

OWNER'S MANUAL

RAIDER CLASSIC 150-S/D

(Single/Double Seat)

EEC APPROVED ON ROAD



Limited Warranty

The warranty policy applies to those cases where the new seller vehicle unloaded from its shipping container, set up and delivered by authorized dealer and under normal use and service is found to have defects in parts or workmanship under the following terms and conditions. This warranty covers the engine and engine related components for a period of 180 days from the date of purchase.

This warranty does not apply to any parts that in the seller's opinion were defective because of improper maintenance, improper assembly, alterations, abuse, negligence, usage of non-genuine parts or accidents.

Should warranty service be required on your vehicle during the 180-day warranty period, please contact your nearest authorized DAZON dealer for repairs.

What is not covered under this warranty?

This warranty does not cover any seller vehicles that have been subjected to:

- a. Renting;
- b. Disassembly, adjusting or repairing of the vehicle in any way so as to adversely affect its safety or reliability;
- c. Competition or racing.

The warranty does not cover any losses of the seller vehicle use, any losses of time, any inconveniences, or any other consequential damages which include, but are not limited to the losses or damages to any persons, property or expenses of returning damaged units to the vehicle distributor or any **DAZON** authorized dealers.

DAZON has the right to make changes without prior notice.

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FOREWORD

Thanks for choosing **DAZON Raider Classic 150 (EEC-approved for on-road use)**. Prior to operating your BUGGY, please read through this Owner's Manual carefully as it contains important safety and maintenance information. Failure to follow the warnings contained in this manual could lead to personal injuries or damages to the unit.

Be sure to follow the recommended maintenance schedule and service your vehicle accordingly. Preventive maintenance is extremely important to the longevity of your vehicle.

DAZON recommends you to wear a helmet, a pair of goggles and proper footwear all the time.

We hope you will have a pleasant experience with our products and thanks again for choosing **DAZON Raider Classic 150 (EEC-approved for on-road use)**.

A FEW WORDS ABOUT SAFETY

In order to keep everyone safe, you must take responsibility for the safe operation of your **Buggy**. To help you make informed decisions about safety, we have provided Safe Operating Procedures and other information in this manual and on Safety Alert Decals affixed to your vehicle. All the information alerts you to potential hazards that could hurt you or others.

It is not practical or possible to warn you against all hazards associated with operating or maintaining your vehicle, so you must use your own good judgments.

Throughout this manual your attention will be called to the safety information below:

- ★ **Safety Advisory Headings and Safety Decals**-----Cautionary signal words (**Warning-Caution**) may appear in various locations throughout this manual or on Safety Alert Decals affixed to your vehicle. Information accented by one of these signal words must be observed to minimize the risk of personal injuries or the possibility of improper service methods which may damage your vehicle or render it unsafe;

- ★ In addition, the word **Note** is utilized to emphasize the areas of procedural importance and provide suggestions for easy repairs;
- ★ The following definitions indicate the use of these advisory headings as they appear throughout this manual or on Safety Alert Decals affixed to your vehicle:

Safety Messages are preceded by a safety alert



symbol and one of the two words **Warning**

and **Caution**.



directs your attention to the unsafe practice, which could result in damages to your vehicle and possibly subsequent personnel injuries or death, if you don't take proper cautions.



directs your attention to the unsafe practice, which could result in personnel injuries or death if you don't take proper precautions.

Note emphasizes an operating procedure, practice, condition, etc. which is essential.

No matter how often it is said or pointed out, there are people who have a tendency to **IGNORE** the safe operation until it becomes too **LATE**. Don't be this type of person. Focus on **SAFETY** at all times when operating or servicing your vehicle.

Physical harm may result from failure to adhere to the instructions within the Safety Advisory Warnings. This entire manual is filled with important safety information—**please read it carefully**.

IMPORTANT SAFETY INFORMATION

Your **Buggy** will provide you with many years of service and pleasure providing you take responsibility for your own safety and understand the challenges that you will meet while driving.

There is much that you can do to protect yourself when driving. You'll find many helpful recommendations throughout this manual. The following are a few that we consider as the most important ones:

Follow the Age Recommendation

It is strongly recommended that no one under the age of 16 be permitted to drive this **Buggy** without adult supervision.

Always Wear a Helmet

Wearing a helmet significantly reduces the possibility and severity of head injuries. Always wear an E-Mark Approved motorcycle helmet. We also recommend you to wear approved goggles and other protective gear.

Always Wear Wrist Straps

Attach your wrist straps to the steering wheel to insure that you won't try to reach out to one side during a rollover. This will prevent injuries to your wrists, arms, fingers, etc. Follow the photos below when using the wrist straps:

Take Time to Learn & Practice

Take time to become familiar with your **Buggy**. Practise in a safe area until you've built your skills and gotten accustomed to the handling characteristics of your vehicle.

