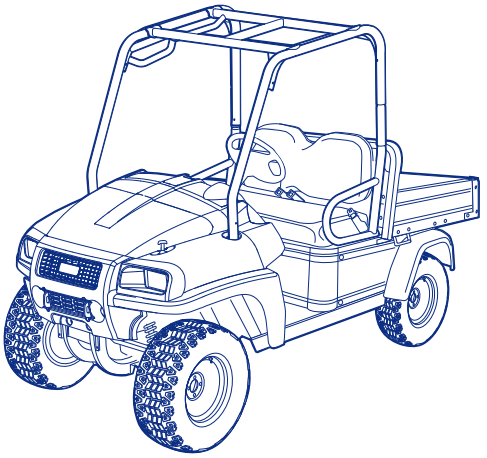
NEW HOLLAND

Rustler™ 120 125

SERVICE MANUAL



CLC103700628

Edition Code 1109B0110A

NEW HOLLAND AGRICULTURE

FOREWORD

These vehicles are designed and built to provide the ultimate in performance efficiency; however, proper maintenance and repair are essential for achieving maximum service life and continued safe and reliable operation.

This manual provides detailed information for the maintenance and repair of New Holland Rustler™ 120 and 125 vehicles, and should be thoroughly reviewed prior to servicing the vehicles. The procedures provided must be properly implemented, and the DANGER, WARNING, and CAUTION statements must be heeded.

This manual was written for the trained technician who already possesses knowledge and skills in electrical and mechanical repair. If the technician does not have such knowledge and skills, attempted service or repairs to the vehicle may render the vehicle unsafe. For this reason, the manufacturer advises that all repairs and/or service be performed by an authorized dealer representative or by a factory-trained technician.

It is the policy of CNH America LLC to assist its distributors and dealers in continually updating their service knowledge and facilities so they can provide prompt and efficient service for vehicle owners. Regional technical representatives, vehicle service seminars, periodic service bulletins, maintenance and service manuals, and other service publications also represent continuing commitment to customer support.

A full line of training and continuing education classes for technicians who want to learn more about our products. For more information, contact your local dealer or CNH America LLC for a list of upcoming classes.

This manual covers all aspects of typical vehicle service; however, unique situations sometimes occur when servicing a vehicle. If it appears that a service question is not answered in this manual, please contact your nearest authorized dealer or distributor for assistance. You may also write to us at: CNH America LLC; 700 State Street; Racine, WI 53402 USA.

This manual effective November 1, 2009.

⚠ WARNING

- **Read Section 1 – Safety before attempting any service on this vehicle.**
- **Before servicing vehicle, read complete section(s) and any referenced information that may be relevant to the service or repair to be performed.**

NOTE: *This manual represents the most current information at the time of publication. The manufacturer is continually working to further improve its vehicles and other products. These improvements may affect servicing procedures. Any modification and/or significant change in specifications or procedures will be forwarded to all dealers and will, when applicable, appear in future editions of this manual.*

Damage to a vehicle or component thereof not resulting from a defect or that occurs due to unreasonable or unintended use, overloading, abuse, or neglect (including failure to provide reasonable or necessary maintenance as instructed in the vehicle owner's manual), accident or alteration, including increasing vehicle speed beyond factory specifications or modifications that affect the stability of the vehicle or the operation thereof, will void the warranty.

The manufacturer reserves the right to change specifications and designs at any time without notice and without incurring any obligation or liability whatsoever.

There are no warranties expressed or implied in this manual. See the limited warranty found in the vehicle owner's manual or write to CNH America LLC; 700 State Street; Racine, WI 53402 USA*, Attention: Warranty Department.*

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SECTION 1 – SAFETY

SAFETY DETAILS

To ensure the safety of those servicing these vehicles, and to protect the vehicles from damage resulting from improper service or maintenance, the procedures in this manual must be followed. It is important to note that throughout this manual there are statements contained within headings labeled DANGER, WARNING, CAUTION, or NOTE. These special statements relate to specific safety issues, and must be read, understood, and heeded before proceeding.

