

HISUN

GRAB SOME SUN

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READ THIS MANUAL CAREFULLY

For questions regarding this
UTV, please contact HISUN at:
(972)446-0760
hisunmotors.com

Rev. 08071501

No one under the age of 16
should operate this vehicle.

Provincial / Municipal
governments have different
regulations pertaining to
owning and operating an
off-road vehicle; learn the
regulations in your area.



VECTOR 500

OWNER'S MANUAL

INTRODUCTION

Congratulations on your purchase of the Vector 500. This Owner's / Operator's manual will provide you information regarding safe operation, operational instructions, maintenance and care. Fully understanding this manual and following all of the instructions herein will provide the knowledge needed to have safe and enjoyable UTV operation.

For questions regarding this UTV, please call (972) 446-0760.

IMPORTANT SAFETY MESSAGES

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

IMPORTANT MANUAL INFORMATION

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

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



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



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



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 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.

When the temperature is below -4°F (-20°C), park the UTV in a place where the temperature is higher than -4°F (-20°C). Start the UTV after the UTV has warmed up. Please see page 7-3 on the warming up process.

Follow the proper parking procedures when the temperature is higher than 100°F (38°C): turn off the engine; make sure the radiator fan is on for 3 minutes before turning off the power switch.

Starting the UTV for the first time will take longer because the fuel will need reach the fuel injectors. To start the UTV the first time, hold the ignition key on at 5-second intervals. Allow the starter to rest 15 seconds between each start attempt.

UNIVERSAL SYMBOLS

As a guide to the operation of your vehicle, various universal symbols have been utilized on the instruments and controls. The symbols are shown below with an indication of their meaning.



Safety Alert Symbol



Diesel Fuel



Engine coolant-Temperature



Parking Brake



Battery Charging Condition



Engine Oil-Pressure



Turn Signal/Hazard



Differential Lock



Position light bulb



Lift Cylinder-Retract



Lift Cylinder-Extend



Lift Cylinder-Float



Hazard Warning Lights



Master Lighting Switch



Audible Warning Device



Fault indicator light of EPS system



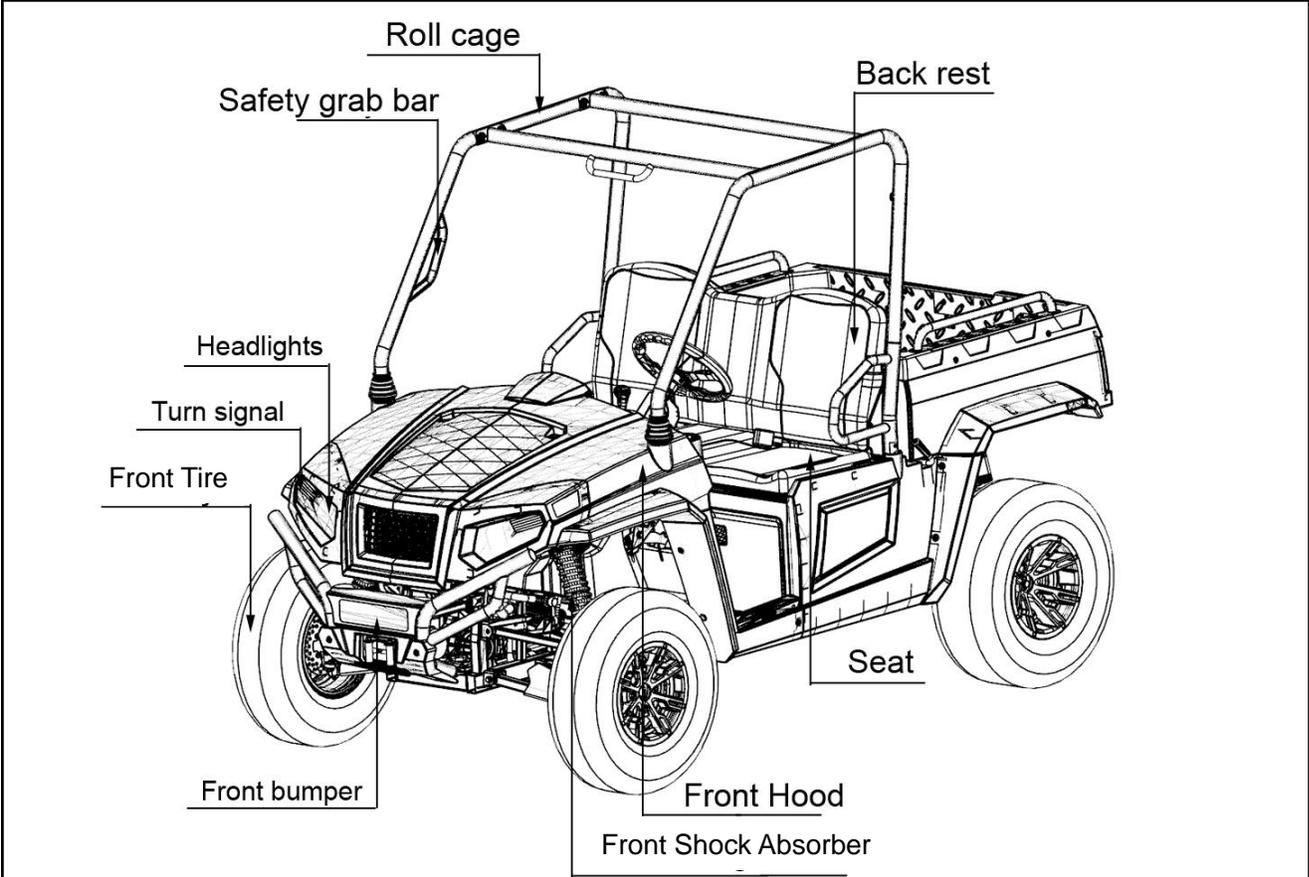
2WD/ 4WD

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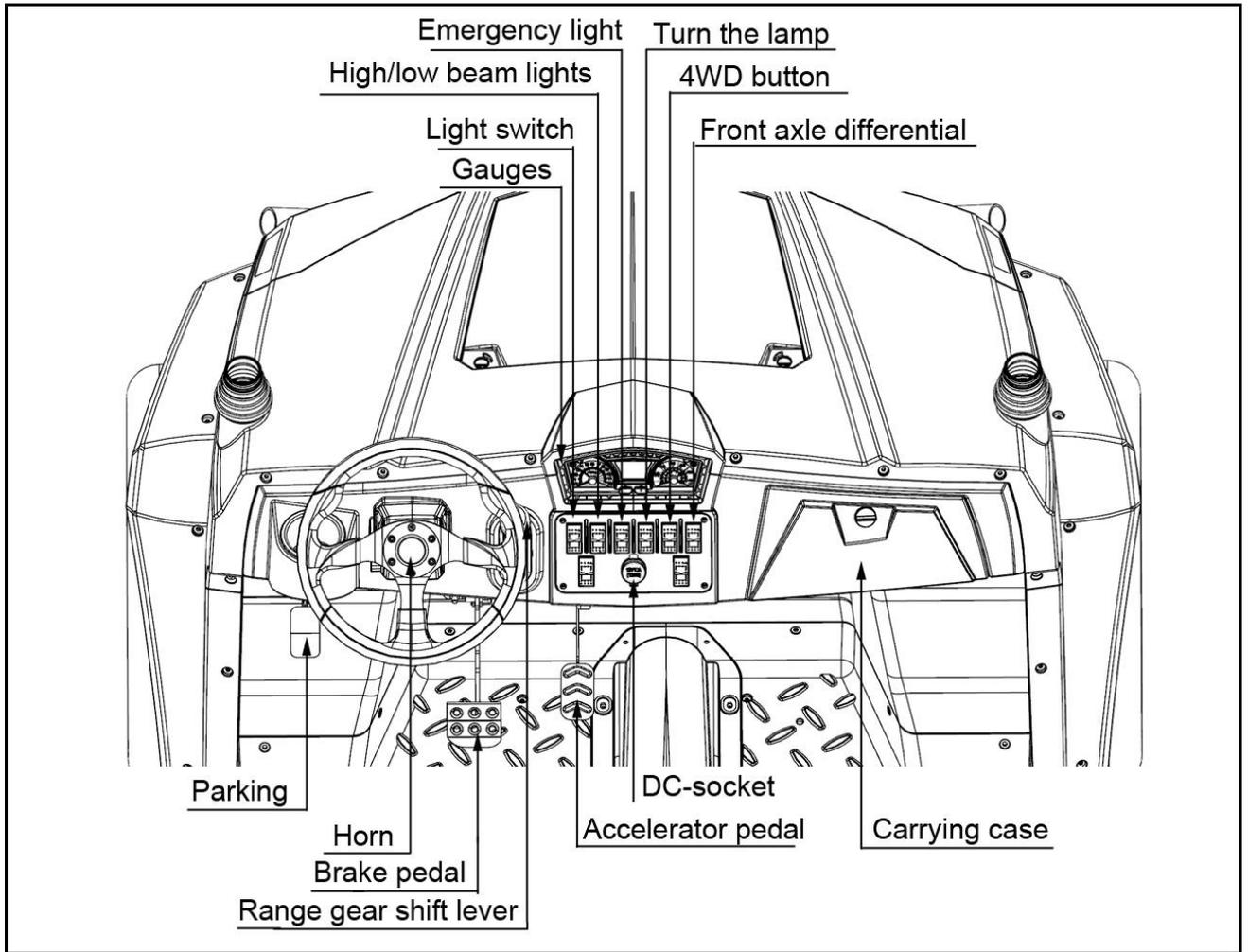
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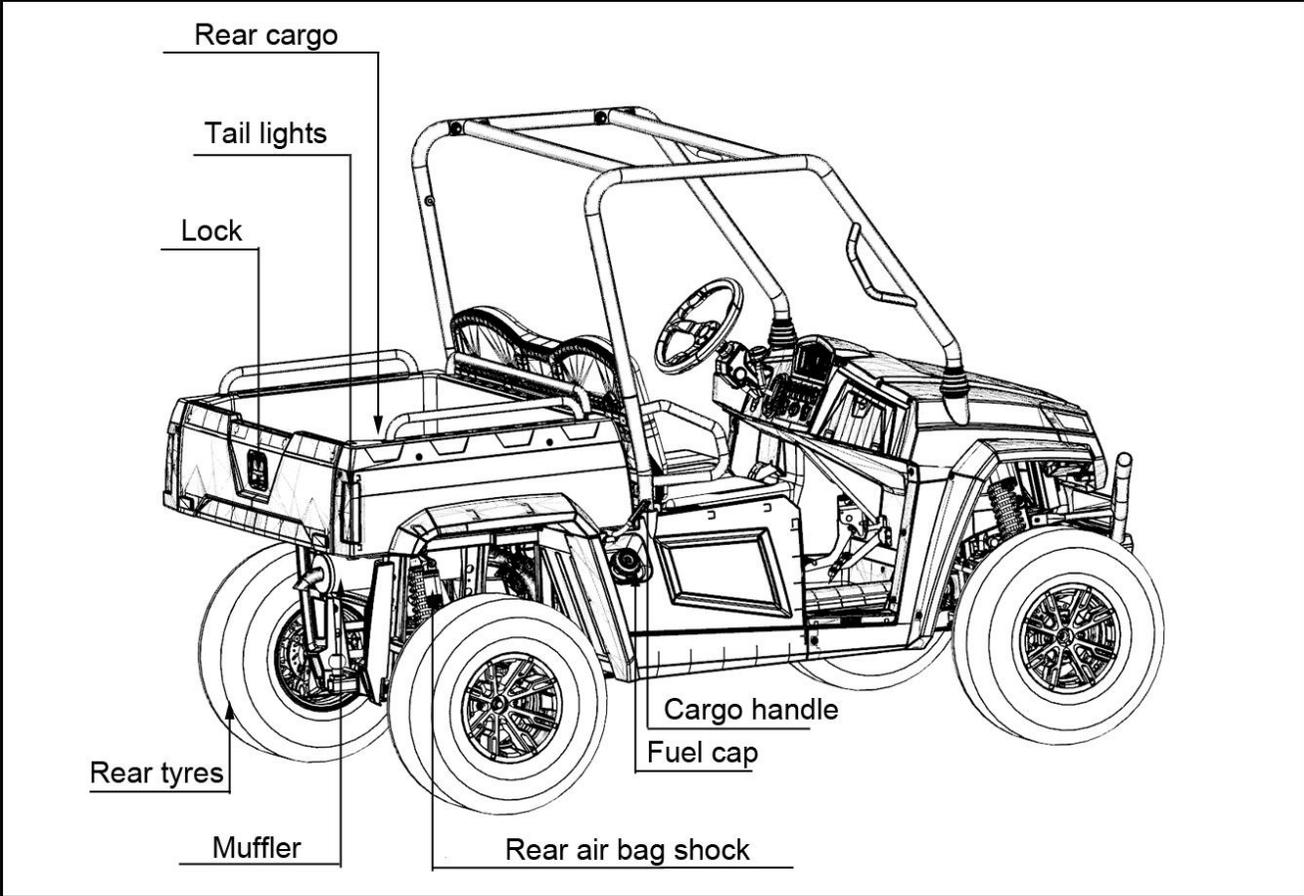
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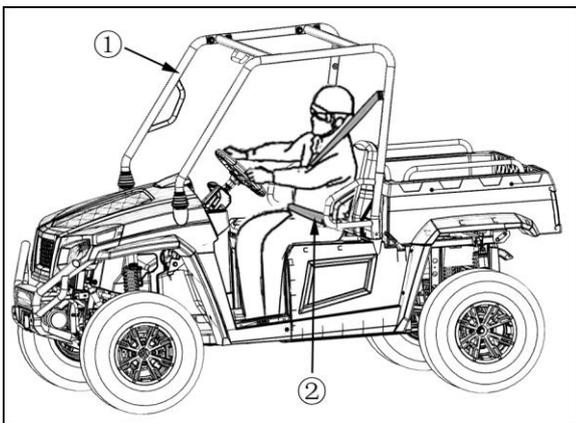


Safe Operation

All operators, including experienced UTV drivers or passengers, should carefully read and fully understand this Users Manual, and operate strictly as the manual states in order to achieve best performance and avoid accidents. Others who will use you UTV should be trained how to operate the UTV and be required to read this manual before operation.

1. Safety Instructions:

1. Understand this UTV by reading this manual and understanding all the components of the vehicle. Only start and operate the vehicle after finishing reading this manual.
2. Pay close attention to the warning and caution labels on the UTV.
3. Understand completely and learn to use the safety devices (roll-over protective structure, seat belts), and never change original safety devices. If safety devices are damaged, consult your local dealer for replacement. Always use seat belts.



- ① Roll-over protective structure;
- ② Seat belts

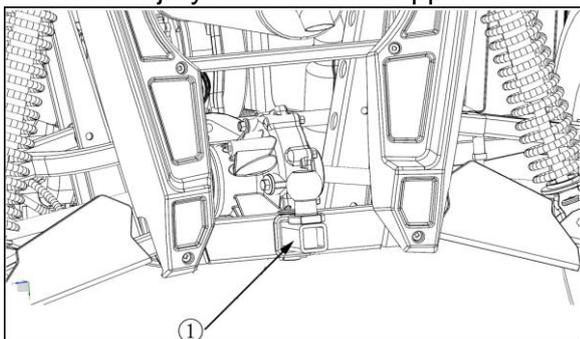
4. Do not wear loosen articles of clothing during operation, as these can be drawn into moving parts on the vehicle and could cause a severe injury to occur.
You should wear protective devices, such as helmet, boots, eye protection, earmuff, gloves, and etc.
5. Only a qualified driver should operate this UTV. Never operate after drinking, using drugs or controlled products, or while fatigued.
6. Always perform the pre-operation checks as following:
 - 5) Check seat belt for worn or damaged, if necessary, replace it.
 - 6) Check brakes, throttle, brake pedal and other mechanical parts for proper operation. If you discover any irregularities, replace related parts as necessary. Periodically check the fittings and fasteners.
 - 7) Check engine oil level and engine coolant level.
 - 8) Check that the UTV is equipped to handle the surroundings.
 - 9) Check and keep vehicle clean. Sludge, grease and debris can cause a fire and severe injury.
7. Passenger quantity and loading:
 - 1) Only the driver and one passenger inside cab. It is suggested that children under age of 5 not be allowed as a passenger.
 - 2) Single-row vehicle's loading limit is 350lbs (159KG).Reduce loading weight according to road condition. Never exceed the weight limits for operation.

Safe Operation

8. Never allow unauthorized persons to repair this UTV. This may affect vehicle performance and cause injury.
9. This UTV is designed and manufactured for off-road use only, so never drive on paved roadways.

2. Operation

1. Start the engine only in an open ventilated area. Carbon monoxide is colorless, odorless and is emitted from the engine and can cause death in areas with poor ventilation.
2. Never start the vehicle or operate the gear selector unless seated in the driver's seat.
3. Never start the vehicle or operate the gear selector unless seated in the driver's seat.
4. The driver and passenger shall always wear their seat belt while the vehicle is being operated.
5. Operators of the UTV should not wear earphones.
6. Use trailer hitch to trail cargo, otherwise, serious injury or death will happen.



