



**⚠ WARNING**

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

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

## INTRODUCTION

Congratulations on your purchase of the 1100UTV. With the purchase of this UTV, you can now appreciate the high degree of craftsmanship. This manual will provide you with a good basic understanding of the features and operation of this UTV. This manual includes important safety information. **It provides information about special techniques and skills necessary to ride your UTV.** It also includes basic maintenance and inspection procedures. If you have any questions regarding the operation or maintenance of your UTV, please consult you dealer.

### **AN IMPORTANT SAFETY MESSAGE:**

- READ THIS MANUAL FOR THE UTV RIDER CAREFULLY AND COMPLETELY BEFORE OPERATING YOUR UTV. MAKE SURE YOU UNDERSTAND ALL INSTRUCTIONS.
- PAY CLOSE ATTENTION TO THE WARNING AND CAUTION LABELS ON THE GO-KART.
- NEVER OPERATE A UTV WITHOUT PROPER TRAINING OR INSTRUCTION. FREE TRAINING IS AVAILABLE TO ANYONE WHO BUYS A NEW UTV.
- THIS UTV, AND ANY OTHER UTV OVER 90cc, SHOULD NOT BE RIDDEN BY ANYONE UNDER 16 YEARS OF AGE.

## INFORMATION

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

Particularly important information is distinguished in this manual by the following notations:



**The Safety Alert Symbol means ATTENTION! BECOME ALERT!**

### **⚠ WARNING**

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

### **CAUTION:**

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

### **NOTE:**

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

## **IMPORTANT NOTICE**

This UTV is designed and manufactured for OFF-ROAD use only. It is illegal and unsafe to operate this UTV on any public street, road or highway. This UTV complies with all applicable OFF-ROAD noise level and spark arrester laws and regulations in effect at the time of manufacture. Please check your local riding laws and regulations before operating this UTV.

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# INTRODUCTION

## **WARNING**

Failure to follow the warnings and safety precautions contained in this manual can result in severe injury or death. Your vehicle is not a toy and can be hazardous to operate. This vehicle handles differently than cars, trucks or other off-road vehicles. A collision or rollover can occur quickly, even during routine maneuvers like turning, or driving on hills or over obstacles, if you fail to take proper precautions.

- Read this owner's manual. Understand all safety warnings, precautions and operating procedures before driving the vehicle. Keep this manual with the vehicle.
- Never operate this vehicle without proper instruction.
- Always follow the age guidelines for your vehicle. Operation is prohibited for anyone age 16 and under. Never operate with a passenger age 12 and under.

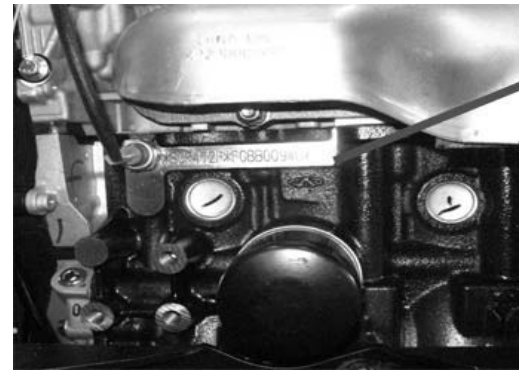
# INTRODUCTION

## Identification number records

Record the vehicle identification number and engine number in the spaces provided for assistance when ordering spare parts from your dealer or for reference in case the vehicle is stolen.



VIN NUMBER



ENGINE NUMBER

**NOTE:** The vehicle identification number is used to identify your machine.

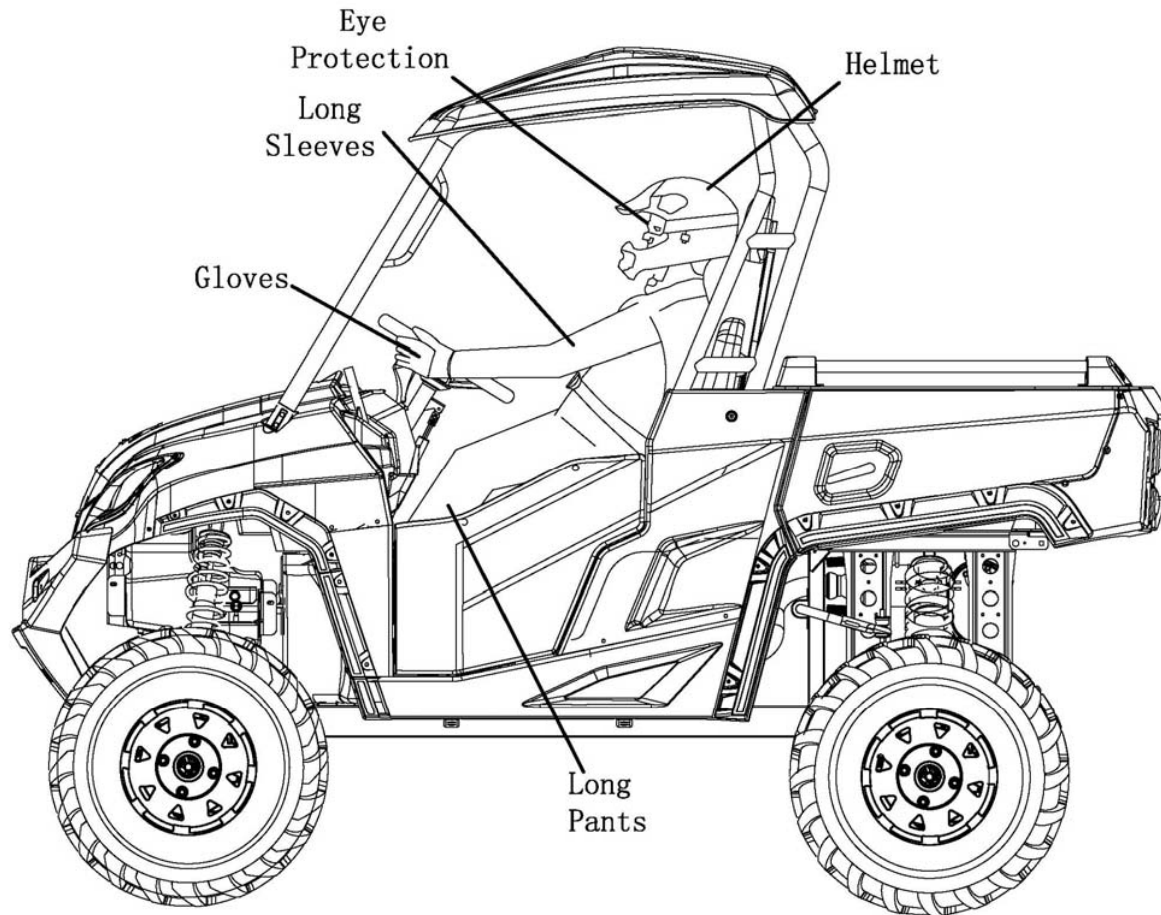
## Equipment Modifications

Your vehicle is designed to provide safe operation when used as directed. Modifications to your vehicle may negatively impact vehicle stability. Failure of critical machine components may result from operation with any modifications, especially those that increase speed or power. This vehicle may become less stable at speeds higher than those for which it is designed. Loss of control may occur at higher speeds. Do not install on a vehicle any equipment that may increase the speed or power of the vehicle, or make any other modifications to the vehicle for these purposes. Any modifications to the original equipment of the vehicle create a substantial safety hazard and increase the risk of bodily injury. The warranty on your vehicle is terminated if any equipment has been added to the vehicle, or if any modifications have been made to the vehicle, that increases its speed or power. The addition of certain accessories may change the handling characteristics of the vehicle. Use only our company approved accessories, and familiarizes yourself with their function and effect on the vehicle.

# SAFETY

## Safe Riding Gear

Always wear appropriate clothing when riding this vehicle. Wear protective clothing for comfort and to reduce the chance of injury.



## Safe Riding Gear

### Helmet

Wearing a helmet can prevent a severe head injury. Whenever riding this vehicle, always wear a helmet that meets or exceeds established safety standards.

Approved helmets in the USA and Canada bear a U.S. Department of Transportation (DOT) label.

### Eye Protection

Do not depend on eyeglasses or sunglasses for eye protection. Whenever riding a vehicle, always wear shatterproof goggles or use a shatterproof helmet face shield.

### Gloves

Wear gloves for comfort and for protection from sun, cold weather and other elements.

### Boots

Wear sturdy footwear. Do not ride a vehicle with bare feet.

### Clothing

Wear long sleeves and long pants to protect arms and legs.

# SAFETY

## Safety Warnings

### **WARNING**

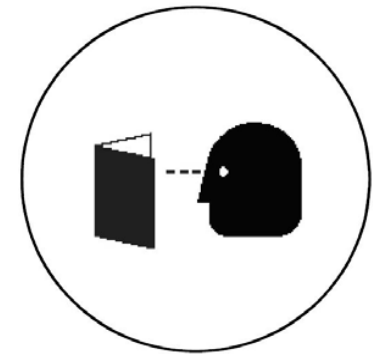
Failure to operate this vehicle properly can result in a collision, loss of control, accident or overturn, which may result in serious injury or death. Be sure to read all of the following warnings about driving hazards and how to avoid them. These warnings are provided for your safety.

#### **Operating Without Instruction**

Operating this vehicle without proper instruction increases the risk of an accident. The operator must understand how to operate the vehicle properly in different situations and on different types of terrain.

#### **Age Restrictions**

Operation is prohibited for anyone age 16 and under. Never operate with a passenger age 12 and under. Make sure any passenger is tall enough to comfortably and safely reach the hand holds and place both feet on the floor.



# SAFETY

## Safety Warnings

### Rider Height

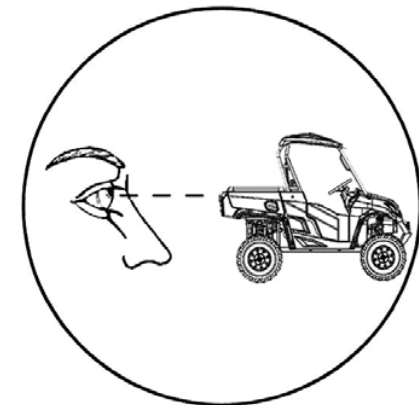
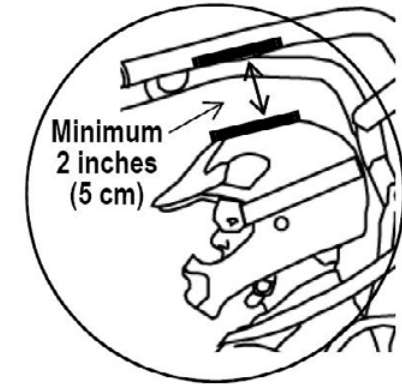
Some riders may be too tall to ride safely in this vehicle. Do not operate or ride in this vehicle if the clearance between the top of your helmet and the overhead cab frame is less than 2 inches (5 cm).

### Failure to Inspect Before Operating

Failure to inspect and verify that the vehicle is in safe operating condition before operating increases the risk of an accident. Always inspect the vehicle before each use to make sure it's in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in the owner's manual.

### Accessories

Installing non-approved accessories may seriously affect vehicle handling and stability, which could result in loss of control or an accident. Never install accessories not approved by our company for use on this vehicle.



## Safety Warnings

### Protective Apparel

Riding in this vehicle without wearing an approved helmet and protective eyewear increases the risk of serious injury in the event of an accident. Operator and passenger must always wear an approved helmet that fits properly and eye protection (goggles or face shield).

### Seat Belts

Riding in this vehicle without wearing the seat belt increases the risk of serious injury in the event of an accident or sudden stop. Riders *must* wear seat belts at all times. Seat belts reduce the severity of injury in the event of a sudden stop or accident. Always make sure the seat belts are secured for both the operator and passenger before riding.

### Using Alcohol or Drugs

Riding in this vehicle after consuming alcohol or drugs could adversely affect operator judgment, reaction time, balance and perception. Never consume alcohol or drugs before or while operating or riding in this vehicle.





## Safety Warnings

### Carrying a Passenger

Never carry a passenger until you have operated this vehicle for at least four hours.

### Carrying Multiple Passengers

Carry more than limitative passengers of the labels of the 1100UE/1100 UEL can affect the operator's ability to steer and operate the controls, which increases the risk of loss of control and accident or overturn.

Never carry more than limitative passengers in this vehicle.

### Operating on Pavement

Operating this vehicle on paved surfaces (including sidewalks, paths, Parking lots and driveways) may seriously affect handling and control of the vehicle, and may cause the vehicle to go out of control. This vehicle's tires are designed for off-road use only, not for use on pavement. Avoid operating the vehicle on pavement. If you must operate on a paved surface, travel slowly and do not make sudden turns or stops.

### Operating on Public Roads

Operating this vehicle on public streets, roads or highways could result in a collision with another vehicle. Never operate this vehicle on any public street, road or highway, including dirt and gravel roads. In many areas it's unlawful to operate vehicles of this type on public streets, roads and highways.



# SAFETY

## Safety Warnings

### Operating at Excessive Speeds

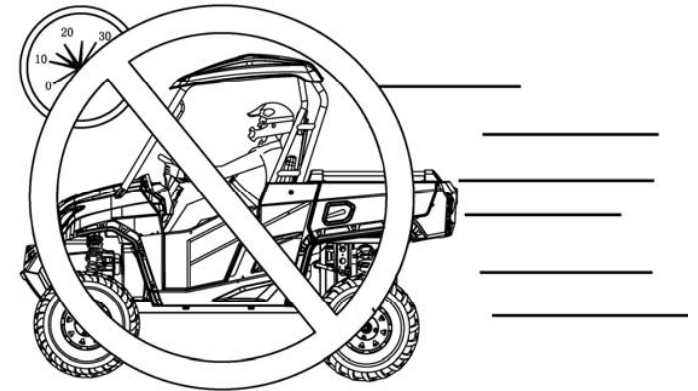
Operating this vehicle at excessive speeds increases the operator's risk of losing control. Always operate at a speed that's appropriate for the terrain, the visibility and operating conditions, your skills and your passenger's skills.

### Turning Improperly

Turning improperly could cause loss of traction, loss of control, accident or overturn. Never turn abruptly or at sharp angles. Never turn at high speeds. Practice turning at slow speeds before attempting to turn at faster speeds.

### Physical Control of the Vehicle

Removing hands from the steering wheel or hand holds or removing feet from the floor while riding increases the risk of loss of control and accident or overturn. The operator should always keep both hands on the steering wheel during operation. A passenger should always be seated in the passenger seat with both feet on the floor and with both hands securely grasping the hand holds. Always keep hands and feet inside the vehicle at all times.



## Safety Warnings

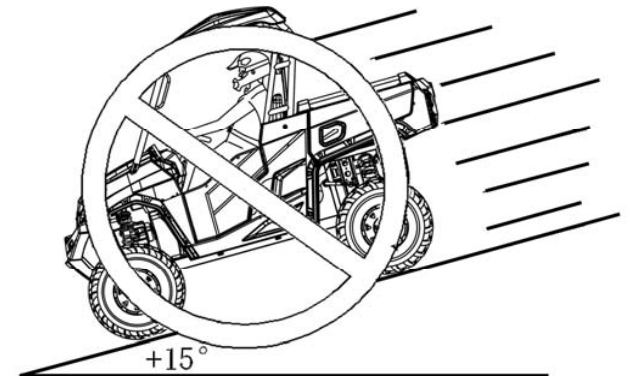
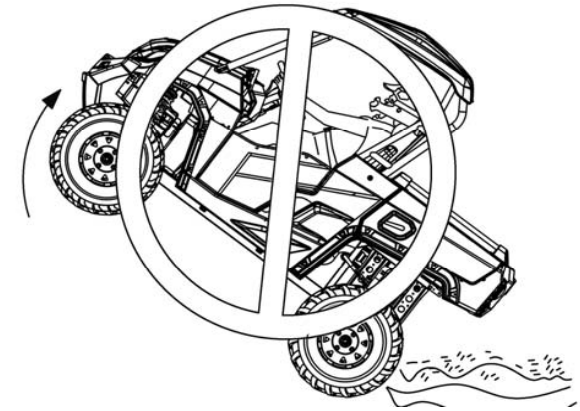
### Jumps and Stunts

Exhibition driving increases the risk of an accident or overturn. DO NOT do power slides, “donuts”, jumps or other driving stunts. Avoid exhibition driving.

### Driving Downhill Improperly

Driving down a hill improperly could cause loss of control or overturn. Always follow proper procedures for driving down a hill as described in the owner's manual.

- Always drive down a hill with the transmission in forward gear. Never drive down a hill with the transmission in neutral.
- Never operate the vehicle on hills steeper than 15 degrees.
- Always check the terrain carefully before driving down a hill
- Never travel down a hill at high speed.
- Avoid traveling down a hill at an angle, which would cause the vehicle to lean sharply to one side. Travel straight downhill.



# SAFETY

## Safety Warnings

### Improper Hill Climbing

Improper hill climbing could cause loss of control or overturn. Use extreme caution when operating on hills. Always follow proper procedures for hill climbing as described in the owner's manual.

### Stalling While Climbing a Hill

Stalling or rolling backwards while climbing a hill could cause an overturn. Maintain a steady speed when climbing a hill.

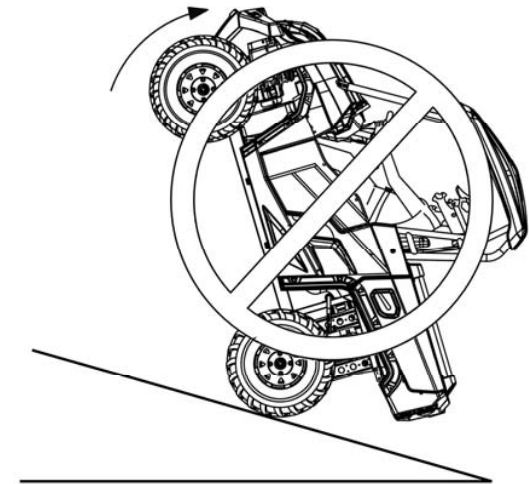
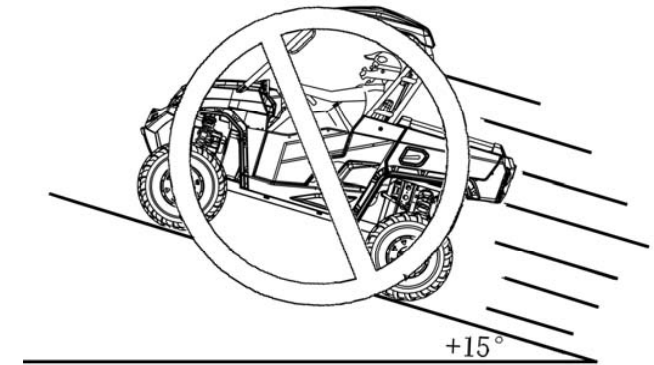
If you lose all forward speed:

Apply the brakes gradually until the vehicle is fully stopped.