Personal Safety

⚠ DANGER

- **A DANGER indicates an immediate hazard that will result in severe personal injury or death. The color associated with Danger is RED.**

⚠ WARNING

- **A WARNING indicates an immediate hazard that could result in severe personal injury or death. The color associated with Warning is ORANGE.**

⚠ CAUTION

- **A CAUTION with the safety alert symbol indicates a hazard or unsafe practice that could result in minor personal injury. The color associated with Caution is YELLOW.**

Machine Safety

CAUTION

- **A CAUTION without the safety alert symbol indicates a potentially hazardous situation that could result in property damage.**

A CAUTION, without the safety alert symbol, is intended for machine and property safety. It is used throughout this manual followed by specific instructions to prevent machine or property damage. Failure to follow these CAUTION messages could result in machine or property damage.

Information

NOTE: *Instructions that clarify steps, procedures, or other information in this manual.*

GENERAL WARNING

The following safety statements must be heeded whenever the vehicle is being operated, repaired, or serviced. Service technicians should become familiar with these safety statements, which can be found throughout this manual. Also, other specific safety statements appear throughout this manual and on the vehicle.

⚠ DANGER

- **Battery – Explosive gases! Do not smoke. Keep sparks and flames away from the vehicle and service area. Ventilate when charging or operating vehicle in an enclosed area. Wear a full face shield and rubber gloves when working on or near batteries.**
- **Battery – Poison! Contains acid! Causes severe burns. Avoid contact with skin, eyes, or clothing. Antidotes:**
  - **External: Flush with water. Call a physician immediately.**
  - **Internal: Drink large quantities of milk or water. Follow with milk of magnesia or vegetable oil. Call a physician immediately.**
  - **Eyes: Flush with water for 15 minutes. Call a physician immediately.**
- **Gasoline/Diesel – Flammable! Explosive! Do not smoke. Keep sparks and flames away from the vehicle and service area. Service only in a well-ventilated area.**
- **Do not operate engine in an enclosed area without proper ventilation. The engine produces carbon monoxide, which is an odorless, deadly poison that can quickly accumulate in an enclosed cab. Do not run the engine in a parked vehicle without proper cab ventilation. Move to fresh air if you feel nausea, headache, dizziness, drowsiness or weakness.**
- **The vehicle will not provide protection from lightning, flying objects, or other storm-related hazards. If caught in a storm while driving this vehicle, exit the vehicle and seek shelter in accordance with applicable safety guidelines for your location.**
- **Do not weld to a wheel or rim until the tire is completely removed. Inflated tires can generate a gas mixture with the air that can be ignited by high temperatures from welding procedures performed on the wheel or rim. Removing the air or loosening the tire on the rim (breaking the bead) will NOT eliminate the hazard. This condition can exist whether tires are inflated or deflated. The tire MUST be completely removed from the wheel or rim prior to welding the wheel or rim. Failure to comply will result in death or serious injury.**

⚠ WARNING

- **The engine produces carbon monoxide, which is a deadly, odorless, colorless gas that can quickly accumulate in an enclosed cab. Do not run the engine in a parked vehicle without proper cab ventilation. Move to fresh air if you feel nausea, headache, dizziness, drowsiness, or weakness.**
- **Follow the procedures exactly as stated in this manual, and heed all DANGER, WARNING, and CAUTION statements in this manual as well as those on the vehicle.**
- **This vehicle is not intended to be used where risk of falling objects exist. If your vehicle will be used in such an environment, contact your local dealer.**
- **Only trained technicians should service or repair the vehicle. Anyone doing even simple repairs or service should have knowledge and experience in electrical and mechanical repair. The appropriate instructions must be used when performing maintenance, service, or accessory installation.**
- **Prior to servicing the vehicle or leaving the vehicle unattended, turn the key switch OFF, remove the key, and place the Forward/Reverse handle in the NEUTRAL position. Chock the wheels when servicing the vehicle.**