① Trailer Hitch

7. Do not accelerate quickly when starting the engine, especially driving on rough terrain as this can cause injury or death. Press the accelerator pedal slowly.
8. Drive at slow speed before braking.
When press the differential unlocked

9. (DIFF.LOCK is off) when pressing, the front/rear wheels can turn at different speed. Otherwise, the vehicle may turnover.
10. Never drive over terrain such as a ditch, a hole, dams, excessive mud, or the vehicle can get stuck because of the vehicles weight.
11. Always pay close attention to your surroundings, and check for streets, trail intersections or other obstacles.
12. Always use signals in advance of turns.
13. Do not allow entrance or exit of the vehicle while it is moving.
14. Clean dash board and Keep the floorboard free of debris that can obstruct the ability to use the brake pedal.
15. Position your hands on the steering wheel. Always keep your hands and feet inside passenger area of the vehicle. Never try to stand while operating the vehicle.
16. Do not tow passengers, or attempt to jump the vehicle.

3. Children safety instructions

Always watch children when they are around the vehicle. Children like to imitate adults and this could lead to an accident.

Do not leave children alone beside the vehicle. Keep children from the operating area of the vehicle.

Turn off the engine and remove the key when children are in the operating area.

Never carry children in the cargo bed. This is very dangerous to children. Children under age of 5 are not allowed to take this vehicle.

Never allow children to touch or climb the vehicle even if they are under adult supervision, or climbing on vehicle.

Safe Operation

Always check for people or obstacles behind the vehicle before shifting the vehicle into reverse.

Avoid a collision with an obstacle or person.

Park the vehicle on a firm, flat area. If parking on a slope, you should use parking brake, remove the key, and get tires stuck in the tire wedge.

4. Driving on a slope

Be cautious when riding on a slope, as this is the main reason result for loss of control, overturn, leading to severe injury or even death.

1. Drive in a straight line on a slope at a low-speed.
2. Reduce weight when ride on a slope or rough terrain.
3. Avoid the sudden application of the brakes when you go uphill or downhill. Be more careful when vehicle turns on a slope.
4. If you start to lose momentum or need to park when climbing, use the parking brake to come to a stop. Release the brake and begin to coast down the hill.
5. If do not believe you can operate the UTV safely in reverse do not attempt to ascend the slope any further.
6. Riding in mud, a ditch, and on slopes will increase the risk of an overturn. Be more cautious when operating. Drive gradually and slowly when climbing. Avoid sudden changes of vehicle speed or direction.

5. Driving in harsh conditions

1. Vehicle can be operated during the day or under good light conditions.
2. Operate the vehicle in open, smooth pavement.

3. Under all conditions, both operator and passengers should wear helmet and protective equipment.

4. Driver should slow down according to road conditions, terrain, visibility conditions.

5. Be cautious when driving over a ditch, stone road or hidden obstacles.

6. Avoid operating in any unknown depth of water. (water depth should not exceed axle height)

6. Driving at high speed

1. Check for front/rear wheels conditions. Pay attention to the difference of braking performances between two and four-wheel drive.
2. Slow down when turning. Turning at high speed may result in overturn or even death.
3. Turn on your headlights at high speeds.
4. Drive only when the vehicle speed can be controlled.
5. Do not use DIFF.LOCK when driving at high speed. Otherwise, this may cause vehicle loss of control.
6. When driving at high speed, suddenly turning the steering wheel will reduce vehicle stability. Never sharply turn the steering wheel at high speeds.

7. Instructions for carrier

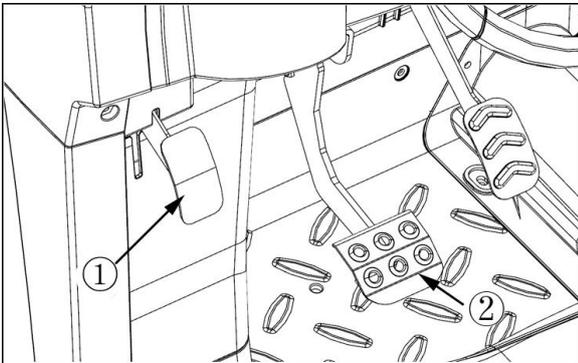
1. Never carry a passenger in the cargo area.
2. Evenly distribute the cargo to maintain proper stability. Avoid overloading the carrier. Cargo should be securely attached.
3. Reduce loaded weight when driving on poor road conditions or steep inclines.

Safe Operation

4. Do not put your hands and you body under the cargo bed when it is raised. Once lowered, lock the cargo bed in place before operating the vehicle. Never driving before securing and locking the cargo bed.

8. Parking

1. Set the gear shift to the "N" position and To release the parking brake, depress the brake pedal.



- ① Parking brake.
- ② Brake pedal

2. Avoid stopping the vehicle on a slope. If stopping on a slope make sure the vehicle is stationary before exiting.

9. Transportation

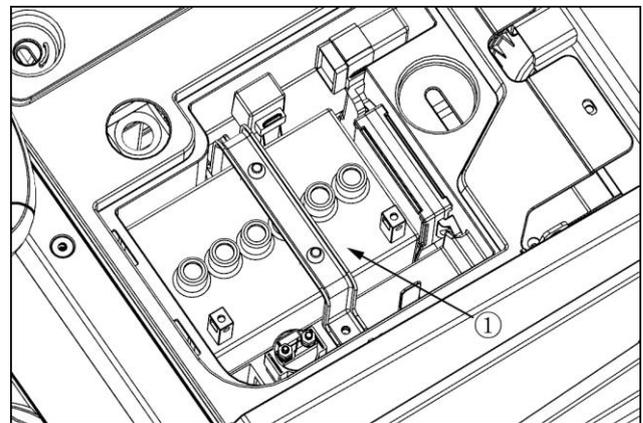
1. Avoid dragging the vehicle behind another vehicle. Use a trailer or truck to transport the vehicle.
2. When loading or unloading, pay attention to your surroundings and others in the area.

10. Maintenance

Stop the vehicle and park it on level ground. Pull the parking brake and remove all cargo. Then

place shift lever on "N" position, stop the engine and remove the key.

1. When working next to the engine, exhaust or radiator, work only after it has cooled down.
2. Wait for the engine to stop running and cool down before checking the coolant level. Otherwise, you could be burned by hot fluid or steam blown out.
3. No smoking when adding electrolyte or refueling. Fuel tank and battery should be kept away from sparks. Battery produces hydrogen and oxygen during charging and this could accelerate the risk of explosion.
4. Read and follow the instructions before replacing the battery.
5. During maintenance, first aid kits and fire extinguishers should be placed at your fingertips.
6. During maintenance, you should disconnect the battery cables.



- ① Battery
7. Do not open radiator cap before coolant has cooled down. When the coolant is cold, open slowly and let the coolant pressure reduced, and then open water cooler cap. Check for the coolant level in the coolant reservoir. If necessary, add coolant.
Tires should be mounted on rims with special

Safe Operation

8. equipment by professionals.
9. Keeping specified tire pressure can help to ensure driving safety.
10. Elevate the vehicle and place a suitable stand under the frame when removing the wheels, Be sure to tighten the wheel nuts to specified torque.

Warning Labels

Warning and caution labels

(1)



(2)



(3)

Chongqing Huansong Science And Technology Industrial Co.,Ltd
This structure meets ROPS requirements for earth-moving machinery under ISO 3471.

(4)



(5)



(6)



(7)

WARNING

Improper Use of Off-Highway Vehicles Can Cause Severe Injury or Death

Be Prepared

- Fasten seat belts.
- Wear an approved helmet and protective gear.
- Each rider must be able to sit with back against seat, feet flat on floor [and foot rests], and hands on steering wheel or handhold[s], where equipped, Stay completely inside the vehicle.

Drive Responsibly

Avoid loss of control and rollovers:

- Avoid abrupt maneuvers, sideways sliding, skidding, or fishtailing, and never do donuts.
- Slow down before entering a turn.
- Avoid hard acceleration when turning, even from a stop.
- Plan for hills, rough terrain, ruts, and other changes in traction and terrain. Avoid paved surfaces.
- Avoid side hilling (riding across slopes).



Be Sure Riders Pay Attention and Plan Ahead

If you think or feel the vehicle may tip or roll, reduce your risk to injury:

- Keep a firm grip on the steering wheel or handholds and brace yourself.
- Do not put any part of your body outside of the vehicle for any reason.

Require Proper Use of Your Vehicle

Do your part to prevent injuries:

- Do not allow careless or reckless driving.
- Make sure operators are 16 or older with a valid driver's license.
- Do not let people drive or ride after using alcohol or drugs.
- Do not allow operation on public roads (unless designated for off-highway vehicle access)--collisions with cars and trucks can occur.
- Do not exceed seating capacity: 1 passenger.



[Locate and] Read [Owner's Manual]
Follow All Instruction and Warnings

[Reserved for Reference to Other Sources of Safety Information]



Rollovers have caused severe injuries and death, even on flat, open areas.

(8)

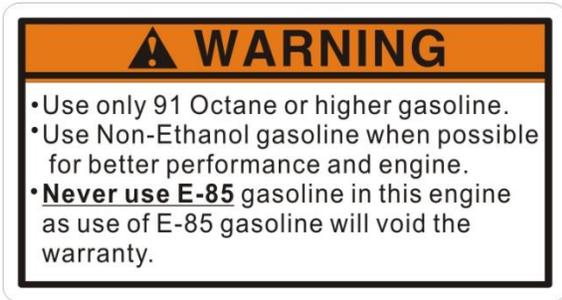


(9)



Warning Labels

(10)



(11)



(12)



(13)



(14)



(15)



(16)



Vehicle Identification Number

SERVICING OF VEHICLE

Your dealer is interested in your new vehicle and has the desire to help you get the most value from it. After reading this manual thoroughly, you will find you can do some of the regular maintenance by yourself.

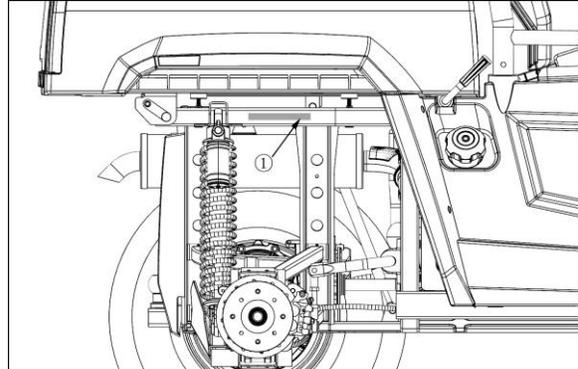
However, when in need of parts or major service, be sure to see your dealer.

For service, contact the dealership from which you purchased your vehicle or your local dealer.

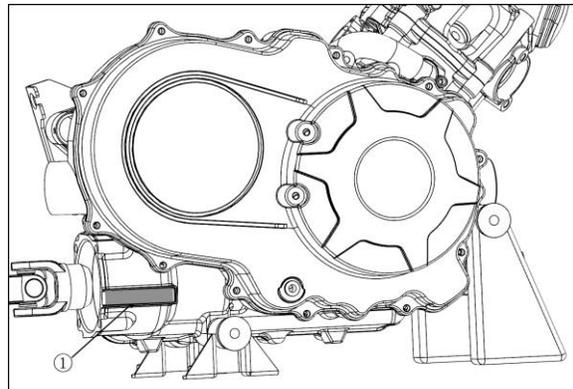
When in need of parts, be prepared to give your dealer both the vehicle and engine serial numbers.

Locate the serial numbers now and record them in the space provided.

	Type	Serial No.
Vehicle		
Engine		
Product Identification Number		
Date of Purchase		
Name of Dealer		



① Vehicle serial number.



① Engine serial number

Specifications

SPECIFICATION TABLE

Engine	Make		Specification	
	Type		1-cylinder, 4-cycle, gasoline, SOHC, liquid cooled	
	Displacement	CC	471cm	
	Horsepower	Kw(HP)	19.44 HP	
	Rated revolution	rpm	7000	
	Low idling revolution	rpm	1350 to 1500	
Fuel Capacity		L(U.S.gas)	29 (7.6)	
Transmission			CVT	
Wheels, Drive system			4, Rear 2WD or 4WD	
Differential lock			Electric control: switch	
Gear selection			L-H-N-R	
Brakes	Front/Rear		Wet disk brake	
	Parking brake		Axis brake, pedal-braking	
Steering			Mechanical	
Suspension	Front		Independent, Dual A-arm type	
	Rear		Independent, Dual A-arm type	
Dimensions	Length		mm(in.) 2880 (113.83)	
	Wide		mm (in.) 1550 (61.02)	
	Height		mm (in.) 1885 (74.21)	
	Front tread centers		mm (in.) 1350 (53.15)	
	Rear tread centers		mm (in.) 1300 (46.5)	
	Wheelbase		mm (in.) 1841.5 (72.5)	
	Ground Clearance	front axle	mm (in.)	254 (10)
		rear axle		254 (10)
Turning Radius		m (ft)	3.96 (13)	
Max. rolling weight (Towing Capacity)		kg (lbs.)	544 (1200)	
Payload capacity		kg (lbs.)	159 (350)	
Weight		kg (lbs.)	590 (1301)	

Specifications

Model		Specification	
Cargo bed	Width	mm (in.)	1066 (42)
	Length	mm (in.)	787 (31)
	Depth	mm (in.)	279 (11)
	Volume	cu.ft.	8.28
	Bed height (unloaded)	mm (in.)	927 (36.50)
	Cargo bed capacity (1 row/2 row)	kg (lbs.)	159 (350)
Sound level, operator ear		db (A)	85
Tire	Front		26x9-12
	Rear		26x10-12
Body color		Camo	

NOTE:

- The values in “Ground clearance” and “Weight” are those of the machine equipped with the tires in the table above.
- The company reserves the right to change the specifications without notice.

TRAVELING SPEEDS

For Vector 500

Range gear shift lever	km/h (mph)
High	60 (37)
Reverse	16 (10)

Specifications

VEHICLE LIMITATIONS

The Vehicle has been thoroughly tested for proper performance with implements sold or approved by manufacturer. Use with implements which are not sold or approved and which exceed the maximum specifications listed below, or which are otherwise unfit for use, vehicle may result in vehicle malfunction or failures with a possibility of the vehicle damage to other property and injury to the operator or others, [Any malfunctions or failures of the vehicle resulting from use with improper implements are not covered by the warranty]

Max. Cargo loading weigh	
Cargo Bed Capacity=159kg(350lb) Cargo Load Capacity=190kg(419lb) *(operator+one passenger+opt+acc)weight	Max. rolling weight 590kg (1300 lbs.)
	Max. tongue weight 50kg (110lbs.)

1. Above mentioned specifications are based on level ground condition.

Pre-Operation

DAILY CHECK

To better prevent troubles, it is important to know condition of the vehicle well. Check it before starting.



CAUTION:

To avoid personal injury:

Be sure to check and service the vehicle on a level surface with the engine shut off and the parking brake "ON" and implement lowered to the ground if equipped.

Check items

- Visually inspect the exterior of the vehicle
- Check engine oil level
- Check transmission oil level
- Check brake fluid level
- Check coolant level
- Clean radiator screen
(When used in a dusty place)
- Check brake and pedal
- Check parking brake
- Check indicators, gauges and meters
- Check lights
- Check seat belts and roll-over protective structures.
- Check front and rear joint boots.
- Check tire inflation pressure.
- Refuel
(See "DAILY CHECK" in "PERIODIC SERVICE" section.)
- Check of danger, warning and caution labels
(See "DANGER, WARNING AND CAUTION LABELS " in " SAFE OPERATION " section.)

Operating the Engine



CAUTION: Section

To avoid personal injury:

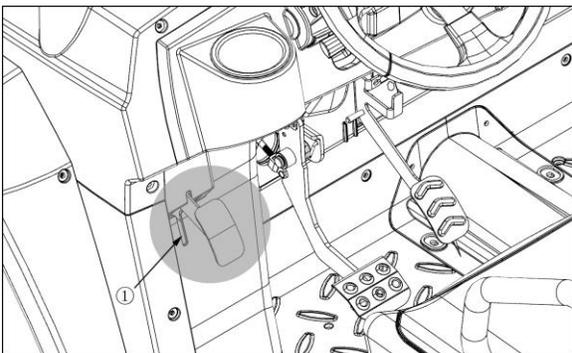
- Read "SAFE OPERATION" in front of this manual.
- Read the danger, warning and caution labels located on the vehicle.
- To avoid the danger of exhaust fume poisoning, do not operate the engine in closed buildings without proper ventilation.
- Start engine only from operator's seat. Never start engine while standing on ground.
- Make it a rule to set gear shift lever to "NEUTRAL" position before starting the engine.

IMPORTANT:

- Do not use starting fluid or ether.
- To protect the battery and the starter, make sure that the starter is not continuously turned for more than 5 seconds.

STARTING THE ENGINE

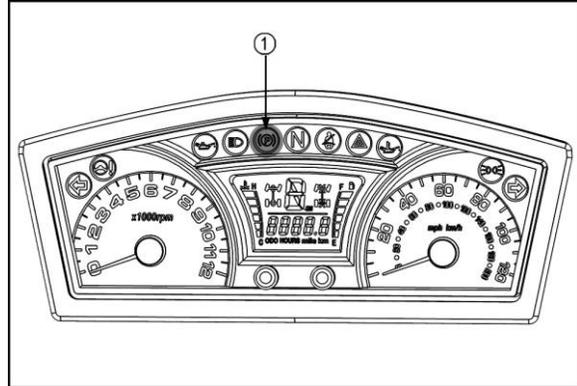
1. Make sure the parking brake is set.