Place the transmission in reverse and slowly allow the vehicle to roll straight downhill while applying light brake pressure to control speed.

### Crossing Hillsides

Driving on a sidehill is not recommended. Improper procedure could cause loss of control or overturn. Avoid crossing the side of any hill unless absolutely necessary.



# SAFETY

## Safety Warnings

### Operating in Unfamiliar Terrain

Failure to use extra caution when operating on unfamiliar terrain could result in an accident or overturn.

Unfamiliar terrain may contain hidden rocks, bumps, or holes that could cause loss of control or overturn.

Travel slowly and use extra caution when operating on unfamiliar terrain. Always be alert to changing terrain conditions.

### Operating on Sand or Slippery Terrain

Operating on sand or on excessively rough, slippery or loose terrain could cause loss of traction, loss of control, accident or overturn. Always use extra caution when operating on sand or on rough, slippery or loose terrain. Do not operate on excessively rough, slippery or loose terrain.





# SAFETY

## Safety Warnings

### Operating Improperly in Reverse

Improperly operating in reverse could result in a collision with an obstacle or person. Always follow proper operating procedures as outlined in this manual. Before shifting into reverse gear, always check for obstacles or people behind the vehicle. When it's safe to proceed, back slowly.

### Operating Over Obstacles

Improperly operating over obstacles could cause loss of control or overturn. Before operating in a new area, check for obstacles. Never attempt to operate over large obstacles such as rocks or fallen trees. Always follow the proper procedures outlined in this manual when operating over obstacles.

### Skidding or Sliding

Skidding or sliding can cause loss of control or overturn (if tires regain traction unexpectedly). Always follow proper procedures for operating on slippery surfaces as described in the owner's manual. When operating on slippery surfaces such as ice or loose gravel, reduce speed and use extra caution to reduce the chance of skidding or sliding. Do not operate on excessively slippery surfaces.



# SAFETY

## Safety Warnings

### Operating Through Water

Operating through deep or fast-flowing water can cause loss of traction, loss of control, overturn or accident. Never operate in fast-flowing water or in water that exceeds the floor level. Always follow proper procedures for operating in water as described in the owner's manual. Wet brakes may have reduced stopping ability. After leaving water, test the brakes. Apply them lightly several times while driving slowly. The friction will help dry out the pads.

### Overloading the Vehicle

Overloading the vehicle or carrying/towing loads may cause changes in stability and handling, which could cause loss of control or an accident.

- Never tow objects or carry loads with this vehicle.
- Never exceed the maximum weight capacity for this vehicle.



## Safety Warnings

### Operating a Damaged Vehicle

Operating a damaged vehicle can result in an accident with serious injury or death. After any overturn or accident, have a qualified service dealer inspect the entire vehicle for possible damage, including (but not limited to) brakes, throttle and steering systems.

### Operating on Frozen Bodies of Water

Operating on frozen bodies of water can result in the vehicle and/or riders falling through the ice. Never operate this vehicle on a frozen body of water.





## Safety Warnings

### Handling Gasoline

Gasoline is highly flammable and is explosive under certain conditions. Always exercise extreme caution whenever handling gasoline.

- Never allow a child to refuel or handle gasoline.
- Always stop the engine when refueling.
- Always refuel outdoors or in a well ventilated area.
- Do not smoke or allow open flames or sparks in or near the refueling area or where gasoline is stored.
- Never refuel while a person is in the vehicle.
- Do not over fill the tank. Do not fill the tank neck.
- If gasoline spills on your skin or clothing, immediately wash it off with soap and water and change clothing.
- Turn the fuel valve off whenever the vehicle is stored or parked.

### Exposure to Exhaust

Engine exhaust fumes are poisonous and can cause loss of consciousness or death in a short time. Never start the engine or let it run in an enclosed area. Operate this vehicle only outdoors or in well-ventilated areas.

## **Safety Warnings**

### **Hot Exhaust Systems**

Exhaust system components are very hot during and after use of the vehicle. Hot components can cause burns and fire. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system.

Use caution when traveling through tall grass, especially dry grass. Always inspect the underside of the vehicle and areas near the exhaust system after driving through tall grass, weeds, brush and other tall ground cover. Promptly remove any grass or debris clinging to the vehicle.

### **Unauthorized Use of the Vehicle**

Leaving the keys in the ignition can lead to unauthorized use of the vehicle, which could result in an accident or overturn. Always remove the ignition key when the vehicle is not in use.

### **Safety Labels and Locations**

Warning labels have been placed on the vehicle for your protection. Read and follow the instructions on each label carefully. If any of the labels shown in this manual differ from the labels on your vehicle, always read and follow the instructions of the labels on the vehicle. If an informational or graphic label becomes illegible or comes off, contact your dealer to purchase a replacement.

# SAFETY

## Safety Labels and Locations

### Warning Label

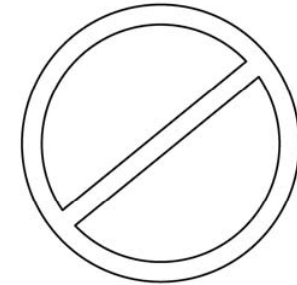
#### WARNING

Improper vehicle use can result in SEVERE INJURY or DEATH  
NEVER allow vehicle to be operated:

- Without all occupants first viewing and understanding safety warning labels.
- With more than one passenger.
- On hills steeper than 15 degrees
- On paved surfaces - pavement may seriously affect handling and control.
- With non-approved accessories ,they may seriously affect stability.
- At speeds that are too fast for the operator's skills, the conditions and/or the terrain.

ALWAYS require operator and passenger to:

- Wear seat belts, grab hand holds (passenger) and plant feet firmly on the floor.
- Keep hands and feet inside vehicle.
- Avoid quick turns of the steering wheel and driving stunts such as jumps, donuts or power slides.
- Reduce speed and use extra caution when carrying a passenger.
- Watch for branches or other hazards that could enter vehicle.



## Safety Labels and Locations

### Warning Label

#### WARNING

Operation of this vehicle by children age 16 and under increases the risk of severe injury or death. NEVER permit children age 16 and under to operate or ride in this vehicle.

#### WARNING

VEHICLE OVERTURN could cause severe injury or death. The cab frame is not designed or intended to provide rollover protection.

#### TIRE PRESSURE IN PSI (KPa):

Front:  $12 \pm 0.5(83 \pm 3.5)$

Rear:  $12 \pm 0.5(83 \pm 3.5)$

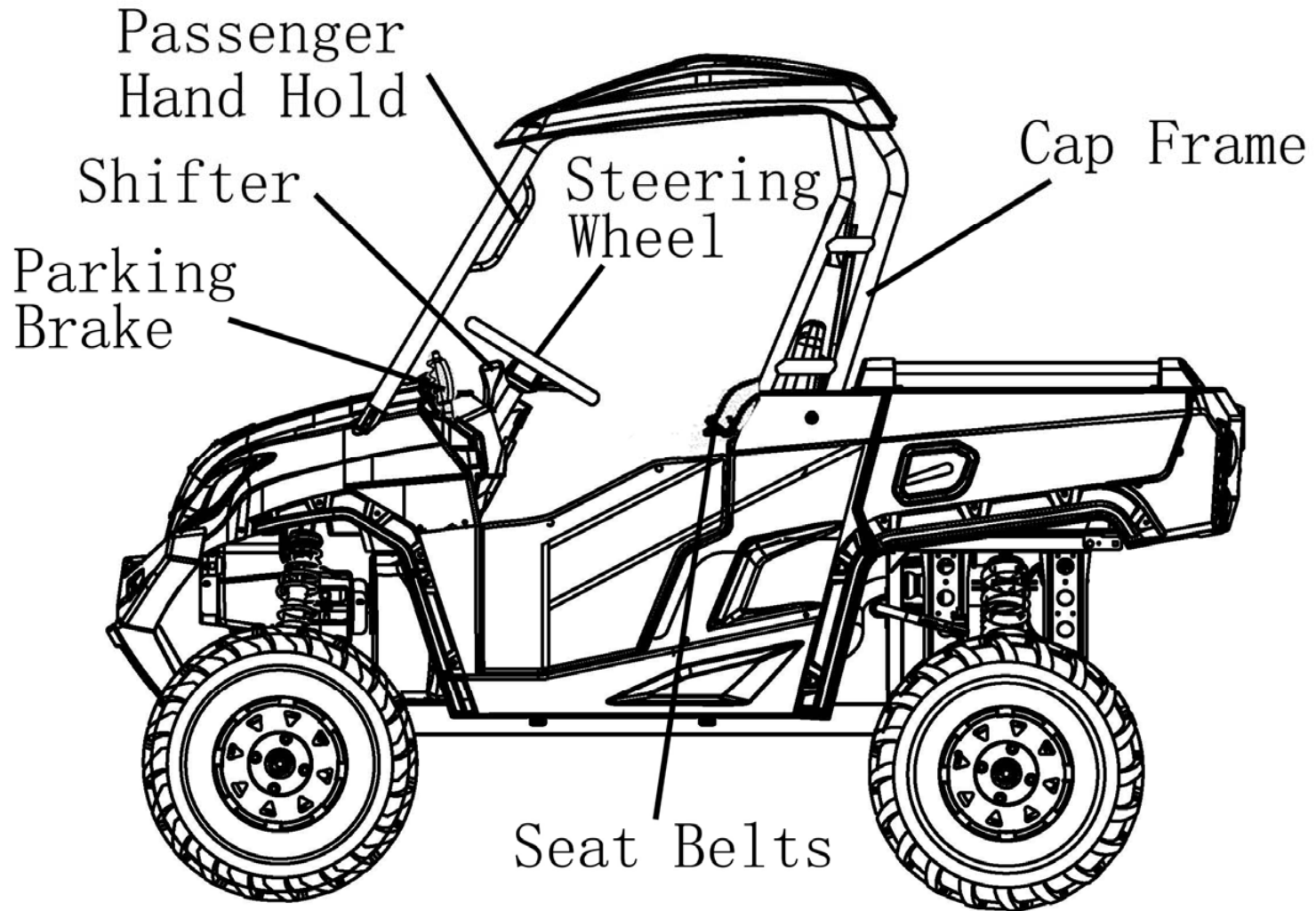
#### MAXIMUM WEIGHT CAPACITY: 990 lbs. (450 Kg)

INCLUDES WEIGHT OF OPERATOR, PASSENGER AND ACCESSORIES.

LOCATE AND READ OWNER'S MANUAL. FOLLOW ALL INSTRUCTIONS AND WARNINGS. IF OWNER'S MANUAL IS MISSING, CONTACT YOUR DEALER FOR A REPLACEMENT.

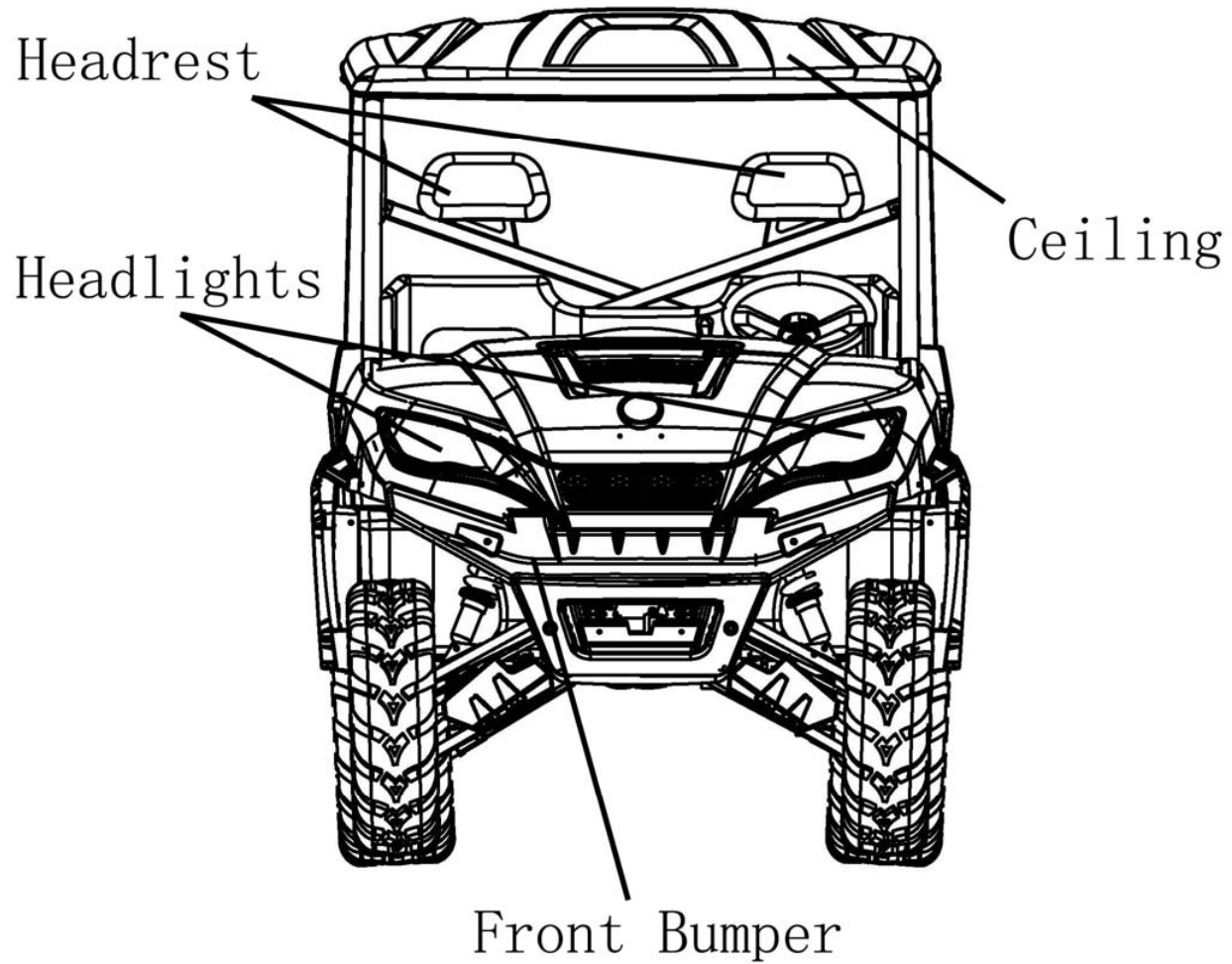
# FEATURES AND CONTROLS

## Component Locations



# FEATURES AND CONTROLS

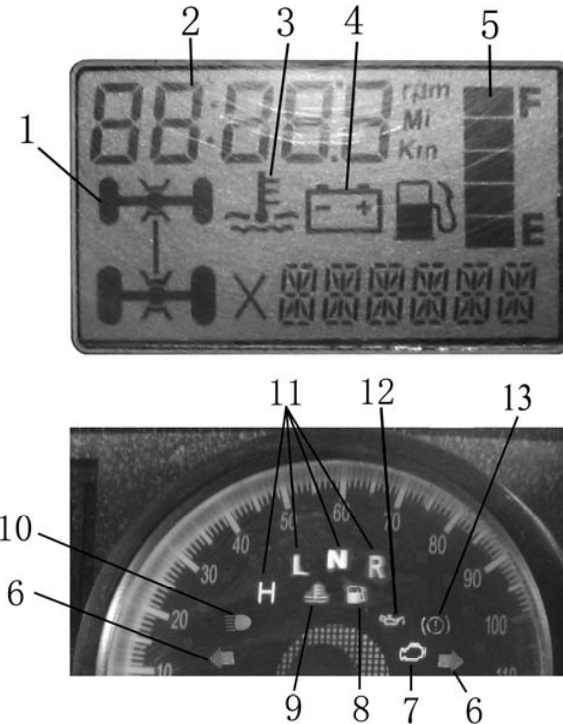
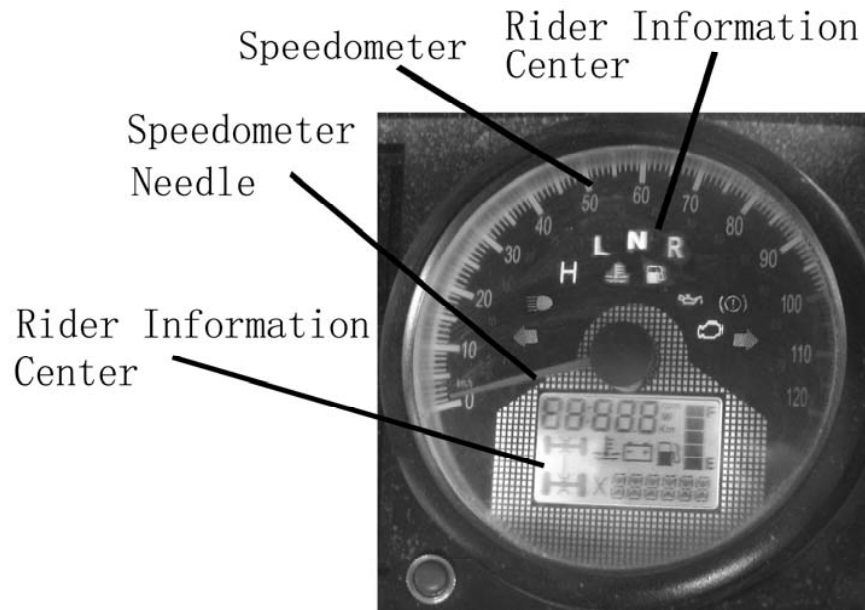
## Component Locations





# FEATURES AND CONTROLS

## Indicator and warning lights

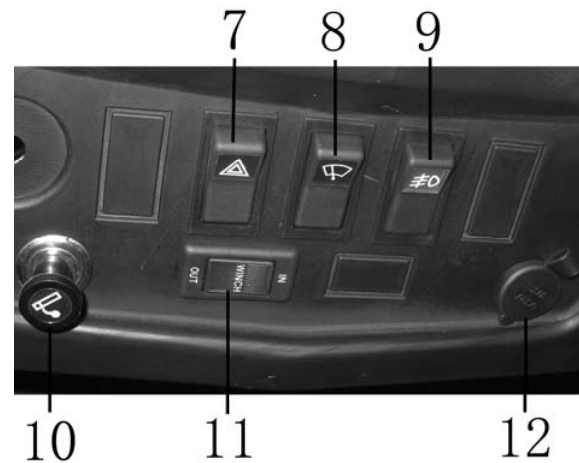
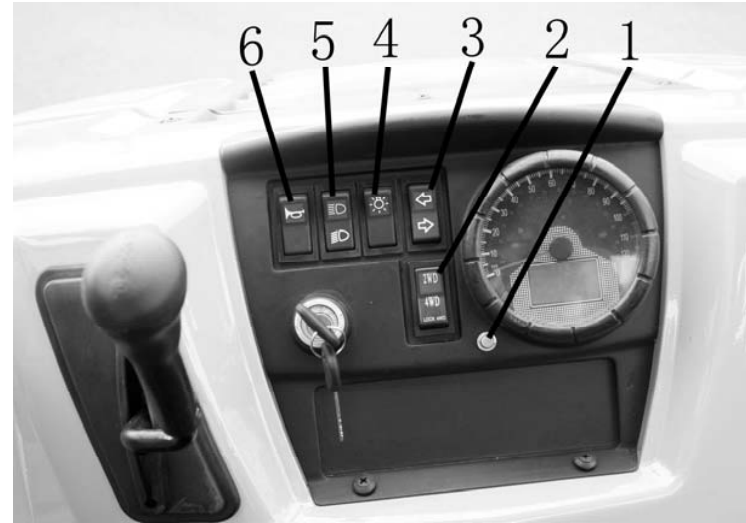


1. AWD indicator
2. Tachometer
3. Temperature warning light
4. Low battery and Over Voltage
5. Fuel indicator
6. turning indicator
7. Engine malfunction warning light
8. Fuel warning light
9. Water temperature warning light
10. High beams indicator
11. Gear indicator
12. Oil pressure low warning light
13. Parking indicator light

## FEATURES AND CONTROLS

### Switch

1. Meter adjust button
2. Driver model turn switch
3. Turning switch
4. Light switch
5. Low beams/High beams turn
6. Horn switch
7. Warning indicator light switch
8. Wiper switch(optional)
9. Spot light(optional)
- 10.Cigarette lighter
11. winch switch(optional)
- 12.Auxiliary DC jack(12V 120W/10A)





# FEATURES AND CONTROLS

## Seat

### Seat Removal

Pull up on the front of the seat and slide it toward the front of the vehicle.

