



# UTV

OWNER'S MANUAL

**TITAN 500**  
Four Wheel Drive



# WELCOME INTRODUCTION

Thank you for purchasing Hammerhead Titan 500 Utility Vehicle (UTV). We hope you will enjoy it. Before you start to operate the vehicle, 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 can result in serious injuries or death.

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

We hope you will have a pleasant experience with our product and thank you again for choosing Hammerhead Products.

# LIMITED WARRANTY POLICY

This warranty applies to defects in workmanship or materials only. No other warranty expressed or implied exists.

Hammerhead Off-Road warrants its products with the following conditions:

This warranty policy only applies to vehicles unloaded from their shipping containers, set up and delivered by an authorized dealer, and that under normal use and service is found to have defects in parts or workmanship under the following terms and conditions. This warranty covers the vehicle and engine related components for a period of 90 days.

The warranty does not apply to any parts, which in opinion of seller was defective because of improper maintenance, improper assembly, alternations, abuse, negligence or accident.

Should warranty service be required on your vehicle during the 90 days warranty period, please contact your nearest authorized dealer for repairs.

## WHAT IS NOT COVERED UNDER THIS WARRANTY

Damage or faults caused by misuse, negligence, alternations, accidents or any abnormal use including the use of non genuine parts, renting leasing, competition or racing. This warranty does not cover loss of use of the unit or loss of time, or inconvenience or normal wear and deterioration of consumable items such as spark plugs, chain, brake shoes, fuses, clutch parts, belts, fuses, sprockets, light bulbs, battery, wheels and tires.

## VEHICLE SERIAL NUMBER LOCATION

Always use the serial and model number when ordering parts for your vehicle. The serial number plate is located under the cargo bed on the driver's side on the frame.

Record your Model Number: \_\_\_\_\_

Record your VIN Number: \_\_\_\_\_

# IMPORTANT MANUAL INFORMATION

**Note:** The operator, passenger, parents or guardian must read, study and understand all the items contained within this owners/operators manual before operating this vehicle. Failure to follow these instructions could endanger the personal safety of the operator, passenger and any Bystanders.

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

**!** The safety alert symbol means **ATTENTION! BECOME 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.

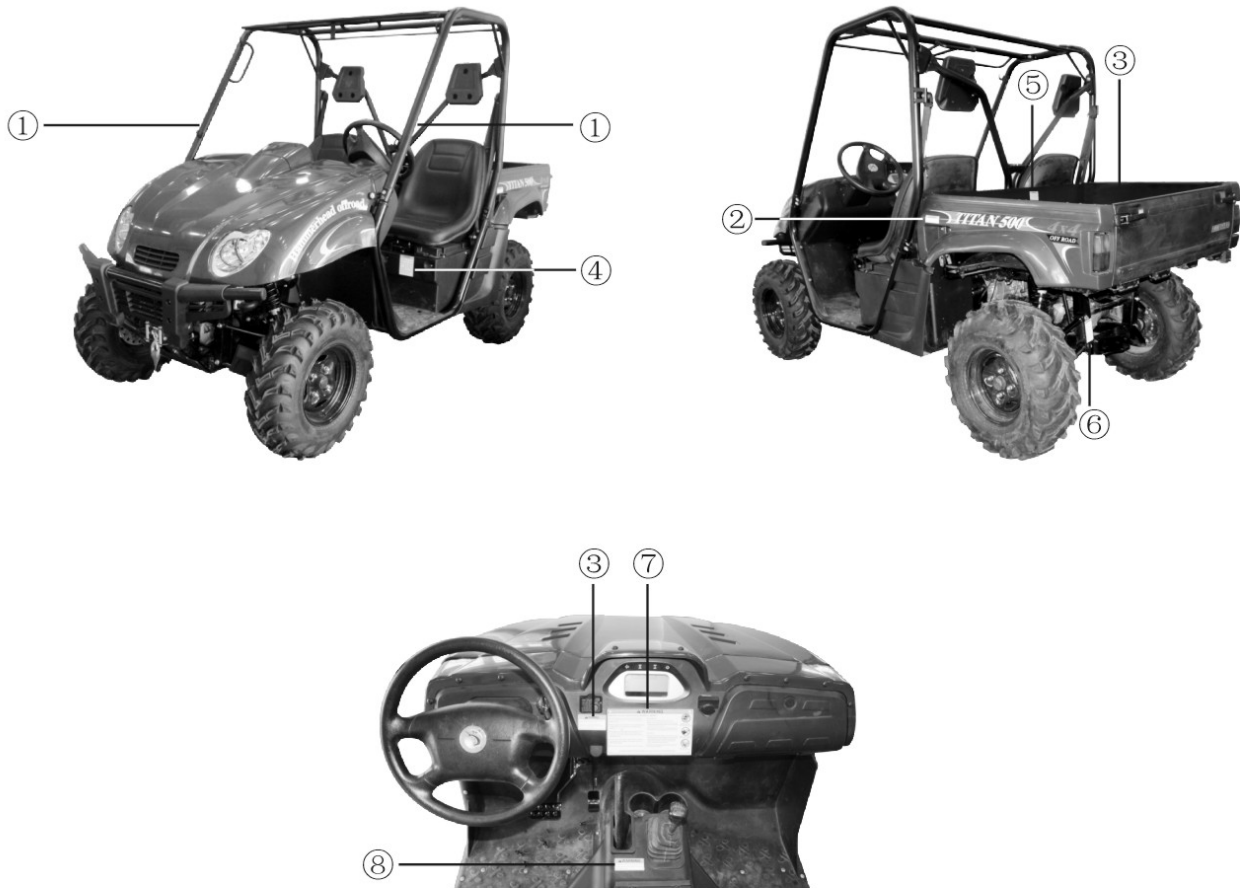
**CAUTION:** A **CAUTION** indicates special precautions that must be taken to avoid damage to the vehicle.

**NOTE:** A **NOTE** provides key information to make procedures easier.



# LOCATION OF WARNING DECALS

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



**⚠ WARNING**

The enclosure cannot protect occupants in all foreseeable accidents, including rollover.

**⚠ WARNING**



- Keep hands, body, other persons away when closing bed.
- Do not operate the vehicle with bed up.

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**⚠ WARNING**

Turning the off road vehicle 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.

**⚠ WARNING**

Please always remember to step brake until the vehicle stop before change gears to avoid any engine gear damage.

③

**⚠ WARNING**

IMPROPER TIRE PRESSURE OR OVERLOADING CAN CAUSE LOSS OF CONTROL.  
LOSS OF CONTROL CAN RESULT IN SEVERE INJURY OR DEATH.

OPERATING TIRE PRESSURE: Set with tires cold.

RECOMMENDED:	FRONT:	70kPa, {.70kgf/cm},	10psi
	REAR:	98kPa, {.98kgf/cm},	14psi
MINIMUM:	FRONT:	63kPa, {.63kgf/cm},	9psi
	REAR:	91kPa, {.91kgf/cm},	13psi

Never set tire pressure below minimum. Tire may dislodge from rim.

Gross Vehicle Weight Rating:907 kg (2000lb) maximum including weight of operator, passenger, accessories, cargo, and (if applicable) trailer tongue weight

④

## WARNING

Severe INJURY or DEATH can result if you ignore the following:

- Maximum Load in Cargo Bed: 181kg (400lb).
- Never carry passengers in cargo bed.
- Cargo can affect handling and stability. Read Owner's Manual before loading or towing.
- When loading with cargo or towing a trailer: Reduce speed and allow more room to stop. Avoid hills and rough terrain.
- Be sure cargo is secured - a loose load could change handling unexpectedly.
- Keep weight in the cargo bed centered, and as low and far forward as possible. Top-heavy loads increase the risk of overturn.

⑤

## WARNING

Improperly loading a trailer and failure to use extra care when pulling trailer can cause an accident or injury. Never load more than 50kg (110lbs) tongue weight on the towing bracket. Do not tow more than 550kg (1212lbs) rolling weight (trailer plus cargo). Operate in low-range gears only, allow for increased braking distance, and use extreme caution when operating on inclines. Read carefully the loading information and trailer hitch sections in the owner's manual.

⑥

## WARNING

Improper use can result in Severe INJURY or DEATH.

This off-highway utility vehicle will handle and maneuver differently from an ordinary passenger car or other vehicle.

- Vehicle capacity: 1 operator and 1 passenger. Passenger must be able to reach and hold the handgrip inside enclosure.
- This vehicle is recommended only for operators 16 and older with a valid motor vehicle license. Adults must supervise use by minors. Check state laws for minimum age requirements.
- Gross Vehicle Weight Rating: 2000lb (907 kg) maximum including operator, passenger, accessories, cargo and trailer tongue weight.
- Passenger and cargo can affect vehicle handling.

### ALWAYS

- wear a seat belt when riding in the vehicle.
- Keep your hands and feet inside the vehicle at all times-watch for branches, brush, or other hazards that could enter the vehicle.
- drive straight up and down inclines-driving across the side of an incline increase the risk of overturn.

### NEVER

- operate through water deeper than 13" (33cm) or fast flowing water-if you must cross shallow, slow moving water, choose your path carefully to avoid sharp drop-offs, large rocks, or slippery surfaces that could cause the vehicle to overturn.
- make sharp, high-speed turns-the vehicle could roll over or go out of control.



