YAMAHA

Read this manual carefully before operating this vehicle.

OWNER'S MANUAL

TT-R230

MOTORCYCLE

TT-R230V1

LIT-11626-40-43

D25-F8199-12

EAU10046

WARNING: Operating, servicing and maintaining a passenger vehicle or off-highway motor vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to www.P65Warnings.ca.gov/passenger-vehicle

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

EAU10084

Congratulations on your purchase of the Yamaha TT-R230V1. This model is the result of Yamaha's vast experience in the production of fine sporting, touring, and pacesetting racing machines. It represents the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields.
This manual will give you an understanding of the operation, inspection, and basic maintenance of this motorcycle. If you have any questions concerning the operation or maintenance of your motorcycle, please consult a Yamaha dealer.
The design and manufacture of this Yamaha motorcycle fully comply with the emissions standards for clean air applicable at the date of manufacture. Yamaha has met these standards without reducing the performance or economy of operation of the motorcycle. To maintain these high standards, it is important that you and your Yamaha dealer pay close attention to the recommended maintenance schedules and operating instructions contained within this manual.
Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your motorcycle and this manual. If there is any question concerning this manual, please consult a Yamaha dealer.

EWA10012

WARNING

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

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.

EAUW0712

TT-R230V1
OWNER'S MANUAL
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1st edition, April 2026
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Printed in Brazil.
P/N LIT-11626-40-43

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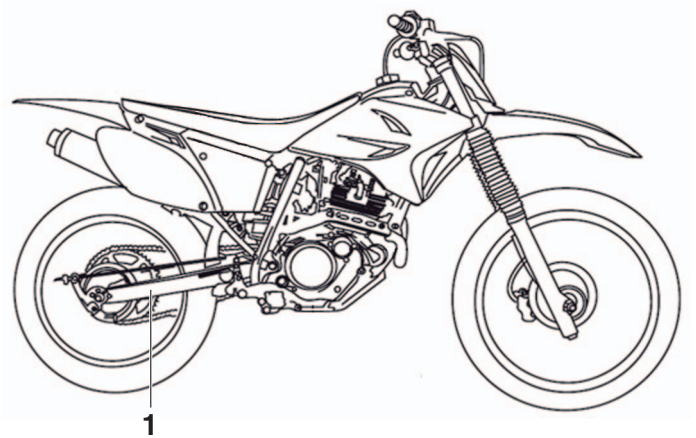
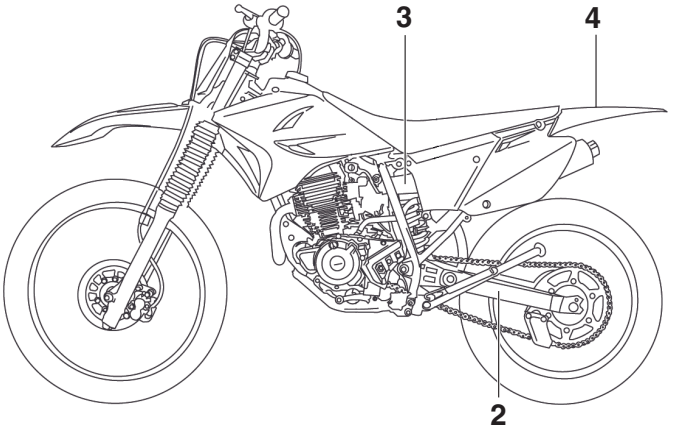
Location of important labels

EAU10387

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

TIRE INFORMATION

Cold tire normal pressure should be set as follows.

FRONT : 100 kPa, (1.00 kgf/cm^2), 15 psi
REAR : 100 kPa, (1.00 kgf/cm^2), 15 psi

3RV-21668-A1

2

VEHICLE EMISSION CONTROL INFORMATION YAMAHA MOTOR DO BRASIL LTDA.
ENG: VYMXX.223AAB PERM: VYMXPP402BC3
THIS VEHICLE IS CERTIFIED TO OPERATE ON UNLEAD GASOLINE.
TUNE- UP SPECIFICATIONS AN ADJUSTMENTS (REFER TO YOUR OWNER'S MANUAL)
DISPLACEMENT: 223 cm^3 EXHAUST EMISSION CONTROL SYSTEM: EM
SPARK PLUG GAP: 0.6 - 0.7 mm VALVE LASH: IN 0.05-0.09 mm EX 0.15-0.19 mm
IDLE SPEED: 1500 r/min IN NEUTRAL AT NORMAL OPERATING TEMPERATURE
FUEL: UNLEAD GASOLINE 91 RON MIN ENGINE OIL: SAE 10W-40
NO OTHER ADJUSTMENTS NEEDED.
THIS VEHICLE MEETS US EPA, REGULATIONS FOR 2027 MODEL YEAR NEW OFF-ROAD MCs.
AND IS CERTIFIED TO HC+NOx 1.4 AND CO 17 (g/km) / ENGINE FAMILY EXHAUST EMISSION LIMITS.
THIS MC MEETS 1986 AND LATER EPA NOISE EMISSION REQUIREMENTS OF THE FED. TEST PROCEDURES.
MODIFICATIONS WHICH CAUSE THIS MC TO EXCEED FED. NOISE ST'D ARE PROHIBITED BY FED. LAW.
SEE OWNER'S MANUAL. LIMIT/CLOSING: 82 dBA / 6837 r/min MODEL CODE: YAM1C60223 D25-2176Y-20

YAMAHA

3

⚠ WARNING

This unit contains high pressure nitrogen gas. Mishandling can cause explosion.
• Read owner's manual for instructions.
• Do not incinerate, puncture or open.

4AA-22259-80

4

⚠ WARNING

- **BEFORE YOU OPERATE THIS VEHICLE, READ THE OWNER'S MANUAL AND ALL LABELS.**
- **NEVER CARRY A PASSENGER. You increase your risk of losing** control if you carry a passenger.
- **NEVER OPERATE THIS VEHICLE ON PUBLIC ROADS.** You can collide with another vehicle if you operate this vehicle on a public road.
- **ALWAYS WEAR AN APPROVED MOTORCYCLE HELMET,** eye protection, and protective clothing.

3PT-2118K-A2

EAU41469

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 for off-road use only, therefore, it is illegal to operate it on public streets, roads, or highways, even a dirt or gravel one. Off-road use on public lands may be illegal. Please check local regulations before riding.
- This motorcycle is designed to carry the operator only. No passengers.
- 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.
  - 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 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). Never travel faster than warranted by conditions.
- Ride cautiously in unfamiliar areas. You may encounter hidden obstacles that could cause an accident.
- The posture of the operator 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.
- Never ride under the influence of alcohol or other drugs.
- Be sure the transmission is in neutral before starting the engine.

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.

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 poi-

soning, 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.

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 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.
  - Accessories fitted to the handlebar or the front fork area can create instability due to improper weight distribution. 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. Wind may attempt to lift the motorcycle, or the motorcycle may become unstable in cross winds.
  - 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 7-15 for tire specifications and more information on replacing your tires.

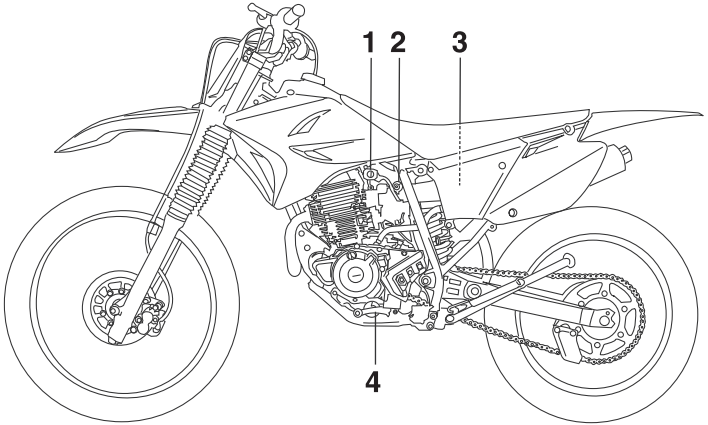
Transporting the Motorcycle

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

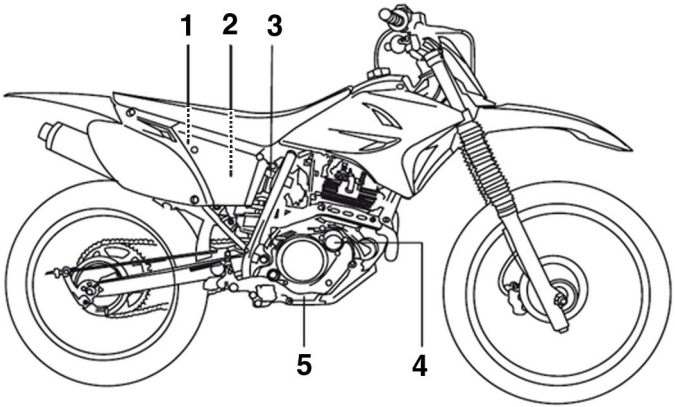
Left view



1. Fuel cock (page 4-5)
2. Starter (choke) knob (page 4-6)
3. Air filter element (page 7-11)
4. Shift pedal (page 4-2)

EAU10421

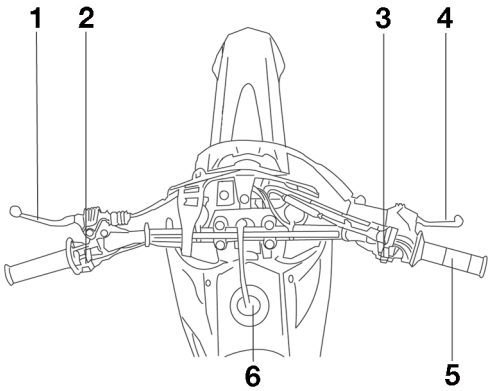
Right view



1. Fuse (page 7-29)
2. Battery (page 7-27)
3. Shock absorber assembly spring preload adjusting nut (page 4-7)
4. Engine oil filter element (page 7-7)
5. Brake pedal (page 4-3)

EAU10431

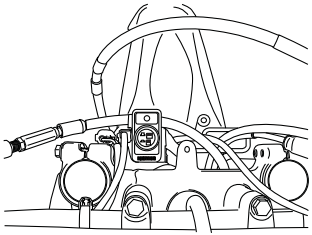
Controls and instruments



1. Clutch lever (page 4-2)
2. Engine stop button (page 4-1)
3. Start switch (page 4-1)
4. Brake lever (page 4-2)
5. Throttle grip (page 7-14)
6. Fuel tank cap (page 4-3)

EAUW1881

Ignition switch



The ignition switch controls the ignition system. The ignition switch positions are described below.