Install the seat by sliding the tabs into the rear of the seat base. Push down firmly on the front of the seat until the pins are fully seated into the grommets.

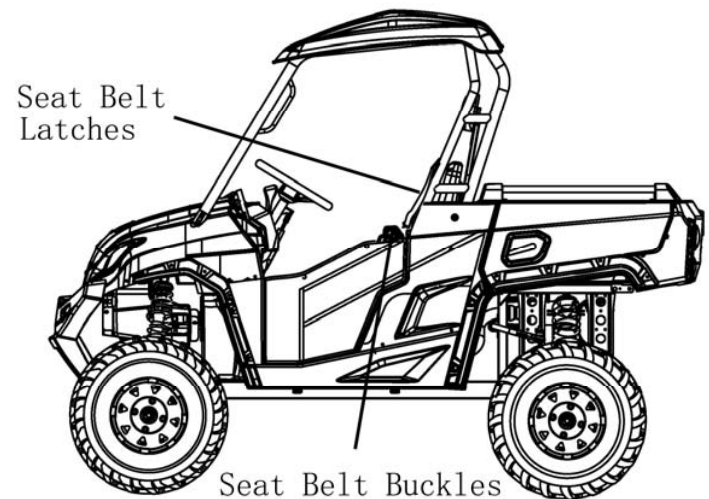
1. Lift the seat latch lever 1 located under the right front edge of the driver's seat.
2. While holding the lever upward, slide the seat forward or rearward to the desired position, then release the lever.
3. Slide the seat forward and rearward to ensure the latch is engaged. Before operating the vehicle, always make sure both seats are securely installed.

### Seat Belts

This vehicle is equipped with three-point lap seat belts for the operator and passenger. Always make sure the seat belts are secured for both the operator and passenger before riding.

To wear the seat belt properly, follow this procedure:

1. Take up the seat belts which are located on the edges of seat and across your shoulders just like wear a coat. The buckle is in front of your abdomen. Make sure the belt is not twisted.



## FEATURES AND CONTROLS

**Tip:** The position of the shoulder strap can be adjusted to the height of the operator.

2. Push the latch plate into the buckle until it clicks.
3. Press the red release latch on the buckle to release the seat belt.

### Seat Belt Inspection

Inspect all seat belts for proper operation before each use of the vehicle.

1. Push the latch plate into the buckle until it clicks. The latch plate must slide smoothly into the buckle. A click indicates that it's securely latched.
2. Push the red release latch in the middle of the buckle to make sure it releases freely.
3. Inspect the full length for any damage, including cuts, wear, fraying or stiffness. If any damage is found, or if the seat belt does not operate properly, have the seat belt system checked and/or replaced by an authorized dealer.
4. To clean dirt or debris from the seat belts, sponge the straps with mild soap and water. Do not use bleach, dye or household detergents.

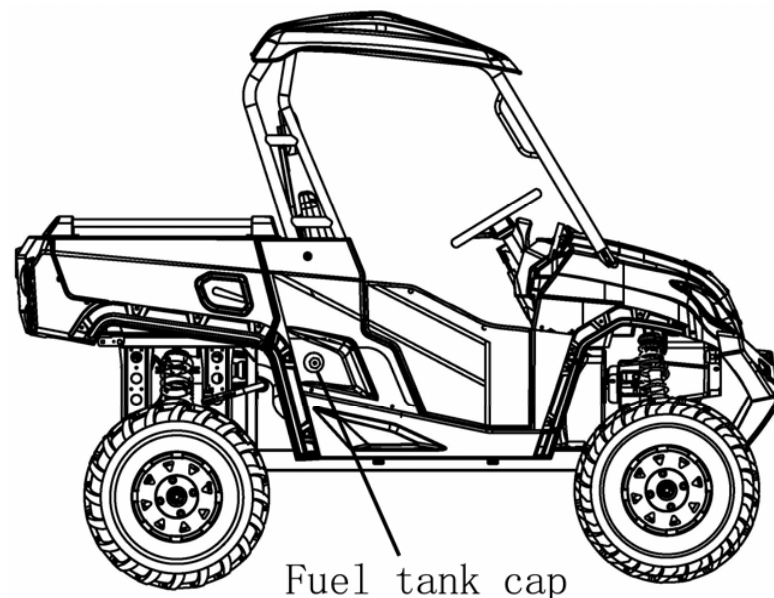
## FEATURES AND CONTROLS

### Fuel Tank Cap



Never allow a child to refuel or handle gasoline.

The fuel tank filler cap is located on the right-hand side of the vehicle behind the passenger seat. When refueling, always use unleaded gasoline.



# FEATURES AND CONTROLS

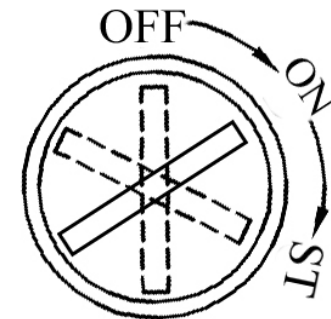
## Ignition Switch

- (1) Turn the key switch to “ST” position. The engine can be started only at this position and the key can not be removed.
- (2) Turn the key switch to “ON” position, the engine will turn off. When turn the key switch to “OFF” position ,the electric was cut off and the key can be removed.

Ignition Switch



Cigarette Lighter



## Cigarette Lighter

The cigarette lighter installed on the vehicle. The socket also can be used for phone charging and external power supply.

Note: The voltage of the socket is 12V, DC. Please make sure the voltage matches your electro-set's.

# FEATURES AND CONTROLS

## Gear Selector

R: Reverse

N: Neutral

L: Low gear

H: High gear

The gear selector is located on the right of the steering wheel.

To change gears, stop the vehicle, and with the engine idling, move the lever to the desired gear. Do not attempt to shift gears with engine speed above idle or while the vehicle is moving.

**Tip:** Maintaining shift linkage adjustment is important to assure proper transmission function. See your dealer if you experience any shifting problems.

**NOTICE:** Do not attempt to shift the transmission while the vehicle is moving or damage to the transmission could result. Always shift when the vehicle is stationary and the engine is at idle.

## Parking Brake

1. Apply the brakes.
2. When the vehicle is fully stopped, pull the parking brake lever rearward as far as possible to set the parking brake.
3. Stop the engine.
4. To release the parking brake, apply the brakes and push the lever toward the passenger seat and forward.



## FEATURES AND CONTROLS

**Tip:** Always set the parking brake whenever the vehicle is left unattended.



Operating the vehicle while the parking brake is engaged could cause an accident resulting in serious injury or death. It could also result in driveline or engine damage. Always be sure to disengage the parking brake before operating the vehicle.

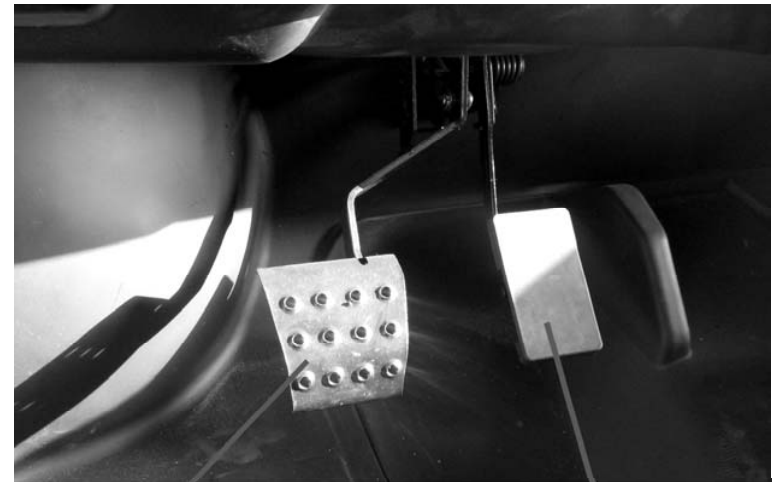
### Brake Pedal

Depress the brake pedal to slow or stop the vehicle. Apply the brakes while starting the engine.

### Throttle Pedal

Push the pedal down to increase engine speed. Spring pressure returns the pedal to the rest position when released. Always check that the throttle pedal returns normally before starting the engine. Make sure there's adequate throttle pedal freeplay. See page 60 for throttle pedal adjustment procedures.

If the throttle cable should stick in an open position when the operator releases the throttle pedal, the engine will stop and power to the rear wheels will cease.



Brake Pedal

Throttle Pedal

### **WARNING**

Failure to operate the vehicle properly can result in a collision, loss of control, accident or overturn, which may result in serious injury or death. Read and understand all safety warnings outlined in the safety section of this owner's manual.

#### **Vehicle Break-in Period**

The break-in period for your new vehicle is defined as the first ten hours of operation, or the time it takes to use the first two full tanks of gasoline.

No single action on your part is as important as a proper break-in period. Careful treatment of a new engine and drive components will result in more efficient performance and longer life for these components. Perform the following procedures carefully.

**NOTICE:** Excessive heat build-up during the first three hours of operation will damage close-fitted engine parts and drive components. Do not operate at full throttle or high speeds during the first three hours of use.

Mixing brands or using a non-recommended oil may cause serious engine damage. Always use the recommended oil. Never substitute or mix oil brands.

## Vehicle Break-in Period

### Engine and Drivetrain Break-in

1. Fill the fuel tank with gasoline. Always exercise extreme caution whenever handling gasoline. Never allow a child to handle gasoline.
2. Check the oil level. See page 52. Add the recommended oil as needed to maintain the oil level in the safe operating range.
3. Complete the New Operator Driving Procedures outlined on pages 37-38.
4. Avoid aggressive use of the brakes. See Brake System Break-in below.
5. Vary throttle positions. Do not operate at sustained idle.
6. Perform regular checks on fluid levels, controls and areas outlined on the daily pre-ride inspection checklist. See page 33.
7. Change the engine oil at 10 hours or one month.

### Brake System Break-in

Apply only moderate braking force for the first 50 stops. Aggressive or overly forceful braking when the brake system is new could damage brake pads and rotors.

### CVT Break-in (Clutches/Belt)

A proper break-in of the clutches and drive belt will ensure a longer life and better performance.

Break in the clutches and belt by operating at slower speeds during the break-in period as recommended. Avoid aggressive acceleration and high speed operation during the break-in period.



# OPERATION

## Pre-Ride Inspection

Failure to inspect and verify that the vehicle is in safe operating condition before operating increases the risk of an accident. Always inspect the vehicle before each use to make sure it's in safe operating condition.

Item	Remarks	Page
Brake	Ensure proper operation	72
Steering	Ensure free operation	74
Engine oil	Ensure proper levels	51 52 53 54
Air filter	Inspect, clean	66 67
Seat Belts	Check length of belt for damage, check latches for proper operation	25
Brake fluid	Ensure proper level	73
Tires	Inspect condition	75
Throttle system	Ensure proper operation	69 70
Gearcase fluid	Ensure proper levels	55
Spark plug	Inspect condition	56

# OPERATION

## Safe Operation Practices

1. Complete the New Operator Driving Procedures outlined on pages 37-38.
2. Do not ride at night or when visibility is poor (rain, fog, dusk). Your vehicle doesn't have lights that are designed for driving in these conditions.
3. Never tow objects or carry loads with this vehicle.
4. Engine exhaust fumes are poisonous. Never start the engine or let it run in an enclosed area. Never allow a child to handle gasoline.
5. Never install accessories not approved by our company for use on this vehicle.
6. Never operate the vehicle on pavement or on any public street, road or highway, including dirt and gravel roads.
7. Drive in a manner appropriate for your skills and operating conditions. Never operate at excessive speeds. DO NOT attempt to do power slides, “donuts”, jumps or other driving stunts. Keep both hands on the steering wheel at all times.
8. Never consume alcohol or drugs before or while operating this vehicle.
9. Always use the size and type of tires specified for your vehicle. Always maintain proper tire pressure.
10. Never operate a damaged vehicle. After any overturn or accident, have a qualified service dealer inspect the entire machine for possible damage.
11. Never operate the vehicle on a frozen body of water.
12. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system.
13. Always remove the ignition key when the vehicle is not in use to prevent unauthorized use.

## Starting the Engine

1. Sit in the driver's seat and fasten the seat belt.
2. Place the transmission in neutral. Set the parking brake.
3. Apply the brakes.
4. Do not press the throttle pedal while starting the engine.
5. Turn the ignition key to the “ST” position. Engage the starter for a maximum of five seconds.

Release the key when the engine starts.

**NOTICE:** Operating the vehicle immediately after starting could cause engine damage. Allow the engine to warm up for several minutes before operating the vehicle.

6. If the engine does not start within five seconds, return the ignition switch to the “ON” position and wait five seconds. Repeat steps 5 and 6 until the engine starts.

**Tip:** If a warm engine has cooled to a point where it does not readily start, intermittent use of the choke (pulled half way out) may be necessary. If the engine is over-choked when warm, depress the throttle lever fully while cranking to aid in starting. Release the throttle lever immediately after the engine starts. If the engine does not start and all conditions are favorable, change the spark plug and try again.

7. Vary the engine RPM slightly with the throttle to aid in warm-up until the engine idles smoothly.
8. Release the parking brake before driving.

## Stopping the Engine

1. Release the throttle pedal completely and brake to a complete stop.
2. Place the transmission in neutral.
3. Set the parking brake.
4. Stop the engine.

## Braking

1. Release the throttle pedal completely. (When the throttle pedal is released completely and engine speed slows to near idle, the vehicle has no engine braking.)
2. Press on the brake pedal evenly and firmly. Practice starting and stopping (using the brakes) until you're familiar with the controls.

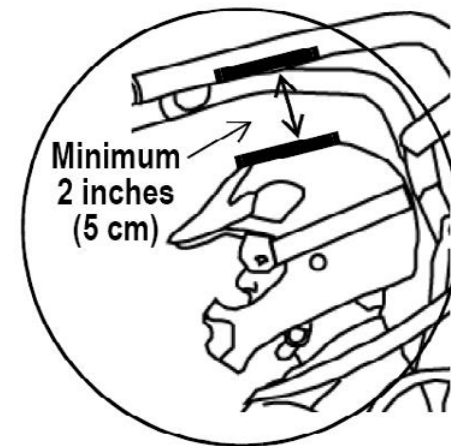
## Parking the Vehicle

1. Stop the vehicle on a level surface. When parking inside a garage or other structure, be sure that the structure is well ventilated and that the vehicle is not close to any source of flame or sparks, including any appliance with pilot lights.
2. Place the transmission in neutral.
3. Set the parking brake.
4. Stop the engine.
5. Remove the ignition key to prevent unauthorized use.

# OPERATION

## New Operator Driving Procedures

1. Read and understand the owner's manual and all warning and instruction labels before operating this vehicle.
2. Review the section of this owner's manual about starting the engine, stopping the engine, braking and parking (pages 35-36).
3. Perform the pre-ride inspection (page 33).
4. Wear appropriate riding gear, including an approved helmet and eye protection (goggles or face shield).
5. Select a level open area to practice driving.
6. Sit in the driver's seat and fasten the seat belt.
7. Do not operate or ride in this vehicle if the clearance between the top of your helmet and the overhead cab frame is less than 2 inches (5 cm).
8. Do not carry a passenger until you have at least four hours of driving experience with this vehicle.  
See page 39.



## OPERATION

9. Set the parking brake.
10. Place the transmission in neutral.
11. Start the engine.
12. Apply the brakes and shift into gear.
13. Release the parking brake.
14. Check your surroundings. Make sure the area is clear of people and obstacles.
15. Keeping both hands on the steering wheel, slowly release the brakes and press the throttle with your right foot to begin driving.
16. Drive slowly at first. Practice starting, stopping, turning, using the throttle and brakes and driving in reverse. Learn how the vehicle handles when making both left and right turns at a slow speed.
17. Increase speed only after mastering all maneuvers at a slow speed.
18. After you become skilled at making turns and begin to operate at faster speeds, follow these precautions:
  - Avoid sharp turns. Make turns gradually.
  - Never turn while applying heavy throttle.
  - Never turn the steering wheel abruptly.
  - Operate at speeds appropriate for your skills, the conditions and the terrain.
  - Do not attempt to do power slides, “donuts”, jumps or other driving stunts.

# OPERATION

## Driving with a Passenger

1. Complete the New Operator Driving Procedures outlined on Pages 37-38.
2. Perform the pre-ride inspection. See page 33.
3. Do not carry a passenger until you have at least four hours of driving experience with this vehicle.
4. Never operate with a passenger age 12 and under. Make sure the passenger is tall enough to comfortably and safely sit in the passenger seat with the seat belt secured, put both feet on the floor and grasp the hand holds.
5. Make sure the passenger has at least 2 inches (5 cm) of clearance between his helmet and the top of the cab frame.
6. Never carry more than one passenger in this vehicle.





## OPERATION

7. Never allow a passenger to ride on the back of the vehicle. Allow a passenger to ride only in the passenger seat.
8. Make sure the passenger is wearing appropriate riding gear, including an approved helmet and eye protection. See page 5.
9. Make sure the passenger secures the seat belt.
10. Tell your passenger to always keep hands and feet inside the vehicle at all times.
12. Drive slowly. Vehicle handling may change with a passenger on board. Always travel at a speed appropriate for your skills, your passenger's skills, and operating conditions. Avoid unexpected or aggressive maneuvers that could cause discomfort or injury to a passenger.
13. Always follow all operating guidelines as outlined on safety labels and in this manual.

