

READ THIS MANUAL CAREFULLY
It contains important safety information.

USER MANUAL

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



ATV 110

Content

FOREWORD	1
IMPORTANT NOTICE	3
SPECIAL SAFETY MESSAGES	4
GENERAL SAFETY PRECAUTIONS	11
PARTS AND CONTROLS	16
PRE-OPERATION INSPECTION	24
PERIODIC MAINTENANCE AND ADJUSTMENT	41
CLEANING AND STORAGE	49

FOREWORD

This manual will provide you with a clear understanding of the details and operation of this vehicle. This manual includes all of the necessary safety information. It provides information necessary to ride your vehicle and also includes basic service and inspection procedures.

AN IMPORTANT SAFETY MESSAGE:

- READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE OPERATING YOUR VEHICLE. MAKE SURE YOU UNDERSTAND ALL INSTRUCTIONS.
- PAY CLOSE ATTENTION TO THE WARNING AND CAUTION LABELS ON THE VEHICLE.
- NEVER OPERATE AN ATV WITHOUT PROPER TRAINING OR INSTRUCTION.
- THIS ATV SHOULD NOT BE RIDDEN BY ANYONE UNDER 16 YEARS OF AGE.

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:

ATTENTION: The Safety Alert Symbol means **ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED!**

WARNING: Failure to follow WARNING instructions could result in severe injury or death to the vehicle operator, a bystander or a person inspecting or repairing the vehicle.

CAUTION: A CAUTION indicates special precautions that must be taken to avoid damage to the vehicle.

NOTE: A NOTE provides key information to make procedures easier or clearer.

IMPORTANT NOTICE

This vehicle is designed and manufactured for OFF-ROAD use only. It is illegal and unsafe to operate this machine on any public street, road or highway.

This vehicle complies with all applicable OFF-ROAD noise level and spark arrester laws and regulations in effect at the time of manufacture. Please check your local riding laws and regulations before operating this machine.

▲ WARNING

POTENTIAL HAZARD

Operating this ATV on paved surfaces.

WHAT CAN HAPPEN

The ATV and its tires are designed for off-road use only. Paved surfaces may seriously affect handling of the ATV which may cause you to lose control of the vehicle.

WARNING

HOW TO AVOID THE HAZARD

Never operate this ATV on any paved surfaces, including sidewalks, driveways, parking lots and streets. If you must ride on a paved surface, go slowly and do not make sudden turns or stops.



SPECIAL SAFETY MESSAGES

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 rollover can occur quickly, even during routine maneuvers such as turning and driving 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 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 90cc.
- **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.
 - **Never** operate an ATV on any paved surfaces, including sidewalks, driveways, parking lots and streets.
 - **Never** operate an ATV on any public street, road or highway, even a dirt or gravel one.
 - **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, long-sleeved shirt or jacket, and long pants.
 - **Never** consume alcohol or drugs before or while operating this ATV.
 - **Never** operate at excessive speeds. 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 footpegs 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 at low speeds before attempting to turn at faster speeds. Do not turn at excessive speed.
- **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 and 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 any 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, maintain a steady speed when climbing a hill. If you stall or roll backwards, follow the special procedure for braking 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 specified in this manual. Remember that wet brakes may have reduced stopping ability. Test you 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** modify an ATV through improper installation or use of accessories.
- **Never** install a twist grip throttle on this ATV.
- **Never** exceed the stated load limits for an ATV. Cargo should be properly distributed and securely attached. Reduce speed and follow instructions in this manual for carrying cargo. Allow greater distance for braking.



POTENTIAL HAZARD

Crashing, flipping, or losing control of the ATV.

WHAT CAN HAPPEN

This ATV may exceed the performance of ATVs you have ridden previously. It accelerates extremely fast and reaches high speeds. Inexperience with a high performance category "S" (Sport) ATV or riding beyond your skill level could lead to a loss of control extremely quickly. YOU COULD BE INJURED OR KILLED.

HOW TO AVOID THE HAZARD

The hazards of ATV riding cannot be completely avoided. If you are under 16, do not ride this ATV. If you do not have advanced skills and substantial operating experience, do not ride this ATV. If you have not taken an ATV training course, take one before riding this ATV. Locate and read the Owner's Manual before riding this ATV. Follow all instructions in the Owner's Manual when riding this ATV. Ride this ATV at small throttle openings and low speeds until you learn its performance and handling characteristics and develop respect and experience.

⚠ WARNING

POTENTIAL HAZARD

Entanglement

WHAT CAN HAPPEN

Moving parts can catch your clothing, fingers or hands resulting in severe injury.

HOW TO AVOID THE HAZARD

Never perform maintenance procedures with the engine running unless otherwise directed in a procedure.



⚠ WARNING

POTENTIAL HAZARD

Fluids

WHAT CAN HAPPEN

The fluids(engine/transmission oils,brake fluid, coolant) In your vehicle are hazardous substances.Contact with your skin or eyes can result in serious injury or irritation. If they are swallowed,severe injury or death can result.

HOW TO AVOID THE HAZARD

Wear hand and eye protection (rubber gloves and safety glasses or face shield)when working with vehicle fluids. If a fluid gets on your hands or clothing,wash it off immediately with soap and water.If swallowed seek immediate medical attention.

KEEP ALL VEHICLE FLUIDS AWAY FROM CHILDREN AND ANIMALS.