① Parking brake

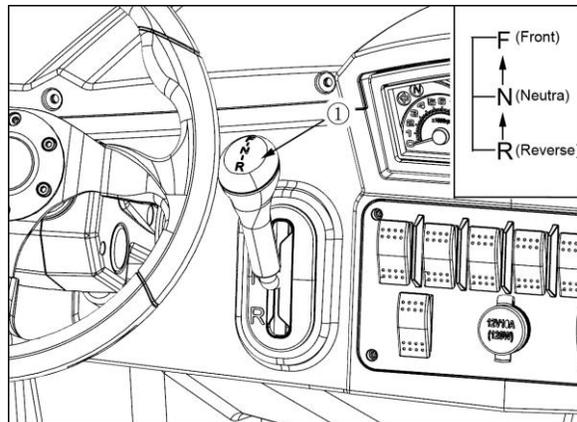
NOTE:

The parking brake warning lamp (P) comes on while parking brake is applied and goes off when it is released.



① Parking brake warning lamp

2. Set gear shift lever to the "NEUTRAL" position.



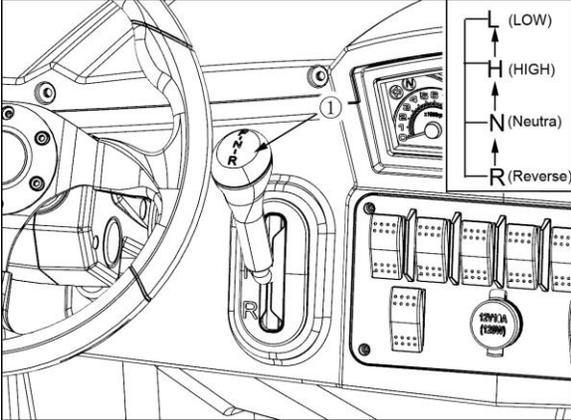
① Range gear shift lever.

(F) FRONT Range

(N) "Neutral" position

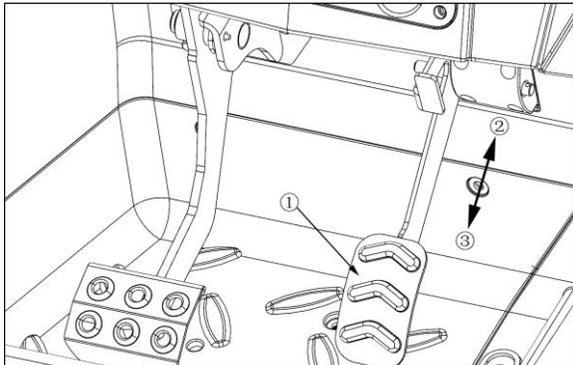
(R) "REVERSE"

Operating the Engine

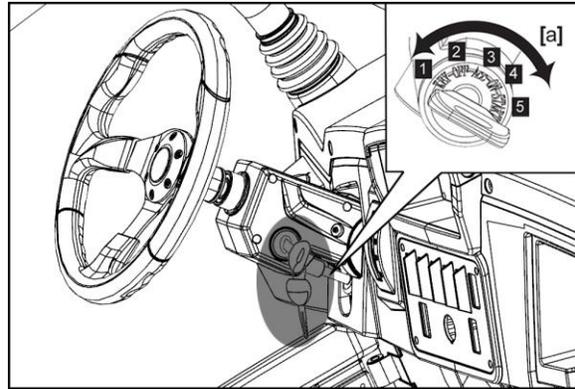


- ① Range gear shift lever.
- (L) Low Range
 (H) High Range
 (N) Neutral position
 (R) REVERS

2. Push the accelerator pedal down slowly.



- ① Speed control pedal
- ②=>③ INCREASE
- ③=>② DECREASE



3. Insert the key into the key switch and turn it "START".
- OFF (Stop the Engine)
 ON (Engine runs or headlights on)
 START (Start the Engine)

IMPORTANT :

- It is not sufficient to do daily checks on dash board only. Always conduct daily checks carefully by referring to "DAILY CHECK" in "PERIODIC SERVICE" section.

4. Turn the key to "START" position and release when the engine starts.

IMPORTANT:

- Because of safety devices, the engine will not start except when the gear shift lever is placed in the "NEUTRAL" position and the brake is depressed.

■ Cold Starting

When the ambient temperature is below -15°C (5°F), the engine is very cold. If the engine fails to start after 5 seconds, turn off the key for 30 seconds and start again.

STOPPING THE ENGINE

- After slowing the engine to idle, turn the key to "OFF".
- Remove the key.

Operating the Engine

WARMING UP



CAUTION:

To avoid personal injury:

- Be sure to set the parking brake during warm-up.
- Be sure to set the shift lever to the “NEUTRAL” position during warm-up.

For 5 minutes after engine start-up, allow the engine to warm up without applying any load. This is to allow oil to reach every engine part. If load is applied to the engine without warming-up, engine damage may occur.

■ Warm-Up Transmission Oil in the Low Temperature Range

IMPORTANT:

- Do not operate the vehicle under full load condition until it is sufficiently warmed up.

Operating the Vehicle

OPERATING NEW VEHICLE

How a new vehicle is handled and maintained determines the life of vehicle.

A new vehicle just off the factory production line has been, of course, tested, but the various parts are not aligned to each other, so the operator should pay more attention to operating the vehicle for the first 50 hours at a slower speed and avoid excessive work or operation until the various parts become “broken-in.” The manner to which you handle the vehicle during “breaking-in” period greatly affects the life of your vehicle. Therefore, to obtain the maximum performance and the longest life of the vehicle, it is very important to properly break-in your vehicle. For better handling a new vehicle, the following precautions should be observed.

■ Do not operate the vehicle at full speed for the first 50 hours.

- Do not start quickly nor apply the brakes suddenly.
- In winter, operate the vehicle after fully warming up the engine.
- Do not run the engine at speeds faster than prescribed.
- On rough roads, slow down to suitable speeds.

Do not operate the vehicle at fast speed. The above precautions are not limited to new vehicles. However, they should be especially observed for new vehicles.

■ Changing Lubricating Oil for New Vehicles

The lubricating oil is especially important for a new vehicle. Various parts need time to wear and polish themselves to the correct operating clearances. Small pieces of metal grit may develop during the operation of the vehicle; and this may wear out or damage the parts. Therefore, change the lubricating oil a little earlier than would ordinarily be required. For further details of change interval hours, see “MAINTENANCE” section

STARTING

1. Fasten the seat belt during operation.

■ Seat Belt

WARNING

To avoid personal injury:

- **Seat belts reduce injury. Always wear your seat belts. The lap-style seat belts may not provide adequate protection for small children. Pay special attention when carrying a child passenger.**

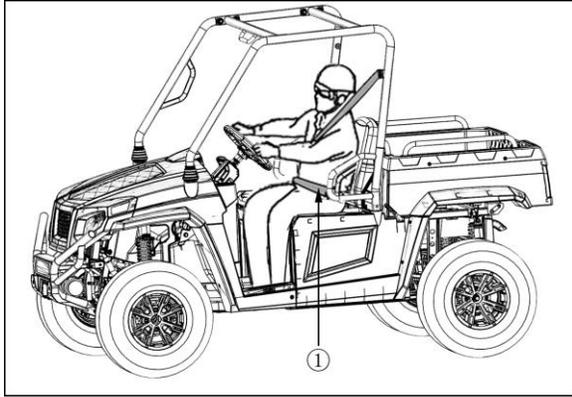
CAUTION:

To avoid personal injury:

- **Always use the seat belts when operating and riding the vehicle.**

Adjust the seat belts for proper fit and connect the buckle. This seat belt is an auto-locking retractable type.

Operating the Vehicle



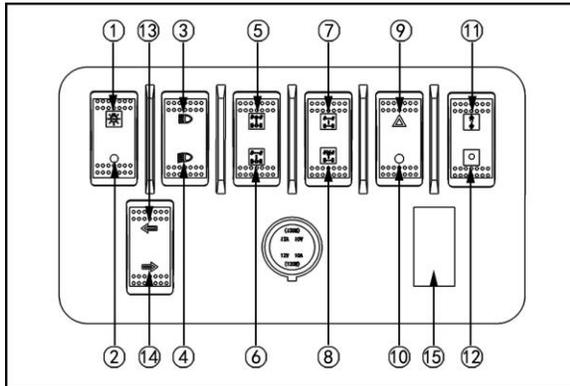
① Seat belt

2. Selecting light switch position.

■ Head Light Switch

Turn on the key switch and toggle the head light switch to the "ON" position.

Toggle the head light switch to the "OFF" position to turn off the head light.



- ① Head light switch
- ② Head lights "OFF"
- ③ High beam lights "ON"
- ④ Low beam lights "ON"
- ⑤ 4WD button
- ⑥ 2WD button
- ⑦ Front axle differential lock
- ⑧ Front axle differential unlock
- ⑨ Emergency light "ON"
- ⑩ Emergency light "OFF"
- ⑪ Winch cable release
- ⑫ Winch cable pulled up
- ⑬ Left turning lights
- ⑭ Right turning lights
- ⑮ Plug cover

NOTE:

Turning the head light switch to the "ON" position causes the following lamps to light simultaneously.

1. Tail lights (lamps at the rear portions of the vehicle)
2. Lamp built in the coolant temperature gauge
3. Lamp built in the fuel gauge
4. Lamp built in the speedometer
5. Front left and right position lights

■ Emergency Light Switch

[if equipped]

Press the top half of the emergency light switch, the light flash along with the indicator on the instrument panel. Press the bottom half of the emergency light switch to turn off the light.

Note:

The emergency light switch will operate when the key switch is in the "ON" position. Be careful that keeping the switch "ON" causes the battery to run out.

■ Turn Signal Light Switch

[if equipped]

To indicate a right turn, push on the lower half of the turn toggle switch.

To indicate a left turn, push on the upper half of the turn toggle switch.

When the left or right signal is activated, the indicated turning light will flash and the other will stay on.

The indicator lamp at the instrument panel also flashes indicating the direction of the turn.

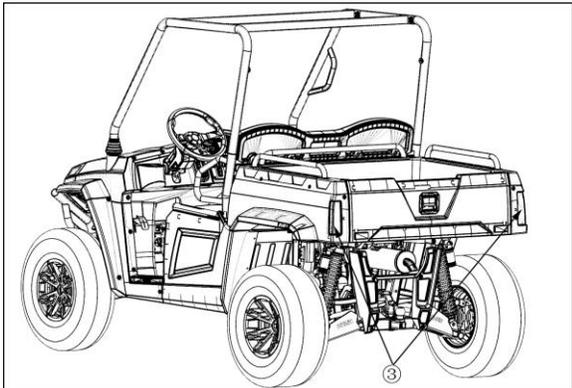
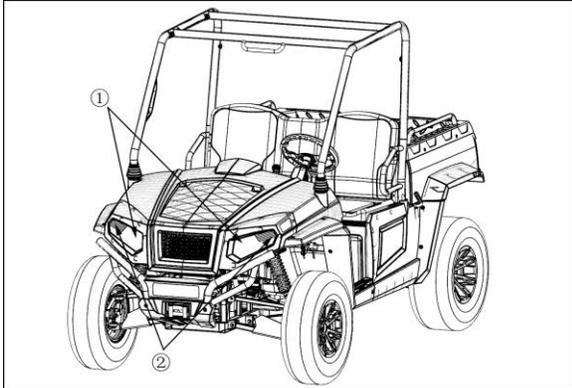
NOTE:

- The turn signal light switch is only operative when the key switch is in the "ON" position. If the emergency light switch is pressed to the "ON" position while the turn signal is

Operating the Vehicle

activated, the indicated turning light will flash and other will stay on.

- Be sure to return switch to center position after turning.



- ① Head light ② Head turn signal lamp;
③ Tail turn signal lamp

3. Checking the brake pedal.

■ Brake Pedal

CAUTION:

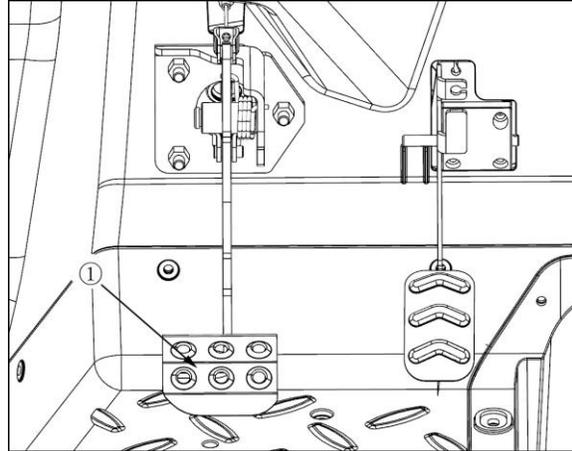
To avoid personal injury:

- If the operator suddenly brakes, an accident may occur due to loss of control or the shifting forward of heavy loads.

When driving on icy, wet or loose surface, make sure the vehicle is correctly loaded to avoid skidding or loss of steering

- **control. Reduce the speed.**

The brake pedal is the left pedal on the foot board. Depress the pedal to slow or stop the vehicle.



- ① Brake pedal

4. Selecting the travel speed.

■ Range Gear Shift Lever

CAUTION:

To avoid personal injury:

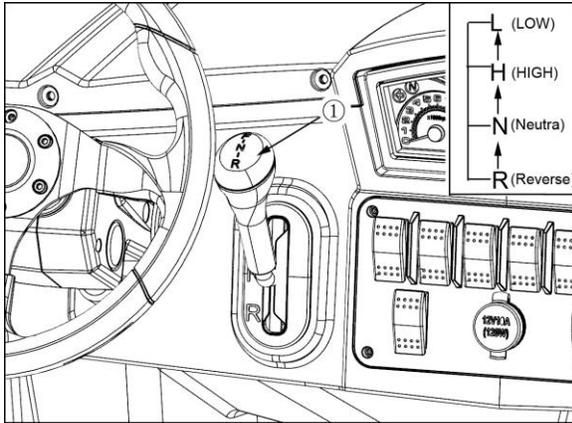
- Avoid changing gears when ascending or descending a slope.
- Before ascending or descending a slope, shift to the “L” range to control the vehicle speed.
- If you shift gears while ascending or descending a slope, be prepared to use the brake to maintain control.
- Operate in reverse at slow speeds to maintain control.

1. The range gear shift lever can only be shifted only when the vehicle is completely stopped and the the brake pedal is pressed.
2. To avoid transmission and shift linkage damage, completely stop the vehicle using the brake pedal before shifting gears.

Operating the Vehicle

3. Select proper gear and engine speed depending on the type of job.
4. Before exiting vehicle, shift the gear shift lever to the "NEUTRAL" position and set parking brake.

FOR HS450UTV



- ① Range gear shift lever
- (L) LOW Range
 - (H) HIGH Range
 - (N) NEUTRAL POSITION
 - (R) REVERSE

NOTE:

- When range gear shift lever is hard to engage, do not force the lever. Set the parking brake, slightly depress the accelerator pedal and release it to neutral position, then shift the lever.

When the lever is hard to disengage, do not force the lever.

- Depress the brake pedal fully, then shift the lever. Damage may occur with wrong shifting operation.

■ 4WD Lever

⚠ CAUTION:

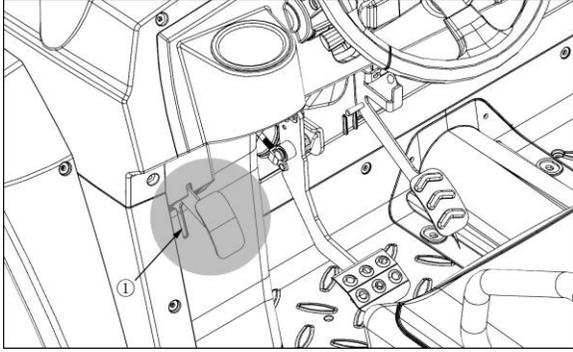
To avoid personal injury:

- when traveling at road speed. Use only 2WD.
- When driving on icy, wet or loose surfaces, make sure the vehicle is correctly loaded to avoid skidding and loss of steering control. Reduce the speed and engage front wheel drive.
- Accident may occur if the vehicle is suddenly braked, such as heavy towed loads shifting forward causing loss of control.
- The braking characteristics are different between two and four wheel drive. Be aware of the difference and operate carefully.

IMPORTANT:

5. **Unlock the parking brake and start slowly.** To release the parking brake, depress the brake pedal. Make sure that indicator in the display goes off.

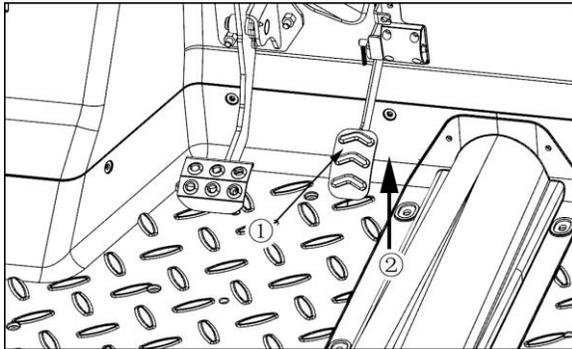
Operating the Vehicle



① Parking brake

■ Accelerator Pedal

The accelerator pedal is used to increase the engine and vehicle speed. Push down on it for higher speed.