EAUW0571

ON

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

EAUW0583

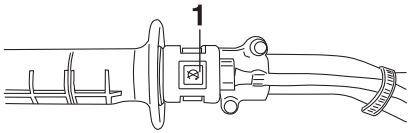
OFF

All electrical systems are off.

EAU1234U

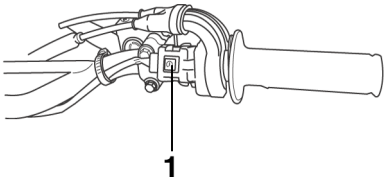
Handlebar switches

Left



1. Engine stop button “ENGINE STOP”

Right



1. Start switch “⊛”

EAU12672

Engine stop button “ENGINE STOP”

Hold this button pushed until the engine stops in case of an emergency, such as when the vehicle overturns or when the throttle cable is stuck.

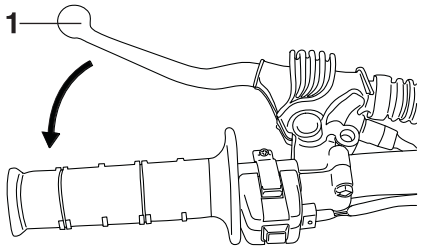
EAU12713

Start switch “⊛”

Push this switch to crank the engine with the starter. See page 6-2 for starting instructions prior to starting the engine.

EAU31642

Clutch lever

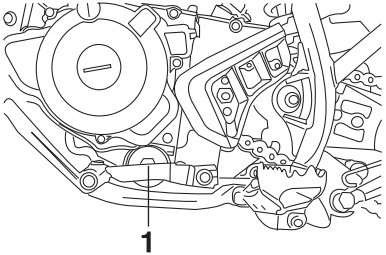


1. Clutch lever

The clutch lever is located on the left side of the handlebar. 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 starting circuit cut-off system. (See page 4-8.)

EAU12876

Shift pedal

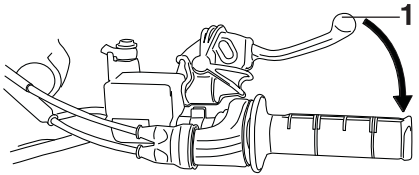


1. Shift pedal

The shift pedal is located on the left side of the motorcycle. To shift the transmission to a higher gear, move the shift pedal up. To shift the transmission to a lower gear, move the shift pedal down. (See page 6-3.)

EAU12892

Brake lever

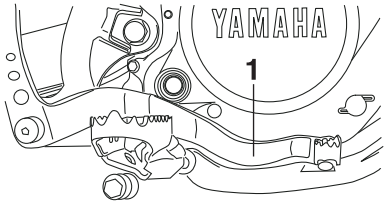


1. Brake lever

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

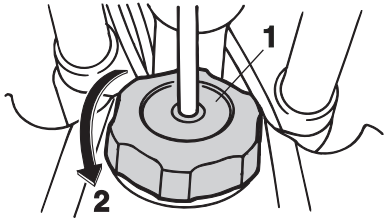


1. Brake pedal

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

EAU13183

Fuel tank cap



1. Fuel tank cap
2. Remove.

To remove the fuel tank cap, turn it counterclockwise, and then pull it off.
To install the fuel tank cap, insert it into the tank opening, and then turn it clockwise.

EWA11092

WARNING

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

EAU13213

Fuel

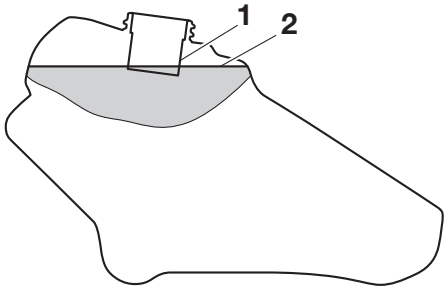
Make sure there is sufficient gasoline in the tank.

EWA10882

WARNING

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

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



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.

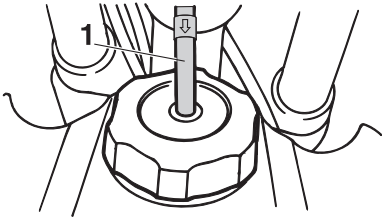
EWA15152

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.

EAU13414

Fuel tank breather hose



1. Fuel tank breather hose

Before operating the motorcycle:

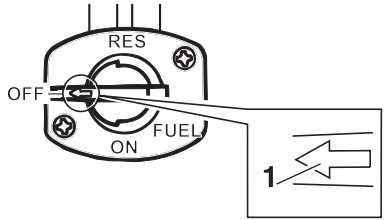
- Check the fuel tank breather hose connection.
- Check the fuel tank breather hose for cracks or damage, and replace it if necessary.
- Make sure that the fuel tank breather hose is not blocked, and clean it if necessary.

EAU13563

Fuel cock

The fuel cock supplies fuel from the tank to the carburetor(s) while filtering it also.
The fuel cock has three positions:

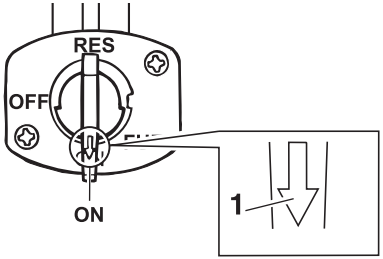
OFF



1. Arrow mark positioned over “OFF”

With the lever in this position, fuel will not flow. Always return the lever to this position when the engine is not running.

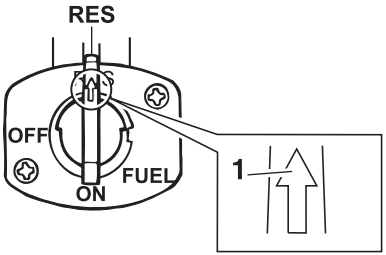
ON



1. Arrow mark positioned over “ON”

With the lever in this position, fuel flows to the carburetor(s). Normal riding is done with the lever in this position.

RES

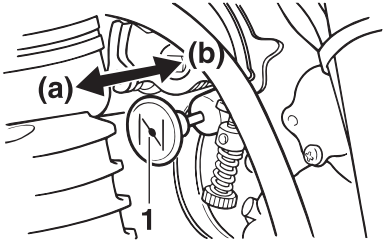


1. Arrow mark positioned over “RES”

This indicates reserve. If you run out of fuel while riding, move the lever to this position. Fill the tank at the first opportunity. Be sure to set the lever back to “ON” after refueling!

EAU13601

Starter (choke) knob "⌇"



1. Starter (choke) knob "⌇"

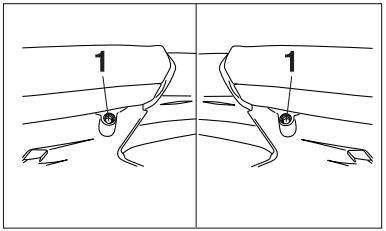
Starting a cold engine requires a richer air-fuel mixture, which is supplied by the starter (choke).
Move the knob in direction (a) to turn on the starter (choke).
Move the knob in direction (b) to turn off the starter (choke).

EAU13962

Seat

To remove the seat

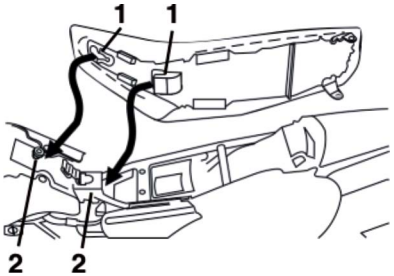
Remove the bolts, and then pull the seat off.



1. Bolt

To install the seat

1. Insert the projections on the front of the seat into the seat holders as shown.



1. Projection
2. Seat holder

2. Place the seat in the original position, and then tighten the bolts.

TIP

Make sure that the seat is properly secured before riding.

EAUW2502

Adjusting the shock absorber assembly

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

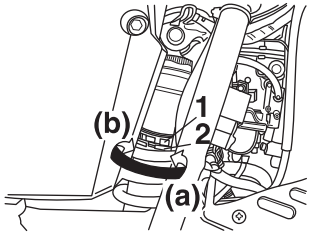
ECA10102

NOTICE

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

Adjust the spring preload as follows.

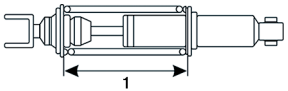
1. Loosen the locknut.



1. Locknut
2. Adjusting nut

2. Turn the adjusting nut in direction (a) to increase the spring preload. Turn the adjusting nut in direction (b) to decrease the spring preload.