ALWAYS USE AN APPROVED HELMET AND PROTECTIVE GEAR



NEVER USE ON PUBLIC ROADS OR PAVEMENT



NEVER USE WITH DRUGS OR ALCOHOL

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

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# **! SAFETY INFORMATION**

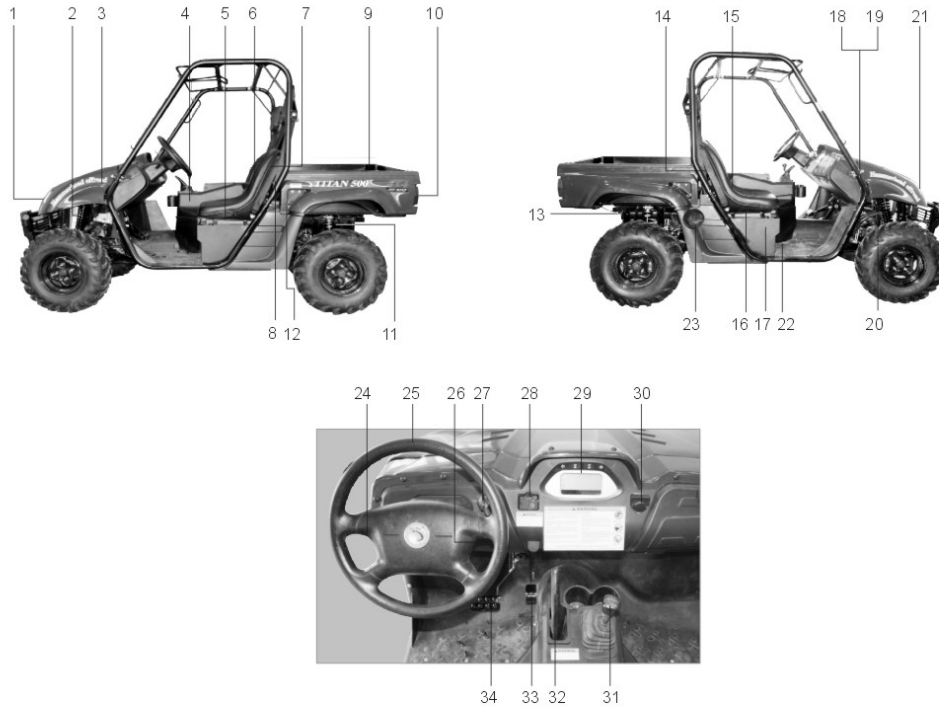
This off-highway utility vehicle handles differently from other vehicles including cars and ATVs. Where INJURY OR DEATH can result if you do not follow these instructions:

- Read this manual and labels carefully and follow the operating procedures described.
- This vehicle is designed to carry the driver and one passenger. Never carry passengers in the cargo bed.
- Always be sure the driver and passenger are wearing seat belts.
- Never give a ride to a passenger who is too small to reach and hold the handgrip on the enclosure.
- Always avoid operating the vehicle on any paved surfaces, including sidewalks, driveways, parking Lots, and streets.
- Never operate this vehicle in any public street, road, or highway, even a dirt or gravel one.
- Never operate this vehicle without wearing an approved motorcycle helmet that fits properly. You should also wear eye protection (goggles or a face shield), gloves, over-the-ankle boots, long-sleeved shirt or jacket, and long pants.
- Never consume alcohol or drugs before or while operating this vehicle.
- Never operate at speeds too fast for your skills or the conditions. Always go at a speed that is proper for the terrain, visibility, operating conditions, and your experience.
- Never attempt jumps or other stunts.
- Always inspect your vehicle each time you use it is in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in this manual.
- Always keep hands, arms, feet, and legs inside the vehicle at all times during operation. Keep your feet on the floorboard. Never hold onto the enclosure except when using the handgrip inside the enclosure. Otherwise, your hand could be injured if it is caught between the enclosure and an obstacle outside the vehicle.
- Always keep both hands on the steering wheel when driving.
- Never wrap your thumbs and fingers around the steering wheel. This is particularly important when driving in rough terrain. The front wheels will move right and left as they respond to the terrain, and this movement will be felt in the steering wheel. A sudden jolt could wrench the steering wheel around, and your thumbs or fingers could be injured if they are in the way of the steering wheel spokes.
- Always go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when driving the vehicle.
- Never operate on excessively rough, slippery, or loose terrain until you have learned and practiced the skills necessary to control the vehicle on such terrain. Always be especially cautious on these kinds of terrain.

- Never turn at excessive speed. Practice turning at slow speeds before attempting to turn at faster speeds. Do not attempt turns on steep inclines.
  - Never operate the vehicle on hills that are too steep for it or for your abilities. Go straight up and down hills where possible. Maximum slope angle:15°
  - Never operate on hills that are slippery or ones where you will not be able to see far enough ahead of you. Never go over the top of a hill at speed if you cannot see what is on the other side.
  - Always follow proper procedures for going uphill. If you lose momentum and cannot continue up a hill, back down the hill with the engine in reverse gear. Use engine braking to help you go slowly. If necessary, use the brakes gradually to help you go slowly.
  - Always check terrain carefully before going down hills. Go as slowly as possible. Never go down a hill at high speed.
  - Always check for obstacles before operating in a new area.
  - Never operate the vehicle in fast flowing water or water deeper than the floorboards on this model. 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 be sure there are no obstacles or people behind you when you operate in reverse. When it is safe to proceed in reverse, go slowly. Do not brake abruptly when carrying loads in the cargo bed.
  - Always use the size and type of tire specified in this manual.
  - Always maintain proper tire pressure as described in this manual.
- Never exceed the stated load capacity. Cargo should be as far forward in the bed as possible, and distributed evenly from side to side. Be sure cargo is secured so that it cannot move around during operation. Reduce speed and follow instructions in this manual for carrying cargo or pulling a trailer. Allow greater distance for braking.



# DESCRIPTION AND VEHICLE IDENTIFICATION



1. Head lights	2. Front Shocks
3. Brake Fluid Reservoir	4. Air Filter Element
5. V-Belt Case	6. Driver Seat
7. Driver Seatbelt	8. Spark Plug
9. Cargo Bed	10. Tail/Brake Light
11. Rear Shock Absorber Adjusting Ring	12. Cargo bed release lever
13. Spark Arrestor	14. Passenger Seatbelt
15. Passenger Seat	16. Oil Filter Cartridge
17. Engine Oil Dipstick	18. Battery
19. Fuses	20. Coolant Reservoir
21. Radiator Cap	22.
23. Fuel tank cap	24. Light switch/ Turn Signal / Horn
25. Steering Wheel	26. Choke
27. Main switch	28. On-Command Four/Wheels Drive & differential switch
29. Indicator and warning lights	30. Auxiliary DC jack
31. Drive Select Lever (H/L/N/R)	32. Parking brake lever
33. Gas Pedal	34. Brake Pedal

# CONTROL FUNCTIONS



## Main Switch

Functions of respective switch position are as follows:

### ON:

All electrical circuits are supplied with power, and the headlights and taillights comes on when the light switch is on.

### OFF:

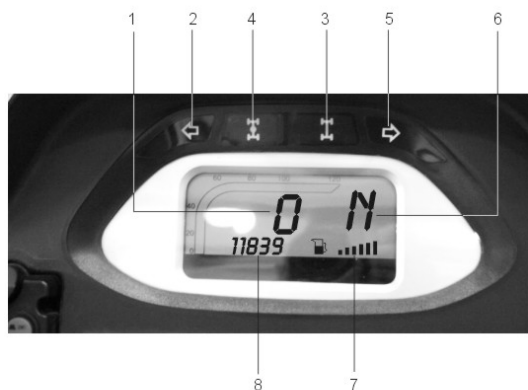
All electrical circuits are switched off. The key can be removed in this position.

### START:

The electric starter is engaged by turning and holding the key in this position. Release the key when the engine starts.

## CAUTION:


- Do not operate the electric starter continuously for more than 5 seconds, or starter damage could occur. Wait at least 5 seconds between each operation of the electric starter to let it cool.
- Do not turn the key to the “START” position with the engine running, or damage to the electric starter can result
- See Starting instructions prior to starting the engine.



## Indicator and warning lights.

1. Speed indicator in MPH.
2. Left turning indicator
3. Four wheel drive indicator.
4. Differential gear lock indicator light.
5. Right turning indicator
6. Gear indicator “L” “H” “N” “R”
7. Fuel indicator
8. Mileage odometer

**Parking Brake indicator light “P”**

**Four wheel drive indicator light “”** . This indicator light comes when the “2WD/4WD” is selected. Note: Due to the synchronizing mechanism in the differential gear case, the light may not come on until the vehicle starts moving.

**Differential Gear lock indicator light.**

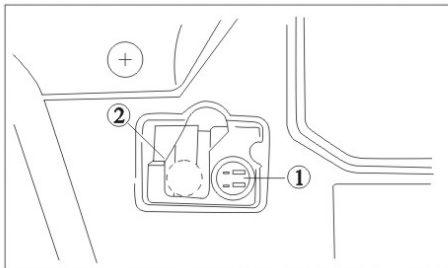
This indicator light comes on when the differential gear lock switch is set to the “LOCK 4WD” mode.



**Switch Grip.**

- 1. Horn Button
- 2. Headlight switch (High/Low Beam)
- 3. Turning Light switch

Caution: Do not use the headlights with the engine turned off for an extended period of time. 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.



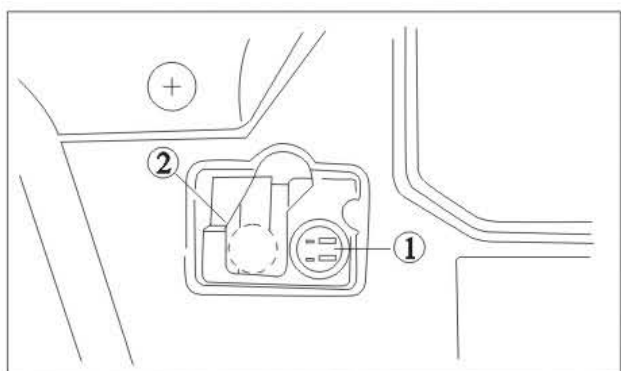
**On-Command four wheel drive and differential gear lock switches.**

- 1. On-command four wheel drive switch “2WD/4WD”
- 2. This vehicle is equipped with an on-command four wheel drive switch and a differential gear lock switch. Select the appropriate drive according to the terrain and the conditions.

- **Two wheel Drive (2WD):** Power is supplied to the rear wheels only.
- **Four-wheel drive (4WD):** Power is supplied to the rear and front wheels.
- **Four-wheel drive with differential locked (4WD-LOCK):** Power is supplied to the rear and front wheels when the differential gear is locked. (**DIFF.LOCK**). Unlike the 4WD mode, all wheels turn at the same speed regardless of traction.

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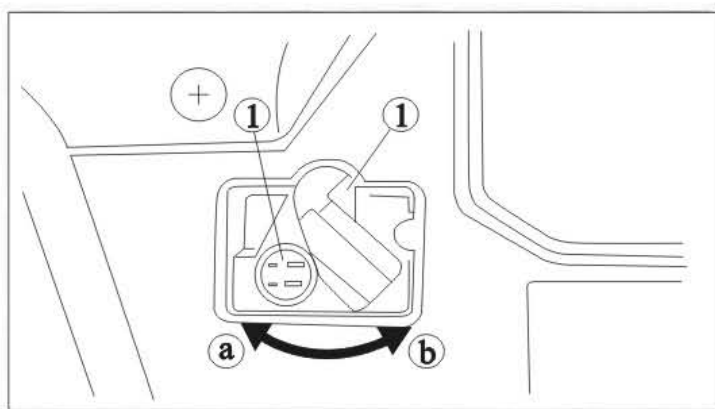
- **Change from 2WD to 4WD or from 4WD to 4WD-LOCK, or vice-versa while the vehicle is moving.**
- **What can happen?**
- **The vehicle handles differently in 2WD than in 4WD and in 4WD-LOCK in some circumstances. Changing from 2WD to 4WD or from 4WD to 4WD-LOCK or vice versa while moving may cause the vehicle to unexpectedly handle differently. This could distract the operator and increase the risk of losing control to an accident.**
- **How To Avoid The Hazard**
- **Always STOP the vehicle before changing from 2WD to 4WD or from 4WD to 4WD-LOCK, or vice versa.**
- 



1. On-Command 2WD, 4WD button
2. Lever

**On Command four wheel drive switch “2WD to 4WD”**

To change from 2WD to 4WD STOP the vehicle and then set the switch to 4WD. When the vehicle is in 4WD, the 4WD indicator light will come on. To change from 4WD to 2WD, STOP the vehicle, be sure the lever is set to position “a”, and then set the switch to 2WD.



