



⚠️ **READ THIS MANUAL CAREFULLY!**
It contains important safety information.

⚠️ **LIRE ATTENTIVEMENT CE MANUEL!**
Il comprend d'importantes informations de sécurité.

⚠️ **¡LEA ESTE MANUAL ATENTAMENTE!**
Contiene indicaciones importantes acerca de la seguridad.

**OWNER'S MANUAL
MANUEL DU PROPRIÉTAIRE
MANUAL DEL PROPIETARIO**

**YFZ
450R**

**YFZ450RD
YFZ450RSED**

18P-28199-67



PRINTED ON RECYCLED PAPER
IMPRIMÉ SUR PAPIER RECYCLÉ
IMPRESO EN PAPEL RECICLADO

PRINTED IN JAPAN
2012.05-0.3×1 CR
(E,F,S)



⚠ READ THIS MANUAL CAREFULLY!
It contains important safety information.

OWNER'S MANUAL

**YFZ
450R**

**YFZ450RD
YFZ450RSED**

⚠ WARNING

This ATV should not be ridden by anyone under 16 years of age.

18P-28199-67-E0



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

EC Declaration of Conformity

conforming to Directive 2006/42/EC

**We, YAMAHA MOTOR CO., LTD. 2500 Shingai, Iwata, Japan,
declare in sole responsibility, that the product**

**YFZ450R (YFZ450RD) (JY4AJ42W0C0003239-)
(YFZ450RSED)**

(Make, model)

**to which this declaration applies, conforms to the essential health
and safety requirements of Directive 2006/42/EC**

(If applicable)

and to the other relevant Directives of EEC

2004/108/EC

(Title and/or number and date of issue of the other Directives of EEC)

(If applicable)

**To effect correct application of the essential health and safety requirements
stated in the Directives of EEC, the following-standards and/or technical
specifications were consulted:**

EN15997, ANSI/SVIA 1-2010

(Title and/or number and date of issue of standards and/or specifications)

Authorized Representative

YAMAHA MOTOR EUROPE N.V.

Koolhovenlaan 101, 1119 NC Schiphol-Rijk, The Netherlands

Signature


Eiji Kato

General Manager

RV Engineering Division

Recreational Vehicle Business Unit

Business Development Operations

YAMAHA MOTOR CO., LTD.

Date of Issue

28 March, 2012

INTRODUCTION

Congratulations on your purchase of the Yamaha YFZ450RD/YFZ450RSED. This ATV represents the result of many years of Yamaha experience in the production of fine sporting, touring, and pacesetting racing machines. With the purchase of this Yamaha, you can now appreciate the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields.

This manual will provide you with a good basic understanding of the features and operation of this ATV. **This manual includes important safety information. It provides information about special techniques and skills necessary to ride the ATV.** It also includes basic maintenance and inspection procedures. If you have any questions regarding the operation or maintenance of your ATV, please consult a Yamaha dealer.




AN IMPORTANT SAFETY MESSAGE:

- Read this manual completely before operating your ATV. Make sure you understand all instructions.
- Pay close attention to the warning and notice labels on the ATV.
- This ATV should not be ridden by anyone under 16 years of age.
- This ATV is a high-performance ATV for off-road use only, for sport-type recreational and competitive use by experienced operators.

IMPORTANT MANUAL INFORMATION

FAILURE TO FOLLOW THE WARNINGS CONTAINED IN THIS MANUAL CAN RESULT IN SERIOUS INJURY OR DEATH.

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.
	A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	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.

EBU17350

IMPORTANT NOTICE

EBU17372

This ATV is designed and manufactured for use on unpaved surfaces only. It is unsafe to operate this ATV on any paved surface, paved street, paved road or motorway.

Please check your local riding laws and regulations before operating this ATV.

EBU17390

**YFZ450RD/YFZ450RSED
OWNER'S MANUAL
©2012 by Yamaha Motor Co., Ltd.
1st edition, April 2012
All rights reserved.
Any reprinting or unauthorized use
without the written permission of
Yamaha Motor Co., Ltd.
is expressly prohibited.
Printed in Japan.**

TABLE OF CONTENTS

LOCATION OF THE WARNING AND SPECIFICATION LABELS	1-1	Seat	4-10
SAFETY INFORMATION	2-1	Adjusting the front shock absorber assemblies	4-11
DESCRIPTION	3-1	Adjusting the rear shock absorber assembly	4-16
Left view	3-1	Handlebar position	4-24
Right view	3-1	PRE-OPERATION CHECKS	5-1
Controls and instruments	3-2	Fuel	5-4
INSTRUMENT AND CONTROL FUNCTIONS	4-1	Engine oil	5-4
Main switch	4-1	Coolant	5-4
Indicator light and warning lights	4-2	Front and rear brakes	5-4
Handlebar switches	4-3	Throttle lever	5-5
Throttle lever	4-4	Drive chain	5-5
Speed limiter	4-5	Tires	5-5
Clutch lever	4-5	Chassis fasteners	5-7
Brake lever	4-6	Instruments, lights and switches	5-7
Brake pedal	4-6	OPERATION	6-1
Parking brake lever	4-7	Starting the engine	6-1
Shift pedal	4-8	Shifting	6-2
Fuel tank cap	4-8	Engine break-in	6-4
Fuel	4-9	Parking	6-4
		Parking on a slope	6-5

Accessories and loading	6-6	Checking the spark plug	8-15
RIDING YOUR ATV	7-1	Engine oil and oil filter element	8-16
GETTING TO KNOW YOUR ATV.....	7-2	Coolant	8-22
RIDE WITH CARE AND GOOD		Cleaning the air filter element	8-23
JUDGMENT	7-2	Cleaning the spark arrester	8-27
BE CAREFUL WHERE YOU RIDE.....	7-9	Adjusting the throttle lever free play	8-29
TURNING YOUR ATV	7-12	Valve clearance	8-30
CLIMBING UPHILL	7-13	Brakes	8-30
RIDING DOWNHILL.....	7-16	Checking the front and rear brake pads ..	8-30
CROSSING A SLOPE.....	7-18	Checking the brake fluid level	8-32
CROSSING THROUGH SHALLOW		Changing the brake fluid	8-33
WATER	7-19	Checking the front brake lever free play ..	8-33
RIDING OVER ROUGH TERRAIN	7-20	Checking the brake pedal height	8-34
SLIDING AND SKIDDING.....	7-21	Adjusting the parking brake free play	8-34
WHAT TO DO IF.....	7-22	Brake light switches	8-36
WHAT TO DO.....	7-22	Adjusting the clutch lever free play	8-36
PERIODIC MAINTENANCE AND		Drive chain slack	8-38
ADJUSTMENT	8-1	Lubricating the drive chain	8-40
Owner's manual and tool kit	8-2	Checking and lubricating the cables	8-40
Periodic maintenance chart for the		Checking and lubricating the brake and	
emission control system	8-3	clutch levers	8-41
General maintenance and lubrication		Checking the shift pedal	8-42
chart	8-5	Checking and lubricating the brake	
Removing and installing the cowling and		pedal	8-42
panels	8-9	Checking the wheel hub bearings	8-42
		Lubricating the swingarm pivots	8-43

Lubricating the upper and lower arm pivots	8-43
Lubricating the steering shaft	8-44
Battery	8-45
Replacing the fuse	8-47
Replacing a headlight bulb	8-48
Adjusting a headlight beam	8-50
Tail/brake light	8-50
Removing a wheel	8-50
Installing a wheel	8-51
Troubleshooting	8-52
Troubleshooting charts	8-53

CLEANING AND STORAGE	9-1
Cleaning	9-1
Storage	9-2

SPECIFICATIONS	10-1
----------------------	------

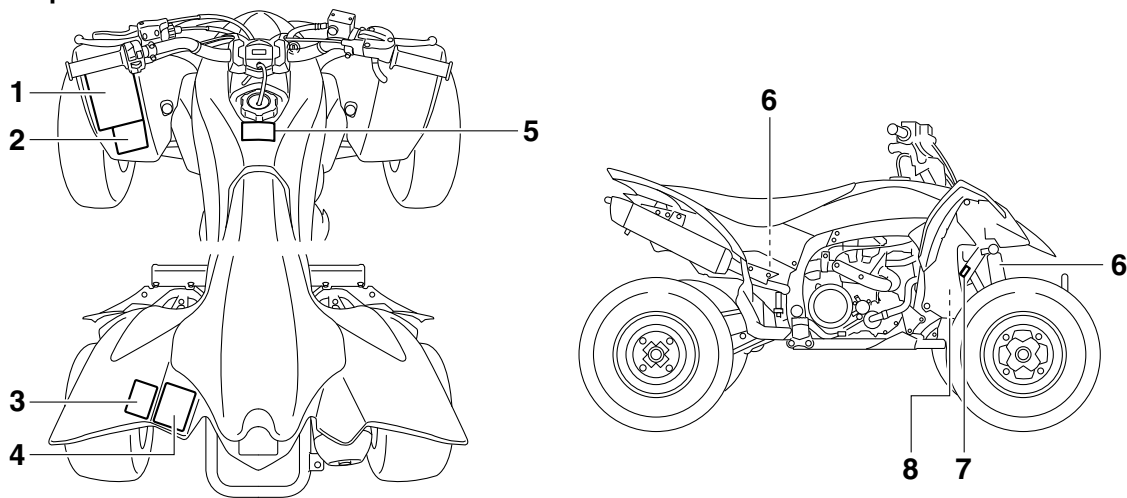
CONSUMER INFORMATION	11-1
Identification numbers	11-1

LOCATION OF THE WARNING AND SPECIFICATION LABELS

Read and understand all of the labels on your ATV. These labels contain important information for safe and proper operation.

Never remove any labels from your ATV. If a label becomes difficult to read or comes off, request a replacement label from your Yamaha dealer.

For Europe

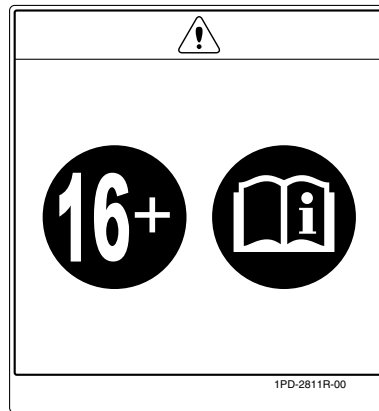


1

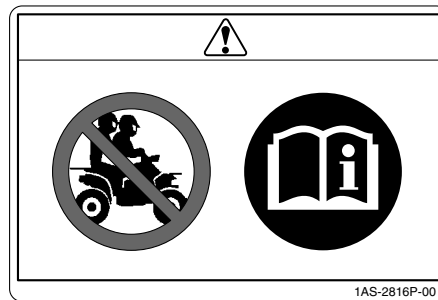
1



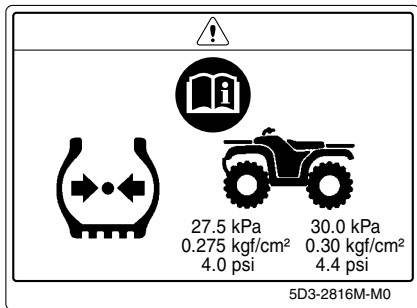
2



3



4



6



5

- Use PREMIUM unleaded gasoline with min. 97 octane (RON).
 - Nur Super Bleifrei mit Mindestoktanzahl 97 (ROZ) tanken.
 - Utilice gasolina sin plomo que tenga como mínimo 97 octanos (RON).
 - Utiliser une essence SUPER sans plomb d'un indice d'octane (RON) de min. 97.
 - Utilizzare benzina PREMIUM super senza piombo con almeno 97 ottani (RON).
 - Gebruik loodvrije SUPERBENZINE met een octaangetal (RON) van minstens 97.
 - Utilize gasolina sem chumbo com índice de octano mínimo de 97 (RON).
 - Använd blyfri PREMIUMBENSIN av 97 oktan (RON) eller mer.
- 5TG-2415E-00

7



















8



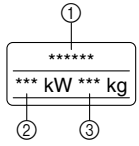

Familiarize yourself with the following pictograms and read the explanatory text, then make sure to check the pictograms that apply to your model.

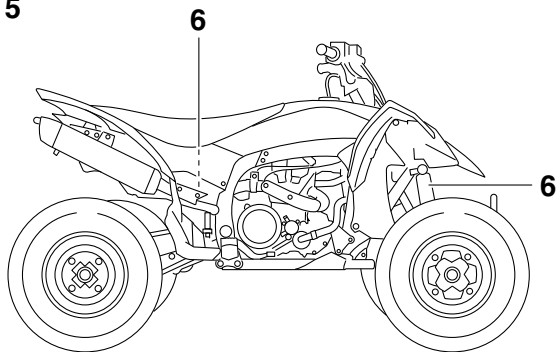
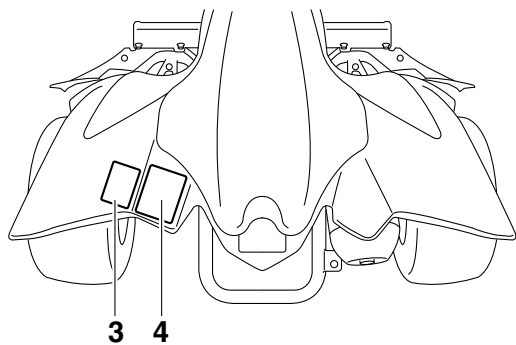
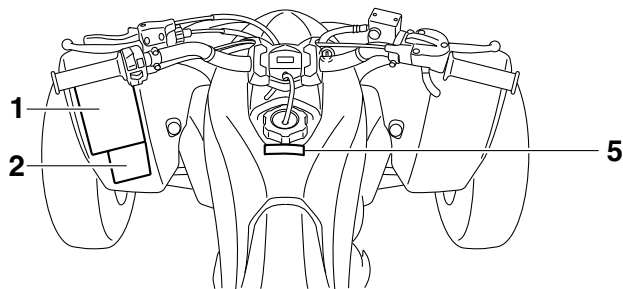
1

	Read the Owner's manual.		NEVER use on paved roads.
	ALWAYS use an approved helmet and protective gear.		NEVER carry passengers.
	For ATV Type 1 category Y12, use from 12 years old. Operation of this ATV by children under the age of 12 increases the risk of severe injury or death. Adult supervision required for children under age 16.		NEVER use with drugs or alcohol.
	Use from 16 years old. Operating this ATV if you are under the age of 16 increases your chance of severe injury or death.		NEVER store fuel or flammable liquids.

	<p>This unit contains high-pressure nitrogen gas. Mishandling can cause an explosion. Do not incinerate, puncture or open.</p>		<p>Turning the ATV in 4WD-LOCK ("DIFF.LOCK") takes more effort. Operate at a slow speed and allow extra time and distance for maneuvers to avoid loss of control.</p>
	<p>Use unleaded gasoline only.</p>		<p>This pictogram shows the loading limits and/or maximum load capacity for this ATV. Follow all load limits and other loading guidelines in this manual. Load may include the driver, passenger, human protective gear, accessories, goods, luggage, and all other load related items. Make sure you do not exceed the load limits. Overloading can cause loss of control. Loss of control can result in severe injury or death.</p>
	<p>Measure the tire pressure when the tires are cold.</p>		<p>This pictogram shows trailer Hitch Tow weight limit. (Combined weight of the trailer and all cargo in the trailer.) Overloading can cause loss of control. Loss of control can result in severe injury or death.</p>
 <p>*** kPa *** kPa *** kgf/cm² *** kgf/cm² ** psi * psi</p>	<p>Adjust the tire pressure. Improper tire pressure can cause loss of control. Loss of control can result in severe injury or death.</p>		<p>This pictogram shows trailer Hitch Tongue weight limit. (Weight on the trailer tongue.) Overloading can cause loss of control. Loss of control can result in severe injury or death.</p>

1

 <p>A rectangular nameplate with a horizontal line. Above the line is a circled '1' pointing to a row of six asterisks. Below the line is the text '*** kW *** kg'. Below 'kW' is a circled '2', and below 'kg' is a circled '3'.</p>	<ul style="list-style-type: none">① Model Name② Max. Power③ Mass In Running Order
 <p>A rectangular nameplate with a horizontal line. Above the line is a circled '1' pointing to a row of four asterisks. Below the line is the text 'YAMAHA MOTOR CO., LTD. 2500 SHINGAI, IWATA, JAPAN'.</p>	<ul style="list-style-type: none">① Year of construction



⚠ WARNING

Improper ATV use can result in **SEVERE INJURY** or **DEATH**.



ALWAYS USE AN APPROVED HELMET AND PROTECTIVE GEAR



NEVER USE ON PUBLIC ROADS



NEVER CARRY PASSENGERS



NEVER USE WITH DRUGS OR ALCOHOL

NEVER operate :

- without proper training or instruction.
- at speeds too fast for your skills or the conditions.
- on public roads - a collision can occur with another vehicle.
- with a passenger - passengers affect balance and steering and increase risk of losing control.


ALWAYS :

- use proper riding techniques to avoid vehicle overturns on hills and rough terrain and in turns.
- avoid paved surfaces - pavement may seriously affect handling and control.

LOCATE AND READ OWNER'S MANUAL. FOLLOW ALL INSTRUCTIONS AND WARNINGS.

SFE-21568-11

⚠ WARNING



Operating this ATV if you are under the age of 16 increases your chance of severe injury or death.

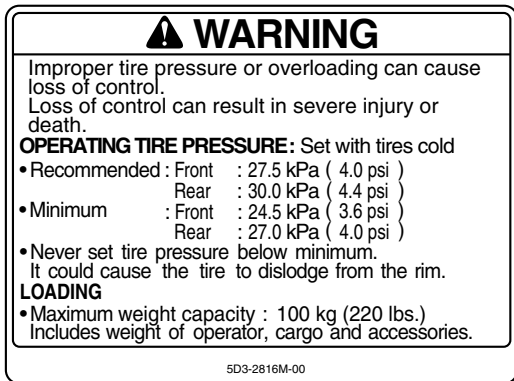
NEVER operate this ATV if you are under age 16.

4D3-2816L-00

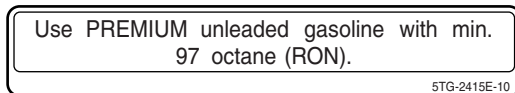
3



4



5



1

6





SAFETY INFORMATION

AN ATV IS NOT A TOY AND CAN BE HAZARDOUS TO OPERATE.

An ATV handles differently from other vehicles, including motorcycles and cars. A collision or roll-over can occur quickly, even during routine maneuvers such as turning and riding on hills or over obstacles, if you fail to take proper precautions.

SEVERE INJURY OR DEATH can result if you do not follow these instructions:

- Read this manual and all labels carefully and follow the operating procedures described.
 - Never operate an ATV without proper training or instruction. Take a training course. Beginners should receive training from a certified instructor. Contact an authorized ATV dealer to find out about the training courses nearest you.
 - Always follow the age recommendation:
 - A child under 16 years old should never operate an ATV with engine size greater than 90 cc.
- Never allow a child under age 16 to operate an ATV without adult supervision, and never allow continued use of an ATV by a child if he or she does not have the abilities to operate it safely.
 - Never carry a passenger on an ATV.
 - This vehicle is intended for off-road use only. Do not operate on any paved surfaces such as: sidewalks, driveways, parking lots, paved roads, public streets or other motorway.
 - Watch carefully for other vehicles when operating on unpaved public streets or roads. Make sure you know your country's laws and regulations before you ride on unpaved public streets or roads.
 - Never operate an ATV without wearing an approved motorcycle helmet that fits properly. You should also wear eye protection (goggles or face shield), gloves, boots, a long-sleeved shirt or a jacket, and long pants.
 - Never consume alcohol or drugs before or while operating this ATV.

- Never operate at speeds too fast for your skills or the riding conditions. Always go at a speed that is proper for the terrain, visibility, operating conditions, and your experience.
- Never attempt wheelies, jumps, or other stunts.
- Always inspect your ATV each time you use it to make sure it is in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in this manual.
- Always keep both hands on the handlebars and both feet on the footrests of the ATV during operation.
- Always go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating the ATV.
- Never operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control the ATV on such terrain. Always be especially cautious on these kinds of terrain.
- Always follow proper procedures for turning as described in this manual. Practice turning at low speeds before attempting to turn at faster speeds and never turn at excessive speeds.
- Never operate the ATV on hills too steep for the ATV or for your abilities. Practice on smaller hills before attempting larger hills.
- Always follow proper procedures for climbing hills as described in this manual. Check the terrain carefully before you start up any hill. Never climb hills with excessively slippery or loose surfaces. Shift your weight forward. Never open the throttle suddenly or make sudden gear changes. Never go over the top of a hill at high speed.
- Always follow proper procedures for going down hills and for braking on hills as described in this manual. Check the terrain carefully before you start down any hill. Shift your weight backward. Never go down a hill at high speed. Avoid going down a hill at an angle that would cause the vehicle to lean sharply to one side. Go straight down the hill where possible.
- Always follow proper procedures for crossing the side of a hill as described in this manual. Avoid hills with excessively slippery or loose surfaces. Shift your weight to the uphill side of the ATV. Never attempt to turn the ATV around on any hill until you have mastered the turning technique described in this manual on level ground. Avoid crossing the side of a steep hill if possible.

- Always use proper procedures if you stall or roll backwards when climbing a hill. To avoid stalling, use the proper gear and maintain a steady speed when climbing a hill. If you stall or roll backwards, follow the special procedure for braking described in this manual. Dismount on the uphill side or to a side if pointed straight uphill. Turn the ATV around and remount, following the procedure described in this manual.
- Always check for obstacles before operating in a new area.
- Never attempt to operate over large obstacles, such as large rocks or fallen trees. Always follow proper procedures when operating over obstacles as described in this manual.
- Always be careful when skidding or sliding. Learn to safely control skidding or sliding by practicing at low speeds and on level, smooth terrain. On extremely slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding or sliding out of control.
- Never operate an ATV in fast flowing water or in water deeper than that recommended in this manual. Remember that wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them several times to let friction dry out the linings.
- Always use the size and type of tires specified in this manual.
- Always maintain proper tire pressure as described in this manual.
- Never exceed the stated load capacity for an ATV. Cargo should be properly distributed and securely attached. Reduce speed and follow instructions in this manual for carrying cargo or pulling a trailer. Allow greater distance for braking.
- Do not operate your ATV during darkness unless it is equipped with a properly functioning headlight. Off-road riding is inherently dangerous and additionally, off-road trails do not have streetlights to guide you.
- Never maintain an ATV without proper knowledge. Contact an authorized ATV dealer to inform you on basic ATV maintenance. Certain maintenance can only be carried out by certified staff.

In the event of an accident

1. If serious injuries are incurred, you may be safer staying next to your vehicle; it may shield you from oncoming riders. Depending on your injuries and position in the trail; you must make a judgment call as to whether you should move to a position off the trail. If you have sustained head, neck, or back injuries, or cannot feel your limbs, you should not move. Keep your helmet on and remain motionless. Lie down next to your vehicle and wait for help.
2. If less serious injuries are incurred and you can walk, then move to a position off the trail. Check yourself for injuries and apply first aid as needed.
3. If your injuries are light, when safe to do so, move your vehicle off the trail to avoid collisions with oncoming riders. Check for injuries and apply first aid as necessary. If you can physically operate your vehicle, inspect your vehicle. If the vehicle is in safe operating condition and you can safely operate it, restart it and ride gently back to camp or other known location where you can receive medical atten-

tion. If necessary, contact your riding party or local authorities to let them know where you are and what has happened.

In the event of a breakdown

1. If your vehicle will not restart or is not in safe operating condition, turn off the main switch and engine stop switch. If the breakdown occurs at twilight or night, leave the main switch on so that your lights may warn other riders of your stopped vehicle.
2. Get out of danger. Check for oncoming vehicles and when safe, push your vehicle to the side of the trail or even off the main trail to avoid any possible collisions with oncoming riders. If you cannot move your vehicle by yourself, when safe, walk to the nearest vantage point and signal an oncoming rider to help you push your vehicle to a safe place off the trail.
3. Inspect your vehicle for any immediate hazardous conditions. The most obvious hazardous conditions are leaking fuel and ungrounded or broken wiring. Visually check for broken wiring and leaking fuel. Leaking fuel can be confirmed by the odor of gasoline.

4. Once immediate safety hazards are confirmed not to exist, you may remove your helmet to more closely inspect your vehicle. Check for external signs of wear, broken parts, fluid leaks, cracks in the frame, suspension damage, wheel damage, and so on. Fuel, oil, and coolant usually give off a noticeable odor.
5. If your vehicle will not restart or if it is unsafe to ride, then turn off all vehicle systems (engine stop switch, main switch, and fuel cock), and then signal or go for help.

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 ATV. Carefully inspect the accessory before using it to make sure that it does not in any way reduce ground clearance, limit suspension travel, steering travel or control operation.
- Accessories fitted to the ATV can create instability due to improper weight distribution.
- Bulky or large accessories may seriously affect the stability of the ATV.
- 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 ATV's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.



Avoid Carbon Monoxide Poisoning

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

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

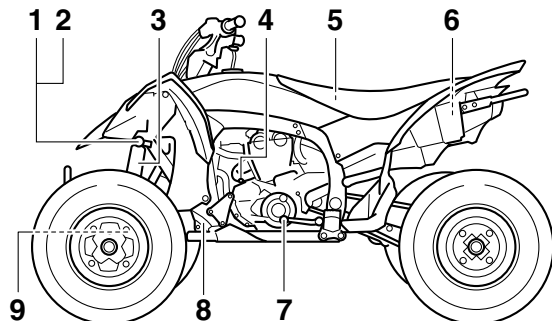
- Do not run engine indoors. Even if you try to ventilate engine exhaust with fans or open windows and doors, carbon monoxide can rapidly reach dangerous levels.
- Do not run engine in poorly ventilated or partially enclosed areas such as barns, garages, or carports.