### Driving on Slippery Surfaces

When driving on slippery surfaces such as wet trails, loose gravel, sand or ice, be alert for the possibility of skidding and sliding.

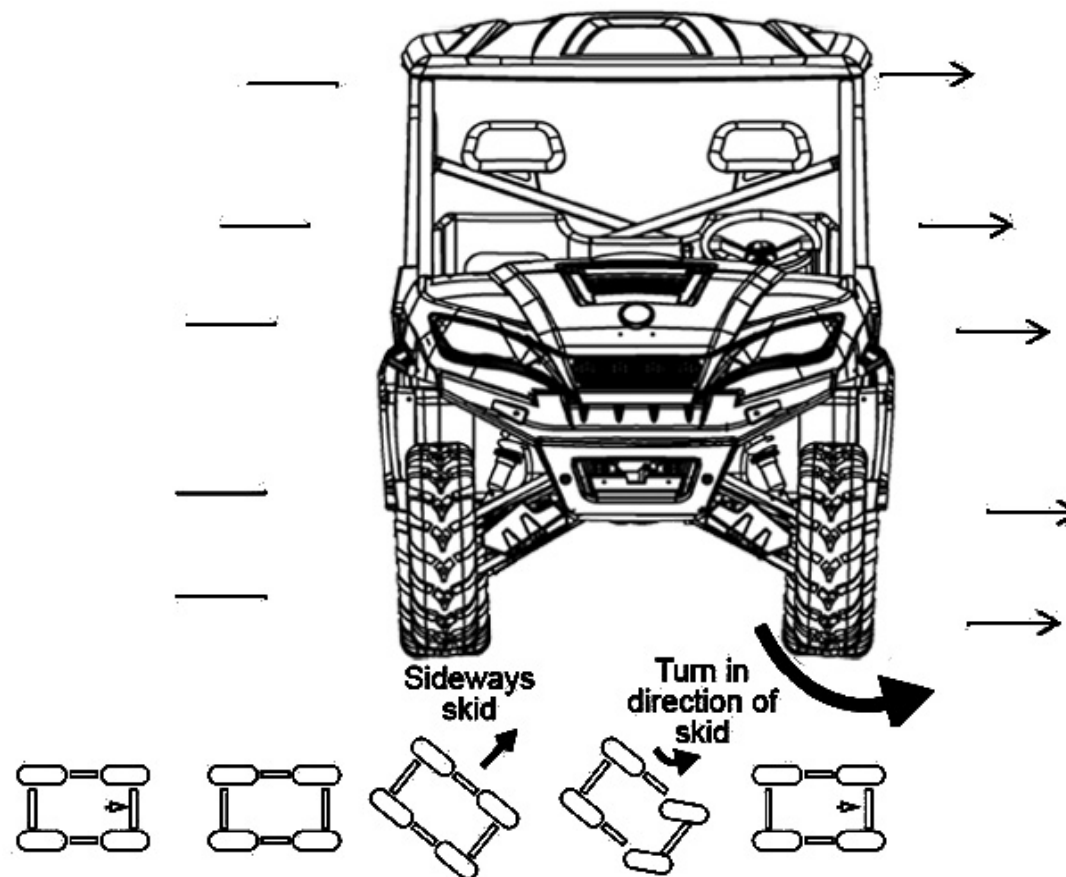


Skidding or sliding can cause loss of control or overturn, especially if tires regain traction unexpectedly. When operating on slippery surfaces such as ice or loose gravel, slow down and use extra caution to help prevent skidding or sliding. Always use extra caution when operating on sand or on rough, slippery or loose terrain. Do not operate on excessively rough, slippery or loose terrain.

# OPERATION

Follow these precautions when driving in slippery conditions:

1. Slow down before entering slippery areas.
2. Be alert, watch the path ahead and avoid quick turns, which can cause skids.
3. Correct a skid by turning the steering wheel in the direction of the skid. Never apply the brakes during a skid.

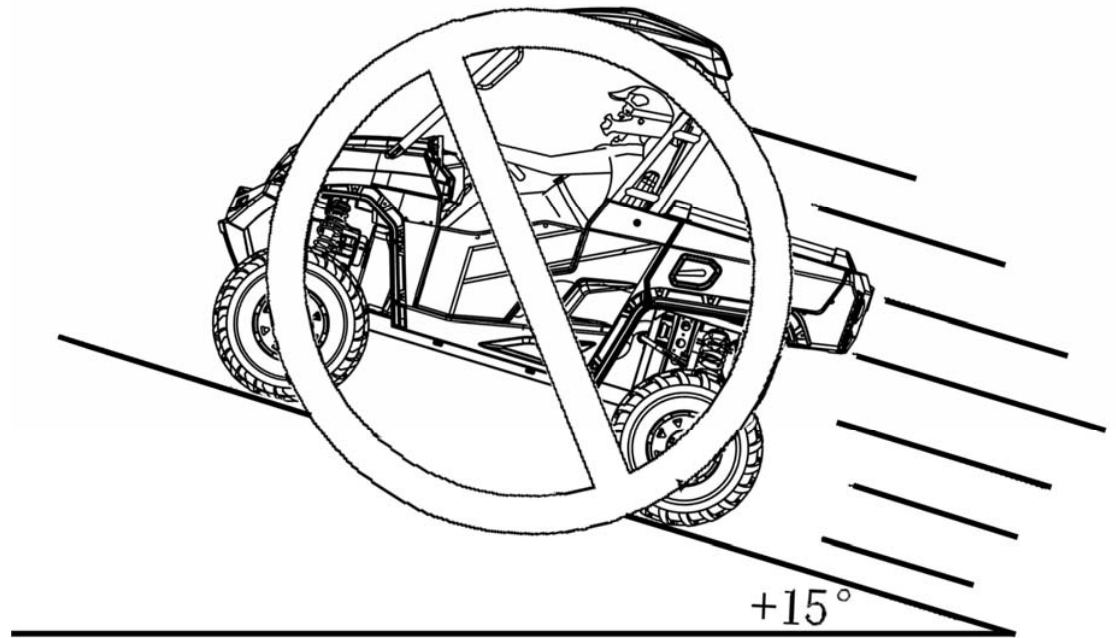


# OPERATION

## Driving Uphill

Whenever traveling uphill, follow these precautions:

1. Always check the terrain carefully before ascending a hill.
2. Avoid steep hills (15° maximum).
3. Drive straight uphill.
4. Never climb hills with excessively slippery or loose surfaces.
5. Drive at a steady rate of speed. Never press the throttle suddenly.
6. Avoid unnecessary changes in speed or direction.
7. Never go over the crest of a hill at a high speed. An obstacle, a sharp drop, or another vehicle or person could be on the other side of the hill.
8. If the vehicle stalls while climbing a hill, apply the brakes. Place the transmission in reverse and slowly allow the vehicle to roll straight downhill while applying the brakes lightly to control speed.



### **Driving on a Sidehill (Sidehilling)**

Driving on a sidehill is not recommended. Driving on a sidehill improperly cause loss of control or overturn.

If crossing a hill is *unavoidable*, follow these precautions:

1. Drive slowly and use extreme caution.
2. If the vehicle begins to overturn, or if it feels as if it may overturn, immediately turn downhill.
3. Avoid obstacles and changes in terrain that may lower or raise one side of the vehicle or cause the vehicle to slide.
4. If the vehicle begins to slide downhill, immediately turn downhill to stop the slide.

### **Driving Downhill**

Whenever driving down a hill, follow these precautions:

1. Avoid steep hills (15° maximum).
2. Slow down. Never travel down a hill at high speed.
3. Always check the terrain carefully before driving down a hill.
4. Always drive down a hill with the transmission in forward gear. Never “coast” or drive down a hill with the transmission in neutral.
5. Avoid driving down a hill at an angle, which would cause the vehicle to lean sharply to one side.  
Always drive straight downhill.
6. Apply the brakes lightly to keep speed slow.

## Driving Through Water

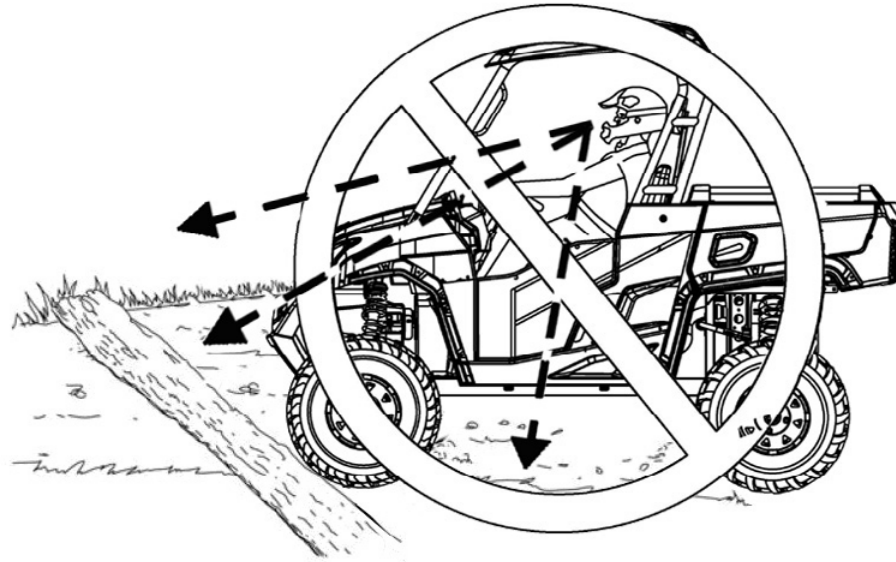
Your vehicle can drive through shallow water. Make sure the water is no deeper than the floor of the vehicle. Follow these precautions when driving through water:

1. Check water depth. Never drive through water that is deeper than the floor level.
2. After driving through water, test the brakes. Apply them lightly several times while driving slowly. The friction will help dry out the pads.

**NOTICE:** Major engine damage can result if the vehicle is not thoroughly inspected after operation in water. Perform the services outlined in the maintenance chart. See page 49-50. Give special attention to engine oil, transmission oil and all grease fittings. If your vehicle is operated in water deeper than the floor level, take it to your dealer for service before starting the engine. If it's impossible to bring the vehicle to your dealer before starting the engine, perform the service outlined on page 76, and take the vehicle to your dealer as soon as possible.



## Driving Over Obstacles

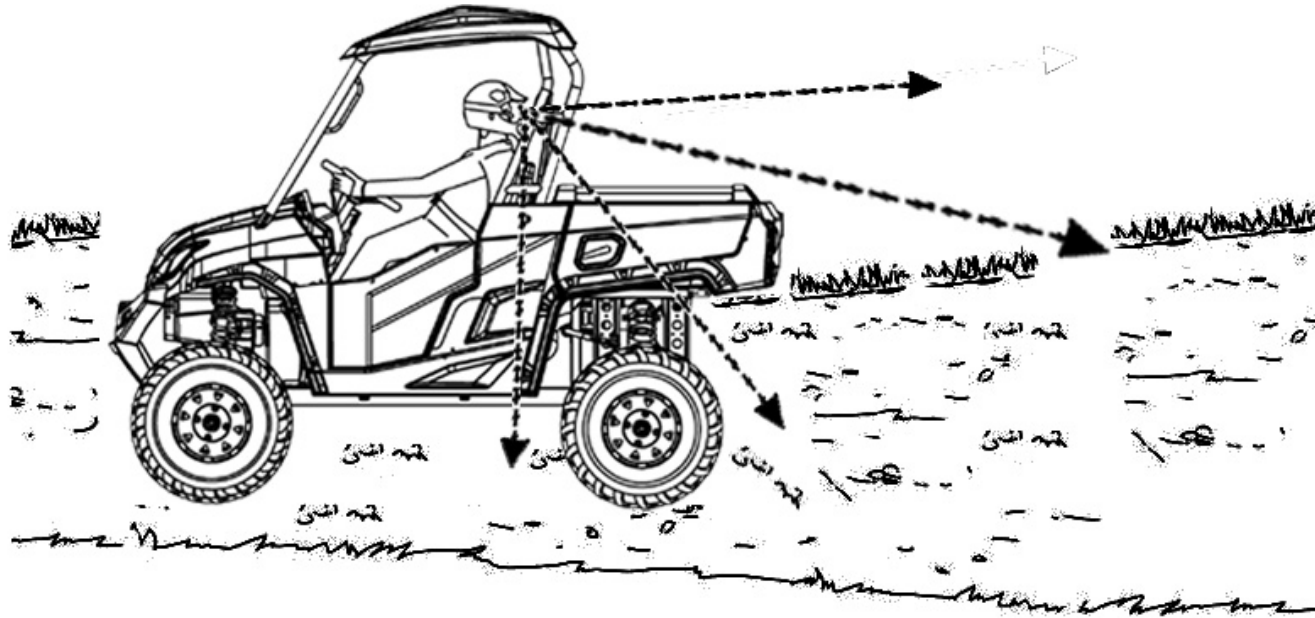


Follow these precautions when driving over obstacles:

1. Always check for obstacles before driving in a new area.
2. Look ahead and watch the terrain. Always be alert for hazards such as logs, rocks and low hanging branches.
3. Drive slowly and use extra caution when driving on unfamiliar terrain. Obstacles are not always clearly visible.
4. Do not drive over large obstacles such as rocks and fallen trees. If it's unavoidable, use extreme caution and drive slowly.
5. Always have a passenger dismount and move away from the vehicle before driving over an obstacle that could cause an overturn.



## Driving in Reverse

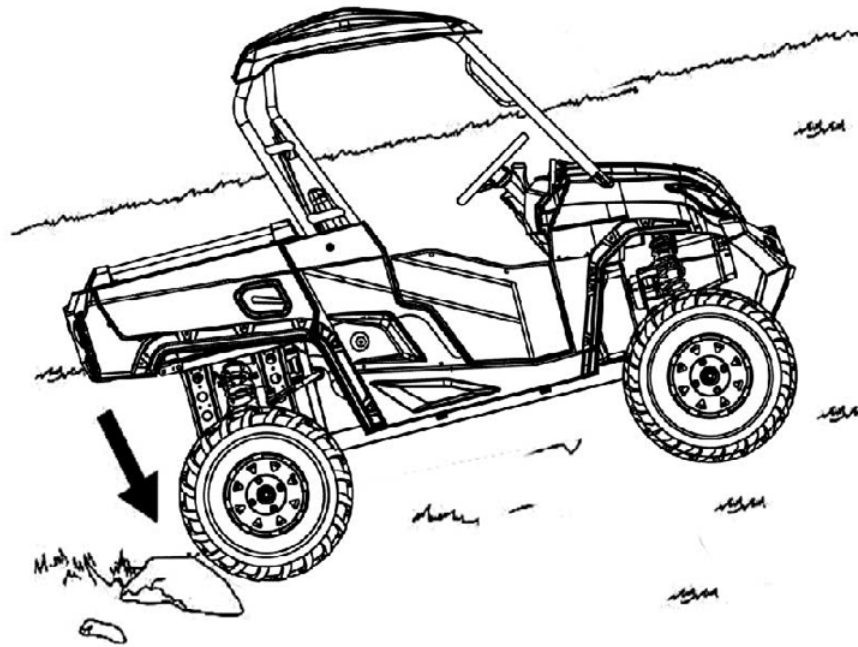


Follow these precautions when driving in reverse:

1. Always check for obstacles or people behind the vehicle.
2. Apply the throttle lightly. Never apply the throttle suddenly.
3. Back slowly.
4. Apply the brakes lightly for stopping.
5. Avoid making sharp



## Parking on an Incline



A rolling vehicle can result in serious injury. Avoid parking on an incline. If parking on an incline is unavoidable, follow these precautions:

1. Place the transmission in neutral.
2. Set the parking brake.
3. Stop the engine.
4. Always block the rear wheels on the downhill side.

# MAINTENANCE

## Periodic Maintenance Chart

Careful periodic maintenance will help keep your vehicle in the safest, most reliable condition.

Inspection, adjustment and lubrication of important components are explained in the periodic maintenance chart. Inspect, clean, lubricate, adjust and replace parts as necessary. When inspection reveals the need for replacement parts, use genuine parts available from your dealer.

Service and adjustments are important for proper vehicle operation. If you're not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations. Maintenance intervals in the following chart are based upon average riding conditions and an average vehicle speed of approximately ten (10) miles per hour. Vehicles subjected to severe use must be inspected and serviced more frequently.

### Severe Use Definition

- Frequent immersion in mud, water or sand
- Racing or race-style high RPM use
- Prolonged low speed operation
- Extended idle
- Short trip cold weather operation

Pay special attention to the oil level. A rise in oil level during cold weather can indicate contaminants collecting in the oil sump or crankcase. Change oil immediately if the oil level begins to rise. Monitor the oil level, and if it continues to rise, discontinue use and determine the cause or see your dealer.

# MAINTENANCE

## Periodic Maintenance Chart

Perform all services at whichever maintenance interval is reached first.

Item	Maintenance Interval (whichever comes first)			Remarks
	Hours	Calendar	Miles(Km)	
II	Steering	—	Daily	Check each day before driving the vehicle. Make adjustments as needed. See the Pre-Ride Checklist on page33.
	Tires	—	Daily	
I	Brake fluid level	—	Daily	
	Brake system	—	Daily	
I	Brake pedal travel	—	Daily	
	Wheels/fasteners	—	Daily	
	Frame fasteners	—	Daily	
I	Engine oil level	—	Daily	
I	Engine oil change(break-in)	25	1 M	
	Engine oil change	100	6 M	Perform a break-in oil change at one month
I	Air filter, main element	—	Weekly	Inspect; replace as needed
I II	Brake pad wear	10	Monthly	100 (160) Inspect periodically
	Idle speed	—		Check; adjust as needed

# MAINTENANCE

## Periodic Maintenance Chart

Item	Maintenance Interval (whichever comes first)			Remarks
	Hours	Calendar	Miles(Km)	
I Front Suspension	50H	6M	500 (800)	Lubricate
I Rear Suspension	50H	6M	500 (800)	Lubricate
I Spark plug	100	12M	600 (1000)	Inspect; replace as needed
II Front wheel bearings	100 H	12M	—	Inspect; replace as needed
Shift Linkage	50H	6M	500 (800)	Inspect, lubricate, adjust
Battery	25	Monthly	250 (400)	Check terminals; clean; test
II Toe adjustment	—			Inspect periodically; adjust when parts are replaced
Headlight aim	—			Adjust as needed
II Choke	10	Monthly	100 (160)	Check for proper operation; see dealer for adjustments
I Main gearcase oil	25	Monthly	250 (400)	Inspect level; change yearly

I Perform these procedures more often for vehicles subjected to severe use.