1. Differential gear “LOCK/4WD” button
2. Lever

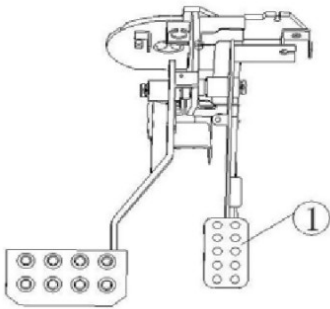
**Differential gear lock switch “LOCK” / 4WD**

To lock the differential gear in 4WD, stop the vehicle, make sure the ON-Command 4WD switch to 4WD, move the lever to position “b”, and then set the button to “LOCK”. When the differential gear is locked, the differential gear lock indicator will come on. To release the different gear lock, stop the vehicle and set the switch to “4WD”, and the differential lock light will be off.

- **NOTE:**
- If the differential gear lock is not engaged properly, turn the steering wheel back and forth to help it engage.
- Riding before the different gear lock is properly engaged will cause the engine speed to be limited until engagement is completed.

**- !. WARNING**

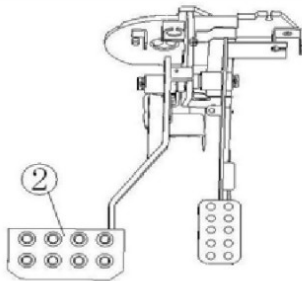
- **Potential Hazard**
- **Riding too fast while the vehicle is in 4WD LOCK mode.**
- **What can happen?**
- **All wheels turn at the same speed when the differential is locked, so it takes more effort to turn the vehicle. The amount of effort required is greater the faster you go. You may lose control and have an accident if you cannot make a sharp enough turn for the speed you are traveling.**
- **How To Avoid The Hazard**
- **Always ride at a slow speed when the vehicle is in 4WD-LOCK mode, and allow extra time and distance for maneuvers.**



1. Accelerator Pedal

**Accelerator Pedal**

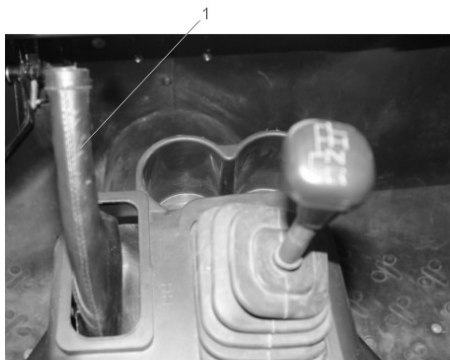
Press the accelerator pedal down to increase engine speed. Spring pressure returns the pedal to the rest position when released. Always check that the accelerator pedal returns normally before starting the engine.



1. Brake Pedal

**Brake Pedal**

Press the brake pedal to slow or stop the vehicle. This vehicle is equipped with four disc brakes press the brake pedal will apply pressure on each brake disc.



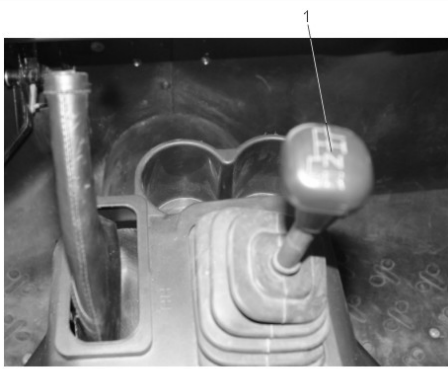
1. Parking Brake lever

**Parking Brake Lever**

The parking brake lever is located at the right side of the driver's seat. It will help hold the vehicle from moving while parked.

To set the parking brake, pull up on the lever, press the release button, and then push the lever all the way down. Spring pressure helps return the lever to the released position. Be sure to fully release the parking brake before starting out. Failure to do so may result in poor performance and premature wearing of the rear brake and V-Belt.



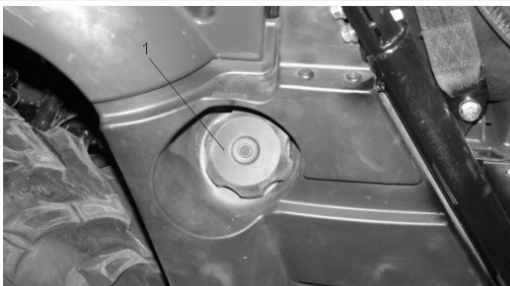


1. Drive selector (Low, High, Neutral, Reverse).

**Drive Select Lever**

The drive select lever is used to shift your vehicle into LOW, HIGH, NEUTRAL and REVERSE position. (L,H,N,R). Always STOP the vehicle completely before select into a different drive.

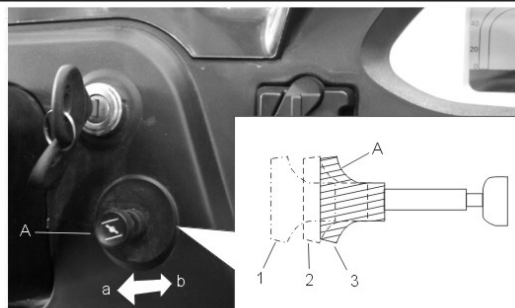
NOTE: Sometimes it may be difficult to select into the drive, that is because the gears might be locked up in the transmission. Try to move the vehicle with your weight to unlock the gears.



1. Fuel tank cap

**Fuel tank cap**

Remove the fuel tank cap by turning it counterclockwise.



A. Starter (choke) "A"  
 2. Half open  
 1. Fully open  
 3. Closed

**Starter (choke)**

Starting a cold engine requires a richer air-fuel mixture. A separate starter circuit supplies this mixture. Pull out the choke toward the driver and make sure the choke stays out, and then start the engine. Once the engine starts and warmed up, release the choke cable to continue operating the vehicle.



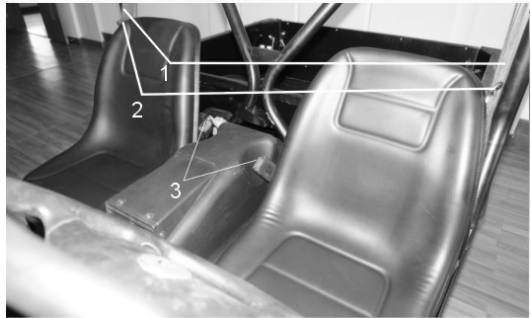
1. Driver Seat  
 2. Passenger seat  
 3. Seat Lock lever

**Seats**

To remove a seat, pull its seat lock lever upward, lift the front of the seat, and then slide the seat forward and up.



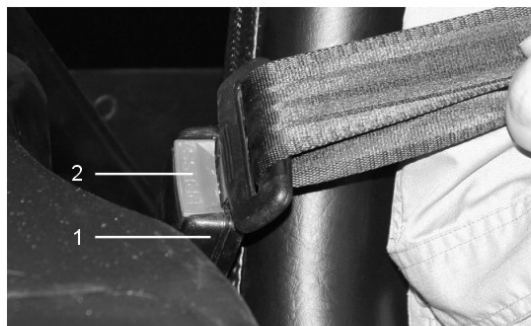
To Install a seat, insert the projections on the rear of the seat into the seat holders and push down on the seat at the front until you hear a click sound and seat latches.



1. Seat belts x2
2. Latch Plates
3. Buckles



1. Buckle
2. Latch Plate



1. Buckle
2. Release Button

### Seat Belts

This vehicle is equipped with three-point seat belts for both the operator and passenger. Always wear the seat belt while riding the vehicle.

1. Hold the latch plate as you pull the belt across your lap and chest. Make sure the belt is not twisted and is not caught on any portion of the vehicle, your clothing, or any equipment you are carrying.
2. Push the latch plate into the buckle until it clicks. Pull up on the latch plate to make sure it is secure.
3. Put the lap portion of the belt low on your hips. Push down on the buckle end of the belt as you pull up on the shoulder part so the belt is snug across your hips.
4. Position the shoulder belt over your shoulder and across your chest. The shoulder belt should fit against your chest. If it is loose, pull the belt out all the way and then let it retract.
5. To release the buckle, firmly press the release button.

### **!WARNING**

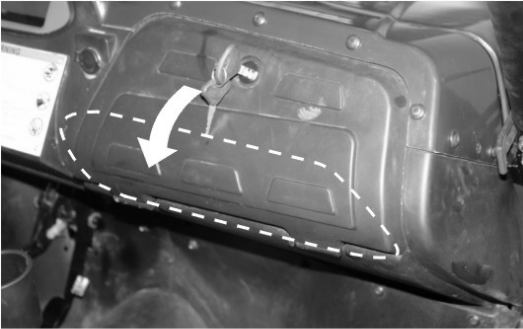
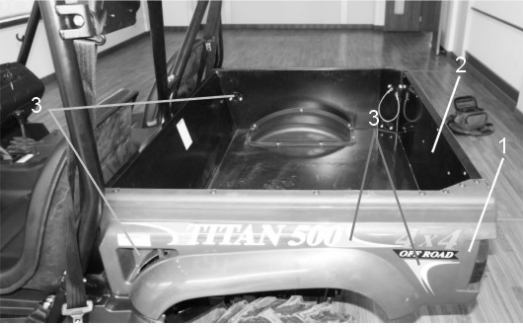
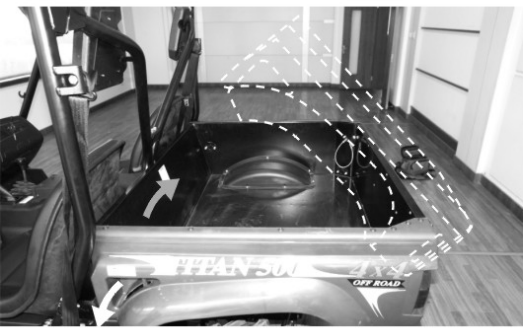
#### **POTENTIAL HAZARD**

