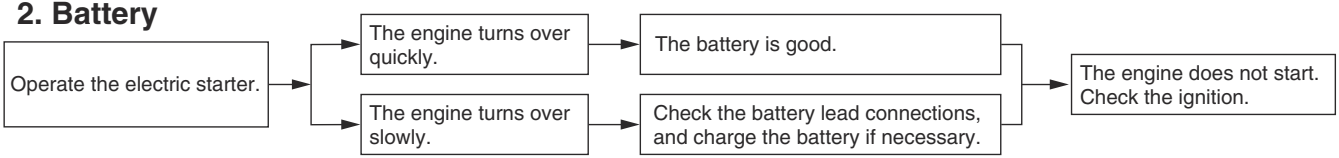
EAU86350

Troubleshooting chart

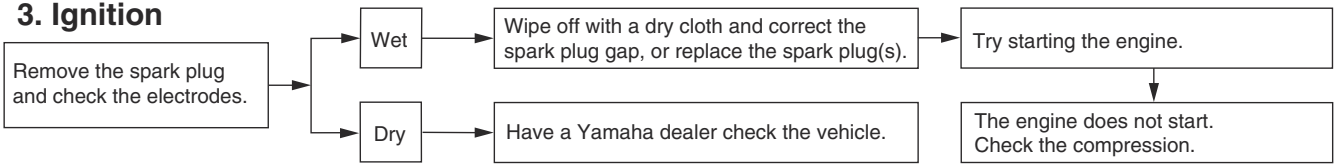
1. Fuel



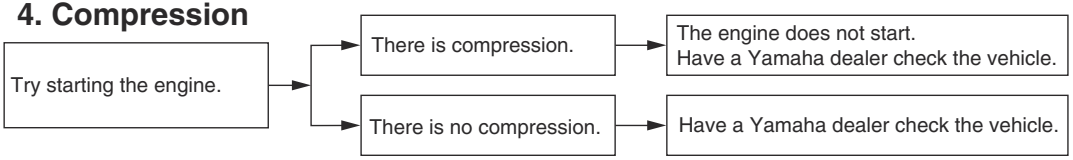
2. Battery



3. Ignition



4. Compression



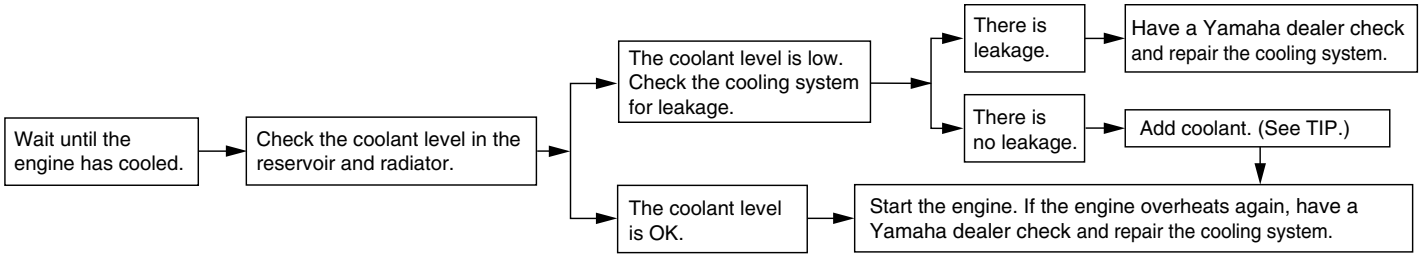
EAU86420

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.

EAU37834

Matte color caution

ECA15193

NOTICE

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

EAU83446

Care

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 detergent applications such as**

those available in coin-operated car washers.

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

Before washing

1. Park the vehicle out of direct sunlight and allow it to cool. This will help avoid water spots.
2. Make sure all caps, covers, electrical couplers and connectors are tightly installed.
3. Cover the muffler end with a plastic bag and a strong rubber band.
4. Pre-soak stubborn stains like insects or bird droppings with a wet towel for a few minutes.
5. Remove road grime and oil stains with a quality degreasing agent and a plastic-bristle brush or sponge. ***NOTICE:*** **Do not use degreasing agent on areas requiring lubrication such as seals, gaskets, and wheel axles. Follow product instructions.**[ECA26290]

