

FarmBoss 1200

Diesel Utility Owner's manual



For Maintenance and Safety

□

⚠ WARNING

Read, understand, and follow all of the instructions and safety precautions in this manual and on all product labels.

Failure to follow the safety precautions could result in serious injury or death.

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INTRODUCTION:

FARMBOSS diesel utility is designed for work and not for high speed competition use, there will always be new ways of have accidents, but LEEWAY's sincere desire is for you to work safety. Remember inexperience is the biggest contributing factor in accidents. Read this manual carefully, obey the instructions, warnings and cautions and always use commonsense. Remember loss of control can lead to serious injury or death. Young adults and inexperienced riders, must have proper instruction and be fully supervised, until fully competent to ride an UTV. Make sure all instructions are understood.

Remember you are responsible for your own safety and the safety of those in your care. LEEWAY cannot be held liable for accidents no matter what the cause. You are responsible for checking your vehicle thoroughly for faults, and for riding in a safe manner.

With any motor vehicle operation, there is an element of risk. By choosing to ride this vehicle, you have accepted this risk. LEEWAY is not responsible for negligence, speeding, component failure, inexperience and other unforeseen circumstances, that can cause injury or death.

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

ATTENTION: The Safety Alert Symbol means:

ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED!

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

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

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

WARNING

● **Failure to follow the warning and advice in this manual can result in serious injury or death.**

● **“Warning”- Safety First- Important notice.**

To assist you with safety, here is some advice you need to be aware of.

Only you can protect yourself.

Safety is your responsibility, for yourself and minors in your care.

1. Pay attention and obey the warning labels on the vehicle, (if they become faded or are removed, replace them immediately).
2. Take introduction and make certain you are fully aware of, and able to operate, the controls of the vehicle.
3. Ride under the instruction or a competent teacher, until you are an experienced rider.
4. These vehicles are designed and manufactured for off road use only. It is illegal and unsafe to use the machine on any public street, road, or highway, tarred, dirt, paved, or cement.
5. Please check your local riding laws and regulations before operating this machine.
6. Please check local environmental laws and respect them. LEEWAY would like to keep our environment clean, safe, and beautiful for all to enjoy as we are sure you do.
7. Riding and UTV is a serious matter, it can be hazardous to operate. A collision, or roll over can occur quickly, with often serious consequences, even routine manoeuvres, like turning, riding over obstacles and sloping ground, or across water, mud, or loose surfaces can be hazardous. The quad handles differently to other vehicles.

8. Never exceed the recommended load capacity. Cargo should be properly distributed and securely attached. If carrying a load, allow greater distances for braking and reduce your speed, especially if pulling a small trailer. Overloading, or improper loading, can cause mechanical failure, loss of control and unnecessary danger.
9. Never fit unauthorized accessories to the UTV.
10. Never ride faster than your skill, or conditions permit.
11. Never ride when tired, or after consuming alcohol, drugs, or with a dangerous medical condition.
12. Inspect your UTV each time you use it, make sure there are no mechanical faults, faulty tires, brakes, or controls.
It must be in safe operating condition, with sufficient oil, fuel, braking fluid and tire pressure.
13. Always follow inspection and maintenance procedures as recommended.
14. Always use the recommended tires and pressures to lessen the risk of tire failure.
15. Always turn the engine off when refuel.
16. Don't run the engine in an enclosed area as this can be fatal.
17. Engine oil from a recently run motor can be very hot. When draining, for an oil change, be careful.
18. When changing a fuse, fit the correct one, as an incorrect fuse can cause a fire.
19. When checking battery fluid, remember a spark could cause the battery to explode.
Switch off engine and power and avoid sparks.
20. Never put your feet on the ground when vehicle is in motion, or moving off.
21. It is your responsibility to make sure that the UTV is properly and safely operated and maintained.
22. People should not operate an UTV beyond their physical, or mental limitation, or capabilities.
23. Keep the owner's manual in a safe place of the vehicle, or under the seat at all times.
24. Only use an UTV on level, open ground, away from people, while learning.
25. Obey government laws at all times.
26. Contact your agent for anything that you do not understand, or need advice on.
27. If you allowed untrained people to use UTV, you endanger his/ her life, and the lives of others..
28. All riders should take a safety course of instruction.
29. Never use gasoline (petrol) to clean your UTV.
30. A slight spark could cause a fatal explosion. Keep a fire extinguisher handy when working.
31. "Grabbing" shuddering, or lack of braking ability, could mean there is a serious problem with the brakes.
This must be remedied before riding, to prevent a possibly serious accident.
32. Don't touch any part of the engine, exhaust, or silencer until it has cooled down.
33. Don't siphon toxic liquids like fuel, or brake fluid by mouth, or allow them to remain on your skin.
34. Wipe up any oil, or grease that could cause you to slip, or lose the controls on the UTV.
35. Don't allow animals, or children around an unattended UTV.
36. Remember, many people have lost fingers and limbs that have got pulled into moving parts, especially chains or belt. Do not work on the UTV with engine running.
37. If in spite of all these precautions being followed, you are unfortunate enough to injure yourself, please seek medical attention immediately.

* This safety list was compiled by LEEWAY with intention of creating awareness, and improving your safety.
SAFETY COMES FIRST. ... **FARMBOSS 1200** diesel utility is your good assistant on farm, forestry, mining & construction site ...

**INTRODUCTION:
Vehicle Identification Numbers**



VIN number



Engine Serial Number

SAFETY

Safe Riding Gear

The driver and all passengers must wear helmet, eye protection, gloves, long-sleeve shirt, long pants, over-the-ankle boots and seat belt at all times. Protective gear reduces the chance of injury

SAFETY

Safety Labels

Warning labels have been placed on the vehicle for your protection. Read and follow the instructions of the labels on the vehicle carefully. If any of the labels depicted in this manual differ from the labels on your vehicle, always read and follow the instructions of the labels on the vehicle.

Drive Responsibly Warning

WARNING

Improper UTV use can result in SEVERE INJURY or DEATH.
NEVER operate:

- without proper training or instruction.
- at speeds too fast for your skills or the conditions
- on public roads-a collision can occur with another vehicle.
- with a passenger-passengers risk of losing control.

ALWAYS:

- use proper riding techniques to avoid vehicle overturns on hills and rough terrain and in turns.
- avoid paved surfaces-pavement may seriously affect handling and control.

LOCATE AND READ OWNER'S MANUAL.

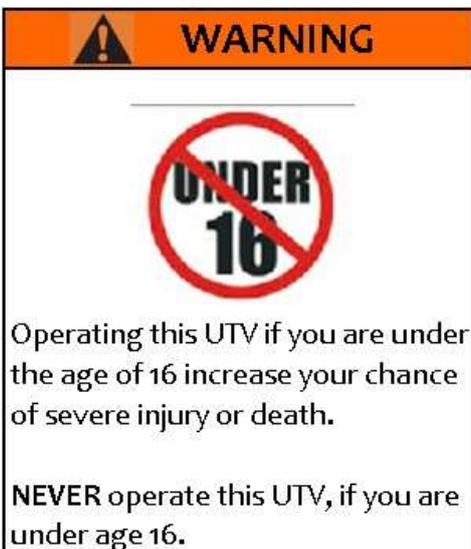
FOLLOW INSTRUCTIONS AND WARNINGS.



Age Restrictions

WARNING

Operating this UTV if you are under the age of 16 will increase your chance of severe INJURY or DEATH.
NEVER operate this UTV, if you are under age 16.



Safety Labels

Payload Warning

⚠ WARNING

OVERLOADING CAN CAUSE LOSS OF CONTROL.

LOSS OF CONTROL CAN RESULT IN SEVERE INJURY OR DEATH.

Never overload this UTV. Maximum load limits for this UTV are as follows:

CARGO BED CARRY: 500 kg (1100 lbs)

TOWING CAPACITY: 910 kg (2006 lbs) (CARGO PLUS TRAILER WEIGHT)

Reduce speed and allow greater distance for braking when carrying cargo.

Overloading or carrying tall, off-center, or unsecured loads will increase your risk of losing control.

Loads should be centered and carried as low as possible in box.

For stability on rough or hilly terrain, reduce speed and cargo.

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•For stability on rough or hilly terrain, reduce speed and cargo.

Passenger

⚠ WARNING

Driving with passengers in the cargo box can result in sever INJURY or DEATH

- Never carry passengers in cargo box.
- Passengers must always ride in the cab with seat belts fastened securely.

⚠ WARNING
Driving with passengers in the cargo box can result in sever injury or death.

Never carry passengers in cargo box.
Passengers must always ride in the cab with seat belts fastened securely.

Safety Labels

Tire Pressure Warning

WARNING

IMPROPER TIRE PRESSURE CAN CAUSE LOSS OF CONTROL.
LOSS OF CONTROL CAN RESULT IN SEVERE INJURY OR DEATH.
Check tire pressure and condition daily.

- Front: Max. load 340lbs at 7psi
- Rear: Max. load 420lbs at 7psi

Tire pressure should be checked when tires are cold, before you ride.

 WARNING
<p>IMPROPER TIRE PRESSURE CAN CAUSE LOSS OF CONTROL.</p> <p>LOSS OF CONTROL CAN RESULT IN SEVERE INJURY OR DEATH.</p> <p>Check tire pressure and condition daily.</p> <p>•Front: Max.load 340lbs at 7psi</p> <p>•Rear: Max.load 420lbs at 7psi</p> <p>Tire pressure should be checked when tires are cold, before you ride.</p> <p>Read the Owner's Manual for more tire information.</p>

Overheating Warning

WARNING

Do not switch off the engine when temp. light on (engine overheating), you should stop the UTV, let the engine idle till temp. light off.

If you switch off the engine while overheating, the fan stop working, the water stop flowing, the heat inside will damage the engine.

 WARNING
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SAFETY

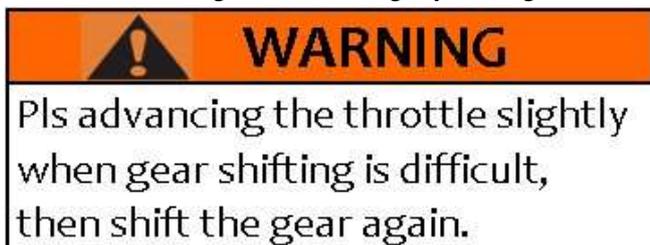
Shift Caution

CAUTION

- To avoid transmission damage, shift only when vehicle is stationary and at idle.



- Please advancing the throttle slightly when gear shifting is difficult, shift the gear again.



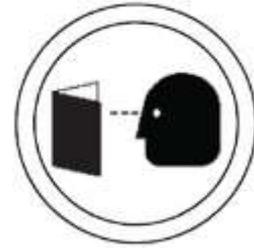
- DO NOT SHIFT TO NEUTRAL GEAR WHEN RIDE ON DOWNHILL ROAD

SAFETY

Operator Safety

Operating Without Instruction

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



All operators must read and understand the Owner's Manual and all warning and instruction labels before operating the vehicle.

Failure to Inspect Before Operating

Failure to inspect and verify that the vehicle is in safe operating condition before operating increases the risk of an accident. Always perform the pre-ride inspection before each use of your *FARMBOSS 1200* to make sure it's in safe operating condition. Always follow all inspection and maintenance procedures and schedules described in this owner's manual.

Using Alcohol or Drugs

Operating the vehicle after consuming alcohol or drugs could adversely affect operator judgment, reaction time, balance and perception.

Never drink alcohol or use drugs or medications before or while operating this vehicle.



Seat Belts

Riding in this vehicle without wearing the seat belt increases the risk of serious injury in the event of rollover, loss of control, other accident or sudden stop. Seat belts may reduce the severity of injury in these circumstances.

All riders *must* wear seat belts at all times.

Operating With a Load on the Vehicle

The weight of both cargo and passengers impacts vehicle operation. For your safety and the safety of others, carefully consider how your vehicle is loaded and how to safely operate the vehicle. Follow the instructions in this manual for loading, tire pressure, gear selection and speed.

- **Do not exceed vehicle weight capacities.** The vehicle's maximum weight capacity is listed in the specifications section of this manual and on a label on the vehicle. When more passenger weight is added, cargo weight may need to be reduced accordingly.
- The recommended tire pressures are listed in the specifications section of this manual and on a label on the vehicle.

Always follow these guidelines:

Under ANY of these conditions:	Do ALL of these steps:
Passenger and/or cargo exceeds half the maximum weight capacity	1. Slow down. 2. Verify tire pressure. 3. Use extra caution when operating.
Operating in rough terrain	
Operating over obstacles	
Climbing an incline	
Towing	

Operator Safety

Exposure to Exhaust

Engine exhaust fumes are poisonous and can cause loss of consciousness or death in a short time. Never start the engine or let it run in an enclosed area.

The engine exhaust from this product contains chemicals known to cause cancer, birth defects or other reproductive harm. Operate this vehicle only outdoors or in well-ventilated areas.

Operating a Damaged Vehicle

Operating a damaged vehicle can result in an accident. After any rollover or other accident, have a qualified service dealer inspect the entire machine for possible damage, including (but not limited to) seat belts, rollover protection devices, brakes, throttle and steering systems.

Operating at Excessive Speeds

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

Turning Improperly

Turning improperly could cause loss of traction, loss of control, accident or rollover. Always follow proper procedures for turning as described in this owner's manual. Never turn abruptly or at sharp angles. Never turn at high speeds. Practice turning at slow speeds before attempting to turn at faster speeds.

Operating on Pavement

This vehicle's tires are designed for off-road use only, not for use on pavement. Operating this vehicle on paved surfaces (including sidewalks, paths, parking lots and driveways) may adversely affect the handling of the vehicle and may increase the risk of loss of control and accident or rollover. Avoid operating the vehicle on pavement. If it's unavoidable, travel slowly, travel short distances and avoid sudden turns or stops.

Operating on Public Roads

Operating this vehicle on public streets, roads or highways could result in a collision with another vehicle. Never operate this vehicle on any public street, road or highway, including dirt and gravel roads (unless designated for off-highway use). In some areas it's unlawful to operate this vehicle on public streets, roads and highways.

Jumps and Stunts

Attempting wheelies, jumps and other stunts increases the risk of an accident or rollover. Never attempt wheelies, jumps, or other stunts. Avoid exhibition driving.

Operating in Unfamiliar Terrain

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

Unfamiliar terrain may contain hidden rocks, bumps, or holes that could cause loss of control or rollover. Travel slowly and use extra caution when operating on unfamiliar terrain. Always be alert to changing terrain conditions.

Operator Safety

Operating on Slippery Terrain

Failure to use extra caution when operating on excessively rough, slippery or loose terrain could cause loss of traction, loss of control, accident or rollover. Do not operate on excessively slippery surfaces.

Always slow down and use additional caution when operating on slippery surfaces.

Skidding or sliding due to loss of traction can cause loss of control or rollover (if tires regain traction unexpectedly). Always follow proper procedures for operating on slippery surfaces as described in this owner's manual.

Improper Hill Climbing

Climbing hills improperly can cause loss of control or vehicle rollover. Always follow proper procedures for climbing hills as described in this owner's manual.