**Not wear the seatbelt, and wear the seat belt improperly.**

#### **WHAT CAN HAPPEN**

**There is increased risk of being killed or seriously injured in an accident.**

#### **HOW TO AVOID THE HAZARD**

	<p><b>Always wear your seat belt when riding in the vehicle. Be sure the seat belt is close-fitting across your hips and chest and is latched securely.</b></p>
	<p><b>Glove Compartment</b> To protect from damages, do not put metal products, like tools or sharply edged products directly in the glove compartment. If they must be stored, wrap them in appropriate cushion materials.</p>
 <p>1. Cargo Bed 2. Tailgate</p>	<p><b>Cargo Bed</b> Cargo bed weight capacity is 500 Lbs. Do not put any extra weight on the tailgate as it might break the latches. Tailgate weight capacity is 50 Lbs.</p>
 <p>1. Cargo bed Release</p>	<p><b>Cargo Bed Release</b> To Lift Push the cargo bed release lever down, and then slowly lift up the cargo bed until it stops. To Lower Lower the cargo bed slowly to its original position by pressing on the side of the bed. Be sure it is locked into the place. The maximum load capacity is 500 Lbs.</p>
<p style="text-align: center;"><b>! WARNING</b></p> <p><b><u>POTENTIAL HAZARD</u></b> <b>Pinch Points</b> <b><u>WHAT CAN HAPPEN</u></b> You or someone else could be pinched between the cargo bed and the frame when the bed is being lowered. <b><u>HOW TO AVOID THE HAZARD</u></b> Before closing the bed, be sure others are standing away from the vehicle. Keep hands and fingers away from the pinch points between the bed and the frame.</p>	

**! WARNING**

**POTENTIAL HAZARD**

**Overloading the cargo bed**

**WHAT CAN HAPPEN**

**Could cause changes in vehicle handling which could lead to an accident**

**HOW TO AVOID THE HAZARD**

**Never exceed the stated maximum load limit for the cargo bed.**

**Cargo should be properly distributed and securely attached.**

**Reduce speed when carrying cargo. Allow greater distance for braking.**

**! WARNING**

**POTENTIAL HAZARD**

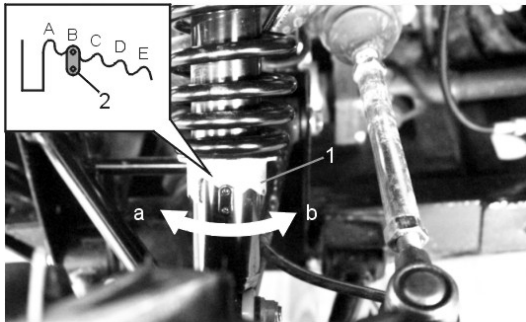
**Carrying a passenger in the cargo bed.**

**WHAT CAN HAPPEN**

**The passenger could fall, be thrown out, or be struck by objects in the cargo bed.**

**HOW TO AVOID THE HAZARD**

**Never carry a passenger in the cargo bed. The cargo bed is designed to carry cargo only.**



1. Spring preloaded adjusting ring
2. Position indicator



**Front and rear shock absorber adjustment**

The spring preload can be adjusted to suit the operating conditions.

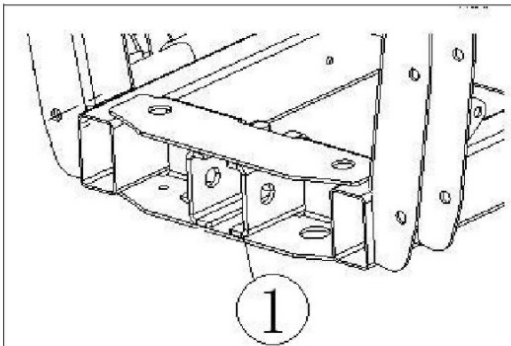
You can reduce preload for a softer ride, or increase preload if frequent bottoming occurs.

Adjust the spring preload as follows.

- To increase the spring preload, turn the adjusting ring in direction of "A".
- To decrease the spring preload, turn the adjusting ring in direction "B"

**!WARNING**

**Frequent or severe bottoming can cause increased wear or damage to the vehicle.**



1. Trailer hitch bracket

**Trailer hitch bracket**

This vehicle is equipped with a 2 inch receiver bracket for a standard trailer hitch.



# PRE-OPERATING CHECKS

Before using this Vehicle, check the following Items:

ITEM	ROUTINE
Brakes	Check operation, free play, fluid level and fluid leakage. Fill with DOT 4 brake fluid if necessary.
Parking Brake	Check for proper operation, condition and free play
Fuel	Check fuel level. Fill with fuel if necessary.
Engine Oil	Check oil Level Fill with oil if necessary.
Coolant reservoir	Check coolant level. Fill with coolant if necessary
Final Gear Oil / Differential oil	Check for leakage
Accelerator Pedal	Check for proper accelerator pedal operation.
Seat belts	Check for proper operation and belt wear.
Steering	Check for proper operations.
Fitting and fasteners	Check all fittings and fasteners.
Lights and switches	Check for proper operation.
Wheels and tires	Check tire pressure, wear and damage.
Axle Boots	Check for damage.

## **! WARNING**

### **POTENTIAL HAZARD:**

**Failure to inspect the vehicle before operating. Failure to properly maintain the vehicle.**

### **WHAT CAN HAPPEN:**

**Increase the possibility of an accident or equipment damage.**

### **HOW TO AVOID THE HAZARD:**

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

## **BRAKE PEDAL**

Check for correct brake pedal free play. If the brake pedal free play is incorrect, have a dealer adjust it. Check the operation of the brake pedal. It should move smoothly and there should be a firm feeling when the brake are applied. If not, have the vehicle inspected by a dealer.

### **Brake Fluid Level**

Check the brake fluid level. Add fluid if necessary.

Recommended Brake Fluid: DOT 4.

### **Brake Fluid Leakage**

Check to see if any brake fluid is leaking out of the pipe joints or the brake fluid reservoir. Apply the brakes firmly for one minute. IF there is any leakage, have the vehicle inspected by a dealer.

### **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, inspect the brake system.

## **! WARNING**

### **POTENTIAL HAZARD:**

**Driving with improperly operating brakes.**

### **WHAT CAN HAPPEN:**

**You could lose braking ability, which could lead to an accident.**

### **HOW TO AVOID THE HAZARD:**

**Always check the brakes at the start of every ride. Do not operate the vehicle if you find any problem with the brakes. If a problem cannot be corrected by the adjustment procedures provided in this manual, have the vehicle inspected by a dealer.**

## **Fuel**

Make sure there is sufficient gasoline in the tank.

Recommended fuel: Unleaded Gasoline ONLY

Fuel Tank Capacity: 30L or 7.93 US Gallon

Your engine has been designed to use regular unleaded gasoline with a pump octane number of  $([R+M]/2)$  86 or higher, or research octane number of 91 or higher. If knocking or pinging occurs, use a different brand of gasoline or premium unleaded fuel. Unleaded fuel will give you longer spark plug life and reduced maintenance cost.

## **! WARNING**

### **POTENTIAL HAZARD:**

**Improper case when refueling.**

### **WHAT CAN HAPPEN:**

**Fuel can spill, which can cause a fire and severe injury.**

**Fuel expands when it heats up. If the fuel tank is overfilled, fuel could spill put due to heat from the engine or the sun.**

### **HOW TO AVOID THE HAZARD:**

**Do not overfill the fuel tank. Be careful not to spill fuel, especially on the engine or exhaust pipe. Wipe up any spilled fuel immediately. Be sure the fuel tank cap is closed securely.**

### **Engine Oil**

Make sure the engine oil is at the specified level. Add oil as necessary.

#### CAUTION:

- In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not use oil with a diesel specification of “CD” or oils of 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.

### **Coolant**

Check the coolant level in the coolant reservoir when the engine is cold. (The coolant level will vary with engine temperature). The coolant is satisfactory if it is between the minimum and maximum level mark, and additional coolant to bring the level up to maximum level mark. If coolant is not available, add distilled water. Change the coolant every two years.

#### CAUTION:

Hard water or salt water is harmful to the engine. You may use soft water if you cannot get distilled water.

Coolant reservoir capacity (up to the maximum level mark): 0.35L (0.37 US qt)
---

### **! WARNING**

#### **POTENTIAL HAZARD:**

**Removing the radiator cap when the engine and radiator are still hot.**

#### **WHAT CAN HAPPEN:**

**You could be burned by hot fluid and steam blown out under pressure.**

#### **HOW TO AVOID THE HAZARD:**

**Wait for the engine to cool before removing the radiator cap. Always use a thick rag over the cap. Always any remaining pressure to escape before completely removing the cap.**

### **Final Gear Oil**

Make sure the final gear oil at the specified level. Add oil as necessary.

Recommended Oil: SAE15W – 40 / SF
-----------------------------------

If desired, an SAE15W-40/SF may be used for all conditions.

NOTE: GL-4 is a quality and additive rating, GL-5 or GL-6 rated hypoid gear oils may also be used.

### **Differential Gear Oil**

Make sure the differential gear oil is at the specified level. Add oil as necessary.

### **Accelerator Pedal**

Check to see that the accelerator pedal operates correctly. It must operate smoothly and fully spring back to the idle position when released. Have a dealer repair as necessary for the proper operation.

**Seat belts**

Make sure that both seat belts are not frayed or damaged.

The seat belt must move smoothly when pulled out and retract on its own when released. The latch plate should click securely into the buckle and release when the release button is pushed firmly. Wash off any dirt or mud which could affect operation. Have a dealer repair as necessary for proper operations.

**Steering**

Park on level ground. Turn the steering wheel right and left. Check for excessive free play, abnormal noise, or a rough feeling. Have a dealer repair as necessary for proper operation.

**Fittings and fasteners**

Always check the tightness of chassis fittings and fasteners before a ride. Take a vehicle to a dealer or refer to the service manual for correct tightening torque.

**Lights**

Check the headlights and tail/brake lights to make sure they are in working condition. Repair as necessary for proper operation.

**Switches**

Check the operation of all switches. Have a dealer repair as necessary for proper operation.