- **To avoid unintentionally starting a gasoline vehicle, disconnect the battery and spark plug wire. See Disconnecting The Battery on page 1-4.**
- **Frame ground – Do not allow tools or other metal objects to contact frame when disconnecting battery cables or other electrical wiring. Do not allow a positive wire to touch the vehicle frame, engine, or any other metal component.**
- **Wear safety glasses or approved eye protection when servicing the vehicle. Wear a full face shield and rubber gloves when working on or near batteries.**
- **Do not wear loose clothing or jewelry such as rings, watches, chains, etc., when servicing the vehicle.**
- **Moving parts! Do not attempt to service the vehicle while it is running.**
- **Hot! Do not attempt to service hot engine or exhaust system. Failure to heed this warning could result in severe burns.**
- **Any modification or change to the vehicle that affects the stability or handling of the vehicle, or increases maximum vehicle speed beyond factory specifications, could result in severe personal injury or death.**
- **The diameter of all tires on the vehicle must be equal; otherwise, the all-wheel drive system will not operate as intended and could result in severe personal injury or death. Never install tires of different diameters on the vehicle.**
- **Lift only one end of the vehicle at a time. Use a suitable lifting device (chain hoist or hydraulic floor jack) with 1000 lb. (454 kg) minimum lifting capacity. Do not use lifting device to hold vehicle in raised position. Use approved jack stands of proper weight capacity to support the vehicle and chock the wheels that remain on the floor. When not performing a test or service procedure that requires movement of the wheels, lock the brakes.**
- **When servicing the vehicle with part of the vehicle on jack stands, do not operate the engine with the Forward/Reverse handle in either the FORWARD or REVERSE position. The all-wheel drive system will engage any wheel(s) with traction. See Figure 1-1, Page 1-3.**

Figure 1-1 All-Wheel Drive Warning

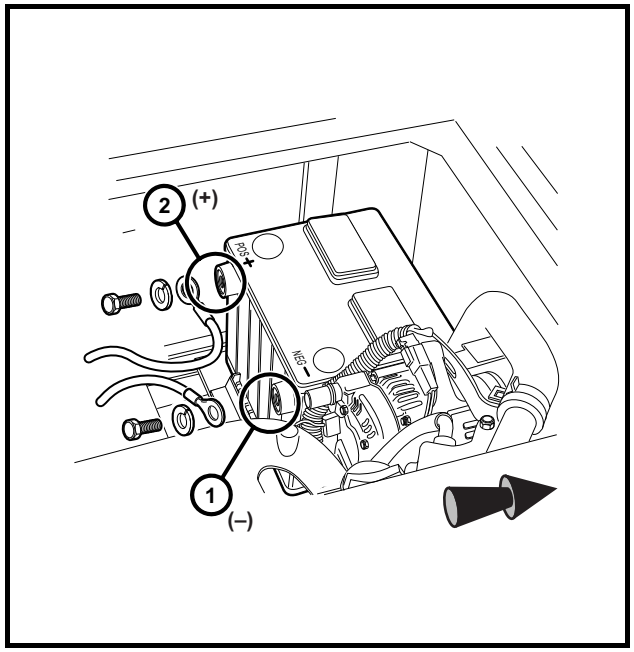

Figure 1-2 Disconnect Battery

(Viewed from driver side of vehicle)
1. Remove negative battery cable.
2. Remove positive battery cable.
Connect battery cables in reverse order.

- **Use insulated tools when working near batteries or electrical connections. Use extreme caution to avoid shorting of components or wiring.**
- **Check the vehicle owner's manual for proper location of all vehicle safety and operation decals and make sure they are in place and are easy to read.**
- **If wires are removed or replaced, make sure wiring and wire harness are properly routed and secured. Failure to properly route and secure wiring could result in vehicle malfunction, property damage, personal injury, or death.**
- **For vehicles with cargo beds, remove all cargo before raising the bed or servicing the vehicle. If the vehicle is equipped with a prop rod, ensure that it is securely engaged while bed is raised. Do not close bed until all persons are clear of cargo bed area. Keep hands clear of all crush areas. Do not drop cargo bed; lower gently and keep entire body clear. Failure to heed this warning could result in severe personal injury or death.**
- **Improper use of the vehicle or failure to properly maintain it could result in decreased vehicle performance, severe personal injury, or death.**
- **Do not leave children unattended on vehicle.**

DISABLING THE VEHICLE

1. Set the park brake.
2. Turn the key switch OFF and remove the key.
3. Place the Forward/Reverse control in the NEUTRAL position.
4. In addition, chock the wheels if servicing or repairing the vehicle.

DISCONNECTING THE BATTERY

1. Disable the vehicle. **See Disabling The Vehicle on page 1-4.**
2. Disconnect the battery cables, negative (–) cable first, as shown **(Figure 1-2, Page 1-3)**.
3. **Gasoline vehicles:** Disconnect the spark plug wires from the spark plugs.