Descending Hills Improperly

Improperly descending a hill could cause loss of control or rollover. Always follow proper procedures for traveling down hills as described in this owner's manual.

Stalling While Climbing a Hill

Stalling or rolling backwards while climbing a hill could cause a rollover. Always maintain a steady speed when climbing a hill.

If all forward speed is lost:

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

If you begin rolling downhill:

- Never apply engine power.
- Apply the brakes gradually until the vehicle is fully stopped.
- Place the transmission in reverse and slowly allow the vehicle to roll straight downhill while applying light brake pressure to control speed.

Improper Tire Maintenance

Operating this vehicle with improper tires or with improper or uneven tire pressure could cause loss of control or accident. Always use the size and type of tires specified for your vehicle. Always maintain proper tire pressure as described in the owner's manual and on safety labels.

Operating on Frozen Bodies of Water

Severe injury or death can result if the vehicle and/or the operator fall through the ice. Never operate the vehicle on a frozen body of water unless you have first verified that the ice is sufficiently thick to support the weight and moving force of the vehicle, you and your passengers, and your cargo, together with any other vehicles in your party.

Always check with local authorities and residents to confirm ice conditions and thickness over your entire route. Vehicle operators assume all risk associated with ice conditions on frozen bodies of water.

Operator Safety

Unauthorized Use of the Vehicle

Leaving the keys in the ignition can lead to unauthorized use of the vehicle by someone under the age of 16, without a drivers license, or without proper training. This could result in an accident or rollover.

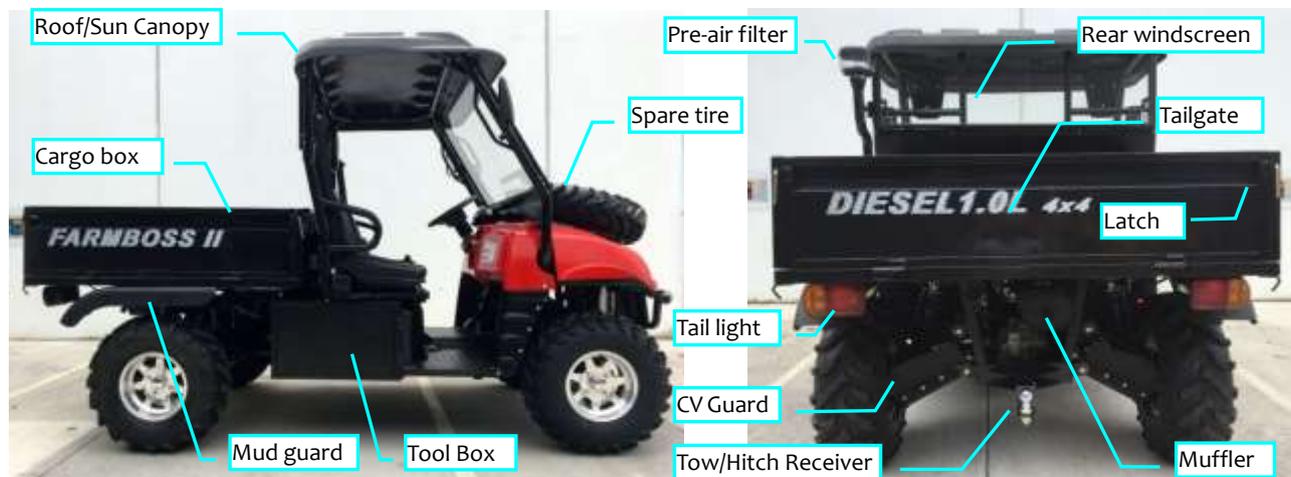
Always remove the ignition key when the vehicle is not in use.

Hot Exhaust Systems

Exhaust system components are very hot during and after use of the vehicle. Hot components can cause burns and fire. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system. Use caution when traveling through tall grass, especially dry grass, to avoid debris build-up around the exhaust system.

FEATURES AND CONTROLS

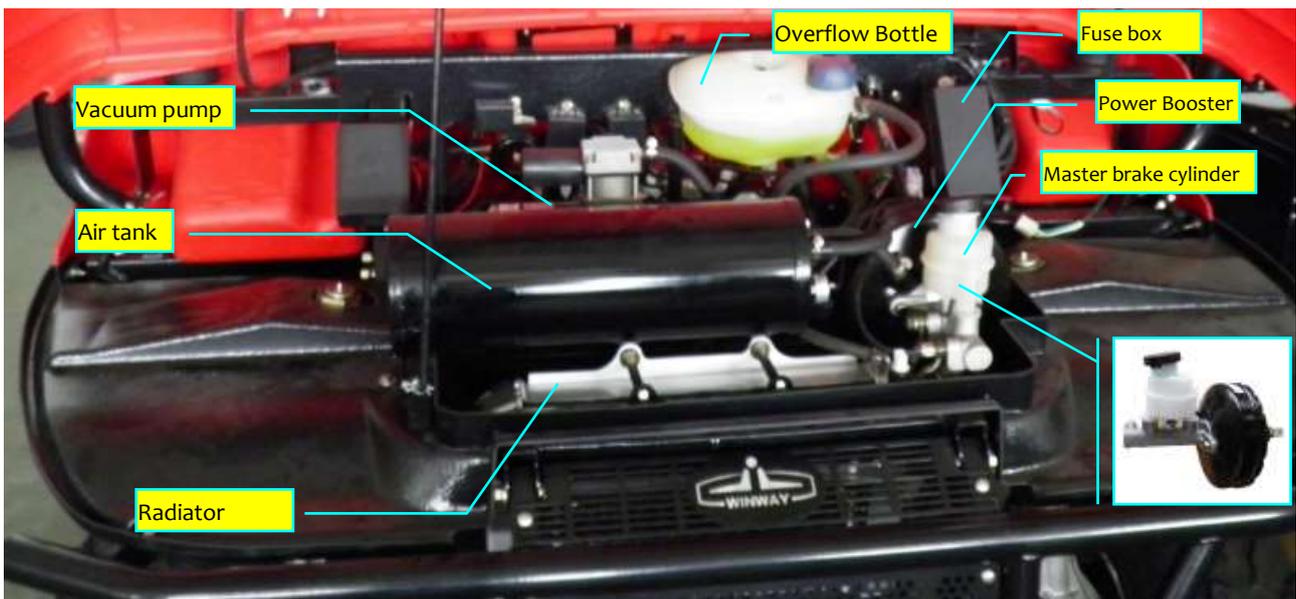
Component Locations



FEATURES AND CONTROLS

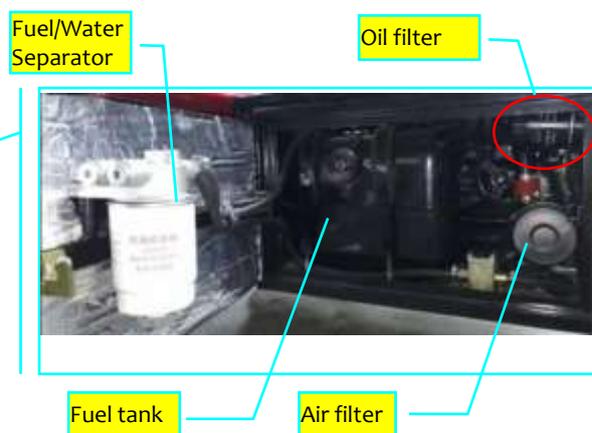
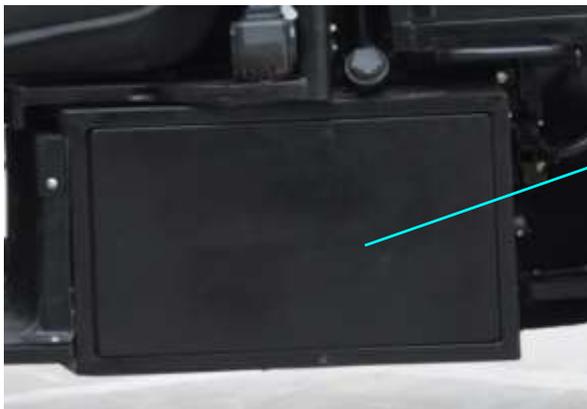
Component Locations

Battery/Air Tank/Vacuum Power Booster



Vacuum Power Booster: Consist of Vacuum Pump, Air Tank & Booster, it can increase the brake force, shorten the braking distance and improve the safety performance.

Oil Filter/Fuel Water Separator/Air Filter/Fuel Tank

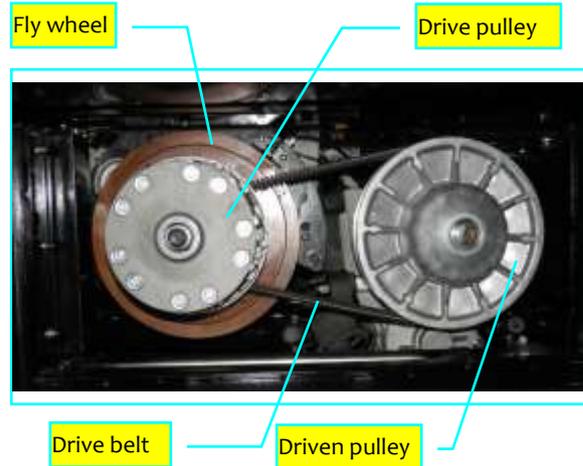


Fuel Filter

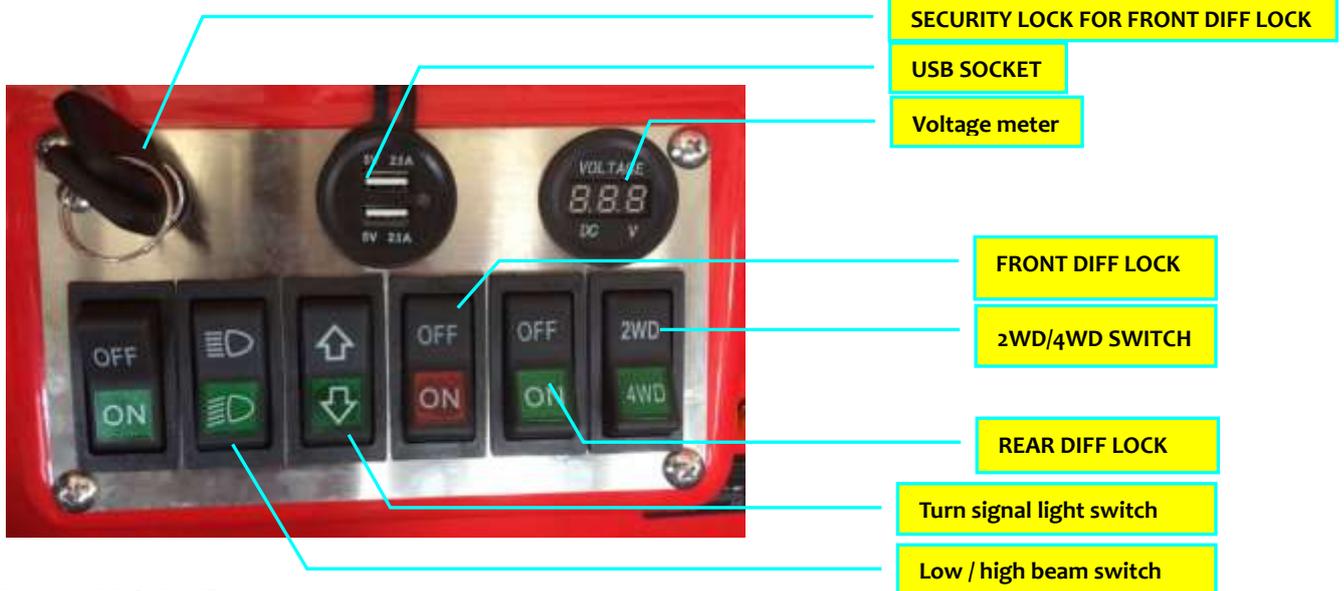


FEATURES AND CONTROLS

Switches and Indicator Lights Clutch/CVT Belt



Light Switch / 2WD/4WD/ DIFF LOCK



Hazard Light Button

Press this button on when drive in smog days, raining days, and at night, or park besides the road when vehicle is out of work

Ignition Switch

The ignition switch is a three-position, key-operated switch. The key can be removed from the switch in the OFF position.



ON: All electrical circuits are supplied with power, the ignition system and fuel system, the headlights and taillights come on when the light switch is on.

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

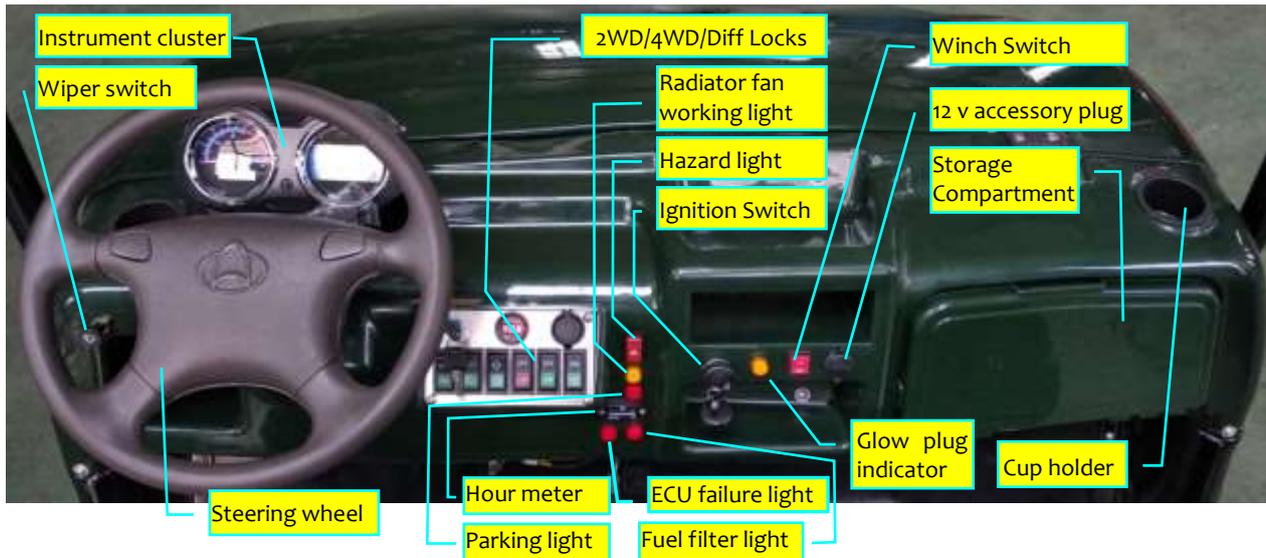
Start: The electric starter is engaged by turning and holding the key in this position. Release the key when the engine starts.

Winch Switch

This switch controls winch in or out.

FEATURES AND CONTROLS

Console



Gear Selector

Use the gear selector to shift gears. Low gear is the primary driving range for the heavy load. High gear is intended for use on hard-packed surfaces with light loads. To shift gears, brake to a complete stop. When the engine is idling, move the lever to the desired gear.