## Tires

### **! WARNING**

#### **POTENTIAL HAZARD:**

**Operating this vehicle with improper tire, or with improper or uneven tire pressure.**

#### **WHAT CAN HAPPEN:**

**Use of improper tires on this vehicle, or operation of this vehicle with improper or uneven tire pressure, may cause loss of control, increasing your risk of accident.**

#### **HOW TO AVOID THE HAZARD:**

**1. Use Proper Tires:**

**Front Tire: 25 x 8 – 12**

**Rear Tire: 25 x 10 – 12**

**2. The tires should be set to the recommended pressure.**

**Front 70kPa ( 10 PSI)**

**Rear 98 kPa (14 PSI)**

**3. Tire pressure must be equal on both sides:**

**Tire pressure below the minimum specified could cause the tire to dislodge from the rim under severe riding conditions. The following are minimum requirements:**

**Front 63kPa (9 PSI)**

**Rear 91kPa (13 PSI)**

**4. Use no more than following pressure when seating the tire beads.**

**Front 77 kPa (11 PSI)**

**Rear 105 kPa (15 PSI)**

**Higher pressure may cause the tire to burst. Inflate the tire very slowly and carefully. Fast inflation could cause the tire to burst.**



# OPERATION

## **! WARNING**

### **POTENTIAL HAZARD:**

**Operating vehicle 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 the Owners manual carefully. If there is a control or function you do not understand, ask your dealer.**

### **Start a cold engine**

1. Apply the brake.
2. Shift the drive select lever into the neutral position.

#### **NOTE:**

- When the drive select lever is in the neutral position, the neutral indicator light should come on. If the neutral indicator light does not come on, ask a dealer to inspect the electric circuit.
  - The engine can be started in any gear if the brake is applied. However, it is recommended to shift into neutral before starting the engine.
3. Use the starter (Choke) to start the engine if the temperature is cold. Below 40F.
  4. With your foot off the accelerator pedal, start the engine by turning the key to "START" position.

**NOTE:** If the engine fails to start, release the key, and then try starting again. Wait a few seconds before the next attempt. Each cranking could be as short as possible to preserve battery. Do not crank the engine more than 5 seconds on each attempt.

5. IF the engine is started with the starter (Choke), allow a few minutes for the engine to warm up until the idles sound smoothly and push the starter (Choke) all the way in to turn off the choke.
6. See the "**Engine Brake In**" section prior to operating the engine for the first time.

### **Start a warm engine**

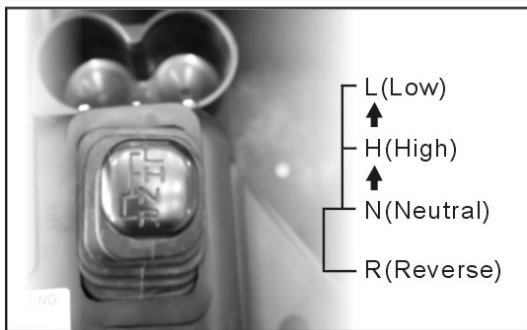
To start a warm engine follow the steps of start a cold engine except do not use the Starter (Choke).

### **Warming Up**

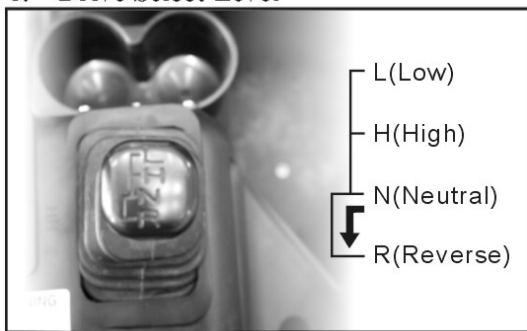
To get the maximum engine life, always warm up the engine before starting off. Never accelerate hard with a cold engine! To see whether or not the engine is warm, check if it responds to the throttle normally with the starter (choke) turned off.

## Drive select lever operation and reverse driving

**Caution:** Before shifting, you must stop the vehicle and take your foot off the accelerator pedal, otherwise the transmission may be damaged.



### 1. Drive Select Lever



#### Shifting: Neutral to High and High to Low

1. Stop the vehicle. Keep your foot off the accelerator pedal.
2. Apply the brakes, then shift by moving the drive select lever along the shift guide.
3. Release the brakes and press the accelerator pedal gradually.

**NOTE:** Make sure the drive select lever is completely in the shifted position.

#### Shifting: Neutral to Reverse

1. Stop the vehicle. Keep your foot off the accelerator pedal.
2. Apply the brake pedal.
3. Shift from neutral to reverse or vice versa by moving the drive select lever along the shift guide.
4. Check behind for people or obstacles, then release the brake pedal.
5. Press the accelerator pedal gradually and continue to watch your rear view while backing.

#### Note:

- When in reverse, the reverse indicator light should be on. If the light does not come on, ask a dealer to inspect the reverse indicator light electrical circuit.
- Due to the synchronizing mechanism in the engine, the light may not come on until the vehicle starts moving.

### **! WARNING**

#### **POTENTIAL HAZARD:**

**Improperly operating in reverse**

#### **WHAT CAN HAPPEN:**

**You could hit an obstacle or person standing behind you, resulting in serious injury.**

#### **HOW TO AVOID THE HAZARD:**

**When you shift into reverse, make sure there are no obstacles or people behind you. When it is safe to proceed, go slowly.**

## **Parking**

When parking, stop the engine and shift the drive select lever into the neutral position. Apply the parking brake to help prevent the vehicle from rolling.

### **Parking on a slope**

#### **! WARNING**

#### **POTENTIAL HAZARD:**

**Parking on a hill or other incline.**

#### **WHAT CAN HAPPEN:**

**The vehicle could roll out of control, increasing the chance of an accident.**

#### **HOW TO AVOID THE HAZARD:**

**Avoid parking on hills or other inclines. If you must park on an incline, apply the parking brake, and block the front and rear wheels with rocks or other objects. Do not park the vehicle at all on hills that are so steep you could not walk up them easily.**

1. Bring the vehicle to stop by applying the brakes.
2. Stop the engine.
3. With the brake applies, set parking brake by pulling up the parking brake lever.

**NOTE:** Like many other vehicle, the parking brake acts on the rear wheels. For the parking brake to have the effect of braking all four wheels, shift to 4WD before stopping the engine.

# DRIVING YOUR VEHICLE

## Getting to know your vehicle

This off-highway utility vehicle will handle and maneuver differently from an ordinary passenger car or other vehicle.

Before you begin to use your vehicle, be sure you have read this Owner's Manual completely and understand the operation of the controls. Pay particular attention to the safety information and warning labels on the vehicle. Please also read all caution and warning labels on your vehicle.

This vehicle is designed for the operator and one passenger. The driver and passenger must always wear a seat belt. Never carry passengers in the cargo bed.

The total weight of operator, passenger, accessories, cargo, trailer tongue weight, and the vehicle itself must not exceed 907 kg (2,000 lb). Carrying a passenger and cargo can affect vehicle handling.

The driver and passenger must always wear a seat belt and an approved motorcycle helmet. Also wear eye protection and protective clothing, including over-the-ankle boots, gloves, along-sleeved shirt or jacket, and long pants. Keep hands and feet inside the vehicle at all times.

## Going Uphill

Do not attempt to climb hills until you have mastered basic maneuvers on flat ground. Use proper driving techniques to avoid overturns on hills and slopes. Drive straight up hills, and avoid slopes. Avoid crossing the side of a hill, which increases your chance of rollover. Practice first on gentle slopes before attempting steeper hills. Always check the terrain carefully before attempting any hill. Use common sense and avoid hills that are too steep for you to climb.

Maximum slope angle: 15 Degrees
---------------------------------

Choose carefully which hills you attempt to climb. Avoid hills with slippery surfaces or ones where you will not be able to see far enough ahead of you.

## Going Down Hill

Check the terrain carefully before going down a hill. When possible, choose a path that lets you drive your vehicle straight downhill. Avoid sharp angles that could allow the vehicle to pitch or roll over. Carefully choose your path and drive no faster than you will be able to react to obstacles that may appear.

## Riding over Rough Terrain

Operating over rough terrain should be done with caution. Look for obstacles that could cause damage to the vehicle or could lead to a rollover or accident. Avoid jumping the vehicle as injury,

loss of control, and damage to the vehicle could occur.

**Tip over warnings and recovery**

This vehicle CAN be rolled over in case of reckless driving, going too fast, jumping or making sharp turn.

**! WARNING**

**POTENTIAL HAZARD:**

**Driving recklessly, going too fast, jumping vehicle or sharp turns.**

**WHAT CAN HAPPEN:**

**The vehicle could tip over and fall on driver or operators body parts. Injuries may lead to disfigurements and maimed bodies.**

**HOW TO AVOID THE HAZARD:**

**Avoid driving recklessly, going too fast, jumping vehicle or make sharp turns. IN CASE OF TURN OVER, keep all limbs inside the vehicle. DO NOT extend any body parts outside of the vehicle. Wait until the vehicle stops rolling, get out of the vehicle and call for HELP.**

## 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. The most important points of vehicle inspection, adjustment and lubrication are explained on the following pages.

### **! WARNING**

#### **POTENTIAL HAZARD:**

**Servicing an engine while its running**

#### **WHAT CAN HAPPEN:**

**Moving Parts can catch clothing or parts of the body, causing injury.**

**Electrical components can cause shocks or can start fires.**

#### **HOW TO AVOID THE HAZARD:**

**Turn off the engine when performing maintenance unless otherwise specified. Have a dealer perform service if you are not familiar with vehicle services.**

**PERIODIC MAINTENANCE / LUBRICATION**

ITEM	ROUTINE	Which ever Comes First	INITIAL			EVERY		
			Month	1	3	6	6	12
			KM (MI)	320 (200)	1200 (750)	2400 (1500)	2400 (1500)	4800 (3000)
			Hours	20	75	150	150	300
Valves	Check vales clearance adjust if necessary		YES		YES	YES	YES	
Cooling System	Check coolant leakage Replace coolant every 24 months Repair if necessary		YES	YES	YES	YES	YES	
Spark Plug	Check condition Adjust gap and clean Replace if necessary		YES	YES	YES	YES	YES	
Air Filter(engine and air intake duct)	Clean Replace if necessary							
Carburetor	Check idle speed/starter operation Adjust if necessary			YES	YES	YES	YES	
Crankcase breather system	Check breather hose for cracks or damage Replace if necessary				YES	YES	YES	
Exhaust System	Check for leakage Replace gasket if necessary Tighten if necessary				YES	YES	YES	
Sparks Arrester	Clean				YES	YES	YES	
Fuel Line	Check fuel hose for cracks or damage Replace if necessary				YES	YES	YES	
Engine Oil	Replace (warm engine before draining)		YES		YES	YES	YES	
Engine Oil Filter cartridge	Replace		YES		YES		YES	
Final Gear Oil	Check oil level / oil leakage		YES				YES	
Differential gear oil	Replace		YES				YES	
Front Brake	Check operation / brake pad wear / fluid leakage Correct if necessary. Replace pads if worn to the limit.		YES	YES	YES	YES	YES	

