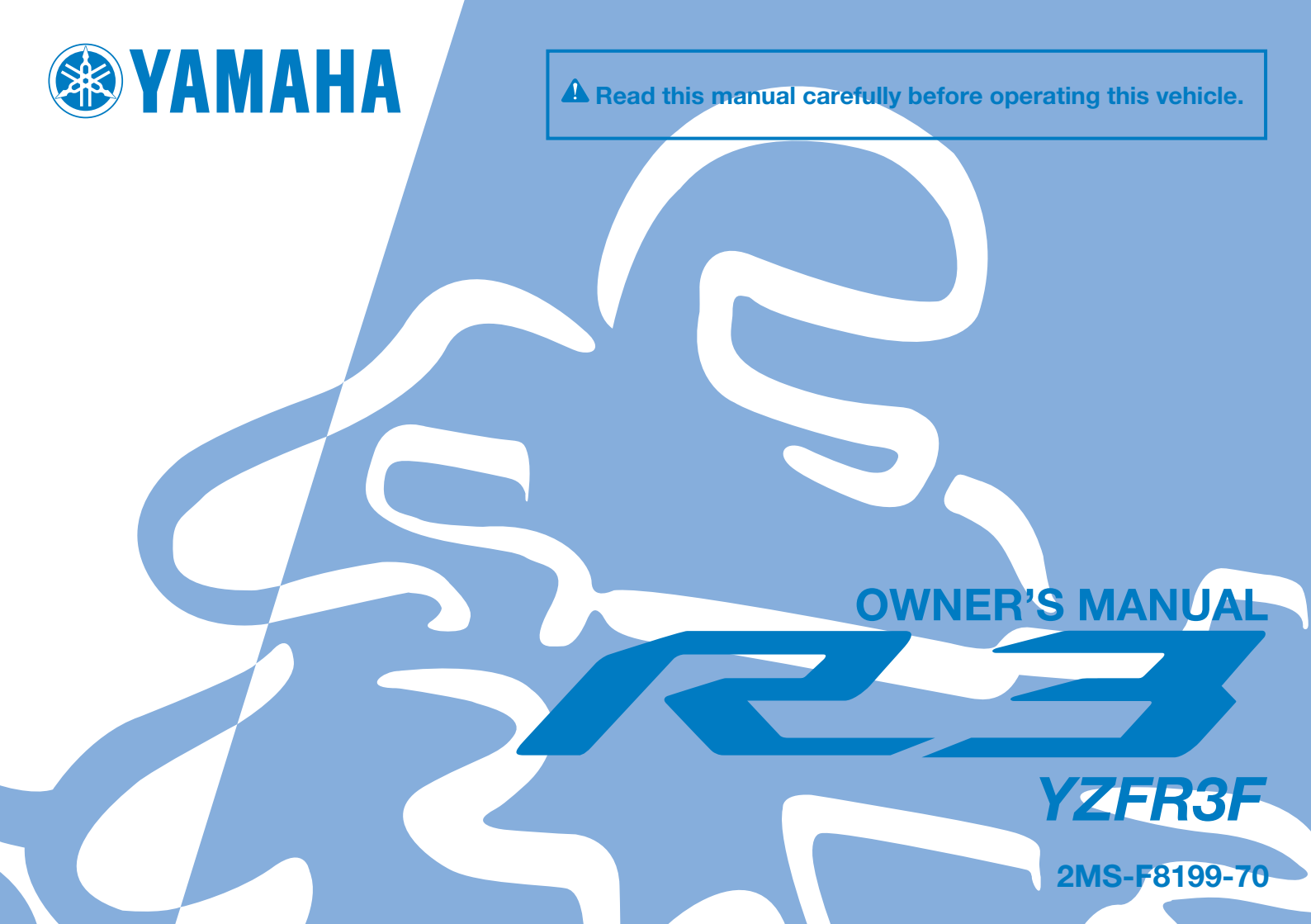
YAMAHA

⚠ Read this manual carefully before operating this vehicle.



OWNER'S MANUAL

YZFR3F

2MS-F8199-70

EAU46091

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

EAU45931

Congratulations on your purchase of the Yamaha YZFR3F. This model is the result of Yamaha's vast experience in the production of fine sporting, touring, and pacesetting racing machines. It represents the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields.
This manual will give you an understanding of the operation, inspection, and basic maintenance of this motorcycle. If you have any questions concerning the operation or maintenance of your motorcycle, please consult a Yamaha dealer.
The design and manufacture of this Yamaha motorcycle fully comply with the emissions standards for clean air applicable at the date of manufacture. Yamaha has met these standards without reducing the performance or economy of operation of the motorcycle. To maintain these high standards, it is important that you and your Yamaha dealer pay close attention to the recommended maintenance schedules and operating instructions contained within this manual.
Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your motorcycle and this manual. If there is any question concerning this manual, please consult a Yamaha dealer.

EWA10022

⚠ WARNING

Please read this manual carefully and completely before operating this motorcycle. Do not attempt to operate this motorcycle until you have attained adequate knowledge of its controls and operating features and until you have been trained in safe and proper riding techniques. Regular inspections and careful maintenance, along with good riding skills, will ensure that you safely enjoy the capabilities and the reliability of 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.

EAUN0430

YZFR3F
OWNER'S MANUAL

1st edition, December 2014

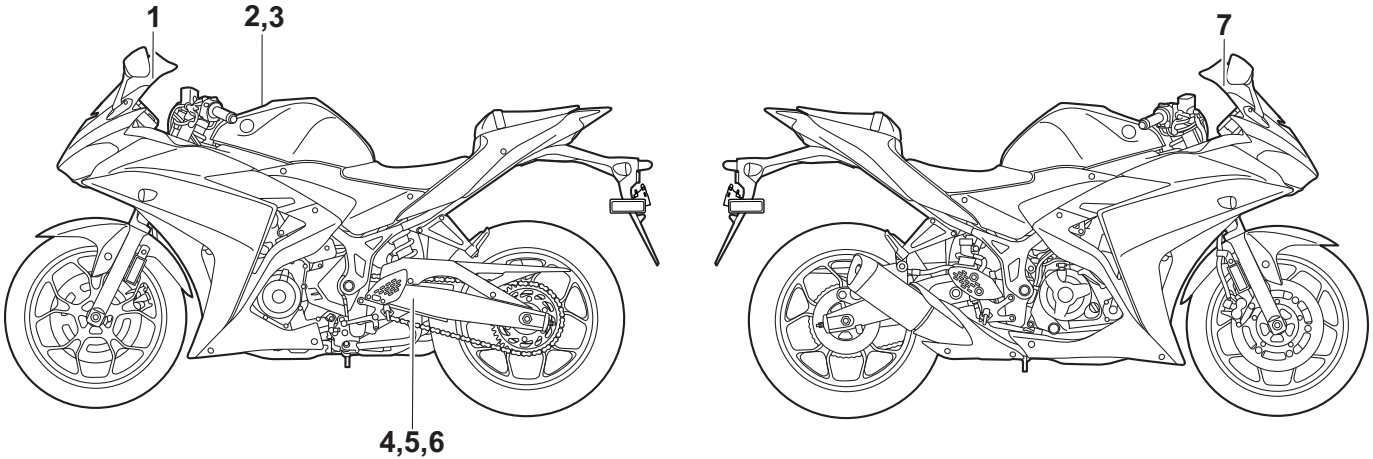
TABLE OF CONTENTS

LOCATION OF IMPORTANT LABELS

EAU10385

1

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



1

NOTICE

- Cleaning with alkaline or acid cleaner, gasoline or solvent will damage windshield.
- Use neutral detergent.

1WD-F815K-10

3

⚠ WARNING

- BEFORE YOU OPERATE THIS VEHICLE, READ THE OWNER'S MANUAL AND ALL LABELS.
- ALWAYS WEAR AN APPROVED MOTORCYCLE HELMET, eye protection, and protective clothing.

1TP-2118K-A1

5

INFORMATION SUR LES PNEUS

La pression des pneus a trol doit froid dit normalement êntre régibe comme suit.

- Jusqu'à 90kg (198lbs)

AVANT : 200kPa, (2.00 kgf/cm^2), 29 psi
REAR : 250kPa, (2.50 kgf/cm^2), 36 psi

- Entra 90kg (198lbs) at charge maximale

FRONT : 200kPa, (2.00 kgf/cm^2), 29 psi
REAR : 250kPa, (2.50 kgf/cm^2), 36 psi

2MS-F1668-30

7

ATTENTION

- Eviter de nettoyer le pare-brise aveo une solution alcaline ou acide ainsi qu'avec de l'essence ou un diluant.
- Utiliser un détergent neutre.

1WD-F815K-20

2

⚠ AVERTISSEMENT

- LIRE LE MANUEL DU PROPRIETAIRE AINSI QUE TOUTES LES ETIQUETTES DU AVANT D'UTILISER CE VEHICULE.
- TOUJOURS PORTER UN CASQUE DE MOTOCYCLISTE APPROUVE, des lunettes et des vêtements de protection

1TP-2118K-B1

4

TIRE INFORMATION

Cold tire normal pressure should be set as follows.

- Up to 90kg (198lbs) load

FRONT : 200kPa, (2.00 kgf/cm^2), 29 psl
REAR : 250kPa, (2.50 kgf/cm^2), 36 psl

- 90kg (198lbs)-maximun load

FRONT : 200kPa, (2.00 kgf/cm^2), 29 psl
REAR : 250kPa, (2.50 kgf/cm^2), 36 psl

2MS-F1668-20

6

This spark ignition system meets all requirements of the Canadian interference Causing Equipment Regulations.

Ce systéme d'allumage par étincelle de véhicule respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

3JK-82377-20

EAU1028B

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 5-1 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.
- This motorcycle is designed for on-road use only. It is not suitable for off-road use.

Protective Apparel

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

- Always wear an approved helmet.
- Wear a face shield or goggles. Wind in your unprotected eyes could contribute to an impairment of vision that could delay seeing a hazard.
- The use of a jacket, 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:
160 kg (353 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 7-16 for tire specifications and more information on replacing your tires.

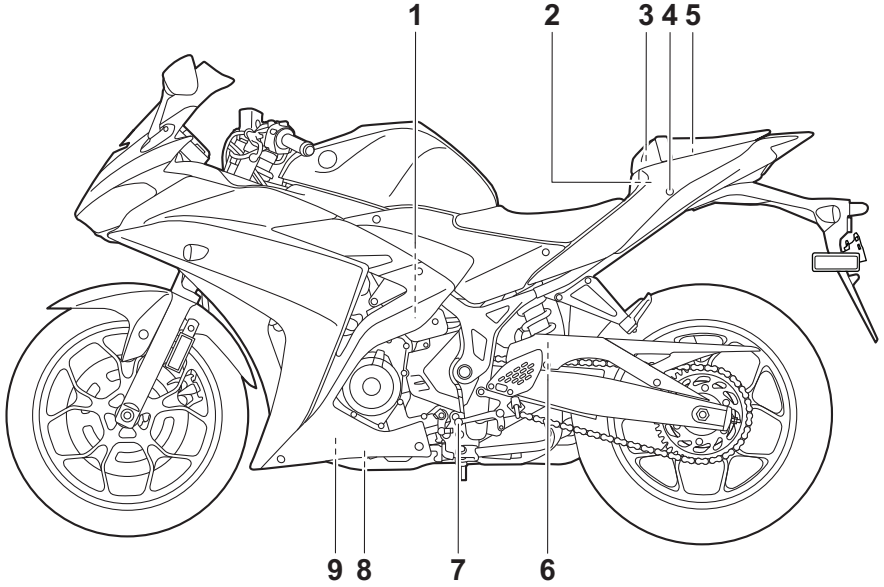
Transporting the Motorcycle

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.

EAU10411

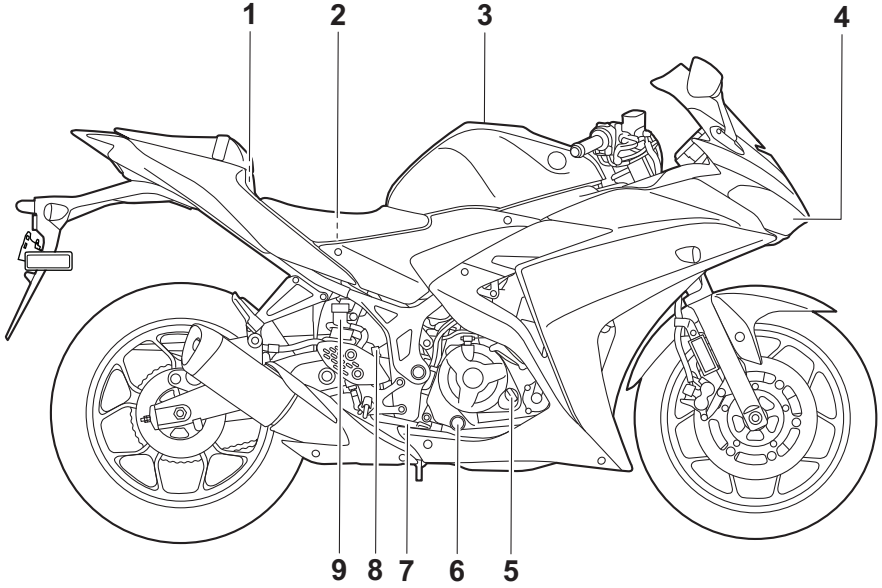
Left view



1. Coolant reservoir (page 7-13)
2. Main fuse (page 7-31)
3. Owner's tool kit (page 7-2)
4. Passenger seat lock (page 4-16)
5. Storage compartment (page 4-18)
6. Shock absorber assembly spring preload adjusting ring (page 4-18)
7. Shift pedal (page 4-12)
8. Engine oil drain bolt (page 7-10)
9. Engine oil filter cartridge (page 7-10)

EAU10421

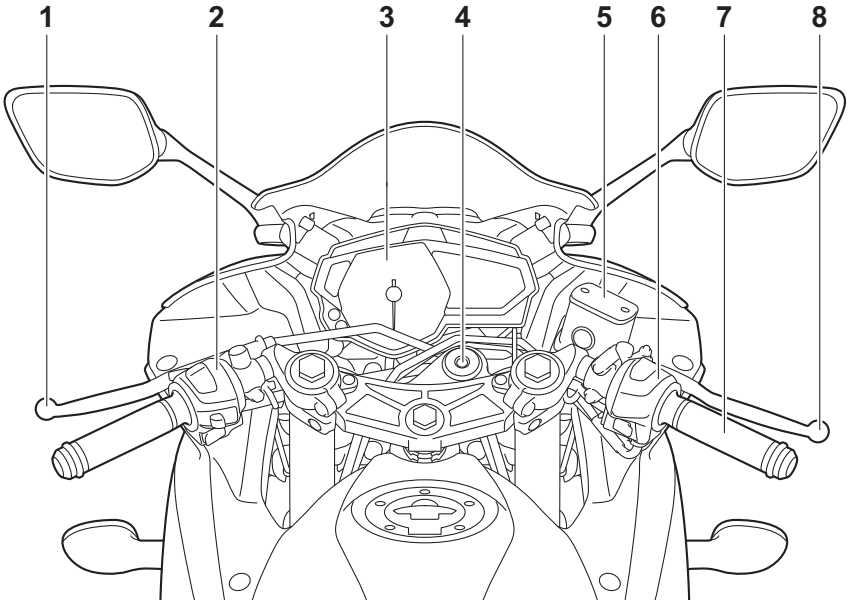
Right view



1. Fuse box (page 7-31)
2. Battery (page 7-29)
3. Fuel tank cap (page 4-13)
4. Headlight (page 7-32)
5. Engine oil filler cap (page 7-10)
6. Engine oil level check window (page 7-10)
7. Brake pedal (page 4-12)
8. Rear brake light switch (page 7-20)
9. Rear brake fluid reservoir (page 7-21)

EAU10431

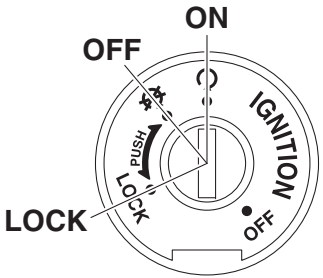
Controls and instruments



1. Clutch lever (page 4-11)
2. Left handlebar switches (page 4-10)
3. Multi-function meter unit (page 4-4)
4. Main switch/steering lock (page 4-1)
5. Front brake fluid reservoir (page 7-21)
6. Right handlebar switches (page 4-10)
7. Throttle grip (page 7-16)
8. Brake lever (page 4-12)

EAU10462

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.

EAU62480

○ (on)
All electrical circuits are supplied with power; the meter lighting, taillight, license plate light and auxiliary light come on, and the engine can be started. The key cannot be removed.

TIP
The headlight comes on automatically when the engine is started and stays on until the key is turned to "⊗", even if the engine stalls.

EAU54301

⊗ (off)
All electrical systems are off. The key can be removed.