NOTICE: Shifting gears with the engine speed above idle or while the vehicle is moving could cause transmission damage. Always shift when the vehicle is stationary and the engine is at idle.



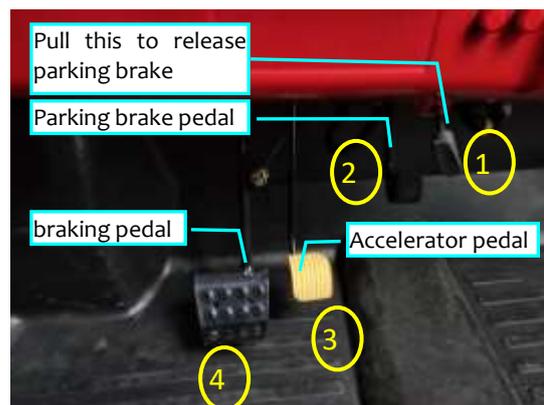
Park Brake Pad

To help prevent the vehicle from rolling, engage the park brake when parking the vehicle. When the park brake is fully engaged, the park brake indicator will be illuminated.

NOTE : Inspect and adjust park brake cable tension after the first 25 hours of operation and every 100 hours thereafter to

ensure proper cable tension. Always apply the service brakes before engaging or releasing the park brake.

1. Apply the brakes pedal ④.
2. Step down the park brake pad. ②
3. To release the park brake, pull ① to release the park Brake on rear disc.
4. Engage the park gear lever.



WARNING! Operating the vehicle while the park brake is engaged could cause loss of control and result in serious injury or death. Always disengage the park brake before operating the vehicle.

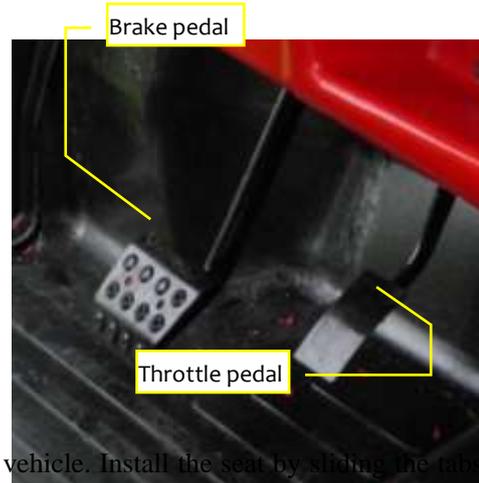
FEATURES AND CONTROLS

Brake Pedal

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

Throttle Pedal

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



Seat Removal

Pull up on the front of the seat and slide it toward the front of the vehicle. Install the seat by sliding the tabs into the rear of the seat base. Push down firmly on the front of the seat until the pins are fully seated into the grommets.

Seat Belts

This vehicle is equipped with three-point lap and diagonal seat belts on all seats. Always make sure the seat belts are secured for all riders before operating.

WARNING! Falling from a moving vehicle could result in serious injury or death. Always fasten your seat belt securely before operating or riding in the *FARMBOSS*.

To wear the seat belt properly, follow this procedure:

1. Pull the seat belt latch downward and across your chest toward the buckle at the inner edge of the seat. The belt should fit snugly across your hips and diagonally across your chest. Make sure the belt is not twisted.
2. Push the latch plate into the buckle until it clicks.
3. Release the strap, it will self-tighten.
4. To release the seat belt, press the square red button in the buckle's center.



Seat Belt Inspection

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

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

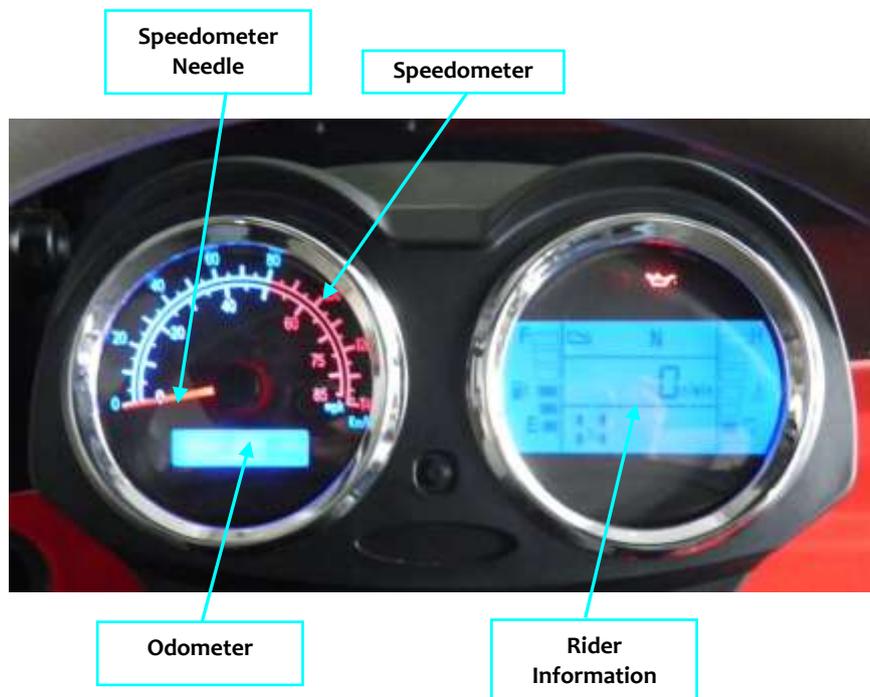
FEATURES AND CONTROLS



Instrument Cluster

Your vehicle is equipped with an instrument cluster that senses vehicle speed from the transmission.

NOTICE: High water pressure may damage components. Wash the vehicle by hand or with a garden hose using mild soap. Certain products, including insect repellents and chemicals, will damage the instrument cluster lens and other plastic surfaces. Do not use alcohol to clean the instrument cluster. Do not allow insect sprays to contact the lens. Immediately clean off any fuel that splashes on the instrument cluster.



Speedometer:

The indicator shows vehicle speed in km/h & MPH.

Odometer Mode

The odometer records the miles traveled by the vehicle.

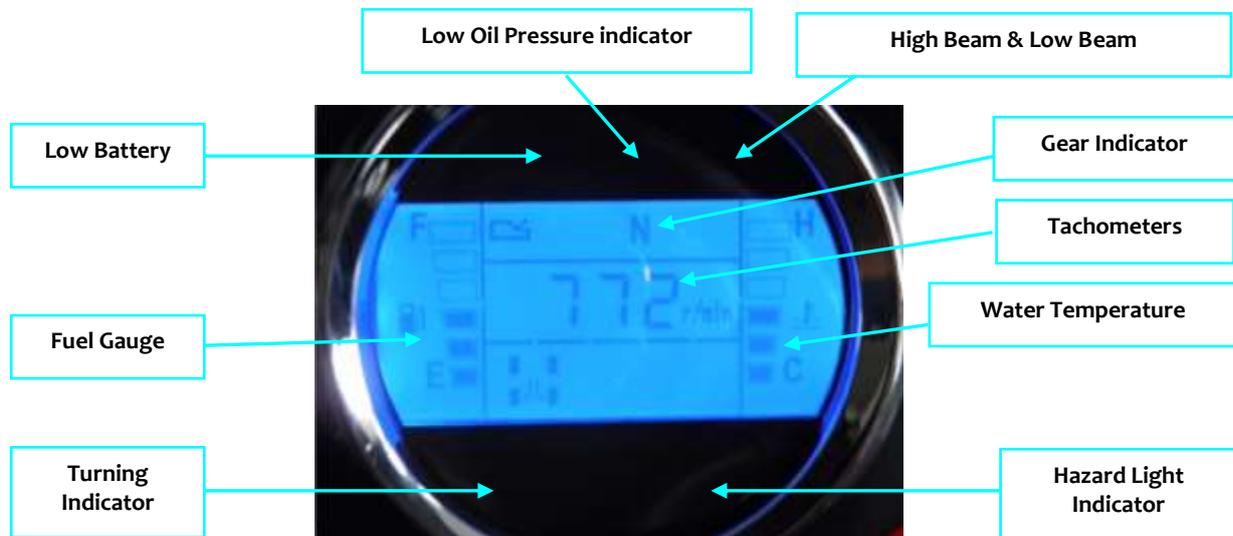
FEATURES AND CONTROLS



Instrument Cluster

Rider Information

The rider information center is located in the instrument cluster. All segments will briefly light up at start-up. If the instrument cluster fails to illuminate, take the vehicle to your LEEWAY dealer for proper diagnosis.



Low Battery and Over Voltage:

This warning usually indicates that the vehicle is operating at an RPM too low to keep the battery charged. It may also occur when the engine is at idle and high electrical load (lights, cooling fan, accessories) is applied. Drive at a higher RPM or recharge the battery to clear the warning.

Low Oil Pressure Indicator

If the low oil pressure indicator remains on when the engine is running, stop the engine immediately to avoid engine damage. Check the oil level and add oil as necessary to bring the level within the safe operating range. See page 67. If the oil level is adequate, see your LEEWAY dealer for service.

High Beam & Low Beam Indicator:

This indicator displays high beam & low beam.

Gear Indicator

This indicator displays gear shifter position.

H = High Gear

L = Low Gear

N = Neutral

R = Reverse Gear

CAUTION: When shifting icon  appears, shifting is available.

NOTICE: Shifting gears with the engine speed above idle or while the vehicle is moving could cause transmission damage. Always shift when the vehicle is stationary and the engine is at idle.

- DO NOT SHIFT TO NEUTRAL GEAR WHEN RIDE ON DOWNHILL ROAD

FEATURES AND CONTROLS

Instrument Cluster

Tachometer:

The engine RPM is displayed digitally. Small fluctuations in the RPM from day to day may be normal because of changes in humidity, temperature and elevation.

Wheel Drive indicator:

This indicator displays 2WD, 4WD & diff lock.

Fuel Gauge:

The segments of the fuel gauge show the level of fuel in the fuel tank.

When the last segment clears, a low fuel warning is activated. All segments will flash, Refuel immediately.

Water Temperature Gauge:

The segments of the temperature gauge show the level of temperature in the engine. If the gauge reaches “H”, the engine is overheating. Check and clean the radiator screen and core and the engine exterior. If the display continues, see your dealer for service

Turning Indicator:

Turning left or turning right light flash when turning.

Hazard Light Indicator

Both turning lights flash when press the hazard light button on.

OPERATION



⚠ WARNING

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

Break-In Period

The break-in period for your new vehicle is the first 50 hours of operation. No single action on your part is as important as a proper break-in period. Careful treatment of a new engine will result in more efficient performance and longer life for the engine.

New Engine Break-In

1. Fill the fuel tank with the recommended fuel.
2. On the initial engine start-up, allow the engine to idle for approximately 15 minutes. Check for proper engine oil pressure, diesel fuel leaks, engine oil leaks, coolant leaks and proper operation of the indicators and gauges.
3. During the first hour of operation, vary engine speed and the load on the engine. Short periods of maximum engine speed and load are desirable. Avoid prolonged operation at minimum or maximum engine speeds and loads for the next 4 to 5 hours.
4. During the break-in period, carefully observe the engine oil pressure and engine temperature.
5. Check the engine oil and coolant levels frequently during the break-in period. Perform regular checks on areas outlined on the daily pre-ride inspection checklist.
6. Change both the oil and the filter at 50 hours.
7. Check fluid levels of transmission and all gearcases after the first 25 hours of operation and every 100 hours thereafter.
8. Inspect and adjust park brake cable tension after the first 25 hours of operation and every 100 hours thereafter.

CVT Break-in (Clutches/Belt)

A proper break-in of the clutches and drive belt will ensure a longer life and better performance. Break-in the clutches and belt by operating at slower speeds during the break-in period as recommended. Pull only light loads. Avoid aggressive acceleration and high speed operation during the break-in period.

If a belt fails, always clean any debris from the duct and from the engine compartment.

OPERATION

Pre-Ride Inspection

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

Item	Remark
Brake system/pedal travel	Ensure proper operation
Brake fluid	Ensure proper level
Front suspension	Inspect, lubricate if necessary
Rear suspension	Inspect, lubricate if necessary
Steering	Ensure free operation
Tires	Inspect condition and pressure
Wheels/fasteners	Inspect, ensure fastener tightness
Frame nuts, bolts, fasteners	Inspect, ensure tightness
Fuel and oil	Ensure proper levels
Coolant level	Ensure proper level
Coolant hoses	Inspect for leaks
Throttle	Ensure proper operation
Indicator lights/switches	Ensure operation
Air filter, pre-filter	Inspect, clean
Air box sediment tube	Drain deposits whenever visible
Headlamp	Check operation
Brake light/tail lamp	Check operation
Seat Belts	Check length of belt for damage, check latches for proper operation

OPERATION

Fuel Recommendations

To keep the engine in best working condition, be sure to use the recommended fuel: **light diesel oil**.

Diesel fuel should comply with the following world-wide specifications.

Diesel Fuel Specification	Location
ASTM D975 No. 1D S15, S500 No. 2D S15, S500	USA
EN590:96	European Union
ISO 8217 DMX	International
BS 2869-A1 or A2	United Kingdom
JIS K2204 Grade No. 2	Japan
KSM-2610	South Korea
GB252	China

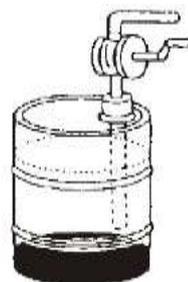
Additional Technical Fuel Requirements

- The fuel cetane number should be equal to 45 or higher.
- The sulfur content must not exceed 0.5% by volume. Less than 0.5% is preferred. Especially in the U.S.A. and Canada, Low Sulfur (300 to 500 ppm (mg/kg) or Ultra Low Sulfur fuel should be used.
- NEVER mix kerosene, used engine oil or residual fuels with diesel fuel.
- Water and sediment in the fuel should not exceed 0.05% by volume.
- Keep the fuel tank and fuel-handling equipment clean at all times.
- Poor quality fuel can reduce engine performance and/or cause engine damage.
- Fuel additives are not recommended. Some fuel additives may cause poor engine performance.
- Ash content must not exceed 0.01% by volume.
- Carbon residue content must not exceed 0.35% by volume. Less than 0.1% is preferred.
- Total aromatics content should not exceed 35% by volume. Less than 30% is preferred.
- PAH (polycyclic aromatic hydrocarbons) content should be below 10% by volume.
- Metal content of Na, Mg, Si and Al should be equal to or lower than 1 mass ppm (test analysis method JPI-5S-44-95).
- Lubricity: Wear mark of WS1.4 should be Max. 0.018 in. (460µm) at HFRR test.

Fuel usage

The fuel with water or dust contaminated will cause the rough running of the engine. Be sure to use the clean container for storing the fuel, meanwhile, the container must be stored at a clean and dry place. Then suck out the upper level clean fuel with a pump as below figure.

- The improper fuel cannot make the engine Achieve the best performance, and even cause the fault of the part.
- Only use the upper level clean fuel. Do not use the lower deposited fuel.



OPERATION

Fuel Recommendations



Handling Fuel

WARNING! Diesel fuel is flammable and explosive under certain conditions.