Be Alert to Hazards

The terrain can present a variety of challenges when driving. Continually "read" the terrain for unexpected turns, drop-offs, rocks, ruts and any other hazards. Always keep your speed low enough to allow time for seeing and reacting to hazards.

Drive within Your Limits

Never drive beyond your personal abilities or faster than conditions warrant. Remember that alcohol, drugs and fatigue can significantly reduce your ability of making good judgments and driving safely.

Don't Drink and Drive

Alcohol and drive never mix. Never drink alcohol prior to or while driving your **Buggy**. Otherwise, it can impair your judgments and worsen your reaction time.

Never Run Your Buggy indoors

The exhaust from the engine contains a tasteless, odorless and poisonous gas called carbon monoxide.

Never Run Indoors or in an Enclosed Area

The exhaust from the engine contains the carbon monoxide, a poisonous, tasteless and odorless gas that may be lethal.

Keep Clear of Moving Parts.

You should never place your hands or other parts of your body near any moving parts. Failure to follow this warning may cause physical harm to your body.

Skidding or Sliding

The terrain surfaces can affect turns. Skidding or sliding in a turn is more likely to occur on slippery surfaces such as snow, ice, mud and loose gravel. If you skid or slide on ice, you may lose all directional controls. To avoid skidding or sliding on slippery terrain surfaces, keep your speed low and drive carefully.

Limited Loadage

The limited loadage on the rear rack is 10kg or 22lbs.

SAFETY ALERT DECALS

The Safety Alert Decals should be considered a permanent part of your **Buggy**. If a safety Alert Decal comes off or becomes hard to read, please contact your authorized dealer for replacement.



ARE YOU READY TO DRIVE?

Before each drive, make sure that you and your **Buggy** are both ready to drive. To help get you prepared, this section discusses how to evaluate your driving readiness, what items you should check on your vehicle, and how to adjust for your comfort, conveniences and safety.

Before driving your **Buggy** for the first time, we urge you to:

- Read this Owner's Manual and the Safety Alert Decals on your vehicle carefully;
- Make sure that you understand all the safety messages;
- Know how to operate all the controls;
- Have an adult present if you're under 16 years old.

Before each of your drive, we urge you to be sure that:

- You feel well and are in good physical and mental conditions;
- You are wearing an E-Mark approved motorcycle helmet (with chin strap tightened securely), approved goggles and other protective clothing.
- You don't have any alcohol or drugs in your system.
- You have a driver's license.

Protective Apparel

For your safety, we strongly recommend that you always wear an E-Mark approved helmet, goggles and other protective clothing.

Although complete protection is not possible, wearing proper driving gear can reduce the chances of injuries when you drive.

The following suggestions will help you choose the proper driving gear.

1. Helmets and Eye Protection Gear

Your helmet is your most important protective gear because it offers the best protection against head injuries. A helmet should fit your head comfortably and securely. An open-face helmet offers some protection, but a full-face helmet offers more. Regardless of the style, look for an E-Mark Approve sticker in any helmet you buy.

Always wear a face shield or goggles to protect your eyes and vision.



- **Operating your Buggy without wearing an approved motorcycle helmet, eye protection gear and protective clothing could increase your chances of head and/or eye injuries, even possibly death in the event of severe accidents.**
- **Always wear an approved motorcycle helmet, eye protection gear (goggles or a face shield), gloves, boots, a long-sleeved shirt or jacket and long pants.**

2. Additional Driving Gear

In addition to a helmet and eye protection gear, we also recommend:

- Sturdy motorcycle boots to help protect your feet, ankles and lower legs;
- Motorcycle gloves to help protect your hands;
- Driving pants with knee and hip pads, a driving jersey with padded elbows, and a chest and shoulder protector.

Drive Training

Developing your driving skills is an on-going process. Even if you have driven other buggies, you still should take time to become familiar with how this **Buggy** works and handles. Practise driving your vehicle

in a safe area to build your skills. Don't drive in rough terrain until you've gotten accustomed to this Buggy's controls, and felt comfortable with its size and weight.



- **Operating your Buggy without proper instructions could increase your risks of accidents that could lead to serious injuries or even death.**

Age Recommendation

It is strongly recommended that no one under the age of 16 be permitted to operate this **Buggy** without adult supervision.



- **A child driving this Buggy that is not recommended for his/her age could lose the vehicle control and result in severe injuries or even death.**
- **A child under 16 should have adult supervision when operating this vehicle.**

No Alcohol or Drugs

Alcohol, drugs and Buggies never mix. Even a small amount of alcohol can impair your ability of operating your **Buggy** safely. Likewise, drugs, even if prescribed by a physician, can be dangerous while you're

operating your vehicle. Consult your doctor to be sure that it is safe to operate a vehicle after taking some medication.