EWA16371

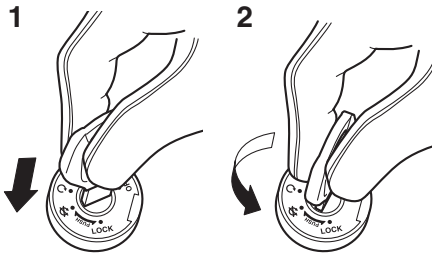
⚠ WARNING

Never turn the key to "⊗" 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.

EAU60860

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

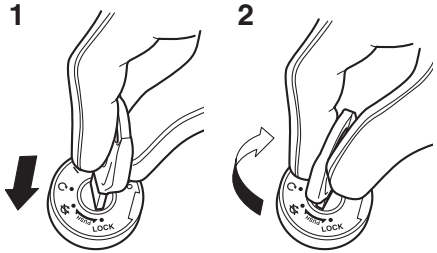
To lock the steering



1. Push.
2. Turn.

1. Turn the handlebars all the way to the left.
2. Push the key in from the "⊗" position, and then turn it to "LOCK" while still pushing it.
3. Remove the key.

To unlock the steering

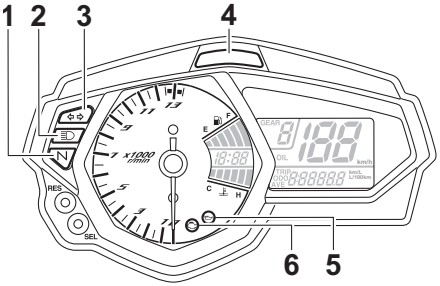


1. Push.
2. Turn.

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

EAU49398

Indicator lights and warning lights



1. Neutral indicator light " **N** "
2. High beam indicator light "≣D"
3. Turn signal indicator light "⇦ ⇨"
4. Shift timing indicator light
5. Oil pressure warning light "🛢"
6. Engine trouble warning light "🔧"

EAU11022

Turn signal indicator light "⇦ ⇨"
This indicator light flashes when a turn signal light is flashing.

EAU11061

Neutral indicator light " N "
This indicator light comes on when the transmission is in the neutral position.

EAU11081

High beam indicator light "≣D"
This indicator light comes on when the high beam of the headlight is switched on.

EAU62530

Oil pressure warning light "🛢"
This warning light comes on if the engine oil pressure is low.
The electrical circuit of the warning light can be checked by turning the key to "∩". The warning light should come on and remain on until the engine is started.
If the warning light does not come on initially when the key is turned to "∩", have a Yamaha dealer check the electrical circuit.

ECA21210

NOTICE

If the warning light comes on when the engine is running, stop the engine immediately and check oil level. If the oil level is below the minimum level, add sufficient oil of the recommended type to raise it up to the correct level. If the oil pressure warning light remains on even if the oil level

4

is correct, immediately turn the engine off and have a Yamaha dealer check the vehicle.

TIP

If the warning light does not go off after starting the engine, check the engine oil level and add oil if necessary. (See page 7-10.)
If the warning light remains on after adding engine oil, have a Yamaha dealer check the vehicle.

EAU62790

Engine trouble warning light "🔧"

This warning light comes on or flashes if a problem is detected in the electrical circuit monitoring the engine. If this occurs, have a Yamaha dealer check the self-diagnosis system. (See page 4-10 for an explanation of the self-diagnosis device.)
The electrical circuit of the warning light can be checked by turning the key to "○". The warning light should come on for a few seconds, and then go off.
If the warning light does not come on initially when the key is turned to "○", or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

TIP

The engine trouble warning light will come on while the start switch is pushed, but this does not indicate a malfunction.

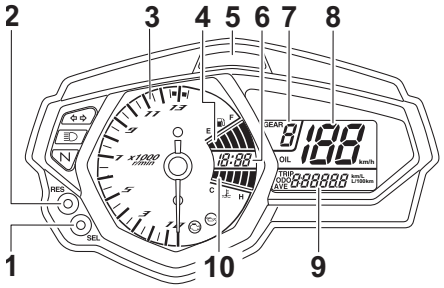
EAU62470

Shift timing indicator light

This indicator light can be set to come on and go off at the desired engine speeds and is used to inform the rider when it is time to shift to the next higher gear. (See page 4-8 for a more detailed explanation of this indicator light and on how to set it.)
The electrical circuit of the indicator light can be checked by turning the key to "○". The indicator light should come on for a few seconds, and then go off.
If the indicator light does not come on initially when the key is turned to "○", or if the indicator light remains on, have a Yamaha dealer check the electrical circuit.

EAUN0841

Multi-function meter unit



1. "SEL" button
2. "RES" button
3. Tachometer
4. Fuel meter
5. Shift timing indicator light
6. Clock
7. Transmission gear display
8. Speedometer
9. Multi-function display
10. Coolant temperature meter

EWA12423

⚠ WARNING

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

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

- a speedometer
- a tachometer
- a clock
- a fuel meter
- a coolant temperature meter
- a transmission gear display
- a multi-function display
- a shift timing indicator light
- a self-diagnosis device

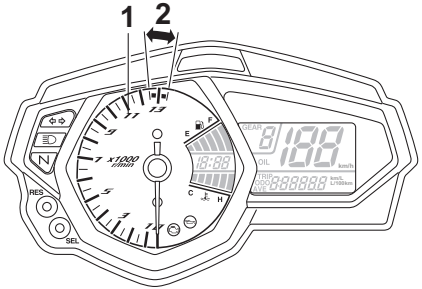
TIP

Be sure to turn the key to "ON" before using the "SEL" and "RES" buttons, except for setting the shift timing indicator light control mode.

Speedometer

The speedometer shows the vehicle's traveling speed.

Tachometer



1. Tachometer
2. Tachometer red zone

The tachometer allows the rider to monitor the engine speed and keep it within the ideal power range.
When the key is turned to "ON", the tachometer will sweep across the r/min range and then return to zero r/min in order to test the electrical circuit.

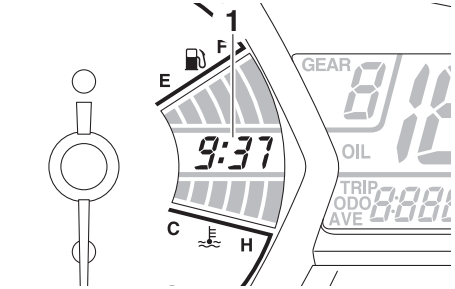
ECA10032

NOTICE

Do not operate the engine in the tachometer red zone.
Red zone: 12500 r/min and above

4

Clock



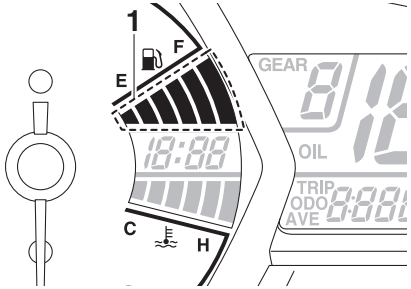
1. Clock

The clock displays when the key is turned to "ON".

To set the clock

1. Turn the key to "ON".
2. Push the "SEL" button and "RES" button together for at least two seconds.
3. When the hour digits start flashing, push the "RES" button to set the hours.
4. Push the "SEL" button, and the minute digits will start flashing.
5. Push the "RES" button to set the minutes.
6. Push the "SEL" button and then release it to start the clock.

Fuel meter



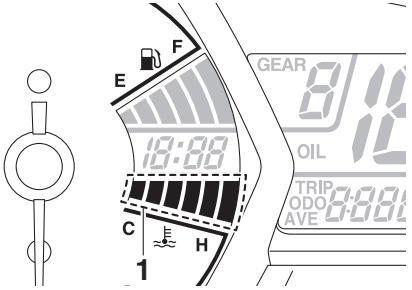
1. Fuel meter

The fuel meter indicates the amount of fuel in the fuel tank.
When the key is turned to "ON", the display segments of the fuel meter will sweep once across the fuel level range and then return to the current amount in order to test the electrical circuit.
The display segments of the fuel meter disappear towards "E" (Empty) as the fuel level decreases. When the last segment starts flashing, refuel as soon as possible.

TIP

This fuel meter is equipped with a self-diagnosis system. If a problem is detected in the electrical circuit, the following cycle is repeated until the malfunction is corrected: fuel level segments flash eight times, then go off for approximately three seconds. If this occurs, have a Yamaha dealer check the electrical circuit.

Coolant temperature meter



1. Coolant temperature meter

The coolant temperature meter indicates the temperature of the coolant.
When the key is turned to "ON", the display segments of the digital coolant temperature gauge will sweep once across the temperature range and then return to "C" in order to test the electrical circuit.

If the last segment on the right flashes, stop the vehicle, then stop the engine, and let the engine cool. (See page 7-42.)

ECA10022

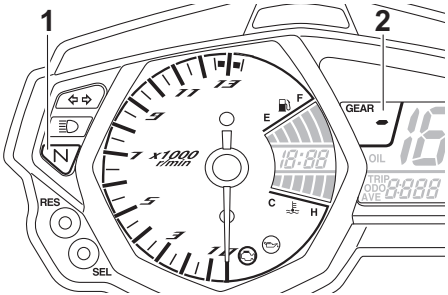
NOTICE

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

TIP

The coolant temperature varies with changes in the weather and engine load.

Transmission gear display



1. Neutral indicator light " **N** "
2. Transmission gear display

This display shows the selected gear. The neutral position is indicated by "**–**" and by the neutral indicator light.

Multi-function display

1. Multi-function display

The multi-function display is equipped with the following:

- an odometer
- two tripmeters
- a fuel reserve tripmeter
- an instantaneous fuel consumption display
- an average fuel consumption display
- an oil change tripmeter
- an oil change indicator

Push the "SEL" button to switch the display between the odometer mode "ODO", tripmeter modes "TRIP 1" and "TRIP 2", instantaneous fuel consumption mode "km/L" or "L/100 km", average fuel consumption mode "AVE_ _._ km/L" or "AVE_ _._ L/100 km" and oil change tripmeter mode "OIL TRIP" in the following order:

ODO → TRIP 1 → TRIP 2 → km/L or L/100 km → AVE_ _._ km/L or AVE_ _._ L/100 km → OIL TRIP → ODO

If the left segment of the fuel meter starts flashing, the display automatically changes to the fuel reserve tripmeter mode "TRIP F" and starts counting the distance traveled from that point. In that case, push the "SEL" button to switch the display between the various tripmeter, odometer, instantaneous fuel consumption and average fuel consumption modes in the following order:

TRIP F → km/L or L/100 km → AVE_ _._ km/L or AVE_ _._ L/100 km → OIL TRIP → ODO → TRIP 1 → TRIP 2 → TRIP F

To reset a tripmeter, select it by pushing the “SEL” button, and then push the “RES” button for at least one second.
If you do not reset the fuel reserve tripmeter manually, it resets itself automatically and the display returns to the prior mode after refueling and traveling 5 km (3 mi).

Instantaneous fuel consumption display

1. Instantaneous fuel consumption display

The instantaneous fuel consumption display can be set to either “km/L” or “L/100 km”.

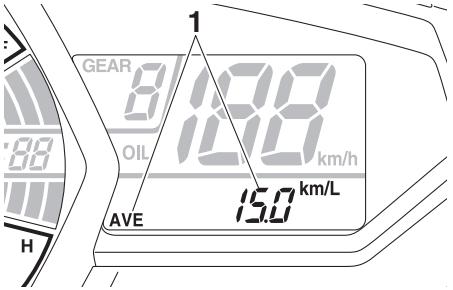
- “km/L”: The distance that can be traveled on 1.0 L of fuel under the current riding conditions is shown.
- “L/100 km”: The amount of fuel necessary to travel 100 km under the current riding conditions is shown.

To switch between the instantaneous fuel consumption displays, push the “SEL” button for one second.

TIP

If traveling at speeds under 20 km/h (12 mi/h), “_ _._” is displayed.

Average fuel consumption display



1. Average fuel consumption display

The average fuel consumption display can be set to either “AVE_ _._ km/L” or “AVE_ _._ L/100 km”.
This display shows the average fuel consumption since it was last reset.

- “AVE_ _._ km/L”: The average distance that can be traveled on 1.0 L of fuel is shown.
- “AVE_ _._ L/100 km”: The average amount of fuel necessary to travel 100 km is shown.

To switch between the average fuel consumption displays, push the “SEL” button for one second.
To reset the average fuel consumption display, push the “RES” button for at least one second.

TIP

After resetting the average fuel consumption display, "_ _._" is shown until the vehicle has traveled 1 km (0.6 mi).

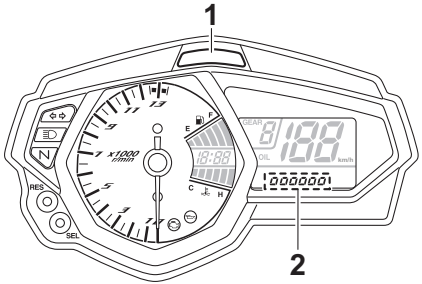
Oil change tripmeter

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

The oil change tripmeter shows the distance traveled since it was last reset (i.e., since the last oil change).
The oil change indicator "OIL" will flash at the initial 1000 km (600 mi) and every 5000 km (3000 mi) thereafter to indicate that the engine oil should be changed.

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

Shift timing indicator light



1. Shift timing indicator light
2. Brightness level display

The shift timing indicator light has four settings which can be adjusted.

- Flashing pattern: this function allows you to choose whether or not the indicator light will come on and whether it should flash or stay on when activated.
- Activation point: this function allows you to select the engine speed at which the indicator light is activated.
- Deactivation point: this function allows you to select the engine speed at which the indicator light is deactivated.

- Brightness: this function allows you to adjust the brightness of the indicator light.

To adjust the shift timing indicator light

1. Turn the key to "⊠".
2. Push and hold the "SEL" button.
3. Turn the key to "∩", and then release the "SEL" button after five seconds. The shift timing indicator light can now be adjusted.

To set the flashing pattern

1. Push the "RES" button to select one of the following flashing pattern settings:
   - On: the indicator light stays on when activated. (This setting is selected when the indicator light stays on.)
   - Flash: the indicator light flashes when activated. (This setting is selected when the indicator light flashes four times per second.)
   - Off: the indicator light is deactivated; in other words, it does not come on or flash. (This setting is selected when the indicator light flashes once every two seconds.)
2. Push the "SEL" button to confirm the selected flashing pattern. The shift timing indicator light changes to the activation point setting mode.

The tachometer will show the current setting r/min for the activation point and deactivation point setting modes.

To set the shift activation point

TIP

The shift timing indicator light activation point can be set between 7000 r/min and 13500 r/min. From 7000 r/min to 12000 r/min, the indicator light can be set in increments of 500 r/min. From 12000 r/min to 13500 r/min, the indicator light can be set in increments of 200 r/min.

1. Push the "RES" button to select the desired engine speed for activating the indicator light.
2. Push the "SEL" button to confirm the selected engine speed. The control mode changes to the deactivation point setting mode.

To set the deactivation point

TIP

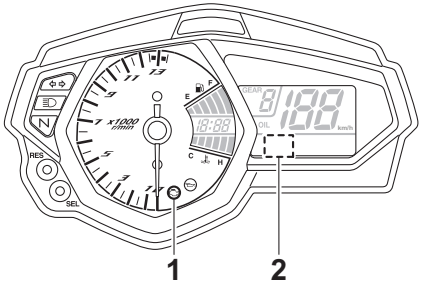
- The shift timing indicator light deactivation point can be set between 7000 r/min and 13500 r/min. From 7000 r/min to 12000 r/min, the indicator light can be set in increments of 500 r/min. From 12000 r/min to 13500 r/min, the indicator light can be set in increments of 200 r/min.
- Be sure to set the deactivation point to a higher engine speed than for the activation point, otherwise the shift timing indicator light will not come on.

1. Push the "RES" button to select the desired engine speed for deactivating the indicator light.
2. Push the "SEL" button to confirm the selected engine speed. The control mode changes to the brightness setting mode.

To adjust the brightness

1. Push the “RES” button to select the desired shift indicator light brightness level.
2. Push the “SEL” button to confirm the selected brightness level. The display exits the shift timing light control mode and returns to the standard multi-function display mode.

Self-diagnosis device



1. Engine trouble warning light “ ”
2. Error code display

This model is equipped with a self-diagnosis device for various electrical circuits. If a problem is detected in any of those circuits, the engine trouble warning light will come on and the display will indicate an error code.

ECA11591

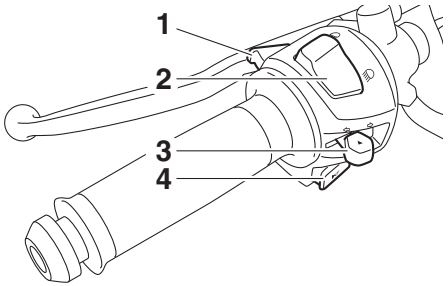
NOTICE

If the display indicates an error code, the vehicle should be checked as soon as possible in order to avoid engine damage.