- NEVER refuel with the engine running.
- Always refuel outdoors or in a well ventilated area.
- Fill the fuel tank with diesel fuel ONLY. Filling with gasoline may result in a fire and will damage the engine.
- Remove flammable material containers from the box before filling them with fuel.
- Do not smoke or allow open flames or sparks in or near the area where refueling is performed.
- Wipe up all spills immediately.
- Keep sparks, open flames or any other form of ignition (match, cigarette) well away when refueling.
- NEVER remove the fuel cap while the engine is running.
- NEVER overfill the fuel tank. Do not fill the tank neck.
- If fuel spills on your skin or clothing, immediately wash it off with soap and water and change clothing.

Refueling

The fuel tank filler cap is located on the left side of the vehicle near the driver's seat. Remove the cap and add the recommended fuel to the bottom of the filler neck. Do not overfill.

1. Add the fuel to the fuel tank.

Add the fuel without containing dirt and water. To prevent the fuel from overfilling during the running course, the amount of the refilled fuel should be 90% of the fuel tank capacity.

2. Eliminate the air in the fuel system.

When refill the fuel at first time or refuel the tank normally as required, you should eliminate the air in the fuel line which begins from the fuel tank, through water-oil separator or fuel filter or primary oil delivery pump, to the fuel injection pump. If the air mixes with the fuel in the fuel line, the fuel injection pump won't provide the high-pressure fuel for the fuel injector, and the engine can't start also. This product adopts the VE distributor pump, and the lubricating and cooling of the VE distributor pump relies on the fuel. So if the fuel is cut off, it will result in damage of VE distributor pump.

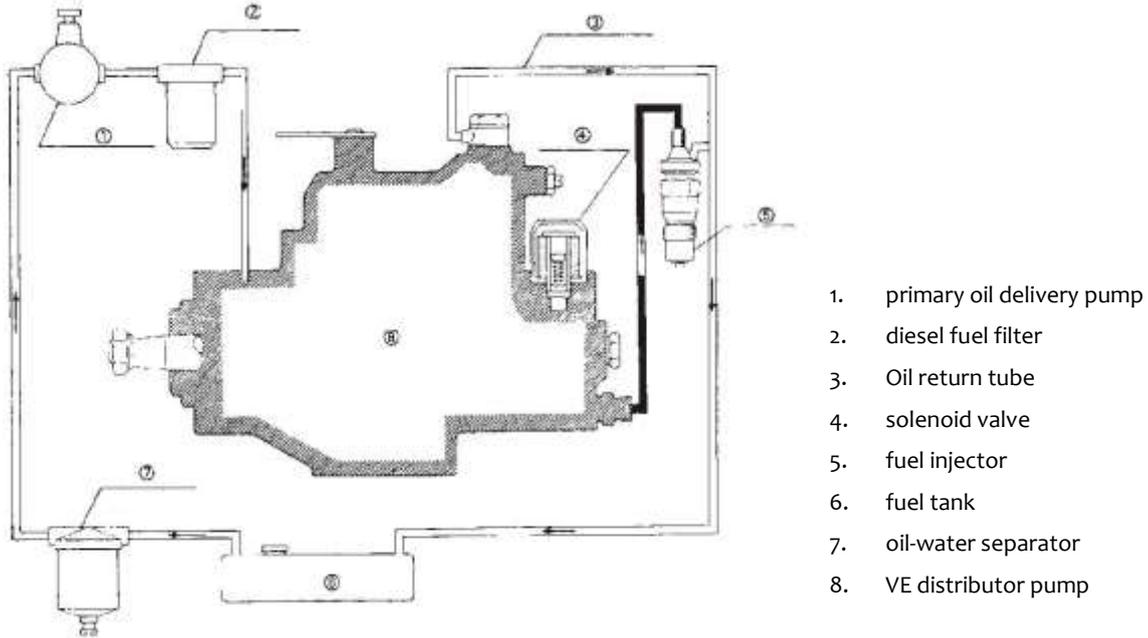
OPERATION

Fuel Recommendations

Refueling

To eliminate the air in the low-pressure fuel line, loosen the connector of the intake pipe in the VE dispensing pump at first, then expel the air from the fuel. Inspect the connector of the VE pump return pipe. If there is a lot of fuel overflowed and no air bubble occur, It indicates that there is no air in the low pressure fuel.

The fuel line of the engine fuel system is as shown:



3. Eliminate the air in the high-pressure fuel line.

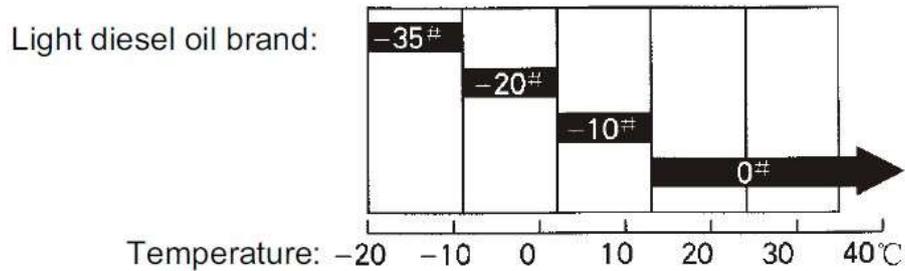
The high-pressure fuel line begins from VE dispensing pump, through high pressure fuel pipe, to the fuel Injector. Method of the treatment: loosen the connector where the high-pressure fuel pipe connects with fuel injector, then start the starter motor and let it run at low speed until the fuel overflows around the connector, finally tighten it. If there is still some air in the high-pressure fuel-pipe, the engine won't start.

OPERATION

Fuel Recommendations

Cold Weather Operation

However, be sure to choose the appropriate brand for the light diesel oil according to actual ambient temperature.



Block Heater Use

If this vehicle will be operated when temperatures are in the -15° to -32° C range, a block heater must be installed. Please see your dealer to purchase a block heater kit.

Operating Conditions

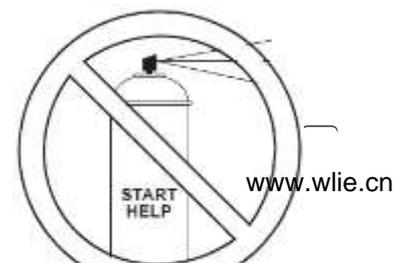
NOTICE: Observe the following environmental operating conditions to maintain engine performance and avoid premature engine wear.

- Avoid operating in the presence of chemical gases or fumes.
- Avoid operating in a corrosive atmosphere such as salt water spray.
- NEVER operate the engine in a floodplain unless proper precautions are taken to avoid being subject to a flood.
- NEVER expose the engine to the rain.
- The standard range of ambient temperatures for the normal operation of the engines is from -20° C to $+40^{\circ}$ C.
- If the ambient temperature exceeds $+40^{\circ}$ C, the engine may overheat and cause the engine oil to break down.
- If the ambient temperature is between -20° C and -35° C, **FARMBOSS** recommends the use of a block heater.

OPERATION

Start the Engine

NOTICE: NEVER use an engine starting aid such as ether. Engine



damage will result.

Before operating this vehicle in cold weather, review the cold weather operation information.

Always wait for the wait-to-start indicator light to turn off before cranking the engine.



1. Always start the engine outdoors or in a well-ventilated area.
2. Sit in the driver's seat and fasten the seat belt.
3. Apply the brakes. Engage the park brake.
4. Shift the transmission to neutral.
5. Turn the ignition switch to cranking the engine.
6. Turn the ignition switch past the ON position to START. Engage the starter for a maximum of five seconds. Release the key when the engine starts.

7. If the engine does not start within five seconds, release the ignition switch and wait five seconds. Repeat steps 5,6 and 7 until the engine starts.

8. Vary the engine RPM slightly with the throttle to aid in warm up until the engine idles smoothly.

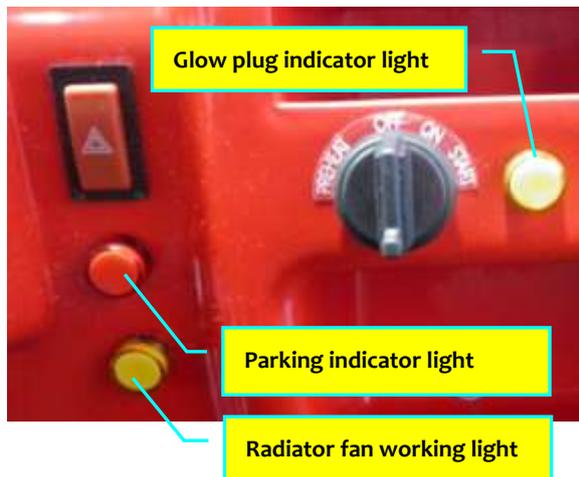
NOTICE: Operating the vehicle immediately after starting could cause engine damage. Allow the engine to warm up for several minutes before operating the vehicle.

Stopping the Engine

For maximum engine life, allow the engine to idle, without load, for 5 minutes. This will allow the engine components that operate at high temperatures, such as the exhaust system, to cool slightly before the engine is shut down.

1. Release the throttle pedal completely and brake to a complete stop.
2. Turn the engine off after radiator fan working light off.
3. Engage the park brake.

WARNING! A rolling vehicle can cause Serious injury. Always engage the park brake after stopping the engine.



OPERATION

Braking

1. Release the throttle pedal completely.
2. Press on the brake pedal evenly and firmly.



3. Practice starting and stopping (using the brakes) until you're familiar with the controls.

Driving Procedure

1. Wear a helmet and eye protection.
2. Perform the pre-ride inspection. See page 24.
3. Sit in the driver's seat and fasten the seat belt.
4. Start the engine and allow it to warm up.
5. Apply the service brakes and shift the transmission into gear.
6. Check your surroundings and determine your path of travel.
7. Release the park brake.
8. Keeping both hands on the steering wheel, slowly release the brakes and depress the throttle with your right foot to begin driving.
9. Drive slowly. Practice maneuvering and using the throttle and brakes on level surfaces.
10. Do not carry a passenger until you have at least two hours of driving experience with this vehicle.

Driving with a Passenger

1. Perform the pre-ride inspection. See page 24.
2. Make sure all passengers are at least 12 years of age and tall enough to comfortably and safely sit in a passenger seat with the seat belt secured, put both feet on the floor and grasp the hand hold.
3. Make sure all passengers are wearing an approved helmet and eye protection.
4. Make sure all passengers secure their seat belt.
5. Make sure all cab nets (or doors) are properly secured.
6. Do not carry more than the recommended number of passengers for your vehicle.
7. Allow a passenger to ride only in a passenger seat.
8. Slow down. Always travel at a speed appropriate for your skills, your passengers' skills, and operating conditions. Avoid unexpected or aggressive maneuvers that could cause discomfort or injury to a passenger.
9. Vehicle handling may change with a passenger and/or cargo on board. Allow more time and distance for braking.
10. Always follow all operating guidelines as outlined on safety labels and in this manual.

OPERATION

Driving Uphill

Whenever traveling uphill, follow these precautions:

1. Always travel straight uphill.
2. Avoid excessively steep hills.



3. Keep both feet on the floor.
4. Always check the terrain carefully before ascending any hill. Never climb hills with excessively slippery or loose surfaces.
5. Proceed at a steady rate of speed and throttle opening. Never open the throttle suddenly.
6. Never go over the crest of a hill at high speed. An obstacle, a sharp drop, or another vehicle or person could be on the other side of the hill.

Driving on a Sidehill (Sidehilling)

Driving on a sidehill is not recommended. Improper procedure could cause loss of control or rollover. Avoid crossing the side of any hill unless absolutely necessary. If crossing a sidehill is *unavoidable*, follow these precautions:

1. Slow down.
2. Exercise extreme caution.
3. Avoid crossing the side of a steep hill.

Driving Downhill

When driving downhill, follow these precautions:

1. Avoid excessively steep hills.
2. Drive straight downhill. Avoid descending a hill at an angle, which would cause the vehicle to lean sharply to one side. Travel straight downhill when possible.
3. Slow down.
4. Apply the brakes *slightly* to aid in slowing.

OPERATION

Driving on Slippery Surfaces

⚠ WARNING: Skidding or sliding can cause loss of control or rollover (if tires regain traction unexpectedly). When operating on slippery surfaces such as ice or loose gravel, reduce speed and use extra caution to reduce the chance of skidding or sliding out of control. Do not operate on excessively

slippery surfaces.

Whenever riding on slippery surfaces such as wet trails or loose gravel, or during freezing weather, follow these precautions:

1. Do not operate on excessively rough, slippery or loose terrain.
2. Slow down before entering slippery areas.
3. Maintain a high level of alertness, reading the trail and avoiding quick, sharp turns, which can cause skids.
4. Engage all-wheel drive before wheels begin to lose traction.

NOTICE: Severe damage to the drive train may occur if the AWD is engaged while the wheels are spinning. Always allow the wheels to stop spinning before engaging AWD.

5. Correct a skid by turning the steering wheel in the direction of the skid. *Never apply the brakes during a skid.*

Driving Over Obstacles

Follow these precautions when operating over obstacles:

1. Always check for obstacles before operating in a new area.
2. Look ahead and learn to read the terrain. Be constantly alert for hazards such as logs, rocks and low hanging branches.
3. Travel slowly and use extra caution when operating on unfamiliar terrain. Not all obstacles are immediately visible.
4. Avoid operating over large obstacles such as large rocks and fallen trees. If unavoidable, use extreme caution and operate slowly.
5. Always have all passengers dismount and move away from the vehicle before operating over an obstacle that could cause a rollover.

Driving in Reverse

Follow these precautions when operating in reverse:

1. Always check for obstacles or people behind the vehicle. Always inspect left and right fields of vision before backing.
2. Always avoid backing downhill.
3. Back slowly.
4. Apply the brakes *lightly* for stopping.
5. Avoid turning at sharp angles.
6. Never open the throttle suddenly.

OPERATION

Driving Through Water

Your **FARMBOSS 1200** can operate through water up to a maximum recommended depth equal to the floorboards. **NOTICE:** Driving through water deeper than the floorboards will cause engine damage and will also void the engine warranty.

NOTICE: Immersion can result in major damage if the vehicle isn't serviced correctly and promptly. After immersion, always take the vehicle to a dealer for service. Do not start the engine! If it's impossible to bring the vehicle to your dealer before starting the engine, and take the vehicle to your dealer at the first opportunity.

Follow these procedures when operating through water:

1. Determine water depths and current before entering water.
2. Choose a crossing where both banks have gradual inclines.
3. Proceed slowly, avoiding rocks and obstacles.
4. Avoid operating through deep or fast flowing water.

WARNING! The large tires on your **FARMBOSS 1200** may cause the vehicle to float in deep or fast-flowing water, which could result in loss of control and lead to serious injury or death. Never cross deep or fastflowing water with your **FARMBOSS 1200**.

5. After leaving water, always dry the brakes by applying light pressure to the pedal repeatedly until braking action is normal.

NOTICE: After operating the vehicle in water, it's critical that you perform the services outlined in the Periodic Maintenance. Give special attention to engine oil, transmission oil, all gearcase fluids and all grease fittings.