CONNECTING THE BATTERY

1. Connect the battery cables, positive (+) cable first.
2. Tighten battery terminals to 80 in-lb (9 N·m).
3. Coat terminals with Battery Terminal Protector Spray (P/N CLC1014305) to minimize corrosion.
4. **Gasoline vehicles:** Connect the spark plug wires to the spark plugs.

SECTION 2 – VEHICLE SPECIFICATIONS

SPECIFICATIONS	Two Passen-ger	Two Passen-ger	Four Passen-ger	Four Passen-ger
POWER SOURCE	**Gasoline**	**Diesel**	**Gasoline**	**Diesel**
Engine: (Kawasaki) 4-cycle OHV, 675 cc, 23.0 maximum HP @3600 rpm (per SAE J 1940/1349), twin-cylinder, air-cooled, with pressure lubrication system	•		•	
Engine: 4-cycle OHV, 719 cc, 20.0 maximum HP @3600 rpm (per SAE J 1940/1349), three-cylinder, liquid-cooled, with pressure lubrication system		•		•
Fuel system: Side-draft carburetor with float bowl, fixed jets, fuel filters, and impulse fuel pump	•		•	
Fuel system: Mechanical injection, fuel water separator, fuel filters, and electric or mechanical fuel pump		•		•
Governor (Kawasaki engine): internal to engine, centrifugal ball	•		•	
Governor: internal to engine, mechanical, centrifugal ball		•		•
Ignition: Transistorized magneto	•		•	
Ignition: Compression		•		•
Transmission: Forward and reverse with neutral (5.39:1 forward, 7.79:1 reverse)	•	•	•	•
Electrical system: 12 volt, 500 cca at 0 °F (-17.8 °C), 650 at 32 °F (0 °C). 105-minute reserve capacity and 35-amp charging capacity	•	•	•	•
Torque converter: Automatic, variable-speed, dry type	•	•	•	•
STEERING/SUSPENSION/BRAKES				
Suspension: **Front:** Independent double A-arms with coil-over shock absorbers **Rear:** Swing arms with coil-over shock absorbers	•	•	•	•
Steering: Self-adjusting rack and pinion, Ackerman	•	•	•	•
Brakes: Hydraulic brake system – brake pads and discs on each wheel with separate foot-operated park brake	•	•	•	•
BODY/CHASSIS				
Frame/Chassis: Box tube aluminum	•	•	•	•
Side and rear body: Plastic	•	•	•	•
Cargo bed: Powder-coated steel or aluminum	•	•	•	•
Front body: Geloy XTWM206	•	•	•	•
Tires: **All Terrain:** 25 x 10.5 – 12 front and rear; tubeless, 4-ply rated load range **Mud:** 25 x 11 – 12 front and rear; tubeless, 4-ply rated load range	•	•	•	•
DIMENSIONS/WEIGHT				
NOTE: Items marked with an asterisk (*) indicate approximate values.				
***Overall length** (box bed configuration, without brushguard):	122 in. (309.9 cm)		154 in. (391.2 cm)	
Overall width: without mirror with mirror	58.5 in. (148.5 cm) 63.6 in. (161.5 cm)			
***Overall height** (with ROPS): with mud tires with all-terrain tires	82.3 in. (209 cm)		80.3 in. (203.8 cm)	

Specifications continued on next page...