EAU1234H

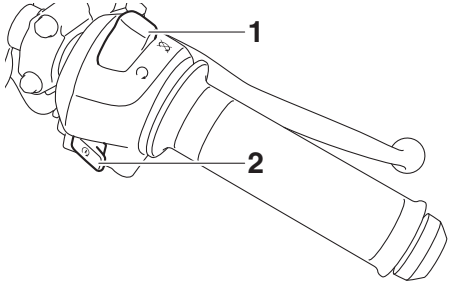
Handlebar switches

Left



1. Pass switch “PASS”
2. Dimmer switch “ / ”
3. Turn signal switch “ / ”
4. Horn switch “ ”

Right



1. Engine stop switch “ / ”
2. Start switch “ ”

EAU12361

Pass switch "PASS"

Press this switch to flash the headlight.

EAU62540

Dimmer switch "≣O/≣O"

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

TIP

When the switch is set to low beam, only the right headlight bulb comes on. When the switch is set to high beam, both headlight bulbs come on.

EAU12461

Turn signal switch "⇦/⇨"

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

EAU12501

Horn switch "🔊"

Press this switch to sound the horn.

EAU12661

Engine stop switch "◯/⊠"

Set this switch to "◯" before starting the engine. Set this switch to "⊠" to stop the engine in case of an emergency, such as when the vehicle overturns or when the throttle cable is stuck.

EAU12713

Start switch "ⓢ"

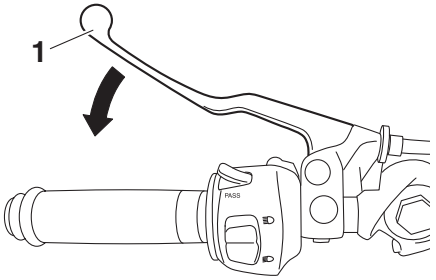
Push this switch to crank the engine with the starter. See page 6-1 for starting instructions prior to starting the engine.

EAU62500

The engine trouble warning light will come on when the key is turned to "◯" and the start switch is pushed, but this does not indicate a malfunction.

EAU12821

Clutch lever



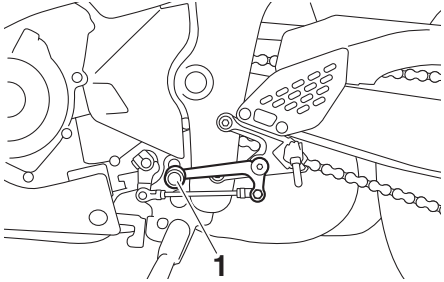
1. Clutch lever

The clutch lever is located at the left handlebar grip. To disengage the clutch, pull the lever toward the handlebar grip. To engage the clutch, release the lever. The lever should be pulled rapidly and released slowly for smooth clutch operation.

The clutch lever is equipped with a clutch switch, which is part of the ignition circuit cut-off system. (See page 4-20.)

EAU12872

Shift pedal

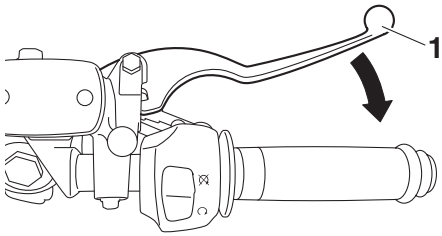


1. Shift pedal

The shift pedal is located on the left side of the motorcycle and is used in combination with the clutch lever when shifting the gears of the 6-speed constant-mesh transmission equipped on this motorcycle.

EAU12892

Brake lever

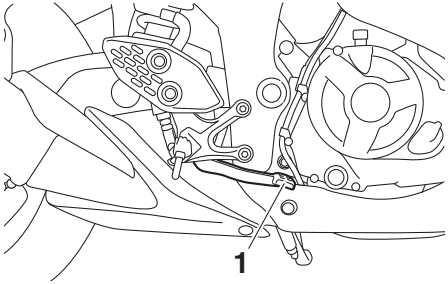


1. Brake lever

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

EAU12944

Brake pedal

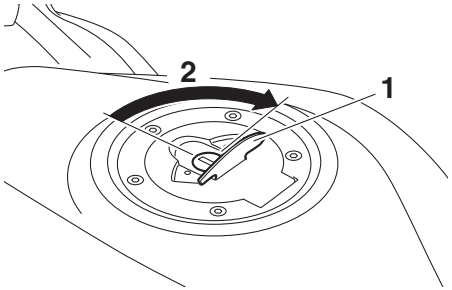


1. Brake pedal

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

EAU13075

Fuel tank cap



1. Fuel tank cap lock cover
2. Unlock.

To open the fuel tank cap

Open the fuel tank cap lock cover, insert the key into the lock, 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

1. Push the fuel tank cap into position with the key inserted in the lock.
2. Turn the key counterclockwise to the original position, remove it, and then close the lock cover.

TIP

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

EAU13222

Fuel

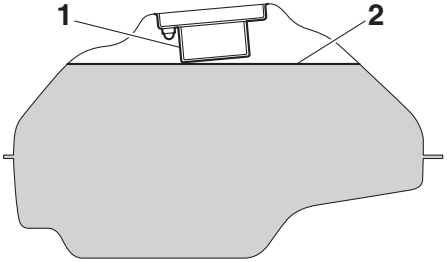
Make sure there is sufficient gasoline in the tank.

EWA10882

⚠ WARNING

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

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



1. Fuel tank filler tube
2. Maximum fuel level

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

EWA15152

⚠ WARNING

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

EAU13315

Recommended fuel:
Regular unleaded gasoline (Gasohol (E10) acceptable)
Fuel tank capacity:
14 L (3.7 US gal, 3.08 Imp.gal)
Fuel reserve amount:
3.0 L (0.79 US gal, 0.66 Imp.gal)

ECA11401

NOTICE

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

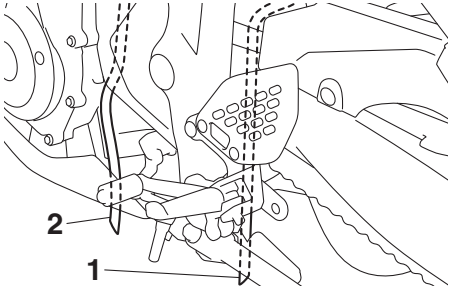
Your Yamaha engine has been designed to use regular unleaded gasoline with a pump octane number [(R+M)/2] of 86 or higher, or a research octane number of 91 or higher. If knocking (or pinging) occurs, use a gasoline of a different brand or premium unleaded fuel. Use of unleaded fuel will extend spark plug life and reduce maintenance costs.

Gasohol

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

EAUN0790

Fuel tank breather hose and overflow hose



1. Fuel tank overflow hose
2. Fuel tank breather hose

Before operating the motorcycle:

- Check each hose connection.
- Check each hose for cracks or damage, and replace if necessary.
- Make sure that the end of each hose is not blocked, and clean if necessary.
- Make sure that the end of fuel tank breather hose is positioned outside of the cowling.

EAU13434

Catalytic converter

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

EWA10863

⚠ WARNING

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

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

ECA10702

NOTICE

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

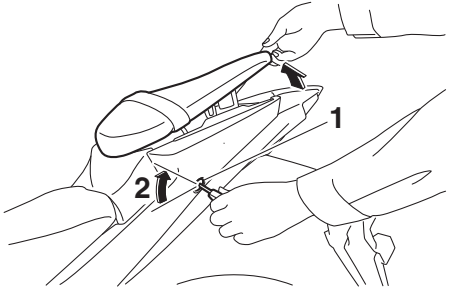
EAU62621

Seats

Passenger seat

To remove the passenger seat

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

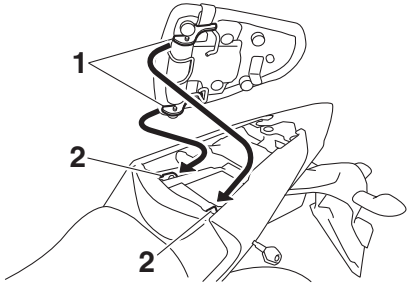


1. Passenger seat lock
2. Unlock.

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

To install the passenger seat

1. Insert the projections on the front of the passenger seat into the seat holders as shown, and then push the rear of the seat down to lock it in place.



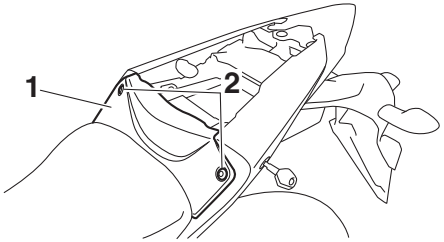
1. Projection
2. Seat holder

2. Remove the key.

Rider seat

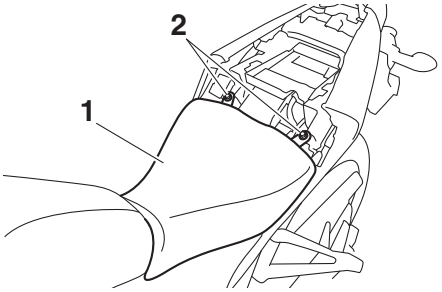
To remove the rider seat

1. Remove the passenger seat.
2. Remove the center cover by removing the screws.



1. Center cover
2. Screw

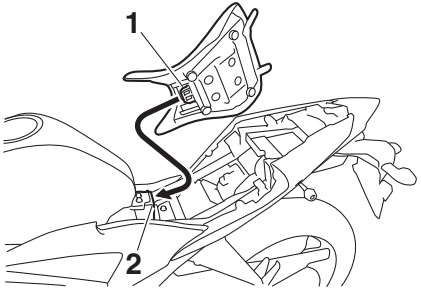
3. Remove the rider seat by removing the bolts.



1. Rider seat
2. Bolt

To install the rider seat

1. Insert the projection on the front of the rider seat into the seat holder as shown, and then place the seat in the original position.



1. Projection
2. Seat holder

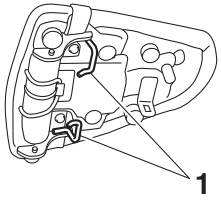
2. Install the rider seat bolts.
3. Install the center cover by installing the screws.
4. Install the passenger seat.

TIP

Make sure that the seats are properly secured before riding.

EAU62930

Helmet holders

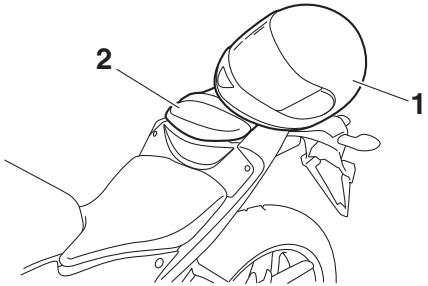


1. Helmet holder

The helmet holders are located on the bottom of the passenger seat.

To secure a helmet to a helmet holder

1. Remove the passenger seat. (See page 4-16.)
2. Attach a helmet to a helmet holder, and then securely install the passenger seat. **WARNING! Never ride with a helmet attached to the helmet holder, since the helmet may hit objects, causing loss of control and possibly an accident.** [EWA10162]



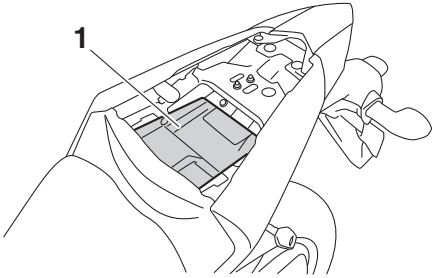
1. Helmet
2. Passenger seat

To release a helmet from a helmet holder

Remove the passenger seat, remove the helmet from the helmet holder, and then install the seat.

EAU62550

Storage compartment



1. Storage compartment

The storage compartment is located under the passenger seat. (See page 4-16.)

When storing documents or other items in the storage compartment, be sure to wrap them in a plastic bag so that they will not get wet. When washing the vehicle, be careful not to let any water enter the storage compartment.

EWA15401

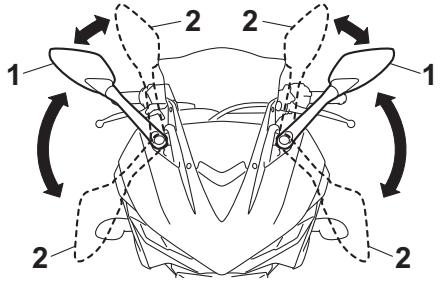
⚠ WARNING

Do not exceed the maximum load of 160 kg (353 lb) for the vehicle.

EAU39672

Rear view mirrors

The rear view mirrors of this vehicle can be folded forward or backward for parking in narrow spaces. Fold the mirrors back to their original position before riding.



1. Riding position
2. Parking position

EWA14372

⚠ WARNING

Be sure to fold the rear view mirrors back to their original position before riding.

EAU62561

Adjusting the shock absorber assembly

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

ECA10102

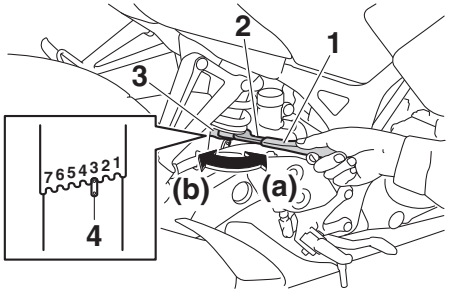
NOTICE

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

Adjust the spring preload as follows.

To increase the spring preload and thereby harden the suspension, turn the adjusting ring in direction (a). To decrease the spring preload and thereby soften the suspension, turn the adjusting ring in direction (b).

- Align the appropriate notch in the adjusting ring with the position indicator on the shock absorber.
- Use the special wrench and the extension bar included in the owner's tool kit to make the adjustment.

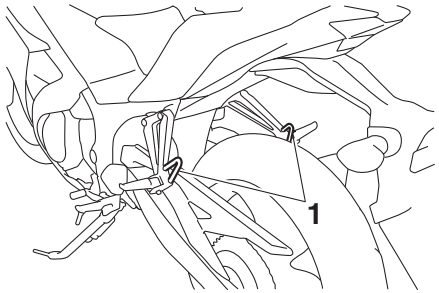


1. Extension bar
2. Special wrench
3. Spring preload adjusting ring
4. Position indicator

Spring preload setting:
Minimum (soft):
1
Standard:
3
Maximum (hard):
7

EAU15152

Luggage strap holders



1. Luggage strap holder

There is a luggage strap holder on each passenger footrest.

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.

EAU44893

Ignition circuit cut-off system

The ignition circuit cut-off system (comprising the sidestand switch, clutch switch and neutral switch) has the following functions.

- It prevents starting when the transmission is in gear and the sidestand is up, but the clutch lever is not pulled.
- It prevents starting when the transmission is in gear and the clutch lever is pulled, but the sidestand is still down.
- It cuts the running engine when the transmission is in gear and the sidestand is moved down.

Periodically check the operation of the ignition circuit cut-off system according to the following procedure.

With the engine turned off:
1. Move the sidestand down.
2. Make sure that the engine stop switch is set to "◯".
3. Turn the key on.
4. Shift the transmission into the neutral position.
5. Push the start switch.

Does the engine start?

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

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

Does the engine stall?

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

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

Does the engine start?

YES **NO** → The clutch switch may not be working correctly. **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 noted, have a Yamaha dealer check the system before riding.

EAU15599

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 hose and overflow hose for obstructions, cracks or damage, and check hose connections.	4-13, 4-15
Engine oil	• Check oil level in engine. • If necessary, add recommended oil to specified level. • Check vehicle for oil leakage.	7-10
Coolant	• Check coolant level in reservoir. • If necessary, add recommended coolant to specified level. • Check cooling system for leakage.	7-13
Front brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear. • Replace if necessary. • Check fluid level in reservoir. • If necessary, add specified brake fluid to specified level. • Check hydraulic system for leakage.	7-21, 7-21

FOR YOUR SAFETY – PRE-OPERATION CHECKS

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.	7-21, 7-21
Clutch	• Check operation. • Lubricate cable if necessary. • Check lever free play. • Adjust if necessary.	7-18
Throttle grip	• Make sure that operation is smooth. • Check throttle grip free play. • If necessary, have Yamaha dealer adjust throttle grip free play and lubricate cable and grip housing.	7-16, 7-26
Control cables	• Make sure that operation is smooth. • Lubricate if necessary.	7-25
Drive chain	• Check chain slack. • Adjust if necessary. • Check chain condition. • Lubricate if necessary.	7-23, 7-25
Wheels and tires	• Check for damage. • Check tire condition and tread depth. • Check air pressure. • Correct if necessary.	7-16, 7-18
Brake and shift pedals	• Make sure that operation is smooth. • Lubricate pedal pivoting points if necessary.	7-26
Brake and clutch levers	• Make sure that operation is smooth. • Lubricate lever pivoting points if necessary.	7-27
Sidestand	• Make sure that operation is smooth. • Lubricate pivot if necessary.	7-27

ITEM	CHECKS	PAGE
Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.	—
Instruments, lights, signals and switches	• Check operation. • Correct if necessary.	—
Sidestand switch	• Check operation of ignition circuit cut-off system. • If system is not working correctly, have Yamaha dealer check vehicle.	4-19

EAU15952

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

EWA10272

⚠ WARNING

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

EAU62513

TIP

This model is equipped with:

- a lean angle sensor to stop the engine in case of a turnover. In this case, the display will indicate error code 30, but this is not a malfunction. Turn the key to "⊠" and then to "○" to clear the error code. 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.