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

DESCRIPTION

EBU17690

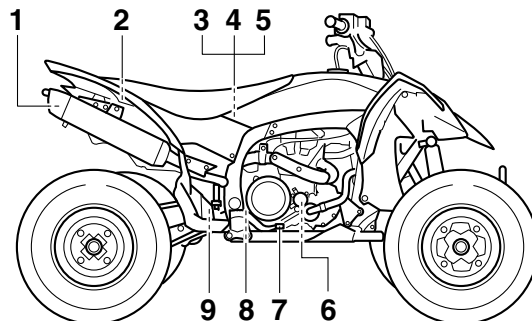
Left view



1. Front shock absorber assembly compression damping force adjusting bolt (for fast compression damping)
2. Front shock absorber assembly compression damping force adjusting screw (for slow compression damping)
3. Front shock absorber assembly spring preload adjusting nut
4. Engine oil tank filler cap
5. Rear brake fluid reservoir
6. Battery
7. Shift pedal
8. Coolant reservoir
9. Front shock absorber assembly rebound damping force adjusting screw

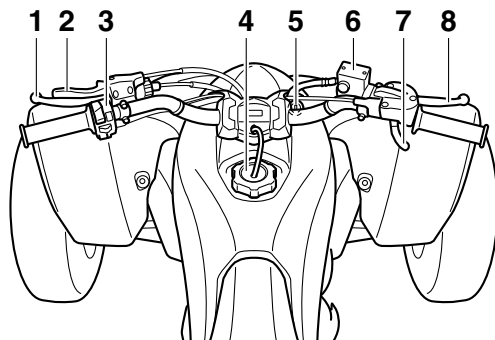
EBU17700

Right view



1. Spark arrester
2. Fuse
3. Rear shock absorber assembly spring preload adjusting nut
4. Rear shock absorber assembly compression damping force adjusting bolt (for fast compression damping)
5. Rear shock absorber assembly compression damping force adjusting screw (for slow compression damping)
6. Oil filter element
7. Brake pedal
8. Rear brake light switch
9. Rear shock absorber assembly rebound damping force adjusting screw

Controls and instruments



1. Clutch lever
2. Parking brake lever
3. Handlebar switches
4. Fuel tank cap
5. Main switch
6. Front brake fluid reservoir
7. Throttle lever
8. Brake lever

TIP


The ATV you have purchased may differ slightly from the figures shown in this manual.

INSTRUMENT AND CONTROL FUNCTIONS

EBU29911


Main switch

The positions of the main switch are as follows:

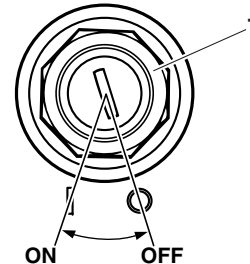
“  ” (on)

4

All electrical systems are supplied with power. The headlights and taillight come on when the light switch is on, and the engine can be started. The key cannot be removed.

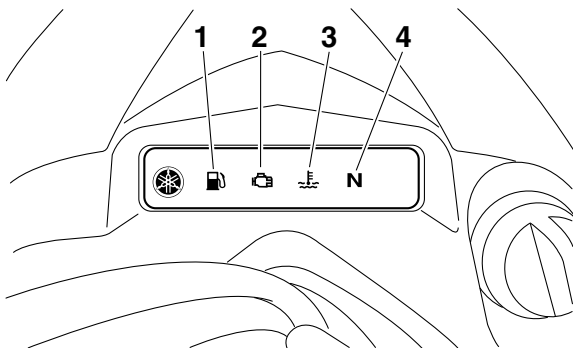
“  ” (off)

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



1. Main switch

Indicator light and warning lights



1. Fuel level warning light “”
2. Engine trouble warning light “”
3. Coolant temperature warning light “”
4. Neutral indicator light “N”

Neutral indicator light “N”

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

Coolant temperature warning light “”

This warning light comes on when the engine overheats. When this occurs during operation, stop the engine as soon as it is safe to do so and allow it to cool down for about 10 minutes.

The electrical circuit of the warning light can be checked by turning the key to “” (on). The warning light should come on for a few seconds, and then go off.

If the warning light does not come on initially when the key is turned to “” (on), or if the warning light remains on, have a Yamaha dealer check the electrical circuit.




NOTICE

- **The engine may overheat if the ATV is overloaded. In this case, reduce the load to specification.**
- **Start the engine after making sure that the warning light is out. Continuous use while the warning light is on may cause damage to the engine.**

EBU29931

Fuel level warning light “”

This warning light comes on when the fuel level drops below approximately 3.4 L (0.90 US gal, 0.75 Imp.gal). When this occurs, refuel as soon as possible.


The electrical circuit of the warning light can be checked by setting the engine stop switch to “” and turning the key to “” (on). The warning light should come on for a few seconds, and then go off. If the warning light does not come on initially when the key is turned to “” (on), or if the warning light remains on, have a Yamaha dealer check the electrical circuit.


4

EBU29942

Engine trouble warning light “”

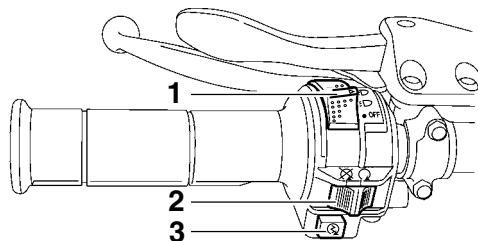
This warning light comes on or flashes when an electrical circuit monitoring the engine is not working correctly. When this occurs, have a Yamaha dealer check the self-diagnosis system.






The electrical circuit of the warning light can be checked by turning the key to “” (on). The warning light should come on for a few seconds, and then go off.

If the warning light does not come on initially when the key is turned to “” (on), or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

EBU18061


Handlebar switches




1. Light switch “ /  / OFF”
2. Engine stop switch “ / ”
3. Start switch “”

EBU18080

Engine stop switch “ / ”

Set this switch to “” before starting the engine. The engine stop switch controls the ignition and stops the engine when it is running. Use this switch

to stop the engine in an emergency situation. The engine will not start or run when this switch is set to “”.



EBU18101

Start switch “”

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

EBU18154

Light switch “ / / OFF”

Set this switch to “” to turn on the low beams and the taillight. Set the switch to “” to turn on the high beams and the taillight. Set the switch to “OFF” to turn off all the lights.

ECB00043

NOTICE

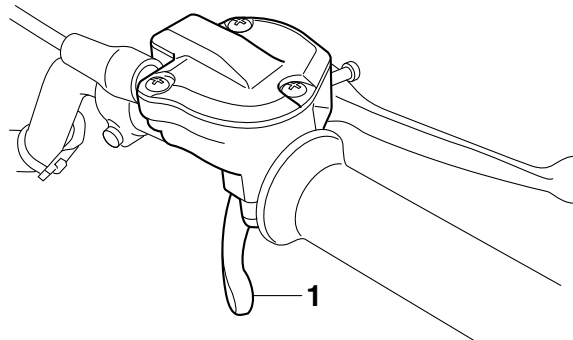
Do not use the headlights with the engine turned off for an extended period of time, otherwise the battery may discharge to the point that the starter motor will not operate properly. If this should happen, remove the battery and recharge it. (See page 8-45.)

EBU18282

Throttle lever

Once the engine is running, pushing the throttle lever will increase the engine speed.

Regulate the speed of the ATV by varying the throttle position. Because the throttle is spring-loaded, the ATV will decelerate, and the engine will return to an idle any time the throttle lever is released.



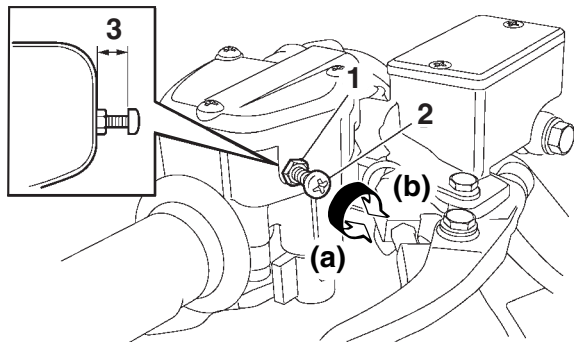
1. Throttle lever

Before starting the engine, check the throttle to be sure it is operating smoothly. Make sure it returns to the idle position as soon as the lever is released.

Speed limiter

Your ATV is equipped with an adjustable speed limiter. The speed limiter keeps the throttle from fully opening, even when the throttle lever is pushed to the maximum.

1. Loosen the locknut.
2. To increase the maximum engine power available and the maximum speed of the ATV, turn the adjusting screw in direction (a). To decrease the maximum engine power available and the maximum speed of the ATV, turn the adjusting screw in direction (b). Do not turn the adjusting screw out more than 12 mm (0.47 in) or the throttle cable could be damaged. Always make sure the throttle lever free play is adjusted to 2.0–4.0 mm (0.08–0.16 in). (See page 8-29.) **WARNING! Improper adjustment of the speed limiter and throttle could cause throttle cable damage or improper throttle operation. You could lose control, resulting in an accident.** [EWB00241]



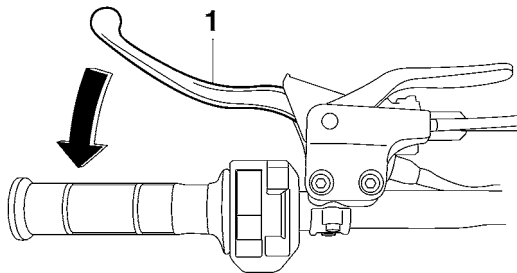
1. Locknut
2. Adjusting screw
3. No more than 12 mm (0.47 in)

3. Tighten the locknut.

Clutch lever

The clutch lever is located on the left handlebar and the ignition circuit cut-off system is incorporated in the clutch lever holder. To disengage the clutch, pull the clutch lever toward the handlebar grip. To engage the clutch, release the clutch lever. The clutch lever should be pulled rapidly and re-

leased slowly for smooth clutch operation. (See page 6-1 for a description of the ignition circuit cut-off system.)



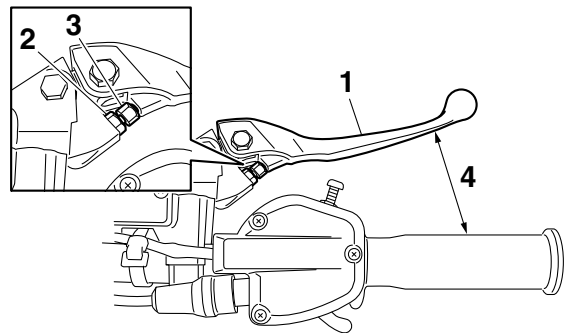
1. Clutch lever

EBU18423

Brake lever

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

The brake lever is equipped with a position adjusting bolt. To adjust the distance between the brake lever and the handlebar grip, hold the brake lever away from the handlebar so it does not contact the adjusting bolt, loosen the locknut, turn the adjusting bolt, and then tighten the locknut.

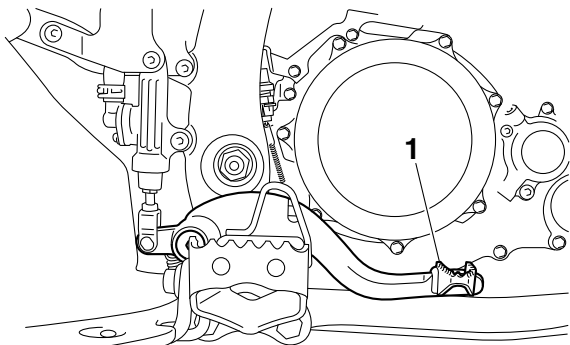


1. Brake lever
2. Locknut
3. Brake lever position adjusting bolt
4. Distance between brake lever and handlebar grip

EBU18432

Brake pedal

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

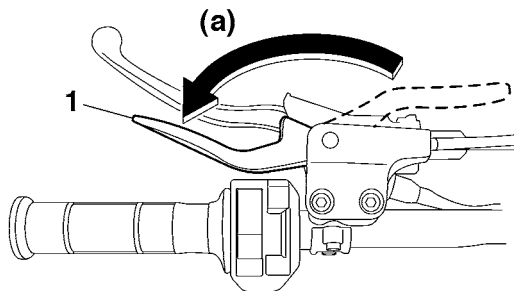


1. Brake pedal

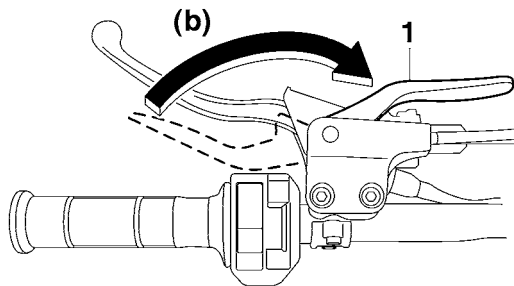
EBU18520

Parking brake lever

Use the parking brake before starting the engine or parking the ATV, especially on a slope. To apply the parking brake, move the parking brake lever in direction (a). To release the parking brake, move the parking brake lever in direction (b).



1. Parking brake lever (locked position)



1. Parking brake lever (unlocked position)

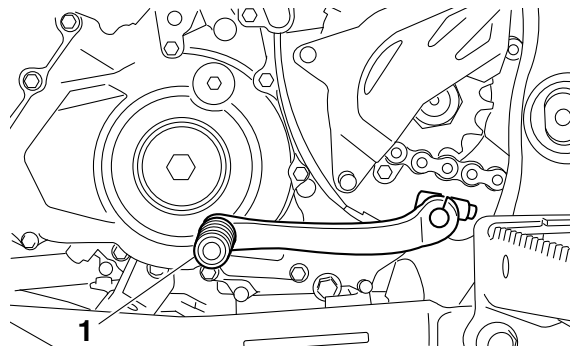
WARNING

- Always set the parking brake before starting the engine. The ATV could start moving unexpectedly if the parking brake is not applied. This could cause loss of control or a collision.
- Always be sure you have released the parking brake before you begin to ride. The brake could overheat if you ride the ATV without releasing the parking brake. You could lose braking performance which could cause an accident. You could also wear out the brakes prematurely.

EBU18530

Shift pedal

This ATV is equipped with a constant-mesh 5-speed transmission. The shift pedal is located on the left side of the engine and is used in combination with the clutch when shifting.

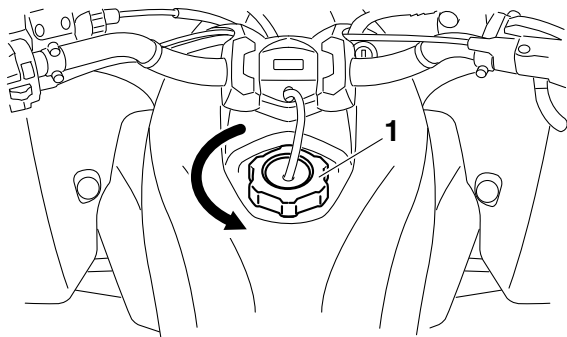


1. Shift pedal

EBU18720

Fuel tank cap

Remove the fuel tank cap by turning it counter-clockwise.



1. Fuel tank cap

EBU18814

Fuel

Make sure there is sufficient gasoline in the tank.

EWB02521

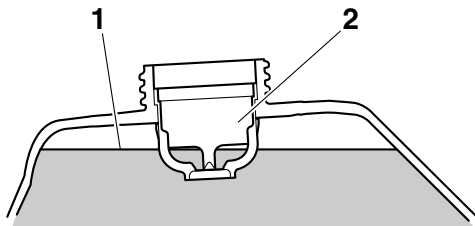
WARNING

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

1. Before refueling, turn off the engine and be sure that no one is sitting on the vehicle. Never refuel while smoking, or while in the vicinity

of sparks, open flames, or other sources of ignition such as the pilot lights of water heaters and clothes dryers.

2. Do not overfill the fuel tank. When refueling, be sure to insert the pump nozzle into the fuel tank filler hole. Stop filling when the fuel reaches the bottom of the filler tube. Because fuel expands when it heats up, heat from the engine or the sun can cause fuel to spill out of the fuel tank.



1. Maximum fuel level
2. Fuel tank filler tube

Recommended fuel:

PREMIUM UNLEADED GASOLINE ONLY
For Europe: PREMIUM UNLEADED GASOLINE ONLY with a research octane number of 97 or higher

Fuel tank capacity:

10.0 L (2.64 US gal, 2.20 Imp.gal)

Fuel reserve amount:

3.4 L (0.90 US gal, 0.75 Imp.gal)

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. [ECB00981]

4. Turn the fuel tank cap fully clockwise to make sure it is securely closed.

EWB02531



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.

ECB00070

NOTICE

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

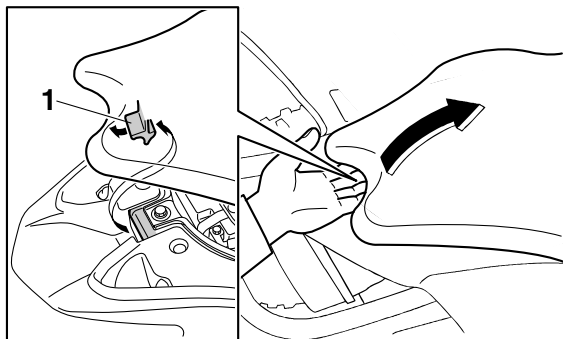
Your Yamaha engine has been designed to use premium unleaded gasoline with a research octane number of 97 or higher. If knocking (or ping-ing) occurs, use a gasoline of a different brand. Use of unleaded fuel will extend spark plug life and reduce maintenance costs.

EBU26731

Seat

To remove the seat

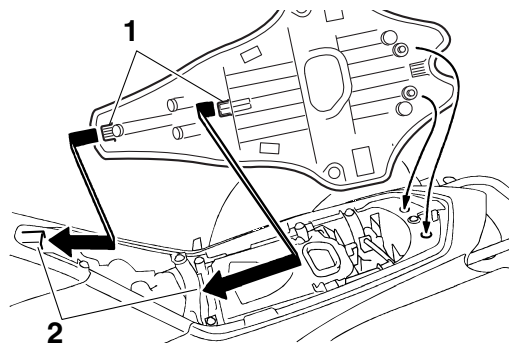
Insert your hand between the rear of the seat and the rear fender, pull the seat lock lever and pull up the seat at the rear.



1. Seat lock lever

To install the seat

Insert the projections on the front of the seat into the seat holders and push down on the seat at the rear. Make sure that the seat is securely fitted.



1. Projection
2. Seat holder

EBU30050

Adjusting the front shock absorber assemblies

These shock absorber assemblies are equipped with a spring preload adjusting nut, a rebound damping force adjusting screw, with a compression damping force adjusting bolt (for fast compression damping), and a compression damping force adjusting screw (for slow compression damping).

WARNING

- **Suspension components become hot during operation. Never touch the compression damping force adjusting bolt and screw, the rebound damping force adjusting screw or the oil reservoir with your bare hand or skin until suspension components have cooled.**
- **Always adjust the shock absorber assemblies on the left and right side to the same setting. Uneven adjustment can cause poor handling and loss of stability, which could lead to an accident.**

NOTICE

Never turn an adjusting mechanism beyond the minimum and maximum settings.

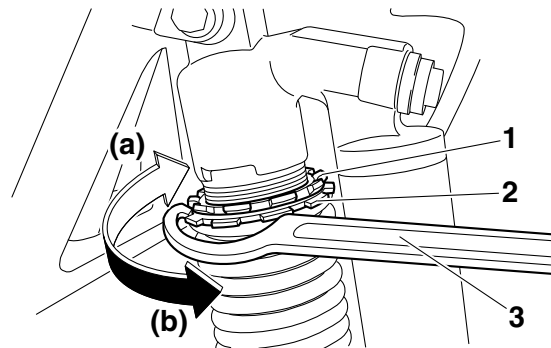
TIP

Although the total number of clicks or turns of a damping force adjusting mechanism may not exactly match the following specifications due to small differences in production, the actual number of clicks or turns always represents the entire adjusting range. To obtain a precise adjustment, it

would be advisable to check the number of clicks or turns of each damping force adjusting mechanism and to modify the specifications as necessary.

Spring preload

1. Loosen the locknut.
2. Turn the spring preload adjusting nut in direction (a) to increase the spring preload and thereby harden the suspension, and in direction (b) to decrease the spring preload and thereby soften the suspension.

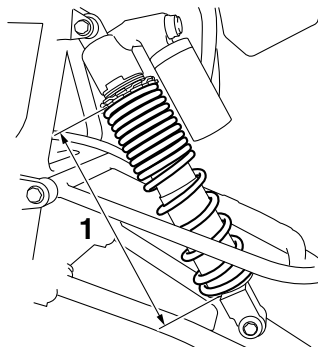


1. Locknut
2. Spring preload adjusting nut
3. Special wrench

TIP

- A special wrench can be obtained at a Yamaha dealer to make this adjustment.
- The spring preload setting is determined by measuring distance A, shown in the illustration. The shorter distance A is, the higher the spring preload; the longer distance A is, the lower the spring preload. With each complete turn of the adjusting nut, distance A is changed by 1.5 mm (0.06 in).

4



1. Distance A

3. Tighten the locknut to the specified torque.
NOTICE: Always tighten the locknut against the adjusting nut, and then tighten it to the specified torque. [ECB00081]

Spring preload setting:

Minimum (soft):

Distance A = 299.8 mm (11.80 in)

Standard:

Distance A = 289.8 mm (11.41 in)

Maximum (hard):

Distance A = 279.8 mm (11.02 in)

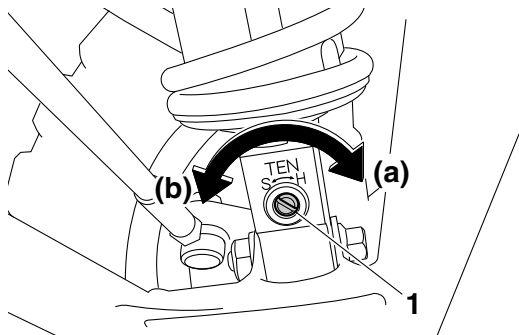
Tightening torque:

Locknut:

50 Nm (5.0 m·kgf, 36 ft·lbf)

Rebound damping force

Turn the rebound damping force adjusting screw in direction (a) to increase the rebound damping force and thereby harden the damping, and in direction (b) to decrease the rebound damping force and thereby soften the damping.



1. Rebound damping force adjusting screw

Rebound damping setting:

Minimum (soft):

20 click(s) in direction (b)*

Standard:

12 click(s) in direction (b)*

Maximum (hard):

1 click(s) in direction (b)*

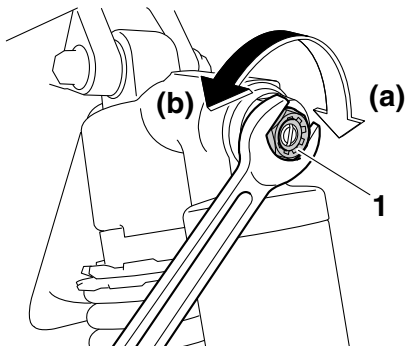
* With the adjusting screw fully turned in direction (a)

4

Compression damping force

Compression damping force (for fast compression damping)

To increase the compression damping force and thereby harden the compression damping, turn the compression damping force adjusting bolt in direction (a). To decrease the compression damping force and thereby soften the compression damping, turn the adjusting bolt in direction (b).



1. Compression damping force adjusting bolt (for fast compression damping)

Compression damping setting (for fast compression damping):

Minimum (soft):

2 turn(s) out from the fully turned in position

Standard:

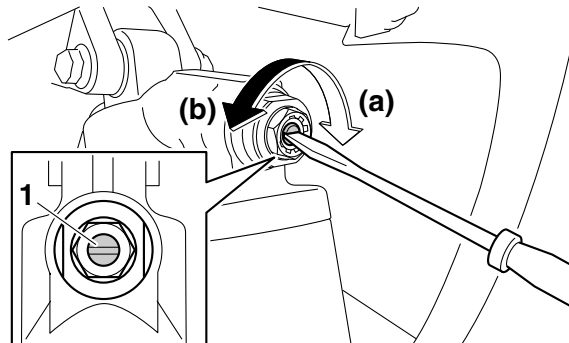
1 turn(s) out from the fully turned in position

Maximum (hard):

Adjusting bolt fully turned in

Compression damping force (for slow compression damping)

To increase the compression damping force and thereby harden the compression damping, turn the compression damping force adjusting screw in direction (a). To decrease the compression damping force and thereby soften the compression damping, turn the adjusting screw in direction (b).



1. Compression damping force adjusting screw (for slow compression damping)

Compression damping setting (for slow compression damping):

Minimum (soft):

18 click(s) in direction (b)*

Standard:

10 click(s) in direction (b)*

Maximum (hard):

1 click(s) in direction (b)*

* With the adjusting screw fully turned in direction (a)

- **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.**

EBU30610

Adjusting the rear shock absorber assembly

This shock absorber assembly is equipped with a spring preload adjusting nut, a rebound damping force adjusting screw, a compression damping force adjusting bolt (for fast compression damping), and a compression damping force adjusting screw (for slow compression damping).

EWB02680

! WARNING

Suspension components become hot during operation. Never touch the compression damping force adjusting bolt and screw, the rebound damping force adjusting screw or the oil reservoir with your bare hand or skin until the suspension components have cooled.