Parking the Vehicle

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

Parking on an Incline

Avoid parking on an incline if possible. If it's unavoidable, follow these precautions:

1. Apply the brakes.
2. Place the transmission in gear.
3. Engage the park brake.
4. Turn the engine off.
5. Block the rear wheels on the downhill side.

OPERATION

Hauling Cargo

⚠ WARNING: Hauling cargo improperly can alter vehicle handling and may cause loss of control or brake instability, which can result in serious injury or death. Always follow these precautions when hauling cargo:

Never exceed the maximum weight capacity of the vehicle. When determining the weight you are adding

to the vehicle, include the weight of the operator, passenger, accessories, loads in the rack or box and the load on the trailer tongue. The combined weight of these items must not exceed the maximum weight capacity.

REDUCE SPEED AND ALLOW GREATER DISTANCES FOR BRAKING WHEN HAULING CARGO.

Always load the cargo box with the load as far forward and as low as possible.

When operating over rough or hilly terrain, reduce speed and cargo to maintain stable driving conditions.

Always operate the vehicle with extreme care when hauling or towing loads.

Slow down and drive in the lowest gear available.

SECURE ALL LOADS BEFORE OPERATING. Unsecured loads can create unstable operating conditions, which could result in loss of control of the vehicle.

OPERATE ONLY WITH STABLE AND SAFELY ARRANGED LOADS. When handling off-centered loads that cannot be centered, securely fasten the load and operate with extra caution. Always attach the tow load to the hitch point designated for your vehicle.

HEAVY LOADS CAN CAUSE BRAKING AND CONTROL PROBLEMS. Use extreme caution when applying brakes with a loaded vehicle. Avoid terrain or situations that may require backing downhill.

USE EXTREME CAUTION when operating with loads that extend over the rack sides. Stability and maneuverability may be adversely affected, causing vehicle rollover.

DO NOT TRAVEL FASTER THAN THE RECOMMENDED SPEEDS. Vehicle should never exceed 16 km/h (0 MPH) while towing a load on a level grass surface. Vehicle speed should never exceed 8 km/h (5 MPH) when towing loads in rough terrain, while cornering, or while ascending or descending a hill.

OPERATION

Hauling Cargo

The *FARMBOSS* has been designed to carry or tow specific capacities. Always read and understand the load distribution warnings listed on the warning labels. The total load (operator, passenger, accessories, cargo and weight on hitch) must not exceed the maximum weight capacity of the vehicle. Never exceed the following capacities.

Model	Maximum Total Weight Capacity (Level Ground)	Maximum Cargo Box Weight Capacity
FARMBOSS 1200	900 KG (1980 lbs)	500 KG (1102 lbs)

WARNING! Driving with passengers in the cargo box can result in severe injury or death. Never allow passengers to ride in the cargo box. Passengers must always ride in the cab with seat belts fastened securely.

Towing Loads

Towing improperly can alter vehicle handling and may cause loss of control or brake instability. Always follow these precautions when towing:

1. Never load more than 68 kg. (150 lbs) tongue weight on the towing bracket.
2. Always shift to low gear for towing.
3. When towing a disabled vehicle, place the disabled vehicle's transmission in neutral. Do not operate the vehicle faster than 16 km/h (10 MPH) when towing.
4. Towing a trailer increases braking distance. Do not operate the vehicle faster than 16 km/h (10 MPH) when towing.
5. Do not tow more than the recommended weight for the vehicle.
6. Attach a trailer to the trailer hitch bracket only. Do not attach a trailer to any other location or you may lose control of the vehicle.
7. Never tow a trailer on a grade steeper than 15°.

Model	Total Towed Load Weight (Level Ground)	Total Towed Load Weight (15° grade)	Total Hitch Vertical Weight	Maximum Towing Speed
FARMBOSS 1200	910 KG (2006 lbs)	400 KG (882 lbs)	68 KG (150 lbs)	16 km/h (10 MPH)

Belt Life

To extend belt life, use the lowest gear possible when hauling or towing heavy cargo.

OPERATION

Dumping the Cargo Box

1. Select a level site to dump the cargo box. Do not attempt to dump or unload the vehicle while parked on an incline.
2. Apply the brakes.
3. Place the transmission in gear.



4. Engage the park brake.
5. Dismount the vehicle.
6. Ensure that the cargo is positioned evenly or toward the front of the cargo box.
7. Release the tailgate by pulling up on the tailgate latch.

WARNING! If the weight distribution on the box is located toward the rear of the box when the release lever is pulled forward, the box may dump unexpectedly and cause serious injury to the operator or bystanders. Never operate the dump lever without ensuring that the load is positioned evenly or at the front of the box.

8. Stand clear and pull up on the cargo box release lever.
9. Lift the front of the cargo box to dump the cargo.
10. Lower the cargo box and push down securely to latch.

WARNING! Operating the vehicle while the cargo box is raised could result in severe injury. The box could close unexpectedly and cause injury to the driver or passenger. The rear tires will also catch the rear of a raised box, damaging the vehicle and creating hazardous driving conditions. Never operate this vehicle with the cargo box in the raised position.

OPERATION

Front Differential & Rear Differential



SECURITY-LOCK FOR
FRONT DIFF LOCK



This vehicle is equipped with an electrically controlled drive mode selection. Select the appropriate drive mode according to the terrain conditions.

- “2WD” (two-wheel drive) : Power is supplied to the rear wheels only.
- “4WD” (Four-wheel drive) : Power is supplied to the rear and front wheels.
- “Rear Diff Lock”: Power is supplied to the rear wheels with the differential gear locked. Rear wheels turn at same speed regardless of traction.
- “Front Diff Lock”: Power is supplied to the front wheels with the differential gear locked. Front wheels turn at same speed regardless of traction.
- **SECURITY-LOCK : TO MAKE SURE PEOPLE FOLLOW CORRECT OPERATING PROCEDURE (2WD – 4WD – DIFFS LOCK), WE FITTED A SECURITY-LOCK, THE SECURITY-LOCK SWITCHES ON, THE “FRONT DIFF LOCK” IS AVAILABLE, SWITCHES OFF, THE “FRONT DIFF LOCK” IS NOT AVAILABLE**

⚠ WARNING: TO ENGAGE OR DIS-ENGAGE THE “FRONT DIFF LOCK” ON “2WD” DRIVE MODE COULD CAUSE SERIOUS DAMAGE TO THE DRIVE UNIT.

NOTICE! : ALWAYS STOP THE VEHICLE BEFORE CHANGING THE DRIVE MODE.

TIPS: After changing the drive mode, please roll slowly with turning the steering wheel left and right, that would help the differential gear lock to engage or disengage.

MAINTENANCE

Periodic Maintenance Chart

Careful periodic maintenance will help keep your vehicle in the safest, most reliable condition. Inspection, adjustment and lubrication of important components are explained in the periodic maintenance chart. Inspect, clean, lubricate, adjust and replace parts as necessary. When inspection reveals the need for replacement parts, please contact **LEEWAY** dealer.

Tip: Service and adjustments are important for proper vehicle operation. If you're not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

Vehicles subjected to heavy or severe use patterns must be inspected and serviced more frequently.

Severe Use Definition

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

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

MAINTENANCE

Periodic Maintenance Chart

Perform all services at whichever maintenance interval is reached first.

Item	Maintenance Interval (whichever comes first)			Remarks
	Hours	Calendar	Miles (Km)	
Steering		Pre-Ride		Make adjustments as need ed. See Pre-Ride Checklist on page xx.
Front suspension				
Rear suspension				
Tires				
Brake fluid level				
Brake pedal travel				
Brake system				
Wheels/fasteners				
Frame fasteners				
Engine oil level				
Air filter, pre-filter				
Fuel filter/water separator	/	Daily	/	Inspect
Coolant (if applicable)	/	Daily	/	Check level daily, change coolant every 2 years
Radiator	/	Daily	/	Clean dust/dirt from external surfaces daily
Headlamp/tail lamp	/	Daily	/	Check operation; apply dielectric grease if replacing
Air filter, main element	/	Weekly	/	Inspect; replace every 150 hours (or more often)
Brake pad wear	10 H	Monthly	/	Inspect periodically
Battery	20 H	Monthly	/	Check terminals; clean; test
Front Gearcase oil (if equipped)	25 H	1 M	/	Perform a break-in oil level check
Rear gearcase oil (if equipped)	25 H	1 M	/	Perform a break-in oil level check
Transmission oil	25 H	1 M	/	Perform a break-in oil level check
Park brake cable tension	25 H	1 M	/	Check tension, adjust
Engine oil change	50 H	/	/	Perform break-in oil change,then change oil and filter every 100 hours
General lubrication	50 H	3 M	/	Lubricate all fittings, pivots, cables, etc.
Fuel filter/water separator	50 H	3 M	/	Drain water
Shift Linkage	50 H	6 M	/	Inspect, lubricate, adjust
Steering	50 H	6 M	/	Lubricate

MAINTENANCE

Periodic Maintenance Chart



Item	Maintenance Interval (whichever comes first)			Remarks
	Hours	Calendar	Miles (Km)	
Front suspension	50 H	6 M	/	Lubricate
Rear suspension	50 H	6 M	/	Lubricate
Throttle cable	50 H	6 M	/	Inspect; adjust; lubricate; replace if necessary
Drive belt	50 H	6 M	/	Inspect; adjust; replace as needed
Cooling system (if applicable)	50 H	6 M	/	Inspect coolant strength seasonally; pressure test system yearly
Oil lines, fasteners (if equipped)	50 H	6 M	/	Inspect for leaks and loose fittings
Park brake cable tension	100 H	6 M	/	Check tension, adjust
Vacuum power booster	100 H	6 M	/	Inspect; replace as needed
Engine oil change	100 H	/	/	After break-in oil change at 50 hours, change oil and filter every 100 hours
Oil filter change	100 H	/	/	Replace with oil filter
Front Gearcase oil (if quipped)	100 H	6 M	/	Inspect level; change yearly
Rear gearcase oil (if equipped)	100 H	6 M	/	Inspect level; change yearly
Transmission oil	100 H	6 M	/	Inspect level; change yearly
Fuel system	100 H	12 M	/	Check for leaks at tank cap, lines, fuel valve, filter, pump, throttle body; replace lines every 2 years
Radiator (in applicable)	100 H	12 M	/	Inspect; clean external surfaces
Cooling Hoses	100 H	12 M	/	Inspect for leaks
Engine mounts	100 H	12 M	/	Inspect
Exhaust muffler/pipe	100 H	12 M	/	Inspect
Wiring	100 H	12 M	/	Inspect for wear, routing, security; apply dielectric grease to connectors subjected to water, mud, etc.
Clutches (drive and driven)	100 H	12 M	/	Inspect; clean; replace worn parts
Front wheel bearings	100 H	12 M	/	Inspect; replace as needed
Rear wheel bearings	100 H	12 M	/	Inspect; replace as needed
Air filter, main element	150 H	/	/	Replace
Fuel filter/water separator	150 H	12 M	/	Replace
Brake fluid	200 H	24 M	/	Change every two years
Fuel system	200 H	24 M	/	Replace lines every two years

MAINTENANCE

Lubrication Recommendations

Check and lubricate all components at the intervals outlined in the Periodic Maintenance Chart, or more often



under severe use, such as wet or dusty conditions. Items not listed in the chart should be lubricated at the general lubrication interval.

Item	Grade	Capacity
Engine oil	15W/30 or 15W/40	2L (2.114qt)
Gearbox oil	GL-4 85W/90	550ML(0.582qt)
Front & rear Differential oil	GL-4 85W/90	400ML(0.423qt)
Brake Fluid	JG3	300ML(0.317qt)
Drive Shaft	U-Joint Grease	Locate fittings and grease

Engine Oil

Always check the oil level *daily*. Change the engine oil at the intervals outlined in the Periodic Maintenance Chart. Always change the oil filter whenever changing oil.

WARNING! Vehicle operation with insufficient, deteriorated or contaminated engine oil will cause accelerated wear and may result in engine seizure, accident and injury. Always perform the maintenance procedures as outlined in the Periodic Maintenance Chart.

Oil Recommendations

NOTICE: Use of a non-recommended engine oil may cause serious engine damage.

LEEWAY recommends the use of L-ECD grade oil (**15W/30 or 15W/40**) for this vehicle. Always use the correct viscosity grade based on the ambient temperature expected during operation.

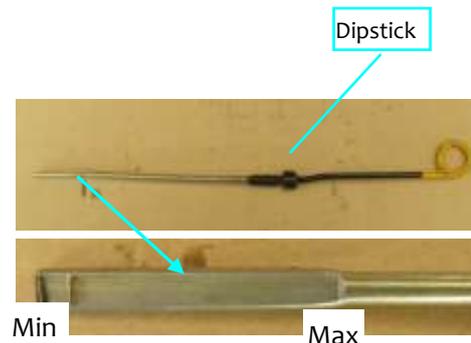
Oil Check

The oil dipstick is located on the engine under the cargo box.

1. Position the vehicle on a level surface.
2. Stop the engine.
3. Lift the cargo box.
4. Remove the dipstick. Wipe it dry with a clean cloth.
5. Reinstall the dipstick, then remove it and check the oil level.

Maintain the oil level in the safe range. Do not overfill.

Tip: Due to the dipstick entry angle into the crankcase, the oil level will read higher on the bottom side of the dipstick. Always read the level on the upper surface of the dipstick.



MAINTENANCE

Engine Oil

Oil and Filter Change

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

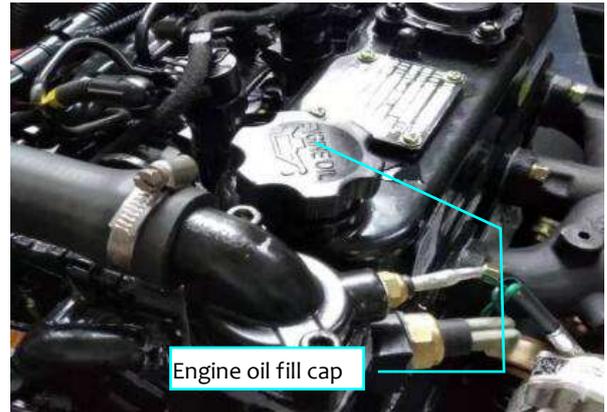
1. Position the vehicle on a level surface.
2. Run the engine for two to three minutes until warm. Stop the engine.
3. Clean the area around the drain plug.
4. Place a drain pan beneath the engine crankcase.

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

5. Remove the drain plug. Allow the oil to drain completely.
6. Reinstall the sealing washer on the drain plug.

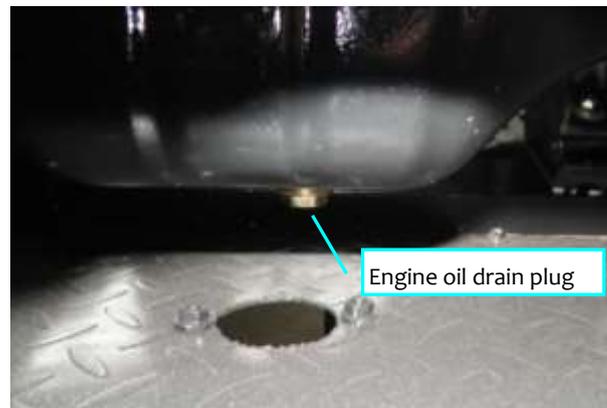
The sealing surfaces on drain plug and crankcase should be clean and free of burrs, nicks or scratches.