EAUN0680

Starting the engine

In order for the ignition circuit cut-off system to enable starting, one of the following conditions must be met:

- The transmission is in the neutral position.
- The transmission is in gear with the clutch lever pulled and the sidestand up.

See page 4-20 for more information.

1. Turn the key to "○" and make sure that the engine stop switch is set to "○".
   The engine trouble warning light should come on for a few seconds, then go off. ***NOTICE:*** **If the warning light does not go off, have a Yamaha dealer check its electrical circuit.** [ECAT1121]
2. Shift the transmission into the neutral position. The neutral indicator light should come on. If not, ask a Yamaha dealer to check the electrical circuit.
3. Start the engine by pushing the start switch.

If the engine fails to start, release the start switch, wait a few seconds, and then try again. Each starting attempt should be as short as possible to preserve the battery. Do not crank the engine more than 10 seconds on any one attempt.

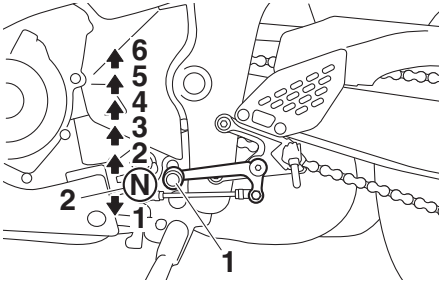
ECA11043

NOTICE

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

EAU16673

Shifting



1. Shift pedal
2. Neutral position

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, press the shift pedal down repeatedly until it reaches the end of its travel, and then slightly raise it.

ECA10261

NOTICE

- **Even with the transmission in the neutral position, do not coast for long periods of time with the engine off, and do not 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.**

EAU16682

To start out and accelerate

1. Pull the clutch lever to disengage the clutch.
2. Shift the transmission into first gear. The neutral indicator light should go out.
3. Open the throttle gradually, and at the same time, release the clutch lever slowly.

4. At the recommended shift points shown in the following table, 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.

TIP

When shifting gears in normal operating conditions, use the recommended shift points.

EAU58270

To decelerate

1. Release the throttle and apply both the front and the rear brakes smoothly to slow the motorcycle.
2. At the recommended shift points shown in the following table, shift to a lower gear.
3. When the motorcycle reaches 25 km/h (16 mi/h), 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. The neutral indicator light should come on 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.**

EAU58280

Recommended shift points

The recommended shift points during acceleration and deceleration are shown in the table below.

Shift up points:
1st → 2nd: 20 km/h (12 mi/h)
2nd → 3rd: 30 km/h (19 mi/h)
3rd → 4th: 40 km/h (25 mi/h)
4th → 5th: 50 km/h (31 mi/h)
5th → 6th: 60 km/h (37 mi/h)

Shift down points:
6th → 5th: 45 km/h (28 mi/h)
5th → 4th: 35 km/h (22 mi/h)
4th → 3rd: 25 km/h (16 mi/h)

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 7000 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 8400 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.**

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.**

EAU17245

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

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

EWA10322

⚠ WARNING

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

EWA15123

⚠ WARNING

Turn off the engine when performing maintenance unless otherwise specified.

- **A running engine has moving parts that can catch on body parts or clothing and electrical parts that can cause shocks or fires.**
- **Running the engine while servicing can lead to eye injury, burns, fire, or carbon monoxide poisoning – possibly leading to death. See page 2-3 for more information about carbon monoxide.**

EWA15461

⚠ WARNING

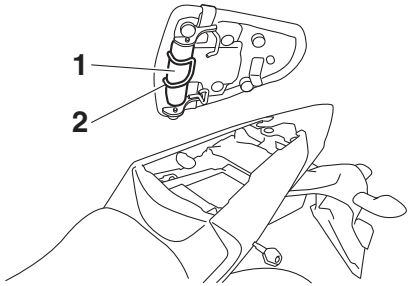
Brake discs, calipers, drums, and linings can become very hot during use. To avoid possible burns, let brake components cool before touching them.

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.

EAUB1402

Owner's tool kit



1. Owner's tool kit
2. O-ring

The owner's tool kit is located on the bottom of the passenger seat (See page 4-16.) and it held in place with an O-ring.
The service information included in this manual and the tools provided in the owner's tool kit are intended to assist you in the performance of preventive maintenance and minor repairs. However, additional tools such as a torque wrench may be necessary to perform certain maintenance work correctly.

TIP

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

PERIODIC MAINTENANCE AND ADJUSTMENT

EAU48481

TIP

- From 31000 km (19000 mi) or 36 months, repeat the maintenance intervals starting from 11000 km (7000 mi) or 12 months.
- Items marked with an asterisk require special tools, data and technical skills, have a Yamaha dealer perform the service.

EAU17592

Periodic maintenance chart for the emission control system

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				1000 km (600 mi) or 1 month	6000 km (4000 mi) or 6 months	11000 km (7000 mi) or 12 months	16000 km (10000 mi) or 18 months	21000 km (13000 mi) or 24 months	26000 km (16000 mi) or 30 months
1	*	**Fuel line**	• Check fuel hoses for cracks or damage. • Replace if necessary.		√	√	√	√	√
2		**Spark plugs**	• Check condition. • Adjust gap and clean. • Replace at 11000 km (7000 mi) or 12 months and thereafter every 10000 km (6000 mi) or 12 months.		√	Replace.	√	Replace.	√
3	*	**Valve clearance**	• Check and adjust valve clearance when engine is cold.	Every 42000 km (26600 mi)					
4	*	**Crankcase breather system**	• Check breather hose for cracks or damage. • Replace if necessary.		√	√	√	√	√
5	*	**Fuel injection**	• Adjust synchronization.		√	√	√	√	√
6	*	**Exhaust system**	• Check for leakage. • Tighten if necessary. • Replace gasket(s) if necessary.		√	√	√	√	√
7	*	**Air induction system**	• Check the air cut-off valve, reed valve, and hose for damage. • Replace any damaged parts.			√		√	

7

EAU32178

General maintenance and lubrication chart

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				1000 km (600 mi) or 1 month	6000 km (4000 mi) or 6 months	11000 km (7000 mi) or 12 months	16000 km (10000 mi) or 18 months	21000 km (13000 mi) or 24 months	26000 km (16000 mi) or 30 months
1		**Air filter element**	• Replace.					√	
2		**Air filter check hose**	• Clean.	√	√	√	√	√	√
3	*	**Clutch**	• Check operation. • Adjust or replace cable.	√	√	√	√	√	√
4	*	**Front brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.	√	√	√	√	√	√
5	*	**Rear brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.	√	√	√	√	√	√
6	*	**Brake hose**	• Check for cracks or damage. • Check for correct routing and clamping.		√	√	√	√	√
			• Replace.	Every 4 years					
7	*	**Brake fluid**	• Replace.	Every 2 years					
8	*	**Wheels**	• Check runout and for damage. • Replace if necessary.		√	√	√	√	√
9	*	**Tires**	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		√	√	√	√	√

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				1000 km (600 mi) or 1 month	6000 km (4000 mi) or 6 months	11000 km (7000 mi) or 12 months	16000 km (10000 mi) or 18 months	21000 km (13000 mi) or 24 months	26000 km (16000 mi) or 30 months
10	*	**Wheel bearings**	• Check bearings for smooth operation. • Replace if necessary.		√	√	√	√	√
11	*	**Swingarm pivot bearings**	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease.			√		Repack.	
12		**Drive chain**	• Check chain slack, alignment and condition. • Adjust and lubricate chain with a special O-ring chain lubricant thoroughly.	Every 800 km (500 mi) and after washing the motorcycle, riding in the rain or riding in wet areas					
13	*	**Steering bearings**	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease.	√	√	√	√	Repack.	√
14	*	**Chassis fasteners**	• Check all chassis fitting and fasteners. • Correct if necessary.		√	√	√	√	√
15		**Brake lever pivot shaft**	• Apply silicone grease lightly.		√	√	√	√	√
16		**Brake pedal pivot shaft**	• Apply lithium-soap-based grease lightly.		√	√	√	√	√
17		**Clutch lever pivot shaft**	• Apply lithium-soap-based grease lightly.		√	√	√	√	√
18		**Shift pedal pivot shaft**	• Apply lithium-soap-based grease lightly.		√	√	√	√	√

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				1000 km (600 mi) or 1 month	6000 km (4000 mi) or 6 months	11000 km (7000 mi) or 12 months	16000 km (10000 mi) or 18 months	21000 km (13000 mi) or 24 months	26000 km (16000 mi) or 30 months
19		**Sidestand pivot**	• Check operation. • Apply lithium-soap-based grease lightly.		√	√	√	√	√
20	*	**Sidestand switch**	• Check operation and replace if necessary.	√	√	√	√	√	√
21	*	**Front fork**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√
22	*	**Shock absorber assembly**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√
23		**Engine oil**	• Change. (See pages 4-4 and 7-10.)	√	When the oil change indicator flashes				
			• Check oil level and vehicle for oil leakage.	√	√	√	√	√	√
24		**Engine oil filter cartridge**	• Replace.	√		√		√	
25	*	**Cooling system**	• Check hoses for cracks or damage. • Replace if necessary.		√	√	√	√	√
			• Change coolant.					√	
26	*	**Front and rear brake switches**	• Check operation.	√	√	√	√	√	√
27	*	**Control cables**	• Apply Yamaha cable lubricant or other suitable cable lubricant thoroughly.	√	√	√	√	√	√

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				1000 km (600 mi) or 1 month	6000 km (4000 mi) or 6 months	11000 km (7000 mi) or 12 months	16000 km (10000 mi) or 18 months	21000 km (13000 mi) or 24 months	26000 km (16000 mi) or 30 months
28	*	**Throttle grip**	• Check operation. • Check throttle grip free play, and adjust if necessary. • Lubricate cable and grip housing.		√	√	√	√	√
29	*	**Lights, signals and switches**	• Check operation. • Adjust headlight beam.	√	√	√	√	√	√

EAU17651

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
  - After disassembling the brake master cylinders and calipers, always change the fluid. Regularly check the brake fluid levels and fill the reservoirs as required.
  - Every two years replace the internal components of the brake master cylinders and calipers, and change the brake fluid.
  - Replace the brake hoses every four years and if cracked or damaged.

EAU19643

Checking the spark plugs

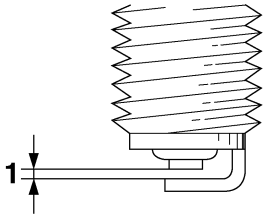
The spark plugs are important engine components, which should be checked periodically, preferably by a Yamaha dealer. Since heat and deposits will cause any spark plug to slowly erode, they should be removed and checked in accordance with the periodic maintenance and lubrication chart. In addition, the 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/CR8E

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:
0.7–0.8 mm (0.028–0.031 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 Nm (1.3 m·kgf, 9.4 ft·lbf)

TIP

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

EAU62632

Engine oil and oil filter cartridge

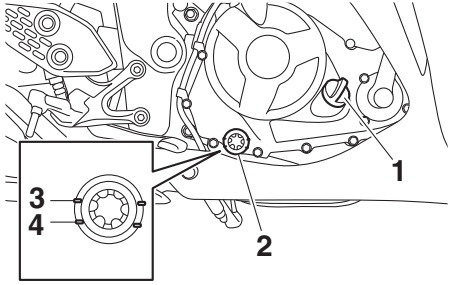
The engine oil level should be checked before each ride. In addition, the oil must be changed and the oil filter cartridge replaced at the intervals specified in the periodic maintenance and lubrication chart.

To check the engine oil level

1. Place the vehicle on a level surface and hold it in an upright position. A slight tilt to the side can result in a false reading.
2. Start the engine, warm it up for several minutes, and then turn it off.
3. Wait a few minutes until the oil settles, and then check the oil level through the engine oil level check window located at the bottom-right side of the crankcase.

TIP

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

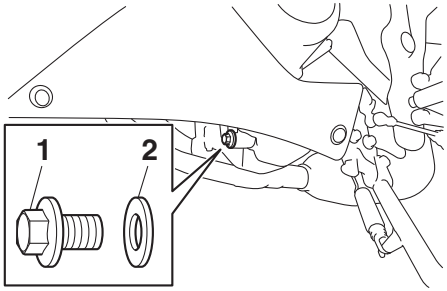


1. Engine oil filler cap
2. Engine oil level check window
3. Maximum level mark
4. Minimum level mark

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

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

1. Place the vehicle on a level surface.
2. Start the engine, warm it up for several minutes, and then turn it off.
3. Place an oil pan under the engine to collect the used oil.
4. Remove the engine oil filler cap, the engine oil drain bolt and its gasket to drain the oil from the crankcase.

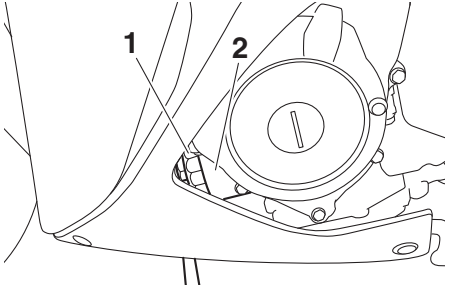


1. Engine oil drain bolt
2. Gasket

TIP

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

5. Remove the oil filter cartridge with an oil filter wrench.

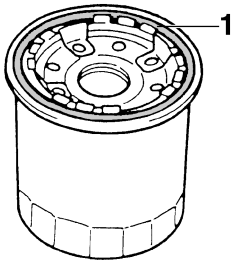


1. Oil filter wrench
2. Oil filter cartridge

TIP

An oil filter wrench is available at a Yamaha dealer.

6. Apply a thin coat of clean engine oil to the O-ring of the new oil filter cartridge.

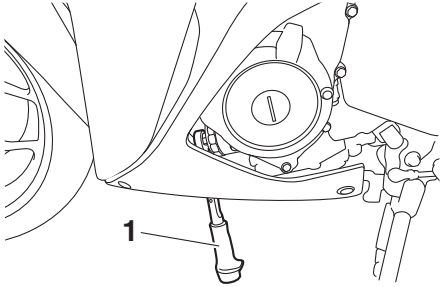


1. O-ring

TIP

Make sure that the O-ring is properly seated.

7. Install the new oil filter cartridge with an oil filter wrench, and then tighten it to the specified torque with a torque wrench.



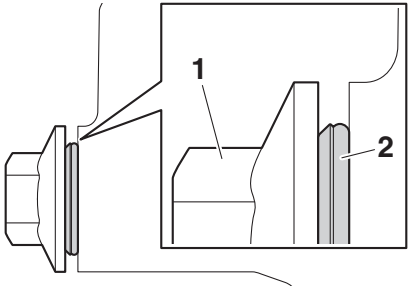
1. Torque wrench

Tightening torque:
Oil filter cartridge:
17 Nm (1.7 m·kgf, 12 ft·lbf)

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

TIP

Install the new gasket as shown.



1. Engine oil drain bolt
2. Gasket

Tightening torque:
Engine oil drain bolt:
20 Nm (2.0 m·kgf, 14 ft·lbf)

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

Recommended engine oil:
See page 9-1.
Oil quantity:
Without oil filter cartridge replacement:
1.80 L (1.90 US qt, 1.58 Imp.qt)
With oil filter cartridge replacement:
2.10 L (2.22 US qt, 1.85 Imp.qt)

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

ECA11621

NOTICE

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

10. Start the engine, and then let it idle for several minutes while checking it for oil leakage. If oil is leaking, immediately turn the engine off and check for the cause.

TIP
After the engine is started, the engine oil pressure warning light should go off.

ECA20860

NOTICE

If the oil pressure warning light flickers or remains on even if the oil level is correct, immediately turn the engine off and have a Yamaha dealer check the vehicle.

11. Turn the engine off, wait a few minutes until the oil settles, and then check the oil level and correct it if necessary.

EAU20071

Coolant

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

EAUN0690

To check the coolant level

1. Place the vehicle on a level surface and hold it in an upright position.

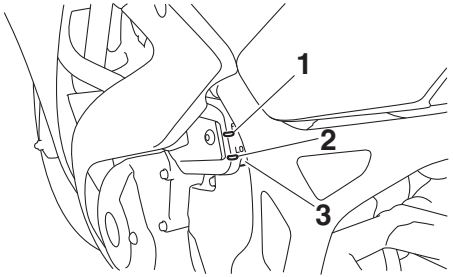
TIP

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

2. Check the coolant level in the coolant reservoir.

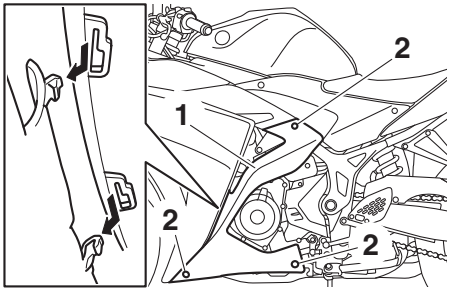
TIP

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

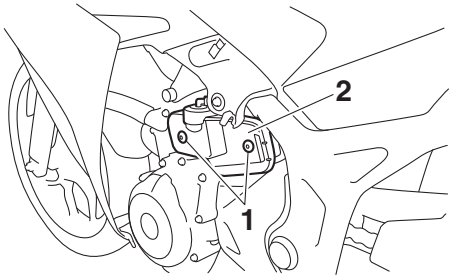


1. Maximum level mark
2. Minimum level mark
3. Coolant reservoir

3. If the coolant is at or below the minimum level mark, remove the left side cowling and coolant reservoir cover to access the coolant reservoir.