ITEM	ROUTINE	Which ever Comes First	INITIAL			EVERY		
			Month	1	3	6	6	12
			KM (MI)	320 (200)	1200 (750)	2400 (1500)	2400 (1500)	4800 (3000)
			Hours	20	75	150	150	300
Rear Brake	Check operation / brake pad wear / fluid leakage Correct if necessary. Replace pads if worn to the limit.		YES	YES	YES	YES	YES	
Accelerator Pedal	Check operation and free play		YES	YES	YES	YES	YES	
V-Belt	Check operation Repair for wear, cracks, of damage		YES			YES	YES	
Wheels	Check balance/damage/run out.		YES		YES	YES	YES	
Wheels bearing	Check bearing assemblies for looseness/damage Replace if damaged.		YES		YES	YES	YES	
Front and Rear Suspension	Check operation and for leakage Correct if necessary				YES		YES	
Steering System	Check operation and for looseness/replace if necessary.		YES	YES	YES	YES	YES	
Rear upper and lower knuckle pivots	Lubricate with lithium soap based grease				YES	YES	YES	
Drive shaft universal joints	Lubricate with lithium soap based grease				YES	YES	YES	
Engine Mount	Check for cracks or damage Check bolts tightness				YES	YES	YES	
Front axle boots	Check operation Replace if damaged		YES				YES	
Stabilizer Bushing	Check for cracks or damage				YES	YES	YES	
Fittings and Fasteners	Check all chassis fittings and fasteners Correct of necessary		YES	YES	YES	YES	YES	

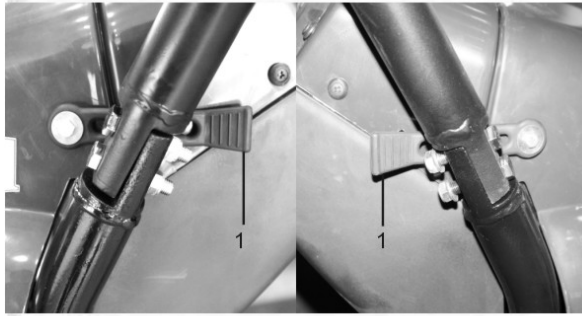
Items may require special tools, data and technical skills may require a dealer to perform the service.



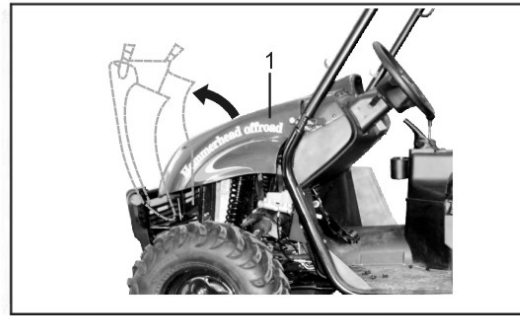
## HOOD

### To Open

Unlock the hood latches, and then slowly tilt the hood up until stops.



1. Latches



2. Hood

### To Close

Lower the hood slowly to its original position, and then hook the hood latches.

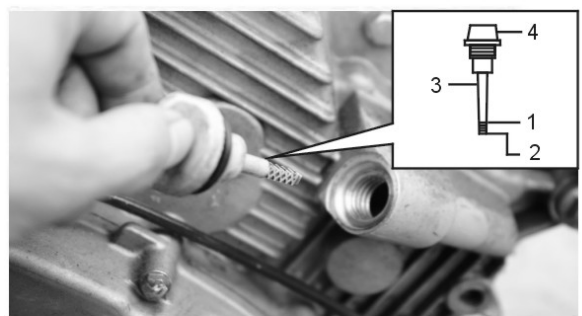


### Console

1. Remove the seats, remove parking brake boot.
2. Pull the console upward.

## Engine Oil and Oil Filter Cartridge

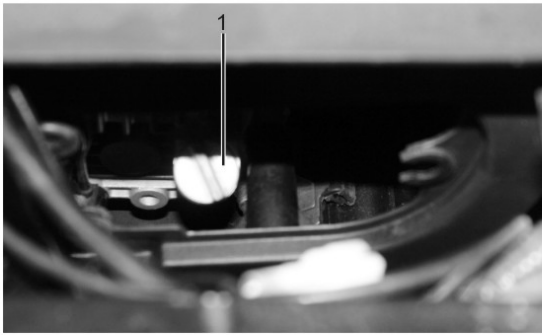
The Engine oil level should be checked before each operation. In addition, the oil must be changed and oil filter cartridge replaced at the intervals specified in the periodic maintenance and lubrication chart.



1. Maximum level mark
2. Minimum level mark
3. Dipstick
4. Engine oil filter cap

### To Check Engine Oil Level

- 1) Place vehicle on level ground
- 2) Remove the console
- 3) Start the engine, warm it up for several minutes, and then turn it off
- 4) Wait a few minutes until the oil settles
- 5) Remove the engine oil filter cap and wipe off the dipstick with a clean rag
- 6) Insert the dipstick in the oil filler hole (without screwing it in), and then remove it again to check the oil level.
- 7) If engine oil is at or below the minimum level mark, add sufficient oil of the



1. Engine oil drain bolt



1. Oil Filter cartridge
2. Oil filter wrench

recommended type and raise it to the correct level.

8) Insert the dipstick into the oil filler hole, and then tighten the oil filler cap.

9) Install the console.

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

1) Remove the console

2) Start the engine, warm it up for several minutes, and then turn it off

3) Place an oil pan under the engine to collect the used oil, and then remove the engine oil filler cap.

4) Remove the engine oil drain bolt to drain the oil from the crankcase

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

6) Apply a light coat of engine oil to the O-Ring of the new oil filter cartridge.

7) Install the new oil filter cartridge with an oil filter wrench, and then tighten it to the specified torque with a torque wrench. (12 ft/lb)

8) Install the engine drain bolt, and then tighten it to the specified torque. (22 ft/lb)

9) Add the specified amount of recommended engine oil, and then install the engine oil filler cap and tighten it.

10) Start the engine and warm it up for several minutes. While warming up, check for oil leakage. If oil leakage is found, turn the engine off immediately and check for the cause.

11) Turn the engine off, and then check the oil level and correct it if necessary.

12) Install the console back.

## Coolant



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

**The coolant level should be checked before each ride.**

### **Checking the coolant level.**

- 1) Place the vehicle on level surface
- 2) Open the hood
- 3) Check the coolant level in the coolant reservoir when the engine is cold as the coolant level varies with engine temperature.
- 4) If the coolant is at or below the minimum level mark, remove the reservoir cap, add coolant to the maximum level mark, install the reservoir cap, and then close the hood.

Coolant reservoir capacity (up to the maximum level mark): 0.35L

CAUTION: Mix anti freeze with distilled water only. However, if the distilled water is not available, soft water may be used for refilling.

### **Changing the coolant**

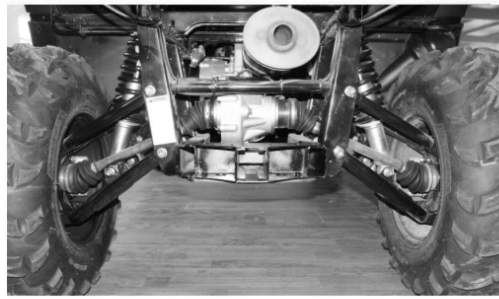
The coolant must be changed by a dealer at the intervals specified in the periodic maintenance and lubrication chart.

NOTE: Adding water instead of coolant lowers the antifreeze content of the coolant. IF water is used instead of coolant, have a dealer check the antifreeze content of the coolant as soon as possible.

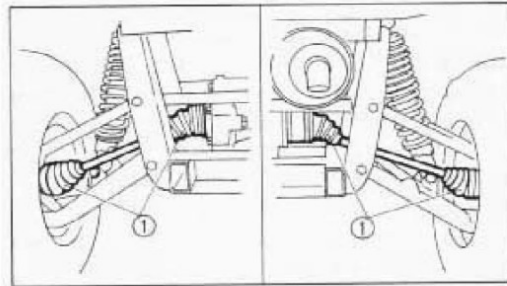
The radiator fan operation is completely automatic. It is switched on or off according to the coolant temperature in the radiator.

### Axle Boots

Check the protective boots for holes or tears. If any damage is found, have them replaced by a dealer.



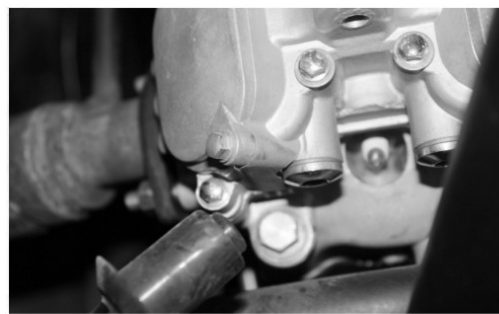
1. Front Boot



2. Rear Boot

### Spark Plug Inspection

1. Lift up the cargo bed.
2. Remove the spark plug.
3. Use the spark plug wrench to remove the spark plug as shown.



1. Spark plug cap



2. Spark plug wrench

#### Inspection:

The Spark plug is an important engine component and it is easy to inspect. The condition of the spark plug can indicate the engine. The ideal color of the porcelain insulator around the center electrodes is a medium to light tan for a vehicle that is being ridden normally.

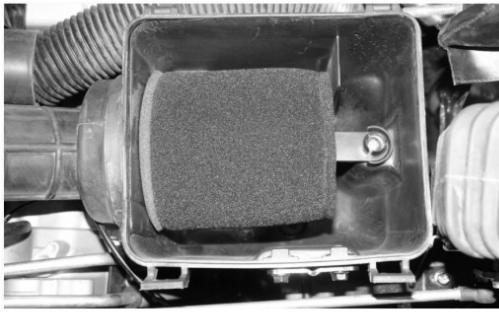
You should periodically remove and inspect the spark plug because head and deposits will cause the spark plug to slowly break down and erode. If electrode erosion becomes excessive, or if carbon and other deposits are excessive, you should replace the spark plug with the specified plug.

Specified spark plug: DPR8EA-9 (NGK)

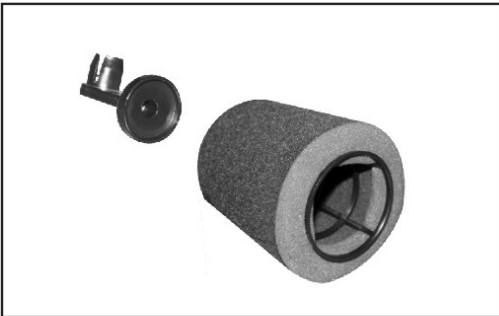
#### Installation

- 1) Measure the electrode gap with a wire thickness gauge and, if necessary, adjust the gap to specification. (0.031-0.035 in)
- 2) Clean the surface of spark plug gasket and its mating surface, and then wipe off any grime from the spark plug threads.
- 3) Install the spark plug and tighten it to the specified torque. (12.7 ft.lbf)
- 4) Install the spark plug cap.
- 5) Lower the cargo bed.