7. Reinstall the drain plug.
8. Place shop towels beneath the oil filter. Using an oil filter wrench, turn the filter counterclockwise to remove it.
9. Using a clean dry cloth, clean the filter sealing surface on the crankcase.
10. Lubricate the o-ring on the new filter with a film of fresh engine oil. Check to make sure the o-ring is in good condition.
11. Install the new filter and turn by hand until the filter gasket contacts the sealing surface, then turn and additional 1/2 turn.



12. Remove the oil fill cap and add **2.8L** (2.9596qt) of the recommended oil.

13. Reinstall the oil fill cap.
14. Shift the transmission to neutral.
15. Apply the brakes. Engage the park brake.
16. Start the engine. Allow it to idle for one to two minutes.
17. Stop the engine. Inspect for leaks.
18. Check the oil level on the dipstick and add oil as necessary to bring the level to the upper mark on the dipstick.
19. Dispose of used filter and oil properly.



MAINTENANCE

Transmission (Main Gearcase)

Always check and change the transmission oil at the

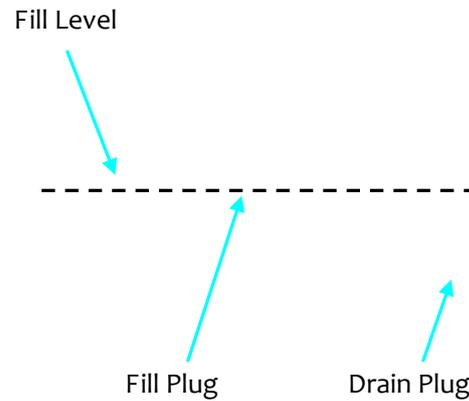


intervals outlined in the Periodic Maintenance Chart. Maintain the oil level even with the bottom of the fill plug hole threads. Refer to the Gearcase Specifications Chart for recommended lubricants, capacities.

Oil Check

The fill plug is located on the right side of the transmission. Access the fill plug from the engine cover between two seats of the cab.

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



Oil Change

The drain plug is located on the back of the transmission. Access the drain plug from the engine cover between two seats of the cab.

1. Remove the fill plug.
2. Place a drain pan under the transmission drain plug.
3. Remove the drain plug. Allow the oil to drain completely.
4. Clean and reinstall the drain plug with a new sealing washer.
5. Add the recommended oil.
6. Reinstall the fill plug.
7. Check for leaks. Dispose of used oil properly.



Fill Plug

Drain Plug



Drain Plug

MAINTENANCE

Front & Rear Gearcase (Differential)

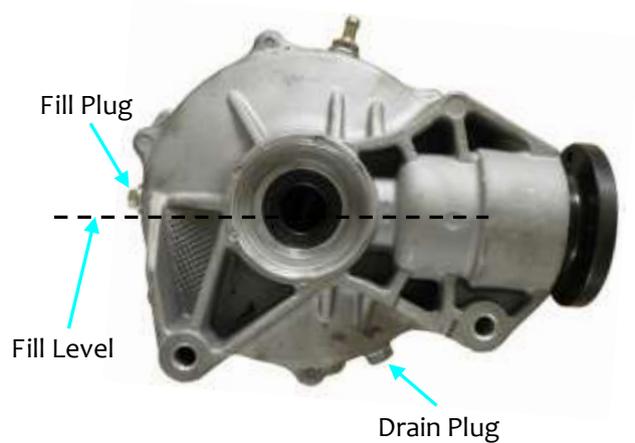
Always check and change the gearcases oil at the intervals outlined in the Periodic Maintenance Chart. Maintain the oil level even with the bottom thread of the fill plug hole.

Refer to the Gearcase Specifications Chart for recommended lubricants, capacities.

Oil Check

The front gearcase fill plug is located on the right side of the front gearcase.

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

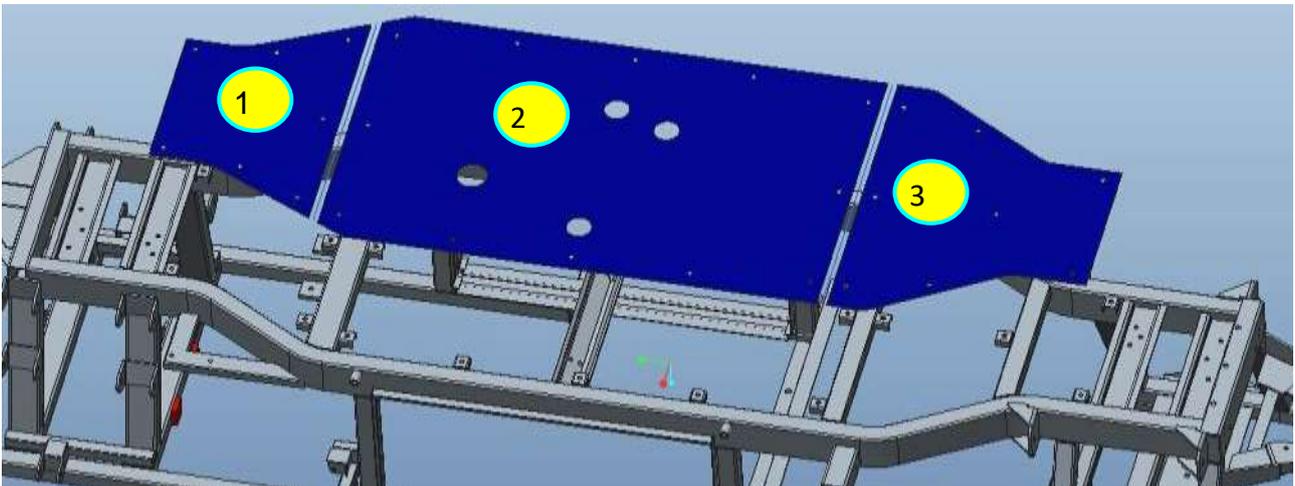


Oil Change

1. Support the vehicle securely with a jackstand.
2. Remove the front tire on the driver's side.
3. Remove the fill plug.
4. Place a drain pan under the drain plug on the bottom.
5. Remove the drain plug. Allow the oil to drain completely.
6. Clean and reinstall the drain plug.
7. Add the recommended oil.
8. Reinstall the fill plug.
9. Check for leaks. Dispose of used oil properly.

Removable Floor pan

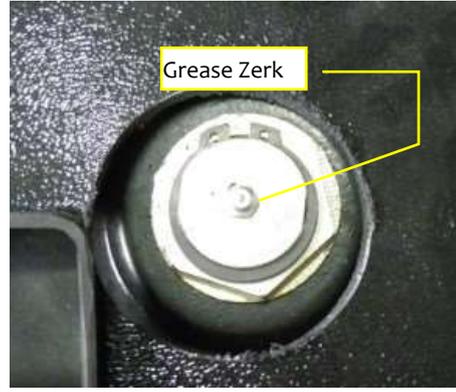
The floor pan consists of 3 panels, and fix by bolts.



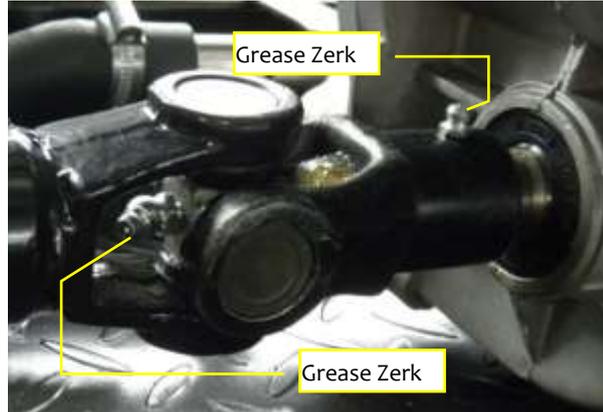
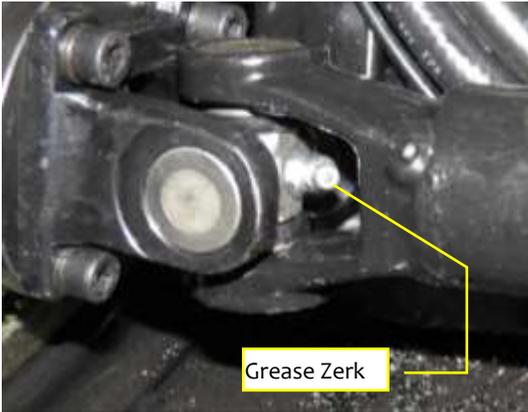
MAINTENANCE

U-Joint Grease

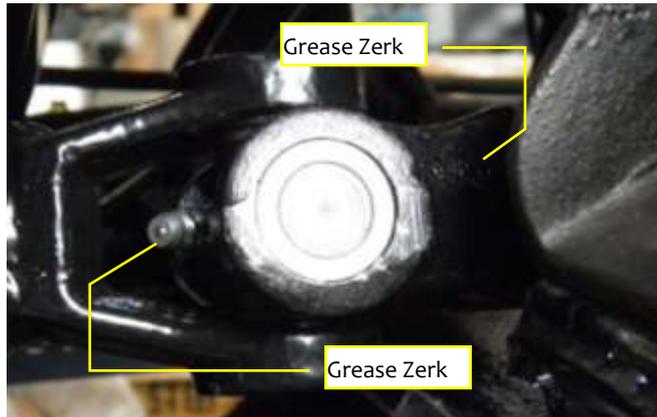
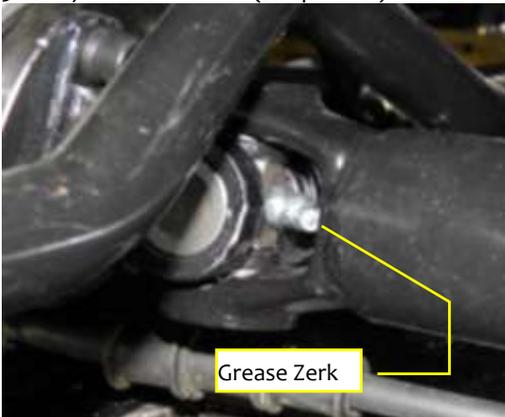
1. Front shocks (see pictures).



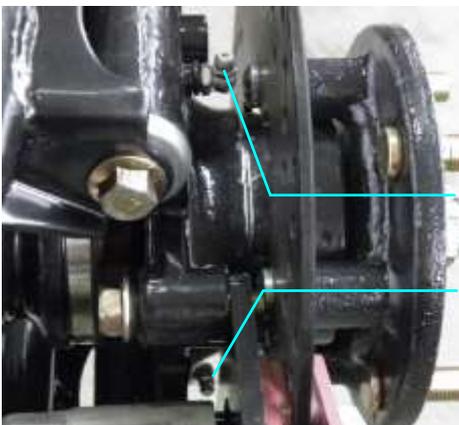
2. U-joints at front shaft (see pictures).



3. U-joint at rear shaft (see picture).



4. Rear wheels bearing (see pictures).



5. Shifting gear.



MAINTENANCE



Cooling System

Adding or Changing Coolant

To ensure that the coolant maintains its ability to protect the engine, we recommend that the system be completely drained every two years and a fresh mixture of antifreeze and water added.

NOTICE: Do not mix different types of coolant in the cooling system when adding coolant. Mixing types can result in damage to the cooling system.

1. Be sure to adopt tap water as cooling water.
2. Be sure to add anti-rusting or anti-freeze solution to the cooling water.
3. Add anti-freezing solution to the cooling water in winter, otherwise, the frozen water may damage the cooling water system.

Anti-rusting solution:

Be sure to use the superior quality anti-rusting solution. But do not use it in winter because it may freeze when the air temperature is low. Its standard mixing ratio is 6%.

Anti-freezing solution:

Be sure to use the superior quality anti-freezing solution. However, it's not necessary to use it with anti-rusting solution simultaneously. This kind of solution can be added to cooling water in all seasons. Its mixing ratio is 30%~55%, please see the chart below:

The lowest temp	-15 °C	-20 °C	-24 °C	-29 °C
Mixing ratio	30%	35%	40%	45%

Use the commercial available anti-freezing solution with the mixing ratio recommended by manufacturer, meanwhile, it must be replaced every year.

CAUTION: If the mixing ratio of anti-freezing solution is too low, cooling water will freeze in low temperature, which causes damage or rust to the water pipe. If the mixing ratio of it is too high, the engine performance will be decreased.

Any time the cooling system has been drained for maintenance or repair, replace the coolant.

Radiator and Cooling Fan

Always check and clean the screen and radiator fins at the intervals outlined in the Periodic Maintenance Chart. Do not obstruct or deflect air flow through the radiator by installing unauthorized accessories in front of the radiator or behind the cooling fan. Interference with the radiator air flow can lead to overheating and consequent engine damage.

NOTICE: Washing the vehicle with a high-pressure hose could damage the radiator fins and impair the radiator's effectiveness. Using a high-pressure system is not recommended.

MAINTENANCE

Cooling System

Overflow Bottle Coolant Level

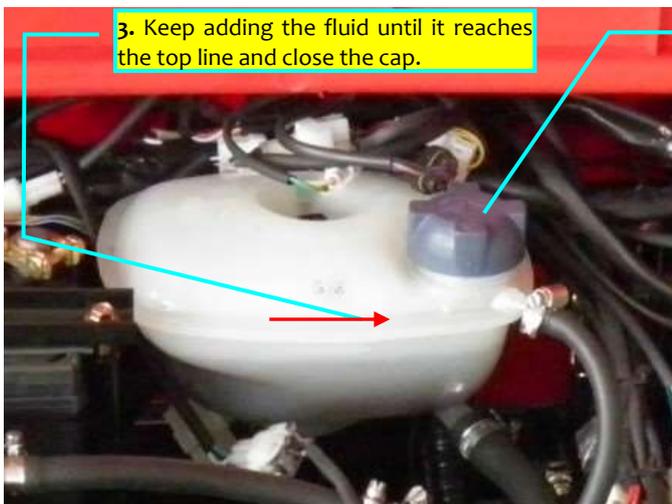
Always check and change the coolant at the intervals outlined in the Periodic Maintenance Chart. Maintain the coolant level between the minimum and maximum marks on the bottle (when the fluid is cool).

The overflow bottle is located under the hood.

1. Position the vehicle on a level surface.
2. View the coolant level in the overflow bottle.
3. If the coolant level is below the safe operating range, lift the hood and locate the overflow bottle lid. Remove the cap and use a funnel to add coolant through the filler opening. Reinstall the cap.

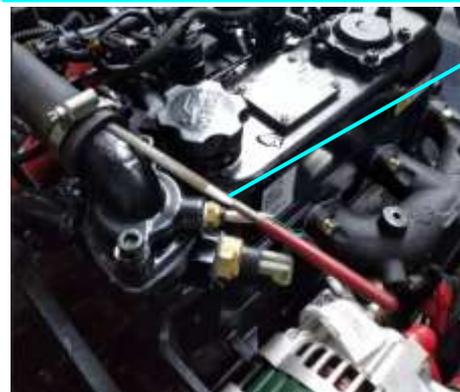
Tip: If coolant must be added often, or if the overflow bottle runs completely dry, there may be a leak in the system. Have the cooling system inspected by your LEEWAY dealer.