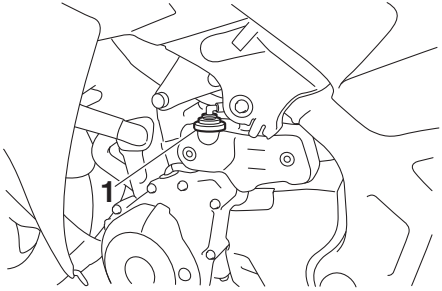
1. Left side cowling
2. Bolt



1. Bolt
2. Coolant reservoir cover

4. Remove the coolant reservoir cap, add coolant to the maximum level mark, and then install the reservoir cap. **WARNING! Remove only the coolant reservoir cap. Never attempt to remove the radiator cap when the engine is hot.** [EWA15162] ***NOTICE:*** **If coolant is not available, use distilled water or soft tap water instead. Do not use hard water or salt water since it is harmful to the engine. If water has been used instead of coolant, replace it with coolant as soon as possible, otherwise the cooling system will not be protected against frost and**

corrosion. If water has been added to the coolant, have a Yamaha dealer check the antifreeze content of the coolant as soon as possible, otherwise the effectiveness of the coolant will be reduced. [ECA10473]



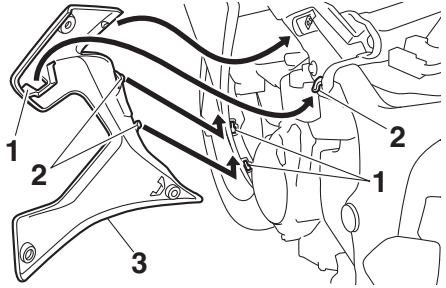
1. Coolant reservoir cap

Coolant reservoir capacity (up to the maximum level mark):
0.25 L (0.26 US qt, 0.22 Imp.qt)

5. Install the coolant reservoir cover.
6. Install the left side cowling by installing the bolts.

TIP

Fit the projections on the cowling into the slots as shown.



1. Slot
2. Projection
3. Left side cowling

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]

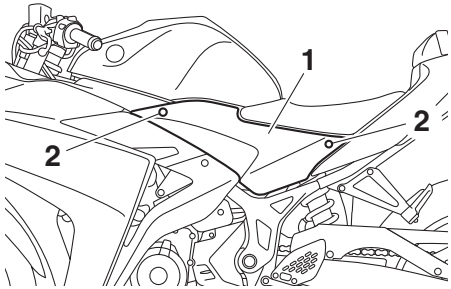
EAU62650

Replacing the air filter element and cleaning the check hose

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

To replace the air filter element

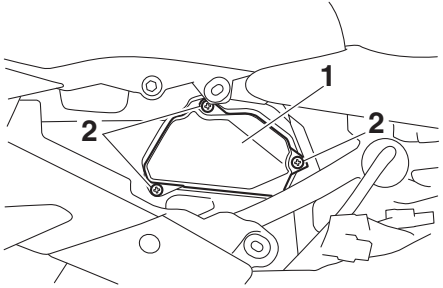
1. Remove the left side panel by removing the bolts.



1. Left side panel
2. Bolt

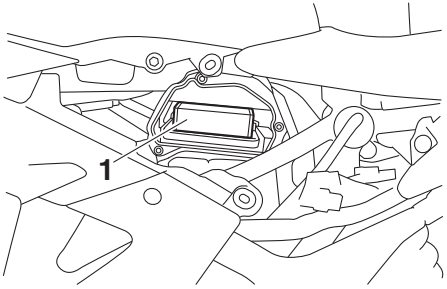
7

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



1. Air filter case cover
2. Screw

3. Pull the air filter element out.



1. Air filter element

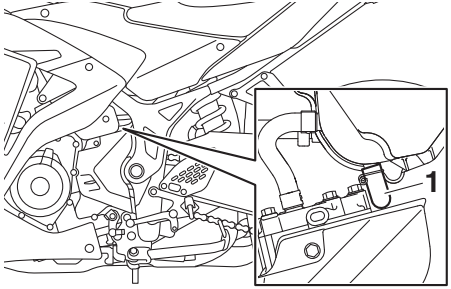
4. Insert a new air filter element into the air filter case. ***NOTICE:*** **Make sure that the air filter element is properly seated in the air filter case. The engine should never be operated without the air filter element installed, otherwise the piston(s) and/or cylinder(s) may become excessively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

[ECA10482]

5. Install the air filter case cover by installing the screws.
6. Install the left side panel by installing the bolts.

To clean the air filter check hose

1. Check the hose on the front of the air filter case for accumulated dirt or water.

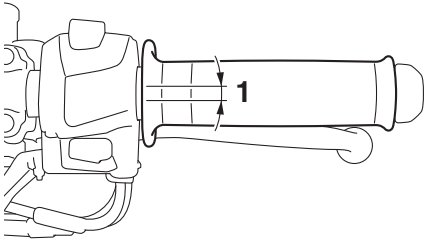


1. Air filter check hose

2. If dirt or water is visible, remove the hose, clean it, and then install it.

EAU21385

Checking the throttle grip free play



1. Throttle grip free play

The throttle grip free play should measure 3.0–5.0 mm (0.12–0.20 in) at the inner edge of the throttle grip. Periodically check the throttle grip free play and, if necessary, have a Yamaha dealer adjust it.

EAU21402

Valve clearance

The valve clearance changes with use, resulting in improper air-fuel mixture and/or engine noise. To prevent this from occurring, the valve clearance must be adjusted by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

EAU62030

Tires

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

Tire air pressure

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

EWA10504

⚠ WARNING

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

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

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

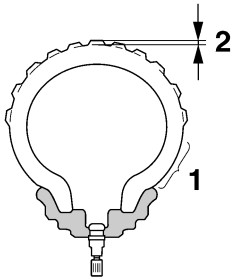
Tire air pressure (measured on cold tires):
Up to 90 kg (198 lb) load:
Front:
200 kPa (2.00 kgf/cm², 29 psi)
Rear:
250 kPa (2.50 kgf/cm², 36 psi)
90 kg (198 lb) to maximum load:
Front:
200 kPa (2.00 kgf/cm², 29 psi)
Rear:
250 kPa (2.50 kgf/cm², 36 psi)
Maximum load*:
160 kg (353 lb)
* Total weight of rider, passenger, cargo and accessories

EWA10512

⚠ WARNING

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

Tire inspection



1. Tire sidewall
2. Tire tread depth

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

Minimum tire tread depth (front and rear):
1.0 mm (0.04 in)

TIP

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

EWA10472

⚠ WARNING

- **Have a Yamaha dealer replace excessively worn tires. Besides being illegal, operating the vehicle with excessively worn tires decreases riding stability and can lead to loss of control.**
- **The replacement of all wheel and brake-related parts, including the tires, should be left to a Yamaha dealer, who has the necessary professional knowledge and experience to do so.**
- **Ride at moderate speeds after changing a tire since the tire surface must first be "broken in" for it to develop its optimal characteristics.**

Tire information

This model is equipped with tubeless tires and tire air valves.
Tires age, even if they have not been used or have only been used occasionally. Cracking of the tread and sidewall rubber, sometimes accompanied by carcass deformation, is an evidence of

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

EWA10462

⚠ WARNING

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

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

Front tire:
Size:
110/70-17M/C (54H)
Manufacturer/model:
MICHELIN/PILOT STREET
Rear tire:
Size:
140/70-17M/C (66H)
Manufacturer/model:
MICHELIN/PILOT STREET

EAU21963

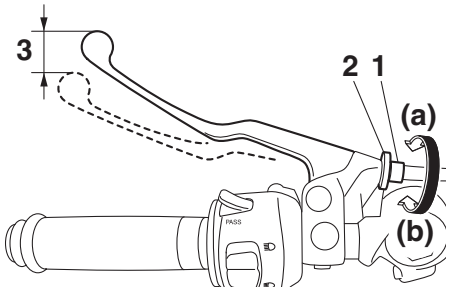
Cast wheels

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

- The wheel rims should be checked for cracks, bends, warpage or other damage before each ride. If any damage is found, have a Yamaha dealer replace the wheel. Do not attempt even the smallest repair to the wheel. A deformed or cracked wheel must be replaced.
- The wheel should be balanced whenever either the tire or wheel has been changed or replaced. An unbalanced wheel can result in poor performance, adverse handling characteristics, and a shortened tire life.

EAU62662

Adjusting the clutch lever free play



1. Clutch lever free play adjusting bolt
2. Locknut
3. Clutch lever free play

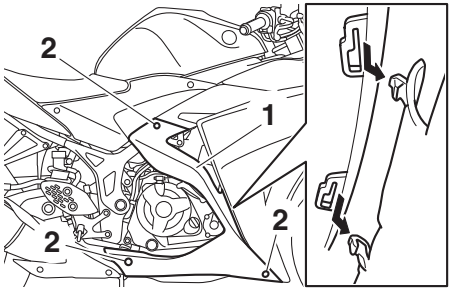
The clutch lever free play should measure 10.0–15.0 mm (0.39–0.59 in) as shown. Periodically check the clutch lever free play and, if necessary, adjust it as follows.

1. Loosen the locknut at the clutch lever.
2. To increase the clutch lever free play, turn the clutch lever free play adjusting bolt in direction (a). To decrease the clutch lever free play, turn the adjusting bolt in direction (b).

TIP

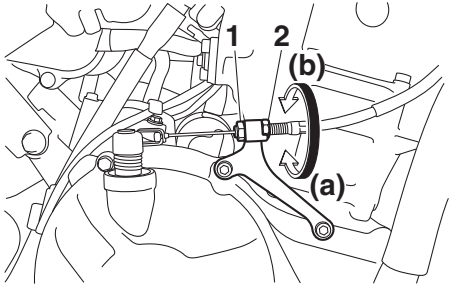
If the specified clutch lever free play could be obtained as described above, skip steps 3–8.

3. Fully turn the adjusting bolt at the clutch lever in direction (a) to loosen the clutch cable.
4. Remove the right side cowling by removing the bolts.



1. Right side cowling
2. Bolt

5. Loosen the locknut at the crankcase.
6. 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).

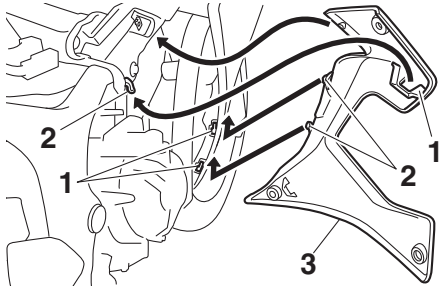


1. Locknut
2. Clutch lever free play adjusting nut

7. Tighten the locknut at the crankcase.
8. Install the right side cowling by installing the bolts.

TIP

Fit the projections on the cowling into the slots as shown.

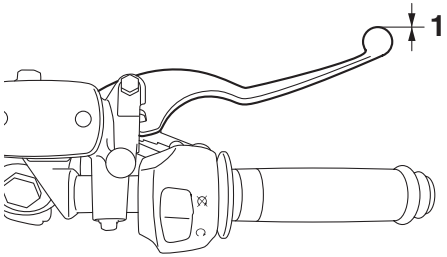


1. Slot
2. Projection
3. Right side cowling

9. Tighten the locknut at the clutch lever.

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.

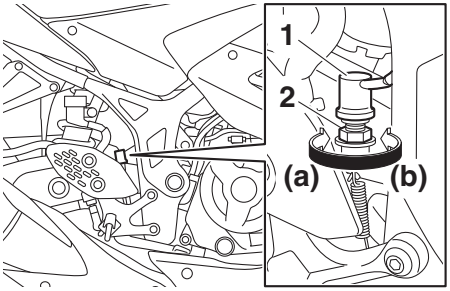
EWA14212

⚠ 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.

EAU22274

Brake light switches



1. Rear brake light switch
2. Rear brake light switch adjusting nut

The brake light, which is activated by the brake pedal and brake lever, should come on just before braking takes effect. If necessary, adjust the rear brake light switch as follows, but the front brake light switch should be adjusted by a Yamaha dealer.

Turn the rear brake light switch adjusting nut while holding the rear brake light switch in place. To make the brake light come on earlier, turn the adjusting nut in direction (a). To make the brake light come on later, turn the adjusting nut in direction (b).

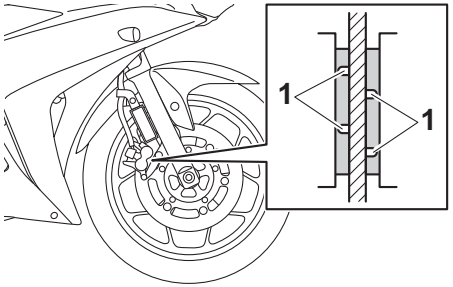
EAU22393

Checking the front and rear brake pads

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

EAU22432

Front brake pads

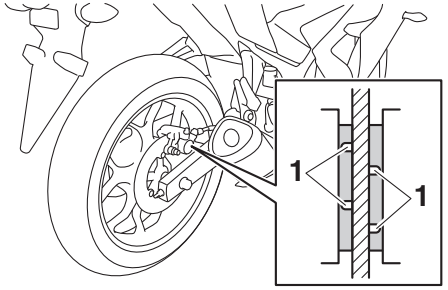


1. Brake pad wear indicator groove

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

EAU36721

Rear brake pads



1. Brake pad wear indicator groove

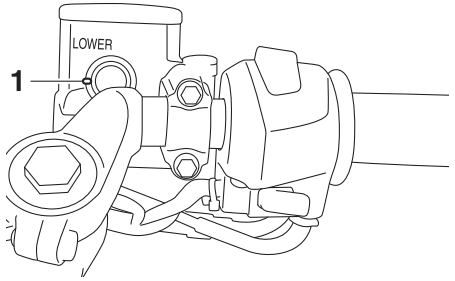
Each rear brake pad is provided with wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that the wear indicator grooves have almost disappeared,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

EAU22582

Checking the brake fluid level

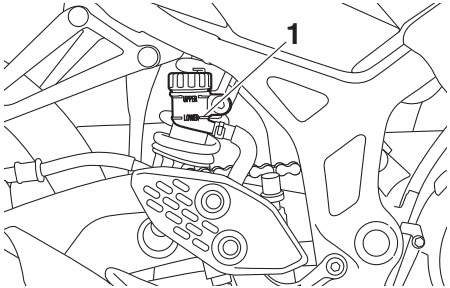
Before riding, check that the brake fluid is above the minimum level mark. Check the brake fluid level with the top of the reservoir level. Replenish the brake fluid if necessary.

Front brake



1. Minimum level mark

Rear brake



1. Minimum level mark

Specified brake fluid:
DOT 4

EWA15991

⚠ WARNING

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

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

ECA17641

NOTICE

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

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

EAU22733

Changing the brake fluid

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

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

EAU22762

Drive chain slack

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

EAU22776

To check the drive chain slack

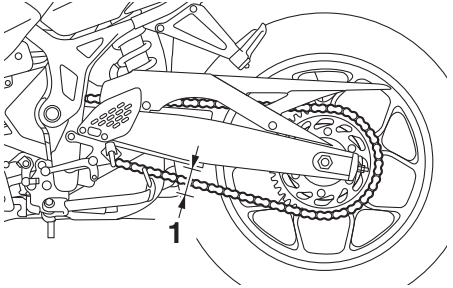
1. Place the motorcycle on the sidestand.

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. Measure the drive chain slack as shown.

Drive chain slack:
35.0–45.0 mm (1.38–1.77 in)



1. Drive chain slack

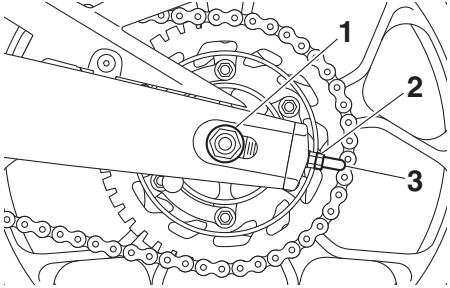
4. If the drive chain slack is incorrect, adjust it as follows.

EAU62980

To adjust the drive chain slack

Consult a Yamaha dealer before adjusting the drive chain slack.

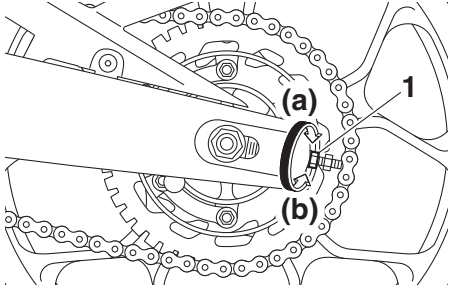
1. Remove the drive chain puller cap, and then loosen the axle nut and the locknut on each side of the swingarm.