GENERAL SAFETY PRECAUTIONS

⚠ WARNING

POTENTIAL HAZARD

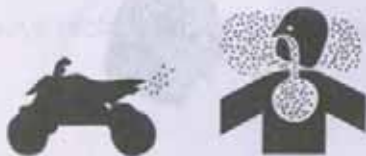
Running the engine indoors
Breathing exhaust gases

WHAT CAN HAPPEN

Running the engine indoors will expose you to dangerous exhaust gases. Breathing carbon monoxide gas leads to poisoning, asphyxiation, and death. This will happen rapidly and without notice.

HOW TO AVOID THE HAZARD

Never operate the vehicle indoors even for brief periods of time.



⚠ WARNING

POTENTIAL HAZARD

Improper care when handling fuel

WHAT CAN HAPPEN

Fuel is highly flammable; spilling it can cause a fire or explosion.

HOW TO AVOID THE HAZARD

Be sure the fuel cap is closed securely. Work in a well-ventilated area which is free of sources that could ignite any spilled fuel accidentally (e.g. cigarettes, welders, torches, grinders, electric shop tools, etc.)



⚠ WARNING

POTENTIAL HAZARD

Hot components (e.g., engine, radiator, hoses, bulbs, exhaust, brakes)

WHAT CAN HAPPEN

The engine and other vehicle systems operate at extremely high temperatures. Contact can produce severe burns.

HOW TO AVOID THE HAZARD

Wait for the engine and vehicle systems to cool completely before starting any work. If the engine must be running, work carefully and avoid hot surfaces. Running unless otherwise directed in a procedure.



⚠ WARNING

POTENTIAL HAZARD

Blindness, eye injury

WHAT CAN HAPPEN

Anytime you work on the vehicle there is a potential that an accident involving a foreign object, vehicle component part, fluid, tool or other maintenance related item can result in severe injury to your eyes. For example, when cleaning the oil filters, objects propelled by compressed air can strike your eyes and cause serious injury or blindness.

HOW TO AVOID THE HAZARD

Always wear safety glasses when working on the vehicle.



VEHICLE WARNING AND SPECIFICATION LABELS

Your ATV comes with several labels containing important safety information. You and anyone who operates the vehicle should read and understand this information before riding.

- The labels should be considered permanent parts of the vehicle. Do not remove the label for any reason.
- If any label is missing, damaged, worn, or becomes difficult to read, contact your dealer for replacements.
- Always replace labels in the paper location.

WARNING

Improper use of ATVs 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.

READ THE OWNER'S MANUAL

FOLLOW ALL INSTRUCTIONS AND WARNINGS.


⚠ WARNING


UNDER 16

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.

⚠ WARNING



NEVER ride as a passenger. Passengers can cause a loss of control, resulting in SEVERE INJURY or DEATH.

⚠ WARNING

Improper tire pressure or overloading can cause loss of control. Loss of control can result in severe injury or death.

- Cold tire pressure:
Front: 20 ± 3kps 0.20 ± 0.03kg/cm² 2.8 ± 0.4psi
Rear: 20 ± 3kps 0.20 ± 0.03kg/cm² 2.8 ± 0.4psi
- Maximum weight capacity: 95kg (209lbs.)

VEHICLE IDENTIFICATION

The identification numbers found on your vehicle identify it from others of the same model type.

You may need the identification numbers when ordering replacement parts, service information, or to assist in theft investigation and recovery.

Record your vehicle identification numbers in the spaces provided. Keep a copy of the numbers in another location.

Vehicle Identification Number(VIN)



Engine Serial Number



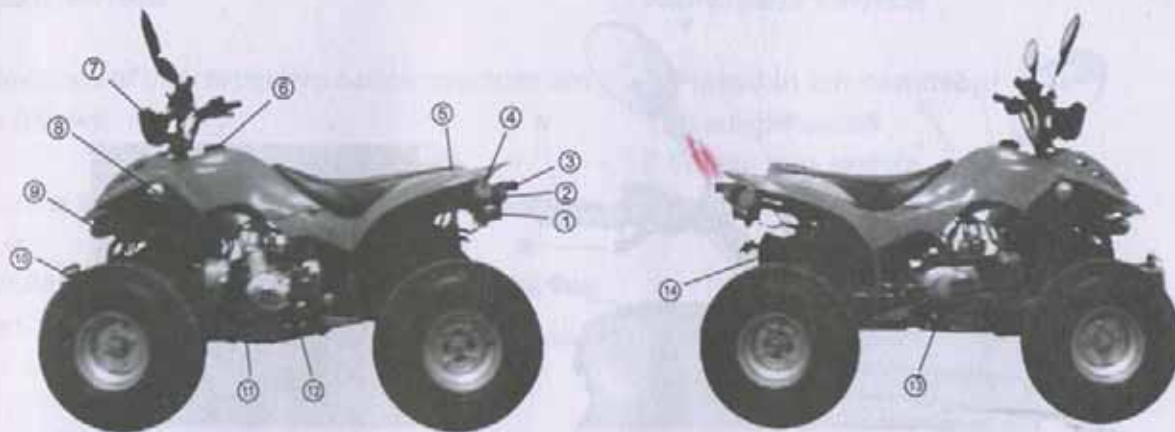
PARTS AND CONTROLS

This section contains information about the controls and component features of your vehicle. Please read carefully and understand well all the information.