Adding coolant:



1. Open the pressure cap.

2. Use a stick to let the air out

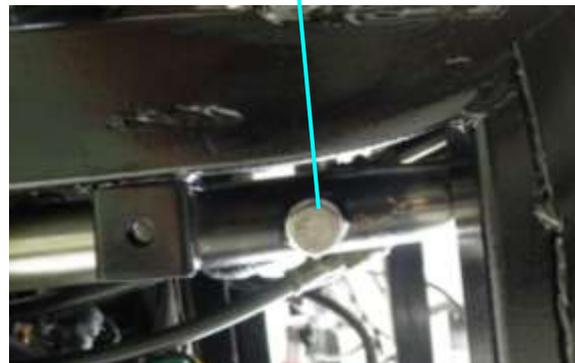
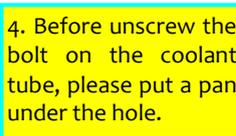
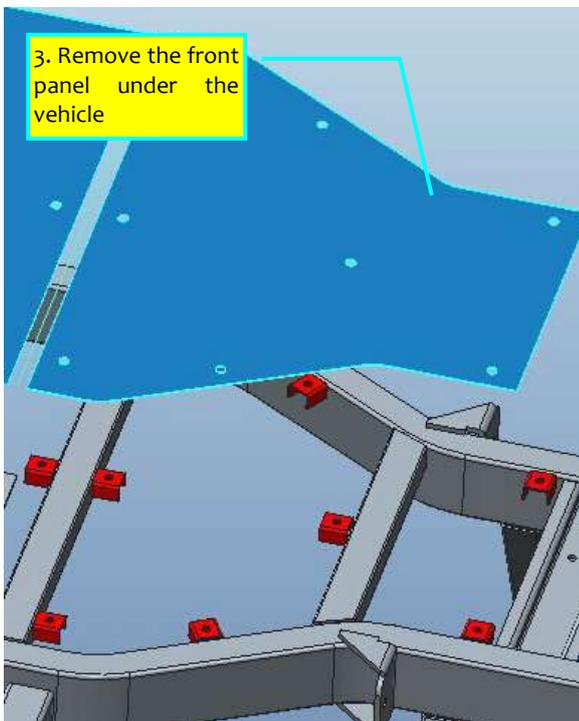
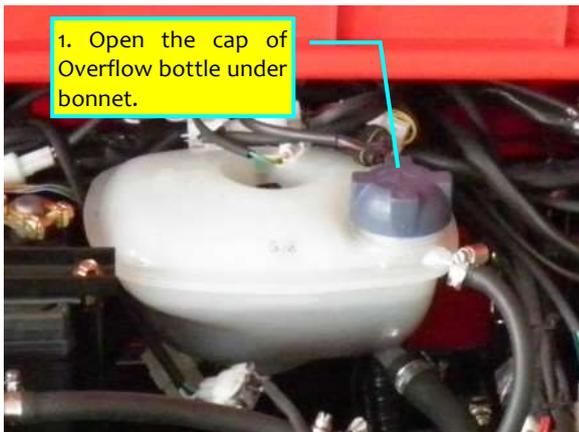


CAUTION! Escaping steam can cause burns. Never remove the pressure cap or plug while the engine is warm or hot. Always allow the engine to cool before removing the pressure cap or air release plug.

MAINTENANCE

Cooling System

Changing coolant:



CAUTION! Escaping steam can cause burns. Never remove the pressure cap or plug while the engine is warm or hot. Always allow the engine to cool before removing the pressure cap or air release plug.

MAINTENANCE

Continuously Variable Transmission (CVT) System

⚠ WARNING: Failure to comply with the instructions in this warning can result in severe injury or death. Do not modify any component of the CVT system. Doing so may reduce its strength so that a failure may occur at a high speed. The CVT system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.

The CVT system rotates at high speeds, creating large amounts of force on clutch components. As the owner, you have the following responsibilities for your own safety and the safety of others:

- Always follow all recommended maintenance procedures. Always look for and remove debris inside and around the clutch and vent system when replacing the belt.
- See your dealer.
- This CVT system is intended for use on **FARMBOSS 1200** only. Do not install it in any other product.

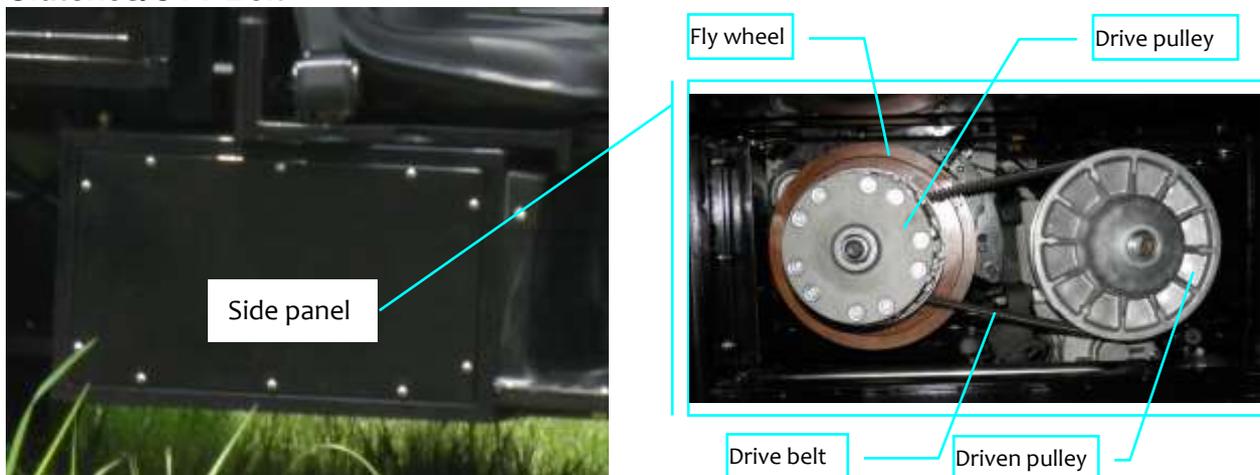
Belt Replacement/Debris Removal

If a belt fails, always clean any debris from the duct and from the clutch and engine compartments when replacing the belt.

WARNING! Failure to remove ALL debris when replacing the belt could result in vehicle damage, loss of control and severe injury or death.

1. Open the side panel.
2. Remove all debris wrapped in and around the CVT system.
3. Check for signs of damage to seals on the transmission and engine. See your dealer promptly for service if any seals appear to be damaged.

Clutches/CVT Belt



Tip: Belt slip is responsible for creating excessive heat that destroys belts, wears clutch components. Switch to low range while operating at slower speeds to extend the life of the CVT components.

MAINTENANCE



Continuously Variable Transmission (CVT) System

CVT Drying

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

NOTICE: Do not attempt to start the engine if water is present in the air box.

1. Position the vehicle on a level surface.
2. Apply the brakes. Start the engine.
3. Engage the park brake. Shift the transmission to neutral.
4. Apply varying throttle for 10-15 seconds to expel the moisture and air-dry the belt and clutches. Do not hold the throttle wide open for more than 10 seconds.
5. Allow the engine RPM to settle to idle speed. Apply the service brakes. Release the park brake and shift the transmission to the lowest available range.
6. Test for belt slippage. If the belt slips, repeat the process.
7. Take the vehicle to your dealer for service as soon as possible.

Vehicle Immersion

NOTICE: If your vehicle becomes immersed, major engine damage can result if the machine is not thoroughly inspected. Take the vehicle to your dealer before starting the engine.

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

1. Move the vehicle to dry land or at the very least, to water below the floorboards.
2. Inspect the air box for water.

NOTICE: Do not attempt to start the engine if water is present in the air box. Engine damage will result. Take the vehicle to your dealer before starting the engine.

3. If the air box is wet but has no visible water, dry the air box.
4. Thoroughly dry the air pre-cleaner mounted on the main frame of cage.
5. Take the vehicle to your dealer for service as soon as possible, whether you succeed in starting it or not.
6. If water has been ingested into the CVT follow the procedure above for drying.

MAINTENANCE

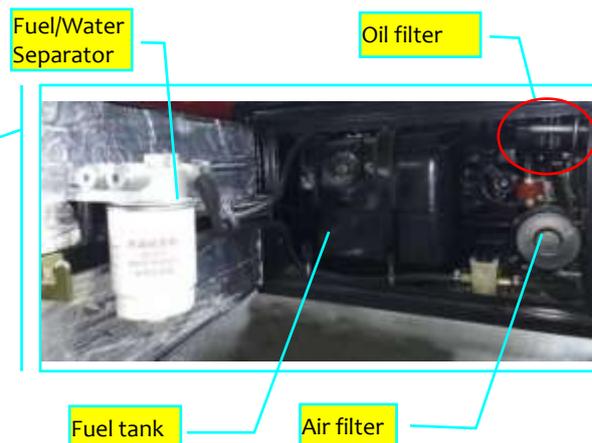
Fuel Filter/Water Separator

The fuel filter/water separator is located under the seat on the left side of the vehicle, between the engine and fuel tank.

Inspect the separator *daily* for leaks. Drain water and replace the separator at the intervals outlined in the Periodic Maintenance Chart. Service the separator more frequently if the vehicle is operated with inferior fuel.

CAUTION! Both fuel and water will drain from the separator during the following procedure. Use caution and observe all fuel safety precautions when handling fuel.

1. Open the side panel. Disconnect the battery.
2. Place an appropriate container under the fuel filter drain to catch fluids (water and fuel).
3. Slightly loosen the bleed screw to relieve fuel pressure in the filter. Do not tighten the screw at this time.
4. Reach under the fuel filter and slightly loosen the drain valve until the fluids drain from the drain hole. Do not completely unscrew the drain valve.
5. When fluids stop draining from the valve, tighten the valve firmly (by hand only).
6. Reconnect the battery.
7. Turn the ignition key on to engage the fuel pump. Leave the key on only until fuel begins to spit from the bleed screw, then tighten the screw.
8. Clean up any spilled fuel and soiled shop towels properly.
9. Cycle the key switch from OFF to ON six times, waiting three seconds at each "ON" cycle to allow the fuel pump to cycle.
10. Start the engine and check for fuel leaks.
11. Close the side panel.



MAINTENANCE



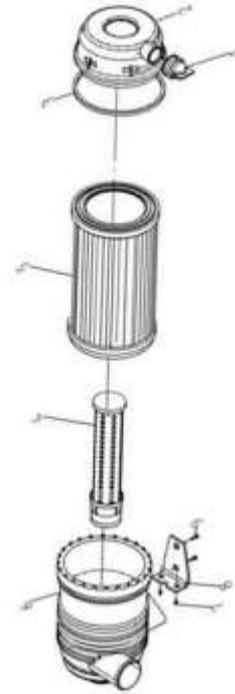
Air Filter

Always change the air filter at the intervals outlined in the Periodic Maintenance Chart beginning. Service the air filter more frequently if the vehicle is operated in wet or dusty conditions or at high throttle openings for extended periods.

1. Open the hinged side panel.
2. Release the four air box cover clips. Remove the air box cover and inspect the gasket. It should adhere tightly to the cover.
3. Remove the air filter assembly with a pulling and twisting motion. Use care to avoid damaging the filter element.
4. Remove debris from the filter using low pressure compressed air. Lightly blow from the inside out.

NOTICE: Operating a diesel engine with a soiled or damaged air filter can result in engine damage. Do not attempt to wash the filter. Always replace a soiled or damaged filter with a new filter.

5. Clean any oil or water deposits from the air box.
6. Apply a small amount of all-purpose grease to the sealing edges of the filter. Make sure the plastic ring is installed.
7. Reinstall the filter into the air box. Make sure it fits tightly.
8. Align the tab and notch of the air box cover and secure the cover clips.



MAINTENANCE



Muffler

⚠ WARNING: Failure to heed the following warnings while servicing the muffler could result in serious injury or death.

- Do not perform service on the muffler while the system is hot. Exhaust system temperatures can reach 1000° F. Allow components to cool sufficiently before proceeding.
- Remove any combustible materials from the area.
- Wear eye protection and gloves.
- Do not stand behind or in front of the vehicle while purging.
- Never run the engine in an enclosed area. Exhaust can cause loss of consciousness or death in a very short time.
- Never operate without the muffler.
- Never go under the vehicle while it's inclined.



Use the following procedure to periodically purge accumulated carbon from the exhaust pipe.

1. Place the transmission in neutral. Engage the park brake. Start the engine.
2. Purge accumulated carbon from the system by momentarily revving the engine several times.
3. If carbon is expelled, *partially* cover the exhaust outlet and rap on the pipe around the clean-out plug while revving the engine several more times.
4. If particles are still suspected to be in the muffler, elevate the rear of the vehicle one foot higher than the front. Block the wheels.
5. Repeat steps 3 and 4 until no more particles are expelled when the engine is revved.
6. Stop the engine. Allow the muffler to cool.
7. Reinstall the muffler plug and remove the partial outlet cover.

Throttle System

⚠ WARNING:

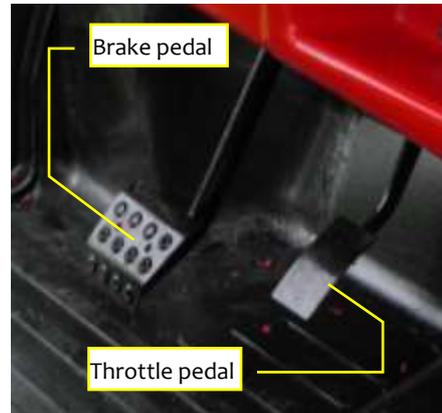
Failure to check or maintain proper operation of the throttle system can result in an accident and lead to serious injury or death if the throttle pedal sticks during operation.

Always check the pedal for free movement and return before starting the engine and occasionally during operation. Never start or operate this vehicle if it has a sticking or improperly operating throttle pedal. Immediately contact your dealer for service if throttle problems arise.

Throttle Freeplay

If the throttle pedal has excessive play due to cable stretch or misadjustment, it will cause a delay in throttle response, especially at low engine speed. The throttle may also not open fully. If the throttle pedal has no freeplay, the throttle may be hard to control, and the idle speed may be erratic.

Check the throttle pedal freeplay at the intervals outlined in the Periodic Maintenance Chart beginning. Adjust the freeplay if necessary.



Throttle Freeplay Inspection

1. Apply the brakes. Engage the park brake. Shift the transmission to neutral.
2. Start the engine. Allow it to warm up thoroughly.
3. Measure the distance the throttle pedal moves before the engine begins to pick up speed.

Idle RPM

Idle RPM is preset by the manufacturer. If the engine idle speed is not satisfactory, please see your LEEWAY dealer for adjustment.

Brakes

The front and rear brakes are hydraulic disc type brakes activated by the brake pedal.