II Have an authorized dealer perform these services.

**Remark:** 1.If the Odometer indication is large, please repeat this maintenance.

2.If operate this vehicle at special wet or dusty area, you had better shorten the maintenance interval.

## MAINTENANCE

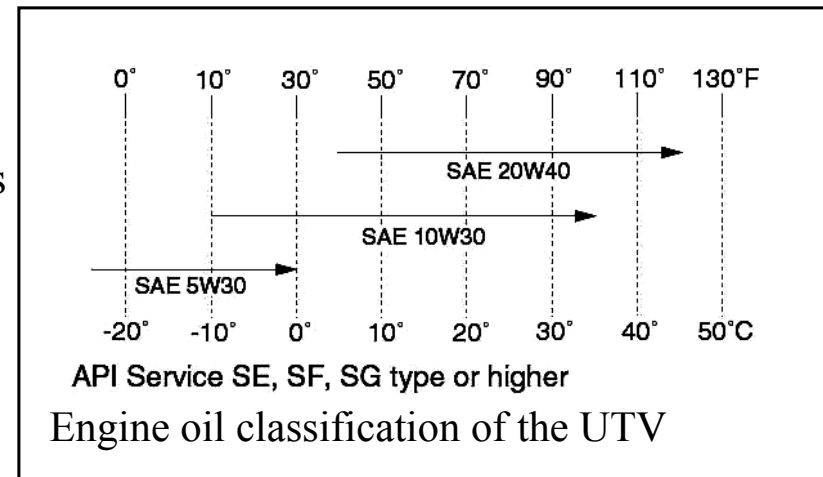
- 3.If you vehicle often operate on rough terrain ,you must maintenance to maintain your vehicle's performance.
- 4.Change every two years , have a qualified dealer perform these operations.

### Engine Oil

Always check and change the engine oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 49. Oil may need to be changed more frequently if the recommended oil is not used.

#### Oil Recommendations

**NOTICE:** Mixing brands or using a non-recommended oil may cause serious engine damage. Always use the recommended oil. Never substitute or mix oil brands.



# MAINTENANCE

## Engine Oil

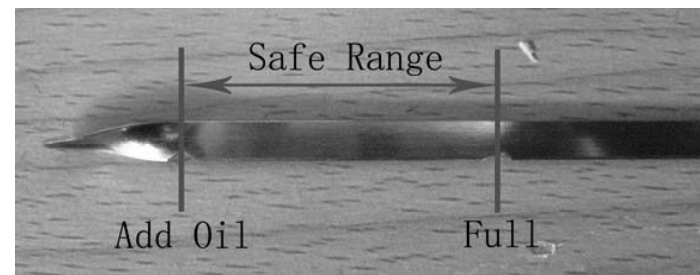
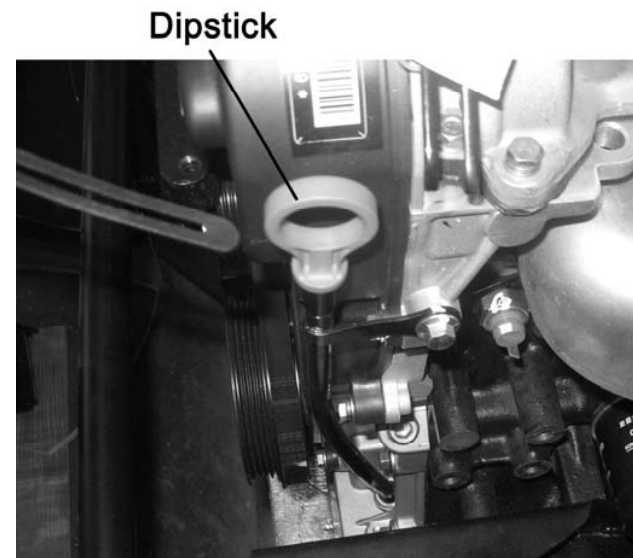
### Oil Check

Maintain the oil level within the safe range on the dipstick. Do not overfill.

1. Position the vehicle on a level surface.
2. Remove the dipstick. Wipe it dry with a clean cloth.
3. Reinstall the dipstick completely.
4. Remove the dipstick and check the oil level.

Tip: A rising oil level between checks in cool weather driving can indicate contaminants such as gas or moisture collecting in the crankcase. If the oil level is over the full/safe mark, change the oil immediately.

5. Add the recommended oil as needed.
6. Reinstall the dipstick.



# MAINTENANCE

## Engine Oil

### Oil and Filter Change

Always change the oil and filter at the intervals outlined in the Periodic Maintenance Chart beginning on page 49. Always change the oil filter whenever changing oil.

The engine drain plug is located on the bottom of the crankcase.

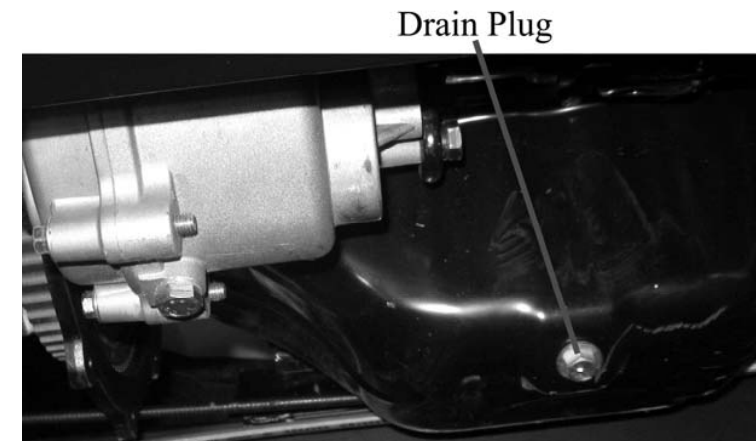
1. Position the vehicle on a level surface. Set the parking brake.
2. Start the engine. Allow it to idle for two to three minutes, Stop the engine.
3. Clean the area around the drain plug.

**CAUTION:** Hot oil can cause burns to skin. Do not allow hot oil to contact skin.

4. Place a drain pan under the engine crankcase.
5. Remove the drain plug. Allow the oil to drain completely.

**NOTE:** The sealing surfaces on drain plug and crankcase should be clean and free of burrs or scratches.

6. Using a cap-style oil filter wrench, turn the oil filter cartridge to remove it.
7. Using a clean dry cloth, clean the filter sealing surface on the crankcase.
8. Lubricate the o-ring on the new filter with a film of fresh engine oil. Check to make sure the o-ring is in good condition.





## Engine Oil Oil and Filter Change

9. Install the new oil filter cartridge with an oil filter wrench ,and then tighten it to the specific torque with a torque wrench .Oil filter cartridge tightening torque:20N·m (20m·kgf, 14ft·lbf).
10. Reinstall the sealing washer on the drain plug.
11. Reinstall the drain plug. Add the recommended engine oil.
12. Place the transmission in PARK. Apply the brakes.
13. Start the engine. Allow it to idle for one to two minutes.
14. Stop the engine. Inspect for leaks.
15. Re-check the oil level on the dipstick and add oil as necessary to bring the level to the upper mark on the dipstick.
16. Dispose of used filter and oil properly.

# MAINTENANCE

## Transmission (Gearcase)

### Oil Check

The fill plug is located on the rear of the gearcase. Access the fill plug through the right rear wheel well. Maintain the oil level at the bottom of the fill plug hole.

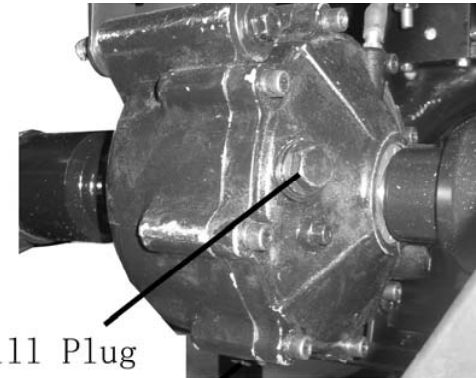
1. Position the vehicle on a level surface.
2. Remove the fill plug.
3. Check the oil level.
4. Add the recommended oil as needed.
5. Reinstall the fill plug.

### Oil Change

The drain plug is located on the bottom of the gearcase.

1. Remove the fill plug.
2. Place a drain pan under the drain plug.
3. Remove the drain plug. Allow the oil to drain completely.
4. Clean the drain plug.
5. Reinstall the drain plug with a new o-ring.
6. Add SAE 80W/90 GL-5 of the recommended oil to the fill hole. Maintain the oil level at the bottom of the fill plug hole. Do not overfill.
7. Reinstall the fill plug.
8. Check for leaks.
9. Discard used oil properly.

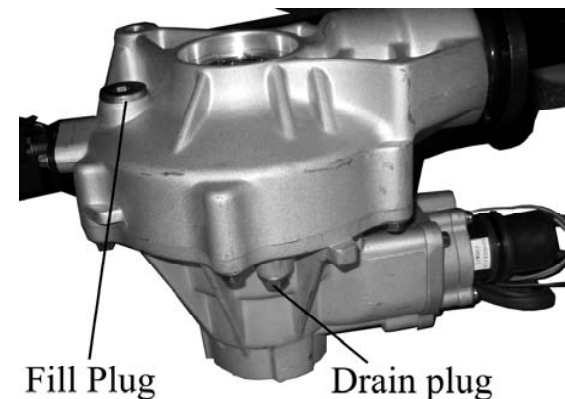
### Rear Gearcase



Fill Plug

Drain Plug

### Front Gearcase



Fill Plug

Drain plug


## Spark Plugs

### Spark Plug Gap/Torque

Electrode Gap	Plug Tightening Torque
$1 \pm 0.1\text{mm}$	14.3 ft. lbs. ( $20 \pm 1.5\text{ Nm}$ )

**NOTICE:** Using non-recommended spark plugs can result in serious engine damage. Always use our company recommended spark plugs.

Spark plug condition is indicative of engine operation. The spark plug firing end condition should be read after the engine is warmed up and the vehicle is driven at higher speeds. Immediately check the spark plug for correct color.

 A hot exhaust system and engine can cause burns. Wear protective gloves when removing a spark plug for inspection.

Specified spark plug: K6RTG.

### Spark Plug Removal and Replacement

1. Remove the spark plug cap.
2. Using the spark plug wrench provided in the tool kit, remove the plug by rotating it counterclockwise.
3. Reverse the procedure for spark plug installation.

# MAINTENANCE

## CVT System

### CVT---main technical parameter and specification

NO.	main technical parameters	
1.	CVT type	Rubber PulleyCVT
2.	Sheave angle of driving plate(°)	26
3.	Sheave angle of driven plate(°)	28
4.	Grooved surface angle °	28
5.	Adjustment scope on speed	3.28~0.84
6.	Dimension(a×b×h) mm	473×245×221
7.	Net weight kg	约 11

### Tightening torque

No	code	Name	Spe.	Torque (N·m)	Assembly position	Thread fastening agent
1	GB/T5789-1986	Plate bolt 10.9 level	M6x16	11±1	Torque cam	
2	GB/T 5783-2000	Plate bolt 10.9 level	M6x45	11±1	Driving wheel cover	
3	21102-T02-0000	Locking nut	M32x1.5	40±1	Combination of fixed disk driving wheel	○
4	GB/T6184-2000	Locking nut	M5	6±1	Swing block shaft	
5	21001-T02-0000	Driving chain connection bolt	M12x1.25	120±10	Engine crankshaft	
6	21004-T02-0000	Driven/driving chain connection bolt	M12x1.25 (Left-spin)	80±10	Gearbox input shaft	

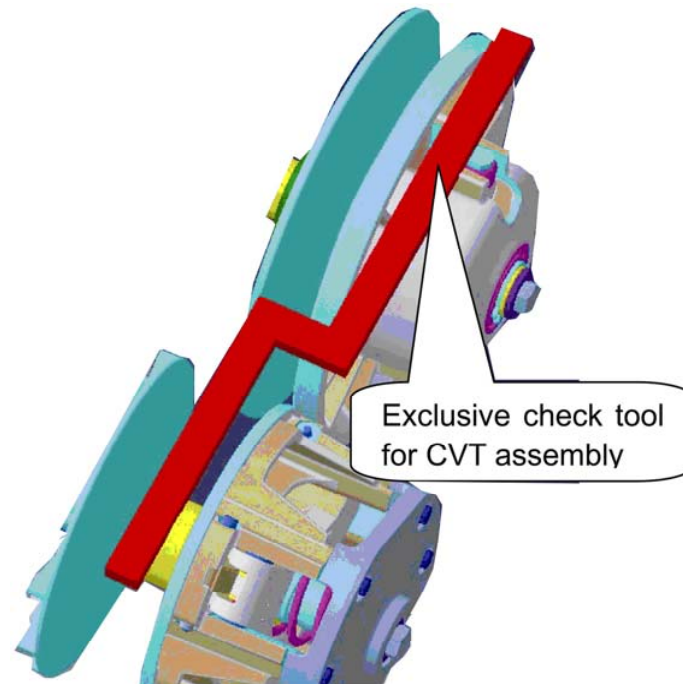
# MAINTENANCE

## CVT System

### Usage and maintenance

When assemble CVT and gearbox, if the CVT driving plate is not accord with the center of driven plate will serious effect the operating life of belt and performance of vehicle.

So after pulley assembly, you should use exclusive check tool to check whether the CVT driving plate is accord with the center of driven plate. (The distance between driving plate and driven plate is  $39.8\pm 0.15$  checked by exclusive check tool for CVT assembly) refer to picture3-1-1:



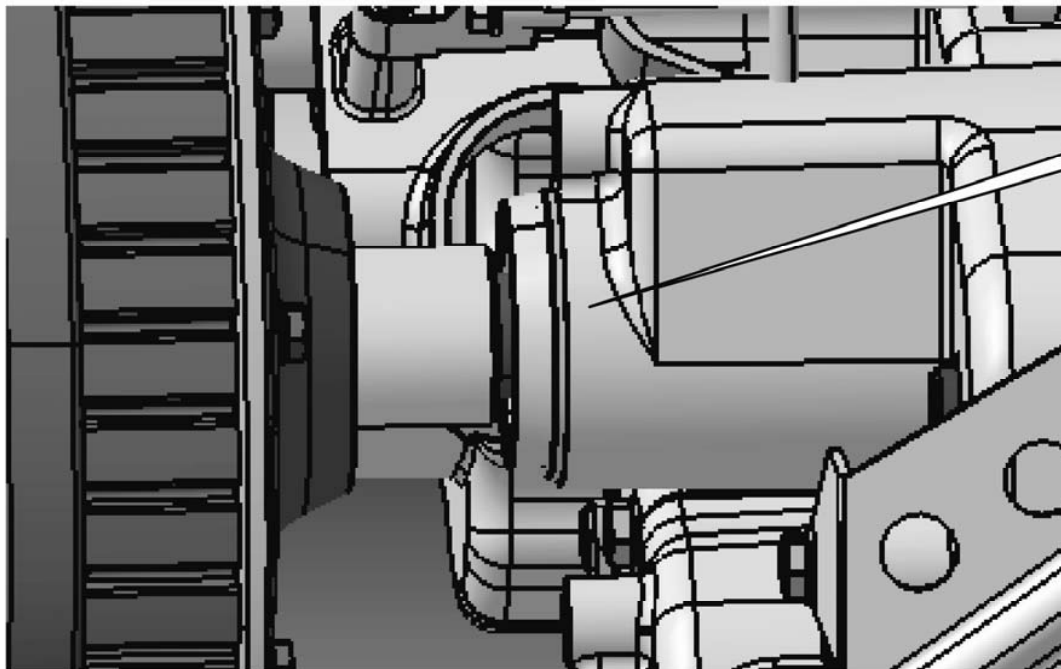
(Picture 3-1-1)

# MAINTENANCE

## CVT System

### Usage and maintenance

If there is space between CVT and check tool, use the gasket to adjust between input shaft of gearbox and CVT. The thickness of every gasket is 0.5mm. refer to picture 3-1-1-2



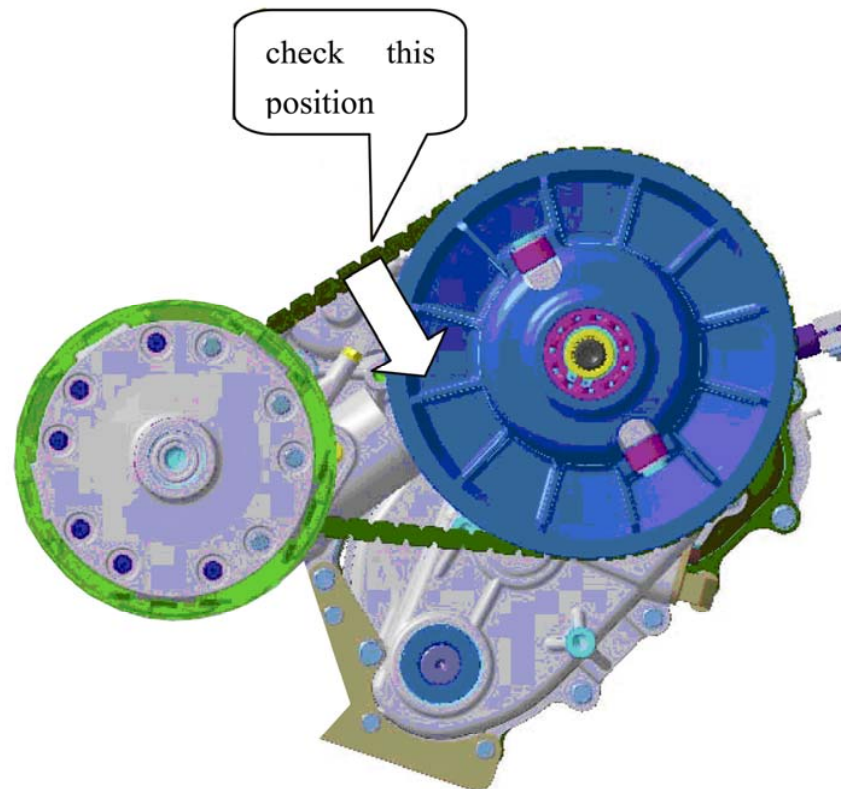
Adjust gasket

(Picture 3-1-1-2)

## CVT System

### Usage and maintenance

**Belt Assembly:** After the belt assembly is finished, the belt tension should be appropriate. Too loose or too tight will obvious effect the operating life of belt. So the verticality of loose edge should be checked after the belt assembly is finished, the drooping height is 10~15mm, refer to picture 3-1-2



(Picture 3-1-2)



# MAINTENANCE

## CVT System

### Usage and maintenance

**Running-in:** Running-in or not of CVT is very important, will affect the operating life of belt a lot. t. 1000 km is stipulated as running-in mileages, during in the running-in mileages, the rpm of engine should not more than 2/3 of max rpm, and throttle should not more than 60% of full opening.