① Accelerator pedal

STOPPING

■ STOPPING

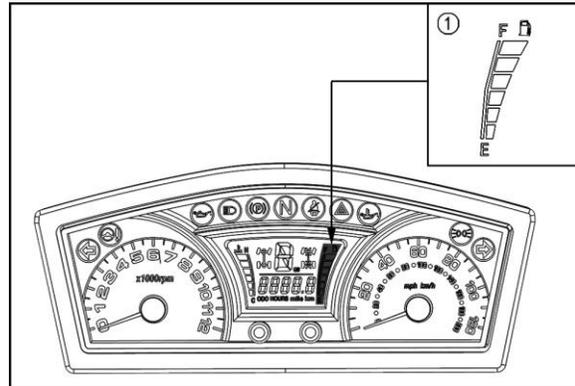
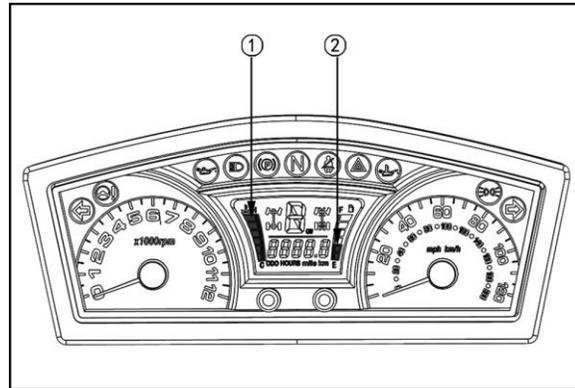
1. Release the accelerator pedal
2. Step on the brake pedal.

CHECK DURING DRIVING

■ Immediately Stop the Engine if:

- The engine suddenly slows down or accelerates.
- Unusual noises are suddenly heard.
- Exhaust fumes suddenly become very white.

While driving, check the following items to see if all parts are functioning normally.



① Fuel gauge

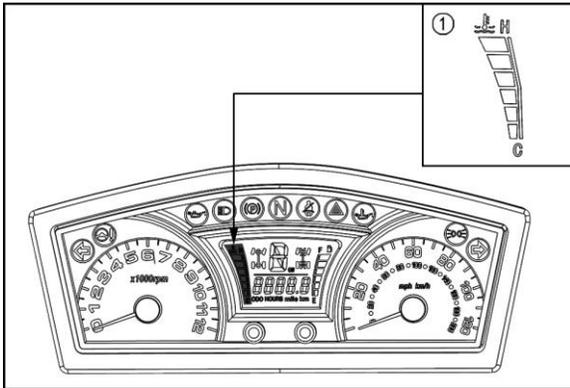
■ Coolant Temperature Gauge

⚠ CAUTION:

To avoid personal injury:

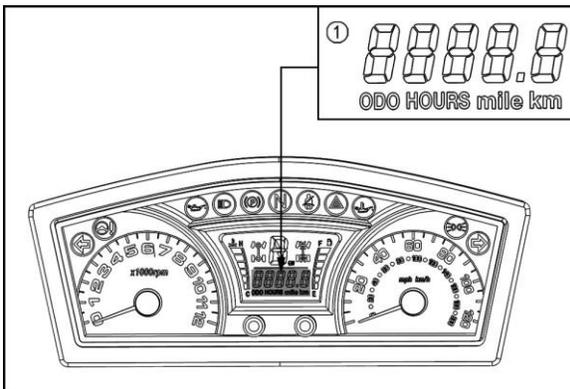
- Do not remove radiator cap until coolant temperature is well below its boiling point. Then loosen cap slightly to relieve pressure before removing cap completely.
1. With the key switch "ON" the temperature gauge indicates the temperature of the coolant. White Zone for "cold" and Red zone for "hot".
 2. If the indicator reaches the Red zone, the engine coolant is overheated. Check the vehicle by referring to "TROUBLESHOOTING" section.

Operating the Vehicle



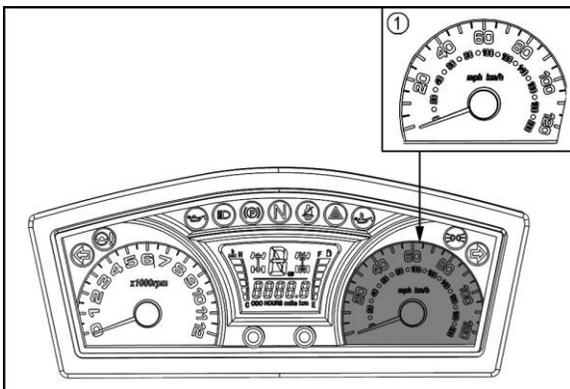
① Coolant temperature gauge

The hour meter indicates in five digits the hours the vehicle has been used; the last digit indicates 1/10 of an hour.



① Hourmeter

The speedometer indicates the traveling speed.

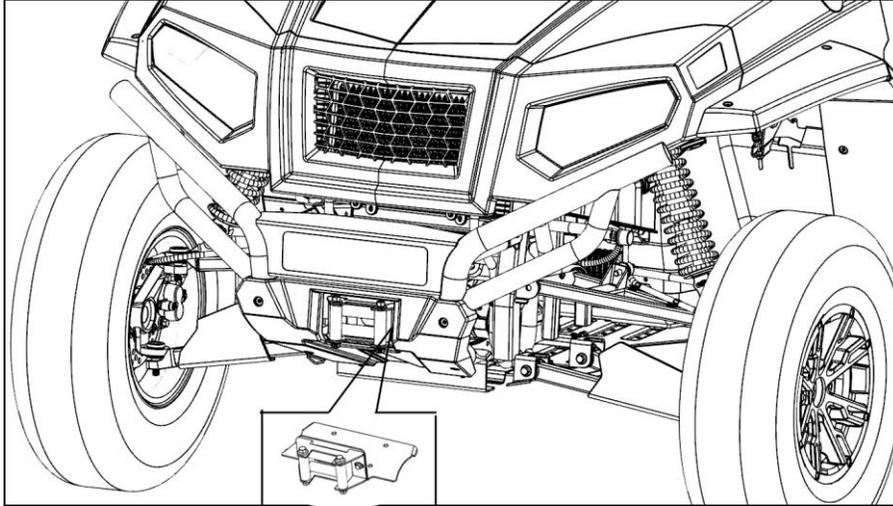


① Speedometer

Maintenance and Adjustment

WINCH MOUNT PLATE

Always read and follow the instructions in the winch owner's manual before attempting to install or use a winch.



① Winch mount plate

■ Transporting Vehicle

Pay attention to the following points when transporting the vehicle.

1. Use a suitable truck or trailer.
2. Apply the parking brake and place chocks against the front and rear tires.

Maintenance and Adjustment



CAUTION:

To avoid personal injury and vehicle damage:

- Be sure you have sufficient knowledge, experience, the proper replacement parts and tools before you attempt any vehicle maintenance task.
- If you don't have the knowledge and equipment which are necessary to perform the maintenance task, consult your local dealer.
- Have your local dealer perform inspection items which are marked *4 in the chart below.

SERVICE INTERVALS

IMPORTANT:

- The jobs indicated by © must be done after the first 50 hours of operation.
- *1 Air cleaner should be cleaned more often in dusty conditions than in normal conditions.
- *2 Every year or every 6 times of cleaning.
- *3 Replace only if necessary.
- *4 Consult your local dealer for this service.
- *5 When the battery is used for less than 100 hours per year, check the battery condition by reading the indicator annually.
- The items listed below with a * mark are registered as emission related critical parts parts by the U.S.EPA. As the engine owner, you are responsible for the performance of the required maintenance on the engine according to the below instruction. Please see Warranty Statement for more information.

No.	Items		Indication of													After 700 hrs	
			50	100	150	200	250	300	350	400	450	500	550	600	650		700
1	Engine oil	Change	©			○				○				○			Every 200 hrs
2	Engine oil filter	Replace	©			○				○				○			Every 200 hrs
3	Transmission fluid	Change								○							Every 400 hrs
4	Engine start system	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Every 50 hrs
5	Greasing	Apply	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Every 50 hrs
6	*Muffler	Clean	©	○		○		○		○		○		○		○	Every 100 hrs
7	Spark arrester	Clean		○		○		○		○		○		○		○	Every 100 hrs
8	Wheel bolt torque	Check	©	○		○		○		○		○		○		○	Every 100 hrs
9	Battery condition	Check		○		○		○		○		○		○		○	Every 100 hrs
10	Toe-in	Adjust		○		○		○		○		○		○		○	Every 100 hrs

Maintenance and Adjustment

No.	Items		Indication of													After 700 hrs	
			50	100	150	200	250	300	350	400	450	500	550	600	650		700
11	Fuel filter element	Check		○		○		○		○		○		○		○	Every 100 hrs
		Replace										○					Every 100 hrs
12	*Fuel line	Check		○		○		○		○		○		○		○	Every 500 hrs
		Replace															Every 100 hrs
13	*Air cleaner element	Clean		○		○		○		○		○		○		○	Every 1 years
		Replace															Every 100 hrs
14	Brake pedal	Check	◎			○				○					○		Every 1 years
15	Parking brake	Adjust	◎			○				○					○		Every 200 hrs
16	Brake light switch	Check	◎			○				○					○		Every 200 hrs
17	Radiator hose and clamp	Check				○				○					○		Every 200 hrs
		Replace															Every 2 years
18	*Intake air line	Check				○				○					○		Every 200 hrs
		Replace															Every 1 years
19	Brake hose & pipe	Check	◎			○				○					○		Every 200 hrs
		Check															Every 4years
20	Tire wear	Check	◎						○						○		Every 300 hrs
21	Front axle case oil	Change								○							Every 400 hrs
22	Knuckle case oil	Change								○							Every 400 hrs
23	Engine valve clearance	Adjust															Every 800 hrs
24	* Fuel injection	Check															Every 1500 hrs
25	* Injection	Check															Every 3900 hrs
26	Brake fluid	Change															Every 2 years
27	Remote hydraulic hose	Replace															Every 2 years
28	Rear brake cylinder seal	Replace															Every 2 years
29	Front brake seal	Replace															Every 2 years
30	Cooling system	Flush															Every 2 years

Maintenance and Adjustment

No.	Items		Indication of													After 700 hrs	
			50	100	150	200	250	300	350	400	450	500	550	600	650		700
31	Coolant	Change															Every 2 years
32	Fuel system	Bleed															Service as required
33	Fuse	Replace															
34	Light bulb	Replace															

NOTE:

◆Engine Oil: (10W/40SL)

Oil used in the engine should have an American Petroleum Institute (API) service classification and Proper SAE Engine Oil according to the ambient temperatures as shown above.

◆Brake fluid:

Always use DOT3 GENUINE BRAKE FLUID from a sealed container.

Periodic Service

CAUTION:

To avoid personal injury:

HOW TO OPEN THE FRONT HOOD COVER AND SEAT

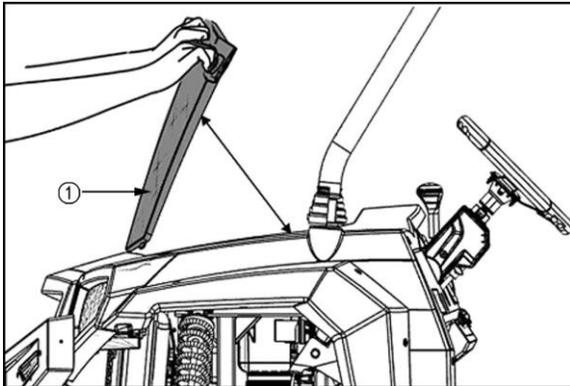
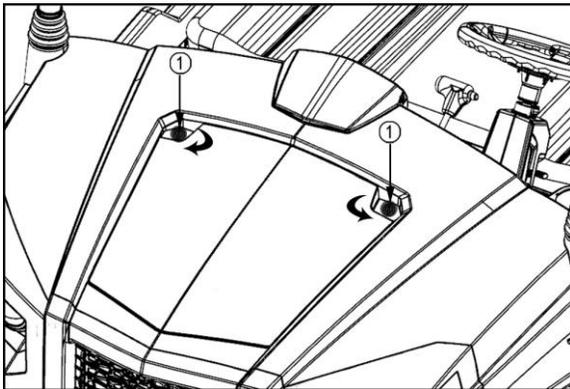
CAUTION

To avoid personal injury from contact with moving parts:

- Never open operator's seat while the engine is running.

■ Front hood cover

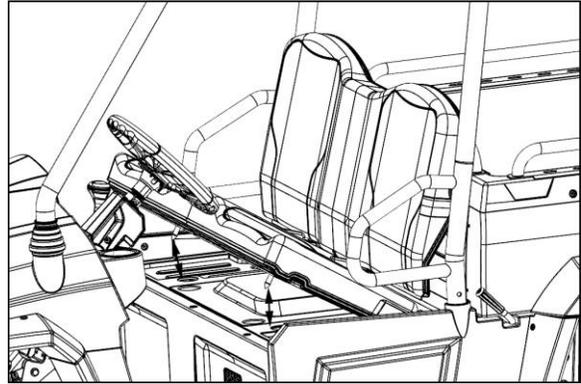
To open the hood, turn the switch as the direction in below picture to release the latch and lift the hood off. To close, tilt cover back to closed position and fasten the latches.



- ① Turn switch
- ② Front hood cover

■ Operator's Seat

To open the seat, raise the seat to the forward position.



- ① Operator's seat

HOW TO RAISE THE CARGO BED

CAUTION

To avoid personal injury:

- When servicing under raised bed, make sure safety support is properly mounted.
- Do not touch muffler or exhaust pipes while they are hot; Otherwise, severe burns could result.

■ Raising and Lowering the Cargo Bed

◆ To raise the cargo bed

1. Apply the parking brake with the engine off.
2. Pull up the cargo bed handle.

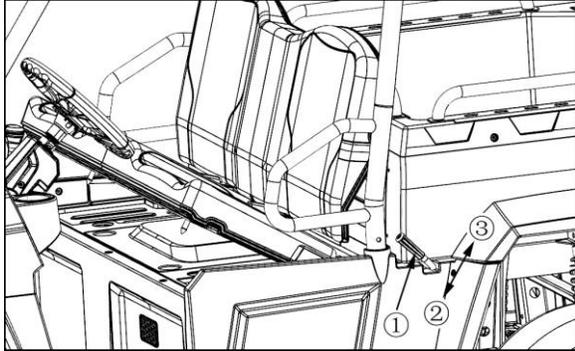
◆ To lower the cargo bed

Press down the cargo bed hard to make the gas spring contractive till it is locked.

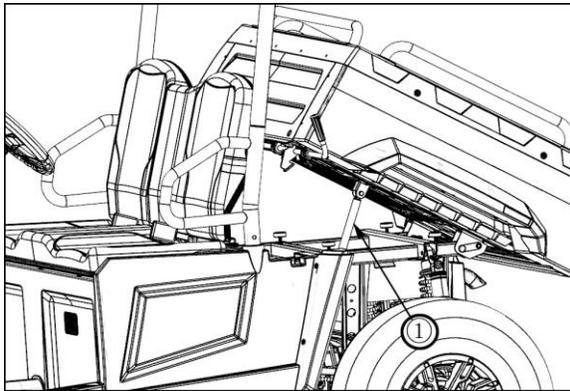
Periodic Service

NOTE:

Pull up the cargo bed handle to raise the cargo bed with the gas spring elasticity.



- ① Cargo bed handle
- ② UP
- ③ DOWN



- ① Gas spring

JACK-UP POINT

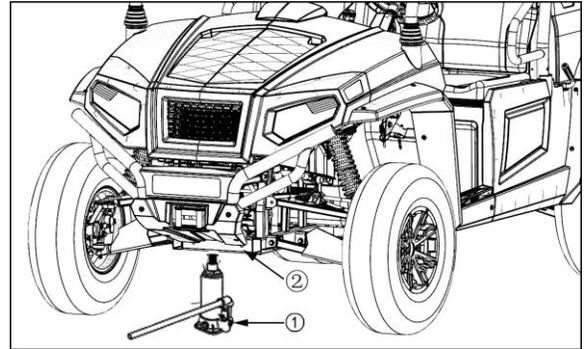
WARNING

To avoid personal injury, death or vehicle damage:

- Do not work under the vehicle unless it is secured by safe stands or suitable blocking.

■ Front End

Jack up at the front frame tube only.

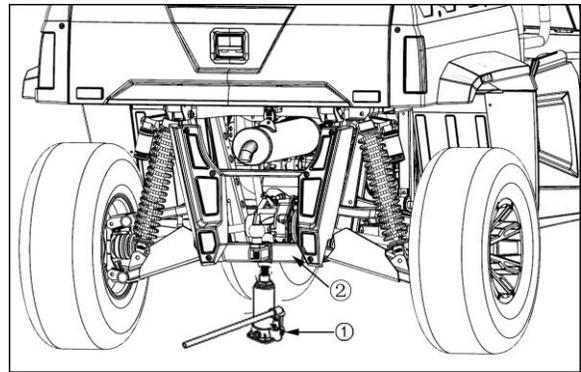


- ① Jack
- ② Front frame tube

■ Rear End

Jack the rear only after placing a wooden block under the right and left frame tubes for securing the engine and then supporting it.

Do not apply jack pressure on the steel plate directly under the engine.



- ① Jack
- ② Rear frame tube

DAILY CHECK

For your own safety and maximum service life of the vehicle, make a thorough daily inspection before starting the engine and operating the vehicle.