- **Operating your Buggy after consuming alcohol or drugs can seriously affect your judgments, cause delayed reaction, affect your balance and perception, and even result in serious injuries or death.**
- **Never consume alcohol or drugs before or while operating your vehicle.**

IS YOUR VEHICLE READY TO DRIVE?

Before each of your drive, it is important to inspect your **Buggy** and make sure that any problems you've found have been corrected. A pre-drive inspection is a must, not only for safety, but because having a breakdown or even a flat tire, can be a safety concern.

If your vehicle has overturned or has been involved in a collision, don't drive it until an authorized dealer has inspected your vehicle. There may be damages you can't see.



- **Improper maintenance of your Buggy or failing to correct a problem before use can result in a crash in which you can be seriously hurt or killed.**
- **Always perform a pre-drive inspection before every drive and correct any problems.**

Pre-drive Inspection

Check the following items before getting on your **Buggy**:

- *Engine Oil*: Check the oil level and add oil if needed; check for leakage; don't let any water go into the

engine, otherwise the engine can't start;

- *Fuel:* Check the level and add fuel if needed; make sure that the fuel-filling cap is securely fastened; check for leaks;
- *Tires:* Use a gauge to check the air pressure, and adjust if needed; look for signs of damages or excessive wear;
- *Nuts & Bolts:* Check the wheels to see if all the axle nuts have been tightened; use a wrench to make sure that all accessible nuts, bolts and fasteners have been tightened;
- *Underbody & Exhaust System:* Remove any dirt, vegetation or other debris that could be a fire hazard or interfere with the proper operation of your vehicle;
- *Air Cleaner Housing Drain Tube:* Check for any dirt in the drain tube, and clean the tube if necessary; check the air cleaner housing;
- *Leaks, Loose Parts:* Walk around your vehicle and look for anything that appears unusual, such as a leak or a loose cable, and adjust or replace if needed;
- *Lights:* Make sure the headlights, brake lights, taillights, turning lights etc. work properly;
- *Throttle:* Check the free play of the throttle, and adjust if needed; press the throttle to make sure it moves smoothly without sticking, and release the throttle to make sure it snaps back automatically;

- *Brakes*: Press the brake pedal several times, check for proper brake pedal free play; make sure there is no brake fluid leakage;
- *Engine Stop Button*: When the engine is running, press and hold the engine stop button for two seconds to make sure the engine stops;
- *Steering Wheel*: Turn the steering wheel to check if it turns properly;
- *Cables*: Check the cable housing for wear; check the fittings for looseness; replace or tighten if needed.
- *Horn*: Check if the horn works properly.

SAFE DRIVING PRECAUTIONS

Keep Hands and Feet on Controls

Always keep both of your hands on the steering wheel and both of your feet on the foot controls when driving your **Buggy**. It is important to maintain your balance and control your vehicle. Removing your hands or feet away from the controls can reduce your ability of maintaining control of your vehicle.



- **Removing your hands from the steering wheel or your feet from the foot controls during operation, can reduce your ability of controlling your Buggy, or cause you to lose your balance and fall off your vehicle.**
- **Always keep both of your hands on the steering wheel and both of your feet on the foot controls of your vehicle during operation.**

Control Speed

Driving at excessively high speed increases the chances of accidents. In choosing a proper speed, you need to consider the capability of your **Buggy**, terrain, visibility and other operating conditions, plus your own skills& experiences.

 **WARNING**

- **Operating your Buggy at excessively high speed increases your chances of losing control of your vehicle, which can easily result in accidents.**
- **Always drive at a speed that is proper for your vehicle, the terrain, visibility and other operating conditions, plus your skills and experiences.**

Be Careful on Unfamiliar or Rough Terrain

Before driving in a new area, always check the terrain thoroughly. Don't drive fast on unfamiliar terrain or when the visibility is limited. (Sometimes it's difficult to see obstructions like hidden rocks, bumps or holes and gain time to react.)

 **WARNING**

- **Failure to use extra care when operating your Buggy on unfamiliar terrain could easily cause your vehicle to overturn or go out of your control.**
- **Go slowly and be especially careful when operating on unfamiliar terrain.**
- **Always be alert to changing terrain conditions when operating your vehicle.**

Never drive past the limit of visibility. Maintain a safe distance between your vehicle and other vehicles.

Always exercise caution and use extra care on rough, slippery and loose terrain surfaces.



- **Failure to use extra care when operating on excessively rough, slippery or loose terrain could cause loss of traction or vehicle control, which could result in accidents, including an overturn.**
- **Don't operate on excessively rough, slippery or loose terrain until you've learned and practised the skills necessary to control your BUGGY on such terrain.**
- **Always be especially cautious on these types of terrain.**

Don't Perform Stunts

Always operate your vehicle in a safe and reasonable manner. When driving, always keep all of the four wheels on the ground.