SPECIFICATIONS	Two Passen-ger	Two Passen-ger	Four Passen-ger	Four Passen-ger
DIMENSIONS/WEIGHT, CONTINUED	**Gasoline**	**Diesel**	**Gasoline**	**Diesel**
Wheelbase	81.5 in. (207 cm)		114 in. (289.5 cm)	
Ground clearance: under differential	8.2 in. (20.8 cm)			
Front and rear wheel tread	48.8 in. (124 cm)			
***Weight:** 2-passenger gasoline with electric bed lift, mud tires, and without brush guard 2-passenger diesel with electric bed lift, mud tires, and brush guard 4-passenger gasoline with all-terrain tires 4-passenger diesel with all-terrain tires	1450 lb. (657.6 kg)	1597 lb. (724.2 kg)	1630 lb. (739.2 kg)	1734 lb. (786.4 kg)
Forward speed	25 mph (40 km/h)			
Governed RPM	3825			
Turning Radius	138 in. (350.5 cm)		204 in. (518.2 cm)	
Load bed height	34 in. (86.4 cm)			
Load bed size (box bed inside dimensions)	48.0 x 49.8 x 10.9 in. (122 x 127 x 28 cm) (15.3 cubic feet)			
Maximum payload capacity (level surface only)	800 lb. (363 kg) High capacity option: 1050 lb. (476 kg)		800 lb. (363 kg)	
Vehicle rated capacity (payload, driver, and passenger; level surface only)	1200 lb. (544 kg) High capacity option: 1450 lb (658 kg)		1600 lb. (725.5 kg)	
Maximum gross vehicle weight (fully loaded vehicle, including accessories)	2750 lb. (1247 kg) High capacity option: 3012 lb. (1366 kg)		3350 lb. (1519.1 kg)	
Standard seating capacity	2		4	
LIQUID CAPACITIES				
Engine (Kawasaki) crankcase with filter: SAE 10W-30, API classification SJ	1 qt. and 19 oz. (1.5 L)		1 qt.and 19 oz. (1.5 L)	
Engine crankcase with filter: SAE 10W-30, API classification CF		3 qt. (2.8 L)		3 qt. (2.8 L)
Front differential: Mobil 424, Exxon Hydraul 560, or Esso Hydraul 56 lubricant	5 oz. (150 mL)			
Rear differential: Mobil 424, Exxon Hydraul 560, or Esso Hydraul 56 lubricant	20 oz. (600 mL)			
Transmission: Mobil 424, Exxon Hydraul 560, or Esso Hydraul 56 lubricant	20 oz. (600 mL)			
Engine coolant: mixture of 55% propylene glycol and 45% water	n/a	2 gal. (7.8 L)	n/a	2.25 gal. (8.5 L)
Brake fluid: DOT 5 (silicone) brake fluid	8 oz. (240 ml)		17.9 oz. (530 ml)	
Fuel tank: unleaded gasoline	6.5 gallons (24.6 L)		6.5 gallons (24.6 L)	
Fuel tank: diesel grade no.2 with cetane rating of 45 or higher		6.5 gallons (24.6 L)		6.5 gallons (24.6 L)
TIRE PRESSURE				
All-terrain tread and mud tires	20 - 22 psi (1.38 - 1.52 Bars)			

SECTION 3 – GENERAL INFORMATION

⚠ DANGER

- **See General Warning, Section 1, Page 1-2.**

⚠ WARNING

- **See General Warning, Section 1, Page 1-2.**

GENERAL INFORMATION

Throughout this manual, important features unique to each model are highlighted. The manufacturer recommends the owner/operator read and understand this manual and pay special attention to features specific to their vehicle(s).

Refer to the owner's manual provided with the vehicle for information on the following topics:

- Safety Decal Identification
- Controls and Indicators
- Driving Instructions
- Towing with the Vehicle
- Transporting on a Trailer
- Engine Oil and Filter Change
- Accessory Equipment
- Subsequent Owner Registration
- Warranties