Periodic Service

CAUTION

To avoid personal injury:

- Be sure to park the vehicle on a flat surface with the engine off and the parking brake "ON".

■ Walk Around Inspection

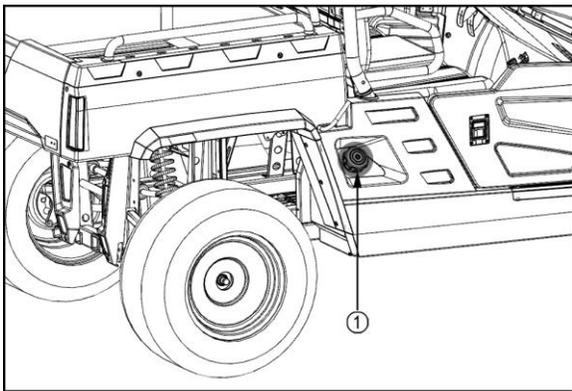
Look around and under the vehicle for such items as loose bolts, trash build-up, oil or coolant leaks, broken or worn parts

■ Checking and Refueling

CAUTION

To avoid personal injury:

- Do not smoke while refueling.
 - Be sure to stop the engine before refueling.
1. Turn the key switch to "ON", check the amount of fuel by the fuel gauge
 2. Fill fuel tank when fuel gauge shows 1/4 or less fuel in tank.



① Fuel tank cap

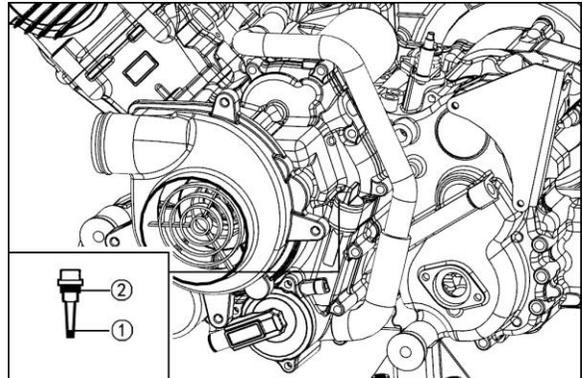
Fuel tank capacity	28L (7.4 ± 0.1 U.S. GALS)
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IMPORTANT

If oil level is low, do not run engine.

Checking engine oil level

1. Park the vehicle on a flat surface with engine off, raise the cargo bed, mount the safety support.
2. To check the oil level, draw out the dipstick, wipe it clean, replace it, and draw it out again, check to see if the level is too low, add new oil to the prescribed level on the dipstick.



② Oil Level

③ Dipstick

IMPORTANT

If oil level is low, do not run engine

Periodic Service

■ Checking Coolant Level

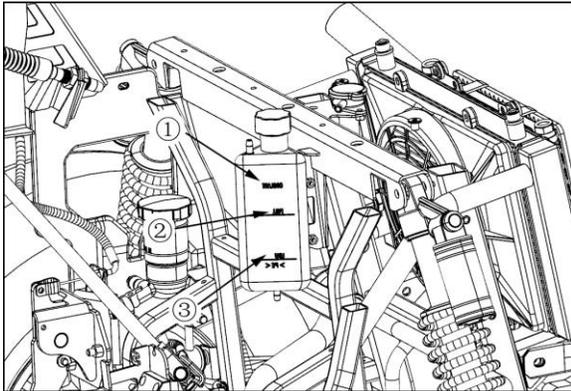


CAUTION

TO avoid personal injury

- Do not remove radiator cap while coolant is hot, when cool, slowly rotate to the first stop and allow sufficient time for excess pressure to escape removing the cap completely.

1. Park the vehicle on a flat surface, access the panel under the hood, set the parking brake, and shut off the engine.
2. Check to see that the coolant level is between the "FULL" and "LOW" marks of recovery tank.
3. When the coolant level drops due to evaporation, add water only up to the full level. In case of leakage add anti-freeze and water in the specified mixing ratio up to the full level.(see flush cooling system and changing coolant in EVERY 2 YEARS in PERIODIC SERVICE section)



- ① Recovery tank
- ② FULL
- ③ LOW

IMPORTANT

- If the radiator cap has to be removed, follow the cautions above and securely retighten the cap.
- Use clean fresh water and anti-freeze to fill the recovery tank.
- If water should leak, consult your local HSUN Dealer.

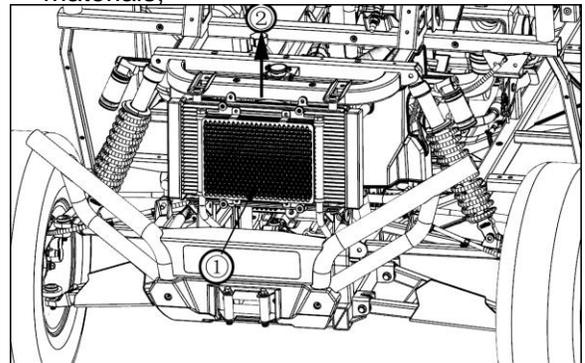
■ Cleaning radiator screen



CAUTION

TO avoid personal injury:

- Be sure to stop the engine before removing the screen
1. Park the vehicle on a flat surface,
 2. Remove the radiator cover,
 3. Detach the screen and remove all foreign materials.



- ① Radiator screen

IMPORTANT

- Radiator screen must be cleaned from debris to prevent engine from overheating

Periodic Service

■ Checking brake fluid level



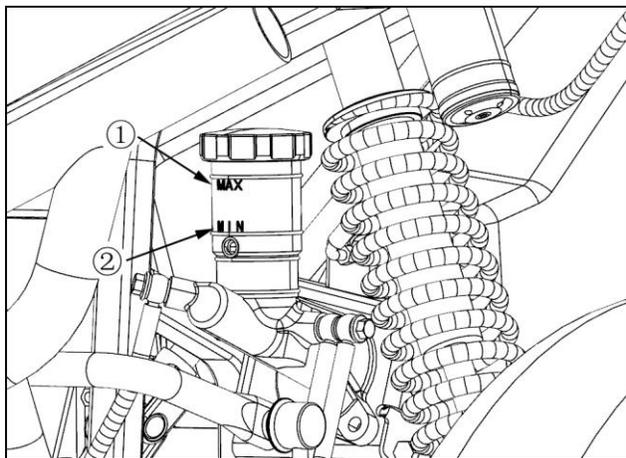
TO avoid personal injury:

- Never operate the vehicle if the brake fluid is below the minimum mark.

Use only DOT3 from a sealed container. Other types of brake fluid may ruin synthetic resin or rubber installed in brake system components and may cause brake failure.

- Avoid clean contamination of the brake fluid thoroughly before removing the filler cap. Do not open the brake fluid reservoir cap unless absolutely necessary.
- Use extreme care when filling the reservoir. If brake fluid spill on power steering hose, wash off with water immediately, as brake fluid quickly ruins synthetic resin or rubber hoses.

1. Check to see that the brake fluid level is up to the LOWER mark.
2. If it is below the "LOWER" mark add brake fluid .



① OIL CUP ② LOWER

■ Checking brake pedal

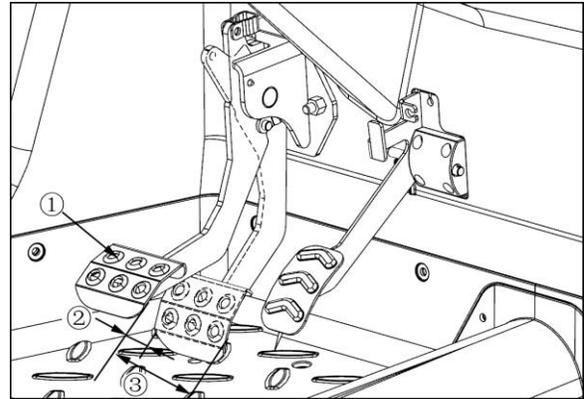


TO avoid personal injury:

- Stop the engine and chock the wheels before checking brake pedal.

1. Inspect the brake pedals for free play and smooth operation.

Adjust if incorrect measurement is found. (see checking brake pedal in "EVERY 200 HOURS in PERIODIC SERVICE" section)



① Brake pedal ② FREE TRAVEL
③ PEDAL STROKE

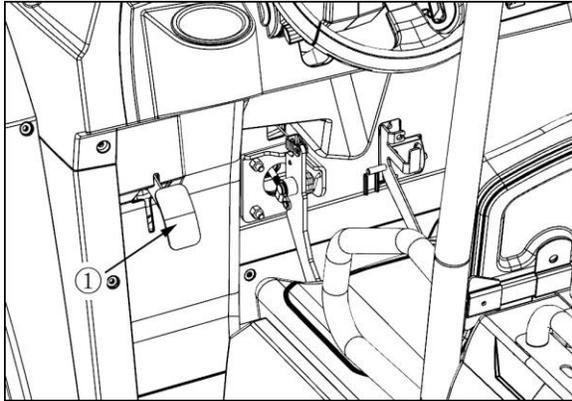
■ Checking parking brake

Pull the parking brake to apply the brakes with the key switch in the "ON" position and the parking brake indicator should come on.

To release the parking brake, depress the parking pedal.

Make sure the parking brake warning lamp on the display goes off when parking brake lever is applied.

Periodic Service



① Parking brake

■ Checking gauges meter service lamps

1. Inspect the instrument panel for broken gauges meter and warning lamps.
2. Replace if broken.

■ Checking head light turn signal light etc

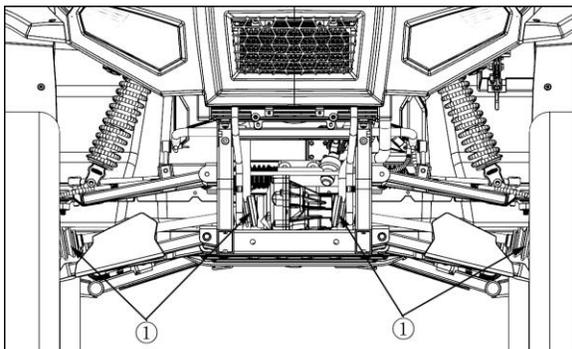
1. Inspect lights for broken bulbs and lenses
2. Replace if broken

■ Checking seat belt and ROPS

1. Always check condition of seat belt and ROPS attaching hardware before operating vehicle.
2. Replace if damaged.

■ Checking joint boot

1. Check to see if the joint boots are damaged or not.
2. If the boots are cut crashed or show signs of deterioration. consult your local dealer.



- ① Joint boot ② Drive shaft

■ Checking tire inflation pressure

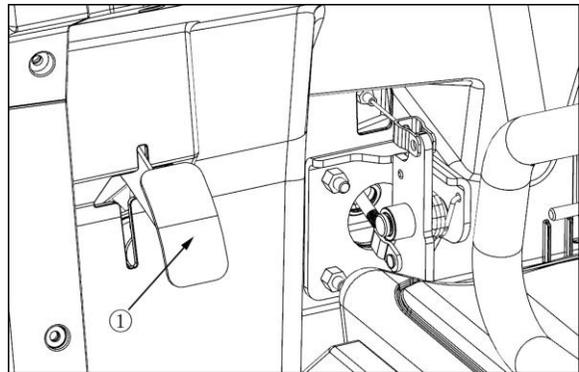
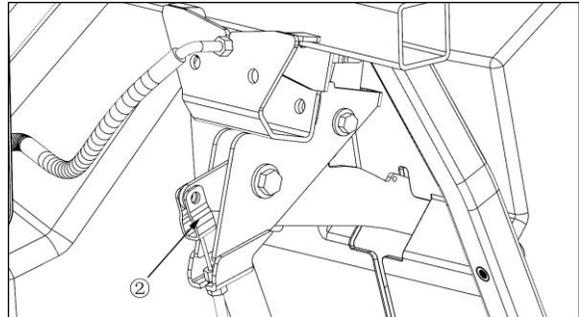
Though the tire pressure is factory-set to the prescribed level, it naturally drops slowly in the course of time, thus check it every day and inflate as necessary.

tire sizes	inflation pressure
Front: 26x9-12	70kPa (10psi)
Rear: 26x10-12	70kPa (10psi)

EVERY 50 HOURS

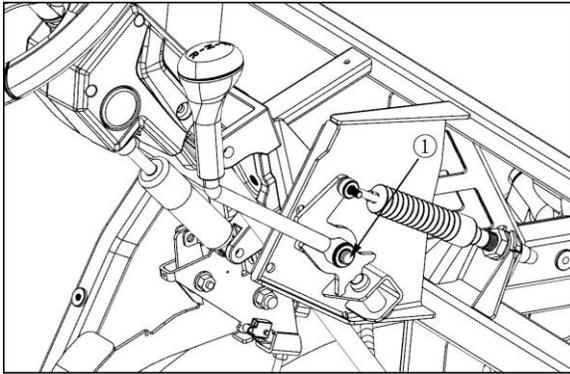
■ Greasing

Apply a small amount of multi-purpose grease to the following points every 50 hours. If you operated the vehicle in extremely wet and muddy conditions lubricate grease fittings more often.



- ① Parking brake
② Parking brake pivot (spray type grease)

Periodic Service



① Range gear shift lever pivot (spray type grease)

■ Checking engine start system

⚠ CAUTION

TO avoid personal injury

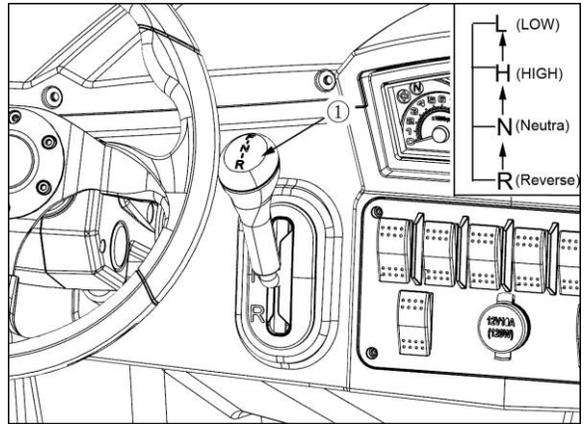
- Do not allow anyone near the vehicle while testing.
- If the vehicle does not pass the test, do not operate the vehicle.

◆ Preparation before testing

1. Place all control levers in the "NEUTRAL" position.
2. Set the parking brake and stop the engine.

◆ Test gear shift range lever safety switch

1. Sit on the operator's seat.
2. Shift the range gear shift lever to: "F", "N" or REVERSE position.
3. Turn the key to "START" position.
4. The engine must not crank.
5. If it cranks consult your local dealer for this service.



① Range gear shift lever

■ Checking wheel bolt torque

⚠ CAUTION

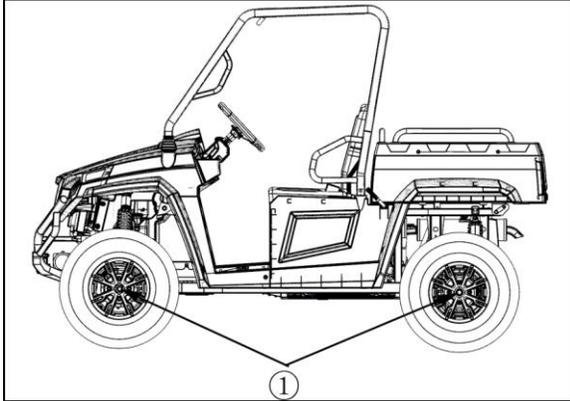
To avoid personal injury

- Never operate vehicle with a loose wheel bolts.
- Any time these bolts are loosened they should be retightened to the specified torque.

Periodic Service

- Check all bolts frequently and keep them tight.

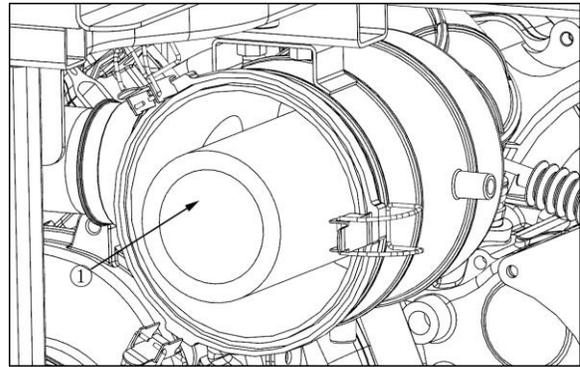
Check wheel bolts regularly especially when new if they are loose tighten them as follows:



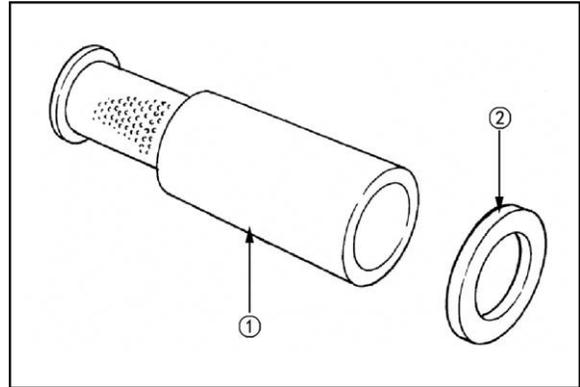
- ① Torque wheel bolts to 75 to 90 N.m

■ Cleaning air cleaner primary element

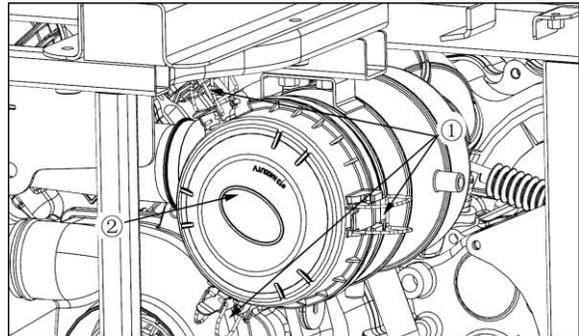
1. Remove the air cleaner cover and primary element.
2. Remove the sponge material from its frame.
3. Wash the sponge material gently but thoroughly in solvent.
4. Squeeze the excess solvent out of the sponge material and let it dry.
5. Inspect the sponge material and replace it if damaged.
6. Thoroughly apply foam air filter oil or other quality liquid foam air filter oil (not spray type) to the sponge material.
7. Re-install the air filter element.
8. Install the air filter case cover and be sure the crankcase breather hose is connected.