## Cleaning the air filter element



1. Air filter element



1. Air Filter Frame
2. Air filter element
3. Element retaining plate

**NOTE:** 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. Remove the seats
2. Remove the console
3. Remove the air filter case cover by unhooking the holders
4. Remove the air filter element
5. Remove the air filter element from its frame
6. Wash the air filter element gently but thoroughly in solvent

**Warning:** Use parts cleaning solvent to clean the air filter element.

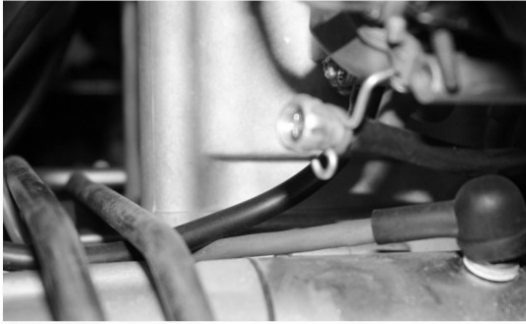
7. Squeeze excess solvent out of the air filter element and let it dry. Do not twist the air filter element when squeezing it.
8. Inspect the air filter element and replace it if damaged.
9. Thoroughly apply foam air filter oil or other quality liquid foam air filter oil (not spray type) to the air filter element. The air filter element should be web but not dripping
10. Pull the air filter element over its frame
11. Install the air filter element
12. Install the air filter case cover and be sure the crankcase breather hose is connected
13. Install the console
14. Install the seats.

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

**CAUTIONS:** Never operate the engine with air filter element removed. This will allow unfiltered air to enter, causing rapid engine wear and possible engine damage. Additionally, operation without the air filter element will affect carburetor jetting with subsequent poor performance and possible engine overheating.

### Idle Speed adjustment

**NOTE:** A diagnostic tachometer must be used for this procedure.



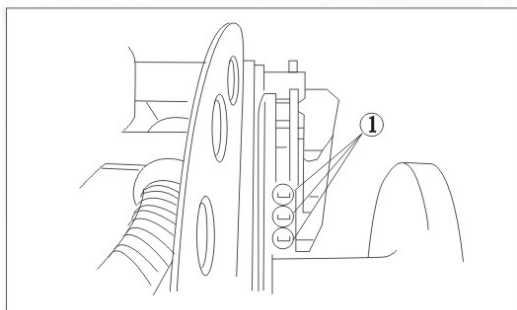
Throttle stop screw

1. Start the engine and warm it up for a few minutes at approximately 1,000 to 2,000 r/min. Occasionally rev the engine to 4,000 to 5,000 r/min. The engine is warm when it quickly responds to the throttle.
2. Remove the seats
3. Remove the console
4. Connect the tachometer to the spark plug lead, and then set the idle to the specified idling speed by adjusting the throttle stop screw. Turn the screw clockwise to increase the engine speed, and counter-clockwise to decrease the engine speed. Specified idle speed: 1,450 – 1,550 r/min
5. Install the console
6. Install the seats.

### Valve Clearance Adjustment

The correct valve clearance changes with use, resulting in improper fuel/air supply or engine noise. To prevent this, the valve clearance must be adjusted regularly. This adjustment however, should be left to a professional service technician.

### Front brake pad check / Rear Brake pad Check

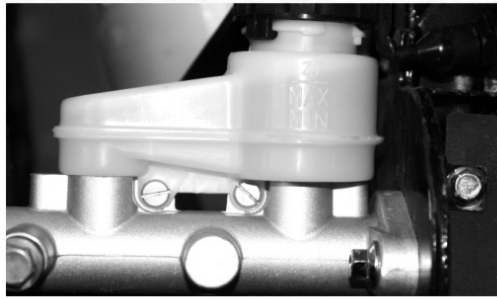


1. Brake Pad wear indicate groove

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 dealer replace the brake pads as a set.

**NOTE:** The wheels need to be removed to check the brake pads.

### Check Brake fluid level



1. Minimum level mark

Insufficient brake fluid may let air enter the brake system, possibly causing the brakes to become ineffective.

Before riding, check that the brake fluid is above the minimum level mark and replenish if necessary. A low brake fluid level may indicate worn brake pads or brake system leakage. If the brake fluid level is low, be sure to check the brake pads for wear and the brake system for leakage.

The brake fluid reservoir is located under the hood.

- Use only the recommended quality brake fluid. Otherwise, the rubber seals may deteriorate, causing leakage and poor braking performance.

Recommended brake fluid: DOT 4

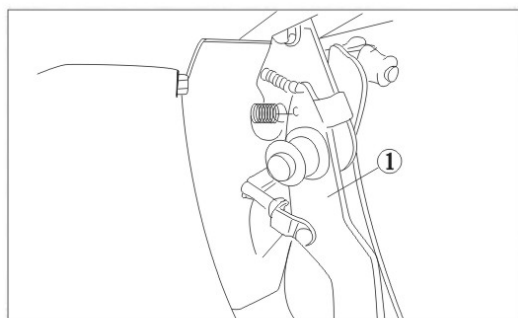
- Refill with the same brake fluid. Mixing fluids may result in a harmful chemical reaction and lead to poor braking performance.
- Be careful water does not enter the brake fluid reservoir when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock.
- Brake fluid may deteriorate painted surfaces or plastic parts. Always clean up spilled fluid immediately.
- Have a dealer inspect the brake system if the brake fluid level goes down.

### Brake fluid replacement

Complete fluid replacement should be done by trained service personnel. Have a dealer replace the following components during periodic maintenance or when they are damaged or leaking.

- Replace the oil seals every two years
- Replace the brake hoses every four years.

### Checking the brake pedal



1. Brake pedal

Have a dealer check the brakes at the intervals specified in the periodic maintenance and lubrication chart. There should be no free play in the brake pedal. The brakes should operate smoothly and there should be no brake drag. If the brake feel soft or spongy, this could indicate air in the brake system. Have a dealer check the brake system if necessary.

**! WARNING**

**POTENTIAL HAZARD:**

**Operating with improperly serviced or adjusted brakes.**

**WHAT CAN HAPPEN:**

**You can lose braking ability, which could lead to an accident.**

**HOW TO AVOID THE HAZARD:**

**After servicing, make sure:**

- **brakes operates smoothly and that the brake pedal position is correct.**
- **Make sure the brakes do not drag**
- **All air must be bled from the brake system**

**Replacement of brake components requires professional knowledge. These procedures should be performed by a dealer.**



### Brake light switch adjustment



1. Brake light switch
2. Adjusting Nut

The brake light switch, which is activated by the brake pedal, is properly adjusted when the brake light comes on just before braking takes effect. If necessary, adjust the brake light switch as follows:

1. Open the hood
2. Turn the adjustment while holding the brake light switch in place. To make the brake light come on earlier, turn the adjusting nut in direct "a". To make the brake light come on later, turn to the opposite direction.
3. Close the hood

### Cable inspection and lubrication

#### **! WARNING**

#### **POTENTIAL HAZARD:**

**Damaged control cables**

#### **WHAT CAN HAPPEN:**

**Corrosion can result when the outer covering of the control cables becomes damaged. Cables can also become frayed or kinked. Operation of controls could be restricted, which could cause an accident or injury.**

#### **HOW TO AVOID THE HAZARD:**

**Inspect cables frequently. Replace damage cables.**

Lubricate the inner cables and the cables ends. If the cables do not operate smoothly, ask a dealer to replace them.

Recommended lubricant: chain and cable lube or SAE10W30 motor oil



#### **Brake pedal and accelerator pedal lubricate**

Lubricate the pivoting parts.



### **Rear knuckle upper and lower pivot lubrication**

Lubricate the knuckle upper and lower pivots with a grease gun.

### **Wheel Removal**

1. Loose the wheel nuts
2. Elevate the vehicle and place a suitable stand under the frame
3. Remove the nuts from the wheels
4. Remove the wheel

### **Wheel installation**

1. Install the wheel and nuts

NOTE: the arrow mark on the tire must point toward the rotation direction of the wheel

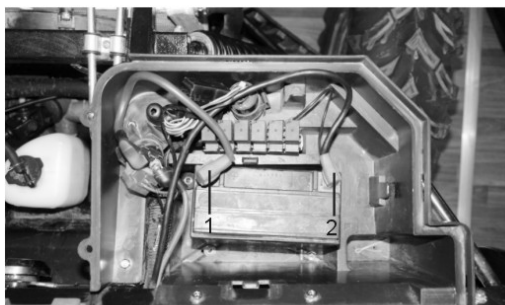
Tapered nuts are used for both the front and rear wheels. Install the nut with its tapered side towards the wheel.

2. Lower the vehicle so that the wheel is on the ground
3. Tighten the wheel nut to the specified torque. Front/Rear: 40 ft,lbf.

### **Battery**

The vehicle is equipped with a sealed type battery. Therefore it is not necessary to check the electrolyte or add distilled water in the battery. IF the battery seems to have discharged, consult a dealer.

### **Battery Maintenance**



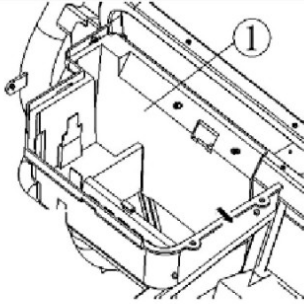
1. Negative battery lead
2. Positive battery lead

1. When vehicle is not used for a month or longer, remove the battery and store it in a cool, dark place. Completely recharge the battery before reinstallation.

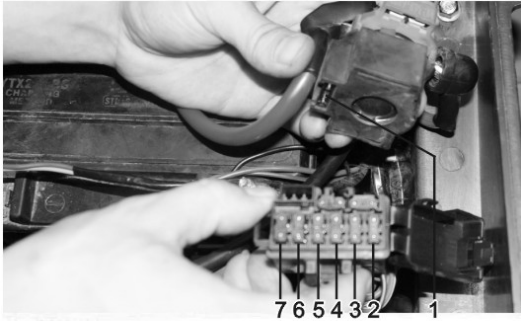
**Warning: A special battery charger is required for recharging a sealed battery.**

2. Always make sure the connections are correct when putting the battery back in the vehicle.

## Fuse Replacement



1. Battery compartment cover



1. Main fuse (20 A)
2. Ignition fuse (10 A)
3. Four wheel drive fuse (10 A)
4. Spare main fuse (15 A)
5. Fans fuse (10 A)
6. Spare Cigar ignition fuse (10 A)
7. Headlight fuse (15 A)

The main fuse and the fuse box are located under the hood. If a fuse is blown, turn off the main switch and install a new fuse of the specified amperage. If a fuse is blown, replace it as follows.