Washing

1. Rinse off any degreaser and spray down the vehicle with a garden hose. Use only enough pressure to do the job. Avoid spraying water directly into the muffler, instrument panel, air inlet, or other inner areas such as underseat storage compartments.
2. Wash the vehicle with a quality automotive-type detergent mixed with cool water and a soft, clean towel or sponge. Use an old toothbrush or plastic-bristle brush for hard-to-reach places. ***NOTICE:*** **Use cold water if the vehicle has been exposed to salt. Warm water will increase salt's corrosive properties.**[ECA26301]
3. For windshield-equipped vehicles: Clean the windshield with a soft towel or sponge dampened with water and a pH neutral detergent. If necessary, use a high-quality windshield cleaner or polish for motorcycles. ***NOTICE:*** **Never use any strong chemicals to clean the windshield. Additionally, some cleaning compounds for plastic may scratch the windshield, so be sure to test all cleaning products before general application.**[ECA26310]
4. Rinse off thoroughly with clean water. Be sure to remove all detergent residues, as they can be harmful to plastic parts.

After washing

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

3. Use a chrome polish to shine chrome, aluminum, and stainless steel parts. Often the thermally induced discoloring of stainless steel exhaust systems can be removed through polishing.
4. Apply a corrosion protection spray on all metal parts including chrome or nickel-plated surfaces. **WARNING! Do not apply silicone or oil spray to seats, hand grips, rubber foot pegs or tire treads. Otherwise these parts will become slippery, which could cause loss of control. Thoroughly clean the surfaces of these parts before operating the vehicle.**[EWA20651]
5. Treat rubber, vinyl, and unpainted plastic parts with a suitable care product.
6. Touch up minor paint damage caused by stones, etc.
7. Wax all painted surfaces using a non-abrasive wax or use a detail spray for motorcycles.
8. When finished cleaning, start the engine and let it idle for several minutes to help dry any remaining moisture.
9. If the headlight lens has fogged up, start the engine and turn on the headlight to help remove the moisture.
10. Let the vehicle dry completely before storing or covering it.

ECA26320

NOTICE

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

EWA20660

⚠ WARNING

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

- **Make sure there is no lubricant or wax on the brakes or tires.**
- **If necessary, wash the tires with warm water and a mild detergent.**
- **If necessary, clean the brake discs and pads with brake cleaner or acetone.**
- **Before riding at higher speeds, test the vehicle's braking performance and cornering behavior.**

EAU83472

Storage

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

ECA21170

NOTICE

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

Long term storage

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

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

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

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

TIP

- If the battery will be removed, charge it once a month and store it in a temperate location between 0-30 °C (32-90 °F).
- See page 8-28 for more information on charging and storing the battery.

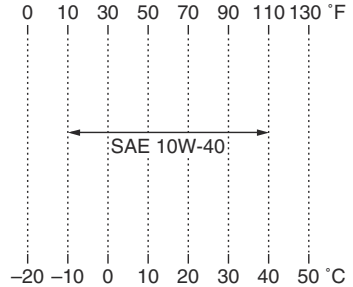
Specifications

Dimensions:
- Overall length:
  - 2370 mm (93.3 in)
- Overall width:
  - 935 mm (36.8 in)
- Overall height:
  - 1495 mm (58.9 in)
- Seat height:
  - 890 mm (35.0 in)
- Wheelbase:
  - 1595 mm (62.8 in)
- Ground clearance:
  - 240 mm (9.45 in)
- Minimum turning radius:
  - 3.1 m (10.17 ft)

Weight:
- Curb weight:
  - 220 kg (485 lb)

Engine:
- Combustion cycle:
  - 4-stroke
- Cooling system:
  - Liquid cooled
- Valve train:
  - DOHC
- Cylinder arrangement:
  - Inline
- Number of cylinders:
  - 2-cylinder
- Displacement:
  - 689 cm^3
- Bore × stroke:
  - 80.0 × 68.6 mm (3.15 × 2.70 in)
- Starting system:
  - Electric starter

Engine oil:
- Recommended brand:
  - YAMALUBE®
- SAE viscosity grades:
  - 10W-40