EWB00410

! WARNING

These shock absorber assemblies contain highly pressurized nitrogen gas. Read and understand the following information before handling the shock absorber assemblies.

- **Do not tamper with or attempt to open the cylinder assemblies.**
- **Do not subject the shock absorber assemblies 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 cylinders in any way. Cylinder damage will result in poor damping performance.**

NOTICE

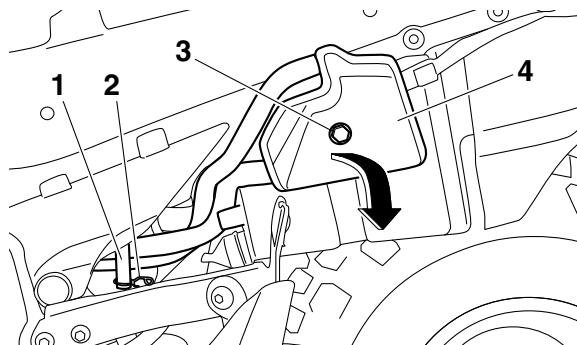
Never turn an adjusting mechanism beyond the minimum and maximum settings.

TIP

Although the total number of clicks or turns of a damping force adjusting mechanism may not exactly match the following specifications due to small differences in production, the actual number of clicks or turns always represents the entire adjusting range. To obtain a precise adjustment, it would be advisable to check the number of clicks or turns of each damping force adjusting mechanism and to modify the specifications as necessary.

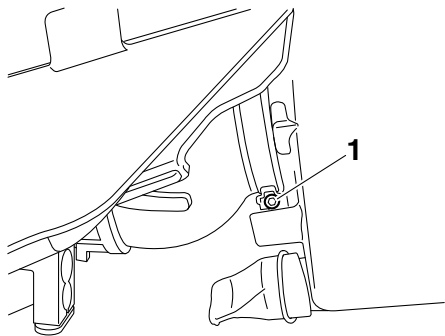
Spring preload

1. Remove the cowling. (See page 8-11 for YFZ450RD or 8-14 for YFZ450RSED.)
2. Remove the clip from the hose holder, remove the bolt, and then move the blow-by gas chamber away from the vehicle.



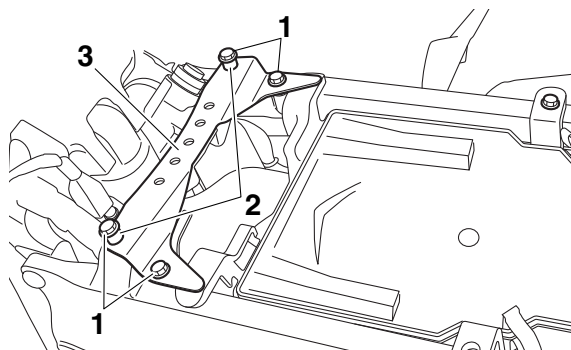
1. Hose holder
2. Clip
3. Bolt
4. Blow-by gas chamber

3. Loosen the clamp screw at the air filter case side.



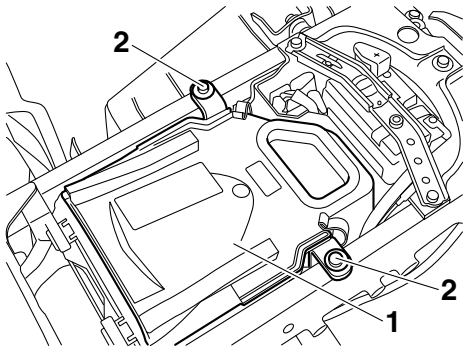
1. Clamp screw

4. Remove the air filter case holding plate by removing the bolts and collars.



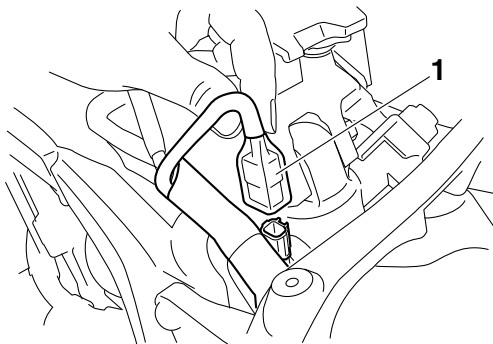
1. Bolt
2. Collar
3. Air filter case holding plate

5. Remove the bolts, and then remove the air filter case by disconnecting it from the air intake duct.



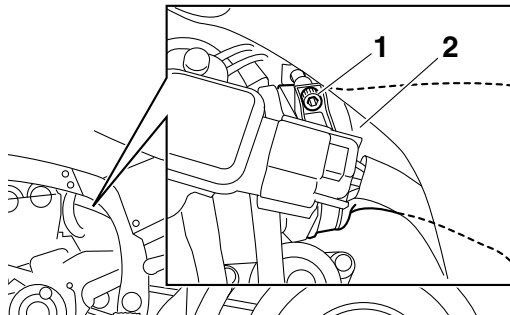
- 1. Air filter case
- 2. Bolt

6. Disconnect the coupler.



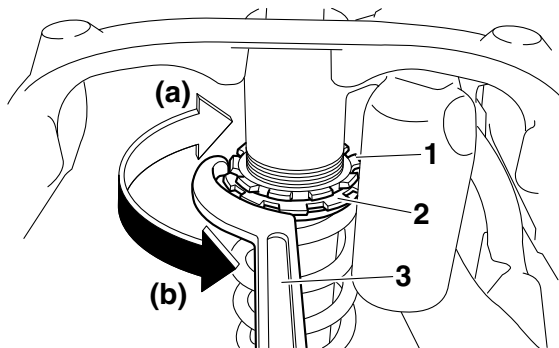
- 1. Coupler

7. Loosen the clamp screw at the throttle body side, and then disconnect the air intake duct from the throttle body.



- 1. Clamp screw
- 2. Air intake duct

8. Loosen the locknut.
 9. Turn the spring preload adjusting nut in direction (a) to increase the spring preload and thereby harden the suspension, and in direction (b) to decrease the spring preload and thereby soften the suspension.



1. Locknut
2. Spring preload adjusting nut
3. Special wrench

TIP

- A special wrench can be obtained at a Yamaha dealer to make this adjustment.
- The spring preload setting is determined by measuring distance A, shown in the illustration. The shorter distance A is, the higher the spring preload; the longer distance A is, the lower the spring preload. With each complete turn of the adjusting nut, distance A is changed by 1.5 mm (0.06 in).

Spring preload setting:

Minimum (soft):

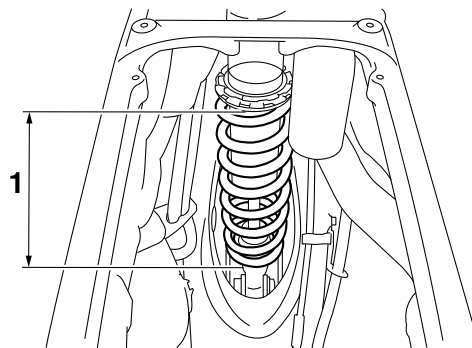
Distance A = 273.5 mm (10.77 in)

Standard:

Distance A = 265.0 mm (10.43 in)

Maximum (hard):

Distance A = 253.5 mm (9.98 in)



1. Distance A

10. Tighten the locknut to the specified torque.
NOTICE: Always tighten the locknut against the adjusting nut, and then tighten it to the specified torque. [ECB00081]

Tightening torque:

Locknut:

30 Nm (3.0 m·kgf, 22 ft·lbf)

11. Connect the air intake duct to the throttle body, and then tighten the clamp screw at the throttle body side. **NOTICE: Make sure that the air intake duct is properly connected to the throttle body, and that the clamp screw is tightened securely.** [ECB00961]
12. Connect the coupler.
13. Connect the air filter case to the air intake duct, place the air filter case in the original position, and then tighten the clamp screw at the air filter case side. **NOTICE: Make sure that the air intake duct is properly connected to the air filter case, and that the clamp screw is tightened securely.** [ECB00971]
14. Install the air filter case bolts, and then tighten them to the specified torque.

Tightening torque:

Air filter case bolt:

7 Nm (0.7 m·kgf, 5.1 ft·lbf)

15. Install the air filter case holding plate by installing the bolts and collars, and then tighten the bolts to the specified torque.

Tightening torque:

Air filter case holding plate bolt:

7 Nm (0.7 m·kgf, 5.1 ft·lbf)

16. Install the blow-by gas chamber by installing the bolt, tighten the bolt to the specified torque, and then install the clip to the hose holder.

Tightening torque:

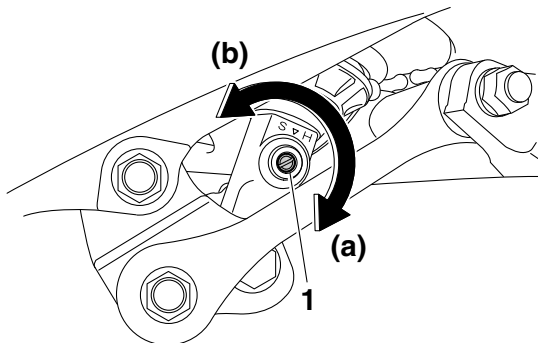
Blow-by gas chamber bolt:

7 Nm (0.7 m·kgf, 5.1 ft·lbf)

17. Install the cowling.

Rebound damping force

Turn the rebound damping force adjusting screw in direction (a) to increase the rebound damping force and thereby harden the damping, and in direction (b) to decrease the rebound damping force and thereby soften the damping.



1. Rebound damping force adjusting screw

Rebound damping setting:

Minimum (soft):

20 click(s) in direction (b)*

Standard:

11 click(s) in direction (b)*

Maximum (hard):

1 click(s) in direction (b)*

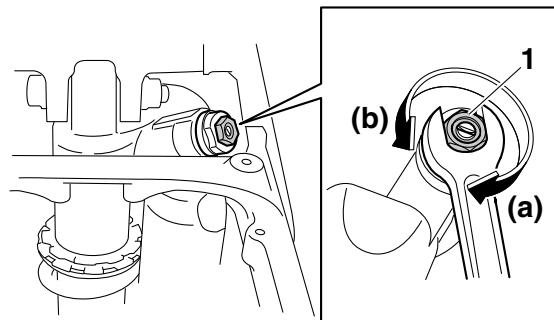
* With the adjusting screw fully turned in direction (a)

Compression damping force

Remove the seat to make this adjustment. (See page 4-10.) If the adjustment is difficult, it may be necessary to remove panels A and C. (See page 8-9.)

Compression damping force (for fast compression damping)

To increase the compression damping force and thereby harden the compression damping, turn the compression damping force adjusting bolt in direction (a). To decrease the compression damping force and thereby soften the compression damping, turn the adjusting bolt in direction (b).



1. Compression damping force adjusting bolt (for fast compression damping)

Compression damping setting (for fast compression damping):

Minimum (soft):

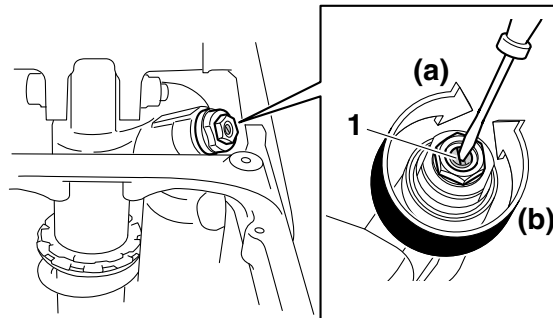
2 turn(s) out from the fully turned in position

Standard:

1 turn(s) out from the fully turned in position

Maximum (hard):

Adjusting bolt fully turned in



1. Compression damping force adjusting screw (for slow compression damping)

Compression damping force (for slow compression damping)

To increase the compression damping force and thereby harden the compression damping, turn the compression damping force adjusting screw in direction (a). To decrease the compression damping force and thereby soften the compression damping, turn the adjusting screw in direction (b).

Compression damping setting (for slow compression damping):

Minimum (soft):

18 click(s) in direction (b)*

Standard:

8 click(s) in direction (b)*

Maximum (hard):

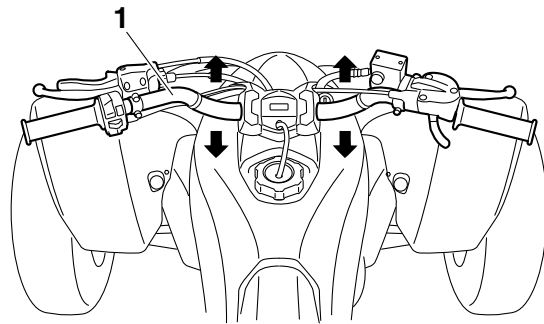
1 click(s) in direction (b)*

* With the adjusting screw fully turned in direction (a)

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.



1. Handlebar

Handlebar position

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

PRE-OPERATION CHECKS

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.

EWB00481



5

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	ROUTINE	PAGE
Fuel	<ul style="list-style-type: none"> • Check fuel level in fuel tank, and add recommended fuel if necessary. • Check fuel line for leakage. Correct if necessary. 	4-9, 5-4
Engine oil	<ul style="list-style-type: none"> • Check oil level in engine oil tank, and add recommended oil to specified level if necessary. • Check ATV for oil leakage. Correct if necessary. 	5-4, 8-16
Coolant	<ul style="list-style-type: none"> • Check coolant level in reservoir, and add recommended coolant to specified level if necessary. • Check cooling system for leakage. Correct if necessary. 	5-4, 8-22

ITEM	ROUTINE	PAGE
Front brake	<ul style="list-style-type: none"> • Check operation. If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear, and replace if necessary. • Check brake fluid level in reservoir, and add specified brake fluid to specified level if necessary. • Check hydraulic system for leakage. Correct if necessary. 	5-4, 8-30, 8-32, 8-33
Rear brake	<ul style="list-style-type: none"> • Check operation. If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear, and replace if necessary. • Check brake fluid level in reservoir, and add specified brake fluid to specified level if necessary. • Check hydraulic system for leakage. Correct if necessary. 	5-4, 8-30, 8-32, 8-34
Clutch	<ul style="list-style-type: none"> • Check operation, and correct if necessary. • Lubricate cable if necessary. • Check lever free play, and adjust if necessary. 	8-36
Throttle lever	<ul style="list-style-type: none"> • Make sure that operation is smooth. Lubricate cable and lever housing if necessary. • Check lever free play, and adjust if necessary. 	5-5, 8-29
Control cables	<ul style="list-style-type: none"> • Make sure that operation is smooth. Lubricate if necessary. 	8-40
Drive chain	<ul style="list-style-type: none"> • Check chain slack, and adjust if necessary. • Check chain condition. Lubricate if necessary. 	5-5, 8-38, 8-40
Wheels and tires	<ul style="list-style-type: none"> • Check wheel condition, and replace if damaged. • Check tire condition and tread depth. Replace if necessary. • Check air pressure. Correct if necessary. 	5-5
Shift pedal	<ul style="list-style-type: none"> • Make sure that operation is smooth. • Correct if necessary. 	8-42
Brake pedal	<ul style="list-style-type: none"> • Make sure that operation is smooth. Lubricate pedal pivoting point if necessary. 	8-42

ITEM	ROUTINE	PAGE
Brake and clutch levers	• Make sure that operation is smooth. Lubricate lever pivoting points if necessary.	8-41
Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened.	5-7
Instruments, lights and switches	• Check operation, and correct if necessary.	5-7

EBU19541

Fuel

Make sure that there is sufficient fuel in the tank. (See page 4-9.)

EBU19560

Engine oil

Make sure that the engine oil is at the specified level. Add oil as necessary. (See page 8-16.)

EBU19631

Coolant

Make sure that the coolant is at the specified level. Add coolant as necessary. (See page 8-22.)

TIP

The coolant level must be checked on a cold engine since the level varies with engine temperature.

EBU19712

Front and rear brakes

Brake lever and brake pedal

- Check that there is no free play in the brake lever. If there is free play, have a Yamaha dealer check the brake system.

- Check for correct brake pedal height. (See page 8-34.) If the pedal height is incorrect, have a Yamaha dealer adjust it.
- Check the operation of the lever and pedal. They should move smoothly and there should be a firm feeling when the brakes are applied. If not, have a Yamaha dealer check the brake system.

Brake fluid level

Check the brake fluid level. Add fluid if necessary. (See page 8-32.)

Specified brake fluid:
DOT 4

Brake fluid leakage

Check to see if any brake fluid is leaking out of the pipe joints or brake fluid reservoirs. Apply the brakes firmly for one minute. If there is any leakage, have a Yamaha dealer check the brake system.

Brake operation

Test the brakes at slow speed after starting out to make sure they are working properly. If the brakes do not provide proper braking performance, check the brake pads for wear. (See page 8-30.)

EBU19761

Throttle lever

Check the operation of the throttle lever. It must open smoothly and spring back to the idle position when released. Have a Yamaha dealer correct if necessary.

EBU19770

Drive chain

Check the condition of the drive chain and check the drive chain slack. Lubricate and adjust the drive chain as necessary. (See page 8-38.)

EBU19794

Tires

Check tire pressure regularly to make sure it is at the recommended specifications. Also check for wear and damage.

Tire pressure

Use the low-pressure tire gauge to check and adjust tire pressures when the tires are cold. Tire pressures must be equal on both sides.

WARNING! Operation of this vehicle with improper tire pressure may cause severe injury or death from loss of control or rollover. Tire pressure below the minimum specified could

also cause the tire to dislodge from the rim under severe riding conditions. [EWB02541] Set tire pressures to the following specifications:

Recommended tire pressure:

Front

27.5 kPa (0.275 kgf/cm², 4.0 psi)

Rear

30.0 kPa (0.300 kgf/cm², 4.4 psi)

Minimum tire pressure:

Front

24.5 kPa (0.245 kgf/cm², 3.6 psi)

Rear

27.0 kPa (0.270 kgf/cm², 4.0 psi)

Maximum tire seating pressure:

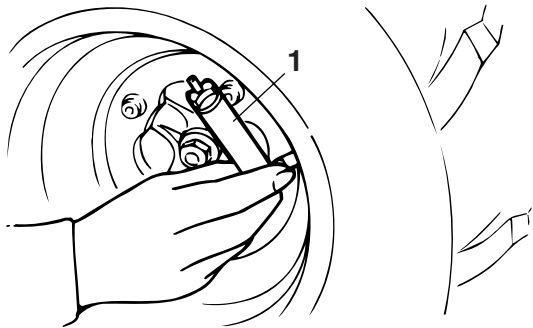
Front

250 kPa (2.5 kgf/cm², 36 psi)

Rear

250 kPa (2.5 kgf/cm², 36 psi)

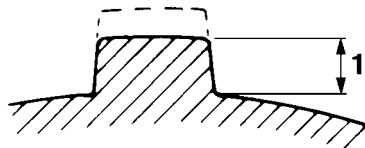
The low-pressure tire gauge is included as standard equipment. Make two measurements of the tire pressure and use the second reading. Dust or dirt in the gauge could cause the first reading to be incorrect.



1. Low-pressure tire gauge

Tire wear limit

When the tire groove decreases to 3 mm (0.12 in) due to wear, replace the tire.



1. Tire wear limit

Tire information

This ATV is equipped with tubeless tires with valves.

EWB02551



Use of improper tires on this ATV may cause loss of control, increasing your risk of an accident.

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

Front:

Manufacturer/model:

DUNLOP/KT352 Radial

Size:

AT21 x 7R10

Type:

Tubeless

Rear:

Manufacturer/model:

DUNLOP/KT357 Radial

Size:

AT20 x 10R9

Type:

Tubeless

EBU19850

Instruments, lights and switches

Check that all instruments, lights and switches are working properly. Correct if necessary.

Aftermarket tires and rims

The tires and rims that came with your ATV 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.

EBU19840

Chassis fasteners

Make sure that all nuts, bolts and screws are properly tightened.

OPERATION

Read the Owner's Manual carefully before riding the ATV. If there is a control or function you do not understand, ask your Yamaha dealer.



WARNING

Read the Owner's Manual carefully to become familiar with all controls in order to help prevent any loss of control, which could cause an accident or injury.

Starting the engine

NOTICE

See the "Engine break-in" section on page 6-4 prior to operating the engine for the first time.

1. Set the parking brake.
2. Turn the key to "  " (on) and the engine stop switch to "  ".

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

- Coolant temperature warning light
- Fuel level warning light
- Engine trouble warning light

NOTICE

If a warning light does not go off, see page 4-2 for the corresponding warning light circuit check. To avoid possible damage, do not operate the ATV if a warning light stays on.

3. Shift the transmission into neutral. The neutral indicator light should come on, if it does not come on, have a Yamaha dealer check the electrical circuit.

TIP

This model is equipped with an ignition circuit cut-off system. The engine can be started under the following conditions.

- The transmission is in neutral.
- The clutch is disengaged with the transmission in gear. However, it is recommended to shift into neutral before starting the engine.

4. Completely close the throttle lever and start the engine by pushing the start switch.

TIP

If the engine fails to start, release the start switch, then push it again. Pause a few seconds before the next attempt. Each cranking should be as short as possible to preserve battery energy. Do not crank the engine more than 10 seconds on each attempt.

ECB00163

NOTICE

6

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

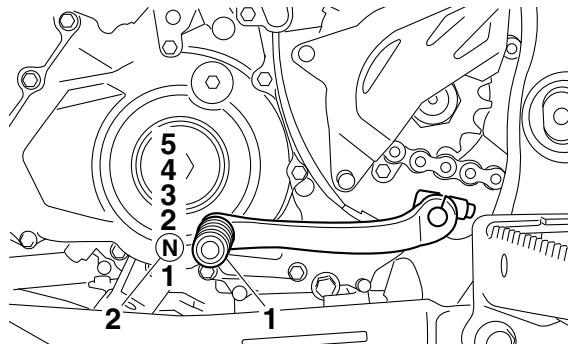
EBU20522

Shifting

This ATV has a 5-speed forward transmission. The transmission allows you to control the amount of power you have available at a given speed or for starting, accelerating, climbing hills, etc.

To shift into neutral, release the throttle lever, apply the clutch, and then repeatedly depress the shift pedal until it stops.

When it stops, it will be in first gear. Raise the pedal slightly to reach the neutral position, and then release the clutch.



1. Shift pedal
2. Neutral position

EBU20593

To start out and accelerate

1. Release the throttle lever, apply the front or rear brake, and then release the parking brake.
2. Pull the clutch lever to disengage the clutch.

3. Shift into first gear, and then release the brake. **NOTICE: Always close the throttle before shifting gears, otherwise damage to the engine and drive train may result.**

[ECB00201]

4. Open the throttle gradually and at the same time, release the clutch lever slowly. **WARNING! Opening the throttle abruptly or releasing the clutch lever too quickly could make the ATV wheelie, which would increase the chance of an accident, including an overturn.** [EWB00731]
5. Once the ATV has attained adequate speed, release the throttle, and at the same time, quickly pull in the clutch lever.
6. Shift the transmission into second gear. (Make sure not to shift the transmission into neutral.)
7. Open the throttle part way and gradually release the clutch lever.
8. Follow the same procedure when shifting to the next higher gear.

EBU20650

To decelerate

When slowing down or stopping, release the throttle and apply the brakes smoothly and evenly. As you slow down, shift to a lower gear. Be sure that the engine has sufficiently slowed before engaging a lower gear. Improper use of the brakes or shifting can cause the tires to lose traction, reducing control and increasing the possibility of an accident.

EWB00710

WARNING

Make sure the engine has sufficiently slowed before shifting to a lower gear. Engaging a lower gear when the engine speed is too high could make the wheels stop rotating and lose traction. This could cause loss of control, an accident and injury. It could also cause engine or drive train damage.

ECB00180

NOTICE

- **Even with the transmission in the neutral position, do not coast for long periods of time with the engine off, and do not tow the ATV for long distances. The transmission is prop-**

erly lubricated only when the engine is running. Inadequate lubrication may damage the transmission.

- **Always use the clutch when changing gears. The engine, transmission and drive train are not designed to withstand the shock of forced shifting and can be damaged by shifting without using the clutch.**

EBU20672

Engine break-in

6

TIP

- For ATVs equipped with an odometer or an hour meter, follow the figures given in km (mi) or the figures given in hours.
- For ATVs not equipped with an odometer or hour meter, follow the figures given in hours.

There is never a more important period in the life of your engine than the first 320 km (200 mi) or 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 320 km (200 mi) or 20 hours. The various parts in the engine wear and polish themselves to the correct operating clear-

ances. During this period, prolonged full-throttle operation or any condition that might result in engine overheating must be avoided.

0–160 km (0–100 mi) or 0–10 hours

Avoid prolonged operation above 1/2 throttle. Vary the speed of the ATV regularly. Do not operate it at one set throttle position.

160–320 km (100–200 mi) or 10–20 hours

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

320 km (200 mi) or 20 hours and beyond

The ATV can now be operated normally.

ECB00220

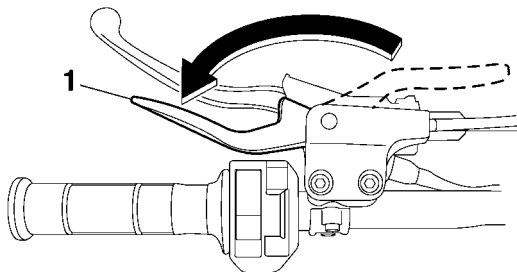
NOTICE

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

EBU26761

Parking

When parking the ATV, shift into first gear, stop the engine, and then apply the parking brake.