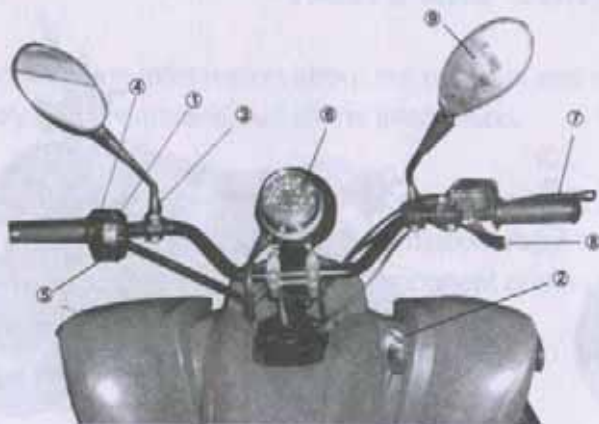
Your vehicle may be equipped with optional or special components depending on the model you purchased. Consult the supplement manufacturer's information about those components provided to you at the time of sale before operating or servicing the component or the related system.

WARNING





- | | | | | | |
|---------------------|-----------------------|------------------------|-------------------|---------------------|--------------------|
| 1. Tail light | 2. Rear turning lock. | 3. Rear reflector | 4. Side reflector | 5. Battery | 6. Gas tank cap |
| 7. Headlight | 8. Side reflector | 9. Front turning light | 10. Bumper | 11. Gearshift level | 12. Left footplate |
| 13. Right footplate | 14. Muffle | | | | |



- 1.Engine RUN/OFF switch 2. Main switch 3. Turning switch 4.High beam and dipped headlight switch
5.Bugle switch 6. Instrument panel 7.Front brake lever 8. Throttle lever 9. rearview mirror
10.Turning lock

Main switch

Functions of the respective switch positions are as follows:

On:The engine can be started only at this position.

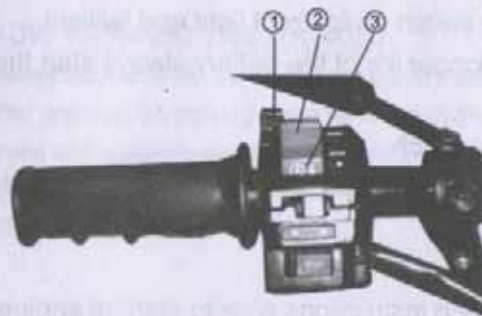
Off:All electrical circuits are switched off,the key can be removed in this position.



Handlebar Switch

A.Placed in left handlebar

- 1.Headlight switch
- 2.Engine stop switch
- 3.Start switch



Engine stop switch

The engine stop switch is a two position(OFF and RUN) sliding switch. The stop switch must be in the run position to operate the starter motor and maintain a running engine.You should use the slide switch to the OFF position to shut down the engine normally when you finish riding.It is also an emergency control;sliding it to the OFF position while riding will stop a running engine.

Light switch

Turn the switch on for front light and taillight.

To gain longer life of the battery,always start the engine with the headlight switch at OFF position.

Start switch

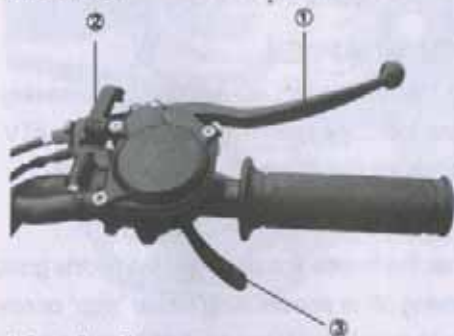
Push this switch to let the starter motor crank the engine.

Caution

See starting instructions prior to starting engine.

B.Placed in right handlebar

- 1.Front brake lever
- 2.Parking brake lock
- 3.Throttle lever



Front brake lever

The front brake lever operates the front brake calipers mounted on the front wheels.

To apply the front brakes,squeeze the lever against the handle grip.Roll the lever harder to increase braking force.Check the free play of front brake lever.

⚠ WARNING

POTENTIAL HAZARD

ATV rolling away unexpectedly.

WHAT CAN HAPPEN

A slow decline in brake fluid pressure can decrease the applied braking force allowing the ATV to begin to roll. You or a bystander can be injured or killed.

HOW TO AVOID THE HAZARD

Always block or shock the wheels on your ATV immediately after applying the parking brake.Never apply the parking brake and leave the vehicle unattended.

Always choose firm level ground on which to park your ATV.

Throttle lever

The throttle lever controls engine speed.

Accelerate: Press the throttle lever.

Decelerate: Release the throttle lever. The lever is spring-loaded, when released, the spring of the lever will return to prior pressing and the engine will return to an idle. Before starting the engine, check the throttle lever to be sure it is operating smoothly. Make sure it returns to the idle position as soon as the lever is released.



WARNING

POTENTIAL HAZARD

Overturning or flipping the ATV onto yourself.

WHAT CAN HAPPEN

Opening the throttle too quickly and/or releasing the clutch lever too quickly can overturn or "flip" the ATV. You can severely injured or killed.

HOW TO AVOID THE HAZARD

Never open the throttle abruptly. Open the throttle gradually when moving off or accelerating. Never "pop" or release the clutch lever quickly. Always gradually release the clutch lever.