- **Attempting wheelies, jumps and any other stunts increases the chances of accidents, including an overturn.**
- **Never attempt stunts, such as wheelies or jumps.**

OPERATION

A. Controls

Warning – Don't attempt to start or operate the engine until you've been completely familiar with the location and use of each control necessary to operate your vehicle. You must know how to stop your machine before starting and driving it.

a. Throttle

The right foot pedal is the throttle that controls your vehicle speed. As the engine speed is above idle, the clutch automatically engages and moves the vehicle forward; to disengage the clutch at any time, allow the throttle to return to the idle position.



- **Each time before starting the engine, check the throttle assembly to ensure that when the pedal is pushed all the way forward, the throttle assembly can work smoothly; and when the pedal is release, the throttle assembly can return to the idle position automatically.**
- **Don't operate your vehicle if the pedal or engine throttle linkage fails to return to idle. If the lubrication, adjustment or replacement of the worn parts can't correct the problem, please contact the authorized dealer for assistance.**

b. Brake

The brake pedal is located on the left side of the vehicle. Applying pressure onto the pedal draws the brake calipers against the brake rotor (one at the rear wheel, two at each of the front wheels) and slows or stops the vehicle.



c. Control Panel

There are two instruments and eight switches on the control panel.

(Raider Classic 150D Control Panel)

Two Instruments: on the left or upper part of the control panel.

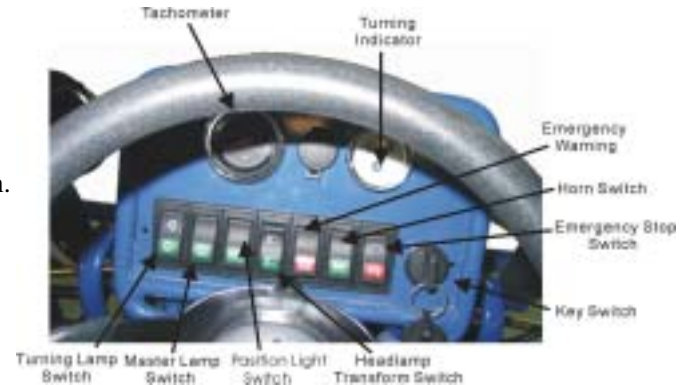
- **Tachometer**-----It's on the left or upper part of the control pane land indicates the engine rotative speed.
- **Turning Indicator** ----- It's beside the Tachometer, and indicates the directional turning of your vehicle.



Eight Switches: on the right or lower part of the control panel.

- **Turning Lamp Switch** ----- Turn on this switch, then when you turn your vehicle, the turning lamp will turn on automatically to show the turning direction.
- **Master Lamp Switch**-----It controls all the lamp switches.
- **Position Light Switch**-----Turn on this switch, and then the position light will show you the position of your vehicle.
- **Headlamp Transform Switch**-----It can transform the high beam headlamp to the dipped headlamp, or the dipped headlamp to the high beam headlamp.
- **Emergency Warning Light Switch**-----Turn on this switch, then once your vehicle is in any emergency, the emergency warning light will turn on automatically to warn you against it.
- **Horn Switch**-----Turn on this switch, then you can sound your horn whenever necessary.
- **Emergency Stop Switch**-----In case your vehicle comes across some emergency in traveling, and you need to stop the engine immediately, you can use this switch.

(Raider Classic 150S Control Panel)



- **Key Switch**-----Insert the key into the key switch, turn the key clockwise, and release the key when the engine starts. The engine will warm up within 5 minutes, and the engine choke will close automatically and operate at normal RPM.

Warning: Don't crank the starter more than 5 seconds at one time.

d. Ignition Switch

Insert the key into the ignition switch, turn the key clockwise, and release the key when the engine starts. The engine will warm up within 5 minutes and the engine choke will close automatically and operate at normal RPM.

Warning: Never crank the starter more than 5 seconds at one time.

e. Engine Stop Switch

Important----Stop Button test: Before driving your vehicle, test the engine stop switch to assure that it is operating properly. When the engine is running, move the stop button to the "OFF" position.