1. Parking brake lever (locked position)

EBU20904

Parking on a slope

EWB00851

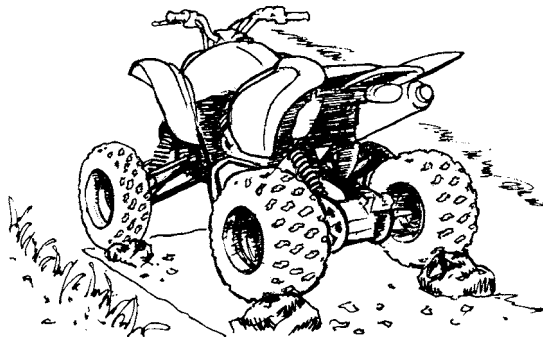


WARNING

Avoid parking on hills or other inclines. Parking on a hill or other incline could cause the ATV to roll out of control, increasing the chance of an accident. If you must park on an incline, place the ATV transversely across the incline, shift into first gear, stop the engine, apply the parking brake, and then block the front and rear wheels with rocks or other objects.

Never park the ATV on hills that are too steep to walk up easily.

1. Bring the ATV to a stop by applying the front brake, shift into first gear, and then stop the engine.
2. With the front and rear brakes applied, apply the parking brake.
3. Release the front and rear brakes.



Accessories and loading

Genuine Yamaha Accessories

Choosing accessories for your ATV 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 ATV. 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 after-

market products or having other modifications performed to your ATV 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 in mind when considering an accessory or operating an ATV which has accessories.

- Accessories should be rigidly and securely mounted. An accessory which can shift position or come off while you are riding could affect your ability to control the ATV.
- Do not mount an accessory where it could interfere with your ability to control the ATV. Examples include (but are not limited to) a heavy or bulky object attached to the handlebars which could make steering difficult, an accessory that limits your ability to move around on the seat, or one that limits your view.
- Use extra caution when riding an ATV with accessories. The ATV may handle differently than it does without accessories.



Never exceed the stated load capacity for this ATV. Overloading this ATV or carrying or towing cargo improperly could cause changes in ATV handling which could lead to an accident. Cargo should be properly distributed and securely attached. Reduce speed when carrying cargo or pulling a trailer. Allow greater distance for braking.

As originally equipped, this ATV is not designed to carry cargo or tow a trailer. If you choose to add accessories so that you can carry cargo or tow a trailer, you must use common sense and good judgment as the stability and handling of an ATV can be changed. When adding accessories, keep the following points in mind:

- Never exceed the weight limits shown. An overloaded ATV can be unstable.

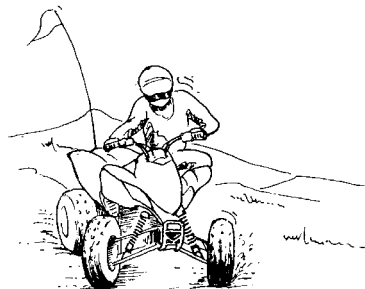
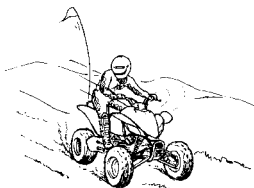
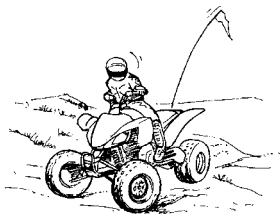
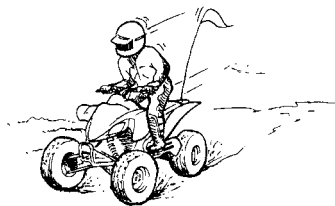
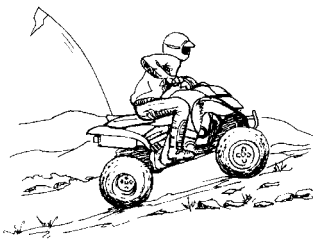
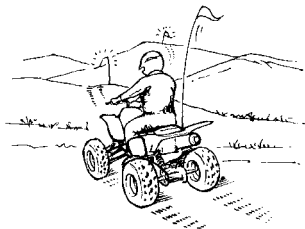
MAXIMUM LOADING LIMIT

ATV loading limit (total weight of rider, cargo, accessories, and tongue):

100.0 kg (220 lb)

- If you are carrying cargo and towing a trailer, include the tongue weight in the maximum ATV load limit.
- Load cargo on the carriers as close to the center of the ATV as possible. Put cargo at the rear of the front carrier, at the front of the rear carrier, and center it.
- Tie down cargo securely to the carriers. Make sure cargo in the trailer cannot move around. A shifting load can cause an accident.
- Make sure the load does not interfere with controls or your ability to see where you are going.
- Ride more slowly than you would without a load. The more weight you carry, the slower you should go. Although conditions vary, it is good practice not to exceed 2nd gear whenever you are carrying heavier loads or when towing a trailer.
- Allow more braking distance. A heavier ATV takes longer to stop.
- Avoid making sharp turns unless at very slow speeds.
- Avoid hills and rough terrain. Choose terrain carefully. Added weight affects the stability and handling of the ATV.

RIDING YOUR ATV



GETTING TO KNOW YOUR ATV

This ATV is intended for recreational use by experienced operators only. This section, Riding your ATV, provides general ATV riding instructions for recreational riding. The skills and techniques described in this section, however, are appropriate for all types of riding. Riding your ATV requires special skills acquired through practice over a period of time. Take the time to learn the basic techniques well before attempting more difficult maneuvers.

Riding your new ATV can be a very enjoyable activity, providing you with hours of pleasure. But it is essential to familiarize yourself with the operation of the ATV to achieve the skill necessary to enjoy riding safely. Before you begin to ride, be sure you have read this Owner's Manual completely and understand the operation of the controls. Pay particular attention to the safety information on pages 2-1–2-6. Also read all warning and notice labels on your ATV.

RIDE WITH CARE AND GOOD JUDGMENT

Get training if you are inexperienced.

EWB01381



- **Do not operate this ATV or allow anyone else to operate it without proper instruction. The risk of an accident is greatly increased if the operator does not know how to operate the ATV properly in different situations and on different types of terrain.**
- **Do not operate this ATV at speeds too fast for your skills or the conditions, as this increases your chances of losing control of the ATV and an accident. Always go at a speed that is proper for the terrain, visibility and operating conditions, and your experience.**

Beginning and inexperienced operators should regularly practice the skills and the operating techniques described in this Owner's Manual.

Riding your ATV requires skills acquired through practice over a period of time.

Do not attempt to operate at maximum performance until you are totally familiar with the ATV's handling and performance characteristics. Take the time to learn the basic techniques well before attempting more difficult maneuvers. Become familiar with this ATV at slow speeds first, even if you are an experienced operator.

Not recommended for children under 16 years of age.

EWB01390

7

⚠ WARNING

A child under 16 should never operate an ATV with engine size greater than 90 cc. Use by children of ATVs that are not recommended for their age can lead to severe injury or death of the child.



This ATV is designed to carry the operator only – passengers prohibited.

The long seat is to allow the operator to shift position as needed during operation. It is not for carrying passengers. **WARNING! Never carry a passenger. Carrying a passenger on this ATV greatly reduces your ability to balance and control this ATV. You could have an accident, resulting in severe injury or death to you and/or your passenger.** [EWB01401]



proved motorcycle helmet increases your chances of a severe head injury or death in the event of an accident. [EWB01411]

Wear eye protection when operating your ATV to reduce the risk of a serious accident or injury. Eye protection, such as a face shield or goggles, may reduce the risk of foreign material getting in your eyes and help prevent loss of vision. **WARNING! Operating without eye protection can result in an accident and increases your chances of a severe injury in the event of an accident.**

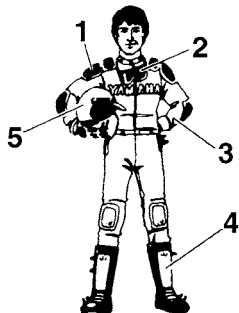
[EWB02611]

Apparel

Always wear the following to reduce risk of injury in an accident:

- Approved motorcycle helmet that fits properly
- Eye protection (goggles, helmet face shield, or protective eyewear)
- Over-the-ankle boots, gloves, long-sleeved shirt or jacket, and long pants

An approved helmet and other personal protective equipment can reduce the severity of injuries in an accident. **WARNING! Operating without an ap-**



1. Protective clothing
2. Goggles
3. Gloves
4. Boots
5. Helmet

7

Do not operate after or while consuming alcohol or drugs.

The operator's performance capability is reduced by the influence of alcohol or drugs. Consuming alcohol or drugs could seriously affect your judgment, cause you to react more slowly, and affect your balance and perception. **WARNING! Never consume alcohol or drugs before or while driving this ATV. You increase your chance of an accident.** [EWB01421]



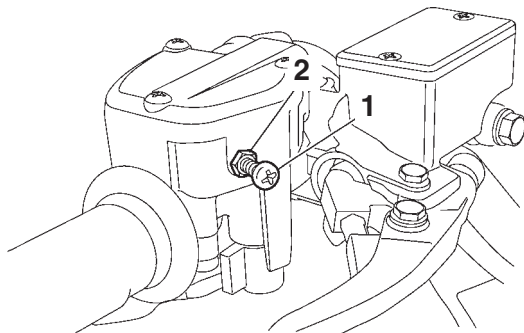
Pre-operation checks

Always inspect your ATV each time you use it to make sure the ATV is in safe operating condition. Perform the pre-operation checks listed on page 5-1. Always follow the inspection and maintenance procedures and schedules described in the Owner's Manual. **WARNING! Failure to inspect the ATV before operating it and to maintain it properly increases the possibility of an accident or equipment damage.** [EWB01431]

Speed limiter

For riders less experienced with this model, the throttle lever housing is equipped with a speed limiter. The speed limiter keeps the throttle from fully

opening, even when the throttle lever is pushed to the maximum. Turning in the adjusting screw limits the maximum engine power available and decreases the maximum speed of the ATV. Turning in the adjusting screw decreases top speed, and turning it out increases top speed. (See page 4-5.)



1. Adjusting screw
2. Locknut

Loading and accessories

EWB00972



Improper loading or towing can increase the risk of loss of control, an overturn, or other accident. To reduce the risk of an accident:

- **Do not exceed the maximum loading limits for the vehicle (see “MAXIMUM LOADING LIMIT” below or vehicle labeling).**
- **Make sure the load does not interfere with your control or ability to see where you are going.**
- **Reduce speed and allow more room to stop. A heavier vehicle takes longer to stop.**
- **Avoid hills and rough terrain. Choose terrain carefully. Use extreme caution when towing or carrying a load on inclines.**
- **Turn gradually and go slowly.**

As originally equipped, this ATV is not designed to carry cargo or tow a trailer. If you choose to add accessories to carry cargo, you must use common sense and good judgment.

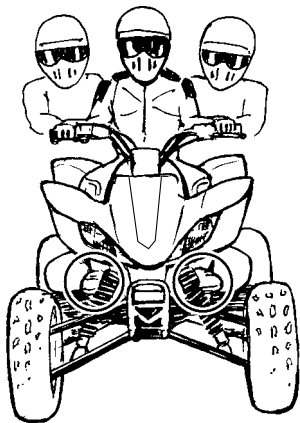
Use extra caution when riding the ATV with additional loads, such as accessories or cargo. The ATV's handling may be adversely affected. Reduce your speed when adding additional loads.

MAXIMUM LOADING LIMIT

ATV loading limit (total weight of cargo, rider, accessories, and tongue):
100.0 kg (220 lb)

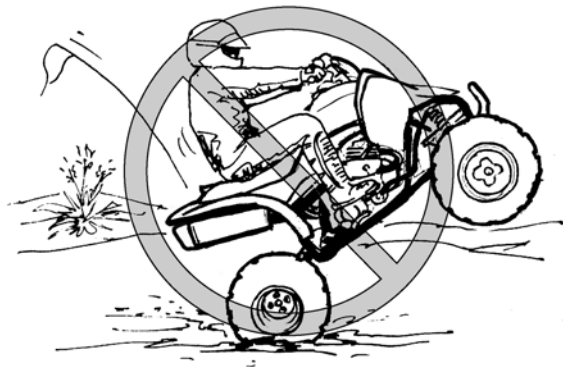
During operation

Always keep your feet on the footrests during operation; otherwise, they may contact the rear wheels. **WARNING! Removing even one hand or foot can reduce your ability to control the ATV or could cause you to lose your balance and fall off of the ATV. If you remove a foot from a footrest, your foot or leg may come into contact with the rear wheels, which could injure you or cause an accident.** [EWB02660]



Avoid wheelies and jumping. **WARNING! Attempting wheelies, jumps, and other stunts increases the chance of an accident, including an overturn. Never attempt stunts, such as wheelies or jumps. Don't try to show off.**

[EWB01481]



Modifications and accessories

Never modify this ATV through improper installation or use of accessories or other modification. All parts and accessories added to this ATV should be genuine Yamaha or equivalent components designed for use on this ATV and should be installed and used according to instructions. If you have

questions, consult an authorized ATV dealer. **WARNING! Operating this ATV with improper modifications may cause changes in handling which in some situations could lead to an accident.** [EWB01491]

Exhaust system

EWB01501

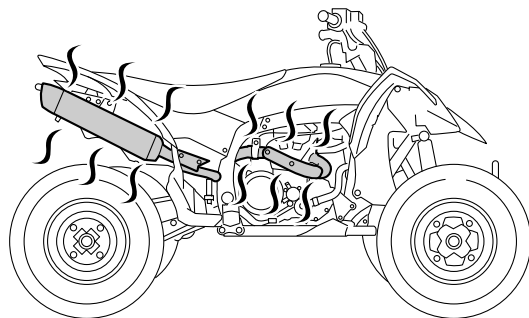
WARNING

- **Dry grass or brush or other combustible material accumulated around the engine area could catch fire. Do not operate, idle, or park the ATV in dry grass or other dry ground cover. Keep the engine area free of dry grass, brush, or other combustible material.**
- **Someone touching the exhaust system during or after operation could be burned. Do not touch the hot exhaust system. Do not park the ATV in a place where others might be likely to touch it.**

The muffler and other engine parts become extremely hot during operation and remain hot after the engine has stopped. To reduce the risk of fire during operation or after leaving the ATV, do not let brush, grass and other materials collect under the vehicle, near the muffler or exhaust pipe, or next to

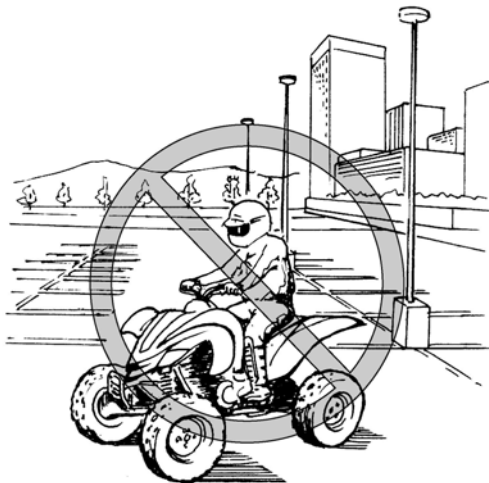
other hot parts. Check under the vehicle after operating in areas where combustible materials may have collected. Do not idle or park the vehicle in long dry grass or other dry ground cover.

To prevent burns, avoid touching the exhaust system. Park the ATV in a place where pedestrians or children are not likely to touch it.



BE CAREFUL WHERE YOU RIDE

This ATV is designed for use on unpaved surfaces only. **WARNING! Paved surfaces may seriously affect handling and control of the ATV, and may cause the ATV to go out of control.** Always avoid paved surfaces, including sidewalks, driveways, parking lots and streets. [EWB01511]



While riding on unpaved public streets or roads may be legal in your area, such operation can increase the risk of collision with other vehicles.

Watch carefully for other vehicles. Make sure you know your country's laws and regulations before you ride on unpaved public streets or roads. Do not ride on any paved public street, road or motorway. **WARNING! Never operate this ATV on any paved street, paved road or motorway. You can collide with another vehicle.** [EWB01521]



Know the terrain where you ride. Ride cautiously in unfamiliar areas. Stay alert for holes, rocks, or roots in the terrain, and other hidden hazards which may cause the ATV to upset. **WARNING! The ATV could go out of control if you do not**

have enough time to react to hidden rocks, bumps, or holes. Go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating the ATV. [EWB01531]

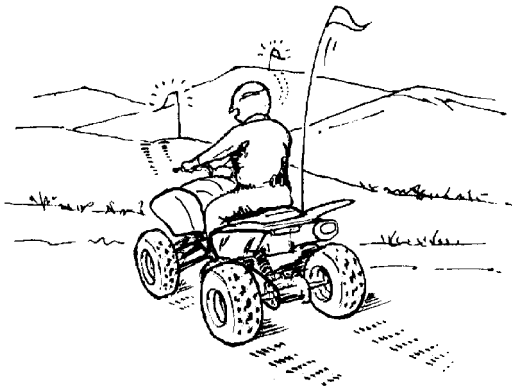


Do not operate on rough, slippery, or loose terrain until you have learned and practiced the skills necessary to control the ATV on such terrain. Always be especially cautious on these kinds of terrain. **WARNING! Failure to use extra care when operating on excessively rough, slippery, or**

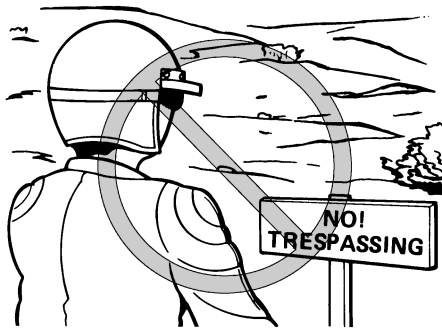
loose terrain could cause loss of traction or ATV control, which could result in an accident, including an overturn. [EWB01541]



When riding in an area where you might not easily be seen, such as desert terrain, mount a caution flag on the ATV. **DO NOT** use the flag pole bracket as a trailer hitch. **WARNING! You could collide with another vehicle if operating in areas where you cannot easily be seen. Mount a caution flag on the ATV to make you more visible. Watch carefully for other vehicles.** [EWB01551]



- 7** Do not ride in areas posted “no trespassing”. Do not ride on private property without getting permission.



Select a large, flat, unpaved area to become familiar with your ATV. Make sure that this area is free of obstacles and other riders. You should practice control of the throttle, brakes, shifting procedures, and turning techniques in this area before trying more difficult terrain.

Set the parking brake and follow the instruction on page 6-1 to start the engine. Once it has warmed up you are ready to begin riding your ATV. As you get on the ATV, be sure not to accidentally move the shift pedal. With the engine idling, pull the clutch lever to disengage the clutch and shift into 1st gear, and then release the parking brake. Open the throttle gradually, and at the same time, release the clutch lever slowly. Once the ATV has attained adequate speed, release the throttle lever and at the same time, quickly pull in the clutch lever and shift into 2nd gear. Open the throttle part way and gradually release the clutch. **WARNING!** If the throttle is applied too abruptly or if the throttle is not released during shifting, or if the shift pedal is not released before applying the throttle, the front wheels may lift off the ground, resulting in a loss of directional con-

trol.^[EWB02631] **NOTICE: Do not shift gears without releasing the throttle. Damage to the engine or drive train may occur.**^[ECB01071]

Use this same procedure as you move into the higher gears. Be sure to coordinate the use of the throttle and shift pedal properly.

Avoid higher speeds until you are thoroughly familiar with the operation of your ATV.

When slowing down or stopping, release the throttle and apply the brakes smoothly and evenly. As you slow down, shift to a lower gear. Be sure that the engine has sufficiently slowed before engaging a lower gear. Improper use of the brakes or shifting can cause the tires to lose traction, reducing control and increasing the possibility of an accident.

TURNING YOUR ATV

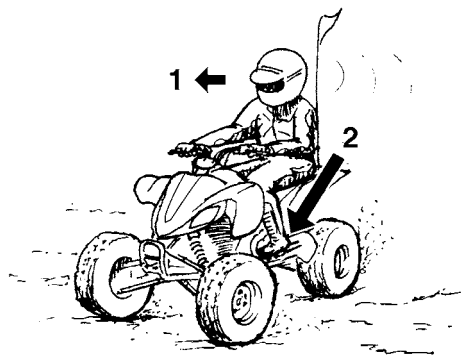
EWB01771



Always follow proper procedures for turning as described in this Owner's Manual. Practice turning at low speeds before attempting to turn at faster speeds. Do not turn at speeds too fast for your skills or the conditions. ATV could go out of control, causing a collision or overturn.

To achieve maximum traction on unpaved surfaces, the two rear wheels turn together at the same speed. Therefore, unless the wheel on the inside of the turn is allowed to slip or lose some traction, the ATV will resist turning. A special turning technique must be used to allow the ATV to make turns quickly and easily. It is essential that this skill be learned first at low speed.

As you approach a curve, slow down and begin to turn the handlebars in the desired direction. As you do so, put your weight on the footrest to the outside of the turn (opposite your desired direction) and lean your upper body into the turn. Use the throttle to maintain an even speed through the turn. This maneuver will let the wheel on the inside of the turn slip slightly, allowing the ATV to make the turn properly.



7

1. Lean towards inside of turn.
2. Support your weight on the outer footrest.

This procedure should be practiced at slow speed many times in a large unpaved area with no obstacles. If an incorrect technique is used, your ATV may continue to go straight. If the ATV doesn't turn, come to a stop and then practice the procedure again. If the riding surface is slippery or loose, it may help to position more of your weight over the front wheels by moving forward on the seat.

Once you have learned this technique, you should be able to perform it at higher speeds or in tighter curves.

Improper riding procedures such as abrupt throttle changes, excessive braking, incorrect body movements, or too much speed for the sharpness of the turn may cause the ATV to tip. If the ATV begins to tip over to the outside while negotiating a turn, lean more to the inside. It may also be necessary to gradually let off on the throttle and steer to the outside of the turn to avoid tipping over.

Remember: Avoid higher speeds until you are thoroughly familiar with the operation of your ATV.

CLIMBING UPHILL

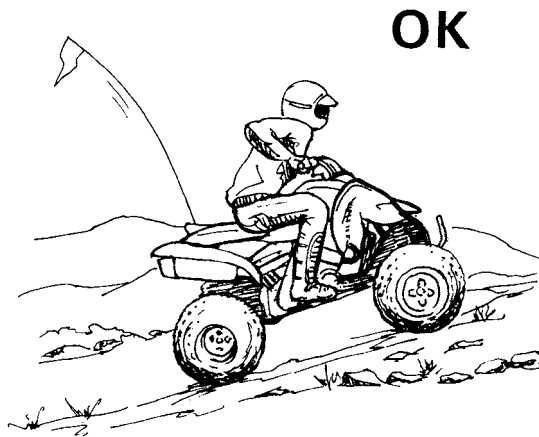
EWB01591

WARNING

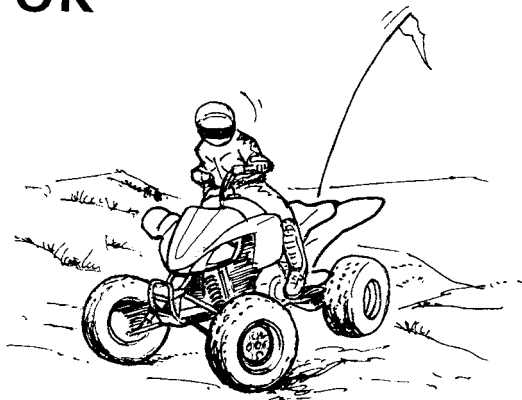
Climbing hills improperly can cause overturns or loss of control. Use proper riding techniques described in this Owner's Manual.

- **Never operate the ATV on hills too steep for the ATV or for your abilities. The ATV can overturn more easily on extremely steep hills than on level surfaces or small hills.**
- **Always check the terrain carefully before you start up any hill. Never climb hills with excessively slippery or loose surfaces.**
- **Shift your weight forward.**

- Never open the throttle suddenly or make sudden gear changes. The ATV could flip over backwards.
 - Never go over the top of any hill at high speed. An obstacle, a sharp drop, or another vehicle or person could be on the other side of the hill.
 - Never attempt to turn the ATV around on any hill until you have mastered the turning technique as described in the Owner's Manual on level ground. Be very careful when turning on any hill.
 - Avoid crossing the side of a steep hill if possible. When crossing the side of a hill, shift your weight to the uphill side of the ATV.
-



OK



7

Do not attempt to climb hills until you have mastered basic maneuvers on flat ground. Always check the terrain carefully before attempting any hill. In all cases avoid inclines with slippery or loose surfaces, or obstacles that might cause you to lose control.

To climb a hill, you need traction, momentum, and steady throttle. Travel fast enough to maintain momentum, but not so fast that you cannot react to changes in the terrain as you climb.

It is important when climbing a hill to make sure that your weight is transferred forward on the ATV. This can be accomplished by leaning forward and, on steeper inclines, standing on the footrests and leaning forward over the handlebars. Whenever possible, ride straight up hills.

Slow down when you reach the crest of the hill if you cannot see clearly what is on the other side – there could be another person, an obstacle, or a sharp drop-off. Use common sense and remember that some hills are too steep for you to climb or descend.

If you are climbing a hill and you find that you have not properly judged your ability to make it to the top, you should turn the ATV around while you still have forward motion (provided you have the room to do so) and go down the hill.

If your ATV has stalled or stopped and you believe you can continue up the hill, restart carefully to make sure you do not lift the front wheels which could cause you to lose control. If you are unable to continue up the hill, dismount the ATV on the up-hill side. Physically turn the ATV around and then descend the hill.