If the ATV "wheelies" or the front wheels begin to come off the ground, close the throttle and pull in the clutch lever immediately.

SHIFT LEVER



1. Shift lever

The shift lever is located on the left side of the engine in front of the left footpeg. The vehicle has five forward gears. Neutral is located between 1st and 2nd gears. Before every ride, make sure the shift lever operates properly and shifts through the entire range of gears with the engine turned off; roll the vehicle forward and back as you shift through all the gears to avoid damaging the transmission.

FOOTPEGS & FOOT BASKETS



1. Footpeg

2. Basket

Keep your feet on the footpegs when operating. Inspect the condition of the footpegs and baskets and make sure that they are fastened securely to the vehicle. The footpeg teeth should be in good condition (not smooth or worn excessively). The baskets should be free of any packed soils and they should not be cracked, broken, or damaged in any way. If damage is found, install new ones.

PRE-OPERATION INSPECTION

Always check the following points before using this ATV:

INSPECTION ITEM	INSPECTION PROCEDURE
Valves	Check valve clearance Adjust if necessary
Spark plug	Check condition Adjust gap and clean Replace if necessary
Air filter	Clean Replace if necessary
Carburetor	Check idle speed/starter operation Adjust if necessary
Cylinder head cover breather system	Check breather hose for cracks or damage Replace if necessary
Exhaust system	Check leakage Retighten if necessary Replace gasket if necessary

INSPECTION ITEM	INSPECTION PROCEDURE
Fuel line	Check fuel hose for cracks or damage Replace if necessary
Engine oil	Check oil level weekly Replace (Warm up engine before draining.)
Engine oil strainer	Clean
Brake	Check operation every time before driving. Correct if necessary
Tires	Check pressure and wear Replace if damaged
Wheel bearings	Check bearing assembly for looseness/damage Replace if damaged
Steering system	Check operation,replace if damaged Check toe-in,adjust if necessary
Battery	Check specific gravity Check that the breather hose is positioned properly

WARNING

POTENTIAL HAZARD

Failure to check the ATV before operating.

Failure to maintain the ATV properly.

WHAT CAN HAPPEN

It could cause an accident or equipment damage.

HOW TO AVOID THE HAZARD

Always check your ATV carefully each time before you use it to be sure the ATV is in safe operation condition.

Always follow inspection and maintenance procedure as shown in the owner's manual.

Brakes

1. Brakes operation

Test the brakes at slow speed after starting to make sure they are working properly. If any of the brakes does not provide proper braking function, inspect the brake for wear.

2. Brake pedal and brake levers

Check the correct free play in the brake pedal and brake levers. Adjust it if the free play is incorrect.

WARNING

POTENTIAL HAZARD

Improperly operating brakes while riding.

WHAT CAN HAPPEN

The braking ability could lose and cause an accident.

HOW TO AVOID THE HAZARD

Always check the brakes every time before you start to ride. Do not ride the ATV if you find there is any problem with the brakes. Find your dealer to inspect it if you cannot correct the problem by yourself according to the adjustment procedures provided in this manual.

Fuel

Always fill regular unleaded gasoline to your ATV. Do not use leaded gasoline, it will cause damage to internal engine parts.

If knocking or pinging occurs, use a different brand of gasoline or premium unleaded fuel.

WARNING

Do not overfill the fuel tank. Be careful not to spill fuel, especially on the engine or exhaust pipe. Make sure the fuel tank cap is closed securely. Do not refuel right after the engine has been running and is still very hot.

Engine Oil

Always fill engine oil according to ambient temperature recommended as follows:

Ambient temperature / Recommended oil:

5°C ~ 45°C (40°F ~ 120°F) / SAE20W40

-10°C ~ 35°C (10°F ~ 100°F) / SAE10W30

-20°C ~ 0°C (0°F ~ 30°F) / SAE 5W30

Make sure the engine oil is at specified level.

Add oil as necessary.

Final gear oil

SAE 80W90 hypoid gear oil may be used for all conditions.

Make sure the gear oil is at specified level.

Add oil as necessary.

Throttle lever

Check the throttle lever and see it operates correctly. It must open smoothly and return

back to idle position when released.

Battery

Check fluid level and fill as necessary. Always use only distilled water to refill it.

Switches

Check the operation of engine stop switch, starter switch, main switch and fuel cock. Repair as necessary for proper operation.

Fittings and Fasteners

Always check the tightness of chassis before riding this ATV. Take the ATV to your dealer or refer to this manual for correcting tightening torque.

Tires

The tire gauge is equipped with this ATV and located in the tool bag under the seat. Measure tire pressure by the tire gauge and set the front and rear tires pressure to 20KPa.

WARNING

POTENTIAL HAZARD

Operating this ATV with improper tires, or with improper or uneven tire pressure.

WHAT CAN HAPPEN

Operating this ATV with improper tires, or with improper or uneven tire pressure could cause loss of control and an accident.

HOW TO AVOID THE HAZARD

1. Always set the front and rear tires pressure to be 20 KPa.

2. Always use size 20x7-8 as front tires.
3. Always use size 20x7-8 as rear tires.
4. When the tire groove decreases to 3mm(0.12 in) due to wear, replace the tire.

OPERATION

WARNING

Indicates a potential hazard that could result in serious injury or death.

WARNING

POTENTIAL HAZARD

Operating ATV without being familiar with all controls.

WHAT CAN HAPPEN

Loss of control, which could cause an accident or injury.