B. Pre-Drive Inspection



- **Perform this pre-drive inspection everyday before each drive. Otherwise, serious damages to your vehicle or personal injuries to yourself may happen.**
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- a. *Engine Oil*: Check the engine oil level, add oil if required; check for oil leaks; don't let any water go into the engine, otherwise the engine can't start;
 - b. *Fuel*: Check the fuel level, and add fuel if necessary (don't overfill); check for fuel leaks;
 - c. *Brakes*: Depress the brake pedal several times, and then check for the proper free play; make sure there is no brake fluid leakage; adjust if necessary;
 - d. *Tires*: Check the tire conditions and pressures;
 - e. *Drive Chain*: Check for the chain conditions and tension; lubricate it if necessary;
 - f. *Throttle*: Check for the smooth operation of the throttle; assure that the throttle "snaps" back to idle;
 - g. *Engine Stop Button*: Perform the engine stop button test; repair it if necessary;
 - h. *Nuts, Bolts and fasteners*: Check the wheels to see if all the wheel nuts have been tightened properly; Check all the other fasteners and tighten them to the specified tension if necessary;
 - i. *Protective Bars*: Ensure all the protective bars are in place and secure your BUGGY before operating;

- j. *Brake Light*: Check for the proper operation of the brake light;
- k. *Wheels*: Check for the tightness of wheel nuts and axle nuts; check if all the axle nuts are secured by cotter pins;
- l. *Steering*: Check for the free operation of steering; check if there is any unusual looseness in any area.
- M Horn*: Check if the horn works properly.



- **Always follow the safe operation rules.**
- **Always wear a helmet.**

Locations of Parts:**Double-Seat**



Single-seat:



C. Passengers

The vehicle allows for two riders only for the double-seat unit and one rider only for the single-seat unit. The combined maximum weight of the driver and passenger for the double-seat unit should not exceed 180kg or 400lbs; the combined maximum weight of the driver for the single-seat unit should not exceed 90kg or 200lbs.

D. Seat Adjustment

The seat must always be securely fastened in the position which affords the best control of the foot pedals, steering wheel and engine stop button for the operator.

- a. Pull the seat adjustment handle upward to disengage the seat slide;
- b. Move the seat to the desired position;
- c. Be sure that the seat adjustment handle snaps back into place and that the seat is locked into position.



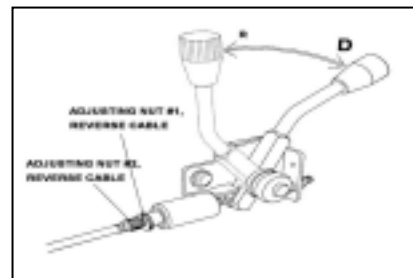
- **Before attempting to adjust the seat, ensure that the engine isn't running.**



- **Never operate your vehicle when the seat isn't securely fastened. Otherwise, it could result in personal injuries or loss of life.**
- **Before attempting to adjust the seat, ensure that the engine isn't running.**

E. Reverser Adjustment

- Press down the reverse lever to the "D" position so that the unit can move forward; pull back the lever to "R" so that the unit can move backward;
- Adjusting Nut #1 at the end of the reverse cable can adjust the mesh status inside the reverse gear box; rotate the nut to adjust the cable, and make sure that the cable isn't too tight or too loose;
- Adjust Nut#2 accordingly.



F. Starting and Operating Instructions

- Before starting the engine, be sure that the driver has sat properly in the driver's seat and the seatbelt has been tightened;
- Test the controls to learn how to start, turn and stop;

- c. Operate your vehicle slowly until you've been familiar with it;
- d. The turning radius of your vehicle is small and agile, so the centrifugal force is very high when turning at high speed. When turning, you'd better slow down to a more controllable speed to prevent your vehicle from rolling over;
- e. Keep your heel on the floorboard for the proper pedal control; any attempt to turn sharply at high speed is dangerous, because the tires can easily catch an edge that can result in a rollover.



- **Never operate your vehicle when the provided seat isn't securely fastened; otherwise, it could result in personal injuries or even loss of life.**

G. Starting the Engine

- (1) Check if the fuel line is smooth.
- (2) Check if the ignition system is working.
- (3) Press the starting button when the throttle is closed.
- (4) Warm up the engine for 2-3 min after starting the cold engine.

Note:

- (1) Release the button and cut the power of the starting motor immediately after starting the engine.
- (2) Don't press the starting button after starting the engine. Otherwise it may cause damages to the engine.
- (3) Don't press the button for more than 3-4 seconds one time. Wait for about 10 seconds to repress. Press the button with the throttle slightly opened.
- (4) In cold weather, warm up the engine for several minutes at the idle speed. Then speed up after the operation temperature is reached.
- (5) In hot weather, avoid running the engine at the idle speed for a long time. It may overheat the engine.

H. Stopping the Engine

- (1) Run the engine for about 3-5 min at the idle speed to cool down.
- (2) Turn off the throttle.
- (3) Turn off the ignition switch.

I. Running-in of the New Engine

The running-in distance is 1000km. During this period, please follow the following instructions.

- (1) Run the engine according to the requirements for the running-in engine.
- (2) Rotate the throttle slowly after starting the engine. Don't speed up or speed down suddenly.
- (3) Drive on the smooth roads. Don't drive uphill or on rough roads for a long time.
- (4) Keep the oil lines smooth.
- (5) Avoid speeding up suddenly or running the engine at a high speed without loading.
- (6) Maintain the vehicle according to service intervals. Repair as soon as possible if necessary.
- (7) After the running-in period, clean the crankcase and replace oil; remove the carbon on the top of the piston and in the combustion chamber; adjust the spark plug electrode gap and valve clearance; check if the oil lines are smooth; Maintain the whole vehicle according to the requirements specified in the Owner's Manual.