1. Remove the battery compartment cover by lifting up and pulling it out.
2. Turn the key to “off” and turn off the electrical circuit in question.

**Caution: To prevent accidental short circuiting turn off the main switch when checking or replacing a fuse.**

3. Remove the blown fuse, and then install a new fuse of the specified amperage.
4. Turn the key to “ON” and turn off the electrical circuit in question to check if the device operates.
5. If the fuse immediately blows again, have a dealer check the electrical system.
6. Install the battery compartment cover.
7. Close the hood

# Troubleshooting

Although vehicles receive a rigid inspection before shipment from the factory, trouble may occur during operation. Any problem in the fuel, compression, or ignition system can cause poor starting and loss of power. The troubleshooting chart describes quick, easy procedures for making checks. If your vehicle requires any repair, take it to a dealer.

Your skilled technician at a dealership has the tools, experience and know-how to properly service your vehicle. Use only genuine parts on your vehicle.

The skilled technicians at a dealership have the tools, experience, and know-how to properly service your vehicle. Use only genuine parts on your vehicle. Imitation parts may look like parts, but they are often inferior. Consequently, they have a shorter service life and can lead to expensive repair bills.

## **! WARNING**

### **POTENTIAL HAZARD**

**Checking the fuel system while smoking or near an open flame.**

### **WHAT CAN HAPPEN**

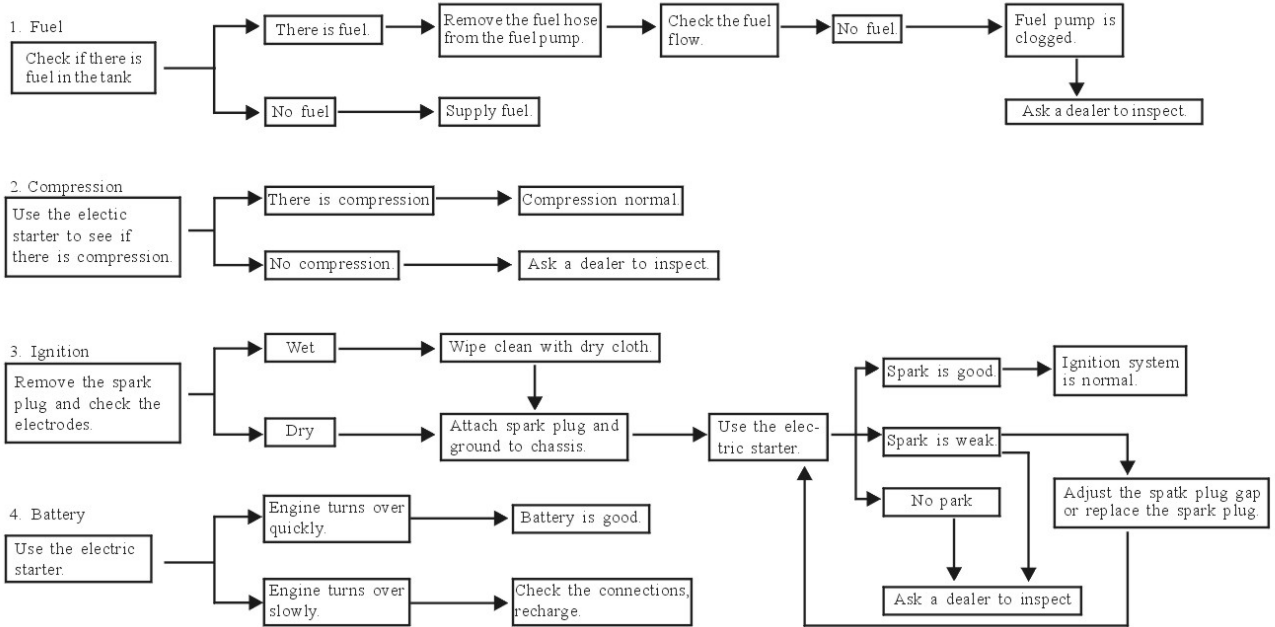
**Fuel can ignite or explode, causing severe injury or property damage.**

### **HOW TO AVOID THE HAZARD**

**Do not smoke when checking the fuel system. 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



## Engine overheating

### ! WARNING

#### POTENTIAL HAZARD

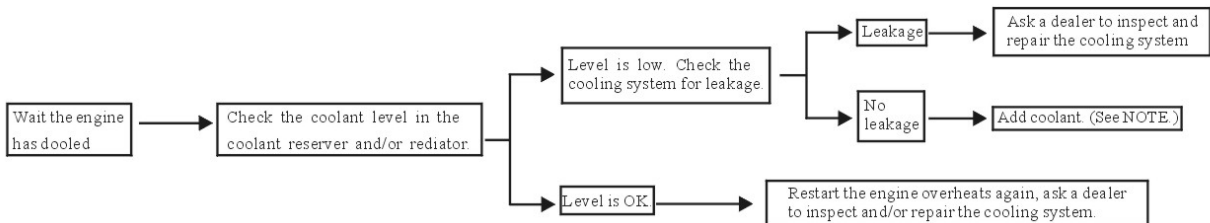
**Removing the radiator cap when the engine and radiator are still hot.**

#### WHAT CAN HAPPEN

**You could be burned by hot fluid and steam blown out under pressure.**

#### HOW TO AVOID THE HAZARD

**Wait for the engine to cool before removing the radiator cap. Always use a thick rag over the cap. Allow any remaining pressure to escape before completely removing the cap.**



**NOTE:** If it is difficult to get the recommended coolant, tap water can be temporarily used, provided that it is changed to the recommended coolant as soon as possible.

## A. Cleaning

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

1. Before cleaning the vehicle:
  - 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 wheel axles.
3. Rinse the dirt and degreaser off with a garden hose. Use only enough pressure to do the job.

**CAUTION:** 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.

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 vehicle off immediately with clean water and dry all surfaces with a chamois, clean towel or soft absorbent cloth.
6. Clean the seats with a vinyl upholstery cleaner to keep the cover pliable and glossy.
7. Automotive type wax may be applied to all painted and chrome plated surfaces. Avoid combination cleaver-waxes. Many contain abrasives which may scratch the paint or protective finish. When finished, start the engine and let it idle for several minutes.

### **! WARNING**

#### **POTENTIAL HAZARD**

**Operation with wet brakes after washing.**

#### **WHAT CAN HAPPEN**

**Wet brakes may have reduced stopping ability, increasing the chance of an accident.**

#### **HOW TO AVOID THE HAZARD**

**Test the brakes after washing. Apply the brakes several times at slow speeds to let friction dry out the linings.**

## B. Storage

Long term storage (60 days or more) of your vehicle will require some preventive

procedures to guard against deterioration. After thoroughly cleaning the vehicle, prepare for storage as follows:

1. Fill the fuel tank with fresh fuel and add the specified amount of Fuel Stabilizer and Conditioner or equivalent product. Operate the vehicle for at least 5 minutes to distribute treated fuel through the fuel system.
2. Drain the fuel from the carburetor float chamber into a clean container by loosening the drain bolt; this will help prevent fuel deposits from building up. Pour the drained fuel into the fuel tank.

**Specified amount:**

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

**NOTE:** Use of fuel stabilizer and conditioner eliminates the need to drain the fuel system. Consult a dealer if the fuel system needs to be drained instead.

3. Remove the spark plug, pour about one tablespoon of SAE 10W30 or 20W40 motor oil in the spark plug. Ground the spark plug wire and turn the engine over several times to coat the cylinder wall with oil.
4. Lubricate all control cables.
5. Block up the frame to raise all wheels off the ground.
6. Tie a plastic bag over the exhaust pipe outlet to prevent moisture from entering.
7. If storing in a humid or salt-air atmosphere, coat all exposed metal surfaces with a light film of oil. Do not apply oil to any rubber parts or the seat covers.
8. Remove the battery and charge it. Store it in a dry place and recharge it once a month.

Do not store the battery in an excessively warm or cold place (less than 0°C (30°F) or more than 30°C (30°F)).

**NOTE:** Make any necessary repairs before storing the vehicle.

# Specifications

## Dimensions

Overall length	2885mm (113.6in)
Overall width	1385mm (54.5in)
Overall height	1853mm (73.0in)
Wheel base	1900mm (74.8in)
Ground clearance	273mm (10.75in)
Minimum turning radius	3900mm (153.5in)
Basic weight	509.0kg (1,122lb)

## Engine

Engine type	CF188
Displacement	493ml
Borexstroke	87.5 × 82
Compression ratio	10.2:1
Starting system	Electric starter/Pull starter
Lubrication system	Force & Splash
Engine oil type	SAE15W-40/SF
Final gear case oil	
Type:	SAE15W-40/SF
Quantity:	0.25L (0.22Imp,0.26US qt)
Differential gear case oil	
Type:	SAE15W-40/SF
Quantity:	0.32L (0.28Imp,0.34US qt)
Radiator capacity(including all routes)	2.50L(2.20Imp,2.64US qt)

## Fuel

Type	RQ-93 Upwards
Quantity gal,7.93US gal)	30.0L(6.60 Imp
Carburetor	
Type/quantity	BSR36-89
Manufacturer	MIKUNI
Spark plug	DPR7EA-9
Spark plug gap	0.8-0.9(0.031-0.035in)
Clutch type	Wet, centrifugal automatic



Transmission	
Primary reduction system	V-belt
Secondary reduction system	Shaft drive
Transmission type	V-belt automatic
Operation	Right hand operation
Tire	
Type	Tubeless
Size front	25 × 8-12NHS
Rear	25 × 10-12NHS
Brake	
System	Front and rear unified
Type front	Dual disc brake
Rear	Dual disc brake
Suspension	
Front suspension	Double wishbone
Rear suspension	Double wishbone
Shock absorber	
Front shock absorber	Coil spring/oil damper
Rear Shock absorber	Coil spring/oil damper
ELECTRICAL	
Ignition system	DC.CDI
Battery type	YTX20L-BS
Battery capacity	STD 2.0A × 5~10h Quick
10A × 1h	
Bulb voltage	
Headlight	35W/35W 12V × 2
Trail/brake light	10W/12V × 2
Winker light	5W/12V × 2
Specified fuses	
Main fuse	20A
Headlight fuse	15A
Ignition fuse	10A
Auxiliary DC jack fuse	10A