HOW TO AVOID THE HAZARD

Read this manual carefully. If you don't understand any control or function, ask your dealer.

Starting a cold engine

1. Set the parking brake.
2. Turn the fuel cock to "ON".
3. Turn the engine stop switch to "RUN".
4. Turn the main switch to "ON".
5. Shift the transmission gear to neutral.
6. Push down the choke lever to the end.
7. Completely close the throttle lever.
8. Push the start switch to crank the engine.
9. Pull up the choke lever to the middle position (warming up position) until the engine runs then release the start button. If the engine fails to start, release the start button, then push it again. Each cranking should not be more than 10 seconds.
10. Keep warming up the engine for 5 min, then pull up the choke lever to top.

To start out and accelerate:

1. Apply the rear brakes.
2. Release the throttle lever.
3. Shift into first gear, then release the shift pedal.
4. Release the rear brakes.
5. Open the throttle gradually.
6. Once the engine has reached adequate speed, release the throttle lever.
7. Shift into second gear, then release the shift pedal.
8. Open the throttle gradually.
9. Follow the same procedure when shifting to the third and fourth gears.

WARNING

Always release the shift pedal before opening the throttle, or the engine could wheelie and will cause an accident.

To decelerate:

1. Release the throttle.
2. Apply the brakes smoothly and evenly.
3. Shift to lower gear once the engine has sufficiently slowed.

WARNING

POTENTIAL HAZARD

Apply a lower gear when the engine speed is too high.

WHAT CAN HAPPEN

The wheel could stop rotating. This could cause an accident, loss of control, injury and damage the engine.

HOW TO AVOID THE HAZARD

Always shift to lower gear before you make sure that the engine has sufficiently slowed.

Engine break-in

The most important period in the life of your engine is between 0 and 20 hours. Please read the following information very carefully.

- Do not put an excessive load on the ATV for first several hours of running.
- Never continuous operation above half throttle.
- Cool off the engine for ten minutes after every hour of operation.
- Vary the speed of the engine from time to time.

Parking

When parking, stop the engine and shift into neutral. Turn the fuel cock to "OFF" position and apply the parking brake. Never parking on hills or other inclines.

Loading

This ATV is not designed to carry any cargo or tow a trailer. Never exceed the maximum loading capacity as 100kg (220 lbs) which includes the total weight of rider and accessories. Always choose the accessories that is equivalent in design and quality.

WARNING

Overloading this ATV or carrying or towing cargo could cause changes in vehicle handling which could lead to an accident. Never exceed the stated loading capacity for this ATV.

RIDING YOUR ATV

WARNING

Indicates a potential hazard that could result in serious injury or death.

Know you ATV before riding

This ATV is for recreation use. This section, riding your ATV, provides general ATV riding instructions for recreational riding. The skills and techniques described in this section are appropriate for all types of riding. Riding this ATV requires special skills. Take the time to learn the basic techniques well before attempting more difficult maneuvers.

For your safety, be sure you have read this Owner's Manual completely and understand

the operation of the controls before you begin to ride. Read all caution and warning labels on your ATV and pay particular attention to the safety information on pages 6-10.

RIDE WITH CARE AND JUDGMENT

Get training if you are inexperienced.

Beginners should get training from a certified instructor. Start at slow speeds first to be familiar with this ATV even if you are an experienced rider. Do not 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

Never allow children under 16 years old to ride this ATV.

A child under 16 should never operate an ATV with engine size greater than 90cc.

This ATV is designed to carry the operator only, never carry a passenger.

The long seat is to allow the operator to shift position as needed during operation. It is not a design for carrying passenger.

Apparel

Always wear an approved motorcycle helmet that fits properly. You should also wear eye protection (face shield or goggles), gloves, boots, long-sleeved jacket and long pants.

Do not operate after consuming alcohol or drugs.

Operator's performance capability is reduced by the influence of alcohol or drugs.

Pre-operation checks

Always perform the pre-operation checks listed on the page 27 before riding for safety and proper care of your ATV.

During operation

Always keep your feet on the footboards during operation. Otherwise your feet may contact the wheel and could cause injury. Avoid wheelies and jumping. You may lose control of the ATV or overturn.

Exhaust system

The exhaust system on the ATV is very hot during and following operation. Never touch 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 off-road use only. Riding on paved surfaces can cause loss of control. Do not ride on any public road, street, or highway. Riding on public roads can result in collisions with other vehicles.

- Know the terrain where you ride. Ride cautiously in unfamiliar areas. Stay alert for roots, holes or rocks in the terrain, and other hidden hazards which may cause the ATV to upset.

- When riding in an area where you might not easily be seen, mount a caution flag on the ATV.

- Do not ride on private property without getting permission. Do not ride in areas posted "No Trespassing".

- Select a large, flat off-road 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 brake, throttle, gear shifting and turning techniques in the area before trying more difficult terrain.

- Set the parking brake and follow the instruction on page 32 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. Don't touch the engine and exhaust pipe.

Turning you ATV

To achieve maximum traction while riding off-road, the two rear wheels are mounted solidly on one axle and 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.

Climbing uphill

Use proper riding skill to avoid vehicle over-turns on hills. Be sure that you can maneuver your ATV well on flat ground before attempting any incline and then practice riding first on gentle slopes. Try more difficult climbs only after you have learned more skills. In all cases avoid

inclines with slippery or loose surfaces, or obstacles that might cause you to lose control. It is important when you 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 footboards and leaning forward over the handlebars.