**Cleaning:** CVT is high-speed rotating member, any filth item are forbidden into it, which will reduce to lock or shorten the operating life of parts.

Especial for the belt, any filth item will rapid decline the operating life of belt. So before CVT assembly or change, please clean it firstly.

**Belt:** The belt should be changed, when vehicle run more than 15000 Kilometers, the abrasion and verticality of belt need to be checked, if it is serious abrasion or the loose edge verticality of belt is more than 15mm.

### WARNING

The driving, driven parts have been checked by dynamic balance (combine gain weight with remove weight), so it is forbidden to disassemble. Any disassemble will due to dynamic balance is unqualified and the balance will be invalid when high speed; what is more, which will seriously decline the operating life of CVT components and relative engine and gearbox. If indeed need to disassemble, the parts need to professional dynamic balance check after assembly.

# MAINTENANCE

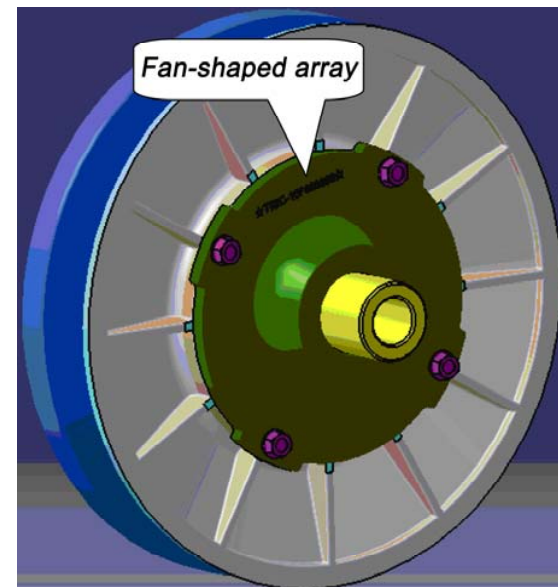
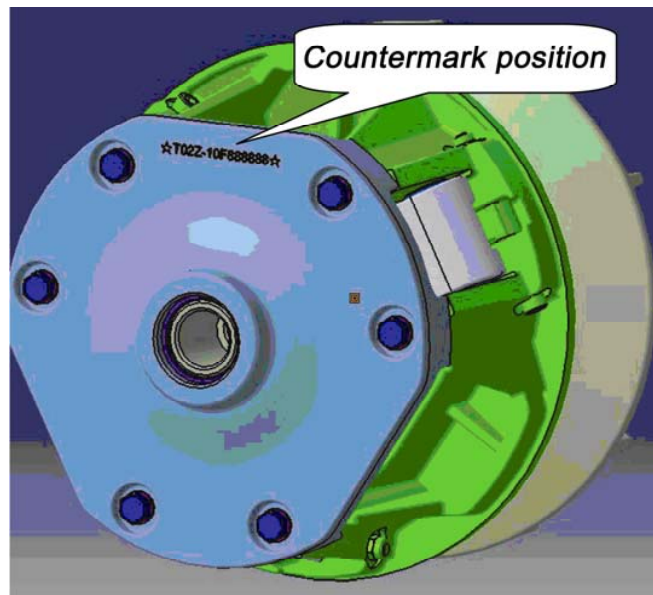
## CVT System

### CVT Maintenance and Check List

Please maintenance and check the CVT as below chart.

Item	maintenance Period (As anyone is firstly expired )			
	Time (h)	Month	Distance	
Driving、 driven part	100	12	1500	Check, clean, change the abrasion parts
Belt	100	12	1500	Check, change if needs

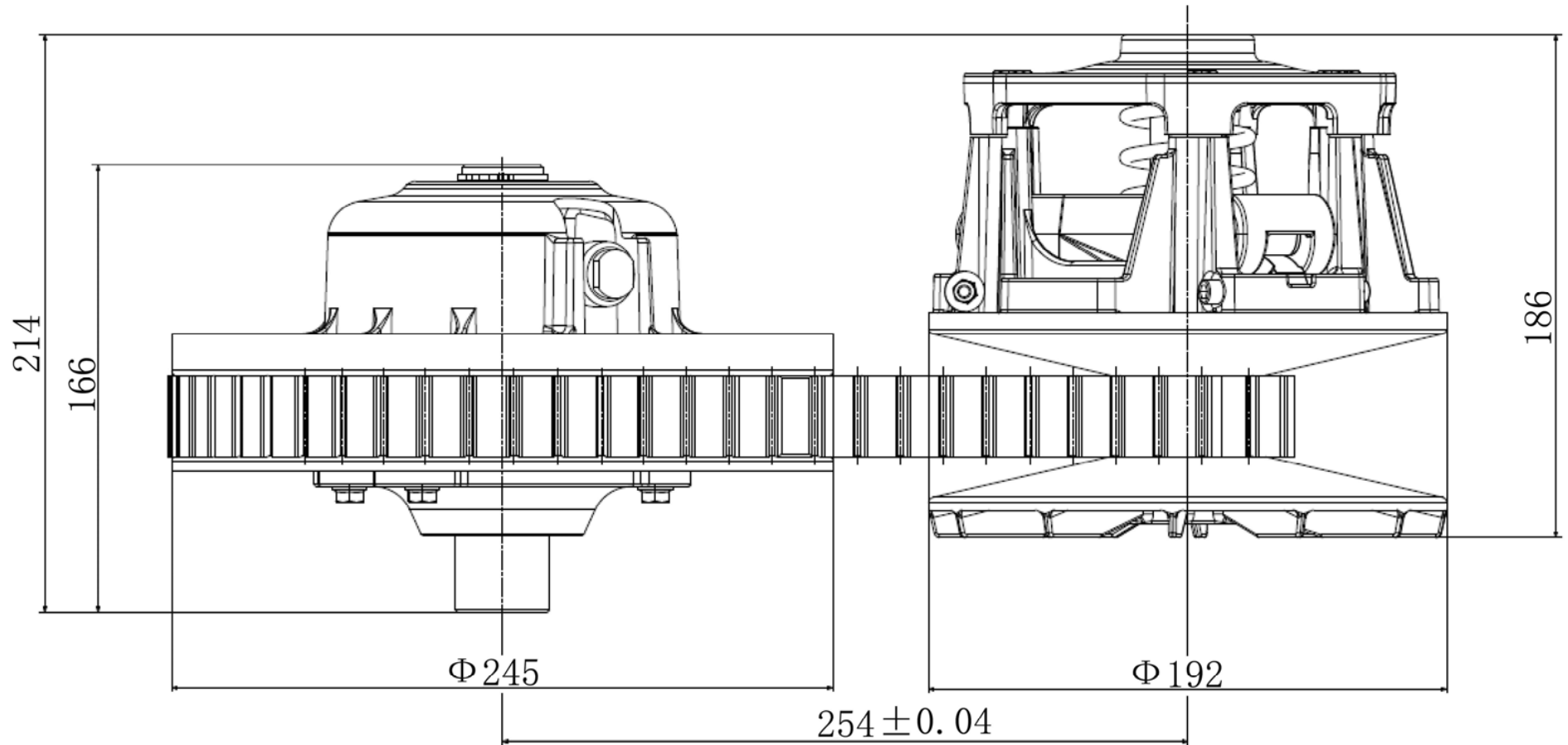
### Countermark position



# MAINTENANCE

## CVT System

### Appearance、 installation dimension map



## CVT System

### WARNING

Failure to comply with the instructions in this warning can result in severe injury or death.

Do not modify any component of the CVT system. Doing so may reduce its strength so that a failure may occur at a high speed. The CVT system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components. The CVT system rotates at high speeds, creating large amounts of force on clutch components. Extensive engineering and testing has been conducted to ensure the safety of this product. However, as the owner, you have the following responsibilities to make sure this system remains safe:

- This CVT system is intended for use on our company products only. Do not install it in any other product.
- Always make sure the CVT housing is securely in place during operation.

# MAINTENANCE

## CVT Drying

There may be some instances when water is accidentally ingested into the CVT system. Use the following instructions to dry it out before operating.

1. Remove the CVT cover. Allow the water to drain. Reinstall the CVT cover.
2. Shift the transmission to neutral. Set the parking brake.
3. Start the engine. Apply varying throttle for 10-15 seconds to expel the moisture and air-dry the belt and clutches. Do not hold the throttle wide open for more than 10 seconds.
4. Allow the engine RPM to settle to idle speed.
5. Test for belt slippage. If the belt slips, repeat the process.
6. Take the vehicle to your dealer for service as soon as possible.

**NOTICE:** Exposure to salt water will cause corrosion to metal components. If your vehicle is operated in salt water areas, rinse it off frequently with fresh water.

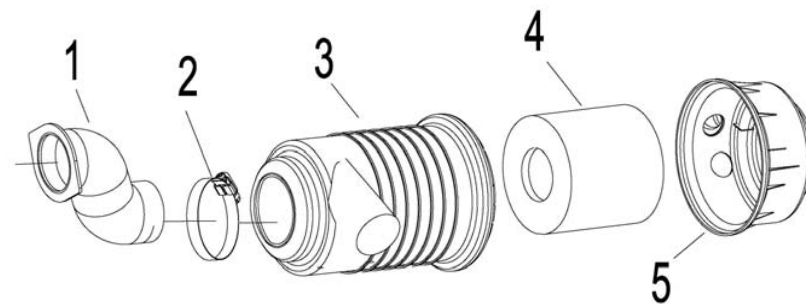
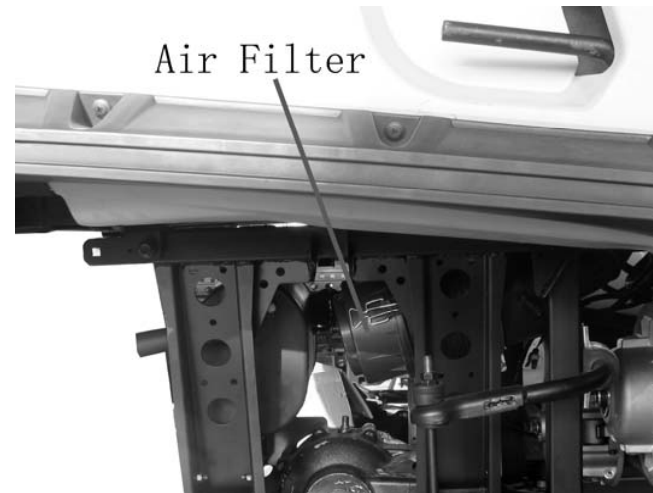
# MAINTENANCE

## Filter Systems

### Air Filter

Always change the air filter at the intervals outlined in the Periodic Maintenance Chart beginning on page 49.

1. Loosen the air filter fixed card and remove the tail cover 5 .
2. Remove the filter element of the air filter 4 from the primary cover.
4. Wash the filter element in warm soapy water, then rinse and let dry. If the filter element is damaged, install a new filter.



- |                       |                   |
|-----------------------|-------------------|
| 1. JOINT, AIR CLEANER | 2. CIRCLIP        |
| 3. PRIMARY COVER      | 4. FILTER ELEMENT |
| 5. TAIL COVER         |                   |

# MAINTENANCE

## Filter Systems

### Air Filter

5. Clean away any oil or sediments in the air box.
6. Reinstall the filter element and tail cover. Secure the fixed card.

**NOTICE:** Never operate the vehicle with the filter element removed. Dirt will enter the engine, causing rapid wear and severe damage to the engine.

7. Reinstall rear decorative board.



# MAINTENANCE

## Cooling system

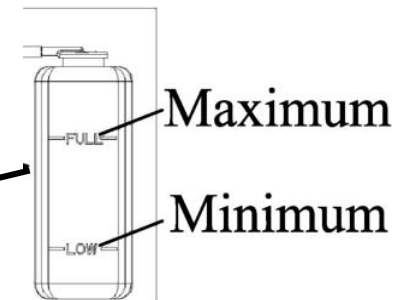
1. Place the vehicle on a level surface.
2. Check the coolant level in the coolant reservoir when the engine is cold as the coolant level will vary with engine temperature.
3. If the coolant is at or below the minimum level mark, remove the reservoir cap, add coolant to the maximum level mark, install the reservoir cap.

**NOTE:**

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

Don't removing the radiator cap when the engine and radiator are still hot, or you could be burned by hot fluid and steam blown out under pressure. 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.

Coolant Reservoir



# MAINTENANCE

## Throttle System

### **⚠** WARNING

Failure to check or maintain proper operation of the throttle system can result in an accident and lead to serious injury or death if the throttle pedal sticks during operation.

Never start or operate this vehicle if it has a sticking or improperly operating throttle pedal.

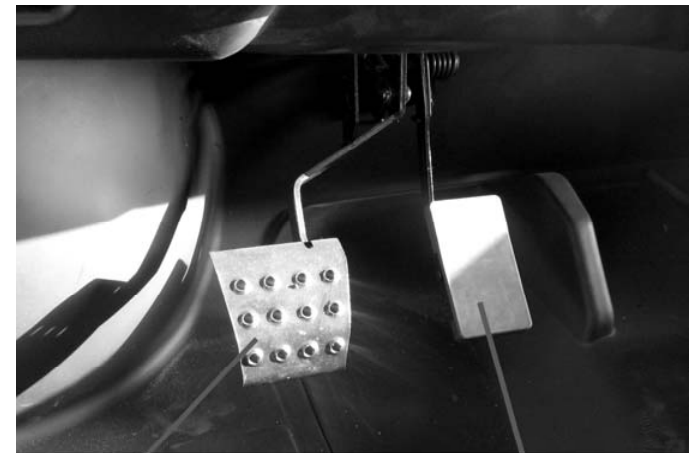
Immediately contact your dealer for service if throttle problems arise.

Always check the pedal for free movement and return before starting the engine and occasionally during operation.

## Throttle Freeplay

If the throttle pedal has excessive play or misadjustment, it will cause a delay in throttle response, especially at low engine speed. The throttle may also not open fully. If the throttle pedal has no freeplay, the throttle may be hard to control, and the idle speed may be erratic. Check the throttle pedal freeplay at the intervals outlined in the Periodic Maintenance Chart beginning on page 49.

Adjust the freeplay if necessary.



Brake Pedal

Throttle Pedal

## Throttle System

### Throttle Freeplay Inspection

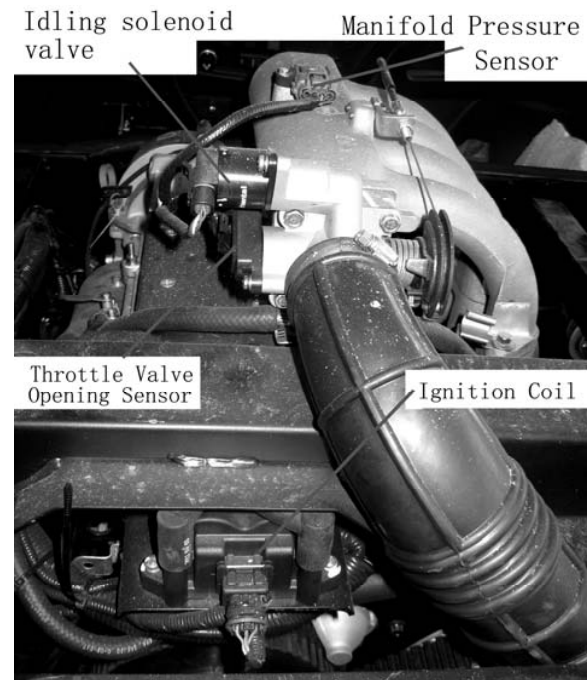
1. Place the transmission in neutral. Set the parking brake.
2. Start the engine. Allow it to warm up thoroughly.
3. Measure the distance the throttle pedal moves before the engine begins to pick up speed. Freeplay should be 1/16 to 1/8 inches (1.5-3 mm).

# MAINTENANCE

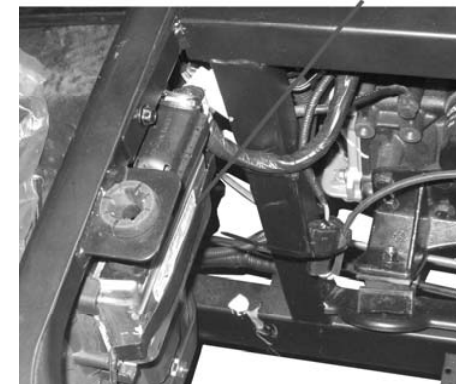
## EFI system

The throttle body control inhalation engine cylinder's air Volume, thus achieves controls engine's rotational speed and the load. the throttle body have two channel constitutions, namely main channel and by-pass channel. The accelerator pedal controls main channel's damper opening through the accelerator back guy, reduces expenses to enter engine cylinder's gas flow amount; the damper opening transmits from the damper position transducer to engine control unit ECU. Flows through the by-pass canal the gas flow amount by the unit motor control, meets the system requirements the idling regime goal rotational speed.

**NOTE:** The idle speed limit screw does not allow the adjustment, the engine idle speed depend on the EFI system adjustment completely, does not hand adjust the idle speed limit screw.




ECU



# MAINTENANCE

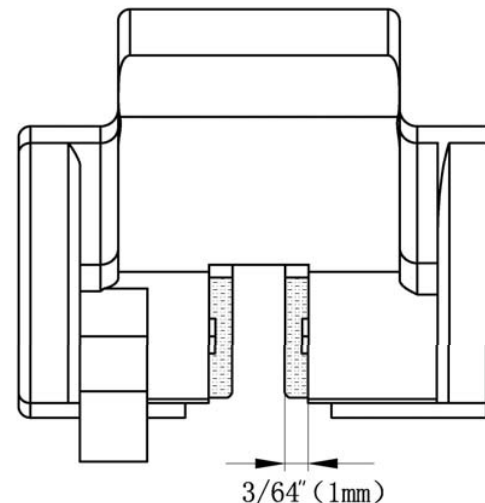
## Brakes

Always check brake pedal travel and the brake fluid reservoir level before each use of the vehicle. When applied, the brake pedal should feel firm. Any sponginess would indicate a possible fluid leak or low brake fluid level, which must be corrected before riding. See page 73 for brake fluid information. If you discover any irregularities in brake system operation, including excessive pedal travel, contact your dealer for proper diagnosis and repairs.

 Operating the vehicle with a spongy brake pedal can result in loss of braking, which could cause an accident resulting in severe injury or death. Never operate the vehicle with a spongy-feeling brake pedal.

## Brake Inspection


1. Check the brake system for fluid leaks.
2. Check the brake pedal for excessive travel or a spongy feel.
3. Check the friction pads for wear, damage and looseness.
4. Inspect the brake pad wear surface for excessive wear.
5. Change pads when worn to 3/64" (1 mm).