If you start to roll backwards, DO NOT apply the rear brake, and apply the front brake gradually. The ATV could easily tip over backwards. When fully stopped, apply the rear brake as well, and then lock the parking brake. Dismount the ATV immediately on the uphill side or to a side if pointed straight uphill. Turn the ATV around and remount, following the procedure described in the Owner's Manual. **WARNING! Stalling, rolling backwards or improperly dismounting while climbing a hill could result in ATV overturning. If you cannot control the ATV, dismount immediately on the uphill side.** [EWB01802]



RIDING DOWNHILL

EWB01131



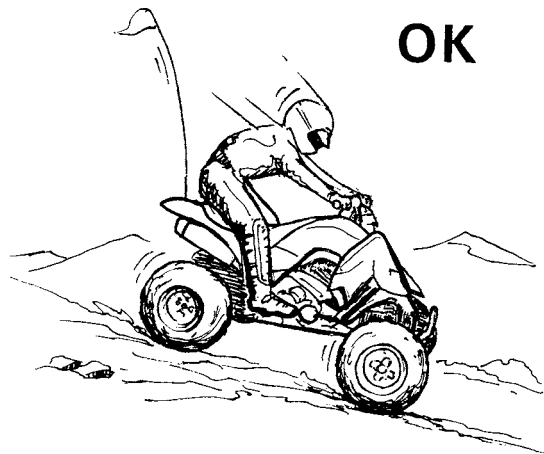
Going down a hill improperly could cause overturns or loss of control. Always follow proper procedures for going down hills as described in this Owner's Manual.

- Always check the terrain carefully before you start down any hill.

- **Never operate the ATV on hills too steep for the ATV or for your abilities. The ATV can overturn more easily on extremely steep hills than on level surfaces or small hills.**
- **Shift your weight backward and to the up side of the hill.**
- **Never go down a hill at high speed.**
- **Avoid going down a hill at an angle that would cause the ATV to lean sharply to one side. Go straight down the hill where possible.**
- **Improper braking can cause the wheels on the uphill side to come off the ground or cause loss of traction. Gradually apply only the rear brake when going downhill.**

When riding your ATV downhill, shift your weight as far to the rear and uphill side of the ATV as possible. Move back on the seat and sit with your arms straight. Choose a low gear which will allow the engine compression to do most of the braking for you. Use caution while descending a hill with loose or slippery surfaces. Braking ability and traction may be adversely affected by these surfaces. Improper braking may also cause a loss of traction. Gradually apply only the rear brake.

Whenever possible, ride your ATV straight downhill. Avoid sharp angles which could allow the ATV to tip or roll over. Carefully choose your path and ride no faster than you will be able to react to obstacles which may appear.



CROSSING A SLOPE

EWB01632

WARNING

Improperly crossing hills or turning on hills could cause loss of control or cause the ATV to overturn.

- **Always follow proper procedures as described in the Owner's Manual.**
- **Avoid hills with excessively slippery or loose surfaces.**
- **Avoid crossing the side of a steep hill.**
- **Shift your weight to the uphill side of the ATV.**
- **Never attempt to turn the ATV around on any hill until you have mastered the turning technique as described in the Owner's Manual on level ground. Be very careful when turning on any hill.**

Traversing a sloping surface on your ATV requires you to properly position your weight to maintain proper balance. Be sure that you have learned the basic riding skills on flat ground before attempting to cross a sloping surface. Avoid slopes with slippery surfaces or rough terrain that may upset your balance.

As you travel across a slope, lean your body in the uphill direction. It may be necessary to correct the steering when riding on loose surfaces by pointing the front wheels slightly uphill. When riding on slopes, be sure not to make sharp turns either up or down hill.

If your ATV does begin to tip over, gradually steer in the downhill direction if there are no obstacles in your path. As you regain proper balance, gradually steer again in the direction you wish to travel.

OK



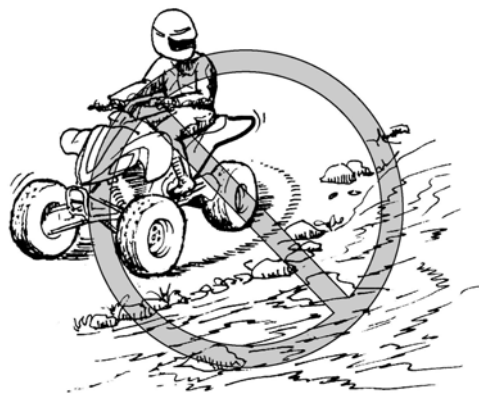
CROSSING THROUGH SHALLOW WATER

EWB01641

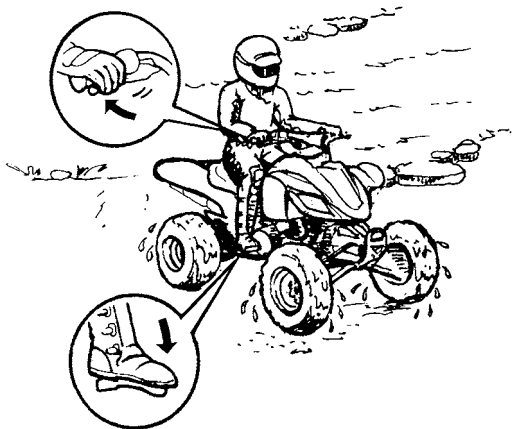
WARNING

Operating this vehicle through deep or fast-flowing water can lead to loss of control or an overturn. To reduce your risk of drowning or other injuries, use care when crossing through water. Never operate this ATV water deeper than the depth specified in your Owner's Manual, as tires may float, increasing the risk of an overturn.

The ATV can be used to cross slow moving, shallow water of up to a maximum of 35 cm (14 in) in depth. Before entering the water, choose your path carefully. Enter where there is no sharp drop off, and avoid rocks or other obstacles which may be slippery or upset the ATV. Drive slowly and carefully.

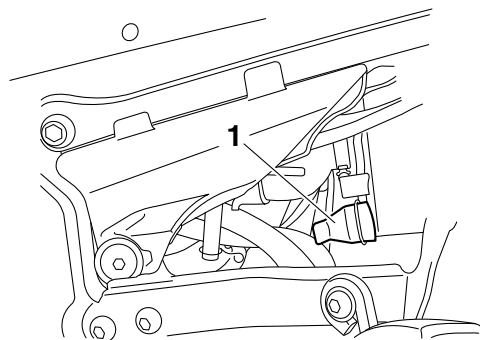


Test your brakes after leaving the water. If necessary, apply them several times to let friction dry out the linings. Do not continue to ride your ATV without verifying that you have regained proper braking ability. **WARNING! Wet brakes may have reduced stopping ability, which could cause loss of control.** [EWB02621]



After riding your ATV in water, be sure to drain the trapped water by removing the check hose at the bottom of the air filter case. **NOTICE: Undrained water can cause damage or improper operation.** [ECB00841]

Wash the ATV in fresh water if it has been operated in salt water or muddy conditions.



1. Air filter case check hose

RIDING OVER ROUGH TERRAIN

EWB01651

WARNING

Riding improperly over obstacles could cause loss of control or a collision. Before operating in a new area, check for obstacles. Never attempt to ride over large obstacles, such as large rocks or fallen trees. When you go over obstacles, always follow proper procedures as described in the Owner's Manual.

Riding over rough terrain should be done with caution. Look out for obstacles which could cause damage to the ATV or could lead to an upset or ac-

cident. Be sure to keep your feet firmly mounted on the footrests at all times. Avoid jumping the ATV as loss of control and damage to the ATV may result.

SLIDING AND SKIDDING

EWB01662

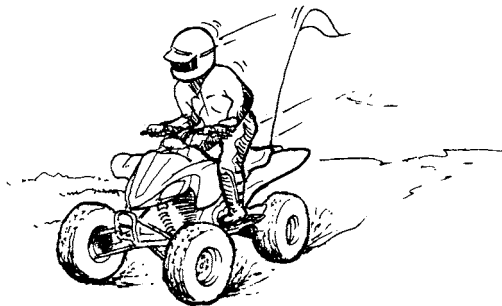
WARNING

Skidding or sliding improperly may cause you to lose control of this ATV. You may also regain traction unexpectedly, which may cause the ATV to overturn.

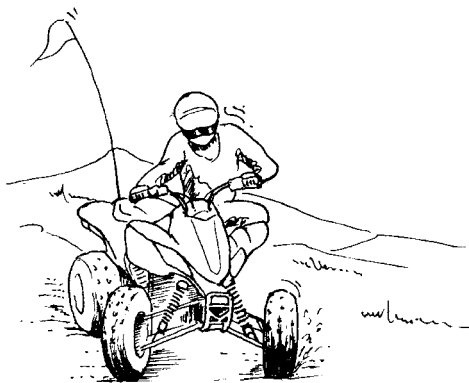
- **Learn to safely control skidding or sliding by practicing at low speeds and on level, smooth terrain.**
- **On extremely slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding or sliding out of control.**

Care should be used when riding on loose or slippery surfaces since the ATV may slide. If unexpected and uncorrected, sliding could lead to an accident.

To reduce the tendency for the front wheels to slide in loose or slippery conditions, positioning your weight over the front wheels will sometimes help.



If the rear wheels of your ATV start to slide sideways, control can usually be regained (if there is room to do so) by steering in the direction of the slide. Applying the brakes or accelerating is not recommended until you have corrected the slide.



With practice, over a period of time, skill at controlled sliding can be developed. The terrain should be chosen carefully before attempting such maneuvers, since both stability and control are reduced. Bear in mind that sliding maneuvers should always be avoided on extremely slippery surfaces such as ice, since all control may be lost.

WHAT TO DO IF...

This section is designed to be a reference guide only. Be sure to read each section on riding techniques completely.

WHAT TO DO...

- If your ATV doesn't turn when you want it to:
Bring the ATV to a stop and practice the turning maneuvers again. Be sure you are putting your weight on the footrest to the outside of the turn. Position your weight over the front wheels for better control. (See page 7-12.)
- If your ATV begins to tip while turning:
Lean more into the turn to regain balance. If necessary, gradually let off the throttle and/or steer to the outside of the turn. (See page 7-12.)
- If your ATV starts to slide sideways:
Steer in the direction of the slide if you have the room. Applying the brakes or accelerating is not recommended until you have corrected the slide. (See page 7-21.)
- If your ATV can't make it up a hill you are trying to climb:
Turn the ATV around if you still have forward speed. If not, stop, dismount on the uphill side of the ATV and physically turn the ATV around. If the ATV starts to slip backwards, **DO NOT USE THE REAR BRAKE** – the ATV may tip over on top of you. Dismount the ATV on the uphill side. (See page 7-13.)

- If your ATV is traversing a sloping surface:
Be sure to ride with your weight positioned towards the uphill side of the ATV to maintain proper balance. If the ATV starts to tip, steer down the hill (if there are no obstacles in your way) to regain balance. If you discover that the ATV is going to tip over, dismount on the uphill side. (See page 7-18.)
- If your ATV encounters shallow water:
Ride slowly and carefully through slow moving water, watching for obstacles. Be sure to let water drain from the ATV and **CHECK YOUR BRAKES FOR PROPER OPERATION** when you come out of the water. Do not continue to ride your ATV until you have regained adequate braking ability. (See page 7-19.)

PERIODIC MAINTENANCE AND ADJUSTMENT

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

WARNING

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

WARNING

Turn off the engine when performing maintenance unless otherwise specified.

- **A running engine has moving parts that can catch on body parts or clothing and electrical parts that can cause shocks or fires.**

- **Running the engine while servicing can lead to eye injury, burns, fire, or carbon monoxide poisoning - possibly leading to death. See page 2-6 for more information about carbon monoxide.**

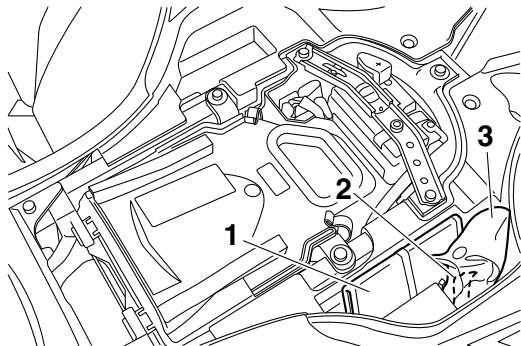
WARNING

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

The intervals given in the periodic maintenance charts should be considered as a general guide under normal riding conditions. However, **DEPENDENT ON THE WEATHER, TERRAIN, GEOGRAPHICAL LOCATION, AND INDIVIDUAL USE, THE MAINTENANCE INTERVALS MAY NEED TO BE SHORTENED.**

Owner's manual and tool kit

Be sure to always keep the owner's manual, the owner's tool kit and the low-pressure tire gauge with the vehicle. Make sure to protect the owner's manual by putting it in the plastic bag, then by placing the bag in the document pouch.



1. Owner's manual
2. Low-pressure tire gauge
3. Owner's tool kit

The service information included in this manual and the tools provided in the owner's tool kit are intended to assist you in the performance of preventive maintenance and minor repairs. However,

additional tools such as a torque wrench may be necessary to perform certain maintenance work correctly.

TIP

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

Periodic maintenance chart for the emission control system

TIP

- For ATVs not equipped with an odometer or an hour meter, follow the month maintenance intervals.
- For ATVs equipped with an odometer or an hour meter, follow the km (mi) or hours maintenance intervals. However, keep in mind that if the ATV isn't used for a long period of time, the month maintenance intervals should be followed.
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

NO.	ITEM	CHECK OR MAINTENANCE JOB	Whichever comes first ⇒	INITIAL			EVERY		
				month	1	3	6	6	12
				km (mi)	320 (200)	1300 (800)	2500 (1600)	2500 (1600)	5000 (3200)
hours	20	80	160	160	320				
1	*	Fuel line		• Check fuel hoses for cracks or other damage, and replace if necessary.			√	√	√
				• Replace.	Every 5 years				
2	*	Spark plug		• Check condition and clean, regap, or replace if necessary.	√	√	√	√	√
3	*	Valves		• Check valve clearance and adjust if necessary.	√		√	√	√
4	*	Crankcase breather system		• Check breather hose for cracks or other damage, and replace if necessary.			√	√	√

NO.	ITEM	CHECK OR MAINTENANCE JOB	Whichever comes first ⇒	INITIAL			EVERY		
				month	1	3	6	6	12
				km (mi)	320 (200)	1300 (800)	2500 (1600)	2500 (1600)	5000 (3200)
				hours	20	80	160	160	320
5	*	Exhaust system	<ul style="list-style-type: none"> • Check for leakage and replace gasket(s) if necessary. • Check for looseness and tighten all screw clamps and joints if necessary. 			√	√	√	
6		Spark arrester	<ul style="list-style-type: none"> • Clean. 			√	√	√	

General maintenance and lubrication chart

TIP

- For ATVs not equipped with an odometer or an hour meter, follow the month maintenance intervals.
- For ATVs equipped with an odometer or an hour meter, follow the km (mi) or hours maintenance intervals. However, keep in mind that if the ATV isn't used for a long period of time, the month maintenance intervals should be followed.
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

NO.	ITEM	CHECK OR MAINTENANCE JOB	Whichever comes first ⇒	INITIAL			EVERY		
				month	1	3	6	6	12
				km (mi)	320 (200)	1300 (800)	2500 (1600)	2500 (1600)	5000 (3200)
				hours	20	80	160	160	320
1	Air filter element	<ul style="list-style-type: none"> • Clean and replace if necessary. 		Every 20–40 hours (more often in wet or dusty areas)					
2	* Clutch	<ul style="list-style-type: none"> • Check operation and adjust if necessary. 		√		√	√	√	
3	* Front brake	<ul style="list-style-type: none"> • Check operation and correct if necessary. • Check fluid level and ATV for fluid leakage, and correct if necessary. 		√	√	√	√	√	
		<ul style="list-style-type: none"> • Replace brake pads. 		Whenever worn to the limit					
4	* Rear brake	<ul style="list-style-type: none"> • Check operation and correct if necessary. • Check fluid level and ATV for fluid leakage, and correct if necessary. 		√	√	√	√	√	
		<ul style="list-style-type: none"> • Replace brake pads. 		Whenever worn to the limit					

NO.	ITEM	CHECK OR MAINTENANCE JOB	Whichever comes first ⇒	INITIAL			EVERY		
				month	1	3	6	6	12
				km (mi)	320 (200)	1300 (800)	2500 (1600)	2500 (1600)	5000 (3200)
hours	20	80	160	160	320				
5	*	Brake hoses	<ul style="list-style-type: none"> • Check for cracks or other damage, and replace if necessary. • Replace. 		√	√	√	√	
				Every 4 years					
6	*	Parking brake	• Check operation and adjust if necessary.	√	√	√	√	√	
7	*	Wheels	• Check runout and for damage, and replace if necessary.	√		√	√	√	
8	*	Tires	<ul style="list-style-type: none"> • Check tread depth and for damage, and replace if necessary. • Check air pressure and balance, and correct if necessary. 	√		√	√	√	
9	*	Wheel hub bearings	• Check for looseness or damage, and replace if necessary.	√		√	√	√	
10	*	Swingarm pivots	<ul style="list-style-type: none"> • Check operation and for excessive play, and replace bearings if necessary. • Lubricate with lithium-soap-based grease. 			√	√	√	
11	*	Upper and lower arm pivots	• Lubricate with lithium-soap-based grease.			√	√	√	
12		Drive chain	<ul style="list-style-type: none"> • Check chain slack and adjust if necessary. • Check rear wheel alignment and correct if necessary. • Clean and lubricate. 	√	√	√	√	√	
13	*	Drive chain roller	• Check for wear and replace if necessary.			√	√	√	

NO.	ITEM	CHECK OR MAINTENANCE JOB	Whichever comes first ⇒	INITIAL			EVERY		
				month	1	3	6	6	12
				km (mi)	320 (200)	1300 (800)	2500 (1600)	2500 (1600)	5000 (3200)
hours	20	80	160	160	320				
14	*	Chassis fasteners	<ul style="list-style-type: none"> Make sure that all nuts, bolts, and screws are properly tightened. 	√	√	√	√	√	
15	*	Shock absorber assemblies	<ul style="list-style-type: none"> Check operation and correct if necessary. Check for oil leakage and replace if necessary. 			√	√	√	
16	*	Rear suspension relay arm and connecting arm pivoting points	<ul style="list-style-type: none"> Check operation and correct if necessary. 		√	√	√	√	
17	*	Steering shaft	<ul style="list-style-type: none"> Lubricate with lithium-soap-based grease. 			√	√	√	
18	*	Steering system	<ul style="list-style-type: none"> Check operation and repair or replace if damaged. Check toe-in and adjust if necessary. 	√	√	√	√	√	
19		Engine oil	<ul style="list-style-type: none"> Change. Check ATV for oil leakage, and correct if necessary. 	√		√	√	√	
20		Engine oil filter element	<ul style="list-style-type: none"> Replace. 	√		√		√	
21	*	Cooling system	<ul style="list-style-type: none"> Check coolant level and ATV for coolant leakage, and correct if necessary. 	√	√	√	√	√	
			<ul style="list-style-type: none"> Replace coolant. 	Every 2 years					
22	*	Moving parts and cables	<ul style="list-style-type: none"> Lubricate. 		√	√	√	√	

NO.	ITEM	CHECK OR MAINTENANCE JOB	Whichever comes first ⇒	INITIAL			EVERY		
				month	1	3	6	6	12
				km (mi)	320 (200)	1300 (800)	2500 (1600)	2500 (1600)	5000 (3200)
hours	20	80	160	160	320				
23	* Throttle lever	<ul style="list-style-type: none"> • Check operation. • Check throttle lever free play, and adjust if necessary. • Lubricate cable and lever housing. 		√	√	√	√	√	
24	* Front and rear brake switches	<ul style="list-style-type: none"> • Check operation and correct if necessary. 		√	√	√	√	√	
25	* Lights and switches	<ul style="list-style-type: none"> • Check operation and correct if necessary. • Adjust headlight beams. 		√	√	√	√	√	

EBU29430

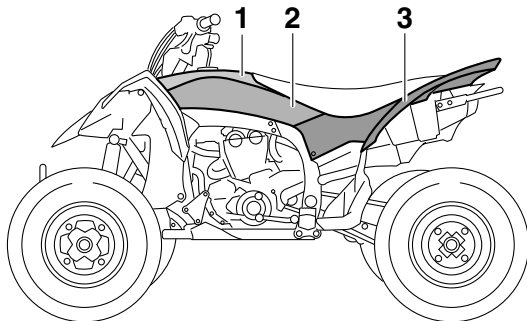
8

TIP

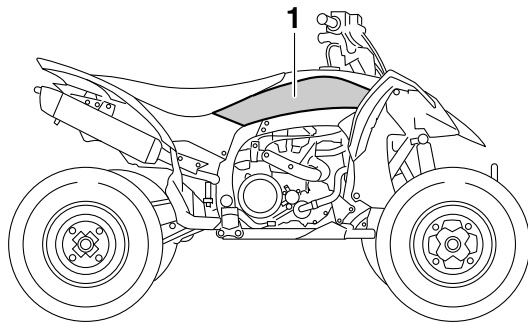
- Some maintenance items need more frequent service if you are riding in unusually wet, dusty, sandy or muddy areas, or at full-throttle.
- Replace the fuel hose every five years and if cracked or damaged.
- Hydraulic brake service
 - Regularly check and, if necessary, correct the brake fluid level.
 - 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.

Removing and installing the cowling and panels

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



1. Panel A
2. Panel B
3. Cowling



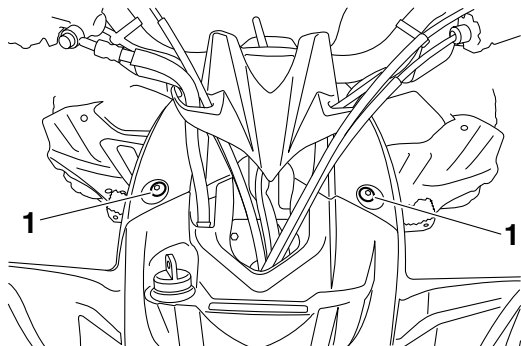
1. Panel C

EBU29538

Panel A (YFZ450RD)

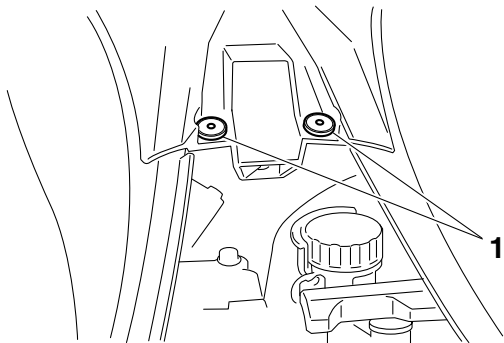
To remove the panel

1. Remove the seat. (See page 4-10.)
2. Remove the fuel tank cap by turning it counterclockwise. (See page 4-8.) **NOTICE: Make sure that no foreign material enters the fuel tank.** [ECB01051]
3. Remove the bolts.



1. Bolt

4. Remove the quick fasteners, and then slide the panel backward and pull upward.

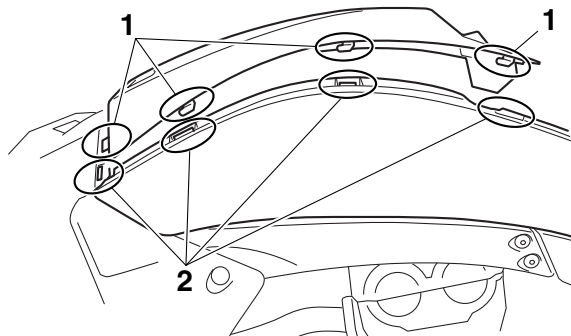


1. Quick fastener

5. Install the fuel tank cap by turning it clockwise.

To install the panel

1. Remove the fuel tank cap by turning it counterclockwise.
2. Place the panel in the original position, and then install the quick fasteners. **NOTICE:** When installing the panel, be sure not to pinch the cables or wires. [ECB00381]



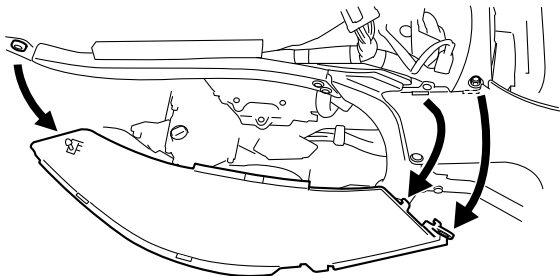
1. Projection
2. Slot

3. Install the bolts.
4. Install the fuel tank cap by turning it clockwise.
5. Install the seat.

Panels B and C (YFZ450RD)

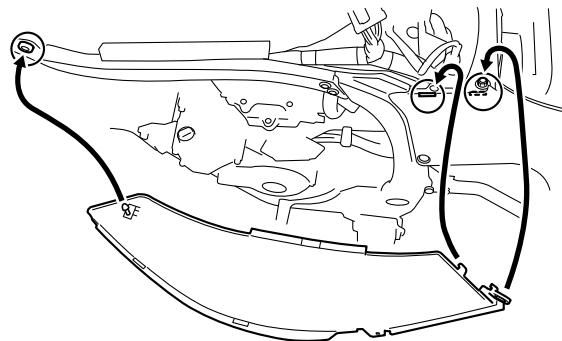
To remove a panel

1. Remove panel A.
2. Pull the panel off.



To install a panel

1. Place the panel in the original position.



2. Install panel A.

Cowling (YFZ450RD)

To remove the cowling

1. Remove panels A, B and C.
2. Remove the bolts, and then take the cowling off.

To install the cowling

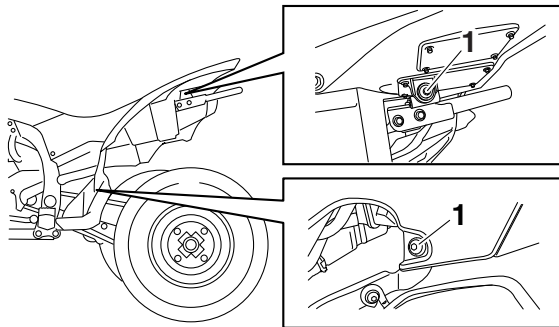
1. Place the cowling in the original position, and then install the bolts.
2. Install panels C, B and A.