SERVICE INSTRUCTIONS

A. Air Cleaner

Service the air cleaner every 20 hours of usage.

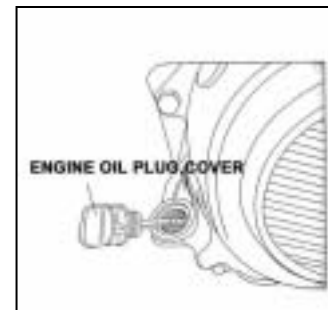
Note: Service more often when driving under dusty conditions.

- a. Remove the cleaner cover 1;
- b. Remove the air cleaner element 2, 3;
- c. Fill a basin with the non-flammable cleaning agent and dip the element in it;
- d. Dry the element after cleaning it; dip it into the engine oil specified by the manufacture, and then dry it again.

B. Engine Lubrication

After the new engine has operated for the first 5 hours and for every 10 hours thereafter, change the oil in the crankcase to insure the proper lubrication of internal parts and to prevent costly repairs due to the excessive wear.

- a. Remove the filler plug located on the rear side of engine; remove the drain plug; tip the vehicle backwards slightly by blocking up the front end; drain the oil into a



suitable container;

- b. Place the vehicle in a level position, replace the filler plug and tighten it securely;
- c. Refill the crankcase with SAE 10W/30 oil (approximately 1 1/4 pint); use the same grade of oil as used originally;
- d. Check the oil level before each drive; add the oil up to the proper level.

Note: Don't mix various grades of oil together.

C. Spark Plug

- a. Remove the spark plug and inspect it with a spark plug wrench each time when changing the oil;

Note: The electrodes should be kept clean and free of carbon. The presence of the carbon or excess oil will greatly reduce the proper performance of engine.

If possible, check the spark plug gap (area between electrodes) with a wire feeler gauge. This specification is 0.6-0.7mm.

- b. Before installing the spark plug, coat the threads lightly with the graphite grease if possible, to ensure the easy removal next time; otherwise, the spark plug will need inspection;
- c. It is advisable to replace the spark plug at least once a year to insure the easy starting and good engine performance.



D. Carburetor Adjustment

Never make unnecessary adjustments. The manufacturer recommended settings are correct for most applications. You will need a tachometer to make some of the adjustments.

- a. Warm up the engine for about 5~10 minutes;
- b. Gently tighten the airscrew, and back it out 2-3 turns anticlockwise;
- c. Connect the tachometer, and adjust the throttle idle speed (the standard value is 1700 RPM);
- d. Turn the airscrew anticlockwise slowly and observe the RPM of the engine, and stop adjusting as the RPM reaches the top speed;
- e. Readjust the idle speed screw to the standard value;
- f. Repeat the steps d, e until the RPM has been stabilized.



E. Cleaning Instructions

Keep your vehicle clean. Use a clean rag to wipe off the dirt and oil from around the controls, also wipe off any spilled fuel and oil.

Keep the engine free of foreign objects, and be sure to check if the cooling fan area is free of debris for proper cooling.

F. Vehicle Lubrication

Lubricate the vehicle every 90 days of use.

G. Chain Lubrication

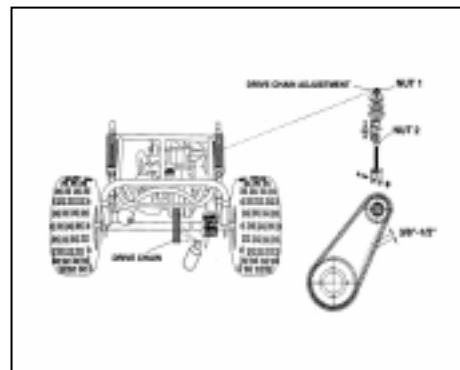
Fill a spray atomizer with the specified chain lubrication, and lubricate the chain.

H. Chain Adjustment

Check the chain adjustment after the first two hours of use.

Readjust it if it has more than 1/2" flex.

- a. Loosen Nut # 1;
- b. Turn Nut # 2 clockwise in 1/2-turn increments, then turn nut # 1 until it becomes tight;
- c. Repeat the above two steps until the chain is adjusted to the desired tension.



I. Front Shock Adjustment

There are five adjustable positions on the front shock. The default position is in the middle set by the manufacturer.

Use a round nut wrench as you adjust the shock. The tension of shock spring will increase as you screw to the left and decrease as you screw to the right.