## Brakes

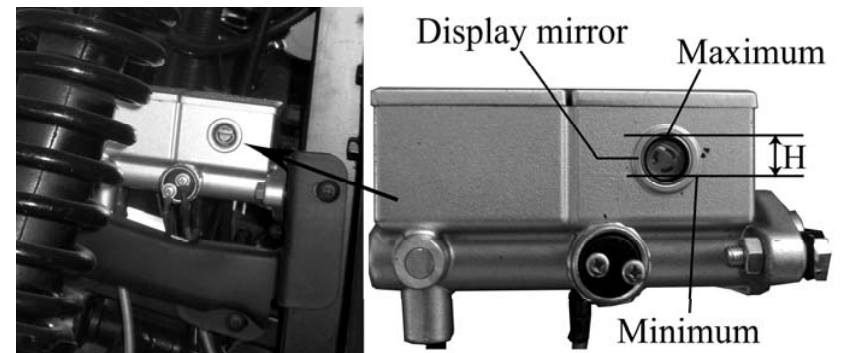
### Brake Fluid

Inspect the level of the brake fluid before each operation. If the fluid level is low add DOT 3 or DOT 4 brake fluid.

 After opening a bottle of brake fluid, always discard any unused portion. Never store or use a partial bottle. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. The moisture causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the possibility of accident or severe injury.

Change the brake fluid every two years and any time the fluid becomes contaminated, the fluid level is below the minimum, or if the type and brand of the fluid in the reservoir are unknown. Access the brake fluid reservoir through the left front wheel well.

1. Position the vehicle on a level surface.
2. Place the transmission in neutral. Set the parking brake.
3. View the brake fluid level in the display mirror, the level should be between the minimum and the maximum. Level below the minimum, you must add the brake fluid.
4. Apply the brake forcefully for a few seconds and Check for fluid leakage around the fittings.



Maximum=H

Minimum=1/4H

# MAINTENANCE

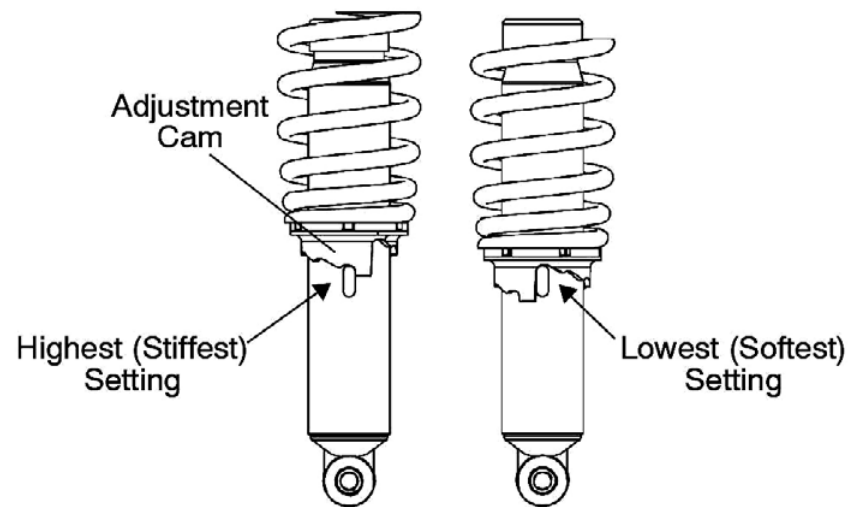
## Steering Wheel Inspection

1. Position the vehicle on level ground.
2. Lightly turn the steering wheel left and right.
3. There should be 0.8"-1.0" (20-25 mm) of freeplay.
4. If there is excessive freeplay or strange noises, or the steering feels rough or catchy, have the steering system inspected by an authorized dealer.

## Shock Spring Adjustment

The front and rear shock absorber springs are adjustable to increase or decrease spring tension. Rotate the adjuster either clockwise or counterclockwise to make adjustments. Always apply the same adjustment setting to all four wheels.

**WARNING!** Uneven adjustment may cause poor handling of the vehicle, which could result in an accident. Always adjust both the left and right spring preloads equally or have your dealer perform the adjustments.





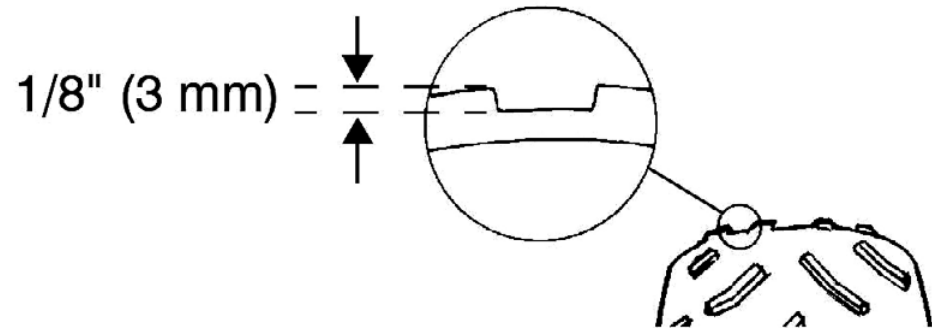
# MAINTENANCE

## Tires

Operating your vehicle with worn tires will increase the possibility of skidding, loss of control and an accident, which could result in serious injury or death. Always replace tires when the tread depth measures 1/8" (3 mm) or less. Improper tire inflation or the use of non-standard size or type of tires may adversely affect vehicle handling, which could result in vehicle damage or personal injury. Always maintain proper tire pressure. When replacing tires, always use original equipment size and type.

### Tire Tread Depth

Always replace tires when tread depth is worn to 1/8" (3 mm) or less.



### Front Wheel Hub Tightening

Front wheel bearing tightness and spindle nut retention are critical component operations.

All service must be performed by your authorized dealer.

### Wheel Removal

1. Position the vehicle on a level surface.
2. Place the transmission in neutral. Set the parking brake. Stop the engine.
3. Loosen the wheel nuts slightly.
4. Elevate the side of the vehicle by placing a suitable stand under the frame.
5. Remove the wheel nuts. Remove the wheel.

## Vehicle Immersion

**NOTICE:** If your vehicle becomes immersed, major engine damage can result if the machine is not thoroughly inspected.

Take the vehicle to your dealer before starting the engine.

If it's impossible to take your vehicle to a dealer before starting it, follow the steps outlined below.

1. Move the vehicle to dry land.
2. Check the air box. If water is present, dry the air box and replace the filter with a new filter. Thoroughly dry the air filter. See page 66.
3. Remove the spark plugs.
4. Turn the engine over several times.
5. Dry the spark plugs and reinstall them, or install new plugs.
6. Attempt to start the engine. If necessary, repeat the drying procedure.
7. Take the vehicle to your dealer for service as soon as possible, whether you succeed in starting it or not.
8. If water has been ingested into the transmission follow the procedure on page 65 for drying.

# MAINTENANCE

## Battery

This machine 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 your dealer.

**CAUTION:** Do not try to remove the sealing caps of the battery cells. You may damage the battery. Failure to handle batteries or battery electrolyte carefully. You could be poisoned and severely burned by the sulfuric acid in battery electrolyte. Batteries produce explosive gases. So you should avoid contact with skin, eyes or clothing. Always shield eyes when working near batteries. Keep out of reach of children.

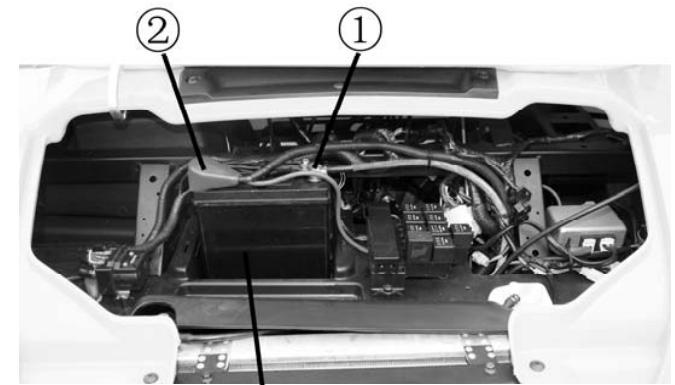
If contact with you body, take the follow measures:

**EXTERNAL:** Flush with water

**INTERNAL:** Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Get prompt medical attention.

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

Keep batteries away from sparks, flames, cigarettes or other sources of ignition. Ventilate when charging or using in a closed.



Battery

1. Negative battery terminal
2. Positive battery terminal

# MAINTENANCE

## Battery

**CAUTION:**A special battery charger (constant voltage/ampere or constant voltage) is required for recharging a sealed type battery. using a conventional battery charger may shorten the battery life.

## Fuse replacement

- 1.The fuses are under the garnish cover of the engine cover.
2. If a fuse is blown, turn off the main switch and the switch of the circuit in question. then, install a new fuse of the specified amperage. Turn on the main switch. If the fuse immediately blows again, consult your dealer.

### Specified fuses:

- |                              |   |
|------------------------------|---|
| 1. Battery fuse: 30A         | 9. Light fuse: 15A                      |
| 2. Electronic clock/ECU: 10A | 10. MP3/small light:10A                 |
| 3. Fuel pump:20A             | 11.2WD/4WD/Brake: 15A                   |
| 4. Fan fuse: 30A             | 12. Turn light/ Horn Fuse:10A           |
| 5. Power output fuse: 30A    | 13. Meter /ECU:10A                      |
| 6. Vacant(EPS):30 A          | 14.Wiper/Winch/Dumping Sump Switch :15A |
| 7. Ignition coil: 20A        | 15.Spare(heater):20A                    |
| 8. Fuel injector: 15A        |   |

# MAINTENANCE

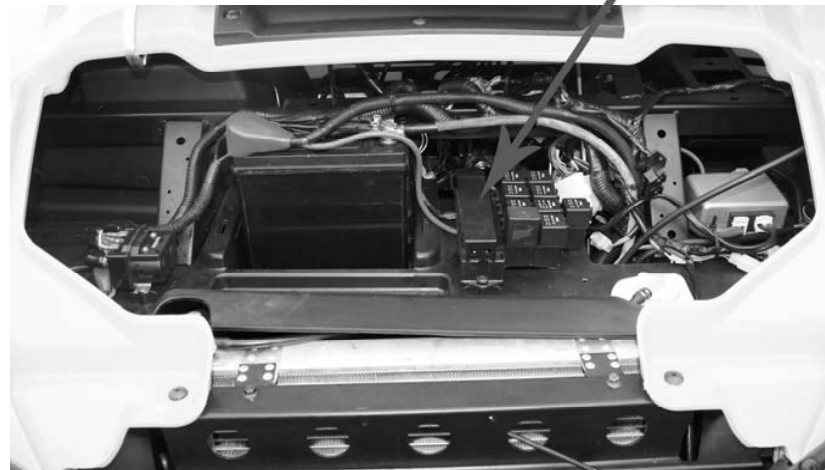
## Battery

1. When the machine is not used for a month or longer, removes the battery and stores it in a cool, dark place. Completely recharge the battery before reinstallation.
2. Always make sure the connections are correct when putting the battery back in the machine.

**WARNING:** Do not use an improper fuse, because an improper fuse can cause damage to the electrical system which could lead to a fire. Always use a fuse of the specified rating. Never use a material in place of the proper fuse.

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

Fuse box



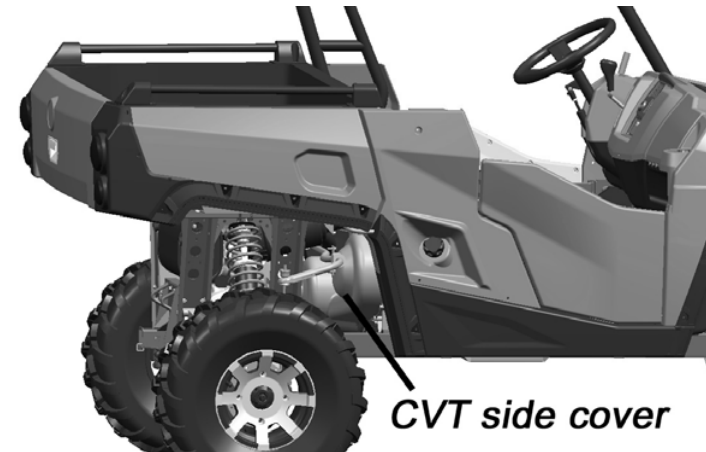
# MAINTENANCE

## Cleaning and Storage

### Washing the Vehicle

Keeping your vehicle clean will not only improve its appearance but it can also extend the life of various components.

Before washing the vehicle, must pay attention prevents the water to enter inside CTV system from the CVT side cover.



**NOTICE:** Water in the CVT system could cause the drive belt to become wet and slip in the clutches. Always avoid spraying water directly toward the CVT inlet and outlet ducts when washing the vehicle from the rear. High water pressure may damage components. We recommend washing the vehicle by hand or with a garden hose, using mild soap. Certain products, including insect repellents and chemicals, will damage plastic surfaces. Do not allow these types of products to contact the vehicle.

The best and safest way to clean your vehicle is with a garden hose and a pail of mild soap and water.

1. Use a professional-type washing cloth, cleaning the upper body first and the lower parts last.
2. Rinse with clean water frequently.
3. Dry surfaces with a chamois to prevent water spots.

## Cleaning and Storage

### Storage

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

1. Drain the fuel system.
2. Remove the spark plug, pour about one tablespoon of SAE 10W30 or 20W40 motor oil in the spark plug hole and reinstall the spark plug. Ground the spark plug wire and turn the engine over several times to coat the cylinder wall with oil.
3. Block up the frame to raise all wheels off the ground.
4. Tie a plastic bag over the exhaust pipe outlet to prevent moisture from entering.
5. 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 cover.
6. 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 (90 °F)).



## Malfunction analysis and elimination

(I) Engine malfunction			
Malfunction phenomenon	Malfunction system	Reason	Solving method
Start difficultly or could not start	1. pressure in cylinder is too low.	① Cylinder wear out ② Piston wear out. ③ Leakage on Washer of cylinder. ④ Wearing on Pipe of air valve or seat of valve is not suitable. ⑤ plug is loose. ⑥ Starting motor is too slow. ⑦ Air circulation is not right. ⑧ Gap of valve is not suitable.	change change change Repair or change Tighten Check electric system. Adjust Adjust
	2. No ignition generated from plug	① Dirt on spark plug ② Wet on plug or smudge ③ Ignition coil problem ④ Touch loop got open or short circuit ⑤ Magneto problem ⑥ ECU problem	Clean or change Clean, dry or Change Change Change Change Change

Start difficultly or could not start	3. No fuel in Throttle body	<ul style="list-style-type: none"> <li>① Vent hole on tank jammed</li> <li>② Problem or blocked in Injector</li> <li>③ High-pressure fuel pump do not work.</li> <li>④ Low-pressure in high-pressure fuel pump</li> <li>⑤ blocked in high-pressure fuel pump strainer</li> </ul>	<p>Clean or change</p> <p>Clean or change</p> <p>Clean or change</p> <p>Clean or change</p> <p>Clean or change</p>
	4. Miscellaneous	Gear is not in neutral	Put gear on neutral
Engine has no idle speed or uneven	1. Mechanic problem	<ul style="list-style-type: none"> <li>① Valve gap no suitable</li> <li>② Valve base is not suitable</li> <li>③ Problem on air pipe</li> <li>④ Broken on bush of swing arms</li> <li>⑤ IAC valve blocked in inlet , exhaust pipe.</li> <li>⑥ Adjust screw of idle sets wrong.</li> </ul>	<p>Adjust</p> <p>Repair or Change</p> <p>Change</p> <p>Change</p> <p>Adjust or Change</p> <p>Adjust</p>
	2. Electric parts problem	<ul style="list-style-type: none"> <li>① Dirt on plug</li> <li>② Gap of plug not correct</li> <li>③ Ignition loop problem</li> <li>④ ECU problem</li> </ul>	<p>Clean or Change</p> <p>Change or Adjust</p> <p>Change</p> <p>Change</p>

		⑤ Magneto problem	Change
Engine middle and high rotate speed is uneven	Mechanical problem	① The force of Valve spring is weak. ② Cam axle worn out ③ Plug is dirty. ④ Gap of plug is too small. ⑤ Air circulation is not right. ⑥ Ignition loop problem ⑦ Air filter is dirty. ⑧ Block in fuel pipe cause fuel supply problem ⑨ Fuel pipe problem ⑩ Underpressure in high-pressure fuel pump	Change Change Clean or Change Adjust or change Adjust or change Change Clean or change Clean Change Adjust or change
Exhaust blue smoke	Mechanical fault	① too many lube ② Piston ring worn out ③ Valve pipe worn out ④ Cylinder wall scratched ⑤ Valve rod worn out ⑥ Seal of valve rod broken	Drain the extra lube Change Change Change Change Change
	1. Fuel supply system fault	① Blocked in muzzle of throttle body ② Air filter is dirty ③ Leakage on air intake pipe	Clean or change Clean or change Tighten or change Drain the extra lube

		<ul style="list-style-type: none"> <li>④ Too many lube</li> <li>⑤ Problem or blocked in Injector</li> <li>⑥ Low-pressure in high-pressure fuel pump</li> </ul>	<p>Clean or Change</p> <p>Adjust or Change</p>
Engine power is not enough	2. Electrical parts problem	<ul style="list-style-type: none"> <li>① Dirt on plug</li> <li>② Gap of plug not correct</li> <li>③ Ignition loop problem</li> <li>④ ECU problem</li> <li>⑤ Magneto problem</li> </ul>	<p>Clean or Change</p> <p>Change or Adjust</p> <p>Change</p> <p>Change</p> <p>Change</p>
	3. Mechanical problem	<ul style="list-style-type: none"> <li>① Gap of Valve is not correct</li> <li>② The force of valve spring is weak.</li> <li>③ Air circulation is not right.</li> <li>④ Cylinder worn out</li> <li>⑤ Piston Ring worn out</li> <li>⑥ Valve base not correct</li> <li>⑦ Swing arm or cam shaft worn out</li> </ul>	<p>Change operation method</p> <p>Check, remove or change</p> <p>Adjust</p> <p>Change</p> <p>Change</p> <p>Change or repair</p> <p>Change</p>
Engine overheats	1. Fuel system fault	<ul style="list-style-type: none"> <li>① Octane number is lower</li> <li>② Fuel pass blocked</li> <li>③ Fuel pump problem</li> </ul>	<p>Use the right fuel</p> <p>Clean the fuel pass</p> <p>Change</p>