EBU29595

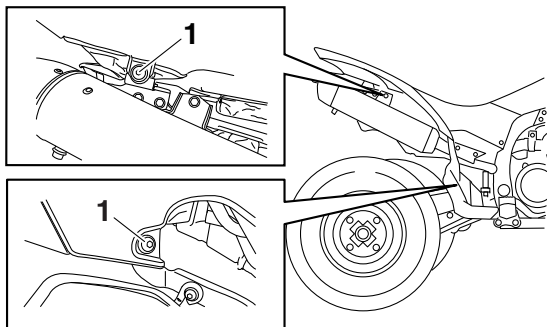
Panel A (YFZ450RSED)

To remove the panel

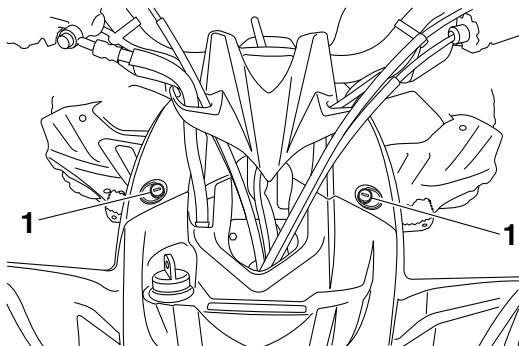
1. Remove the seat. (See page 4-10.)
2. Remove the fuel tank cap by turning it counterclockwise. (See page 4-8.) **NOTICE: Make sure that no foreign material enters the fuel tank.** [ECB01051]
3. Loosen the quick fasteners.



1. Bolt



1. Bolt



1. Quick fastener

4. Remove the quick fasteners, and then slide the panel backward and pull upward.

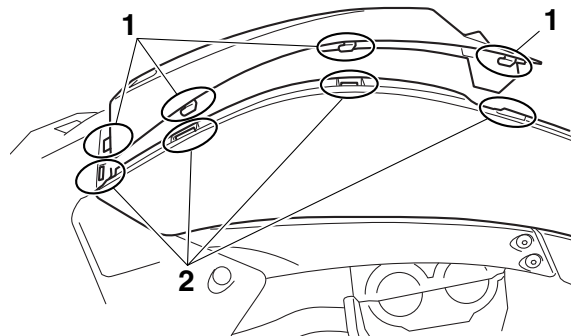


1. Quick fastener

5. Install the fuel tank cap by turning it clockwise.

To install the panel

1. Remove the fuel tank cap by turning it counterclockwise.
2. Place the panel in the original position, and then install the quick fasteners. **NOTICE:** When installing the panel, be sure not to pinch the cables or wires. [ECB00381]



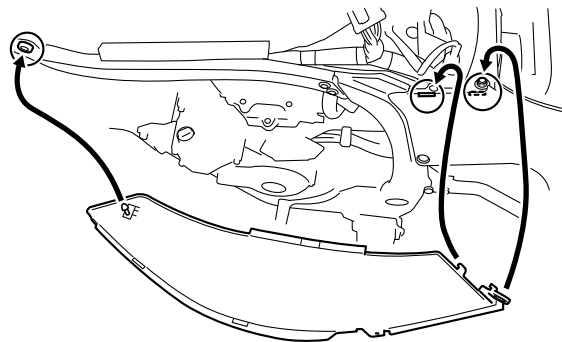
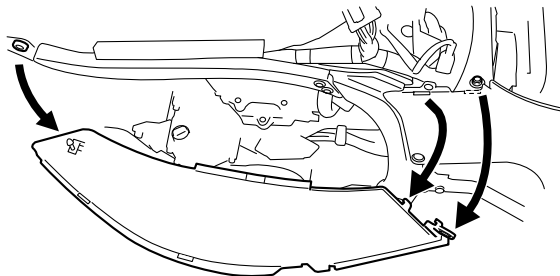
1. Projection
2. Slot

3. Tighten the quick fasteners.
4. Install the fuel tank cap by turning it clockwise.
5. Install the seat.

Panels B and C (YFZ450RSED)

To remove a panel

1. Remove panel A.
2. Pull the panel off.



2. Install panel A.

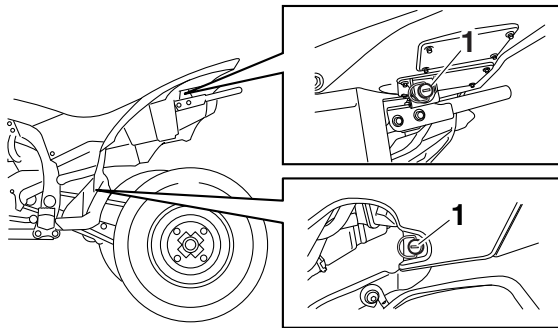
Cowling (YFZ450RSED)

To remove the cowling

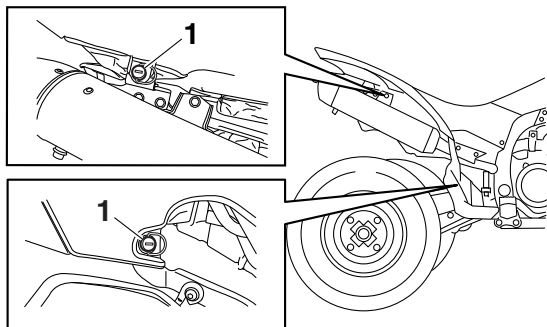
1. Remove panels A, B and C.
2. Loosen the quick fasteners, and then take the cowling off.

To install a panel

1. Place the panel in the original position.



1. Quick fastener



1. Quick fastener

To install the cowling

1. Place the cowling in the original position, and then tighten the quick fasteners.
2. Install panels C, B and A.

EBU29441

Checking the spark plug

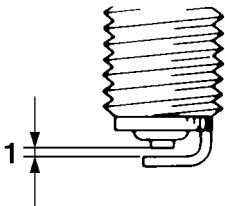
The spark plug is an important engine component, which should be checked periodically, preferably by a Yamaha dealer. Since heat and deposits will cause any spark plug to slowly erode, the spark plug should be removed and checked in accordance with the periodic maintenance and lubrication chart. In addition,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

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

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

Specified spark plug:
NGK/CR8E

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



1. Spark plug gap

Spark plug gap:
0.7–0.8 mm (0.028–0.031 in)

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

Tightening torque:
Spark plug:
13 Nm (1.3 m·kgf, 9.4 ft·lbf)

TIP

If a torque wrench is not available when installing the 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.

EBU29499

Engine oil and oil filter element

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

To check the engine oil level

1. Place the ATV on a level surface.
2. Start the engine, warm it up until the engine oil has reached a normal temperature of 40 °C (104 °F), let it continue to idle for ten seconds or more, and then turn the engine off.

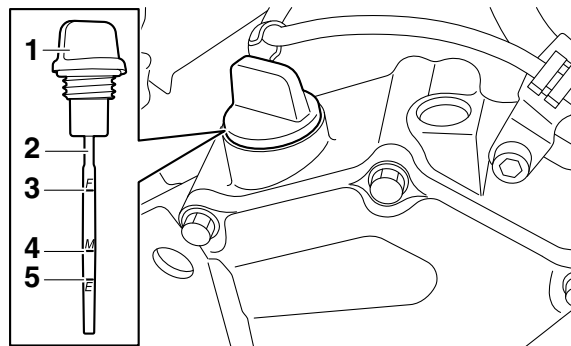
TIP

To achieve the proper engine oil temperature for an accurate oil level reading, the engine must have first completely cooled down, and then warmed up again for several minutes to normal operating temperature.

3. Remove the engine oil tank filler cap, and wipe the engine oil dipstick off with a clean rag.
4. Insert the dipstick into the filler hole (without screwing it in), and then remove it again to check the oil level.

TIP

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



1. Engine oil tank filler cap
2. Engine oil dipstick
3. Maximum level mark
4. Half-level mark
5. Minimum level mark

5. If the engine oil is at or below the minimum level mark, add sufficient oil of the recommended type through the engine oil tank filler hole to raise it to the correct level. **NOTICE: Be sure the engine oil is at the correct level, otherwise engine damage may result.**

[ECB00851]

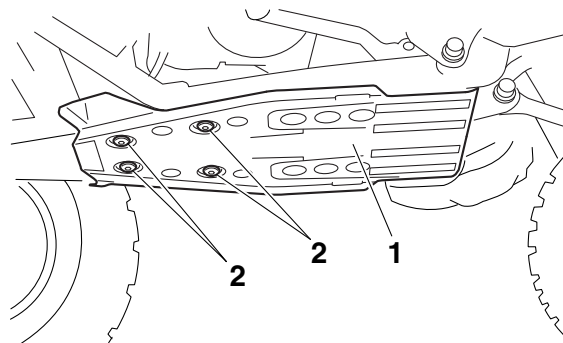
TIP

When adding oil, be careful not to overfill the engine oil tank; the oil level rises faster starting from the half-level mark on the dipstick.

6. Insert the dipstick into the engine oil tank filler hole, and then tighten the engine oil tank filler cap. **NOTICE: Make sure that the engine oil tank filler cap is securely tightened; otherwise, oil may seep out when the engine is running.** [ECB00362]

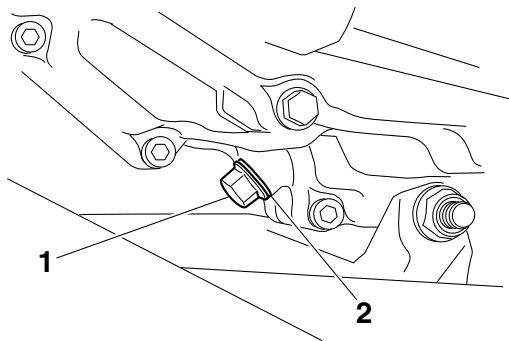
To change the engine oil (with or without oil filter element replacement)

1. Place the ATV on a level surface.
2. Remove the engine guard by removing the bolts.



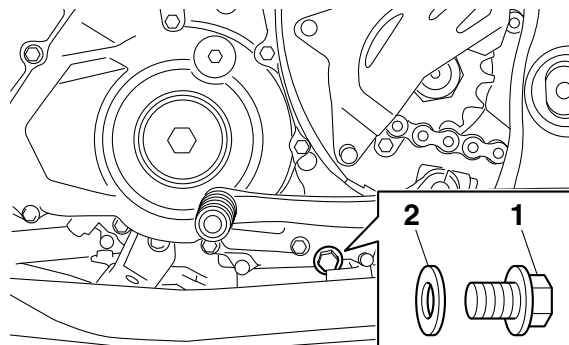
1. Engine guard
2. Bolt

3. Start the engine, warm it up for several minutes, and then turn it off.
4. Place an oil pan under the engine to collect the used oil.
5. Remove the engine oil tank filler cap, and then remove the engine oil tank drain bolt and its gasket.



1. Engine oil tank drain bolt
2. Gasket

6. Remove the crankcase engine oil drain bolt and its gasket.

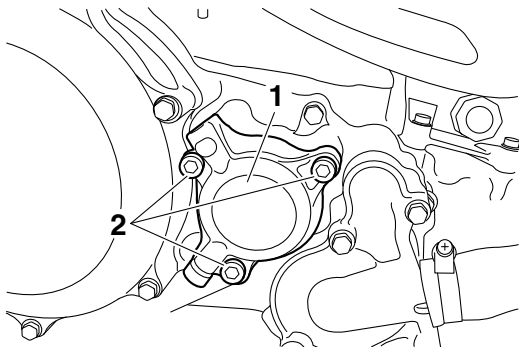


1. Crankcase engine oil drain bolt
2. Gasket

TIP

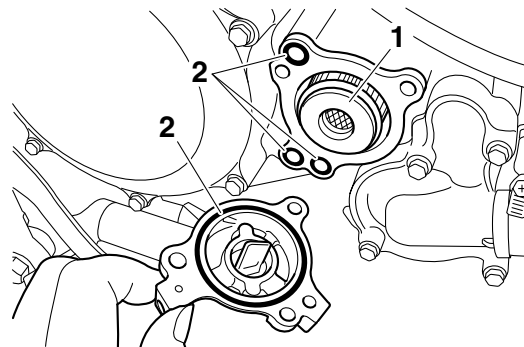
Skip steps 7–10 if the oil filter element is not being replaced.

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



1. Oil filter element cover
2. Bolt

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



1. Oil filter element
2. O-ring

9. Install a new oil filter element and new O-rings.

TIP _____
Make sure that the O-rings are properly seated.

10. Install the oil filter element cover by installing the bolts, and then tighten them to the specified torque.

Tightening torque:
Oil filter element cover bolt:
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

11. Install the crankcase engine oil drain bolt, the engine oil tank drain bolt and their new gasket, and then tighten the bolts to their specified torques.

Tightening torques:

Crankcase engine oil drain bolt:

20 Nm (2.0 m·kgf, 14 ft·lbf)

Engine oil tank drain bolt:

20 Nm (2.0 m·kgf, 14 ft·lbf)

12. Refill with the specified amount of the recommended engine oil through the engine oil tank filler hole, and then install and tighten the engine oil tank filler cap.

Recommended oil:

See page 10-1.

Oil quantity:

Without oil filter element replacement:

1.40 L (1.48 US qt, 1.23 Imp.qt)

With oil filter element replacement:

1.45 L (1.53 US qt, 1.28 Imp.qt)

TIP

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

ECB00300

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.**

13. Start the engine, and then let it idle for several minutes while checking it for oil leakage. If oil is leaking, immediately turn the engine off and check for the cause.
14. Turn the engine off, and then check the oil level and correct it if necessary.

15. Install the engine guard by installing the bolts, and then tighten them to the specified torque.
- NOTICE: Be sure to apply LOCTITE® to the engine guard bolts before installing them.**

[ECB00371]

Tightening torque:
Engine guard bolt:
7 Nm (0.7 m·kgf, 5.1 ft·lbf)

EBU29860

Coolant

The coolant level should be checked before each ride. In addition, the coolant must be changed at the intervals specified in the periodic maintenance and lubrication chart. Have a Yamaha dealer change the coolant. **WARNING! Never attempt to remove the radiator cap when the engine is hot.** [EWB02670]

EBU27942

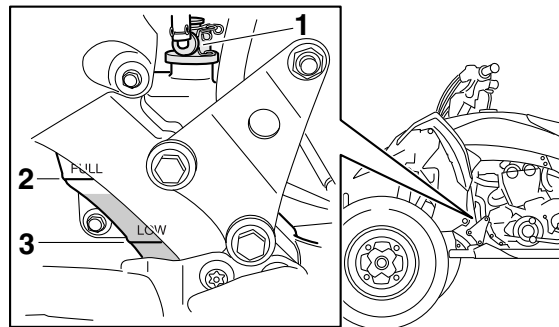
To check the coolant level

1. Place the ATV on a level surface.

TIP _____
The coolant level must be checked on a cold engine since the level varies with engine temperature.

2. Check the coolant level in the coolant reservoir.

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



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

3. If the coolant is at or below the minimum level mark, remove the coolant reservoir cap, add coolant or distilled water to the maximum level mark, and then install the reservoir cap.
- NOTICE:** If coolant is not available, use distilled water or soft tap water instead. Do not use hard water or salt water since they are harmful to the engine. If water has been used instead of coolant, replace it with coolant as soon as possible, otherwise the cooling system will not be protected against frost and corrosion. If water has been added to the coolant, have a Yamaha dealer check the antifreeze content of the coolant as soon as possible, otherwise the effectiveness of the coolant will be reduced. [ECB01011]

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

TIP

- The radiator fan is automatically switched on or off according to the coolant temperature in the radiator.

- If the engine overheats, see page 8-54 for further instructions.

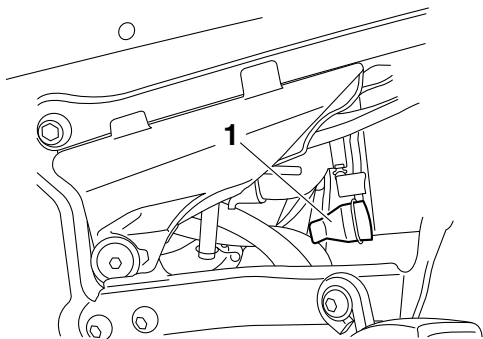
EBU26806

Cleaning the air filter element

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

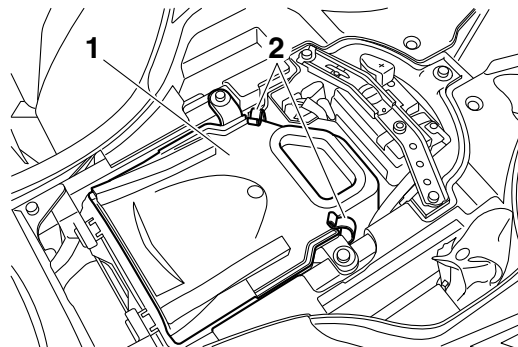
TIP

There is a check hose at the bottom of the air filter case. If dust or water collects in this hose, empty the hose and clean the air filter element and air filter case.



1. Air filter case check hose

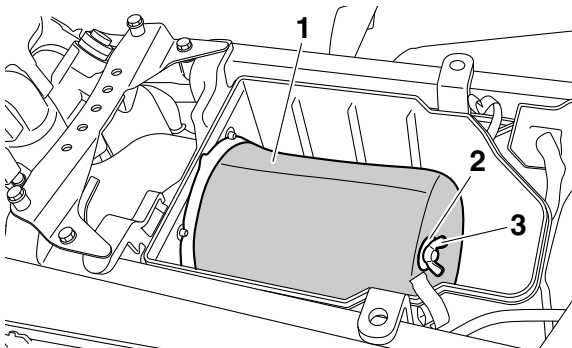
1. Place the ATV on a level surface.
2. Remove the seat. (See page 4-10.)
3. Remove the air filter case cover by unhooking the holders.



1. Air filter case cover

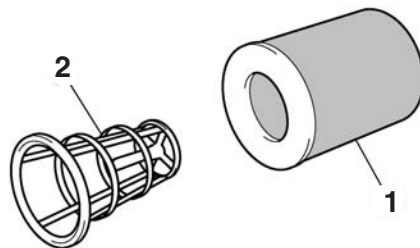
2. Air filter case cover holder

4. Fully loosen the wing bolt.
5. Remove the air filter element together with the wing bolt and washer.



1. Air filter element
2. Washer
3. Wing bolt

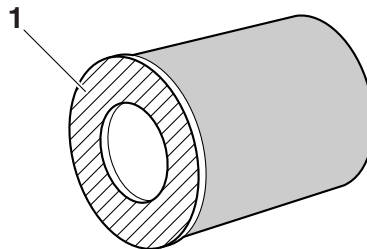
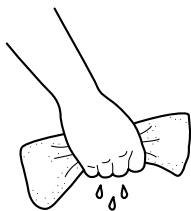
6. Remove the wing bolt and washer from the air filter element.
7. Remove the sponge material from the air filter element frame.



1. Sponge material
2. Air filter element frame

8. Wash the sponge material gently but thoroughly in solvent. **WARNING! Always use parts cleaning solvent to clean the sponge material. Never use low-flash-point solvents or gasoline to clean the sponge material because the engine could catch fire or explode.** [EWB01941]
9. Squeeze the excess solvent out of the sponge material and let it dry. **NOTICE: Do not twist the sponge material when squeezing it.**

[ECB00441]



10. Check the sponge material and replace it if damaged.
11. Apply Yamaha foam air filter oil or other quality foam air filter oil to the sponge material.

8

TIP

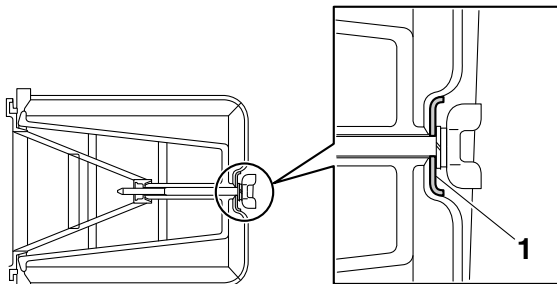
The sponge material should be wet but not dripping.

12. Pull the sponge material over the air filter element frame.
13. Apply all-purpose grease to the air filter element seat.

1. Air filter element seat

14. Install the washer onto the air filter element frame, and then insert the wing bolt into the hole in the air filter element frame. **NOTICE:** Be sure to install the washer with its curved side facing outward as shown.

[ECB00453]



1. Washer

15. Insert the air filter element into the air filter case, and then tighten the wing bolt. **NOTICE:** Make sure that the air filter element is properly seated in the air filter case. Never operate the engine with the air filter element removed. This will allow unfiltered air to enter the engine, causing rapid engine wear and possible engine damage. Additionally, operation without the air filter element will affect the fuel injection system with subsequent poor performance and possible engine overheating. [ECB00761]
16. Install the air filter case cover by hooking the holders onto the air filter case.

17. Install the seat.

TIP

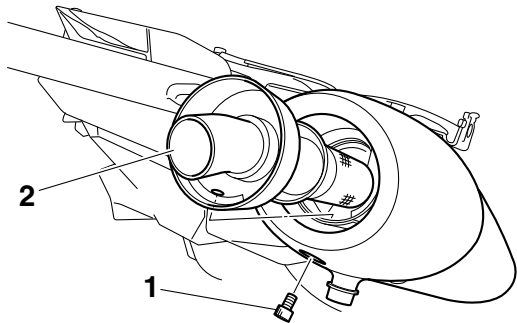
The air filter element should be cleaned every 20–40 hours. It should be cleaned and lubricated more often if the ATV is operated in extremely dusty areas. Each time the air filter element maintenance is performed, check the air inlet of the air filter case for obstructions. Check the air filter case rubber joint to the throttle body and the rubber joint manifold fittings for an air-tight seal. Tighten all fittings securely to avoid the possibility of unfiltered air entering the engine.

EBU27703

Cleaning the spark arrester

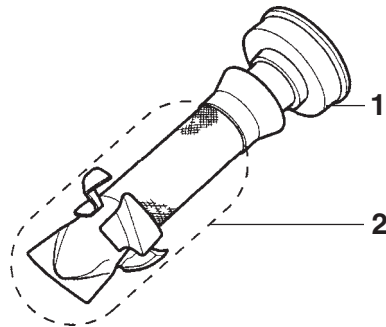
Select a well-ventilated area free of combustible materials and make sure the exhaust and muffler are cool.

1. Remove the tailpipe bolt.



1. Tailpipe bolt
2. Tailpipe

2. Remove the tailpipe by pulling it out of the muffler.
3. 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.



1. Tailpipe
2. Spark arrester

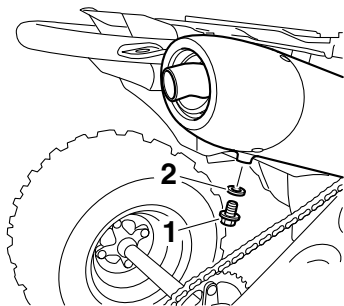
4. Insert the tailpipe into the muffler and align the bolt holes.
5. Install the bolt and tighten it to the specified torque.

Tightening torque:

Tailpipe bolt:

8 Nm (0.8 m·kgf, 5.8 ft·lbf)

6. Remove the purging bolt and the gasket.



1. Purging bolt
2. Gasket

7. Start the engine and rev it up approximately twenty times while momentarily creating exhaust system back pressure by blocking the end of the muffler with a shop towel.
8. Stop the engine and allow the exhaust pipe to cool.
9. Check the gasket for damage, and replace it if necessary.
10. Install the gasket and the purging bolt, and then tighten the bolt to the specified torque.

Tightening torque:
Purging bolt:
27 Nm (2.7 m·kgf, 20 ft·lbf)

EWB02380

WARNING

Never run the engine in an enclosed area when purging the spark arrester, otherwise it could cause injury to the eyes, burns, carbon monoxide poisoning, possibly leading to death, and start a fire.

- **Always let the exhaust system cool prior to touching exhaust components.**
- **Always wear eye protection, and make sure no one is behind the ATV.**
- **Make sure there are no combustible materials in the area.**

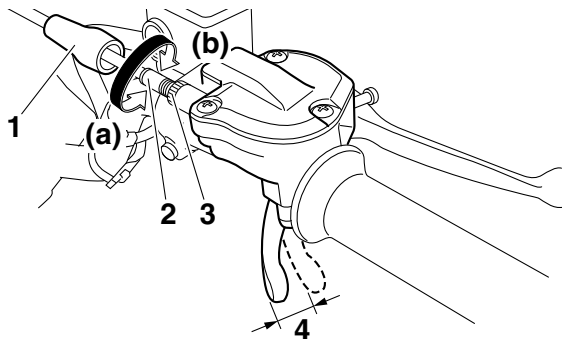
EBU29702

Adjusting the throttle lever free play

The throttle lever free play should be checked and, if necessary, adjusted at the intervals specified in the periodic maintenance and lubrication chart.

The throttle lever free play should measure 2.0–4.0 mm (0.08–0.16 in) as shown. Periodically check the throttle lever free play and, if necessary, adjust it as follows.