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 descend the hill.

If your ATV has halted 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 uphill side. Physically turn the

ATV around and then go down hill.

If you start to roll backwards, DO NOT use the rear brake to stop or try to put the ATV in gear. The ATV could easily tip over backwards. Instead, dismount the ATV immediately on the uphill side.

Riding 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. Wrong braking may lead to a loss of traction. Use caution while descending a hill with loose or slippery surfaces. Braking ability and traction may be adversely affected by these surfaces. Wrong braking may

also cause a loss of traction if possible, ride your ATV straight downhill. Avoid sharp angles which could cause 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

Crossing a sloping surface on your ATV requires you to properly position your weight to keep proper balance. Make sure that you have learned the basic riding skills on flat ground before attempting to traverse a sloping surface. Avoid slopes with slippery surfaces or rough terrain that may disturb 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.

Crossing through shallow water

The ATV can be used to cross slow moving, shallow water of up to a maximum of 20cm (7.9 inches) in depth. Before entering the water, choose your path cautiously. Enter where there is no sharp drop off, and avoid rocks or other obstacles which may be slippery or upset the ATV. Ride slowly and carefully.

Test your brakes after leaving the water. Do not continue to ride your ATV without verifying that you have regained proper braking ability.

Riding over rough terrain

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

Sliding and skidding

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

To reduce the possibility for the front wheels to slide in loose or slippery conditions, putting 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 place 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 improved. 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 of if...

This section is designed to be a reference guide only. Make 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 positioning your weight on the footboard to the outside of the turn. Put your weight over the front wheels for better control.
- If your ATV begins to tip while turning: Lean more into the turn to regain balance. If necessary, gradually release the throttle and/or steer to the outside of the turn.
- If your ATV can't make it up a hill you are trying to climb: Turn the ATV around if you still have forward. 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.

- If your ATV is crossing a sloping surface: Be sure to ride with your weight positioned towards the uphill side of the ATV to keep proper balance. If the ATV starts to tip, steer down the hill (if there are no obstacles in your way) to get balance again. If you discover that the ATV is going to tip over, dismount on the uphill side.

- If your ATV meets 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.

- If your ATV starts to slide sideways: Steer in the direction of the slide if you have the place. Applying the brakes or accelerating is not recommended until you have corrected the slide.

PERIODIC MAINTENANCE AND ADJUSTMENT

Periodic check, adjustment and lubrication will keep your machine in the securest and most efficient condition possible. Security is an obligation of the machine owner. The most important points of machine inspection, adjustment and lubrication are explained on the following pages.

Owner's manual and tool kit

You are advised to put this owner's manual and low-pressured tire gauge in the vinyl bag and always carry them along with the owner's tool kit under the seat.

The service information included in this manual is designed to provide you, the owner, with the essential information for completing your own preventive maintenance and minor repairs.

The tools provided in the owner's tool kit are enough for this purpose, except that a torque wrench is also necessary to correctly tighten nuts and bolts.



Engine oil

Engine oil level measurement

1. Place the ATV on a level surface.
2. Warm up the engine for several minutes and stop it.
3. Remove the dipstick and wipe it off with a clean rag. Insert the dipstick in the filler hole without screwing it in.
4. Remove the dipstick and check the oil level.
5. The oil level should be between the maximum and minimum marks. If the level is low, add oil to raise it to the proper level.

Engine oil replacement

1. Place the ATV on a level position.
2. Warm up the engine for several minutes and stop it.

3. Place a container under the engine.
4. Remove the dipstick and drain bolt to drain the oil.
5. Check the O-ring and replace if damaged.
6. Install the drain bolt and tighten to specification.
7. Fill the engine with oil and equip the dipstick.
8. Warm up the engine for several minutes at idle speed. Inspect oil leakage while warming up.

Final gear oil

Final gear oil measurement

1. Place the ATV on a level surface.
2. Remove the dipstick and wipe it off with a clean rag. Insert the dipstick in the filler hole without screwing it in.
3. Remove the dipstick and check the oil.

4. The oil level should be between the maximum and minimum marks. If the level is low, add oil to raise it to the proper level.
5. Equip the dipstick.

Final gear oil replacement

1. Place the ATV on a level position.
2. Place a container under the final gear case
3. Remove the dipstick and drain bolt to drain the oil.
4. Equip the drain bolt and tighten to specification.
5. Fill the final gear case with oil.
6. Equip the dipstick.
7. Inspect oil leakage. If oil leakage is found, check for the reason.

Spark plug inspection

The spark plug is an important engine component

and is easy to check. The condition of the spark plug can indicate the condition of the engine. For example, a very white center electrode porcelain color could indicate an intake air leak or carburetion problem for that cylinder. Do not attempt to diagnose such problems yourself.

Instead, take the ATV to your dealer, you should regularly remove and inspect the spark plug because heat and deposits will cause the spark plug to slowly break down and erode. If electrode erosion becomes excessive, you should replace the spark plug with one of the proper type.

Before installing the spark plug, measure the electrode gap with a feeler gauge and adjust to specification.

When equipping the spark plug, always clean

the gasket surface and use a new gasket. Wipe off any grime from the threads and tighten to the specified torque.