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



1. Distance A

Spring preload:
Minimum (soft):
Distance A = 196.0 mm (7.72 in)
Standard:
Distance A = 194.0 mm (7.64 in)
Maximum (hard):
Distance A = 184.0 mm (7.24 in)

3. Tighten the locknut to the specified torque. ***NOTICE:*** **Always tighten the locknut against the adjusting nut, and then tighten the locknut to the specified torque.** [ECA10122]

Tightening torque:
Locknut:
70 N·m (7.0 kgf·m, 52 lb·ft)

EWA10222

WARNING

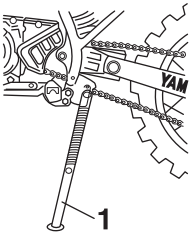
This shock absorber assembly contains highly pressurized nitrogen gas. Read and understand the following information before handling the shock absorber assembly.

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

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

EAU37491

Sidestand



1. 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.

EWA14191

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.

EAUW0803

Starting circuit cut-off system

This system prevents in-gear engine starts unless the clutch lever is pulled. Periodically check the system via the following procedure.

TIP

- This check is most reliable if performed with a warmed-up engine.
- See pages 4-1 and 4-1 for switch operation information.

With the engine turned off:
1. Push the ignition switch to set it to “**ON**”.
2. Shift the transmission into the neutral position.
3. 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.

4. Turn the engine off.
5. Shift the transmission into gear.
6. Keep the clutch lever pulled.
7. 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.

For your safety – pre-operation checks

EAU1559B

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

EWA11152

WARNING

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

Before using this vehicle, check the following points:

ITEM	CHECKS	PAGE
Fuel	• Check fuel level in fuel tank. • Refuel if necessary. • Check fuel line for leakage.	4-3
Engine oil	• Check oil level in engine. • If necessary, add recommended oil to specified level. • Check vehicle for oil leakage.	7-7
Front brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check lever free play. • Adjust if necessary. • 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.	7-18, 7-20, 7-21
Rear brake	• Check operation. • Check pedal free play. • Adjust if necessary.	7-19, 7-20

ITEM	CHECKS	PAGE
Clutch	• Check operation. • Lubricate cable if necessary. • Check lever free play. • Adjust if necessary.	7-17
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.	7-14, 7-24
Control cables	• Make sure that operation is smooth. • Lubricate if necessary.	7-24
Drive chain	• Check chain slack. • Adjust if necessary. • Check chain condition. • Lubricate if necessary.	7-22, 7-23
Wheels and tires	• Check for damage. • Check tire condition and tread depth. • Check air pressure. • Correct if necessary.	7-15, 7-17
Brake and shift pedals	• Make sure that operation is smooth. • Lubricate pedal pivoting points if necessary.	7-25
Brake and clutch levers	• Make sure that operation is smooth. • Lubricate lever pivoting points if necessary.	7-25
Sidestand	• Make sure that operation is smooth. • Lubricate pivot if necessary.	7-26
Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.	—
Engine stop switch	• Check operation.	4-1

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.

EAU16851

Engine break-in

There is never a more important period in the life of your engine than the first 20 hours of riding. 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 20 hours of operation. 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. However, momentary full-throttle operation under load (i.e., two to three seconds maximum) does not harm the engine. Each full-throttle acceleration should be followed with a substantial rest period for the engine. To allow the engine to cool down from the temporary build-up of heat, cruise at a lower engine speed.

0–10 hours

- Avoid prolonged operation above 1/2 throttle.
- After every hour of operation, stop the engine, and then let it cool for five to ten minutes.
- Vary the engine speed from time to time. Do not operate the engine at one set throttle position.

10–20 hours

- Avoid prolonged operation above 3/4 throttle.
- Rev the engine freely through the gears, but do not use full throttle at any time.

After break-in

Avoid prolonged full-throttle operation. Vary the engine speed occasionally.

ECA10271

NOTICE

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

EAUW0596

Starting and warming up a cold engine

In order for the starting 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.
  See page 4-8 for more information.

1. Turn the fuel cock lever to “ON”.
2. Push the ignition switch to set it to “ON”.
3. Shift the transmission into the neutral position.
4. Turn the starter (choke) on and completely close the throttle. (See page 4-6.)
5. 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.
6. After starting the engine, move the starter (choke) back halfway.
7. When the engine is warm, turn the starter (choke) off.

TIP

The engine is warm when it responds normally to the throttle with the starter (choke) turned off.

ECA11043

NOTICE

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

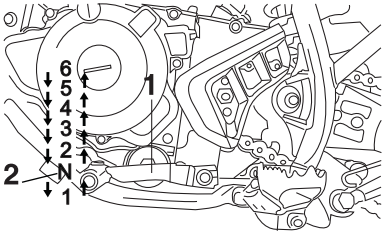
EAU16641

Starting a warm engine

Follow the same procedure as for starting a cold engine with the exception that the starter (choke) is not required when the engine is warm.

EAU16675

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

ECA10262

NOTICE

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

EAUW4540

To start out and accelerate

1. Pull the clutch lever to disengage the clutch.
2. Shift the transmission into first gear.
3. Open the throttle gradually, and at the same time, release the clutch lever slowly.
4. 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.

EAUW4550

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 16 Km/h (10mph), the engine is about to stall or runs roughly, pull the clutch lever in, use the brakes to slow the motorcycle, and continue to downshift as necessary.
4. Once the motorcycle has stopped, the transmission can be shifted into the neutral position and then the clutch lever can be released.

EWA17380

WARNING

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

EAU64150

Recommended shift points

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

Shift up points:
1st → 2nd: 16 km/h (10 mph)
2nd → 3rd: 24 km/h (15 mph)
3rd → 4th: 32 km/h (20 mph)
4th → 5th: 40 km/h (25 mph)
5th → 6th: 48 km/h (30 mph)
Shift down points:
6th → 5th: 36 km/h (22 mph)
5th → 4th: 32 km/h (20 mph)
4th → 3rd: 24 km/h (15 mph)

EAUW0604

Parking

When parking the vehicle, stop the engine, push the ignition switch to set it to “OFF”, and then turn the fuel cock lever to “OFF”.

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.**

EAU39945

Periodic maintenance chart for the emission control system

TIP

- From 7000 km (4200 mi) or 18 months, repeat the maintenance intervals starting from 3000 km (1800 mi) or 6 months.
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

No.		ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL	ODOMETER READINGS	
				1000 km (600 mi) or 1 month or 30 hours	3000 km (1800 mi) or 6 months or 90 hours	5000 km (3000 mi) or 12 months or 150 hours
1	*	**Fuel line**	• Check fuel hoses for cracks or damage. • Replace if necessary.		√	√
2		**Spark plug**	• Check condition. • Adjust gap and clean.		√	√
3	*	**Valve clearance**	• Check and adjust valve clearance when engine is cold.			√
4	*	**Air filter element**	• Clean with solvent. • Replace if necessary.		√	√
5	*	**Crankcase breather system**	• Check ventilation hose for cracks or damage and drain any deposits. • Replace if necessary.	√	√	√
6	*	**Carburetor**	• Check engine idling speed and starter operation. • Adjust if necessary.	√	√	√
7		**Exhaust system**	• Check for leakage. • Tighten if necessary. • Replace gasket(s) if necessary.		√	√
8	*	**Spark arrester**	• Clean.			√
9		**Engine oil**	• Change (warm engine before draining).	√	√	√

No.	ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL	ODOMETER READINGS	
			1000 km (600 mi) or 1 month or 30 hours	3000 km (1800 mi) or 6 months or 90 hours	5000 km (3000 mi) or 12 months or 150 hours
10	Engine oil filter element	• Clean. • Check engine oil level and for leakage.	√	√	√

EAU3534E

General maintenance and lubrication chart

TIP

- From 7000 km (4200 mi) or 18 months, repeat the maintenance intervals starting from 3000 km (1800 mi) or 6 months.
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

No.		ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL	ODOMETER READINGS	
				1000 km (600 mi) or 1 month or 30 hours	3000 km (1800 mi) or 6 months or 90 hours	5000 km (3000 mi) or 12 months or 150 hours
1	*	**Clutch**	• Check operation. • Adjust if necessary.	√	√	√
2	*	**Front brake**	• Check operation, fluid level, and for fluid leakage.	√	√	√
			• Replace brake pads.	Whenever worn to the limit		
3	*	**Rear brake**	• Check operation. • Adjust brake pedal free play and replace brake shoes if necessary.	√	√	√
4	*	**Brake hoses**	• Check for cracks or damage. • Check for correct routing and clamping.		√	√
			• Replace.	Every 4 years		
5	*	**Brake fluid**	• Change.	Every 2 years		
6	*	**Wheels**	• Check runout, spoke tightness and for damage. • Tighten spokes if necessary.	√	√	√
7	*	**Tires**	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		√	√

No.		ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL	ODOMETER READINGS	
				1000 km (600 mi) or 1 month or 30 hours	3000 km (1800 mi) or 6 months or 90 hours	5000 km (3000 mi) or 12 months or 150 hours
8	*	**Wheel bearings**	• Check bearings for smooth operation. • Replace if necessary.		√	√
9	*	**Swingarm pivot bearings**	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease.		√	√
10		**Drive chain**	• Check chain slack/alignment and condition. • Adjust and lubricate chain with Yamaha chain lubricant or other suitable chain lubricant thoroughly.	Every ride		
11	*	**Steering bearings**	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease.	√		√
12	*	**Chassis fasteners**	• Check all chassis fitting and fasteners. • Correct if necessary.	√	√	√
13		**Brake lever pivot shaft**	• Apply silicone grease lightly.		√	√
14		**Brake pedal pivot shaft**	• Apply lithium-soap-based grease lightly.		√	√
15		**Clutch lever pivot shaft**	• Apply lithium-soap-based grease (all-purpose grease) lightly.		√	√
16		**Shift pedal pivot shaft**	• Apply lithium-soap-based grease (all-purpose grease) lightly.		√	√
17		**Sidestand pivot**	• Check operation. • Apply lithium-soap-based grease lightly.	√		√
18	*	**Front fork**	• Check operation and for oil leakage. • Replace if necessary.		√	√
19	*	**Shock absorber assembly**	• Check operation and for oil leakage. • Replace if necessary.			√