- ① Air filter element



- ① Air filter element
- ② Locating pad



- ① Mounting point
- ② Air filter case cover

IMPORTANT

- The air cleaner uses a dry element never apply oil.
- Do not run the engine with filter element removed.

Periodic Service

- Be sure to refit the cover with the arrow (on the rear of cover) upright if the cover is improperly fitted the evacuator valve will not function and dust will adhere to the element.

◆ Evacuator Valve

Open the air cleaner cover once a week under ordinary conditions –or daily when used in a dusty place-to get rid of large particles of dust and dirt. Check fuel line and fuel filter.

CAUTION

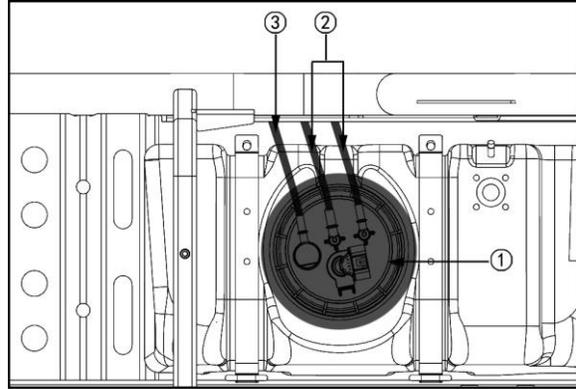
To avoid personal injury:

- **Be sure to stop the engine and remove the key when attempting to make the following checks and changes.**
 - **Never fail to check the fuel lines periodically the fuel lines are subject to wear and aging fuel may leak out onto the running engine causing a fire.**
 - **The fuel line connections should be checked annually or every 100 service hours whichever comes first.**
1. Park the vehicle on a flat surface and raise the cargo bed.
 2. The fuel line is made of rubber and ages regardless of service period.
 3. If the fuel line and clamps are found to be damaged or deteriorated replace them.
 4. Check fuel filter if it is clogged by debris or contaminated with water replace it.

IMPORTANT

When the fuel line is disconnected for maintenance or repair, close both ends of the fuel line with a piece of clean cloth or paper to prevent dust and dirt from entering. Particular, care must be taken not to admit dust and dirt into the fuel

pump entrance. Even a small amount of dust or dirt cause premature wear and malfunction of the fuel pump and injector components.



- ① Fuel pump
- ② Fuel line
- ③ Exit pipe

■ Checking battery condition

DANGER

If you store a battery in a diminished state of charge you will probably have to replace the battery.

CAUTION

To avoid personal injury

- **Never remove the battery while the engine is running.**
- **Keep electrolyte away from eyes, hands and clothes. If you are splattered with it, wash it away completely with water immediately and get medical attention.**
- **Wear eye protection and rubber gloves when working around the battery.**

The factory –installed battery is non-refillable type if the battery is weak, charge the battery or replace it with new one.

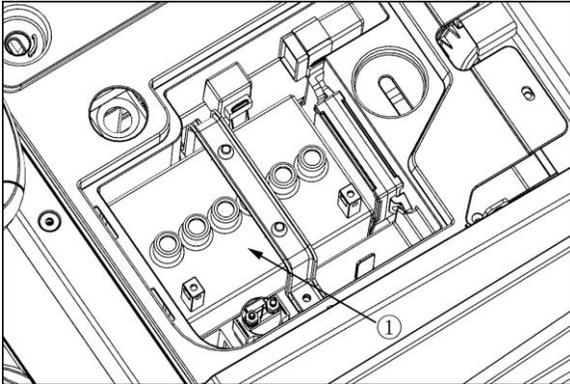
◆ Battery charging

Periodic Service

CAUTION

To avoid personal injury

- When the battery is being activated, hydrogen and oxygen gases in the battery are extremely explosive. Keep open sparks and flames away from the battery at all times, especially when charging the battery.
- When disconnecting the cable from the battery start with the negative terminal first; when connection the cable to the battery start with the positive terminal first.
- Always check battery charge by using a voltmeter.



① Battery

1. To slow charge the battery connect the battery positive terminal to the charger positive terminal and the negative to the negative. then recharge in the standard fashion.
2. A boost charge is only for emergencies it will partially charge the battery as early as possible.
3. When exchanging an old battery for a new one use battery of equal specification shown in table 1.

Battery type	Volts
12V32Ah	12

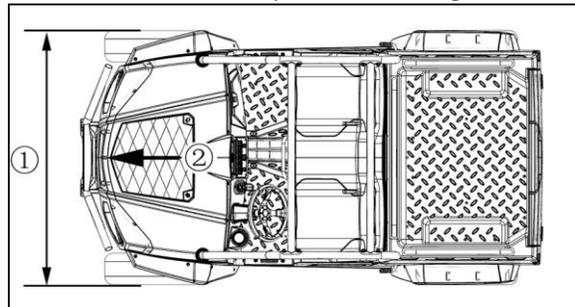
◆ Direction for storage

1. When storing the vehicle for a long period, remove the battery from the vehicle, store in a dry place out of direct sunlight.
2. The battery shall self self-discharge while it is shored recharge it once every three months in hot seasons and once every six months in cold seasons.

■ Adjusting toe-in

Proper toe-in	0 to12 mm (0 to 0.47 in)
---------------	--------------------------

1. Park vehicle on flat place.
2. Turn steering wheel so front wheels are in the straight ahead position.
3. Lock the park brake and stop the engine.
4. Measure distance between front tire beads at rear of tire at hub height.
5. Front distance should be shorter than rear distance if not adjust tie rod length.



① Wheel-to-wheel distance at front

② FRONT

◆ Adjusting procedures

1. Loosen the lock nut and turn the tie rod to adjust the rod length until the proper toe-in

Periodic Service

measurement is obtained.

2. Retighten the lock nut.

IMPORTANT

- Keep the equal length of the left and right tie-rod.

■ Cleaning Muffler



CAUTION

To avoid personal injury:

- Before touching any part of an exhaust system, be absolutely sure that it has sufficient time to cool!
- Always wear safety goggles and face mask.
- The particulate matter contained in the muffler contains chemicals that are harmful to people, animals and marine life.
- If you are unable to do this work, have it done by your dealer.
- Cleaning spark arrester of muffler.

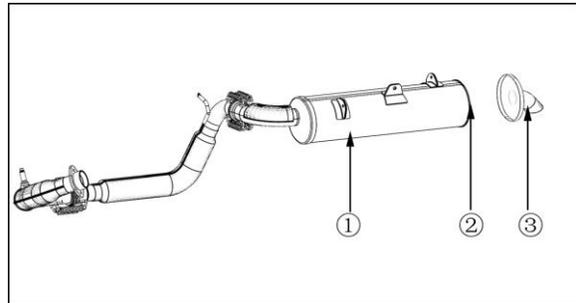
Maintenance & cleanout procedure:

The screen type spark arrester should be removed, cleaned, and inspected after every 100 hours of use.

1. The spark arrester is located inside of the muffler body, and fastened with bolts.
2. Loosen the bolts and remove the spark arrester.
3. Shake loosened particles out of the screen assembly and lightly clean the screen with wire brush. Soak in solvent and again clean with wire brush if necessary.
4. If any breaks in the screen or welds are discovered, the assembly must be replaced.
5. Return the spark arrester to the muffler body and refasten the bolts.

IMPORTANT:

- Visually check the muffler for cracks or holes in the body, weldment or pipes at regular intervals.
- USDA approval requires clearance between spark arrester sleeve and muffler body to be no larger than 0.023”(0.584 mm).
- Replace the entire muffler if it is damaged.
- Do not operate the vehicle with a damaged muffler.



- ① Muffler ② Spark arrester
③ Back cover

EVERY 200 HOURS

■ Changing Engine Oil



CAUTION

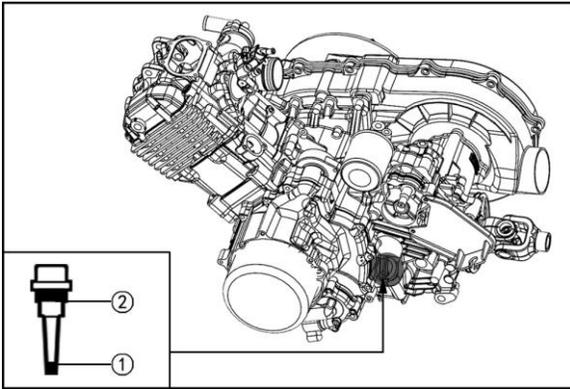
To avoid personal injury:

- Be sure to stop the engine before replacing oil.
 - Allow engine to cool down sufficiently, oil can be hot and can burn.
1. Park the vehicle on flat surface and raise the cargo bed.
 2. To drain the used oil, remove the drain plug at the bottom of the engine and completely drain the oil into an oil pan.
 3. After draining, reinstall the drain plug.

Periodic Service

- Fill with the new oil up to the upper notch on the dipstick.
(See "LUBRICANTS, FUEL AND COOLANT" in "MAINTENANCE" section.)

Oil capacity	[Filter exchanged]	1.8L (1.89U.S. qts.)
	[Filter non-exchanged]	1.6L (1.68U.S. qts.)



- ① Oil Lever
- ② Dipstick

■ Replacing Engine Oil Filter

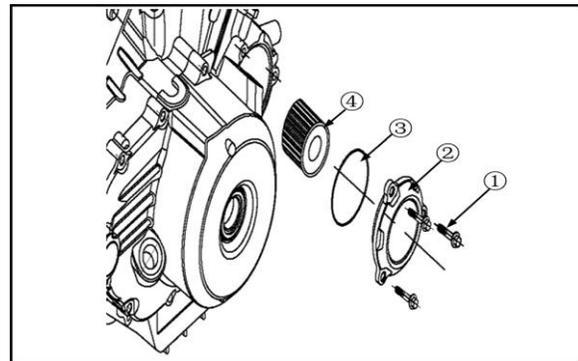
CAUTION

To avoid personal injury:

- Be sure to stop the engine before changing the oil filter cartridge.

- Allow engine to cool down sufficiently, oil can be hot and can burn.

- Park the vehicle on a flat surface, remove the seat and open the adjust hatch cover.
- Remove the oil filter.
- Put a film of clean engine oil on the rubber seal of the new filter.
- Tighten the filter quickly until it contacts the mounting surface.
Tighten filter by hand an additional 1/2 turn only.
- After the new filter has been replaced, the engine oil normally decreases a little. Make sure that the engine oil does not leak through the seal and check the oil level on the dipstick. Then replenish the engine oil up to the prescribed level.



- ① Bolt;
- ② Cover
- ③ "O" seal ring;
- ④ Engine oil filter

IMPORANT:

- To prevent serious damage to the engine, use only a genuine filter.

■ Replacing Transmission Oil

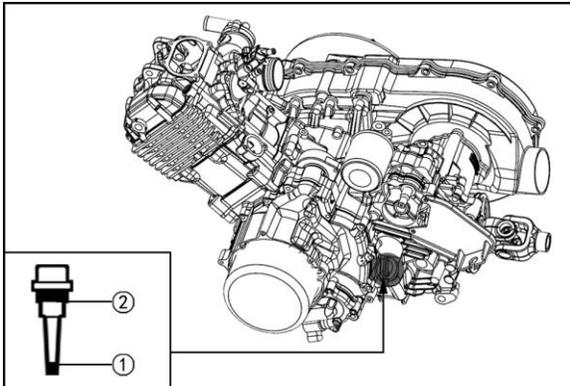
CAUTION

To avoid personal injury:

Periodic Service

- **Be sure to stop the engine before changing oil.**
 - **Allow engine to cool down sufficiently, oil can be hot and can burn.**
1. Park the vehicle on a flat surface, raise the cargo bed, and mount the safety support.
 2. Put a film of clean transmission oil;
 3. Quickly tighten the filter until it contacts the mounting surface, tighten it an additional 1 turn only.
 4. After running the engine for a few minutes, stop the engine and check the oil level again. Add oil to the prescribed level.

Oil capacity	[Filter exchanged]	1L (1.05U.S. qts.)
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- ① Oil Lever
- ② Dipstick

■ Checking Brake Pedal

⚠ CAUTION

- Stop the engine and chock the wheels before checking brake pedal.
- If movement is outside of the specifications contact your local dealer for adjusting the brake.

◆ Checking the brake pedal free travel

Proper brake pedal free travel	7 to 14mm (0.3 to in.)On the pedal
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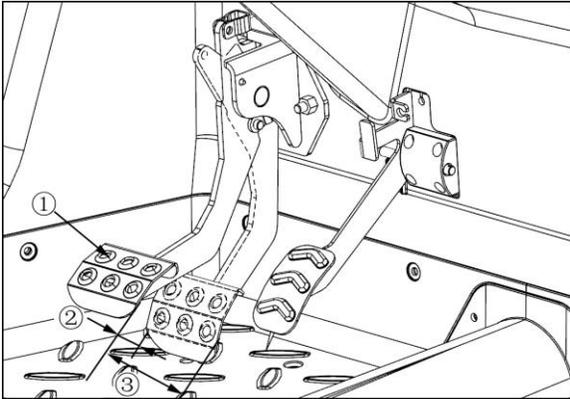
1. Release the parking brake.
2. Slightly depress the brake pedal and measure free travel at the top of the pedal stroke.
3. If brake pedal free travel is outside of the specifications, contact your local dealer for adjusting the brake.

◆ Checking the brake pedal stroke

Pedal stroke	Less than 120mm (4.7in.) On the pedal
--------------	--

1. Release the parking brake.
2. Step on the pedal and measure the pedal stroke.
3. If brake pedal stroke is outside of the specifications, contact your local dealer for adjusting the brake.

Periodic Service



- ① Brake pedal
- ② "FREE TRAVEL" ③ "PEDAL STROKE"

■ Checking Brake Hose and Pipe

1. Check to see that brake hose and lines are not swollen, hardened or cracked.
2. Check the brake hose and pipe joints for oil leaks.
3. If there is any abnormality, consult your local dealer for this service.

■ Checking Brake Light Switch

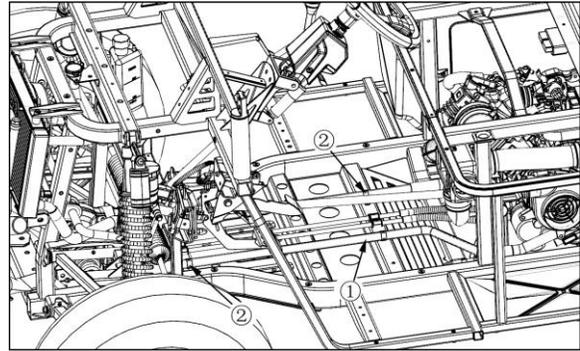
1. Park the vehicle on a flat surface and raise the cargo bed.
2. Turn the key switch to the "ON" position.
3. Step on the brake pedal to check if the brake light comes on.
4. If it does not, check the bulb or brake light switch.

■ Checking Radiator Hose and Clamp

Park the vehicle on a flat surface and raise the cargo bed. Check to see if radiator hoses are properly fixed every 200 hours of operation or six months, whichever comes first.

1. If hose clamps are loose or water leaks, tighten bands securely.
2. Replace hoses and tighten hose clamps

3. securely, if radiator hoses are swollen, hardened or cracked. Replace hoses and hose clamps every 2 years or earlier, if checked and found that hoses are swollen, hardened or cracked.



- ① Radiator hose ② Clamp bands

◆ Precaution at Overheating

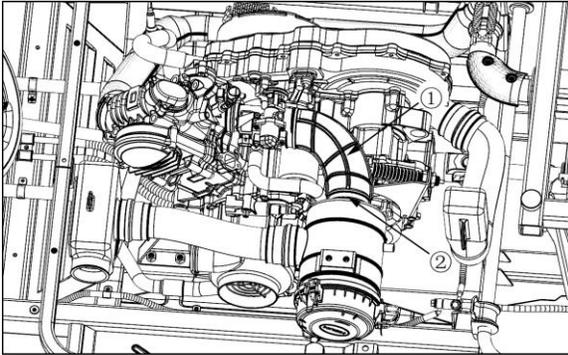
Take the following actions in the event the coolant temperature is close to or more than the boiling point, which is called "Overheating".

1. Stop the vehicle operation in a safe place and keep the engine unloaded idling.
2. Don't stop the engine suddenly, but stop it after about 5 minutes of unloaded idling.
3. Keep yourself well away from the vehicle for at least 10 minutes or while the steam is blowing out.
4. Check to see if there is no danger such as burning, get rid of the causes of overheating according to the "TROUBLESHOOTING" section of the manual, and then start the engine again.