Air filter cleaning

1. Remove the front cover by removing the screws.
2. Remove the air filter case cover by unhooking the fasteners.
3. Remove the air filter element by unhooking the fasteners.
4. Wash the air filter element gently but totally in solvent.
5. Press the excess solvent out of the air filter element and let it dry.
6. Check the air filter element. If damaged, replace it.
7. Apply foam air filter oil or other quality foam air filter oil to the air filter element. If foam air

filter oil is not useful, SAE 10W30 motor oil may be used.

8. Equip the air filter element, the air filter case cover and the front cover.

Air intake restrictor plate removal

To get full engine performance ability, removing the air intake restrictor plate is required.

1. Remove the air filter element. (See Air filter cleaning for removal and installation procedures.)
2. Remove the air intake restrictor plate.
3. Equip the air filter element.

Carburetor adjustment

The carburetor is a principal part of the engine and requires very complex adjustment. Most adjusting should be left to your dealer who is professional and experienced on this.

However, the idling speed may be performed by the owner as a part of the usual maintenance routine.

Idle speed adjustment

1. Start the engine and warm it up for a few minutes at nearly 1,000 to 2,000 r/min. Sometimes rev the engine to 4,000 to 5,000 r/min. The engine is warm when it quickly responds to the throttle.
2. Connect the tachometer and set the idle to the specified idling speed by adjusting the throttle stop screw. Turn the screw in to increase engine speed, and out to decrease engine speed.

Valve clearance adjustment

The proper valve clearance changes with use, leading to incorrect fuel/air supply or engine

noise. To prevent this, the valve clearance must be adjusted periodically. This adjustment however, should be left to a professional service technician.

Cam chain adjustment

The cam chain will loosen with use, resulting in improper valve timing and engine noise. To prevent this, the cam chain tensioner must be adjusted regularly. This adjustment should be left to your dealer.

Front and rear brake shoe inspection

A wear indicator is provided on each brake. The indicators allow inspecting of brake shoe wear without disassembling the brake. Apply the brake and check the position of the indicator. If the indicator reaches the wear limit line, ask your dealer to replace the shoes as a set.

Front brake lever free play adjustment

The front brake lever free play should be adjusted to 10~20mm (0.4~0.5 in) at the brake lever pivot. If the free play is improper, adjust as follows:

1. Release the upper locknut and fully turn in the adjusting bolt.
2. Release the lower locknut.
3. Turn the lower adjusting bolt specified free play is obtained.

4. Tighten the lower locknut.
5. While applying the front brake, turn out the upper adjusting bolt until the upper and lower cable lengths are equal. The cable joint will become vertical.
6. Tighten the upper locknut.

Rear brake lever and pedal adjustment

1. Brake lever free play adjustment
 - a. Release the brake cable locknut.
 - b. Turn the adjusting bolt at the brake lever until brake lever free play is 5~8 mm (0.20~0.30 in).
 - c. Tighten the locknut.
2. Brake pedal free play adjustment
 - a. Turn the brake rod adjusting nut at the rear wheel hub until brake pedal free play is 20~30 mm (0.8~1.2 in).

Clutch adjustment

1. Remove the rubber cap.
2. Release the locknut.
3. Slowly turn the adjusting bolt clockwise until resistance is felt. Then turn it 1/8 counterclockwise.

Cable inspection and lubrication

Lubricate the inner cables and the cable ends. If the cables do not operate evenly, ask your dealer to replace them.

Knuckle shaft and steering shaft lubrication

Lubricate the pivot points. Use a grease gun.

Wheel removal

1. Raise the wheel by placing a suitable stand under the frame.
2. Remove the nuts from the wheel.
3. Remove the wheel assembly

Wheel installation

When installing the wheel, reverse the removal procedure.

- Tighten the wheel nuts to the specified torques.

Battery

Inspect the level of the battery fluid and see if the terminals are tight. Add distilled water if the fluid level is low.

Replenishing the battery fluid

A poorly maintained battery will corrode and discharge quickly. The battery fluid should be checked at least once a month.

1. The level should be between the upper and lower lever marks. Use only distilled water if refilling is necessary.
2. Disconnect the negative (-) lead.
3. Disconnect the positive(+) lead and remove the battery.
4. When the machine is not to be used for a month or longer, remove the battery and put it in a cool, dark place. Thoroughly recharge the

battery before reusing.

5. If the battery is to be stored for a longer period than the above, check the specific gravity at least once a month and recharge the battery when it is too low.
6. Always make sure the connections are right when putting the battery back in the machine. Make sure the breather hose is properly connected and is not damaged or obstructed.

Fuse replacement

1. The fuse case is placed under the seat.
2. If the fuse is blown, turn off the main switch and equip a new fuse of the specified amperage. Then turn on the switches. If the fuse immediately blows again, consult your dealer.

CLEANING AND STORAGE

Cleaning

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

1. Before cleaning the machine.
 - a. Block off the the end of the exhaust pipe to prevent water entry. A plastic bag and strong rubber band may be used.
 - b. Assure the spark plug and all filler caps are correctly installed.
2. If the engine case is extremely greasy, apply degreaser with a paintbrush. Do not apply degreaser to the wheel axles.
3. Rinse the dirt and deagreaser off with a garden hose. Use only sufficient pressure to do the job.
4. Once the majority 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-get-at places.