No.		ITEM	CHECKS AND MAINTENANCE JOBS	INITIAL	ODOMETER READINGS	
				1000 km (600 mi) or 1 month or 30 hours	3000 km (1800 mi) or 6 months or 90 hours	5000 km (3000 mi) or 12 months or 150 hours
20	*	**Rear suspension link pivots**	• Check operation.		√	√
			• Lubricate with lithium-soap-based grease.			√
21	*	**Control cables**	• Apply Yamaha cable lubricant or other suitable cable lubricant thoroughly.	√	√	√
22	*	**Throttle grip**	• Check operation. • Check throttle grip free play, and adjust if necessary. • Lubricate cable and grip housing.	√	√	√

EAU18671

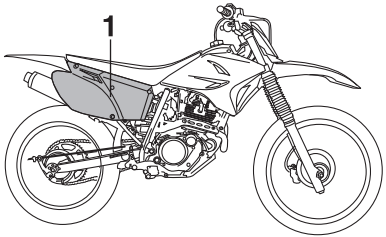
TIP

- The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
- Hydraulic brake service
  - Regularly check and, if necessary, correct the brake fluid level.
  - Every two years replace the internal components of the brake master cylinders and calipers, and change the brake fluid.
  - Replace the brake hoses every four years and if cracked or damaged.

EAU18752

Removing and installing the panel

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



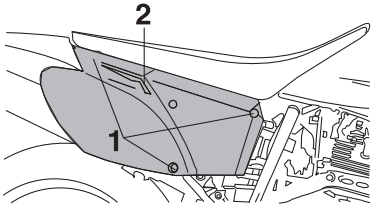
1. Panel

EAU19212

Panel

To remove the panel

Remove the screws, and then take the panel off.



1. Screw
2. Panel

To install the panel

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

EAU19623

Checking the spark plug

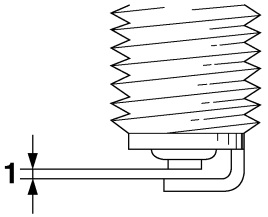
The spark plug is an important engine component, which should be checked periodically, preferably by a Yamaha dealer. Since heat and deposits will cause any spark plug to slowly erode, it should be removed and checked in accordance with the periodic maintenance and lubrication chart. In addition, the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

The porcelain insulator around the center electrode of the spark plug should be a medium-to-light tan (the ideal color when the vehicle is ridden normally). If the spark plug shows a distinctly different color, the engine could be operating improperly. Do not attempt to diagnose such problems yourself. Instead, have a Yamaha dealer check the vehicle.

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

Specified spark plug:
Niterra do Brasil Ltda./DR8EA

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:
0.6–0.7 mm (0.024–0.028 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:
18 N·m (1.8 kgf·m, 13 lb·ft)

TIP

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

EAUW0616

Engine oil

The oil level should be checked regularly. In addition, the oil must be changed and the filter element cleaned at the intervals specified in the periodic maintenance chart.

Recommended oil:
See page 9-1.
Oil quantity:
Oil change:
1.00 L (1.06 US qt, 0.88 Imp.qt)
With oil filter removal:
1.10 L (1.16 US qt, 0.97 Imp.qt)

ECA11621

NOTICE

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

ECA11233

NOTICE

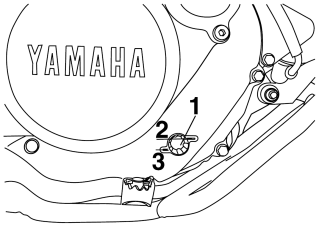
After changing the engine oil, the oil pressure must be checked using the bleed bolt.

To check the engine oil level

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

TIP

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

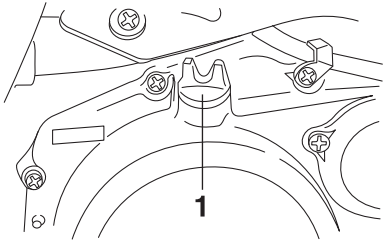


1. Engine oil level check window
2. Maximum level mark
3. Minimum level mark

4. If the engine oil is at or below the minimum level mark, remove the oil filler cap and add oil.
5. Check the engine oil filler cap O-ring. Replace if damaged.
6. Install the engine oil filler cap.

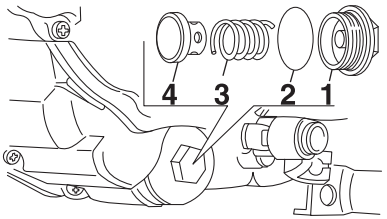
To change the engine oil (and clean the filter)

1. Start the engine, warm it up briefly, and then turn it off.
2. Place an oil pan under the engine.
3. Remove the engine oil filler cap, and then the engine oil drain bolt to drain the oil from the crankcase.
   NOTICE: **When removing the engine oil drain bolt, the O-ring, compression spring, and oil strainer will fall out. Take care not to lose these parts.** [ECA11002]



1. Engine oil filler cap

4. Remove the oil filter element drain bolt to drain the oil from the oil filter element.

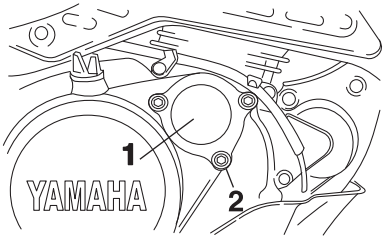


1. Engine oil drain bolt
2. O-ring
3. Compression spring
4. Oil strainer

TIP

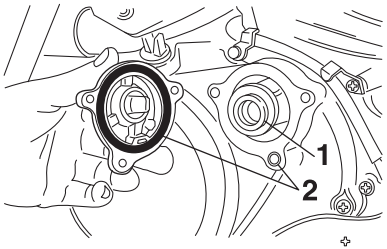
Skip to step 10 if not cleaning the oil filter element.

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



1. Oil filter element cover
2. Oil filter element drain bolt

6. Remove the oil filter element and O-rings.



1. Oil filter element
2. O-ring

7. Check the O-rings for damage and replace them if necessary.
8. Clean the oil filter element with solvent, and then install it.

TIP

Check the oil filter element for damage and replace it if necessary.

TIP

Make sure the O-ring is properly seated.

9. Install the oil filter element cover and bolts. Tighten the bolts to the specified torque.

Tightening torque:
Oil filter element cover bolt:
7 N·m (0.7 kgf·m, 5.2 lb·ft)

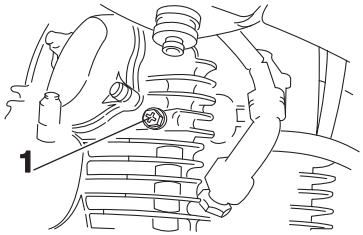
10. Install the engine oil drain bolt. Tighten the bolt to the specified torque.

Tightening torque:
Engine oil drain bolt:
43 N·m (4.3 kgf·m, 32 lb·ft)

11. Install the engine oil filter element drain bolt, and then tighten the bolt to the specified torque.

Tightening torque:
Oil filter element drain bolt:
10 N·m (1.0 kgf·m, 7.4 lb·ft)

12. Refill with the specified amount of the recommended engine oil.
13. Check the O-ring for damage, and then install the oil filler cap.
14. Loosen the bleed bolt.



1. Bleed bolt

15. Start the engine and let it it idle until oil flows out, then close the bleed bolt. ***NOTICE:*** **If engine oil does not flow out after 1 minute, stop the engine immediately. Have your Yamaha dealer inspect the vehicle before further use.** [ECA26130]
16. Tighten the bleed bolt to the specified torque.

Tightening torque:
Bleed bolt:
7 N·m (0.7 kgf·m, 5.2 lb·ft)

17. For several minutes, continue to let the engine idle while checking for oil leaks. If any leakage is found, stop the engine and check for the cause.
18. Turn the engine off, wait a few minutes for the oil to settle, and then check the oil level one last time.

TIP

Wipe off any spilled oil after the engine and exhaust system have cooled down.

EAU85450

Why Yamalube

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

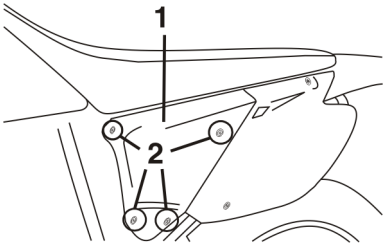
YAMALUBE®

EAUW0634

Cleaning the air filter element

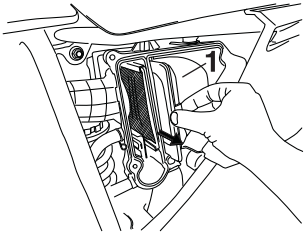
The air filter element should be cleaned at the intervals specified in the periodic maintenance and lubrication chart. Clean the air filter element more frequently if you are riding in unusually wet or dusty areas.