1. Slide the rubber cover back.
2. Loosen the locknut.
3. To increase the throttle lever free play, turn the throttle lever free play adjusting bolt in direction (a). To decrease the throttle lever free play, turn the adjusting bolt in direction (b).



1. Rubber cover
 2. Throttle lever free play adjusting bolt
 3. Locknut
 4. Throttle lever free play
4. Tighten the locknut.

5. Slide the rubber cover to its original position.

EBU24060

Valve clearance

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

EBU29601

Brakes

Replacement of brake components requires professional knowledge. Brake service should be performed by a Yamaha dealer.

EWB02571



Operating with improperly serviced or adjusted brakes could lead to a loss in braking ability and an accident.

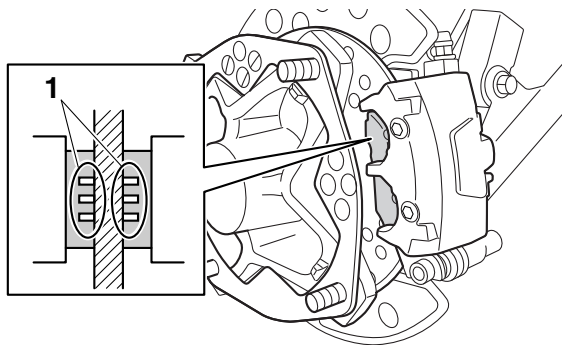
EBU24130

Checking the front and rear brake pads

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

Front brake pads

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



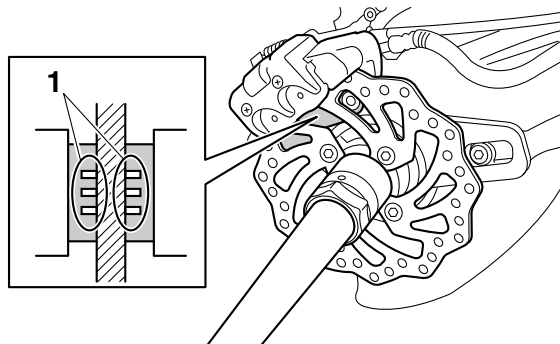
1. Wear indicator groove

TIP

The wheels need to be removed to check the brake pads. (See page 8-50.)

Rear brake pads

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

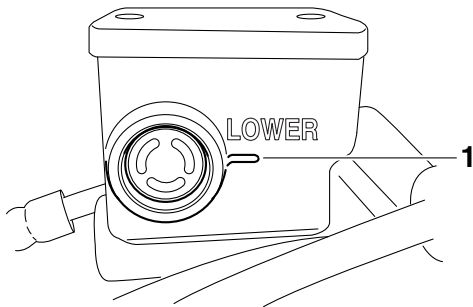


1. Wear indicator groove

Checking the brake fluid level

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

Front brake



1. Minimum level mark

8

Rear brake



1. Minimum level mark

TIP

To check the rear brake fluid level, remove the seat. (See page 4-10.)

Specified brake fluid:
DOT 4

EWB02720

! 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.**

ECB01160

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.

EBU24291

Changing the brake fluid

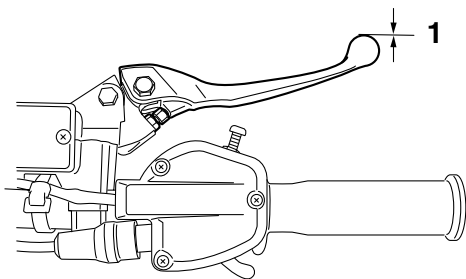
Have a Yamaha dealer change the brake fluid at the intervals specified in the TIP after the periodic maintenance and lubrication chart. In addition, have the oil seals of the master cylinders and calipers as well as the brake hoses replaced at the intervals listed below or whenever they are damaged or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

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

EBU24394

Checking the front brake lever free play

The brake lever free play must be checked at the intervals specified in the periodic maintenance and lubrication chart. The brake lever should have no free play as shown. If there is free play, have a Yamaha dealer check the brake system.



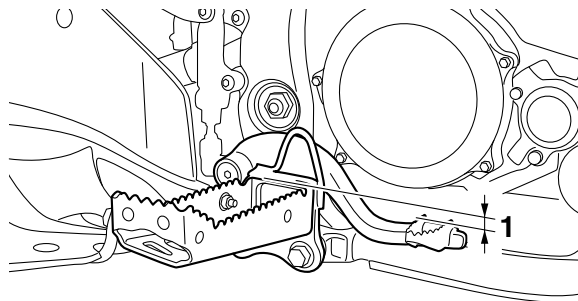
1. No brake lever free play

EBU24613

Checking the brake pedal height

The brake pedal height must be checked and, if necessary, adjusted at the intervals specified in the periodic maintenance and lubrication chart.

The top of the brake pedal should be positioned 11.7 mm (0.46 in) below the top of the footrest as shown. If the brake pedal is not positioned as specified, have a Yamaha dealer adjust it.

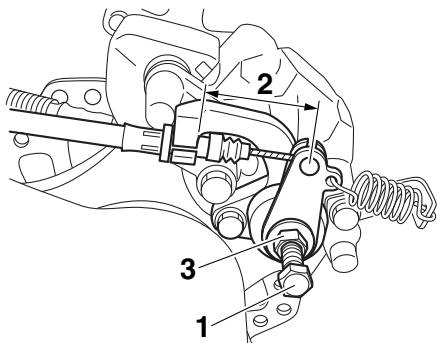


1. Brake pedal height

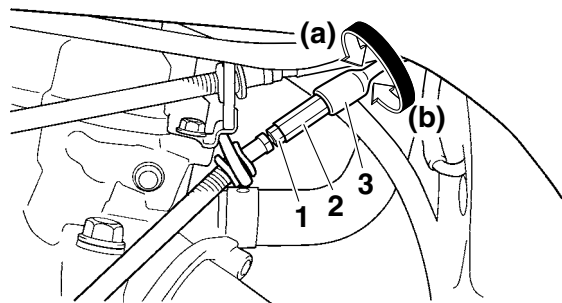
EBU24715

Adjusting the parking brake free play

The parking brake free play must be checked and, if necessary, adjusted at the intervals specified in the periodic maintenance and lubrication chart. Cable length "A" should measure 47–51 mm (1.85–2.01 in). Adjust the parking brake free play as follows.



1. Adjusting bolt
2. Cable length "A"
3. Locknut



1. Locknut
2. Parking brake free play adjusting nut
3. Rubber cover

1. Release the parking brake by moving the parking brake lever to the right.
2. Fully loosen the locknut and the adjusting bolt at the rear brake caliper.
3. Slide the rubber cover back at the brake cable.
4. Loosen the locknut.
5. Turn the parking brake free play adjusting nut in direction (a) to increase the cable length, and in direction (b) to decrease it.

TIP

If the cable length cannot be adjusted to specification, consult a Yamaha dealer.

6. Tighten the locknut on the brake cable.
7. Slide the rubber cover to its original position.
8. Turn in the adjusting bolt at the rear brake caliper until it feels tight, then turn it out 1/8 turn and tighten its locknut to the specified torque.

NOTICE: When tightening the locknut,

hold the adjusting bolt with a wrench so that it does not turn together with the locknut. [ECB00521]

Tightening torque:

Locknut (rear brake caliper):
16 Nm (1.6 m·kgf, 12 ft·lbf)

EWB02090

⚠ WARNING

Operating with improperly serviced or adjusted brakes could cause the brakes to malfunction, resulting in reduced braking performance. This could increase the chance of a collision or accident. After adjusting the parking brake free play, block the rear of the ATV off the ground and spin the rear wheels. Check to make sure there is no brake drag. If brake drag is noticed, perform the adjustment again.

8

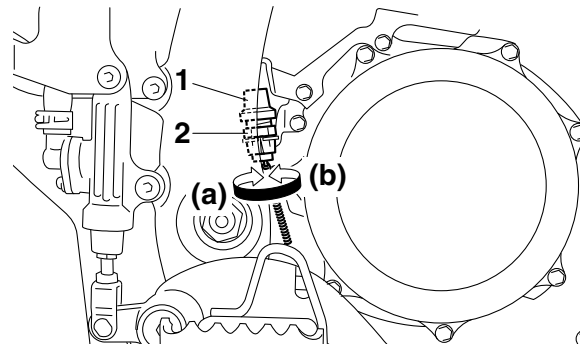
EBU24743

Brake light switches

The brake light, which is activated by the brake pedal and brake lever, should come on just before braking takes effect.

The brake light switch for the brake pedal can be adjusted as follows, but the front brake light switch should be adjusted by a Yamaha dealer.

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



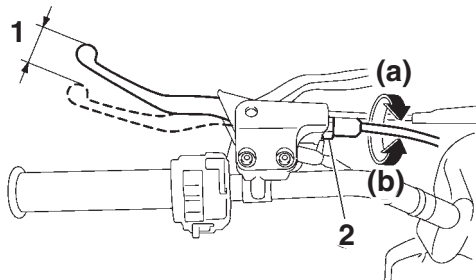
1. Rear brake light switch
2. Rear brake light switch adjusting nut

EBU30152

Adjusting the clutch lever free play

The clutch lever free play must be checked and, if necessary, adjusted at the intervals specified in the periodic maintenance and lubrication chart.

The clutch lever free play should measure 8.0–13.0 mm (0.31–0.51 in) as shown. If the free play is incorrect, adjust it as follows.



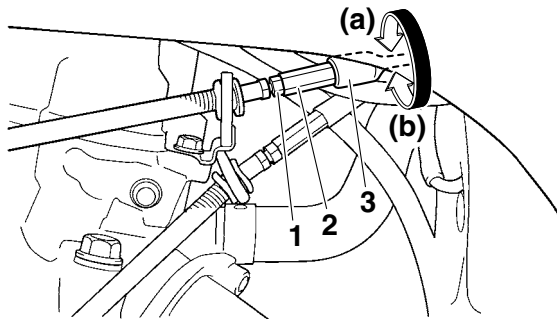
1. Clutch lever free play
2. Clutch lever free play adjusting nut (clutch lever)

1. To increase the clutch lever free play, turn the clutch lever free play adjusting nut at the clutch lever in direction (a), and to decrease it, turn the nut in direction (b).

If the specified free play cannot be obtained, proceed with the following steps.

2. Fully turn the adjusting nut at the clutch lever in direction (a) to loosen the clutch cable.
3. Slide the rubber cover back.
4. Loosen the locknut.

5. To increase the clutch lever free play, turn the clutch lever free play adjusting nut located towards the center of the cable in direction (a), and to decrease it, turn the nut in direction (b).



1. Locknut
2. Clutch lever free play adjusting nut (clutch cable)
3. Rubber cover

6. Tighten the locknut.

7. Slide the rubber cover to its original position.

TIP

If the specified free play cannot be obtained as described above or if the clutch does not operate correctly, have a Yamaha dealer check the internal clutch mechanism.

Drive chain slack

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

To check the drive chain slack

1. Place the ATV on a level surface.

TIP

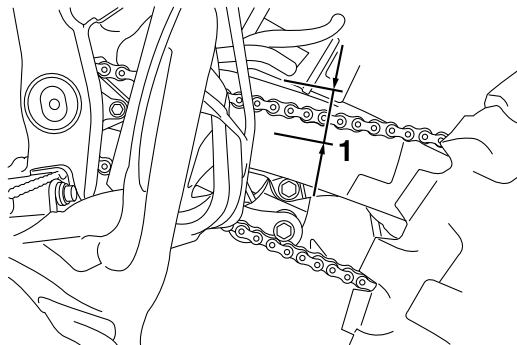
When checking and adjusting the drive chain slack, there should be no weight on the ATV and all tires must be touching the ground.

2. Move the ATV back and forth to locate the tightest portion of the drive chain, and then measure the drive chain slack as shown.

8

Drive chain slack:

25.0–35.0 mm (0.98–1.38 in)

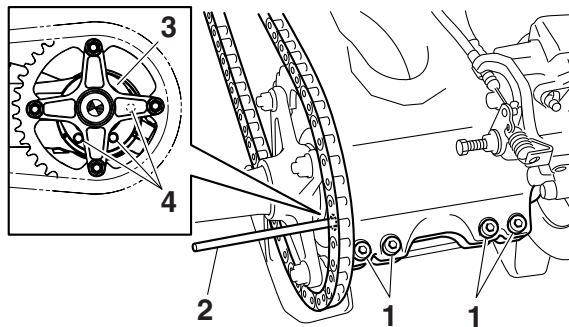


1. Drive chain slack

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

To adjust the drive chain slack

1. Place the ATV on a level surface.
2. Loosen the rear wheel axle pinch bolts.
3. Insert a rod of a diameter of 8 mm (0.3 in) and a length of 10 cm (4 in) into one of the holes in the drive chain tensioner as shown.



1. Rear wheel axle pinch bolt
2. Rod
3. Drive chain tensioner
4. Hole

TIP

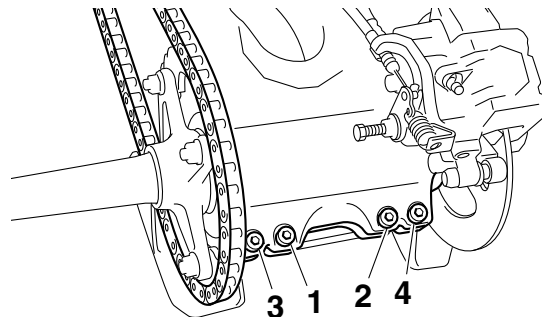
A rod can be obtained at a Yamaha dealer to make this adjustment.

4. Shift the transmission into neutral.
5. To tighten the drive chain, push the ATV backward. To loosen the drive chain, push the ATV forward. **NOTICE: Improper drive chain slack will overload the engine as well as other vital parts of the ATV and can lead to drive chain slippage or breakage. To pre-**

vent this from occurring, keep the drive chain slack within the specified limits.

[ECB00542]

6. Pull the rod out, and then tighten the rear axle pinch bolts to the specified torque in the order shown.



Tightening torque:

Rear axle pinch bolt:

21 Nm (2.1 m·kgf, 15 ft·lbf)

Lubricating the drive chain

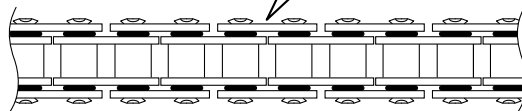
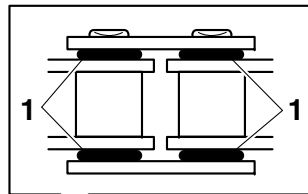
The drive chain must be cleaned and lubricated at the intervals specified in the periodic maintenance and lubrication chart, otherwise it will quickly wear out, especially when riding in dusty or wet areas. Service the drive chain as follows.

ECB00561

NOTICE

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

1. Clean the drive chain with kerosene and a small soft brush. **NOTICE: To prevent damaging the O-rings, do not clean the drive chain with steam cleaners, high-pressure washers or inappropriate solvents.** [ECB00571]



1. O-rings
2. Wipe the drive chain dry.
3. Thoroughly lubricate the drive chain with a special O-ring chain lubricant. **NOTICE: Do not use engine oil or any other lubricants for the drive chain, as they may contain substances that could damage the O-rings.** [ECB00581]

EBU24902

Checking and lubricating the cables

The operation and the condition of all control cables should be checked before each ride, and the cables and cable ends should be lubricated if nec-

essary. If a cable is damaged or does not move smoothly, have a Yamaha dealer check or replace it.

Recommended lubricant:
Yamaha Chain and Cable Lube or engine oil

EWB02581

WARNING

- **Inspect cables frequently and replace if damaged. Corrosion can result when the cable sheaths become damaged, and cables can also become frayed or kinked, which could restrict the operation of controls and lead to an accident or injury.**
- **Always make sure all control cables work smoothly before you begin riding in cold weather. If the control cables are frozen or do not work smoothly, you could be unable to control the ATV, which could lead to an accident or collision.**

EBU24922

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.

Recommended lubricants:

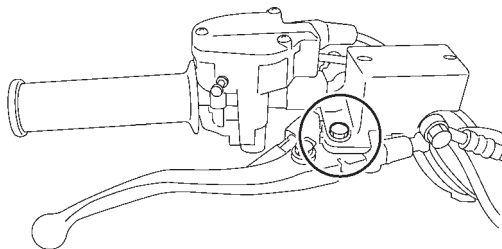
Brake lever:

Silicone grease

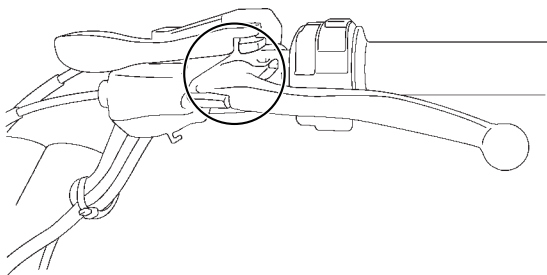
Clutch lever:

Lithium-soap-based grease

Brake lever



Clutch lever



EBUM0170

Checking the shift pedal

The operation of the shift pedal should be checked before each ride. If operation is not smooth, have a Yamaha dealer check the vehicle.

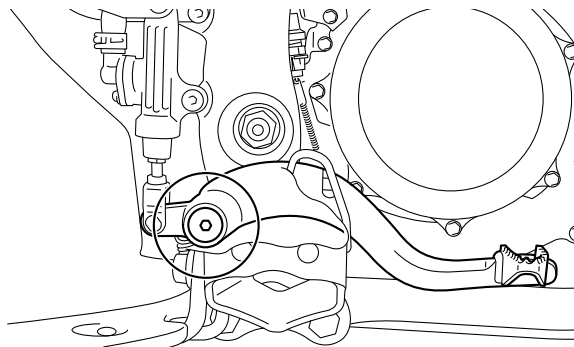
8

EBU28871

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.

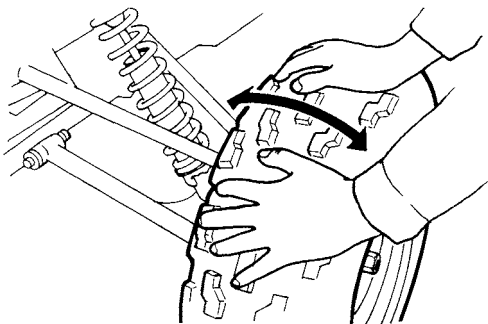
Recommended lubricant:
Lithium-soap-based grease



EBU24963

Checking the wheel hub bearings

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

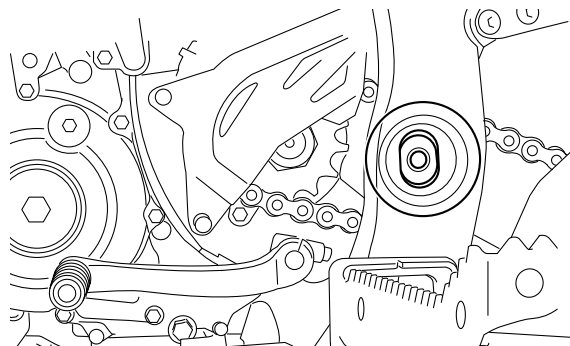


EBU24995

Lubricating the swingarm pivots

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

Recommended lubricant:
Lithium-soap-based grease



EBU25033

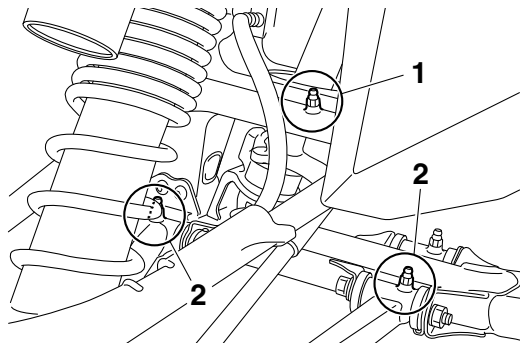
Lubricating the upper and lower arm pivots

The upper and lower arm pivots must be lubricated at the intervals specified in the periodic maintenance and lubrication chart.

TIP _____
For parts equipped with a grease nipple, use a grease gun.

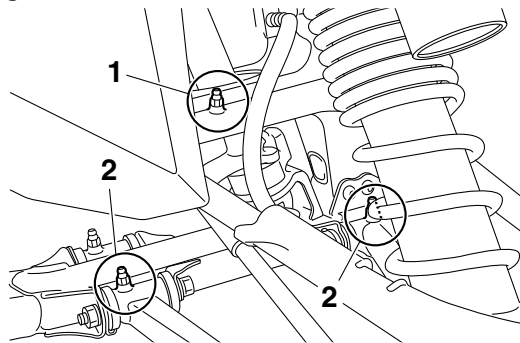
Recommended lubricant:
Lithium-soap-based grease

Left side



1. Upper grease nipple
2. Lower grease nipple

Right side



1. Upper grease nipple
2. Lower grease nipple

8

EBU25092

Lubricating the steering shaft

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

TIP

For parts equipped with a grease nipple, use a grease gun.

Recommended lubricant:
Lithium-soap-based grease

Battery

The battery is located under the seat. (See page 4-10.)

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.

EWB02160



Battery electrolyte is poisonous and dangerous, as it contains sulfuric acid, which can cause severe burns. Avoid contact with skin, eyes or clothing. Always shield your eyes when working near batteries.

Antidote:

EXTERNAL: Flush with water.

INTERNAL: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call a physician immediately.

EYES: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flame, cigarettes or other sources of ignition away. Ventilate when charging or using in an enclosed space.

KEEP OUT OF REACH OF CHILDREN.

ECB00620

NOTICE

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

To remove the battery

1. Remove the seat. (See page 4-10.)
2. Remove the battery holding plate by removing the bolts.
3. Disconnect the negative battery lead first, then the positive battery lead by removing their bolt. **NOTICE: When removing the battery, the main switch must be off, and the negative lead must be disconnected before the positive lead.** [ECB01001]

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

- If the ATV will not be used for more than one month, remove the battery, fully charge it, and then place it in a cool, dry place.
- If the battery will be stored for more than two months, check it at least once a month and fully charge it if necessary.

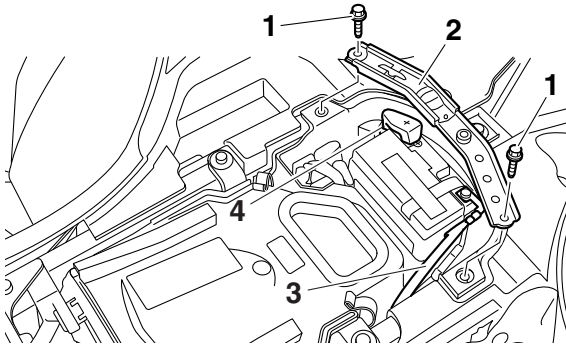
NOTICE

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

To install the battery**TIP**

Be sure the battery is fully charged.

1. Place the battery in its compartment.



1. Bolt
2. Battery holding plate
3. Negative battery lead (black)
4. Positive battery lead (red)

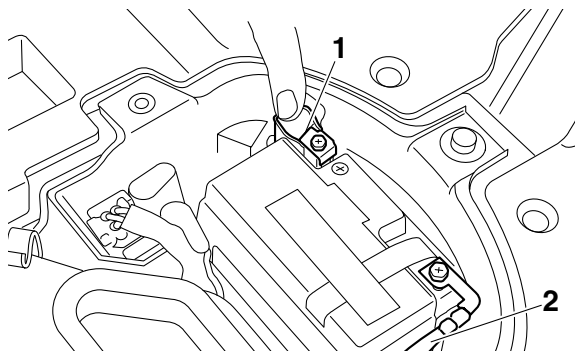
8

4. Pull the battery out of its compartment.

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 ATV is equipped with optional electrical accessories.

2. Connect the positive battery lead first, then connect the negative battery lead by installing their bolt. **NOTICE: When installing the battery, the main switch must be off, and the positive lead must be connected before the negative lead.** [ECB01110]

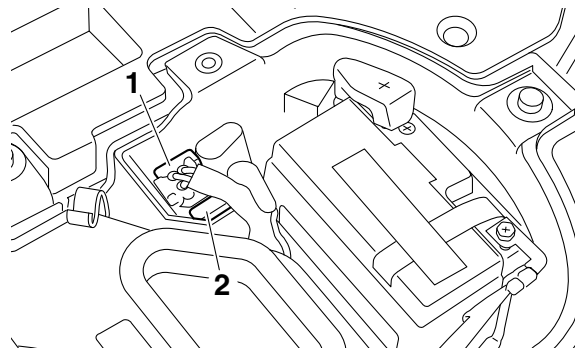


1. Positive battery lead (red)
2. Negative battery lead (black)

3. Install the battery holding plate by installing the bolts.
4. Install the seat. (See page 4-10.)

EBU29961

Replacing the fuse



1. Fuse
2. Spare fuse

The fuse holder is located under the seat. (See page 4-10.)

If the fuse is blown, replace it as follows.

1. Turn the key to "○" (off) and turn off all electrical circuits.

ECB00640

NOTICE

To prevent accidental short-circuiting, turn off the main switch when checking or replacing a fuse.

2. Remove the blown fuse, and then install a new fuse of the specified amperage. **WARNING! Always use a fuse of the specified rating, and never use a substitute object in place of the proper fuse. An improper fuse or a substitute object can cause damage to the electrical system, which could lead to a fire.** [EWB02172]

Specified fuse:
20.0 A

3. Turn the key to “ I ” (on) and turn on the electrical circuits to check if the devices operate.
4. If the fuse immediately blows again, have a Yamaha dealer check the electrical system.