J. Storage Instructions

In the event your vehicle isn't to be operated for periods in excess of 30 days or at the end of each driving season, prepare for the storage as follows:

- a. Drain out (or use a fuel stabilizer) all the left fuel in the fuel tank and carburetor;
- b. Remove the spark plug, pour one ounce of clean cylinder lubricating oil through the spark plug hole into the cylinder, and crank the engine slowly to spread the oil;
- c. Replace the spark plug;
- d. Don't save or store gasoline over winter, because the old gasoline has deteriorated in the winter storage, and will cause hard starting and affect the engine performance.



- **Don't drain fuel while the engine is hot.**
- **Be sure to move your vehicle outside before draining the fuel.**

J. Engine Maintenance

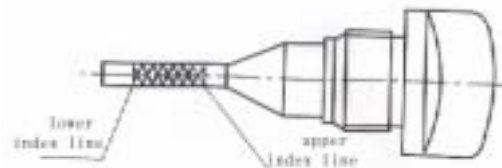
(1) Daily Maintenance:

- Remove the dust and dirt on the surface;
- Check all the exterior fasteners at the joints, and fasten or replace them if necessary;
- Check for the oil leakage, and check the compression at the mating surface;
- Check the engine oil, and add some if necessary.

Note: The oil level should be between the upper index line and the lower index line of the gauge.


(2) 50-Hour Maintenance:

- Finish the daily maintenance;
- Remove the dust in the air cleaner element; replace the element if there is too much dust or any



damp;

Note: Don't dip the element in water or oil. Don't apply any lubrication oil or any other oil on the element. Otherwise it may cause damages to the transmission belt.

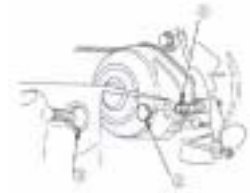
 **WARNING**

- Don't clean the element with gasoline or solvent of low flash point.

- c) Remove the carbon on the spark plug;
- d) Clean the crankcase and replace the oil;
- e) Clean the transmission box and replace the gear oil;
 - Remove the cap ②;
 - Remove the filling bolt ①;
 - Remove the drain bolt ③;

Note: When draining the oil, the engine should be at some temperature, which can ensure the quick and complete draining.

- f) Check the cooling devices.
 - Check for the leakage of the water tank and water pipe;
 - Check if the water in the subsidiary water tank is between the



upper limit ① and lower limit ③;

- If the water is insufficient, please open the cap ② and add some water until the water level reaches the upper limit ①.

(3) 100-Hour Maintenance:

- Finish the 50-hour maintenance;
- Remove the cylinder cover and cylinder body, and clean out the carbon on the cylinder cover, cylinder body, piston top and in/ex valve, etc.;
- Clean the inner part of the crankcase, and rotate the crankshaft during the cleaning to clean the main bearing and connecting rod big end needle bearing;
- Check if the fixed screw of the generator stator is loose;
- Keep the connectors and electric parts dry and clean.

(4) 150-Hour Maintenance:

- Finish 100-hour maintenance;
- Clean the crankcase and replace oil;
- Check if there is any leakage on the oil seals; replace the oil seals if necessary.

(5) 300-Hour Maintenance:

- a) Finish 150-hour maintenance;
- b) Check if the parts of the clutch and the transmission are normal; adjust or replace the parts if necessary.

(6) 500-Hour Maintenance:

- a) Finish 300-hour maintenance;
- b) Disassemble the engine (except the crankshaft connecting rod); check the parts for wear, and repair or replace the parts if necessary;
- c) Replace the cooling fluid.

REPAIRS

A. Front Wheel Replacement

Don't disassemble the castle nuts when you replace the front wheels.

First remove the 4 wheel nuts, next remove the front wheel, then replace the new wheel, finally tighten the wheel nuts.



B. Rear Wheel Replacement

Disassemble the castle nuts when you replace the rear wheels.

It is only necessary to tighten the castle nut so that the wheels turn freely on the axle with minimum endplay. Tighten the castle nuts and install the cotter pins after replacing the wheels.



PERIODICAL CHECK AND SERVICE

The maintenance intervals in the following table are based upon average riding conditions. Riding in unusually dusty areas requires more frequent services.

Items	First	Monthl	Quarterly	Yearl
Tire pressure/wear, Brake performance, Tightness of	I	I		
Air cleaner		C	C	I
Carburetor	I	A		C
Spark plug			C, A	
Drive chain	I	I	C, A, L	
Brake fluid			I	
Replace gearbox oil		I	R	
Chassis		C, I	L	
Fuel switch/fuel tank				C
Battery	I		I	
Engine oil		R		
Valve clearance of engine			A	

Note: A: Adjust; C: clean; I: inspect, clean or replace if necessary; L: lubricate; R: replace.