5. Rinse the machine off immediately with clean water and dry all surfaces with a chamois, clean towel or cloth.
6. Clean the seat with a vinyl upholstery cleaner to keep the cover plible and glossy.
7. Automotive type wax may be applied to all pained and chrome plated surfaces. Avoid combination cleaner-waxes. Many contain abrasives which may mar the paint or protective finish. When finished, start the engine and let it idle for several minutes.

Storage

Long term storage (60 days or more) of your machine will require some protective procedures to guard against deterioration. After completely cleaning the machine, prepare for storage as follows:

1. Fill the fuel tank with fresh fuel
2. Remove the spark plug, pour about one tablespoon of SAE 10W30 or 20W40 motor oil in the spark plug hole and reinstall the spark plug. Ground the spark plug wire and turn the engine over several times to coat the cylinder wall with oil.
3. Lubricate all control cables.
4. Block up the frame to raise all wheels off the ground.
5. Tie a plastic bag over the exhaust pipe outlet to prevent moisture from entering.
6. If storing in a damp or salty atmosphere,

coat all exposed metal surfaces with a light film of oil. Do not apply oil to any rubber parts or the seat cover.

7. Remove the battery and charge it. Store it in a dry place and recharge in once a month. Do not store the battery in an extremely warm or cold place (less than 0°C (30°F) or more than 30°C (90°F)).

Specification and performance parameter of complete vehicle

The datum mentioned in following table is the size and specification of complete vehicle, performance and specification of the engine.

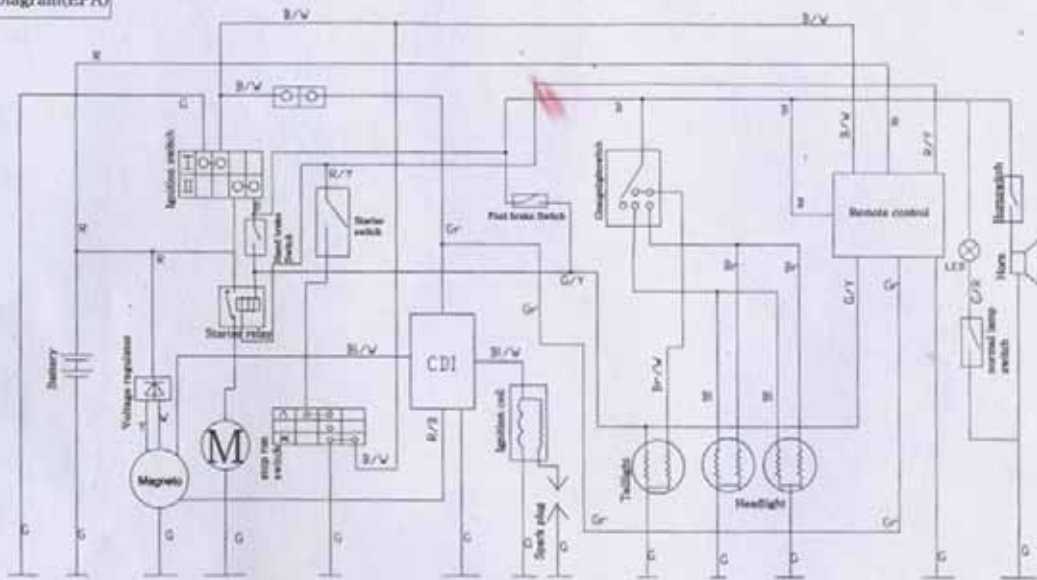
Model		110ATV
Size of complete vehicle and proper mass of empty vehicle	Overall length	1.540mm
	Overall width	860mm
	Overall height	950mm
	wheel base	1.040mm
	Min.ground clearance	100mm
	Seat height	670mm
	Minimum turning radius	2.400mm
	Dry weight:	116kg(256 lbs)

Engine:	
Type	Air cooled, 4-stroke, 3speeds
Cylinder arrangement	Single cylinder
Displacement	107 cc
Bore x Stroke	52.4 x 49.5mm
Compression ratio	9.6:1
Starting system	Electric starter

Lubricaton systems:	Wet sump
SPECIFICATION	
Model	110ATV
Rider Capacity	1 person
Engine Oil Capacity	0.95 L
Gear Oil Capacity	0.12 L
Fuel Capacity	7.8 L
Starting	Electric
Transmission	Semi-automatic
Front Suspension	Leading arm
Rear Suspension	Swing arm
Front/Rear Brakes	Drum
Parking Brake	Mechanical Lock
Front Tires/PSI	19 x 7-8/2.9psi
Rear Tires/PSI	18 x 9.50-8/2.9psi
Neutral Indicator	Standard(green)
Max. Load Capacity	95 kg(209 lb)
Battery (Green)	12V-7A

E Type Circuit Diagram(EPA)

Code	Colour
B	Black
C	Copper
D	Orange
E	Red
H	Blue
Gr	Grey
P	Purple
BL	Black/Blue
BR	Black/Red
BY	Black/White
BY	Black/Yellow
CB	Green/Black
BY	Blue/Yellow
BL/BL	Black/Blue
Y	Yellow
W/W	White/White
CB	Green/Blue
GR	Green/Red
GW	Green/White
GY	Green/Yellow
UV	Orange/White
BL	Black/Black
BY	Black/Brown
WR	White/Red
Y/B	Yellow/Black
Y/W	Yellow/White
BL/B	Black/Black



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