■ Checking Intake Air Line

1. Check to see if the hoses and hose clamps are tight and not damaged.
If hoses and clamps are found to be worn or damaged, replace or repair them at once.

Periodic Service



① Hose ② Hose joint

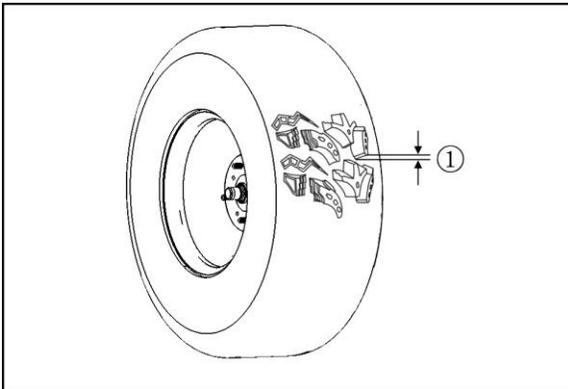
EVERY 300 HOURS

■ Checking Tire

1. Check to see if tires are not damaged.
2. If the tires are cracked, bulged, or cut, or they are worn out, replace or repair them at once.

◆ Tire Tread Depth

Always replace the tires when the tread depth is worn to minimum allowable.



① 3mm(0.12in)

EVERY 400 HOURS

■ Changing Transmission Fluid

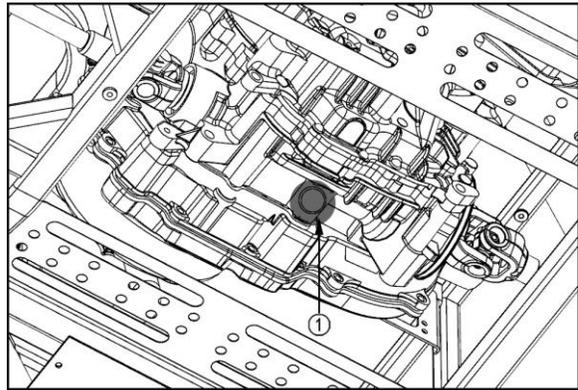


To avoid personal injury:

- Park the vehicle on a flat surface, raise the cargo bed, mount the safety support.

- Allow engine to cool down sufficiently, oil can be hot and can burn.

1. Park the vehicle on a flat surface, raise the cargo bed, mount the safety support.
2. To drain the used oil, remove the drain plug at the bottom of the transmission case and drain the oil completely into the oil pan.
3. After draining, reinstall the drain plug.
4. After running the engine for a few minutes, stop the engine and check the oil level again; add oil to prescribed level.



① Drain plug

IMPORTANT:

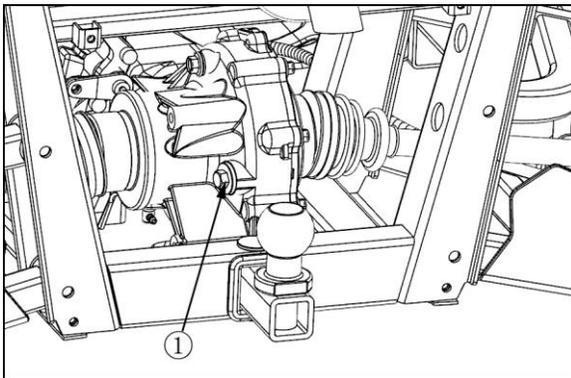
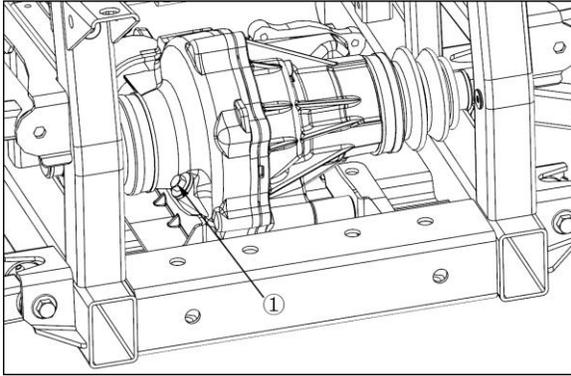
- Do not operate the vehicle immediately after changing the transmission fluid.
- Run the engine at medium speed for a few minutes to prevent damage to the transmission.

■ Changing Front and Rear Axle Case Oil

1. Park the vehicle on a firm, flat and level surface.
2. To drain the used oil, remove the drain the oil completely into the oil pan.
3. Fill with the new oil up to the upper notch on the dipstick.

Periodic Service

Oil capacity for front axle case	0.28L (0.072U.S.gals.)
Oil capacity for rear axle case	0.20L (0.052U.S.gals.)



- ① Front axle case drain plug
- ② Rear axle case drain plug

EVERY 500 HOURS

■ Replacing Fuel Filter

Consult your local dealer for this service.

EVERY 600 HOURS

■ Adjusting Engine Valve Clearance

Consult your local dealer for this service.

EVERY 1500 HOURS

■ Checking Injection and Fuel Pump

Consult your local dealer for this service.

EVERY 1 YEAR

■ Replacing Air Cleaner Primary Element and Secondary Element

(See “Cleaning Air Cleaner Primary Element” in “every 100 HOURS” in “PERIODIC SERVICE” section.)

EVERY 2 YEARS

■ Changing Brake Fluid

Consult your local Dealer for this service.

(See “Checking Brake Fluid Level” in “DAILY CHECK” in “PERIODIC SERVICE” section.)

■ Flushing Cooling System and Changing Coolant

⚠ CAUTION

To avoid personal injury:

- Do not remove the radiator cap while coolant is hot. When cool, slowly rotate cap to the first stop and allow sufficient time for excess pressure to escape before removing the cap completely.

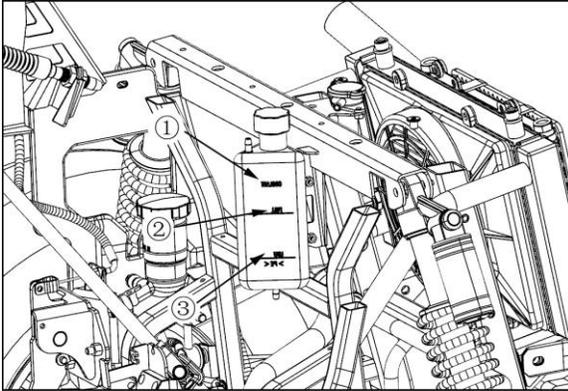
1. Stop the engine and let cool down.
2. To drain the coolant, open the radiator drain plug and remove radiator cap. The radiator cap must be removed to completely drain the coolant.
3. After all coolant is drained, close the drain plug.
4. Fill with clean water and cooling system cleaner.
5. Follow directions of the cleaner instruction.
6. After flushing, fill with clean water and anti-freeze until the coolant level is just below the radiator cap.
7. Fill with fresh water up to the “FULL” mark

Periodic Service

on the recovery tank.

8. Start and operate the engine for few minutes.
9. Stop the engine and let cool.
10. Check coolant level of recovery tank and coolant if necessary.

Coolant capacity	1.8L (1.89 U.S.qts.)
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- ① Recovery tank ② "FULL"
③ "LOW"

IMPORTANT:

- Do not start engine without coolant.
- Use clean, fresh water and anti-freeze to fill the radiator and recovery tank.
- When the anti-freeze is mixed with water, the antifreeze mixing ratio must be less than 50%.
- Securely tighten radiator cap. If the cap is loose or improperly fitted, water may leak out and the engine could overheat.

■ Anti-Freeze



To avoid personal injury:

- When using antifreeze, put on some protection such as rubber gloves.(Antifreeze contains poison.)
- If you should drink antifreeze, throw up at

once and take medical attention.

- When antifreeze comes in contact with the skin or clothing, wash it off immediately. ◦
- Do not mix different types of Antifreeze. The mixture can produce chemical reaction causing harmful substances.
- Antifreeze is extremely flammable and explosive under certain conditions. Keep fire and children away from antifreeze.
- When draining fluids from the engine, place some container underneath the engine body.
- Do not pour waste onto the grounds, down a drain, or into any water source.
- Also, observe the relevant environmental protection regulations when disposing of antifreeze.

If it freezes, coolant can damage the cylinders and radiator. If the ambient temperature falls below 0°C(32°F) or before a long-term storage, let out cooling water completely, or mix fresh water with long-life coolant and fill the radiator and recovery tank with the mixture. •

1. Long-life coolant (hereafter LLC) comes in several types. Use ethylene glycol(EG) type for this engine.
2. Before employing LLC-mixed cooling water, fill the radiator with fresh water and empty it again.
Repeat this procedure 2 or 3 times to clean up the inside.
3. Mixing the LLC
4. The procedure for the mixing of water and antifreeze differs according to the make of the antifreeze and the ambient temperature.

Periodic Service

Refer to SEA J1034 standard, more specifically also to SAE J814c.

IMPORTANT:

- When the antifreeze is mixed with water, the antifreeze mixing ratio must be less than 50%.

VOL% Anti-freeze	Freezing point		Boiling point	
	°C	°F	°C	°F
40	-24	-12	106	222
50	-37	-34	108	226

*At 1.013x10⁵Pa (760mmHg) pressure (atmospheric).

A higher boiling point is obtained by using a radiator

pressure cap which permits the development of pressure within the cooling system.

5. Adding the LLC

- 1) Add only water if the mixture reduces in amount by evaporation.
- 2) If there is a mixture leak, add the LLC of the same manufacturer and type in the same mixture percentage.

* Never add any long-life coolant of different manufacturer.(Different brands may have different additive components, and the engine may fail to perform as specified.)

6. When the LLC is mixed, do not employ any radiator cleaning agent. The LLC contains anticorrosive agent. If mixed with the cleaning agent, sludge may build up, adversely affecting the engine parts.

7. The vehicle's genuine long-life coolant has a service life of 2 years. Be sure to change the

coolant every 2 years.

NOTE:

- The above data represent industry standards that necessitate a minimum glycol content in the concentrated antifreeze.
- When the coolant level drops due to evaporation, add water only to keep the antifreeze mixing ratio less than 50%. In case of leakage, add antifreeze and water in the specified mixing ratio before filling into the radiator.

■ Replacing Radiator Hose (Water pipes)

Replace the hoses and clamps.

(See "Checking Radiator Hose and Clamp" in "EVERY 200 HOURS" in "PERIODIC SERVICE" section.)

■ Replacing Fuel Hose

Consult your local HUANSONG Dealer for this service.

■ Replacing Brake Master Cylinder (Inner parts)

Consult your local dealer for this service.

■ Replacing Front Brake Seal

Consult your local dealer for this service.

■ Replacing Rear Brake Cylinder Seal

Consult your local dealer for this service.

■ Replacing Intake Air Line

Consult your local dealer for this service.

EVERY 4 YEARS

■ Replacing Brake Hose

Consult your local Dealer for this service.

■ Replacing Slow-Blow Fuses

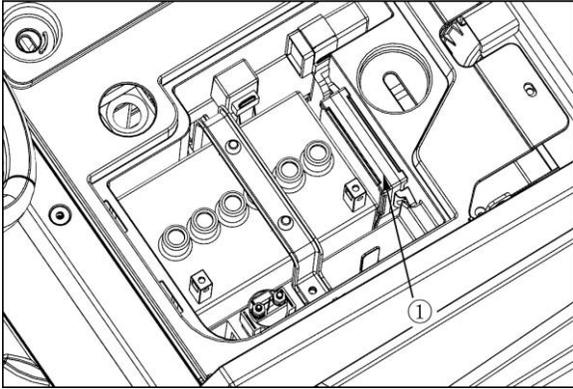
The slow-blow fuses are intended to protect the

Periodic Service

electrical cabling. If any of them have blown out, be sure to pinpoint the cause.

◆ Replacing procedure

- 1) Disconnect the negative cable of the battery.
- 2) Open the slow-blow fuse box cover.
- 3) Pull out the slow-blow fuse.
- 4) Insert a new slow-blow fuse into the box.
- 5) Close the slow-blow fuse box cover.
- 6) Connect the negative battery cable.



① Slow-blow fuse box cover

■ Replacing Light Bulb

- Head lights
Take the bulb out of the light body and replace it with a new one.
- Other lights
Detach the lens and replace the bulb

Light	Capacity
Head lights	2x55W
Tail light	LED 0.5W
Brake light	LED 1W
Instrument panel light	1W

STORAGE

⚠ CAUTION

To avoid personal injury:

- Do not clean the vehicle when the engine is running.
- To avoid the danger of exhaust fume poisoning, do not operate the engine in a closed building without proper ventilation.
- When storing, remove the key from the key switch to avoid unauthorized persons from operating the vehicle and getting injured.

VEHICLE STORAGE

If you intend to store your vehicle for an extended period of time, follow the procedures outlined below.

These procedures will insure that the vehicle is ready to operate with minimum preparation when it is removed from storage.

1. Check the bolts and nuts for looseness. and tighten if necessary.
2. Apply grease to vehicle areas where bare metal will rust also to pivot areas.
3. Unload from cargo bed.
4. Inflate the tire to a pressure a little higher than usual.
5. Charge the engine oil and run the engine to circulate oil throughout the engine block and internal moving parts for about 5 minutes.
6. With all implements lowered to the ground, coat any exposed rods with grease (if equipped).
7. Remove the battery from the vehicle. Store

Periodic Service

- the battery following the battery storage procedures.
- Keep the vehicle in a dry place where the vehicle is sheltered from the elements. Cover the vehicle.
 - Keep the vehicle indoors in a dry area that is protected from sunlight and excessive heat. If the vehicle must be stored outdoors, cover it with a waterproof tarpaulin. Put boards under the tires to keep dampness away from tire. Keep the tires out of direct sunlight and extreme heat.

IMPORTANT:

- When washing the vehicle, be sure to stop the engine. Allow sufficient time for the engine to cool before washing.
- Do not wash with a high-pressure car-washing machine.
- Cover the vehicle after the muffler and the engine have cooled down.

REMOVING THE VEHICLE FROM STORAGE

- Check the tire air pressure and inflate the tires if they are low.
- Install battery before installing the battery, Be sure it is fully charged.
- Check to see if the fan works.
- Check all fluid levels (engine oil, transmission oil, engine coolant, transmission coolant and any attached implements).

- Start the engine. Observe all gauges. If all gauges are functioning properly and reading normal, move the vehicle outside. Once outside, park the vehicle and let the engine idle for at least five minutes. Shut the engine off and work around vehicle and make a visual inspection looking for evidence of oil or water leaks.
- With the engine fully warm up. Release the parking brake and test the brakes for proper adjustment as you move forward. Adjust the brake as necessary

Troubleshooting

ENGINE TROUBLESHOOTING

If something is wrong with the engine, refer to the table below for the cause and its corrective countermeasure.

Trouble	Cause	Countermeasure
Engine is difficult to start or will not start.	<ul style="list-style-type: none"> No fuel flow 	<ul style="list-style-type: none"> Check the fuel tank and fuel filter. Check the electric fuel pump. Check the injector. Check the ECU with Motor Scan KF90121. Replace filter electric fuel pump injector and ECU If necessary.
	<ul style="list-style-type: none"> Water is in the fuel system 	<ul style="list-style-type: none"> Check to see if the fuel tank cover is tight.
	<ul style="list-style-type: none"> In winter, oil viscosity increases, and Engine revolution is slow. 	<ul style="list-style-type: none"> Use oils of different viscosities, depending on ambient temperatures.
	<ul style="list-style-type: none"> Battery becomes weak and the engine does not turn over quick enough. 	<ul style="list-style-type: none"> Clean battery cables and terminals. Charge the battery. In cold weather (-15°C), always remove the battery from the vehicle, charge and store it indoors. install it on the vehicle only when the vehicle is going to be used.
Engine power is insufficient	<ul style="list-style-type: none"> Insufficient fuel. The injector is clogged. Crankshaft position sensor is bad.. The air cleaner is clogged. Spark plug is dirty or fouled. Ignition coil is bad. 	<ul style="list-style-type: none"> Check the fuel system. Clean or replace the injector. Replace crankshaft position sensor. Clean or replace the air cleaner. Clean or replace the spark plug. Replace the ignition coil.
Engine stops suddenly	<ul style="list-style-type: none"> Check with the diagnostic instrument (Motor Scan KF90121). 	
Engine overheats	<ul style="list-style-type: none"> Engine overloaded 	<ul style="list-style-type: none"> Shift to lower gear or reduce load.
	<ul style="list-style-type: none"> Low coolant level. 	<ul style="list-style-type: none"> Fill cooling system to the correct level; Check radiator and hoses for loose connections or leaks.
	<ul style="list-style-type: none"> The motor driven fan does not turn. 	<ul style="list-style-type: none"> Check to see if the fuse is not blown. Check the electric system.
	<ul style="list-style-type: none"> Dirty radiator core or grille screens. 	<ul style="list-style-type: none"> Remove all trash.
	<ul style="list-style-type: none"> Coolant flow route corroded. 	<ul style="list-style-type: none"> Flush cooling system.

If you have any questions, consult your local dealer.