	2. Electric System problem	① Ignition time is late or early ② Spark is weak or no spark	Adjust ignition time Check from plug to magneto
	3. Air pass problem	① Leakage on engine ② Air filter is dirty ③ Cylinder, piston, ring worn out ④ Leakages on connecting face ⑤ Block in exhaust pipe ⑥ Leakage on Air inlet pipe	Repair Clean or change filter Repair or change Repair or change Dredge Repair or change
	4. Engine cooling system	① Block in water channel or radiator ② Air in Cooling system or coolant is not enough ③ Water pump problem ④ Unsuitable coolant ⑤ Constant temperature unit problem ⑥ Fault on motor of fan or switch of heat-sensor	Clear Release air, refill coolant Change Change Change Change
	5. Miscellaneous	① Carbon accumulated on top of piston ② Too many or less lube ③ Unsuitable lube used	Clear Drain or Refill Change
Noise from	Noise on air valve	① Gap on valve is too big	Adjust

engine		② Spring on valve is broken ③ Swing arm or cam shaft worn out	Change Change
	Noise from piston	① Piston worn out ② Cylinder worn out ③ Carbon gathered in firebox ④ Piston pin or pin hole worn out ⑤ Piston ring or ring notch worn out	Change Change Clean Change Change
	Noise from chain of circulation	① Chain elongated ② Chain worn out ③ Adjustor of chain problem	Change chain & sprocket Change chain & sprocket Repair & Change
	Noise from clutch	① Spline of crankshaft damaged ② Spline of clutch damaged	Change crankshaft Change clutch
	Noise from Crankshaft	① Bearing noise ② Needle bearing damaged ③ Gap too big	Change Change Change
	Noise from CVT	① Belt loose or worn out ② Roller or main wheel damage	Change Change
	Noise from transmission system	① Gear damaged ② Input and output shaft damaged ③ Bearing worn out ④ Bush worn out	Change Change Change Change
	Gasoline engine lacks power and accelerating	1. Fuel system happens malfunction  ② Oil routine is blocked and oil supply	Change with gasoline whose Octane number accords with regulation

Clutch skidding		is not smooth	Clean oil routine
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Clutch skidding	Transmission system	<ul style="list-style-type: none"> <li>① Hoof of clutch worn out</li> <li>② Spring on clutch is weak</li> <li>③ Out wheel worn out</li> <li>④ Belt worn out &amp; loose</li> </ul>	<ul style="list-style-type: none"> <li>Change</li> <li>Change</li> <li>Change</li> <li>Change</li> </ul>
Gear change not smooth or got stuck	Gear box or Gear change system	<ul style="list-style-type: none"> <li>① Operating gear damaged</li> <li>② Shift rod twisted</li> <li>③ Shift drum worn out</li> <li>④ Shift pulling stick unsuitable</li> </ul>	<ul style="list-style-type: none"> <li>Change</li> <li>Change</li> <li>Change</li> <li>Adjust</li> </ul>
Throttle body works not properly	Starting problem	<ul style="list-style-type: none"> <li>① Blocked in muzzle</li> <li>② Blocked in muzzle channel</li> <li>③ Leakage on connecting part of starting part</li> <li>④ Starting pin not work properly</li> </ul>	<ul style="list-style-type: none"> <li>Clean</li> <li>Clean</li> <li>Tighten, Adjust or change</li> <li>Adjust</li> </ul>
	Idle and low speed not stable	<ul style="list-style-type: none"> <li>① Reducer valve blocked or loose</li> <li>② Valve channel Blocked</li> <li>③ Air inlet channel blocked</li> <li>④ Air inlet bypass Blocked</li> <li>⑤ Starting pin not closed completely</li> <li>⑥ Idle screw not suitable</li> <li>⑦ Height of floater not correct</li> </ul>	<ul style="list-style-type: none"> <li>Clean or tighten</li> <li>Clean</li> <li>Clean</li> <li>Clean</li> <li>Adjust</li> <li>Adjust</li> <li>Adjust</li> </ul>



Engine coolant temperature is lower	Cooling System	① Fault on heat sensor switch on fan ② Cold weather ③ problem on constant temperature meter	Change Cover the radiator Change
Spark weak	Ignition System	① Fault on starter ② problem on spark plug ③ Magneto problem ④ Voltage of battery is weak ⑤ Ignition loop problem ⑥ Starting loop problem	Change Change Change Change Change Change

## (II) Malfunction in transmission system

Vehicle speed does not increase by engine speed	Transmission system	① Shift belt slips ② Speed adjusting plate abrasion is too much ③ Speeding adjusting plate slipping is blocked ④ Spring force of adjuster is short	Change Change Repair or Change Repair or Change
Out of gear	Gear Box or Gear shifting system	① Speed changing drum groove worn out	Change

		② Right and Left gear changing rods bended ③ High and Low driven gear groove wear to taper ④ Speed changing principal and countershaft worn out ⑤ Sector gear tooth worn out ⑥ The force of spring of sector gear is weak or broken.	Change  Change  Repair or Change  Repair or Change  Change
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(III) Malfunction in running system, suspension and steering organization			
Running is leaning	Running system	① Air pressure in left and right wheel is different ② Load of left and right wheel is different ③ Spring force of left and right absorbing spring ④ Front wheel location is wrong ⑤ One side wheel is locked or brake could not release ⑥ Front and rear suspension parts have been loosened, bent or damaged	Adjust air pressure in tyre Adjust load Adjust or Change Check or adjust Repair arrester  Screw or Change suspension parts

Tyre is abraded abnormally or greatly	Steering organization, running system, suspension	<ul style="list-style-type: none"> <li>①Left and right absorber has been damaged, spring force is short</li> <li>②Tyre is not balance, and wheel hub is distorted</li> <li>③Front wheel location is wrong</li> <li>④Vehicle is over-load</li> <li>⑤Tyre has not change its position</li> <li>⑥Wheel hub bearing has been damaged or adjustment is wrong</li> <li>⑦Wheel assembly jump (axial, radial) is too great</li> <li>⑧Air pressure in tyre is too hig or too low</li> </ul>	<p>Adjust or Change</p> <p>Change</p> <p>Check or adjust</p> <p>Check load</p> <p>Change</p> <p>Adjust or Change</p> <p>Change</p> <p>Adjust air pressure in tyre</p>
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Front wheel shakes, swing or jump	Steering organization, running system	<ul style="list-style-type: none"> <li>①Tyre and wheel is not balance</li> <li>②Wheel hub bearing has been damaged or adjustment is wrong</li> <li>③Left and right swing arm ball head has been abraded or loosened</li> <li>④Drag pole tie-in has been abraded or loosened</li> <li>⑤Front wheel location is wrong</li> </ul>	<p>Balance wheel or Change tyre</p> <p>Change or adjust</p> <p>Change</p> <p>Change</p> <p>Check、 adjust</p>
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		⑥ Wheel (axial, radial) jump is too big ⑦ Tyre has tympanic bag ⑧ Free travel of redirector is too big ⑨ Fixed bolts on each part of steering organization has been loosened	Change tyre or wheel hub Change tyre Change or adjust Fasten
Steering is heavy	Steering organization running system	① Air pressure in tyre is short ② Ball head of left and right swing arm and drag pole is blocked ③ Front wheel location is wrong ④ Steering pole pipe is blocked ⑤ Mesh clearance of redirector is too small	Charge the tyre to applicable air pressure Change  Check and adjust Repair or Change Adjust

(IV) Malfunction in brake system			
Brake is not hard enough	Brake system	① Brake pipeline leaks oil ② Brake disk and brake hoof contacts badly or dirt on surface ③ Brake drum and brake hoof wear badly ④ Brake main pump is damaged or leaks oil ⑤ Brake branch pump is damaged or leaks oil ⑥ Brake liquid is short	Repair Repair or clean the dust  Change Repair or change Repair or Change Add

		<ul style="list-style-type: none"> <li>⑦ Brake pipeline has air</li> <li>⑧ Arrester is too hot</li> </ul>	<p>Eliminate air Repair or Change</p>
Brake is leaning	Brake system suspension	<ul style="list-style-type: none"> <li>① Some brake drums and hoof pads have oil stain</li> <li>② Individual brake branch pump leaks oil or is blocked</li> <li>③ The air pressure in right and left tyre is not even</li> <li>④ Front wheel adjustment is wrong</li> <li>⑤ Vehicle frame is distorted, and left and right wheelbase is different</li> <li>⑥ Some brake pipelines is not smooth</li> <li>⑦ Individual brake drum and brake hoop contacts badly</li> <li>⑧ Suspension parts loose</li> <li>⑨ Vehicle is leaning</li> <li>⑩ Thread abrasion of left and right wheel is different</li> </ul>	<p>Clean or Change Repair or Change</p> <p>Equalize the air pressure Adjust as the stipulation Repair or Adjust</p> <p>Repair or adjust</p> <p>Repair Check, repair and fasten Verify, repair and adjust Change</p>

Brake clip block	Brake system	<ul style="list-style-type: none"> <li>① Brake main pump could not return correctly</li> <li>② Brake hoop return spring is too soft</li> <li>③ Parking brake adjustment is wrong</li> <li>④ Parking brake drag line could not return</li> <li>⑤ Brake branch clip block</li> <li>⑥ Abrasion of brake drum and brake hoop is too big, and clearance is too great</li> <li>⑦ Brake pipeline has been concaved</li> </ul>	<p>Repair main pump Change Adjust Lubricate or Change Repair or Change Change Change</p>
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(V) Malfunction in lamplight, circuit and meter system			
Front headlight does not illuminate	Lighting system	<ul style="list-style-type: none"> <li>① Bulb has been damaged</li> <li>② Adjuster has been damaged (adjusting voltage is too high to burn bulb)</li> <li>③ Fuse has been burned</li> <li>④ Headlight relay has been damaged</li> <li>⑤ Lead or grounding happens malfunction</li> <li>⑥ Combination switch has been damaged</li> <li>⑦ Storage cell has been damaged (incur bulb is burned)</li> </ul>	Change bulb Change adjuster  Check、 Change Change Repair circuit Repair、 Change Change

Only one front headlight does not illuminate	Lighting system	<ul style="list-style-type: none"> <li>① Bulb has been damaged</li> <li>② Lead or grounding happens malfunction</li> </ul>	Change Repair circuit
Steering light does not illuminate		<ul style="list-style-type: none"> <li>① Steering relay has been damaged</li> <li>② Individual steering bulb has burned</li> <li>③ Grounding is bad</li> <li>④ Fuse burn out</li> <li>⑤ Switch damaged</li> </ul>	Change Change Repair Change Change
Starter does not rotate when starting		<ul style="list-style-type: none"> <li>① Starter has been damaged</li> <li>② Starting relay has been damaged</li> <li>③ Grounding of starter is bad</li> <li>④ Ignition switch has been damaged</li> </ul>	Repair or Change Change Repair Change

All electric apparatuses do not work	Circuit system	<ul style="list-style-type: none"> <li>① Total fuse has been burned</li> <li>② Ignition switch has been damaged</li> <li>③ General wire or grounding wire has been cut off</li> <li>④ Electric bottle contacts badly or happens oxygenation</li> </ul>	<ul style="list-style-type: none"> <li>Check and Change</li> <li>Change</li> <li>Repair circuit</li> <li>Repair</li> </ul>
Some kind of lamplight is bad or complete lamplights are damaged (not including headlight)	Lamplight 、 circuit	<ul style="list-style-type: none"> <li>① Switch has been damaged</li> <li>② Bulb has been burned</li> <li>③ Circuit has been cut off, linking parts contact badly</li> <li>④ Fuse has been burned.</li> <li>⑤ Grounding wire contacts badly</li> </ul>	<ul style="list-style-type: none"> <li>Change</li> <li>Change</li> <li>Repair circuit</li>   <li>Change</li> <li>Repair</li> </ul>
Meter works badly	Meter and wire	<ul style="list-style-type: none"> <li>① Fuse has been burned.</li> <li>② Route has been cut off, tie-in contacts badly</li> <li>③ Instrument has been damaged</li> <li>④ Sensor has been damaged</li> </ul>	<ul style="list-style-type: none"> <li>Change</li> <li>Repair route</li> <li>Change</li> <li>Change</li> </ul>

# WARRANTY

## LIMITED WARRANTY

Company gives a SIX MONTH LIMITED WARRANTY on all components of your vehicle against defects in material or workmanship. This warranty is transferable to another consumer during the warranty period through a company dealer.

## REGISTRATION

At the time of sale, the Warranty Registration Form must be completed by your dealer and submitted to company within ten days. Upon receipt of this registration, Company will record the registration for warranty. **NO WARRANTY COVERAGE WILL BE ALLOWED UNLESS YOUR VEHICLE IS REGISTERED WITH COMPANY.** Initial dealer preparation and set-up of your vehicle is very important in ensuring trouble-free operation.

## WARRANTY COVERAGE :

## LIMITATIONS OF WARRANTIES AND REMEDIES

The limited warranty excludes any failures that are not caused by a defect in material or workmanship. This warranty does not cover accidental damage, normal wear and tear, abuse or improper handling. This warranty also does not cover any vehicle that has been altered structurally, modified, neglected, improperly maintained, used for racing, or used for purposes other than for which it was manufactured, or for any damages which occur during trailer transit or as a result of unauthorized service or the use of unauthorized parts. In addition, this warranty does not cover physical damage to paint or finish, stress cracks, tearing or puncturing of upholstery material, corrosion, or defects in parts, components or the vehicle due to fire, explosions or any other cause beyond company' control.



# WARRANTY

## LIMITATIONS OF WARRANTIES AND REMEDIES

ALL IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO THE ABOVE SIX MONTH WARRANTY PERIOD.

COMPANY FURTHER DISCLAIMS ALL EXPRESS WARRANTIES NOT STATED IN THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you if inconsistent with controlling state law.

## HOW TO OBTAIN WARRANTY SERVICE

If your vehicle requires warranty service, you must take it to a company Servicing Dealer. When requesting warranty service you must present your related proof form to the dealer. (THE COST OF TRANSPORTATION TO AND FROM THE DEALER IS YOUR RESPONSIBILITY). Company suggests that you use your original selling dealer; however, you may use any Company Servicing Dealer to perform warranty service.

Please work with your dealer to resolve any warranty issues. Should your dealer require any additional assistance they will contact the appropriate person at company. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If any of the above terms are void because of state or federal law, all other warranty terms will remain in effect.

## EMISSION:

Reach Euro II emission standard.

# WARRANTY

## LIMITATIONS OF WARRANTIES AND REMEDIES

In the Country where your vehicle was purchased:

Warranty or Service Bulletin repairs must be done by an authorized Company dealer. If you move or are traveling within the country where your vehicle was purchased, Warranty or Service Bulletin repairs may be requested from any authorized Company dealer who sells the same line as your vehicle.

Outside the Country where your vehicle was purchased:

If you are traveling temporarily outside the country where your vehicle was purchased, you should take your vehicle to an authorized Company dealer. You must show the related proof. Upon verification, the servicing dealer will be authorized to perform the warranty repair.

### **Notice**

If your vehicle is registered outside of the country where it was purchased, and you have not followed the procedure set out above, your vehicle will no longer be eligible for warranty or service bulletin coverage of any kind. (Vehicles registered to Government officials or military personnel on assignment outside of the country where the vehicle was purchased will continue to be covered by the basic warranty.)

For questions, please call Crossfire Motorcycles:

Phone: (02) 9822 88 99

## SPECIFICATIONS

MODEL	1100UE	1100UEL
Dimensions:		
Overall length	2830 mm (111.4 in)	3630 mm (142.9 in)
Overall width	1640 mm (64.6 in)	
Overall height	2130 mm (83.9 in)	
Seat height	930mm (36.6 in)	
Wheelbase	1830mm (72.0in)	2630mm (103.5in)
Minimum ground clearance	340mm (13.4in)	
Minimum turning radius	4500mm (177.2 in)	5000mm (196.9 in)
Maximum speed	≥85 km/h	
Basic weight:		
Mass of whole equipments (Not include driver)	711kg	800 kg
Engine:		
Engine type	Water-cooled 4-stroke, SQR472	
Cylinder arrangement	Four cylinder	
Displacement	1.083L	
Bore × stroke	72×66.5 mm (2.83×2.62 in)	

MODEL	1100UE	1100UEL
Compression ratio	9.5:1	
Starting system	Electric	
Lubrication system	Pressure spray	
Engine oil:		
Type	<p>API Service SE, SF, SG type or higher</p>	
Recommended engine oil classification		
Quantity:		
Without oil filter cartridge replacement	3.6L(3.8 US qt)	
With oil filter cartridge replacement	3.5L(3.7 US qt)	
Final gear case oil:		
Type	SAE 85W/90 GL-5	

MODEL	1100UE	1100UEL
Quantity:		
Periodic oil change	0.45L(0.5US qt)	
Front gear case oil:		
Type	SAE 85W/90 GL-5	
Quantity:		
Periodic oil change	0.31L(0.3US qt)	
Air filter:	dry element	
Fuel:		
Type	UNLEADED GASOLINE 93 OCTANE OR ABOVE	
Fuel tank capacity	35L (9.3Gal)	
EFI System :		
Type/quantity	SIMK31	
Manufacturer	SIEMENS VDO	
Spark plug:		
Type/manufacturer	K6RTG	
Spark plug gap	0.9-1.1 mm (0.035–0.043 in)	
Clutch type:	wet, hoof centrifugal type	
Transmission:		

MODEL		1100UE	1100UEL
Primary reduction system		V-belt	
Secondary reduction system		Shaft drive	
Transmission type		V-belt automatic	
Operation		Right hand operation	
High gear		2.66	
Low gear		5.527	
Reverse gear		6.80	
Chassis:			
Frame type		Steel tube frame	
Caster angle		8°	
Trail			
Tire:			
Type		Tubeless	
Size	front	26×9-14	
	rear	26×11-14	
Brake:			
Front brake	type	Dual disc brake	
	operation	Left foot operation	

MODEL		1100UE	1100UEL
Rear brake	type	Dual disc brake	
	operation	Left foot operation	
Suspension:			
Front suspension		Double swing arm independent suspension	
Rear suspension		Double swing arm independent suspension	
Shock absorber:			
Front shock absorber		Coil spring / Air damper	
Rear shock absorber		Coil spring / Air damper	
Electrical:			
Ignition system		ECU	
Generator system		A.C. magneto	
Battery type			
Battery capacity		12V 36Ah	
Headlight type:			
Bulb voltage, wattage × quantity:			
Headlight		12 V 35 W/35 W × 2	
Tail/brake light		12 V 21W/5W × 2	
Indicator light			

MODEL	1100UE	1100UEL
Neutral indicator light	LED × 1	
High gear indicator light	LED × 1	
Low gear indicator light	LED × 1	
Reverse gear indicator light	LED × 1	
Coolant temperature warning light	LED × 1	
4WD-Lock drive indicator light	LED × 1	
Fuses:		
Battery fuse	30A	
Electronic clock/ECU	10A	
Fuel pump	20 A	
Fan fuse	30A	
Power output fuse	30A	
Spare(heater)	20A	
Ignition coil	20A	
Fuel injector	15 A	
Light fuse	15A	
MP3/small light	10 A	
Turn light/ Horn Fuse	10A	
Wiper/Winch/Dumping Sump Switch	15A	
Meter	10 A	



MODEL	1100UE	1100UEL
Vacant(EPS)	30 A	
2WD/4WD/Brake	15 A	