1. Axle nut
2. Locknut
3. Drive chain puller cap

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. ***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. To prevent this from occurring, keep the drive chain slack within the specified limits.**

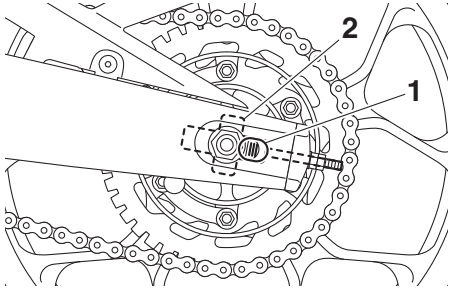
[ECA10572]



1. Drive chain slack adjusting nut

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. Alignment marks
2. Drive chain puller

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

Tightening torques:
Axle nut:
57 Nm (5.7 m·kgf, 41 ft·lbf)
Locknut:
16 Nm (1.6 m·kgf, 12 ft·lbf)

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.
5. Install the drive chain puller caps.

EAU23026

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 kerosene 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

EAU49921

Checking and lubricating the throttle grip and cable

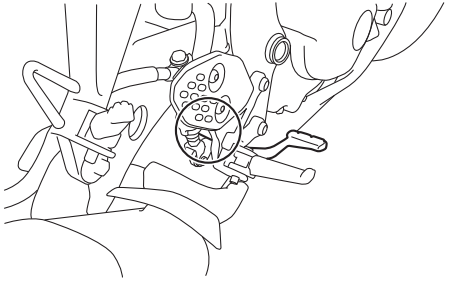
The operation of the throttle grip should be checked before each ride. In addition, the cable should be lubricated by a Yamaha dealer at the intervals specified in the periodic maintenance chart.

EAU44275

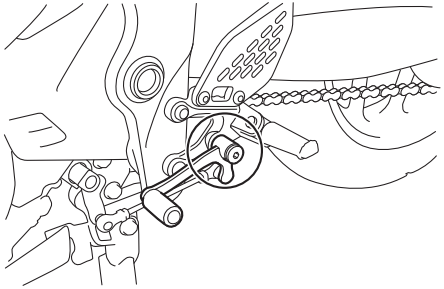
Checking and lubricating the brake and shift pedals

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



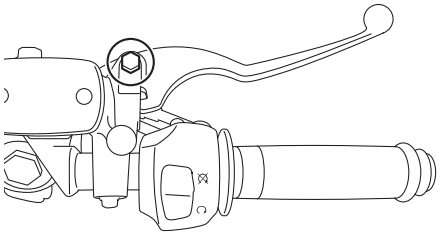
Recommended lubricant:
Lithium-soap-based grease

EAU23144

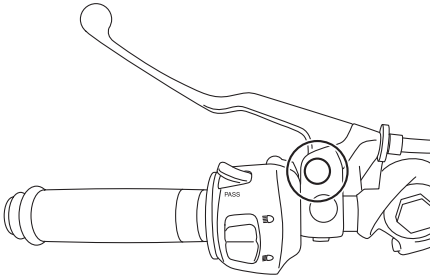
Checking and lubricating the brake and clutch levers

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



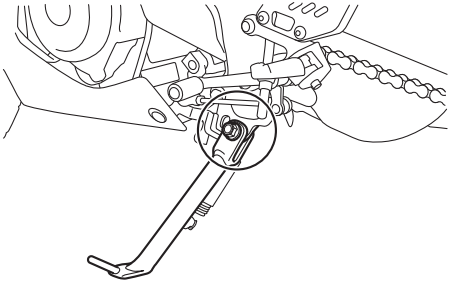
Clutch lever



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

EAU23203

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

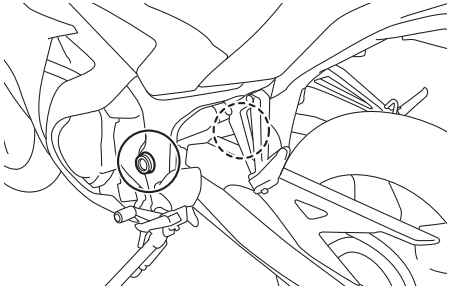
⚠ WARNING

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:
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

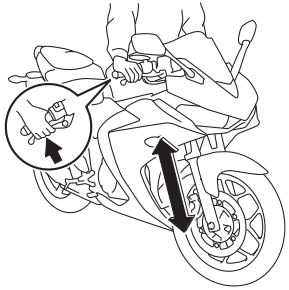
The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

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.

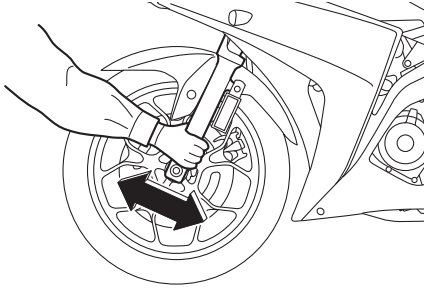
7

EAU23285

Checking the steering

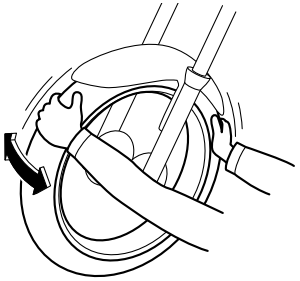
Worn or loose steering bearings may cause danger. Therefore, the operation of the steering must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

1. Raise the front wheel off the ground. (See page 7-36.) **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

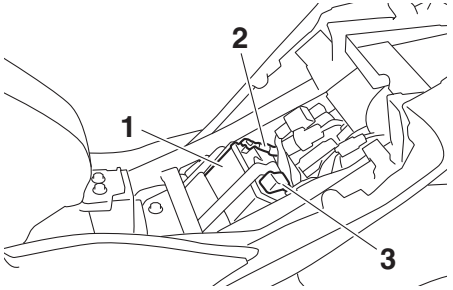
Checking the wheel bearings



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.

EAU62521

Battery



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

The battery is located under the rider seat. (See page 4-16.)
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**

7

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.**

ECA10621

NOTICE

Never attempt to remove the battery cell seals, as this would permanently damage the battery.

To charge the battery

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

ECA16522

NOTICE

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

To store the battery

1. If the vehicle will not be used for more than one month, remove the battery, fully charge it, and then place it in a cool, dry place. ***NOTICE:*** **When removing the battery, be sure the key is turned to "⊠", then disconnect the negative lead before disconnecting the positive lead.** [ECA17712]
2. If the battery will be stored for more than two months, check it at least once a month and fully charge it if necessary.
3. Fully charge the battery before installation. ***NOTICE:*** **When installing the battery, be sure the key is turned to "⊠", then connect the positive lead before connecting the negative lead.** [ECA17722]
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.

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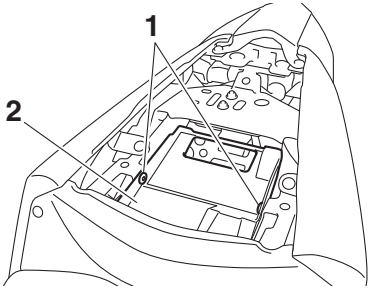
EAU62772

Replacing the fuses

The main fuse is located under the passenger seat. The fuse box, which contains the fuses for the individual circuits, is located behind the center panel. (See page 4-16.)

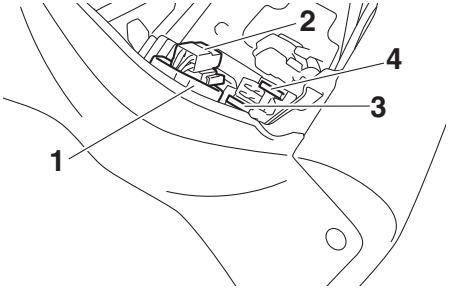
To access the main fuse, proceed as follows.

1. Remove the passenger seat. (See page 4-16.)
2. Remove the tray by removing the quick fasteners.



1. Quick fastener
2. Tray

3. Pull back the starter relay cover, and then disconnect the starter relay coupler as shown.

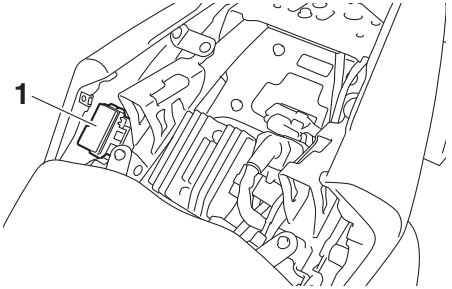


1. Starter relay cover
2. Starter relay coupler
3. Main fuse
4. Spare main fuse

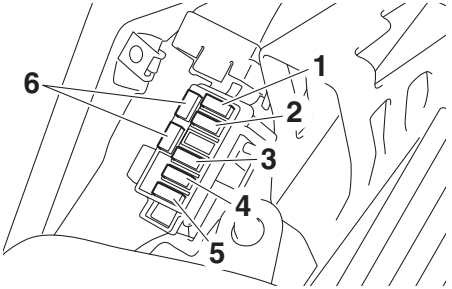
4. Connect the starter relay coupler, and then slide the cover to its original position.
5. Place the tray in its original position, and then install the quick fasteners.
6. Install the passenger seat.

TIP

To access the fuse box, remove the center cover.(See page 4-16.)



1. Fuse box



1. Ignition fuse
2. Signaling system fuse
3. Backup fuse (for clock)
4. Headlight fuse
5. Radiator fan motor fuse
6. Spare fuse

If a fuse is blown, replace it as follows.

1. Turn the key to "⊠" and turn off the electrical circuit in question.
2. Remove the blown fuse, and then install a new fuse of the specified amperage. **WARNING! Do not use a fuse of a higher amperage rating than recommended to avoid causing extensive damage to the electrical system and possibly a fire.** [EWA15132]

Specified fuses:
Main fuse:
30.0 A
Headlight fuse:
15.0 A
Signaling system fuse:
15.0 A
Ignition fuse:
15.0 A
Radiator fan motor fuse:
7.5 A
Backup fuse:
7.5 A

3. Turn the key to "◯" 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.

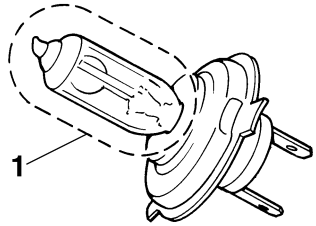
EAU39014
Replacing a headlight bulb

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

ECA10651
NOTICE

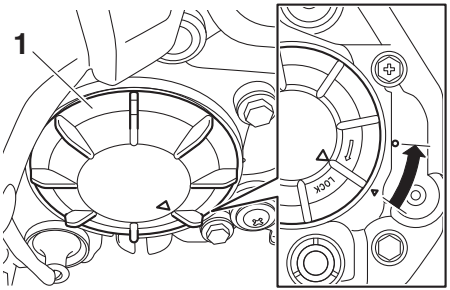
Take care not to damage the following parts:

- **Headlight bulb**
  Do not touch the glass part of the headlight bulb to keep it free from oil, otherwise the transparency of the glass, the luminosity of the bulb, and the bulb life will be adversely affected. Thoroughly clean off any dirt and fingerprints on the headlight bulb using a cloth moistened with alcohol or thinner.
- **Headlight lens**
  Do not affix any type of tinted film or stickers to the headlight lens.
  Do not use a headlight bulb of a wattage higher than specified.



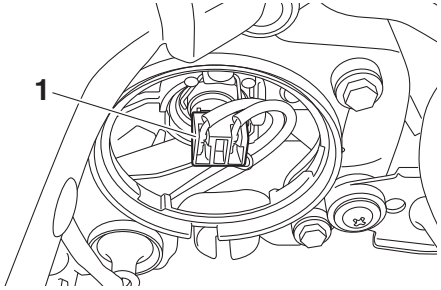
1. Do not touch the glass part of the bulb.

1. Remove the headlight bulb cover by turning it counterclockwise.



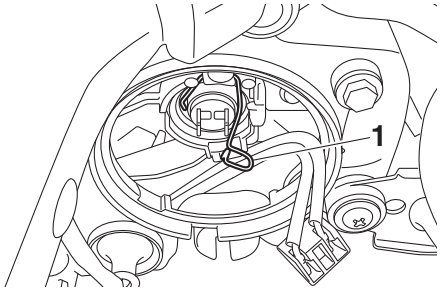
1. Headlight bulb cover

2. Disconnect the headlight coupler.



1. Headlight coupler

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

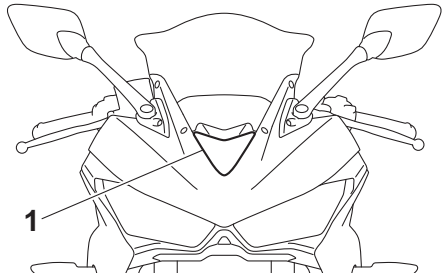


1. Headlight bulb holder

4. Place a new headlight bulb into position, and then secure it with the bulb holder.
5. Connect the headlight coupler.
6. Install the headlight bulb cover by turning it clockwise.
7. Have a Yamaha dealer adjust the headlight beam if necessary.

EAU39021

Auxiliary light bulb



1. Auxiliary light

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

EAU24182

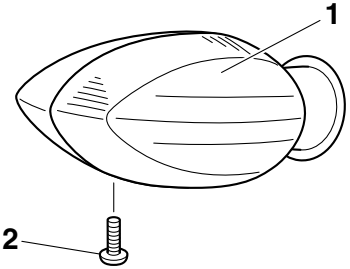
Tail/brake light

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

EAU62590

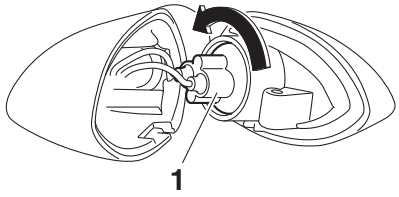
Replacing a turn signal light bulb

1. Remove the turn signal light lens by removing the screw.



1. Turn signal light lens
2. Screw

2. Remove the turn signal light bulb socket (together with the bulb) by turning it counterclockwise.



1. Turn signal light bulb socket

3. Remove the burnt-out bulb by pulling it out.
4. Insert a new bulb into the socket.
5. Install the socket (together with the bulb) by turning it clockwise.
6. Install the turn signal light lens by installing the screw. ***NOTICE:*** **Do not overtighten the screw, otherwise the lens may break.**

[ECA11192]

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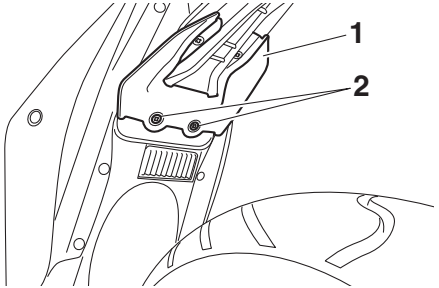
EAU62670

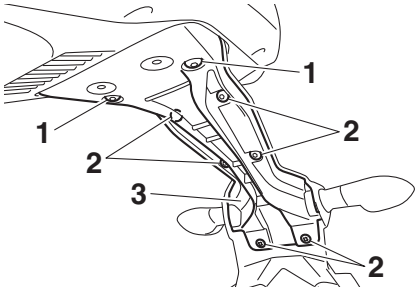
Replacing the license plate light bulb

1. Remove the mudguard by removing the quick fasteners.



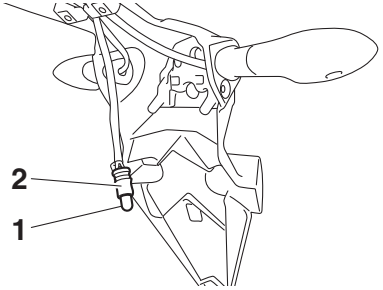
1. Mudguard
2. Quick fastener

2. Remove the rear fender lower panel by removing the bolts and screws.



1. Bolt
2. Screw
3. Rear fender lower panel

3. Remove the license plate light bulb socket (together with the bulb) by pulling it out.
4. Remove the burnt-out bulb by pulling it out.



1. License plate light bulb
2. License plate light bulb socket

5. Insert a new bulb into the socket.
6. Install the socket (together with the bulb) by pushing it in.
7. Install the rear fender lower panel by installing the bolts and screws.
8. Install the mudguard by installing the quick fasteners.

EAU24351

Supporting the motorcycle

Since this model is not equipped with a centerstand, follow these precautions when removing the front and rear wheel or performing other maintenance requiring the motorcycle to stand upright. Check that the motorcycle is in a stable and level position before starting any maintenance. A strong wooden box can be placed under the engine for added stability.

To service the front wheel

1. Stabilize the rear of the motorcycle by using a motorcycle stand or, if an additional motorcycle stand is not available, by placing a jack under the frame in front of the rear wheel.
2. Raise the front wheel off the ground by using a motorcycle stand.

To service the rear wheel

Raise the rear wheel off the ground by using a motorcycle stand or, if a motorcycle stand is not available, by placing a jack either under each side of the frame in front of the rear wheel or under each side of the swingarm.