- Recommended engine oil grade:
  - API service SG type or higher, JASO standard MA
- Engine oil quantity:
  - Without oil filter cartridge replacement:
    - 2.30 L (2.43 US qt, 2.02 Imp.qt)
  - With oil filter cartridge replacement:
    - 2.60 L (2.75 US qt, 2.29 Imp.qt)
  - Oil change:
    - 2.30 L (2.43 US qt, 2.02 Imp.qt)
  - With oil filter removal:
    - 2.60 L (2.75 US qt, 2.29 Imp.qt)

Coolant quantity:
- Coolant reservoir (up to the maximum level mark):
  - 0.25 L (0.26 US qt, 0.22 Imp.qt)
- Radiator (including all routes):
  - 1.61 L (1.70 US qt, 1.42 Imp.qt)

Fuel:
- Recommended fuel:
  - Unleaded gasoline (E10 acceptable)
- Octane number (RON):
  - 90
- Fuel tank capacity:
  - 23 L (6.1 US gal, 5.1 Imp.gal)
- Fuel reserve amount:
  - 3.2 L (0.84 US gal, 0.70 Imp.gal)

Fuel injection:
- Throttle body:
  - ID mark:
    - BLW1

Drivetrain:
- Gear ratio:
  - 1st:
    - 2.846 (37/13)
  - 2nd:
    - 2.125 (34/16)
  - 3rd:
    - 1.632 (31/19)
  - 4th:
    - 1.300 (26/20)
  - 5th:
    - 1.091 (24/22)
  - 6th:
    - 0.964 (27/28)

Front tire:
Type:
With tube
Size:
90/90-21 M/C 54V M+S A
Speed rating:
240 km/h (149 mph)
Manufacturer/model:
PIRELLI/SCORPION RALLY STR

Rear tire:
Type:
With tube
Size:
150/70 R18 M/C 70V M+S
Speed rating:
240 km/h (149 mph)
Manufacturer/model:
PIRELLI/SCORPION RALLY STR

Optional tire:

Front tire:
Type:
With tube
Size:
90/90 – 21 M/C 54R M+S
Speed rating:
170 km/h (105 mph)
Manufacturer/model:
MICHELIN/ANAKEE WILD

Rear tire:
Type:
With tube
Size:
150/70 R18 M/C 70R M+S
Speed rating:
170 km/h (105 mph)
Manufacturer/model:
MICHELIN/ANAKEE WILD

Loading:
Maximum load:
174 kg (384 lb)
(Total weight of rider, passenger, cargo and accessories)

Front brake:
Type:
Hydraulic dual disc brake

Rear brake:
Type:
Hydraulic single disc brake

Front suspension:
Type:
Telescopic fork

Rear suspension:
Type:
Swingarm (link suspension)

Electrical system:
System voltage:
12 V

Battery:
Model:
YTZ7S (F)
Voltage, capacity:
12 V, 6.0 Ah (10 HR)

Bulb wattage:
Headlight:
LED
Brake/tail light:
LED
Front turn signal light:
LED
Rear turn signal light:
LED
Auxiliary light:
LED
License plate light:
5.0 W

EAU53562

Identification numbers

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

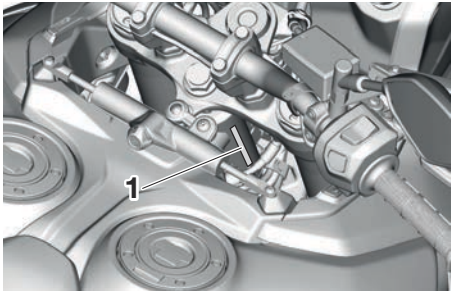
VEHICLE IDENTIFICATION NUMBER:

ENGINE SERIAL NUMBER:

MODEL LABEL INFORMATION:

EAU26401

Vehicle identification number



1. Vehicle identification number

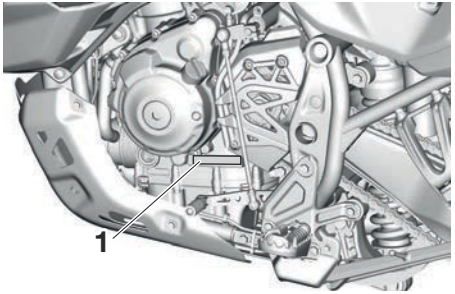
The vehicle identification number is stamped into the steering head pipe. Record this number in the space provided.

TIP

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

EAU26442

Engine serial number



1. Engine serial number

The engine serial number is stamped into the crankcase.