Brake Fluid

Inspect the brake system routinely. Inspect the level of the brake fluid before each operation.

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

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

1. Position the vehicle on a level surface.
2. View the brake fluid level at the reservoir in the driver's side wheel well.
3. The level should be between the upper (MAX) and lower (MIN) level lines.
4. If the fluid level is lower than the upper level line, add brake fluid to the upper (MAX) line.
5. Apply the brake forcefully for a few seconds and check for fluid leakage around the fittings.



Brake Inspection

1. Check the brake system for fluid leaks.
2. Check the brake pedal for excessive travel or a spongy feel.
3. Check the friction pads for wear, damage and looseness.
4. Check brake discs for signs of cracks, excessive corrosion, warping or other damage. Clean any grease using an approved brake cleaner or alcohol.

WARNING! Do not apply WD-40 or any petroleum product to brake discs. These types of products are flammable and may also reduce the friction between the brake pad and caliper.

5. Inspect the brake disc spline and pad wear surface for excessive wear. Change pads when worn.

Tires

⚠ WARNING :

Operating your vehicle with worn tires, improperly inflated tires, non-standard tires or improperly installed tires will affect vehicle handling and could cause an accident resulting in serious injury or death. Always follow all tire maintenance procedures as outlined in this manual and on the labels on the vehicle.

Always use **LEEWAY**-approved size and type of tires for this vehicle when replacing tires.

Tires Pressure

	FarmBoss II
Front tire size: (Ft)	AT25 in ×8in × 12in
Max load :	340 lbs AT 7 psi
Max load:	155 kgs AT 45 kpa
Rear tire size:(Ft)	AT25 in ×10in × 12in
Max load :	420 lbs AT 7 psi
Max load:	190 kgs AT 45 kpa



Tire pressure must be equal on both sides.

If the tire pressure goes lower than the minimum, it could cause the tire to disl

Do not go higher than the pressures shown below when pumping up the tires.

WARNING: Do not inflate beyond 250 kpa(36psi) when seating reads.

Not for highway services the spirit of innovation.

Wheel bolt lock torque (N.m): (M 10) 50-55 N.m

Wheel Removal

1. Apply the brakes. Engage the park brake.
2. Stop the engine. Place the transmission in gear.
3. Loosen the wheel nuts slightly.
4. Elevate the side of the vehicle by placing a suitable stand under the frame.
5. Remove the wheel nuts and washers. Remove the wheel.

Wheel Installation

1. Apply the brakes.
2. Place the transmission in gear.
3. Engage the park brake.
4. Place the wheel in the correct position on the wheel hub. Be sure the valve stem is toward the outside and rotation arrows on the tire point toward forward rotation.

WARNING! Improperly installed wheels can adversely affect tire wear and vehicle handling, which can result in serious injury or death. Always ensure that all nuts are torqued to specification. Do not service axle nuts that have a cotter pin installed. See your **LEEWAY** dealer.

5. Attach the wheel nuts and washers and finger tighten.
6. Carefully lower the vehicle to the ground.
7. Torque the wheel nuts to tight.

MAINTENANCE



Lights

Poor lighting can result in reduced visibility when driving. Headlight and taillight lenses become dirty during normal operation. Clean lights frequently and replace burned out lamps promptly. Do not operate this vehicle at night or in low light conditions until the headlight is replaced. Always make sure lights are adjusted properly for best visibility.

When servicing a halogen lamp, don't touch the lamp with bare fingers. Oil from your skin leaves a residue, causing a hot spot that will shorten the life of the lamp.

Brake Lights

When the brake pedal is depressed, the brake light comes on. Check the brake light before each ride.

1. Turn the ignition switch to the ON position.
2. Depress the brake pedal. The brake light should come on after depress the pedal. If the light doesn't come on, check the bulb.

Headlight Lamp Replacement

1. Open the hood.

CAUTION! Hot components can cause burns to skin. Allow lamps to cool before servicing.

2. Unplug the headlamp from the wiring harness. Be sure to pull on the connector, not on the wiring.
3. Turn the lamp counterclockwise to remove it.
4. Install the new lamp.

Tip: Make sure the tab on the lamp locates properly in the housing.

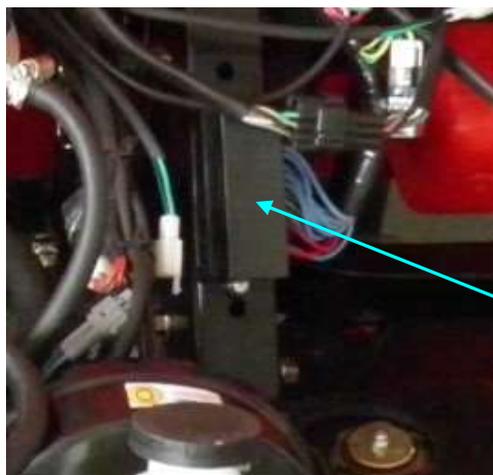
5. Reinstall the harness assembly into the headlight assembly.

Fuses

If the engine stops or will not start, or if you experience other electrical failures, a fuse may need replacement.

Locate and correct any short circuits that may have caused the blown fuse, then replace the fuse.

If you suspect that a fuse or relay may not be working properly, please see your **LEEWAY** dealer.



Fuse Box

MAINTENANCE



Battery

⚠ WARNING:

Improperly connecting or disconnecting battery cables can result in an explosion and cause serious injury or death. When removing the battery, always disconnect the negative (black) cable first. When reinstalling the battery, always connect the negative (black) cable last.

Your vehicle is equipped with a sealed battery, which requires little maintenance. Always keep battery terminals and connections free of corrosion. If cleaning is necessary, remove corrosion with a stiff wire brush. Wash with a solution of one tablespoon baking soda and one cup water. Rinse well with tap water and dry off with clean shop towels. Coat the terminals with dielectric grease or petroleum jelly.

Battery Removal

1. Lift the hoods.
2. Remove the screws from the battery hold-down strap and remove the strap.
3. Disconnect the black (-) battery cable first.
4. Disconnect the red (+) battery cable last.
5. Lift the battery out of the vehicle.

Battery Installation

Using a new battery that has not been fully charged can damage the battery and result in a shorter life. It can also hinder vehicle performance.

1. Ensure that the battery is fully charged.
2. Place the fully charged battery in the battery holder under the hood with the terminals toward the rear of the vehicle.
3. Coat the terminals with dielectric grease or petroleum jelly.
4. Connect and tighten the red (+) cable first.
5. Connect and tighten the black (-) cable last.
6. Verify that cables are properly routed and install the hold-down strap. Tighten the screws securely.



Cleaning and Storage

Washing the Vehicle

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

NOTICE: High water pressure may damage components. LEEWAY recommends washing the vehicle by hand or with a garden hose, using mild soap.

NOTICE: Certain products, including insect repellents and chemicals, will damage plastic surfaces. Do not allow these types of products to contact the vehicle.

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

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

Washing Tips

- Avoid the use of harsh cleaners, which can scratch the finish.
- Do not use a power washer to clean the vehicle.
- Do not use medium to heavy duty compounds on the finish.
- Always use clean cloths and pads for cleaning and polishing. Old or reused cloths and pads may contain dirt particles that will scratch the finish.

Washing the Vehicle

If a high pressure water system is used for cleaning (not recommended), exercise extreme caution. The water may damage components and could remove paint and labels. Avoid directing the water stream at the following items:

- Engine
- Air Intake
- Wheel bearings
- Radiator
- Transmission seals
- Brakes
- Cab and body panels
- Labels and decals
- Switches and controls
- Electrical components and wiring

If an informational or graphic label becomes illegible or comes off, contact your FARMBOSS dealer to purchase a replacement. Replacement *safety* labels are provided by LEEWAY at no charge.

Grease all zerk fittings immediately after washing. Allow the engine to run for a while to evaporate any water that may have entered the engine or exhaust system.

MAINTENANCE

Removal from Storage

1. Charge the battery if necessary. Install it in the vehicle.
2. Fill the fuel tank with fuel.
3. Check all the points listed in the Daily Pre-Ride Inspection section. *Tightness of the bolts, nuts and other fasteners should be checked by an authorized LEEWAY dealer.*
4. Lubricate at the intervals outlined in the Periodic Maintenance Chart.

Transporting the **FARMBOSS**

Follow these procedures when transporting the vehicle.

1. Apply the brakes.
2. Engage the park brake.
3. Stop the engine.
4. Place the transmission in gear.
5. Secure the fuel cap, oil cap, hood and seat. Ensure that the seats are attached correctly and are not loose.

WARNING! Cargo and other loose vehicle parts may fly off while transporting this vehicle. Secure or remove all cargo, and inspect the unit for loose parts prior to transport.

6. Always tie the frame of the **FARMBOSS** to the transporting unit securely with suitable straps or rope.
7. Remove the key to prevent loss during transporting.

SPECIFICATIONS

Engine	Type	3-Cylinder, water cooled, 4-stroke, high pressure common rail,
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		direct injection
	Displacement	1.220L
	Horsepower	Rated Power: 18.5kw/2200 r/min; 25.2 hp.
Engine starting		Electric start
Dimensions	L x W x H	3160mm×1550mm ×1950mm
	Front Tread Centers	1230mm
	Rear Tread Centers	1330mm
	Wheelbase	2095mm
	Ground Clearance	300mm
	Turning Radius	5.5 M
Fuel Capacity U.S. gals(L)		29L
Engine starting		Electric start
Transmission		Automatic CVT , 4x4
Gear Selection		CVT-R N L H
Wheels, Drive System		2WD/4WD switch, Shaft, Electronic diff locks.
Top Speed	In high gear range	55 km/h
	In low gear range	30 km/h
Brake	Front / Rear	Front disc brake / Rear drum brakes
Braking Distance		Less than 7M at 30km/h
Steering		Rack and Pinion
Suspension	Front	Independent Mac-Pherson strut
	Rear	Independent dual A- arm, IRS
Towing Capacity		910 kg (2006 lbs)
Cargo Bed Load Capacity		500 kg (1100 lbs)
Fuel Consumption	On Road	8 L / 100km
	Off Road	12 L/100km
Curb Weight (unloaded)		750 kg (1653 lbs)
Cargo Bed	Width x Length	1435mm x 1250mm
	Bed Deep mm	330mm
	Cargo Bed load	500 kg (1100 lbs)
Sound Level, at Operator's Ear db.(A)		82 db
Tires	Front	All Terrain 26x9-14 : 6 ply
	Rear	All Terrain 26x11-14 : 6 ply
Body Color		Red/Green/Camouflage

TROUBLESHOOTING

Drive Belt Wear/Burn

Possible Cause	Solution
Driving onto a pickup or tall trailer in high range	Use low range during loading.
Starting out going up a steep incline	Use low range.
Driving at low RPM or ground speed	Drive at a higher speed or use low range more frequently.
Insufficient warm-up at low ambient temperatures	Warm the engine at least 5 minutes. With the transmission in neutral, advance the throttle to about 1/5 throttle in short bursts, 5 to 7 times. The belt will become more flexible and prevent belt burning.
Slow/easy clutch engagement	Use the throttle quickly and effectively.
Towing/pushing at low RPM/low ground speed	Use low range only.
Utility use/plowing	Use low range only.
Stuck in mud or snow	Shift the transmission to low range and carefully use fast, aggressive throttle application to engage clutch. WARNING: Excessive throttle may cause loss of control and vehicle rollover.
Climbing over large objects from a stopped position	Shift the transmission to low range and carefully use fast, brief, aggressive throttle application to engage clutch. WARNING: Excessive throttle may cause loss of control and vehicle rollover.
Belt slippage from water or snow ingestion into the CVT system	Dry out the CVT. Inspect clutch seals for damage if repeated leaking occurs.
Clutch malfunction	See your LEEWAY dealer.
Poor engine performance	Check for clogged air filter, clogged fuel filter, water in the fuel or foreign material in fuel tank or fuel lines. See your dealer.
Slippage from failure to warm up belt	Always warm up the belt by operating below 50 KM/H for 2 KM (10 KM or more when temperature is below freezing).
Wrong or missing belt	Install the recommended belt.
Improper break-in	Always break in a new belt and/or clutch.

TROUBLESHOOTING

Park Brake Alarm Fails to Turn Off

Possible Cause	Solution
Park brake is not completely disengaged	Ensure lever is in forward-most position
Park brake connector malfunction or switch movement or failure	Disconnect the connector if temporary continued operation is necessary, see your dealer promptly for service

Engine Doesn't Turn Over

Possible Cause	Solution
Low battery voltage	Recharge the battery.
Loose battery connections	Check all connections and tighten
Loose solenoid connections	Check all connections and tighten
Loose electronic control box connections	Inspect, clean, reinstall connectors

Engine Turns Over, Fails to Start

Possible Cause	Solution
Out of fuel	Refuel
Clogged fuel filter/water separator	Replace
Clogged air filter	Replace
Water is present in fuel	Drain the fuel system and refuel, replace fuel filter/water separator
Old or non-recommended fuel	Replace with fresh recommended fuel
Water or fuel in crankcase	Immediately see your LEEWAY dealer
Low battery voltage	Recharge the battery.
Mechanical failure	See your dealer
Defective glow plug	Inspect and replace
Defective stop solenoid	Replace
Defective fuel pump	Replace

Engine Backfires

Possible Cause	Solution
Old or non-recommended fuel	Replace with fresh recommended fuel
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with fresh recommended fuel

TROUBLESHOOTING

Engine Runs Irregularly, Stalls or Misfires

Possible Cause	Solution
Poor fuel quality or incorrect fuel	Replace with recommended fuel
Low fuel level	Refuel
Clogged fuel filter	Replace
Clogged air filter	Replace
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with new fuel
Kinked or plugged fuel tank vent line	Inspect and replace
Other mechanical failure	See your dealer

Engine Stops or Loses Power

Possible Cause	Solution
Poor fuel quality or incorrect fuel	Replace with recommended fuel
Clogged fuel filter	Replace
Clogged air filter	Replace
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with new fuel
Kinked or plugged fuel tank vent line	Inspect and replace
Other mechanical failure	See your dealer
Out of fuel	Refuel
Low battery voltage	Recharge the battery.
Overheated engine	Clean radiator screen and core, clean engine exterior, operate at lower load, see your dealer

WARRANTY

LIMITED WARRANTY

LEEWAY warrants a 12-month /1000-hours of engine operation limited warranty on the engine of this vehicle for failure due to defects. This warranty covers the parts and freight cost for replacement of defective parts which are covered by this warranty. This warranty begins on the date of purchase. This warranty is transferable to another consumer during the warranty period through a LEEWAY dealer.

LIMITATIONS OF WARRANTIES AND REMEDIES

This LEEWAY 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 purposes other than for which it was designed. This warranty excludes damages or failures resulting from: 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.

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

WARRANTY

LIMITATIONS OF WARRANTIES AND REMEDIES



LUBRICANTS AND FLUIDS

1. Mixing oil brands or using non-recommended oil may cause engine damage.
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 LEEWAY' S 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. LEEWAY 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. LEEWAY DISCLAIMS ALL EXPRESS WARRANTIES NOT STATED IN THIS WARRANTY.