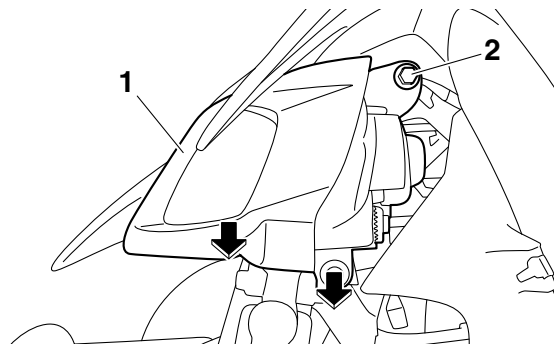
8

EBU30161

Replacing a headlight bulb

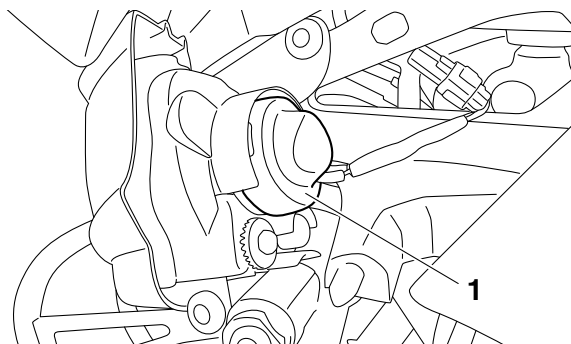
If a headlight bulb burns out, replace it as follows.

1. Remove the headlight unit by removing the bolt, and then pulling the headlight unit outward as shown.



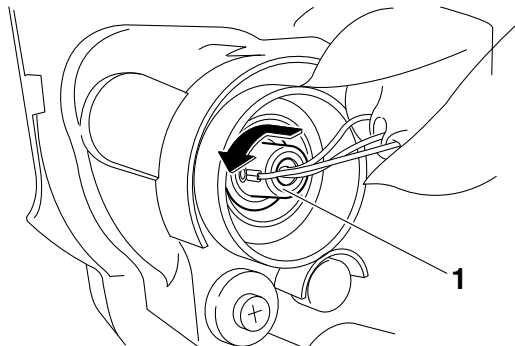
1. Headlight unit
2. Bolt

2. Remove the headlight bulb holder cover.



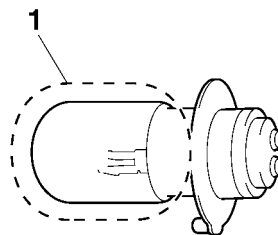
1. Headlight bulb holder cover

3. Remove the headlight bulb holder by pushing it in and turning it counterclockwise, and then remove the burnt-out bulb.

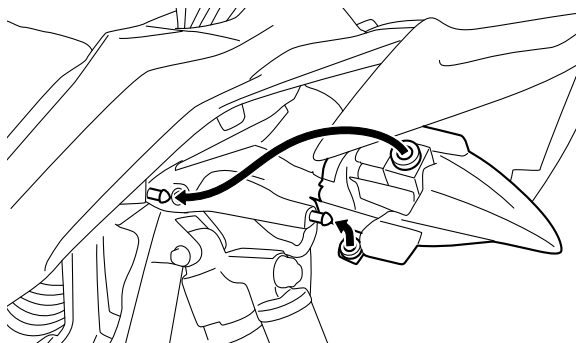


1. Headlight bulb holder

4. Place a new headlight bulb into position.
NOTICE: Do not touch the glass part of the headlight bulb to keep it free from oil, otherwise the transparency of the glass, the luminosity of the bulb, and the bulb life will be adversely affected. Thoroughly clean off any dirt and fingerprints on the headlight bulb using a cloth moistened with alcohol or thinner. [ECB00651]



1. Do not touch the glass part of the bulb.
5. Install the headlight bulb holder by pushing it in and turning it clockwise.
6. Install the headlight bulb holder cover.
7. Place the headlight unit in the original position, and then install the bolt.



8. Adjust the headlight beam if necessary.

EBU25561

Adjusting a headlight beam

ECB00690

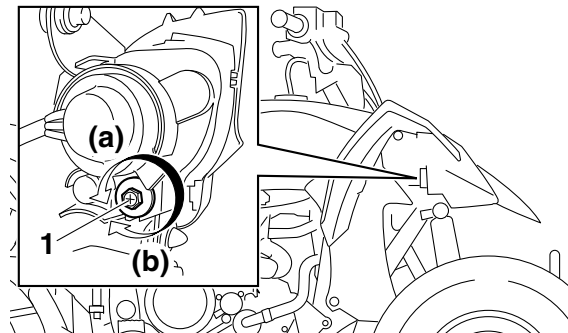
8

NOTICE

It is advisable to have a Yamaha dealer make this adjustment.

To raise a headlight beam, turn the headlight beam adjusting bolt in direction (a).

To lower a headlight beam, turn the adjusting bolt in direction (b).



1. Headlight beam adjusting bolt

EBU26920

Tail/brake light

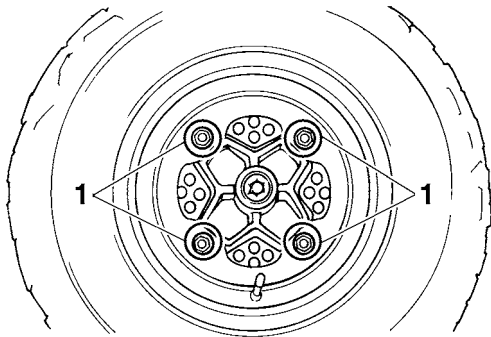
This model is equipped with an LED type of tail/brake light.

If the tail/brake light does not come on, have a Yamaha dealer check it.

EBU25651

Removing a wheel

1. Place the ATV on a level surface.
2. Loosen the wheel nuts.



1. Wheel nut

3. Elevate the ATV and place a suitable stand under the frame.
4. Remove the nuts from the wheel.
5. Remove the wheel.

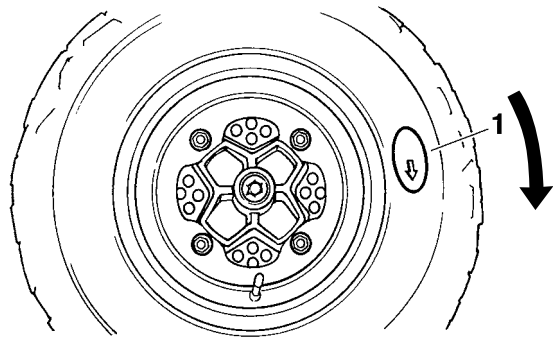
EBU27481

Installing a wheel

1. Place the ATV on a level surface.
2. Install the wheel and the nuts.

TIP

When installing the wheel, make sure its arrow mark → points toward the rotating direction of the wheel.



1. Arrow mark

3. Lower the ATV to the ground.
4. Tighten the wheel nuts to the specified torques.

Tightening torques:

Front wheel nut:

45 Nm (4.5 m·kgf, 33 ft·lbf)

Rear wheel nut:

45 Nm (4.5 m·kgf, 33 ft·lbf)

Troubleshooting

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

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

8

EVB02280

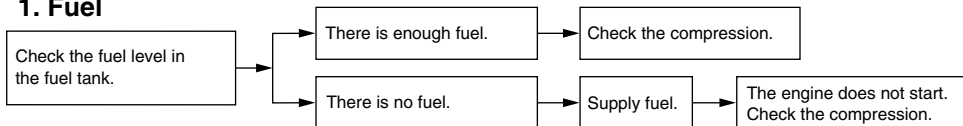


Do not smoke when checking the fuel system. Fuel can ignite or explode, causing severe injury or property damage. Make sure there are no open flames or sparks in the area, including pilot lights from water heaters or furnaces.

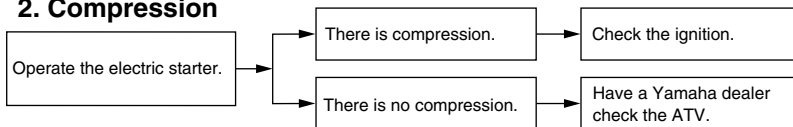
Troubleshooting charts

Starting problems or poor engine performance

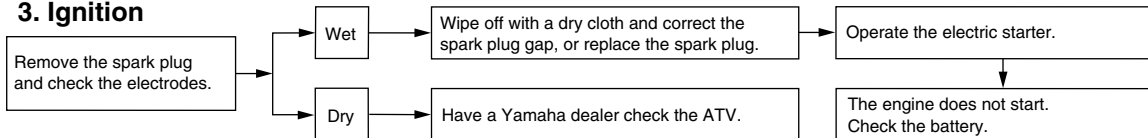
1. Fuel



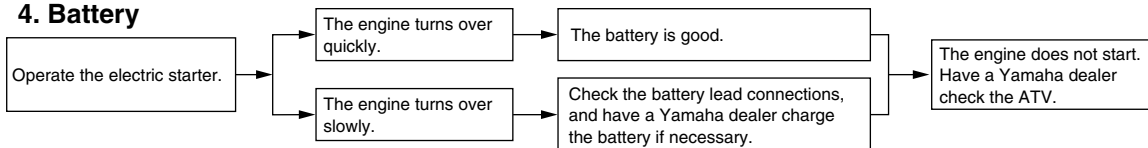
2. Compression



3. Ignition



4. Battery

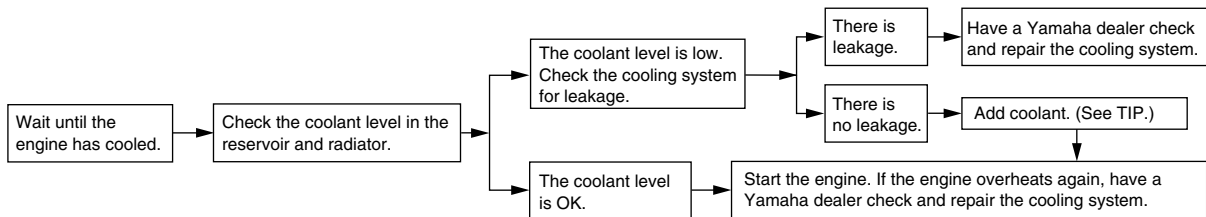


Engine overheating

EWB02290



Wait for the engine and radiator to cool before removing the radiator cap. You could be burned by hot fluid and steam blown out under pressure. Always put a thick rag over the cap when opening. Allow any remaining pressure to escape before completely removing the cap.



8

TIP

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

CLEANING AND STORAGE

EBU25902

Cleaning

Frequent, thorough cleaning of your ATV will not only enhance its appearance but will improve its general performance and extend the useful life of many components.

1. Before cleaning the ATV:
 - a. Block off the end of the exhaust pipe to prevent water entry. A plastic bag and strong rubber band may be used.
 - b. Make sure the spark plug and all filler caps are properly installed.
 2. If the engine case is excessively greasy, apply degreaser with a paint brush. Do not apply degreaser to the chain, sprockets or wheel axles.
 3. Rinse the dirt and degreaser off with a garden hose. Use only enough pressure to do the job.
- WARNING! Wet brakes may have reduced stopping ability, increasing the chance of an accident. Test the brakes after washing. Apply the brakes several times at slow speeds to let friction dry out the linings.**

[EWB02311] **NOTICE: Excessive water pressure**

may cause water seepage and deterioration of wheel bearings, brakes, transmission seals and electrical devices. Many expensive repair bills have resulted from improper high-pressure detergent applications such as those available in coin-operated car washers. [ECB00711]

4. Once most of the dirt has been hosed off, wash all surfaces with warm water and mild, detergent-type soap. An old toothbrush or bottle brush is handy for hard-to-reach places.
5. Rinse the ATV off immediately with clean water and dry all surfaces with a chamois, clean towel or soft absorbing cloth.
6. Dry the chain and lubricate it to prevent it from rusting.
7. Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.
8. Automotive type wax may be applied to all painted and chrome plated surfaces. Avoid combination cleaner-waxes. Many contain abrasives which may mar the paint or protective finish. When finished cleaning, start the engine and let it idle for several minutes.

Storage

Short-term

Always store your ATV in a cool, dry place and, if necessary, protect it against dust with a porous cover. **NOTICE: Storing the ATV 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.** [ECB00721]

Long-term

Before storing your ATV for several months:

1. Follow all the instructions in the “Cleaning” section of this chapter.
2. Fill up the fuel tank and add fuel stabilizer (if available) to prevent the fuel from deteriorating.

Specified amount:

7.5 ml of stabilizer to each liter of fuel (or 1 oz of stabilizer to each gallon of fuel)

3. Perform the following steps to protect the cylinder, piston rings, etc. from corrosion.
 - a. Remove the spark plug cap and spark plug.
 - b. Pour a teaspoonful of engine oil into the spark plug bore.
 - c. Install the spark plug cap onto the spark plug, and then place the spark plug on the cylinder head so that the electrodes are grounded. (This will limit sparking during the next step.)
 - d. Turn the engine over several times with the starter. (This will coat the cylinder wall with oil.)
 - e. Remove the spark plug cap from the spark plug, and then install the spark plug and the spark plug cap.
4. Lubricate all control cables and the pivoting points of all levers and pedals.
5. Check and, if necessary, correct the tire air pressure, and then block up the ATV so that all of its wheels are off the ground. Alternatively, turn the wheels a little every month in order to prevent the tires from becoming degraded in one spot.

6. Cover the muffler outlet with a plastic bag to prevent moisture from entering it.
7. Remove the battery and fully charge it. Store it in a cool, dry place and charge it once a month. Do not store the battery in an excessively cold or warm place [less than 0 °C (30 °F) or more than 30 °C (90 °F)]. For more information on storing the battery, see page 8-45.

TIP _____

Make any necessary repairs before storing the ATV.

SPECIFICATIONS

Dimensions:

- Overall length:
1795 mm (70.7 in)
- Overall width:
1240 mm (48.8 in)
- Overall height:
1065 mm (41.9 in)
- Seat height:
810 mm (31.9 in)
- Wheelbase:
1270 mm (50.0 in)
- Ground clearance:
235 mm (9.3 in)
- Minimum turning radius:
3600 mm (142 in)

Weight:

- With oil and fuel:
184.0 kg (406 lb)

Noise and vibration level:

- Noise level (77/311/EEC):
YFZ450RD 85.9 dB(A)@3750 r/min (EUR)(FRA)(GBR)
YFZ450RSED 85.9 dB(A)@3750 r/min
(EUR)(FRA)(GBR)
- A-weighted sound power level:
YFZ450RD 99.0 dB(A)@3750 r/min (EUR)(FRA)(GBR)
YFZ450RSED 99.0 dB(A)@3750 r/min
(EUR)(FRA)(GBR)

Vibration on seat (EN1032, ISO5008):

- YFZ450RD Will not exceed 0.5 m/s² (EUR)(FRA)(GBR)
- YFZ450RSED Will not exceed 0.5 m/s²
(EUR)(FRA)(GBR)

Vibration on handlebar (EN1032, ISO5008):

- YFZ450RD Will not exceed 2.5 m/s² (EUR)(FRA)(GBR)
- YFZ450RSED Will not exceed 2.5 m/s²
(EUR)(FRA)(GBR)

Engine:

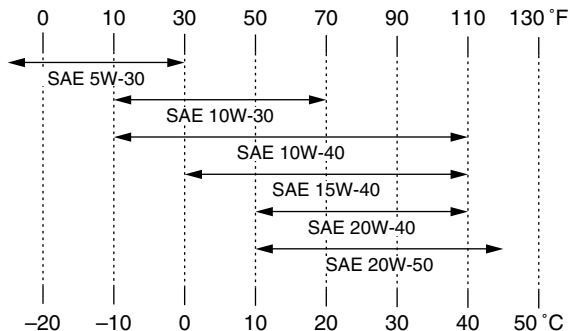
- Engine type:
Liquid cooled 4-stroke, DOHC
- Cylinder arrangement:
Single cylinder
- Displacement:
449 cm³
- Bore × stroke:
95.0 × 63.4 mm (3.74 × 2.50 in)
- Compression ratio:
11.40 : 1
- Starting system:
Electric starter
- Lubrication system:
Dry sump

Engine oil:

- Recommended brand:
YAMALUBE

Type:

SAE 5W-30, 10W-30, 10W-40, 15W-40, 20W-40 or 20W-50



Recommended engine oil grade:

API service SG type or higher, JASO standard MA

Engine oil quantity:

Without oil filter element replacement:

1.40 L (1.48 US qt, 1.23 Imp.qt)

With oil filter element replacement:

1.45 L (1.53 US qt, 1.28 Imp.qt)

Cooling system:

Coolant reservoir capacity (up to the maximum level mark):

0.25 L (0.26 US qt, 0.22 Imp.qt)

Radiator capacity (including all routes):

1.25 L (1.32 US qt, 1.10 Imp.qt)

Air filter:

Air filter element:

Wet element

Fuel:

Recommended fuel:

Premium unleaded gasoline only

Fuel tank capacity:

10.0 L (2.64 US gal, 2.20 Imp.gal)

Fuel reserve amount:

3.4 L (0.90 US gal, 0.75 Imp.gal)

Fuel injection:

Throttle body:

ID mark:

18P1 00

Spark plug (s):

Manufacturer/model:

NGK/CR8E

Spark plug gap:

0.7–0.8 mm (0.028–0.031 in)

Clutch:

Clutch type:

Wet, multiple-disc

Transmission:

Primary reduction system:

Spur gear

Primary reduction ratio:

61/23 (2.652)

Secondary reduction system:

Chain drive

Secondary reduction ratio:

38/14 (2.714)

Transmission type:
Constant mesh 5-speed

Operation:
Left foot operation

Gear ratio:
1st:
35/14 (2.500)
2nd:
30/15 (2.000)
3rd:
31/19 (1.632)
4th:
28/21 (1.333)
5th:
23/21 (1.095)

Chassis:

Frame type:
Aluminum die-cast and steel tube frame

Caster angle:
5.0 °

Trail:
21.0 mm (0.83 in)

Front tire:

Type:
Tubeless

Size:
AT21 x 7R10
Manufacturer/model:
DUNLOP/KT352 Radial

Rear tire:

Type:
Tubeless

Size:
AT20 x 10R9
Manufacturer/model:
DUNLOP/KT357 Radial

Loading:

Maximum loading limit:
100.0 kg (220 lb)
(Total weight of rider, cargo, accessories, and tongue)

Tire air pressure (measured on cold tires):

Recommended:
Front:
27.5 kPa (0.275 kgf/cm², 4.0 psi)
Rear:
30.0 kPa (0.300 kgf/cm², 4.4 psi)
Minimum:
Front:
24.5 kPa (0.245 kgf/cm², 3.6 psi)
Rear:
27.0 kPa (0.270 kgf/cm², 4.0 psi)

Front wheel:

Wheel type:
Panel wheel
Rim size:
10 x 5.5AT

Rear wheel:

Wheel type:
Panel wheel
Rim size:
9 x 8.0AT

Front brake:

Type:

Disc brake

Operation:

Right hand operation

Specified brake fluid:

DOT 4

Rear brake:

Type:

Disc brake

Operation:

Right foot operation

Specified brake fluid:

DOT 4

Front suspension:

Type:

Double wishbone

Spring/shock absorber type:

Coil spring/gas-oil damper

Wheel travel:

250 mm (9.9 in)

Rear suspension:

Type:

Swingarm (link suspension)

Spring/shock absorber type:

Coil spring/gas-oil damper

Wheel travel:

280 mm (11.0 in)

Electrical system:

Ignition system:

TCI

Charging system:

AC magneto

Battery:

Model:

YTZ7S

Voltage, capacity:

12 V, 6.0 Ah

Headlight:

Bulb type:

Krypton bulb

Bulb voltage, wattage × quantity:

Headlight:

12 V, 30.0/30.0 W × 2

Tail/brake light:

LED

Neutral indicator light:

LED

Fuel level warning light:

LED

Coolant temperature warning light:

LED

Engine trouble warning light:

LED

Fuse:

Fuse:

20.0 A

For Europe only

The figures quoted are emission levels and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual level of exposure of work-force include the characteristics of the work room, the other sources of noise, etc. i.e. the number of machines and other adjacent processes, and the length of time for which an operator is exposed to the noise. Also the permissible exposure level can vary from country. This information, however, will enable the user of the machine to make a better evaluation of the hazard and risk.

CONSUMER INFORMATION

EBU28201

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 ATV is stolen.

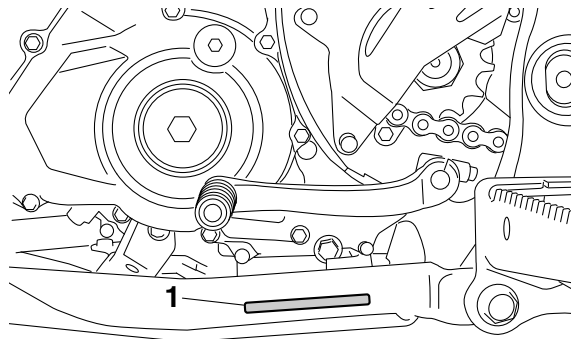
VEHICLE IDENTIFICATION NUMBER:

MODEL LABEL INFORMATION:

EBU26030

Vehicle identification number

The vehicle identification number is stamped into the frame.



1. Vehicle identification number

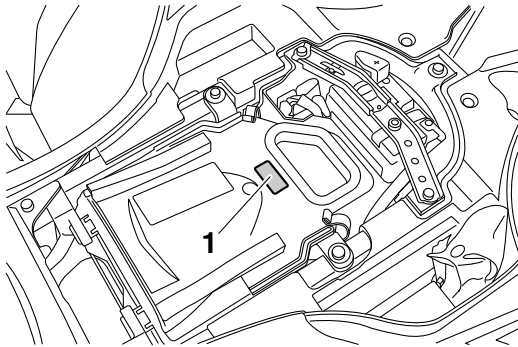
TIP

The vehicle identification number is used to identify your ATV.

EBU26050

Model label

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



1. Model label

INDEX

- A**
Accessories and loading 6-6
Air filter element, cleaning 8-23
- B**
Battery 8-45
Brake and clutch levers, checking and lubricating 8-41
Brake fluid, changing 8-33
Brake fluid level, checking 8-32
Brake lever 4-6
Brake lever free play, checking the front 8-33
Brake light switches 8-36
Brake pads, checking the front and rear 8-30
Brake pedal 4-6
Brake pedal, checking and lubricating 8-42
Brake pedal height, checking 8-34
Brakes 8-30
Brakes, front and rear 5-4
- C**
Cables, checking and lubricating 8-40
Chassis fasteners 5-7
Cleaning 9-1
Clutch lever 4-5
Clutch lever free play, adjusting 8-36
Coolant 5-4, 8-22
Coolant temperature warning light 4-2
Cowling and panels, removing and installing 8-9
- D**
Drive chain 5-5
Drive chain, lubricating 8-40
Drive chain slack 8-38
- E**
Engine break-in 6-4
Engine oil 5-4
Engine oil and oil filter element 8-16
Engine, start 6-1
Engine stop switch 4-3
Engine trouble warning light 4-3
- F**
Fuel 4-9, 5-4
Fuel level warning light 4-3
Fuel tank cap 4-8
Fuse, replacing 8-47
- H**
Handlebar position, adjusting 4-24
Handlebar switches 4-3
Headlight beam, adjusting 8-50
Headlight bulb, replacing 8-48
- I**
Identification numbers 11-1
Indicator light and warning lights 4-2
Instruments, lights and switches 5-7
- L**
Label locations 1-1
Light switch 4-4
- M**
Main switch 4-1

Maintenance and lubrication chart	8-5
Maintenance chart, emission control system	8-3
Model label	11-1
N	
Neutral indicator light	4-2
O	
Owner's manual and tool kit	8-2
P	
Parking	6-4
Parking brake free play, adjusting	8-34
Parking brake lever	4-7
Parking on a slope	6-5
Part locations	3-1
R	
Riding your ATV	7-1
S	
Safety information	2-1
Seat	4-10
Shifting	6-2
Shift pedal	4-8
Shift pedal, checking	8-42
Shock absorber assemblies, adjusting the front	4-11
Shock absorber assembly, adjusting the rear	4-16
Spark arrester, cleaning	8-27
Spark plug, checking	8-15
Specifications	10-1
Speed limiter	4-5
Start switch	4-4
Steering shaft, lubricating	8-44
Storage	9-2
Suspension, lubricating the upper and lower arm pivots	8-43

Swingarm pivots, lubricating	8-43
T	
Tail/brake light	8-50
Throttle lever	4-4, 5-5
Throttle lever free play, adjusting	8-29
Tires	5-5
Troubleshooting	8-52
Troubleshooting charts	8-53
V	
Valve clearance	8-30
Vehicle identification number	11-1
W	
Wheel hub bearings, checking	8-42
Wheel, installing	8-51
Wheel, removing	8-50

⚠ WARNING

Improper ATV use can result in SEVERE INJURY or DEATH.



**ALWAYS USE
AN APPROVED
HELMET AND
PROTECTIVE GEAR**



**NEVER USE
ON PAVED
ROADS**



**NEVER CARRY
PASSENGERS**



**NEVER USE
WITH DRUGS
OR ALCOHOL**

NEVER operate:

- without proper training or instruction.
- at speeds too fast for your skills or the conditions.
- on public roads—a collision can occur with another vehicle.
- with a passenger—passengers affect balance and steering and increase risk of losing control.

ALWAYS:

- use proper riding techniques to avoid vehicle overturns on hills and rough terrain and in turns.
- avoid paved surfaces—pavement may seriously affect handling and control.

LOCATE AND READ OWNER'S MANUAL. FOLLOW ALL INSTRUCTIONS AND WARNINGS.