OPTIONAL ITEMS**Mudguard Assembly Instructions****1. Assemble left front mudguard**

- a) Install the left support of the front mudguard and the front mudguard by using 4 Flange bolts (convex) M6×16, 4 Flange nuts M6, 4 washers ϕ 6 and 4 spring washers ϕ 6;



- b) Fix the left support of the front mudguard and the left knuckle support by using 4 socket-head bolts

M8×25, 4 hex nuts M8 and 4 spring washers ϕ 8.

2. Assemble right front mudguard



- a) Install the right support of the front mudguard and the front mudguard by using 4 Flange bolts (convex) M6×16, 4 Flange nuts M6, 4 washers ϕ 6 and 4 spring washers ϕ 6;



A2

A1

- b) Fix the right support of the front mudguard and the right knuckle support by using 4 socket-head bolts M8×25, 4 hex nuts M8 and 4 spring washers ϕ 8.

3. Assemble left rear mudguard



- a) Install the left support of the rear mudguard and the rear mudguard by using 4 Flange bolts (convex) M6×16, 4 Flange nuts M6, 4 washers ϕ 6 and 4 spring washers ϕ 6;



B1

B2



- b) Fix the left support of the rear mudguard and the left pipe of the rear swing arm by using 4 Flange bolts (convex) M8×50, 4 hex nuts M8 and 4 spring washers ϕ 8.

4. Assemble right rear mudguard



- a) Install the right support of the rear mudguard and the rear mudguard by using 4 Flange bolts (convex) M6×16 ,4 Flange nuts M6 ,4 washers ϕ 6 and 4 spring washers ϕ 6;



- b) Fix the right support of the rear mudguard and the right pipe of the rear swing arm by using 4 Flange bolts (convex) M8×50, 4 hex nuts M8 and 4 spring washers ϕ 8.

5. Mudguard and Bracket

- a) A1: Mudguard Bracket Outer, Front
- b) A2: Mudguard Bracket Inner, Front
- c) B1: Mudguard Bracket Outer, Rear
- d) B2: Mudguard Bracket Inner, Rear



A1

A2

Mudguard and Front Bracket



B1

B2

Mudguard and Rear Bracket

SPECIFICATIONS**DIMENSIONS**

Overall Length

Overall Width

Overall Height

Wheelbase

Ground Clearance

VIN

Statutory Plate& Safety Labels

SINGLE-SEAT / DOUBLE-SEAT

2330mm / 2300mm

1310mm / 1460mm

1425mm / 1425mm

1475mm / 1520mm

200mm

accord with GMVR A01-01

accord with GB 7258-1997

ENGINE

Model

Type

Engine Capacity

Displacement

Bore X Stroke

Max Power

DZ1P57QMJ

Forced air-cooled, single cylinder, 4-Stroke

150cc

149.6ml

57.4mm X 57.8mm

7.0kw or 7000rpm

Max Torque	10.0N.m or 6500rpm
Idle Speed	1700±100rpm
CO Emission	7.0g/km
HC Emission	1.0g/km
Fuel Type	SAE 90# or above (unleaded)
Lubricate Oil Type	SAE 10W/30SF
Lubrication	Force & Splash
Cooling	Air-cooled
Ignition	C.D.I.
Starting	Electric
Spark Plug	C7HSA (NGK)
Spark Plug Gap	0.6-0.7mm
Transmission	Chain Transmission
Transmission Ratio	F. 1:1, B. 1:3
Compression Ratio	9.5±0.1:1
Carburetor	MIKUNI BS 24-1005
Absorber	Normal (in $10^6 \times 10^4$ times of experiments)

CAPACITIES

Front/ Rear Tire Load Coefficient	36
Front/ Rear Tire Speed Level	L
Fuel Tank	7.0L, 130kpa (no leakage in experiments)
Engine Oil	850ml
Starting Time	≤15s
Climbing	≥20%
Top Speed	60kmph
Tachometer	33-40kmph
Turning Radius	3m/3.5m
Acceleration Noise Level	≤77dB (A)
Horn	DL80-90 12V 3A 105dB, 93<dB (A) <112
Headlight	12V 35W/35W
Headlight High Beam Intensity	regulations/law-oriented
Taillight	12V 21W /5W
Turning Light	12V 10W
License Light	12V 5W
Battery	12V 8Ah

Anti-theft Lock	$\geq 200\text{N. m}$
Rearview Mirror	accord with EEC standards

CHASSIS

Front/Rear Brake	Hydraulic disc, foot control
Front Wheel Brake Force	764N/1117N
Rear Wheel Brake Force	1000N/1176N
Parking Brake	Hydraulic disc, hand control
Braking Distance	$\leq 7 \text{ m}@30\text{kmph}$
Front Tire	21 X 7 -10
Rear Tire	22 X 11 -10

PRESSURE

Front Tire	175kPa
Rear Tire	200kPa

WEIGHT

Net Weight	219kg/241kg
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