Troubleshooting

Diagnostic Trouble Code Table

MT05 ECU Malf Code	
Table:23	
Malf code in MT05	Description
P0107	MAP Circuit Low Voltage or Open
P0108	MAP Circuit High Voltage
P0112	IAT Circuit Low Voltage
P0113	IAT Circuit High Voltage or Open
P0117	Coolant/Oil Temperature Sensor Circuit Low Voltage
P0118	Coolant/Oil Temperature Sensor Circuit High Voltage or Open
P0122	TPS Circuit Low Voltage or Open
P0123	TPS Circuit High Voltage
P0131	O2A Circuit Low Voltage
P0132	O2A Circuit High Voltage
P0031	O2A Heater Circuit High Voltage
P0032	O2A Heater Circuit Low Voltage
P0201	Injector 1 Circuit Malfunction
P0202	Injector 2 Circuit Malfunction
P0230	FPR Coil Circuit Low Voltage or Open
P0232	FPR Coil Circuit High Voltage
P0336	CKP Sensor Noisy Signal
P0337	CKP Sensor No Signal
P0351	Cylinder 1 Ignition Coil Malfunction
P0352	Cylinder 2 Ignition Coil Malfunction
P0505	Idle Speed Control Error
P0562	System Voltage Low
P0563	System Voltage High
P0650	MIL Circuit Malfunction
P1693	Tachometer Circuit Low Voltage
P1694	Tachometer Circuit High Voltage

If you have any questions, consult your local dealer.

Troubleshooting

BATTERY TROUBLESHOOTING

Trouble	Cause	Countermeasure	Preventive measure
Starter does not function	<ul style="list-style-type: none"> Battery overused until lights are dim. 	<ul style="list-style-type: none"> Charge the battery sufficiently. 	<ul style="list-style-type: none"> Charge the battery properly.
	<ul style="list-style-type: none"> Battery has not been recharged. 		
	<ul style="list-style-type: none"> Poor terminal connection 	<ul style="list-style-type: none"> Clean the terminal and tighten securely. 	<ul style="list-style-type: none"> Keep the terminal clean and tight. Apply grease and treat with anti-corrosive.
	<ul style="list-style-type: none"> Battery life expired 	<ul style="list-style-type: none"> Replace new battery 	
At initial start the starter does not function, and lights soon become dim	<ul style="list-style-type: none"> Insufficient charging 	<ul style="list-style-type: none"> Charge battery Insufficiently 	<ul style="list-style-type: none"> Battery must be serviced properly before initial use
When viewed from the top, the battery terminals look white. * Refillable type battery only	<ul style="list-style-type: none"> Battery was used with an insufficient amount of electrolyte. 	<ul style="list-style-type: none"> Add distilled water and charge the battery. 	<ul style="list-style-type: none"> Regularly check the electrolyte level.
	<ul style="list-style-type: none"> Battery was used with too much without recharging. 	<ul style="list-style-type: none"> Charge battery Insufficiently 	<ul style="list-style-type: none"> Charge battery properly
Recharging is impossible.	<ul style="list-style-type: none"> Battery life expired. 	<ul style="list-style-type: none"> Replace battery. 	
Terminals are severely corroded and heat up.	<ul style="list-style-type: none"> Poor terminal connection 	<ul style="list-style-type: none"> Clean the terminal and tighten securely. 	<ul style="list-style-type: none"> Keep the terminal clean and tight. Apply grease and treat with anti-corrosives.
Battery electrolyte level drops rapidly. * Refillable type battery only	<ul style="list-style-type: none"> There is a crack or pin holes in the electrolytic cells. 	<ul style="list-style-type: none"> Replace battery. 	
	<ul style="list-style-type: none"> Charging system trouble. 	<ul style="list-style-type: none"> Consult your local dealer. 	

- If you have any questions, consult your local dealer.
- The factory installed battery is non-refillable type.

Troubleshooting

MACHINE TROUBLESHOOTING

Trouble	Cause	Countermeasure
Trouble shifting gears	<ul style="list-style-type: none"> ● High idling speed of engine 	<ul style="list-style-type: none"> ● Replace throttle cable ● Replace throttle pedal ● Replace the throttle
	<ul style="list-style-type: none"> ● High rotary speed for clutch connection. 	<ul style="list-style-type: none"> ● Replace the junior clutch spring; ● Replace the primary clutch.
	<ul style="list-style-type: none"> ● Gearshift cable is out of adjustment. 	<ul style="list-style-type: none"> ● Put the gearshift rod into the position of "N". ● Put the gearshift arm of engine into "N". ● Adjust the shift cable and the bolt. ● Lock tightly.
	<ul style="list-style-type: none"> ● Gear abrasion 	<ul style="list-style-type: none"> ● Replace the gears
Transmission noise	<ul style="list-style-type: none"> ● Poor clearance for the inner and outside gears of transmission shaft 	<ul style="list-style-type: none"> ● Replace the gears
	<ul style="list-style-type: none"> ● Poor clearance of transmission gears. 	<ul style="list-style-type: none"> ● Replace the gears
	<ul style="list-style-type: none"> ● Poor connection of gear end face 	<ul style="list-style-type: none"> ● Replace the gears
Reduced vehicle power	<ul style="list-style-type: none"> ● Parking brake engaged 	<ul style="list-style-type: none"> ● Loosen the parking brake
	<ul style="list-style-type: none"> ● Hydraulic disc braking system is activated 	<ul style="list-style-type: none"> ● Contact servicing dealer.
	<ul style="list-style-type: none"> ● CVT transmission sliding 	<ul style="list-style-type: none"> ● Removing the grease for the clutch. Replace CVT transmission belt Servicing dealer to replace the clutch.
Brake noise	<ul style="list-style-type: none"> ● Insufficient brake oil 	<ul style="list-style-type: none"> ● Check the braking oil level
	<ul style="list-style-type: none"> ● Air inside the braking system. 	<ul style="list-style-type: none"> ● Contact servicing dealer.
	<ul style="list-style-type: none"> ● Brake discs abrasion 	<ul style="list-style-type: none"> ● Contact servicing dealer.
	<ul style="list-style-type: none"> ● Assembling bolt of disc plate loose 	<ul style="list-style-type: none"> ● Lock tightly
	<ul style="list-style-type: none"> ● Assembling bolt for disc brake clippers loose 	<ul style="list-style-type: none"> ● Lock tightly

If you have any questions, consult your local servicing dealer.

VECTOR 500 VEHICLE WARRANTY

HISUN MOTORS CORP., 301 E. University Drive, McKinney, TX 75069 (HISUN) gives the below LIMITED WARRANTY on all components of your HISUN vehicle against defects in material or workmanship.

Warranty Terms by Model:

- Vector Series (250cc, 500cc) – 1 year
- Vector E1 - 1 year

HISUN further warrants that the spark arrester in this product will meet the efficiency requirements of USFS standard 5100-1C for at least 1000 hours when subjected to normal use and when maintenance and installation are in accordance with HISUN recommendations.

This warranty covers parts and labor charges for repair or replacement of defective parts and begins on the date of purchase by the original retail purchaser. This warranty is transferable to another owner during the warranty period through a HISUN dealer, but any such transfer will not extend the original term of the warranty. The duration of this warranty may vary by international region based upon local laws and regulations.

Registration

At the time of sale, the Warranty Registration Form must be completed by your dealer and submitted to HISUN within ten days of purchase. Upon receipt of this registration, HISUN will record the registration for warranty. No verification of registration will be sent to the purchaser as the copy of the Warranty Registration Form will be your proof of warranty coverage. If you have not signed the original registration and received the customer copy, please contact your dealer immediately. **NO WARRANTY COVERAGE WILL BE ALLOWED UNLESS YOUR VEHICLE IS REGISTERED WITH HISUN.** Initial dealer preparation and set-up of your vehicle is very important in ensuring trouble-free operation. Purchasing a machine in the crate or without proper dealer set-up will void your warranty coverage.

Warranty Coverage and Exclusions:

Limitations of Warranties and Remedies

This HISUN limited warranty excludes any failures that are not caused by a defect in material or workmanship. **THIS WARRANTY DOES NOT COVER CLAIMS OF DEFECTIVE DESIGN.** This warranty also does not cover acts of God, accidental damage, normal wear and tear, abuse or improper handling. This warranty also does not cover any vehicle, component, or part that has been altered structurally, modified, neglected, improperly maintained or used for racing, competition or purposes other than for which it was designed.

This warranty excludes damages or failures resulting from improper engine break-in, improper lubrication; improper engine timing; improper fuel; surface imperfections caused by external stress, heat, cold or contamination; operator error or abuse; improper component alignment, tension, adjustment or altitude compensation; snow, water, dirt or other foreign substance ingestion/contamination; improper maintenance; modified components; use of aftermarket or unapproved components, accessories, or attachments; unauthorized repairs; or repairs made after the warranty period expires or by an unauthorized repair center.

VECTOR 500 VEHICLE WARRANTY

Limitations of Warranties and Remedies

This warranty excludes damages or failures caused by abuse, accident, fire, or any other cause other than a defect in materials or workmanship and provides no coverage for consumable components, general wear items, or any parts exposed to friction surfaces, stresses, environmental conditions and/or contamination for which they were not designed or not intended, including but not limited to the following items:

- Wheels and Tires
- Finished and unfinished surfaces
- Suspension components
- Throttle body components
- Brake components
- Engine components
- Seat components
- Drive belts
- Clutches and components
- Hydraulic components and fluids
- Steering components
- Circuit breakers/Fuses
- Batteries
- Electronic components
- Light bulbs/Sealed beam lamps
- Spark plugs
- Filters
- Sealants
- Lubricants
- Coolants
- Bushings
- Bearings

Lubricants and Fluids

1. Mixing oil brands or using non-recommended oil may cause engine damage. We recommend the use of HISUN engine oil.

2. Damage or failure resulting from the use of non-recommended lubricants or fluids is not covered by this warranty.

This warranty provides no coverage for personal loss or expense, including mileage, transportation costs, hotels, meals, shipping or handling fees, product pick-up or delivery, replacement rentals, loss of product use, loss of profits, or loss of vacation or personal time.

THE EXCLUSIVE REMEDY FOR BREACH OF THIS WARRANTY SHALL BE, AT HISUN' OPTION, REPAIR OR REPLACEMENT OF ANY DEFECTIVE MATERIALS, COMPONENTS, OR PRODUCTS. THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. HISUN SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE. THIS EXCLUSION OF CONSEQUENTIAL, INCIDENTAL, AND SPECIAL DAMAGES IS INDEPENDENT FROM AND SHALL SURVIVE ANY FINDING THAT THE EXCLUSIVE REMEDY FAILED OF ITS ESSENTIAL PURPOSE. THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS EXCLUDED FROM THIS LIMITED WARRANTY. ALL OTHER IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY) ARE LIMITED IN DURATION TO THE ABOVE STATED WARRANTY PERIOD. HISUN DISCLAIMS ALL EXPRESS WARRANTIES NOT STATED IN THIS WARRANTY. SOME STATES DO NOT PERMIT THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ALLOW LIMITATIONS ON THE DURATION OF IMPLIED WARRANTIES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU IF INCONSISTENT WITH CONTROLLING STATE LAW.

VECTOR 500 VEHICLE WARRANTY

How to Obtain Warranty Service

If your vehicle requires warranty service, you must take it to a HISUN Servicing Dealer. When requesting warranty service you must present your copy of the **Warranty Registration Form** to the dealer. (THE COST OF TRANSPORTATION TO AND FROM THE DEALER IS YOUR RESPONSIBILITY). HISUN suggests that you use your original selling dealer; however, you may use any HISUN Servicing Dealer to perform warranty service.

Outside the Country where your product was purchased:

If you are traveling temporarily outside the country where your product was purchased, you should take your product to an authorized HISUN dealer. You must show the dealer photo identification from the country of the selling dealer's authorized location as proof of residence. Upon residence verification, the servicing dealer will be authorized to perform the warranty repair.

If you purchase from a private party:

If you purchase a HISUN product from a private party, to be kept and used outside of the country in which the product was originally purchased, all warranty coverage will be denied. You must nonetheless register your product under your name and address with a local HISUN dealer in your country to ensure that you receive safety information and notices regarding your product.

Exported Products

EXCEPT WHERE SPECIFICALLY REQUIRED BY LAW, THERE IS NO WARRANTY OR SERVICE BULLETIN COVERAGE ON THIS PRODUCT IF IT IS SOLD OUTSIDE THE COUNTRY OF THE SELLING DEALER'S AUTHORIZED LOCATION. This policy does not apply to products that have received authorization for export from HISUN. Dealers may not give authorization for export. You should consult an authorized dealer to determine this product's warranty or service coverage if you have any questions. This policy does not apply to products registered to government officials or military personnel on assignment outside the country of the selling dealer's authorized location. This policy does not apply to Safety Bulletins.

Notice

If your product is registered outside of the country where it was purchased and you have not followed the procedure set above, your product will no longer be eligible for warranty or service bulletin coverage of any kind, other than safety bulletins. Products registered to government officials or military personnel on assignment outside of the country where the product was purchased will continue to be covered by the Limited Warranty.

Please work with your dealer to resolve any warranty issues. Should your dealer require any additional assistance, they will contact the appropriate person at HISUN.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or in different countries. If any of the above terms are void because of federal, state, local law, all other warranty terms will remain in effect.

For questions call HISUN Customer Assistance: United States & Canada: 1-877-838-6188

U.S.A. EPA Emissions Limited Warranty

This emissions limited warranty is in addition to the HISUN standard limited warranty for your vehicle. HISUN MOTORS CORP., warrants that at the time it is first purchased, this emissions-certified vehicle is designed, built and equipped so it conforms with applicable U.S. Environmental Protection Agency emission regulations. HISUN warrants that the vehicle is free from defects in materials and workmanship that would cause it to fail to meet these regulations.

The warranty period for off road vehicles 100cc or greater emissions-certified vehicles starts on the date of purchase by original retail purchaser and continues for a period of 500 hours of engine operation, 3100 miles of vehicle travel, or 30 calendar months from the date of purchase, whichever comes first.

The warranty period for ATVs less than 100cc emissions-certified vehicles starts on the date of purchase by original retail purchaser and continues for a period of 250 hours of engine operation, 1550 miles of vehicle travel, or 30 calendar months from the date of purchase, whichever comes first.

This EPA emissions warranty period is extended for at least as long as the standard factory warranty that HISUN provides on the vehicle as a whole. The EPA emissions warranty period does not further extend if you purchase additional warranty coverage in the form of a service contract or other paid warranty extension, but emission-related parts may be covered subject to the terms of any such paid service contract or paid warranty extension.

This emissions limited warranty covers components whose failure increases the vehicle's regulated emissions, and it covers components of systems whose only purpose is to control emissions. Repairing or replacing other components not covered by this warranty is the responsibility of the vehicle owner. This emissions limited warranty does not cover components whose failure does not increase the vehicle's regulated emissions.

For exhaust emissions, emission-related components include any engine parts related to the following systems:

- Air-induction system
- Ignition system
- Fuel system
- Exhaust gas recirculation systems

The following parts are also considered emission-related components for exhaust emissions:

- After treatment devices
- Sensors
- Crankcase ventilation valves
- Electronic control units

The following parts are considered emission-related components for evaporative emissions:

- Fuel Tank
- Vacuum Control Diaphragms*
- Fuel Cap
- Control Cables*
- Fuel Line
- Control Linkages*
- Fuel Line Fittings
- Purge Valves
- Clamps*
- Vapor Hoses
- Pressure Relief Valves*
- Liquid/Vapor Separator
- Control Valves*
- Carbon Canister
- Control Solenoids*
- Canister Mounting Brackets
- Electronic Controls*
- Carburetor Purge Port Connector

*As related to the evaporative emission control system.

Emission-related components also include any other part whose only purpose is to reduce emissions or whose failure will increase emissions without significantly degrading engine/equipment performance. The exclusive remedy for breach of this limited warranty shall be, at the exclusive option of HISUN, repair or replacement of any defective materials, components or products.

THE REMEDIES SET FORTH IN THIS LIMITED WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. HISUN SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE OR OTHER TORT OR OTHERWISE. THIS EXCLUSION OF CONSEQUENTIAL, INCIDENTAL, AND SPECIAL DAMAGES IS INDEPENDENT FROM AND SHALL SURVIVE ANY FINDING THAT THE EXCLUSIVE REMEDY FAILED OF ITS ESSENTIAL PURPOSE.

ALL IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO THE WARRANTY PERIOD DESCRIBED HEREIN. HISUN 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 if it is inconsistent with the controlling state law.

This limited warranty excludes failures not caused by a defect in material or workmanship. This limited warranty does not cover damage due to accidents, abuse or improper handling, maintenance or use. This limited warranty also does not cover any engine that has been structurally altered, or when the vehicle has been used in racing competition. This limited warranty also does not cover physical damage, corrosion or defects caused by fire, explosions or other similar causes beyond the control of HISUN.

Owners are responsible for performing the scheduled maintenance identified in the owner's manual. HISUN may deny warranty claims for failures that have been caused by the owners or operator's improper maintenance or use, by accidents for which HISUN has no responsibility, or by acts of God. Any qualified repair shop or person may maintain, replace, or repair the emission control devices or systems on your vehicle. An authorized HISUN dealer can perform any service that may be necessary for your vehicle. HISUN also recommends HISUN parts, however equivalent parts may be used for such service. It is a potential violation of the Clean Air Act if a part supplied by an aftermarket parts manufacturer reduces the effectiveness of the vehicle's emission controls. Tampering with emission controls is prohibited by federal law.

If you have any questions regarding your warranty rights and responsibilities, please contact HISUN Customer Care: United States & Canada: 1-877-838-6188.



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