EAU26542

Model label

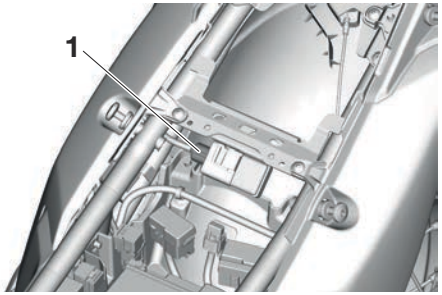


1. Model label

The model label is affixed to the frame under the seat. (See page 5-34.) Record the information on this label in the space provided. This information will be needed when ordering spare parts from a Yamaha dealer.

EAU69910

Diagnostic connector



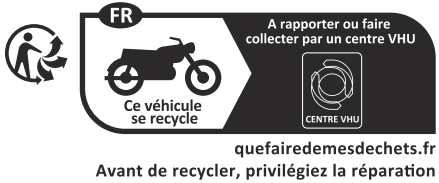
1. Diagnostic connector

The diagnostic connector is located as shown.

EAUA8920

Vehicle Recycling Information (France)

This product is subject to recycling obligations in France and is marked with the Triman logo, in accordance with Article 17 of the AGEC Law (Anti-Waste and Circular Economy Law) dated February 10, 2020.



EAUA0873

Use of your data

This is a brief summary of how Yamaha (Yamaha Motor Co., Ltd., and Yamaha Motor Europe N.V.) uses your data. For more details, please go to the specific URL below for the Privacy Policy:

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Belgium	Dutch	https://www.yamaha-motor.eu/be/nl/privacy/privacy-policy/
Belgium	French	https://www.yamaha-motor.eu/be/fr/privacy/privacy-policy/
Bulgaria	Bulgarian	https://www.yamaha-motor.eu/bg/bg/privacy/privacy-policy/
Czech Republic	Czech	https://www.yamaha-motor.eu/cz/cs/privacy/privacy-policy/
Denmark	Danish	https://www.yamaha-motor.eu/dk/da/privacy/privacy-policy/
Finland	Finnish	https://www.yamaha-motor.eu/fi/fi/privacy/privacy-policy/
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Germany	German	https://www.yamaha-motor.eu/de/de/privacy/privacy-policy/
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Romania	Romanian	https://www.yamaha-motor.eu/ro/ro/privacy/privacy-policy/
Spain	Spanish	https://www.yamaha-motor.eu/es/es/privacy/privacy-policy/
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U.K.	English	https://www.yamaha-motor.eu/gb/en/privacy/privacy-policy/

What data we collect? and How we collect your data?
This vehicle collects three types of data through integrated Engine Control Units (ECU).: (1) Vehicle Identification Number (VIN); (2) live data showing the performance of the vehicle such as engine/motor operating state, vehicle speed, mileage; and (3) other data showing the status of the vehicle such as diagnostic trouble code (DTC).
The collected data will be uploaded to server at Yamaha Motor Co., Ltd. by attaching a special Yamaha diagnostic tool to the vehicle, only when maintenance checks or service procedures are performed.

How will we use your data?
Yamaha use collected data from your vehicle, (1) to conduct adequate maintenance service including diagnostics, (2) to implement proper warranty claim judgement, (3) to conduct research and development of vehicle, (4) to provide and improve quality of products, features, and services, (5) to ensure our business purpose, and (6) to comply with legal obligations or lawful orders, and to establish or defend legal claims.

How we share your data?
We may share your data 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 to contact us
Yamaha Motor Co., Ltd., and Yamaha Motor Europe N.V. are joint data controller regarding your data collected. Any questions or complaints regarding the processing of your Personal Data can be submitted in writing to:
Yamaha Motor Europe N.V./Digital Marketing & CRM
– PO Box 75033 – 1117 ZN Schiphol – The Netherlands.
The SOLE PURPOSE of above provided contact information is TO RESPOND DATA PROCESSING INQUIRY AND OTHER KINDS OF INQUIRIES **WILL NOT BE RESPONDED.** Please provide the following information for the proper handling of your inquiry: **(1) Your Name; (2) Your Email Address; (3) Your Country of Residence; and (4) Your VIN.** We will use your personal information provided only for the purpose of supporting your data processing inquiry.

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