1. Remove the air filter element case cover by removing the screws, and then pulling it outward and sliding it forward.



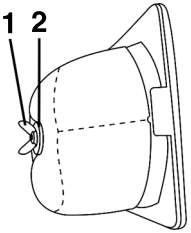
1. Air filter case cover
2. Screw

2. Pull the air filter element out of the air filter case.



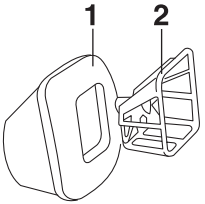
1. Air filter element

3. Remove the wing nut and washer from the air filter element.



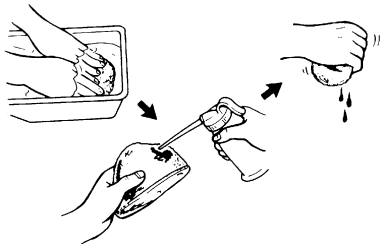
1. Wing nut
2. Washer

4. Remove the sponge material from the air filter element frame.



1. Sponge material
2. Air filter element frame

5. Clean the sponge material with solvent, and then squeeze the remaining solvent out. **WARNING! To avoid the risk of fire or explosion, do not use gasoline or solvents with a low flash point.** [EWAW0022] ***NOTICE:*** **To avoid damaging the foam material, handle it gently and carefully, and do not twist or wring it.** [ECA10512]



6. Apply oil of the recommended type to the entire surface of the sponge material, and then squeeze the excess oil out.

TIP

The sponge material should be wet but not dripping.

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

7. Pull the sponge material over the air filter element frame.
8. Install the washer and wing nut, and then insert the 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]
9. Install the air filter case cover and screws.

EAU40422

Cleaning the spark arrester

The spark arrester should be cleaned at the intervals specified in the periodic maintenance and lubrication chart.

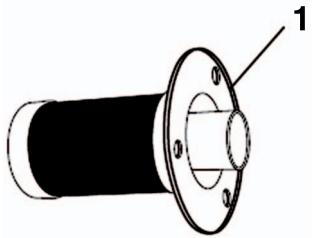
EWA10981

WARNING

- **Always let the exhaust system cool prior to touching exhaust components.**
- **Do not start the engine when cleaning the exhaust system.**

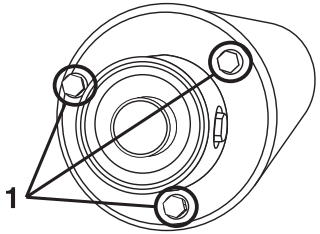
TIP

Make sure to select a well-ventilated area free of combustible materials to clean the spark arrester.



1. Spark arrester

1. Remove the tailpipe by removing the bolts, and then pulling it out of the muffler.



1. Bolt

2. Tap the tailpipe lightly, and then use a wire brush to remove any carbon deposits from the spark arrester portion of the tailpipe and inside of the tailpipe housing.
3. Insert the tailpipe into the muffler, and then install and tighten the bolts to the specified torque.

Tightening torque:
Tailpipe bolt:
10 N·m (1.0 kgf·m, 7.4 lb·ft)

TIP

Make sure to align the bolt holes when inserting the tailpipe.

EAU39931

Adjusting the carburetor

The carburetor is an important part of the engine and requires very sophisticated adjustment. Therefore, most carburetor adjustments should be left to a Yamaha dealer, who has the necessary professional knowledge and experience. The adjustment described in the following section, however, may be serviced by the owner as part of routine maintenance.

ECA10551

NOTICE

The carburetor has been set and extensively tested at the Yamaha factory. Changing these settings without sufficient technical knowledge may result in poor performance of or damage to the engine.

EAU21363

Adjusting the engine idling speed

The engine idling speed must be checked and, if necessary, adjusted as follows at the intervals specified in the periodic maintenance and lubrication chart.

TIP

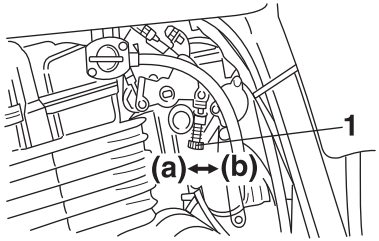
A diagnostic tachometer is needed to make this adjustment.

1. Attach the tachometer to the spark plug lead.
2. Start the engine and warm it up for several minutes at 1000–2000 r/min while occasionally revving it to 4000–5000 r/min.

TIP

The engine is warm when it quickly responds to the throttle.

3. Check the engine idling speed and, if necessary, adjust it to specification by turning the throttle stop screw. To increase the engine idling speed, turn the screw in direction (a). To decrease the engine idling speed, turn the screw in direction (b).



1. Throttle stop screw

Engine idling speed:
1400–1600 r/min

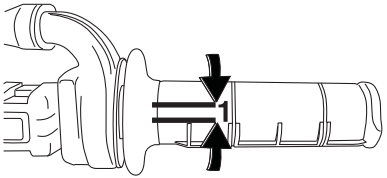
TIP

If the specified idling speed cannot be obtained as described above, have a Yamaha dealer make the adjustment.

EAU21386

Checking the throttle grip free play

Measure the throttle grip free play as shown.



1. Throttle grip free play

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

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

EAU21403

Valve clearance

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

TIP

This service must be performed when the engine is cold.

EAUW3500

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.

EWA10442

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, cargo, and accessories approved for this model.**

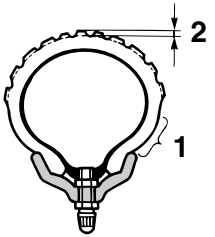
Standard tire pressure:
Front:
100 kPa (1.00 kgf/cm², 15 psi)
Rear:
100 kPa (1.00 kgf/cm², 15 psi)

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 (minimum tire tread depth), 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):
4.0 mm (0.16 in)

Tire information

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

EWA10462

WARNING

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

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

Front tire:
Size:
80/100-21 51R,80/100-21 51M
Manufacturer/model:
PIRELLI/MT320H
KENDA/SOUTHWICK 2 K780F
Rear tire:
Size:
100/100-18 59R,100/100-18 59M
Manufacturer/model:
PIRELLI/MT320
KENDA/SOUTHWICK 2 K780

EWA14391

WARNING

- **Have a Yamaha dealer replace excessively worn tires. Operating the motorcycle 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.**
- **It is not recommended to patch a punctured tube. If unavoidable, however, patch the tube very carefully and replace it as soon as possible with a high-quality product.**

EAU21945

Spoke wheels

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

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

EWA10611

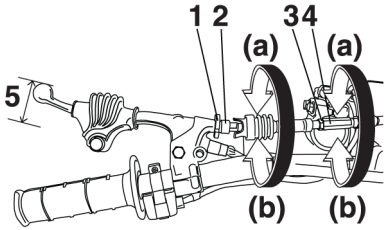
WARNING

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

EAU22038

Adjusting the clutch lever free play

Measure the clutch lever free play as shown.



1. Locknut (clutch lever)
2. Adjusting bolt
3. Locknut (clutch cable)
4. Adjusting nut
5. Clutch lever free play

Clutch lever free play:
10.0–15.0 mm (0.39–0.59 in)

Periodically check the clutch lever free play and, if necessary, adjust it as follows.

1. Slide the rubber cover back at the clutch lever.
2. Loosen the locknut.
3. 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

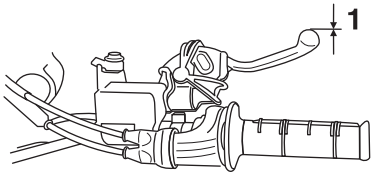
If the specified clutch lever free play could be obtained as described above, skip steps 4–8.

4. Fully turn the adjusting bolt in direction (a) to loosen the clutch cable.
5. Slide the rubber cover back at the clutch cable.
6. Loosen the locknut further down the clutch cable.
7. 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).
8. Tighten the locknut at the clutch cable, and then slide the rubber cover to its original position.

9. Tighten the locknut at the clutch lever, and then slide the rubber cover to its original position.

EAU37914

Checking the brake lever free play



1. Front 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.

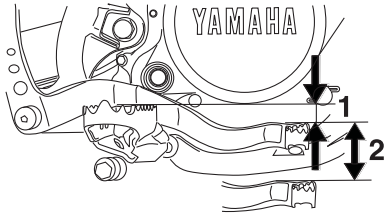
EWA14212

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.

EAUW0655

Adjusting the brake pedal height and free play



1. Brake pedal height
2. Brake pedal free play

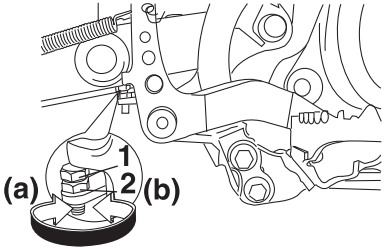
EWA10671

WARNING

It is advisable to have a Yamaha dealer make these adjustments.

Brake pedal height

The top of the brake pedal should be positioned at the specified distance below the top of the footrest as shown.



1. Adjusting bolt
2. Locknut

Brake pedal height:
3.0 mm (0.12 in)

Periodically check the brake pedal height and, if necessary, adjust it as follows.

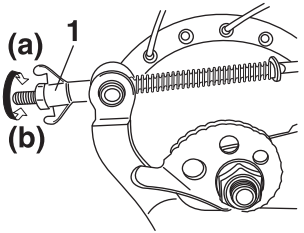
1. Loosen the locknut at the brake pedal.
2. To raise the brake pedal, turn the adjusting bolt in direction (a). To lower the brake pedal, turn the adjusting bolt in direction (b).
3. Tighten the locknut.

EWA11232

WARNING

After adjusting the brake pedal height, the brake pedal free play must be adjusted.

Brake pedal free play



1. Adjusting nut

The brake pedal free play should measure 20.0–30.0 mm (0.79–1.18 in) as shown. Periodically check the brake pedal free play and, if necessary, adjust it as follows.