EAU24361

Front wheel

EAUN0670

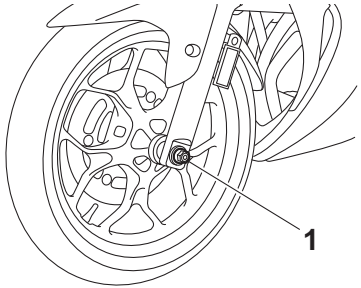
To remove the front wheel

EWA10822

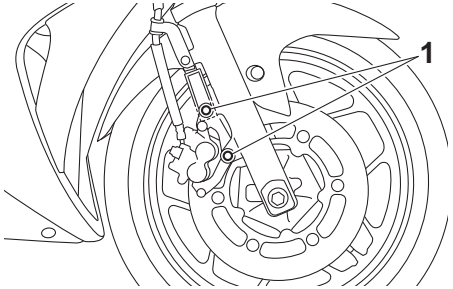
⚠ WARNING

To avoid injury, securely support the vehicle so there is no danger of it falling over.

1. Loosen the axle nut and the brake caliper bolts.



1. Axle nut



1. Brake caliper bolt

2. Lift the front wheel off the ground according to the procedure in the previous section "Supporting the motorcycle".
3. Remove the brake caliper (together with the reflector on each side) by removing the bolts. ***NOTICE:*** **Do not apply the brake after the brake caliper has been removed, otherwise the brake pads will be forced shut.** [ECA22240]
4. Remove the axle nut.
5. Pull the wheel axle out, and then remove the wheel.

To install the front wheel

1. Lift the wheel up between the fork legs.
2. Insert the wheel axle from the right side and then install the axle nut.
3. Install the brake caliper (together with the reflectors on each side) by installing the bolts.

TIP

Make sure that there is enough space between the brake pads before installing the brake caliper onto the brake disc.

4. Lower the front wheel so that it is on the ground, and then put the sidestand down.
5. Tighten the wheel axle and the brake caliper bolts to the specified torques.

Tightening torques:
Wheel axle:
60 Nm (6.0 m·kgf, 44 ft·lbf)
Brake caliper bolt:
35 Nm (3.5 m·kgf, 25 ft·lbf)

6. Push down hard on the handlebar several times to check for proper fork operation.

Rear wheel

EAU25081

EAU62611

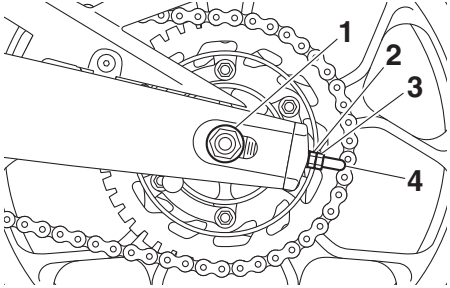
To remove the rear wheel

EWA10822

⚠ WARNING

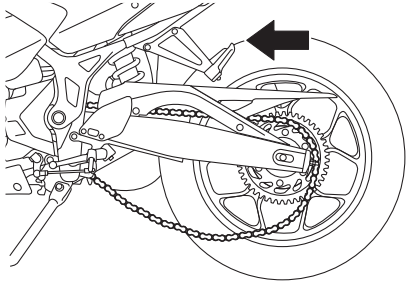
To avoid injury, securely support the vehicle so there is no danger of it falling over.

1. Remove the drive chain puller cap, and then loosen the locknut and drive chain slack adjusting nut on each side of the swingarm.
2. Loosen the axle nut.



1. Axle nut
2. Drive chain slack adjusting nut
3. Locknut
4. Drive chain puller cap

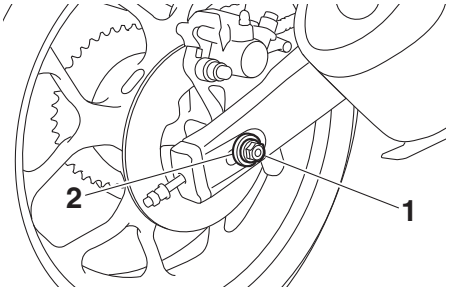
3. Lift the rear wheel off the ground according to the procedure on page 7-36.
4. Remove the axle nut.
5. Push the wheel forward, and then remove the drive chain from the rear sprocket.



TIP

The drive chain does not need to be disassembled in order to remove and install the rear wheel.

6. While supporting the brake caliper and slightly lifting the wheel, pull the wheel axle out.



1. Wheel axle
2. Washer

TIP

A rubber mallet may be useful to tap the wheel axle out.

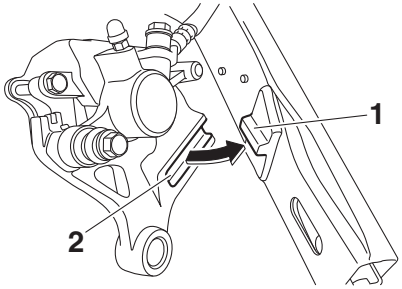
7. Remove the wheel. ***NOTICE:*** **Do not apply the brake after the wheel and brake disc have been removed, otherwise the brake pads will be forced shut.** [ECA11073]

To install the rear wheel

1. Install the wheel and the brake caliper bracket by inserting the wheel axle from the right-hand side.

TIP

- Make sure that the slot in the brake caliper bracket is fit over the retainer on the swingarm.
- Make sure that there is enough space between the brake pads before installing the wheel.



1. Retainer
2. Slot

2. Install the drive chain onto the rear sprocket.
3. Install the axle nut.
4. Lower the rear wheel so that it is on the ground, and then put the sidestand down.
5. Adjust the drive chain slack. (See page 7-23.)
6. Tighten the axle nut, and then tighten the locknuts to the specified torques.

Tightening torques:
Axle nut:
57 Nm (5.7 m·kgf, 41 ft·lbf)
Locknut:
16 Nm (1.6 m·kgf, 12 ft·lbf)

7. Install the drive chain puller caps.

EAU25872

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

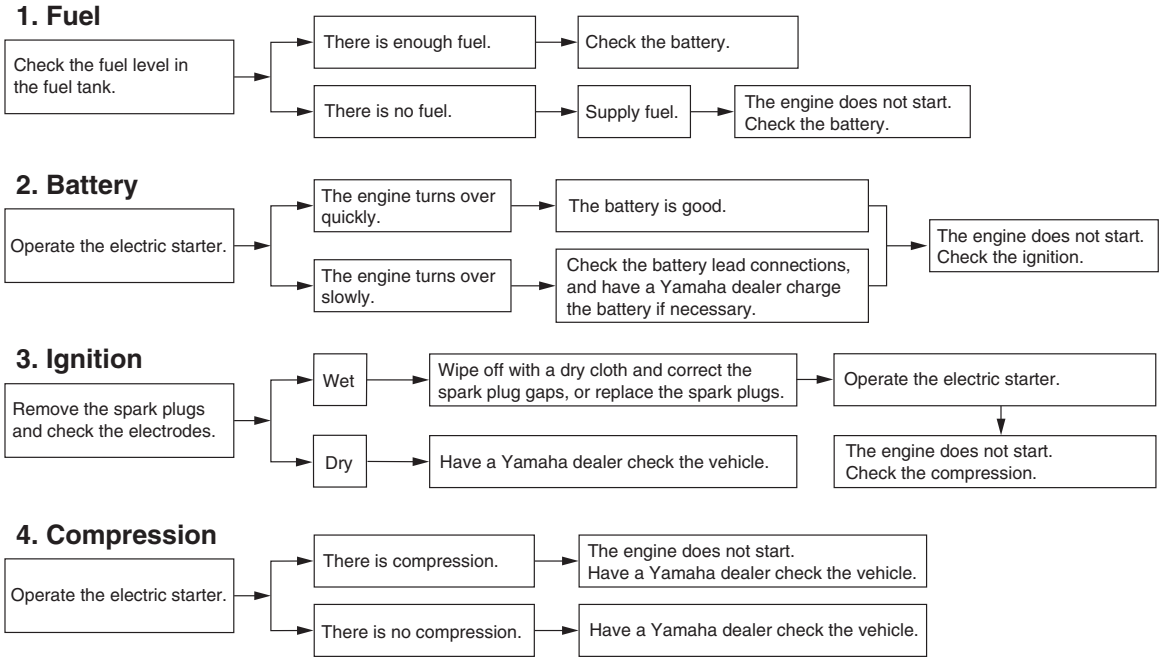
When checking the fuel system, do not smoke, and make sure there are no open flames or sparks in the area, including pilot lights from water

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

EAU42505

Troubleshooting charts

Starting problems or poor engine performance



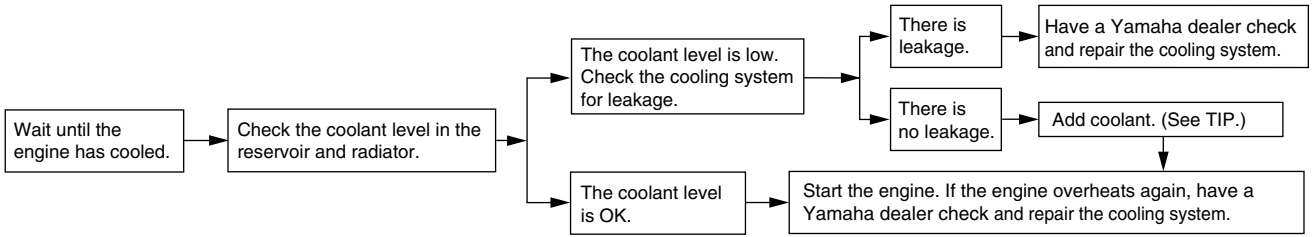
7

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.

EAU54661

Care

While the open design of a motorcycle reveals the attractiveness of the technology, it also makes it more vulnerable. Rust and corrosion can develop even if high-quality components are used. A rusty exhaust pipe may go unnoticed on a car, however, it detracts from the overall appearance of a motorcycle. Frequent and proper care does not only comply with the terms of the warranty, but it will also keep your motorcycle looking good, extend its life and optimize its performance.

Before cleaning

1. Cover the muffler outlet with a plastic bag after the engine has cooled down.
2. Make sure that all caps and covers as well as all electrical couplers and connectors, including the spark plug caps, are tightly installed.
3. Remove extremely stubborn dirt, like oil burnt onto the crankcase, with a degreasing agent and a brush, but never apply such products onto seals, gaskets, sprockets, the drive chain and wheel axles. Always rinse the dirt and degreaser off with water.

Cleaning

ECA10773

NOTICE

- **Avoid using strong acidic wheel cleaners, especially on spoked wheels. If such products are used on hard-to-remove dirt, do not leave the cleaner on the affected area any longer than instructed. Also, thoroughly rinse the area off with water, immediately dry it, and then apply a corrosion protection spray.**
- **Improper cleaning can damage plastic parts (such as cowlings, panels, windshields, headlight lenses, meter lenses, etc.) and the mufflers. Use only a soft, clean cloth or sponge with water to clean plastic. However, if the plastic parts cannot be thoroughly cleaned with water, diluted mild detergent with water may be used. Be sure to rinse**

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

- **Do not use any harsh chemical products on plastic parts. Be sure to avoid using cloths or sponges which have been in contact with strong or abrasive cleaning products, solvent or thinner, fuel (gasoline), rust removers or inhibitors, brake fluid, antifreeze or electrolyte.**
- **Do not use high-pressure washers or steam-jet cleaners since they cause water seepage and deterioration in the following areas: seals (of wheel and swingarm bearings, fork and brakes), electric components (couplers, connectors, instruments, switches and lights), breather hoses and vents.**
- **For motorcycles equipped with a windshield: Do not use strong cleaners or hard sponges as they will cause dulling or scratching. Some cleaning compounds for plastic may leave scratches on the windshield. Test the product on a small hidden part of the windshield to make sure that it does not leave any marks. If the windshield is scratched, use a quality plastic polishing compound after washing.**

After normal use

Remove dirt with warm water, a mild detergent, and a soft, clean sponge, and then rinse thoroughly with clean water. Use a toothbrush or bottlebrush for hard-to-reach areas. Stubborn dirt and insects will come off more easily if the area is covered with a wet cloth for a few minutes before cleaning.

After riding in the rain, near the sea or on salt-sprayed roads

Since sea salt or salt sprayed on roads during winter are extremely corrosive in combination with water, carry out the following steps after each ride in the rain, near the sea or on salt-sprayed roads.

TIP

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

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

Cleaning the windshield

Avoid using any alkaline or strong acid cleaner, gasoline, brake fluid, or any other solvent. Clean the windshield with a cloth or sponge dampened with a mild detergent, and then wash it off thoroughly with water. For additional cleaning, use Yamaha Windshield Cleaner or another high-quality windshield cleaner. Some cleaning compounds for plastics may leave scratches on the windshield. Before using such cleaners, test an area of the

windshield which does not affect your visibility and which cannot be easily recognized.

After cleaning

1. Dry the motorcycle with a chamois or an absorbing cloth.
2. Immediately dry the drive chain and lubricate it to prevent it from rusting.
3. Use a chrome polish to shine chrome, aluminum and stainless-steel parts, including the exhaust system. (Even the thermally induced discoloring of stainless-steel exhaust systems can be removed through polishing.)
4. To prevent corrosion, it is recommended to apply a corrosion protection spray on all metal, including chrome- and nickel-plated, surfaces.
5. Use spray oil as a universal cleaner to remove any remaining dirt.
6. Touch up minor paint damage caused by stones, etc.
7. Wax all painted surfaces.
8. Let the motorcycle dry completely before storing or covering it.

EWA11132

⚠ WARNING

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

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

ECA10801

NOTICE

- **Apply spray oil and wax sparingly and make sure to wipe off any excess.**
- **Never apply oil or wax to any rubber and plastic parts, but treat them with a suitable care product.**
- **Avoid using abrasive polishing compounds as they will wear away the paint.**

TIP

- Consult a Yamaha dealer for advice on what products to use.
- Washing, rainy weather or humid climates can cause the headlight lens to fog. Turning the headlight on for a short period of time will help remove the moisture from the lens.

EAU26183

Storage

Short-term

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

ECA10811

NOTICE

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

Long-term

Before storing your motorcycle for several months:

1. Follow all the instructions in the "Care" section of this chapter.
2. Fill up the fuel tank and add fuel stabilizer (if available) to prevent the fuel tank from rusting and the fuel from deteriorating.
3. Perform the following steps to protect the cylinders, piston rings, etc. from corrosion.
   a. Remove the spark plug caps and spark plugs.
   b. Pour a teaspoonful of engine oil into each spark plug bore.
   c. Install the spark plug caps onto the spark plugs, and then place the spark plugs 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 walls 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 caps from the spark plugs, and then install the spark plugs and the spark plug caps.
4. Lubricate all control cables and the pivoting points of all levers and pedals as well as of the sidestand/centerstand.
5. Check and, if necessary, correct the tire air pressure, and then lift the motorcycle so that both of its wheels are off the ground. Alternatively, turn the wheels a little every month in order to prevent the tires from becoming degraded in one spot.
6. Cover the muffler outlet with a plastic bag to prevent moisture from entering it.
7. Remove the battery and fully charge it. Store it in a cool, dry place and charge it once a month. Do not store the battery in an excessively cold or warm place [less than 0 °C (30 °F) or more than 30 °C (90 °F)]. For more information on storing the battery, see page 7-29.

TIP

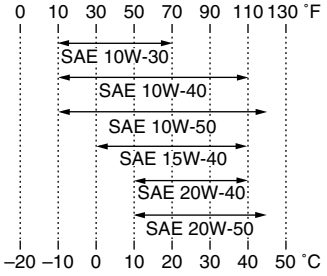
Make any necessary repairs before storing the motorcycle.