To increase the brake pedal free play, turn the adjusting nut at the brake rod in direction (a). To decrease the brake pedal free play, turn the adjusting nut in direction (b).

EWAW0031

WARNING

- **After adjusting the drive chain slack or removing and installing the rear wheel, always check the brake pedal free play.**
- **If proper adjustment cannot be obtained as described, have a Yamaha dealer make this adjustment.**

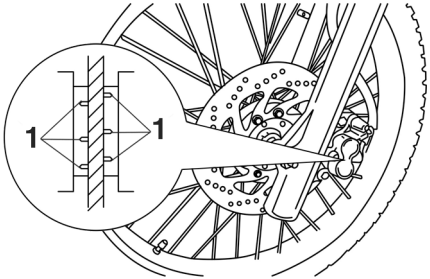
EAU22382

Checking the front brake pads and rear brake shoes

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

EAU36892

Front brake pads

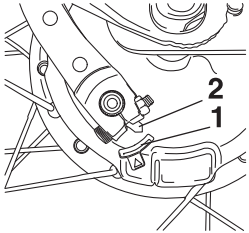


1. Brake pad wear indicator groove

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

EAU22541

Rear brake shoes



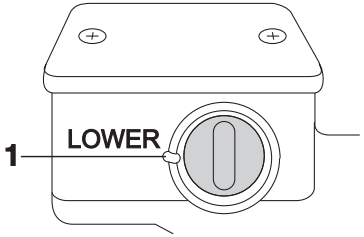
1. Brake shoe wear limit line
2. Brake shoe wear indicator

The rear brake is provided with a wear indicator, which allows you to check the brake shoe wear without having to disassemble the brake. To check the brake shoe wear, check the position of the wear indicator while applying the brake. If a brake shoe has worn to the point that the wear indicator reaches the wear limit line, have a Yamaha dealer replace the brake shoes as a set.

EAU32346

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.



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.

EAU22725

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 brake master cylinder and caliper as well as the brake hose replaced at the intervals listed below or whenever they are damaged or leaking.

- Brake seals: Replace every two years.
- Brake hose: Replace every four years.

EAU22762

Drive chain slack

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

EAU22788

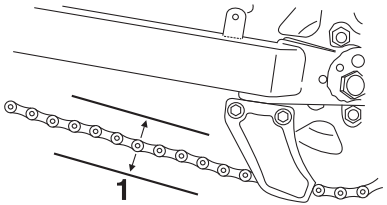
To check the drive chain slack

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.



1. Drive chain slack

Drive chain slack:
45.0–60.0 mm (1.77–2.36 in)

4. If the drive chain slack is incorrect, adjust it as follows. ***NOTICE:*** **Improper drive chain slack will overload the engine as well as other vital parts of the motorcycle and can lead to chain slippage or breakage. To prevent this from occurring, keep the drive chain slack within the specified limits.** [ECA10572]

TIP

When checking the drive chain slack, the chain tensioner should not be touching the drive chain.

EAUW0665

To adjust the drive chain slack

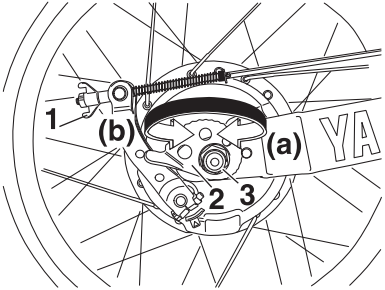
Consult a Yamaha dealer before adjusting the drive chain slack.

1. Loosen the brake pedal free play adjusting nut.
2. Loosen the axle nut.
3. To tighten the drive chain, turn the drive chain slack adjusting plate on each side of the swingarm in direction (a). To loosen the drive

chain, turn the adjusting plate on each side of the swingarm in direction (b), and then push the rear wheel forward.

TIP

Make sure that both adjusting plates are in the same position for proper wheel alignment.



1. Adjusting nut
2. Adjusting plate
3. Axle nut

4. Tighten the axle nut to the specified torque.

Tightening torque:
Axle nut:
80 N·m (8.0 kgf·m, 59 lb·ft)

5. Adjust the brake pedal free play. (See page 7-19.)
6. Make sure that the drive chain adjusting plate is in the same position, the drive chain slack is correct, and the drive chain moves smoothly.

EAU23027

Cleaning and lubricating the drive chain

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

ECA10584

NOTICE

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

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

cants 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

EAU23115

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.

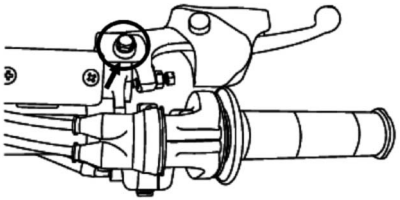
The throttle cable is equipped with a rubber cover. Make sure that the cover is securely installed. Even though the cover is installed correctly, it does not completely protect the cable from water entry. Therefore, use care not to pour water directly onto the cover or cable when washing the vehicle. If the cable or cover becomes dirty, wipe clean with a moist cloth.

EAU23146

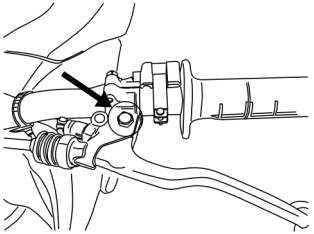
Checking and lubricating the brake and clutch levers

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

Brake lever



Clutch lever

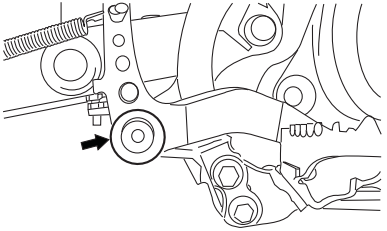


Recommended lubricants:
Brake lever:
Silicone grease
Clutch lever:
Lithium-soap-based grease

EAU23185

Checking and lubricating the brake pedal

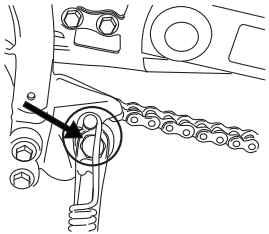
The operation of the brake pedal should be checked before each ride, and the pedal pivot should be lubricated if necessary.



Recommended lubricant:
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

EAU23273

Checking the front fork

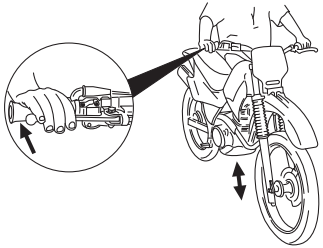
The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

To check the condition

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

To check the operation

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



ECA10591

NOTICE

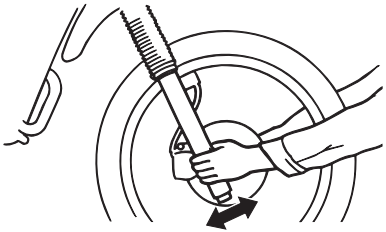
If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.

EAU23285

Checking the steering

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

1. Raise the front wheel off the ground. (See page 7-29.) **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.



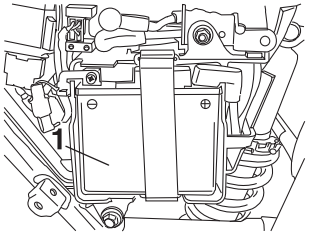
EAU23292

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.

EAU2338A

Battery



1. Battery

The battery is located behind panel . (See page 7-6.)

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

EWA10761

WARNING

- **Electrolyte is poisonous and dangerous since it contains sulfuric acid, which causes severe burns. Avoid any contact with skin, eyes or clothing and al-**

ways 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 to turn the main switch off, then disconnect the negative lead before disconnecting the positive lead.** [ECA16304]
2. If the battery will be stored for more than two months, check it at least once a month and fully charge it if necessary.
3. Fully charge the battery before installation. ***NOTICE:*** **When installing the battery, be sure to turn the main switch off, then connect the positive lead before connecting the negative lead.** [ECA16842]
4. After installation, make sure that the battery leads are properly connected to the battery terminals.

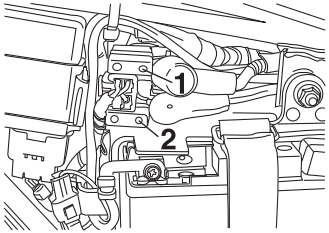
ECA16531

NOTICE

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

EAUW0626

Replacing the fuse



1. Fuse
2. Spare fuse

The fuse holder is located behind panel . (See page 7-6.)
If the fuse is blown, replace it as follows.

1. Push the ignition switch to set it to “OFF”.
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 fuse:
10.0 A

3. Push the ignition switch to set it to “ON”.
4. If the fuse immediately blows again, have a Yamaha dealer check the electrical system.

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.

Front wheel

EAU24361

EAU56231

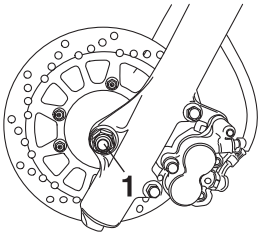
To remove the front wheel

EWA10822

WARNING

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

1. Loosen the axle nut.
2. Lift the front wheel off the ground according to the procedure in the previous section “Supporting the motorcycle”.
3. Remove the axle nut and washer.



1. Axle nut

4. Pull the wheel axle out, and then 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 front wheel

1. Lift the wheel up between the fork legs.

TIP

Make sure that there is enough space between the brake pads before inserting the brake disc into the caliper.

2. Insert the wheel axle, and then install the washer and axle nut.
3. Lower the front wheel so that it is on the ground.
4. Tighten the axle nut to the specified torque.

Tightening torque:
Axle nut:
80 N·m (8.0 kgf·m, 59 lb·ft)

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

Rear wheel

EAU25081

EAU56601

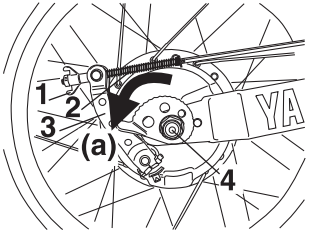
To remove the rear wheel

EWA10822

WARNING

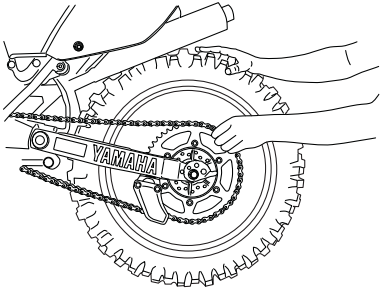
To avoid injury, securely support the vehicle so there is no danger of it falling over.

1. Loosen the axle nut.



1. Adjusting nut
2. Brake rod
3. Brake camshaft lever
4. Axle nut

2. Remove the brake pedal free play adjusting nut, and then disconnect the brake rod from the brake camshaft lever.



3. Turn the drive chain adjusting plate on each side of the swingarm fully in direction (a).
4. Lift the rear wheel off the ground according to the procedure on page 7-29.
5. Remove the axle nut, and then pull the wheel axle out.
6. 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 wheel.

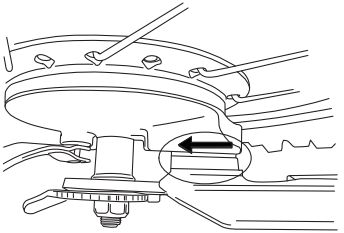
7. Remove the wheel.

To install the rear wheel

1. Insert the wheel axle from the left-hand side.

TIP

Make sure that the drive chain adjusting plates are installed with the punched sides facing to the outside and that the slot in the brake shoe plate fits over the retainer on the swingarm.



2. Install the drive chain onto the rear sprocket, and then install the axle nut.
3. Adjust the drive chain slack. (See page 7-22.)
4. Lower the rear wheel so that it is on the ground.
5. Install the brake rod onto the brake camshaft lever, and then install the brake pedal free play adjusting nut onto the brake rod.
6. Adjust the brake pedal free play. (See page 7-19.)

EWA10661

WARNING

After adjusting the brake pedal free play, check the operation of the brake light.

EAU25853

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 chart represents a quick and easy procedure 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.

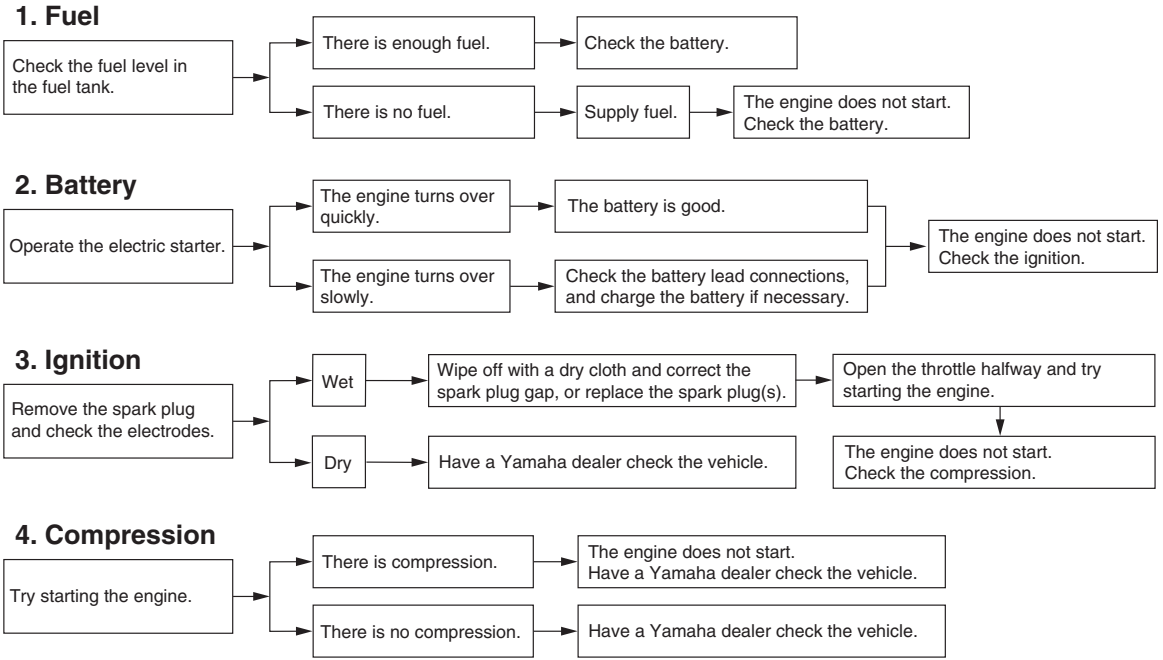
EWA15142

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.

EAU25905

Troubleshooting chart



EAU84433

Care

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

TIP

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

ECA26280

NOTICE

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

- **high-pressure washers or steam-jet cleaners. Excessive water pressure may cause water seepage and deterioration of wheel bearings, brakes, transmission seals and electrical devices. Avoid high-pressure detergent applications such as those available in coin-operated car washers.**
- **harsh chemicals, including strong acidic wheel cleaners, especially on spoke or magnesium wheels.**
- **harsh chemicals, abrasive cleaning compounds, or wax on matte-finished parts. Brushes can scratch and damage the matte-finish, use soft sponge or towel only.**
- **towels, sponges, or brushes contaminated with abrasive cleaning products or strong chemicals such as, solvents, gasoline, rust removers, brake fluid, or antifreeze, etc.**

Before washing

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

[ECA26290]

Washing

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

After washing

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

ECA26320

NOTICE

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

EWA20660

WARNING

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

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

EAU84440

Storage

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

ECA21170

NOTICE

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

Long term storage

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

1. Make all necessary repairs and perform any outstanding maintenance.
2. Follow all instructions in the Care Section of this chapter.
3. Fill up the fuel tank and add fuel stabilizer according to product instructions.
4. Run the engine for 5 minutes to distribute treated fuel through the fuel system.
5. For vehicles with a fuel cock: Turn the fuel cock lever to the off position.
6. For vehicles with a carburetor: To prevent fuel deposits from building up, drain the fuel in the carburetor float chamber into a clean container. Retighten the drain bolt and pour the fuel back into the fuel tank.
7. Use a quality engine fogging oil (YAMALUBE Stor-Rite Engine Fogging Oil) according to product instructions. If engine fogging oil is not available, perform the following steps for each cylinder:
   a. Remove the spark plug cap and spark plug.

b. Pour a teaspoonful of engine oil into the spark plug bore.
c. Install the spark plug cap onto the spark plug, and then place the spark plug on the cylinder head so that the electrodes are grounded. (This will limit sparking during the next step.)
d. Turn the engine over several times with the starter or kick-starter. (This will coat the cylinder wall with oil.) **WARNING! To prevent damage or injury from sparking, make sure to ground the spark plug electrodes while turning the engine over.** [EWA10952]
e. Remove the spark plug cap from the spark plug, and then install the spark plug and the spark plug cap.

8. Lubricate all control cables, pivots, levers and pedals, as well as the sidestand and centerstand (if equipped).
9. Check and correct the tire air pressure, and then lift the vehicle so that all wheels are off the ground. If maintenance stands are not available, turn the wheels a little once a month in order to prevent the tires from becoming degraded in one spot.
10. Cover the muffler outlet with a plastic bag to prevent moisture from entering it.
11. For vehicles with a battery: Remove and fully charge it, or attach a maintenance charger. ***NOTICE:*** **Confirm that the battery and its charger are compatible. Do not charge a VRLA battery with a conventional charger.** [ECA26330]

Dimensions:

Overall length:
2065 mm (81.3 in)
Overall width:
800 mm (31.5 in)
Overall height:
1180 mm (46.5 in)
Seat height:
870 mm (34.3 in)
Wheelbase:
1385 mm (54.5 in)
Ground clearance:
295 mm (11.61 in)
Minimum turning radius:
2.1 m (6.89 ft)

Weight:

Curb weight:
114 kg (251 lb)
Technical permissible mass (Maximum load + Curb weight):
204 kg (450 lb)

Engine:

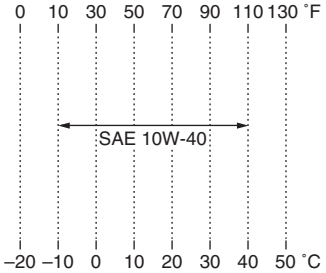
Combustion cycle:
4-stroke
Cooling system:
Air cooled
Valve train:
SOHC
Number of cylinders:
Single cylinder
Displacement:
223 cm^3
Bore × stroke:
70.0 × 58.0 mm (2.76 × 2.28 in)
Starting system:
Electric starter

Engine oil:

Recommended brand:

YAMALUBE®

SAE viscosity grades:
10W-40



Recommended engine oil grade:
API service SG type or higher, JASO standard MA
Engine oil quantity:
Oil change:
1.00 L (1.06 US qt, 0.88 Imp.qt)
With oil filter removal:
1.10 L (1.16 US qt, 0.97 Imp.qt)

Fuel:

Recommended fuel:
Unleaded gasoline (E10 acceptable)
Octane number (RON):
90
Fuel tank capacity:
8.0 L (2.1 US gal, 1.8 Imp.gal)
Fuel reserve amount:
1.8 L (0.48 US gal, 0.40 Imp.gal)