Dimensions:
Overall length:
2090 mm (82.3 in)
Overall width:
720 mm (28.3 in)
Overall height:
1135 mm (44.7 in)
Seat height:
780 mm (30.7 in)
Wheelbase:
1380 mm (54.3 in)
Ground clearance:
160 mm (6.30 in)
Minimum turning radius:
2700 mm (106.3 in)

Weight:
Curb weight:
166 kg (366 lb)

Engine:
Engine type:
Liquid cooled 4-stroke, DOHC
Cylinder arrangement:
Inline 2-cylinder
Displacement:
321 cm³
Bore × stroke:
68.0 × 44.1 mm (2.68 × 1.74 in)
Compression ratio:
11.2 : 1
Starting system:
Electric starter
Lubrication system:
Wet sump

Engine oil:
Recommended brand:
YAMALUBE
Type:
SAE 10W-30, 10W-40, 10W-50, 15W-40, 20W-40 or 20W-50



Recommended engine oil grade:
API service SG type or higher, JASO standard MA
Engine oil quantity:
Without oil filter cartridge replacement:
1.80 L (1.90 US qt, 1.58 Imp.qt)
With oil filter cartridge replacement:
2.10 L (2.22 US qt, 1.85 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):
0.96 L (1.01 US qt, 0.84 Imp.qt)

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

Fuel:
Recommended fuel:
Regular unleaded gasoline (Gasohol (E10) acceptable)
Fuel tank capacity:
14 L (3.7 US gal, 3.08 Imp.gal)
Fuel reserve amount:
3.0 L (0.79 US gal, 0.66 Imp.gal)

Fuel injection:
Throttle body:
ID mark:
2MS2 00

Spark plug(s):
Manufacturer/model:
NGK/CR8E
Spark plug gap:
0.7–0.8 mm (0.028–0.031 in)

Clutch:
Clutch type:
Wet, multiple-disc

Transmission:
Primary reduction ratio:
3.043 (70/23)
Final drive:
Chain
Secondary reduction ratio:
3.071 (43/14)
Transmission type:
Constant mesh 6-speed
Operation:
Left foot operation
Gear ratio:
1st:
2.500 (35/14)

2nd:
1.824 (31/17)
3rd:
1.348 (31/23)
4th:
1.087 (25/23)
5th:
0.920 (23/25)
6th:
0.800 (24/30)

Chassis:
Frame type:
Diamond
Caster angle:
25.00 °
Trail:
95 mm (3.7 in)

Front tire:
Type:
Tubeless
Size:
110/70-17M/C (54H)
Manufacturer/model:
MICHELIN/PILOT STREET

Rear tire:
Type:
Tubeless
Size:
140/70-17M/C (66H)
Manufacturer/model:
MICHELIN/PILOT STREET

Loading:
Maximum load:
160 kg (353 lb)
(Total weight of rider, passenger, cargo and accessories)

Tire air pressure (measured on cold tires):
Loading condition:
0–90 kg (0–198 lb)
Front:
200 kPa (2.00 kgf/cm², 29 psi)
Rear:
250 kPa (2.50 kgf/cm², 36 psi)
Loading condition:
90–160 kg (198–353 lb)
Front:
200 kPa (2.00 kgf/cm², 29 psi)
Rear:
250 kPa (2.50 kgf/cm², 36 psi)

Front wheel:
Wheel type:
Cast wheel
Rim size:
17M/C x MT2.75

Rear wheel:
Wheel type:
Cast wheel
Rim size:
17M/C x MT4.00

Front brake:
Type:
Single disc brake
Operation:
Right hand operation
Specified brake fluid:
DOT 4

Rear brake:
Type:
Single disc brake
Operation:
Right foot operation
Specified brake fluid:
DOT 4

Front suspension:
Type:
Telescopic fork
Spring/shock absorber type:
Coil spring/oil damper
Wheel travel:
130 mm (5.1 in)

Rear suspension:
Type:
Swingarm
Spring/shock absorber type:
Coil spring/oil damper
Wheel travel:
125 mm (4.9 in)

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

Battery:
Model:
GTZ8V
Voltage, capacity:
12 V, 7.0 Ah

Headlight:
Bulb type:
Halogen bulb

Bulb voltage, wattage × quantity:

Headlight:
12 V, 55.0 W × 2
Tail/brake light:
LED
Front turn signal/position light:
12 V, 21.0 W/5.0 W × 2
Rear turn signal light:
12 V, 21.0 W × 2
Auxiliary light:
12 V, 5.0 W × 1
License plate light:
12 V, 5.0 W × 1
Meter lighting:
LED
Neutral indicator light:
LED
High beam indicator light:
LED
Oil pressure warning light:
LED
Turn signal indicator light:
LED
Engine trouble warning light:
LED

Fuses:

Main fuse:
30.0 A
Headlight fuse:
15.0 A
Signaling system fuse:
15.0 A
Ignition fuse:
15.0 A
Radiator fan motor fuse:
7.5 A
Backup fuse:
7.5 A

EAU26357

Identification numbers

Record the vehicle identification number, engine serial number, model label information, and the key identification number 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:

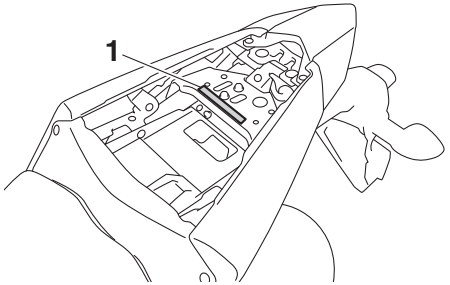
ENGINE SERIAL NUMBER:

MODEL LABEL INFORMATION:

KEY IDENTIFICATION NUMBER:

EAU62971

Vehicle identification number



1. Vehicle identification number

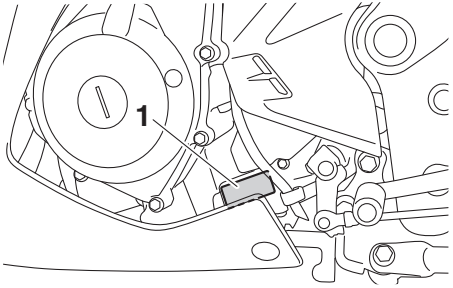
The vehicle identification number is stamped into the frame under the passenger seat. (See page 4-16.)

TIP

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

EAU26442

Engine serial number

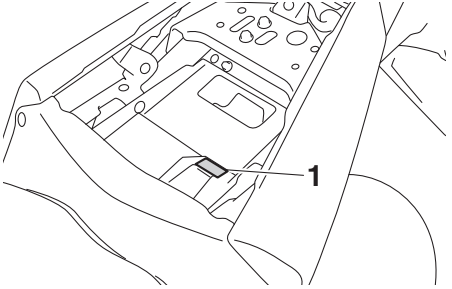


1. Engine serial number

The engine serial number is stamped into the crankcase.

EAU26521

Model label

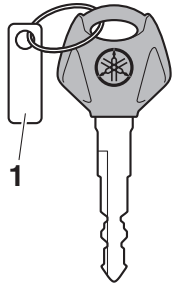


1. Model label

The model label is affixed to the frame under the passenger seat. (See page 4-16.) Record the information on this label in the space provided. This information will be needed when ordering spare parts from a Yamaha dealer.

EAU26382

Key identification number

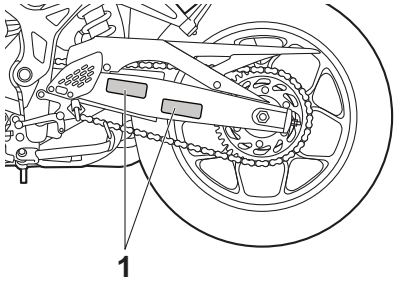


1. Key identification number

The key identification number is stamped into the key tag. Record this number in the space provided and use it for reference when ordering a new key.

EAU48271

Vehicle Emission Control Information label



1. Vehicle Emission Control Information label

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

EAU26622

Maintenance record

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

Maintenance interval	Date of service	Mileage	Servicing dealer name and address	Remarks
1000 km (600 mi) or 1 month				
6000 km (4000 mi) or 6 months				
11000 km (7000 mi) or 12 months				
16000 km (10000 mi) or 18 months				
21000 km (13000 mi) or 24 months				
26000 km (16000 mi) or 30 months				
31000 km (19000 mi) or 36 months				
36000 km (22000 mi) or 42 months				
41000 km (25000 mi) or 48 months				

Maintenance interval	Date of service	Mileage	Servicing dealer name and address	Remarks
46000 km (28000 mi) or 54 months				
51000 km (31000 mi) or 60 months				

EAU26718

YAMAHA MOTOR CANADA LTD. MOTORCYCLE WARRANTY GUIDE

Congratulations on the purchase of your new Yamaha motorcycle. You have chosen a quality product designed and manufactured to bring you years of enjoyment.
This information explains Yamaha's warranty policy. You will find the answers to most of your questions by reading it through.
If you require further assistance, see your Yamaha dealer. Their qualified personnel will be pleased to meet all your service requirements, both during and after the warranty period.
Keep in mind that Yamaha manufactures many other quality products too. For further information on our complete line-up, contact your dealer or visit our web site.
For a product brochure, or a dealer near you, go to our web site.
Yamaha Motor Canada Ltd.
480 Gordon Baker Road, Toronto, Ontario M2H 3B4
(416) 498-1911 www.yamaha-motor.ca

Yamaha Motorcycle Warranty Policy

In this warranty, the term 'MOTORCYCLE' shall refer to a new motorcycle manufactured by YAMAHA MOTOR COMPANY, LTD. ('MANUFACTURER') under the trade name of Yamaha, distributed by YAMAHA MOTOR CANADA LTD. ('YAMAHA'), sold at retail by an authorized Yamaha dealer ('DEALER'). The term 'CUSTOMER' shall refer to the owner or lessee of record of the MOTORCYCLE registered with YAMAHA and to any subsequent owner, and the term 'DELIVERY' shall refer to the date of delivery of the MOTORCYCLE from the DEALER to the CUSTOMER.

Section A — Warranty

Subject to Section D, YAMAHA offers the following warranty coverage to the CUSTOMER:

1. Periods of warranty:
   a) Pleasure Use (including government use)
      i) **Basic Period of Warranty**
      The period of warranty shall be ninety days commencing on DELIVERY on all models designated PW, TT and on YZ85 models.
      The period of warranty shall be one year commencing on DELIVERY on all other models.
      ii) **Additional Period of Warranty for Street-Legal Motorcycles**
      In the event DELIVERY occurs between January 1st and April 30th, the warranty shall extend to April 30th of the following year.
   b) Commercial Use
      The period of warranty shall be half of the warranty period indicated for pleasure use, commencing on DELIVERY on any MOTORCYCLE which has been identified as being used for commercial applications.
2. During these periods of warranty:
   a) Any part defective by reason of the MANUFACTURER's faulty workmanship or material will be replaced or repaired free of charge.
   b) Any repairs or adjustments made necessary by reason of the MANUFACTURER's faulty workmanship or material will be performed free of charge.

The MANUFACTURER reserves the right to change the design of any model without obligation to modify any model previously manufactured.

Section B — Subsequent Owner

The warranty set forth in Section A may be transferred to any subsequent owner provided that the period of warranty has not expired and that the CUSTOMER has complied with all terms and conditions of this warranty.
The subsequent owner has the responsibility for ensuring that a change of registration is sent to YAMAHA at the time of such transfer of ownership.
This transfer MUST be done by contacting the DEALER who will forward the following information to YAMAHA:

1. the complete model and serial number as shown on the original warranty document;
2. the name of the previous owner;
3. the original delivery date of the MOTORCYCLE;
4. the complete name and address of the subsequent owner;
5. the indication that the subsequent owner has received and read the Owner's Manual and this warranty policy.

Section C — Obtaining Repairs Under Warranty

To obtain repairs under warranty, the CUSTOMER must:

1. Ensure that the MOTORCYCLE is properly operated, maintained and stored as specified in the Owner's Manual.
2. Give notice to a DEALER of any and all apparent defects immediately upon discovery, and make the entire MOTORCYCLE available at that time for inspection and repair at the DEALER'S place of business.
3. Provide proof of warranty coverage to such DEALER (CUSTOMER'S copy of the New Vehicle Information Statement: N.V.I.S.).
4. Authorize the DEALER to tear down the MOTORCYCLE for diagnostic evaluation should it be required.

All warranty repairs must be done by a DEALER and final approval of any repairs rests with YAMAHA. All parts replaced become the property of YAMAHA.

Section D — Exclusions

1. This warranty does not apply unless:
   a) The MOTORCYCLE has been fully assembled and set to the MANUFACTURER's operating specifications by a DEALER prior to DELIVERY to the CUSTOMER.
   b) The CUSTOMER has followed the break-in and storage instructions contained in the Owner's Manual and all other instructions shown in the Owner's Manual.
   c) The CUSTOMER can provide record of maintenance having been performed as recommended in the Owner's Manual.
   d) Requests for repairs under warranty have been made as prescribed in Section C.
2. This warranty does not cover the repair of damage resulting from abuse or neglect of the MOTORCYCLE. Examples of abuse and neglect include, but are not limited to:
   a) racing, competition, MOTORCYCLE models designated WR or YZ, with the exception of WR25R, WR25X and YZ85 models, modification of original parts or abnormal strain;
   b) use of lubricants, oils, fuel, fuel additives and mixtures other than those recommended in the Owner's Manual, improperly installed accessories or use of parts or accessories that are not equivalent in design and quality to genuine Yamaha parts;
   c) damage as a result of accidents, collisions, contact with foreign materials, impact, submersion or use of the MOTORCYCLE after discovery of a defect;
   d) appearance-related damages of body parts. Examples of such damages include but are not limited to: scratches, dents, fading, flaking, peeling.
3. This warranty does not extend to:
   a) MOTORCYCLES which have been modified in any way from the standard specifications as shown in the Owner's Manual, including any MOTORCYCLE whose odometer has been altered;
   b) normal wear and tear, corrosion and routine maintenance, such as the recommended service inspections;
   c) pre-delivery inspection and assembly;
   d) MOTORCYCLES from which the MANUFACTURER's identification numbers have been removed or whose identification numbers have been altered or mutilated;
   e) wear and tear and/or maintenance parts such as drive chains, clutch plates and facings, oils and lubricants, spark plugs, batteries, generator brushes, sealed beams and light bulbs, tires, filters, brake pads, drive belts and fuses;
   f) inconvenience, loss of time, loss of income or loss of use of the MOTORCYCLE or any consequential damage of any kind;

g) damages from theft, fire, vandalism, explosion, water or acts of God;
h) storage costs, or transportation and shipping costs related to the performance of this warranty;
i) damage due to “flat towing” (see your DEALER for explanation).

Section E — Emissions Control System Warranty (For applicable models only)

YAMAHA warrants to the CUSTOMER of a MOTORCYCLE covered by this warranty with a displacement of 50cc or greater, that the MOTORCYCLE is designed, built and equipped so as to conform at the time of DELIVERY with all federal emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the periods listed immediately below. Failures other than those resulting from defects in material or workmanship, which arise solely as a result of owner abuse and/or lack of proper maintenance, are not covered by this warranty.

Engine Displacement	Period
50cc to 169cc	12,000 km or 5 years, whichever occurs first
170cc to 279cc	18,000 km or 5 years, whichever occurs first
280cc and over	30,000 km or 5 years, whichever occurs first

Section F

This warranty is in addition to, and not a modification of, any warranty required by the laws of any province of Canada.
Subject to any applicable sales or consumer legislation, the above warranty is in lieu of any warranty or representation, expressed or implied, including any warranty of performance, merchantability or fitness for a particular purpose on the part of YAMAHA, and any other obligation or liability on behalf of YAMAHA, and the above warranty constitutes your sole remedy and the full liability of YAMAHA. In no event shall YAMAHA be liable for special, incidental or consequential damages howsoever caused, whether by negligence or otherwise resulting directly or indirectly from the use of the MOTORCYCLE, or the MOTORCYCLE having replacement parts or the unavailability of replacement parts.
YAMAHA does not assume, or authorize any person to create or assume for YAMAHA, any obligation or liability in connection with the MOTORCYCLE or any part thereof distributed by YAMAHA.

Original Equipment Tires

Tires supplied as original equipment on your MOTORCYCLE are warranted separately by the individual tire manufacturer or its representatives. Generally speaking, this warranty covers defects in workmanship or material.

Storing Your MOTORCYCLE

If your MOTORCYCLE is not to be used for 60 days or more, it must be properly stored to ensure against deterioration. You should consult your Owner’s Manual for storage details, but WE RECOMMEND THAT YOU HAVE AN AUTHORIZED YAMAHA MOTORCYCLE DEALER PREPARE YOUR MOTORCYCLE FOR STORAGE. Their highly-trained staff have the experience and the qualifications to do the job right.
YAMAHA cannot accept responsibility for damage to your vehicle or personal injury resulting from negligence or lack of experience in the preparation of your MOTORCYCLE for storage.

Pre-delivery Inspection Checklist

The DEALER has assembled, inspected and tested the MOTORCYCLE according to the Yamaha Motorcycle Pre-delivery Inspection Checklist prior to DELIVERY to the CUSTOMER (some items may not be applicable to all models). These items include:

- Brakes
- Clutch
- Fluid Levels
- Drive System
- Cooling System
- Fuel / Throttle System
- Wheels / Tires / Suspension
- Steering and Controls
- Electrical System
- Replacing damaged or missing parts
- Test Ride

The Yamaha Motorcycle Pre-delivery Inspection Checklist has been provided to the CUSTOMER at the time of DELIVERY.

Change of Address or Other Owner Information

If you should move after you have purchased your MOTORCYCLE, please contact the DEALER who will forward the required information to YAMAHA. Provide the DEALER with the model name and serial number as shown on the N.V.I.S., along with your new mailing address (or other information). This will ensure that YAMAHA has an up-to-date registration record.

INDEX

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

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

Genuine Yamaha Accessories – Yamaha only offers accessories that meet our high standards for quality and performance. Buy with confidence, knowing your Genuine Yamaha Accessories will fit right and perform right – right out of the box.

Yamalube – Take care of your Yamaha with legendary Yamalube oils, lubricants, and care products. They're formulated and approved by the toughest judges we know: the Yamaha engineering teams that know your Yamaha from the inside out.

Genuine Yamaha Service Manuals – Get the same factory manual for your vehicle that the technicians at your authorized Yamaha dealer use. Service manuals are available through your Yamaha dealer or you can order them directly through yamahapubs.com (for US consumers only).

Genuine Yamaha products are available only from your Yamaha dealer.

Find out more at:
For US consumers, please visit yamaha-motor.com
For Canadian consumers, please visit yamaha-motor.ca