Carburetor:

Type × quantity:
YP26 × 1

Drivetrain:

Gear ratio:
1st:
2.923 (38/13)
2nd:
1.889 (34/18)
3rd:
1.429 (30/21)
4th:
1.125 (27/24)
5th:
0.926 (25/27)
6th:
0.793 (23/29)

Front tire:

Type:
With tube
Size:
80/100-21 51R,80/100-21 51M
Manufacturer/model:
PIRELLI/MT320H
Manufacturer/model:
KENDA/SOUTHWICK 2 K780F
Speed rating:
170 km/h (106 mph)

Rear tire:

Type:

With tube

Size:

100/100-18 59R,100/100-18 59M

Manufacturer/model:

PIRELLI/MT320

Manufacturer/model:

KENDA/SOUTHWICK 2 K780

Speed rating:

170 km/h (106 mph)

Front brake:

Type:

Hydraulic single disc brake

Rear brake:

Type:

Mechanical leading trailing drum brake

Front suspension:

Type:

Telescopic fork

Rear suspension:

Type:

Swingarm (link suspension)

Battery:

Model:

YTX5L-BS

Voltage, capacity:

12 V, 3.4 Ah (10 HR)

EAU40793

Identification numbers

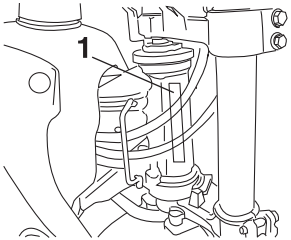
Record the vehicle identification number and model label information in the spaces provided below for assistance when ordering spare parts from a Yamaha dealer or for reference in case the vehicle is stolen.

VEHICLE IDENTIFICATION NUMBER:

MODEL LABEL INFORMATION:

EAU26401

Vehicle identification number



1. Vehicle identification number

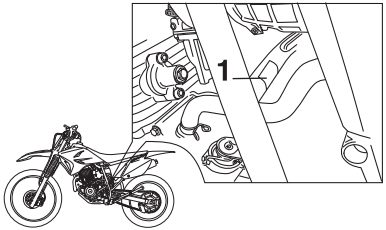
The vehicle identification number is stamped into the steering head pipe. Record this number in the space provided.

TIP

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

EAU26461

Model label

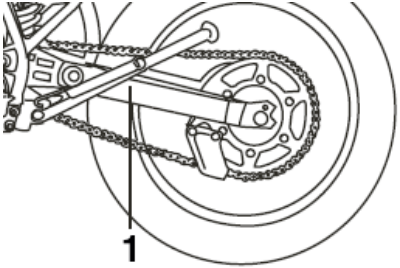


1. Model label

The model label is affixed to the location shown. Record the information on this label in the space provided. This information will be needed when ordering spare parts from a Yamaha dealer.

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.

EAU26562

Motorcycle noise regulation

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:

Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.
“AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW”.
These acts include tampering with the following systems; i.e., modification, removal, etc.

Exhaust system

- Muffler
- Exhaust pipe
- Silencer

Intake system

- Air cleaner case
- Air cleaner element
- Intake duct

EAU26652

Maintenance record

Have a Yamaha dealer complete this record when the motorcycle is serviced.

Maintenance interval	Date of service	Mileage	Servicing dealer name and address	Remarks

EAU61834

YAMAHA MOTOR CORPORATION, U.S.A. 2020 AND LATER MODEL OFF-ROAD MOTORCYCLE LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants that new Yamaha off-road motorcycles purchased from an authorized Yamaha motorcycle dealer in the continental United States will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations. Covered off-road motorcycles are those units certified by Yamaha to EPA noise regulations and come equipped from the factory with USDA-FS approved spark arresters.

THE PERIOD OF WARRANTY for Yamaha off-road motorcycles shall be ninety (90) days from the date of purchase, with no mileage limitation, except for the battery, which is warranted for thirty (30) days from the date of purchase.

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

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

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

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

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

1. Operate and maintain the motorcycle as specified in the appropriate Owner's Manual, and
2. Give notice to an authorized Yamaha motorcycle dealer of any and all apparent defects within ten (10) days after discovery, and make the motorcycle available at that time for inspection and repairs at such dealer's place of business.

EMISSION CONTROL SYSTEM WARRANTY

Yamaha Motor Corporation, U.S.A. also warrants to the ultimate purchaser and each subsequent purchaser of each applicable model Yamaha motorcycle covered by this warranty that the vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S. emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the period 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.

All TT-R Models

Thirty (30) months from the original purchase date

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

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

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

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

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

Q. What costs are my responsibility during the warranty period?
A. The customer's responsibility includes all costs of normal maintenance services, non warranty repairs, accident and collision damages, and oil, oil filters, air filters, spark plugs, and brake shoes.

Q. What are some examples of "abnormal" strain, neglect, or abuse?
A. These terms are general and overlap each other in areas. Specific examples include: Running the machine out of oil, sustained high-rpm, full-throttle, operating the machine with a broken or damaged part which causes another part to fail, damage or failure due to improper or careless transportation and or tie down. If you have any specific questions on operation or maintenance, please contact your dealer for advice.

Q. Does the warranty cover incidental costs such as towing or transportation due to a failure?
A. No. The warranty is limited to repair of the machine itself.

Q. May I perform any or all of the recommended maintenance shown in the Owner's Manual instead of having the dealer do them?
A. Yes, if you are a qualified mechanic and follow the procedures specified in the Owner's and Service Manual. We do recommend, however, that items requiring special tools or equipment be done by Yamaha Motorcycle dealer.

Q. Will the warranty be void or cancelled if I do not operate or maintain my new motorcycle exactly as specified in the Owner's Manual?
A. No. The warranty on a new motorcycle cannot be "voided" or "cancelled." **However, if a particular failure is caused by operation or maintenance other than as shown in the Owner's Manual, that failure may not be covered under warranty.**

Q. What responsibility does my dealer have under this warranty?
A. Each Yamaha Motorcycle dealer is expected to:
1. Completely set up every new machine before sale.
2. Explain the operation, maintenance, and warranty requirements to your satisfaction at the time or sale, and upon your request at any later date.
3. Each Yamaha Motorcycle dealer is held responsible for his setup, service and warranty repair work.

Q. Is the warranty transferable to second owners?
A. Yes. The remainder of the existing warranty can be transferred upon request. The unit has to be inspected and re-registered by an authorized Yamaha Motorcycle dealer for the policy to remain effective.

If your machine requires warranty service, you must take it to any authorized Yamaha Motorcycle dealer within the continental United States. Be sure to bring your warranty registration card or other valid proof of the original date of purchase. If a question or problem arises regarding warranty, first contact the owner of the dealership. Since all warranty matters are handled at the dealer level, this person is in the best position to help you. IF you are still not satisfied and require additional assistance, please write.

YAMAHA MOTOR CORPORATION U.S.A.
CUSTOMER RELATIONS DEPARTMENT
P.O. Box 6555
Cypress, California 90630

When contacting Yamaha Motor Corporation, U.S.A. don't forget to include any important information such as names, addresses, model, VIN (vehicle identification number), dates, and receipts.

CHANGE OF ADDRESS

The federal government requires each manufacturer of a motor vehicle to maintain a complete, up-to-date list of all first purchasers against the possibility of a safety-related defect and recall. This list is compiled from the purchase registrations sent to Yamaha Motor Corporation, U.S.A. by the selling dealer at the time of your purchase.

If you should move after you have purchased your new motorcycle, please advise us of your new address by sending a postcard listing your motorcycle model name, VIN number, dealer number (or dealer's name) as it is shown on your warranty card, your name and new mailing address. Mail to:

YAMAHA MOTOR CORPORATION, U.S.A.
1270 Chastain Road
Kennesaw, GA 30144
Attention: Warranty Department

This will ensure that Yamaha Motor Corporation, U.S.A. has an up-to-date registration record in accordance with federal law.

EAU26753

YAMAHA EXTENDED SERVICE (Y.E.S.)

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

- Y.E.S. is designed and administered by Yamaha Motor Corporation to provide maximum owner satisfaction. It provides uninterrupted factory-backed coverage for extra peace of mind.
- Y.E.S. is flexible. You choose the plan that's right for you: 12 months, 24 months, 36 months or, on certain models, even 48 months beyond your warranty period.
- Y.E.S. is designed and administered by the same Yamaha people who handle your warranty – and it shows in the comprehensive coverage benefits. There are no mileage limitations. Coverage isn't limited to "moving parts" or the "drivetrain" like many other plans. And Y.E.S. covers manufacturing defects just like the warranty. See the sample contract at your Yamaha dealer to see how comforting uninterrupted factory-backed protection can be.
- You don't have to pay anything for covered repairs. There's no deductible to pay, and repairs aren't "pro-rated." You don't have any "out-of-pocket" expenses for covered repairs.
- In addition, Travel and Recreation Interruption Protection (TRIP) is included at no extra cost. TRIP gives you up to $250 reimbursement per occurrence for any reasonable expenses you incur because your Yamaha needs covered service: replacement vehicle rental, emergency towing, phone calls, even food and lodging when you are away from home. This superb coverage goes into effect when you purchase Y.E.S., so it applies to any warranty repairs as well as covered repairs during your entire Y.E.S. plan period.
- Y.E.S. coverage is honored at any authorized Yamaha dealer nationwide.
- Y.E.S. coverage is transferable to a new owner if you sell or trade-in. That can make your Yamaha much more valuable!

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

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

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

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

YAMAHA EXTENDED SERVICE

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

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

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

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PRINTED IN BRAZIL
2026.04