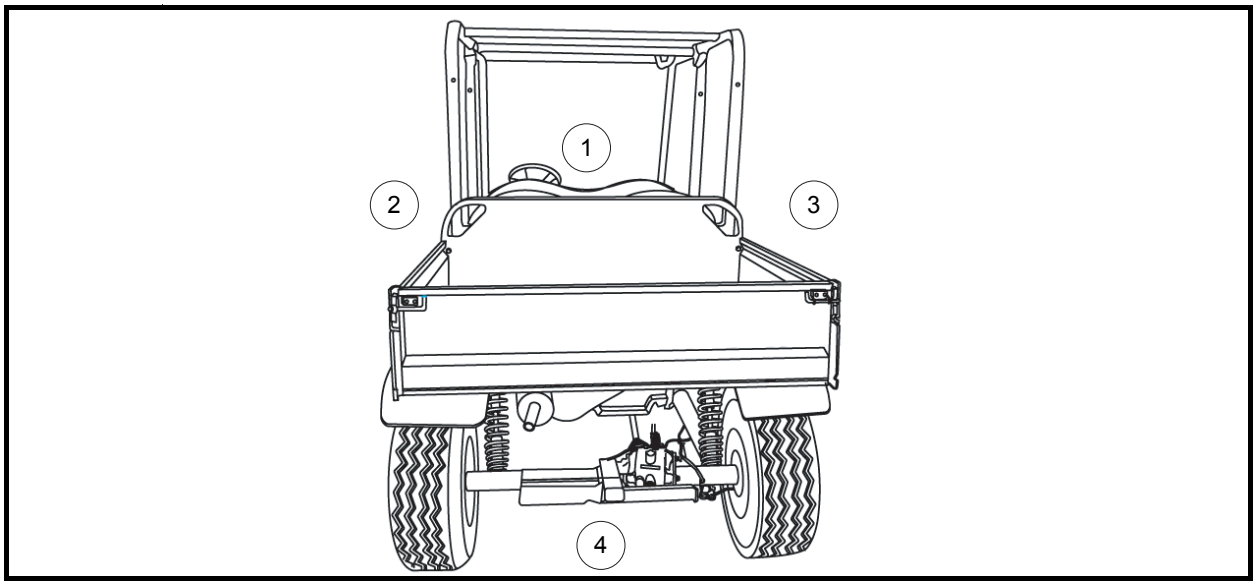

Figure 3-1 Vehicle Orientation

The terms front (1), left-hand (2), right-hand (3) and rear (4) are used in this manual to indicate the sides as they are seen from the operator's seat.

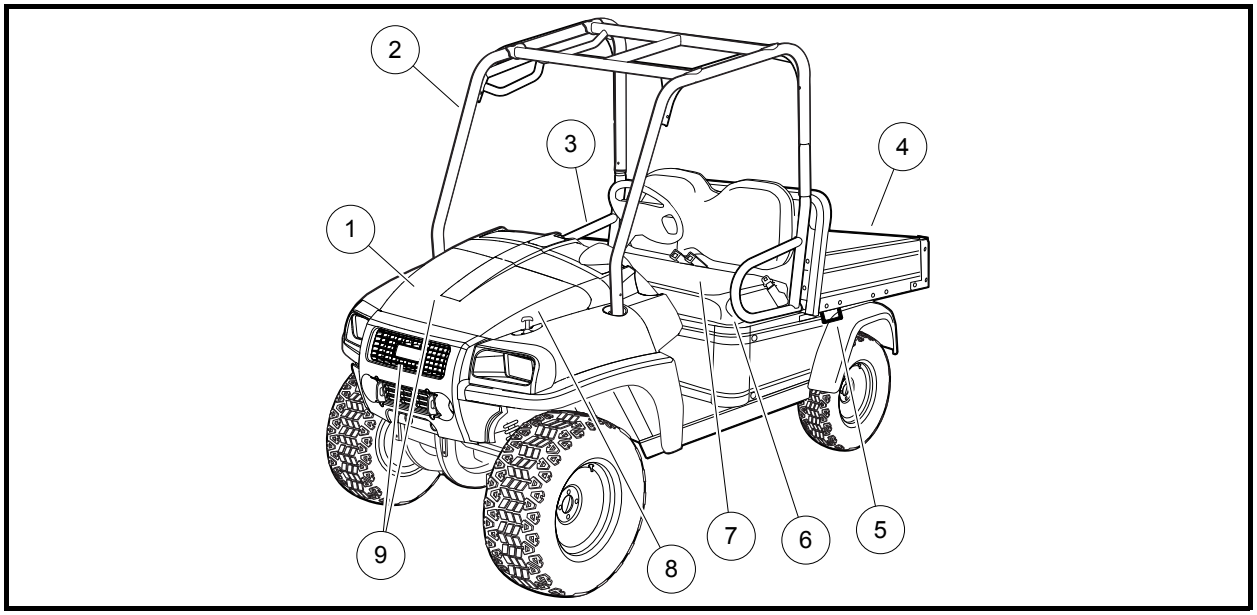

Figure 3-2 Vehicle Components

1. Hood 2. ROPS 3. Fuel Fill Cap 4. Cargo Bed 5. Bed Lift Latch – vehicles with manual (standard) bed lift only 6. Engine Compartment, Battery, Fuel Tank (under seat; for four-passenger model, engine compartment is under rear seat) 7. Seat 8. Brake Fluid Reservoir (under hood) 9. Radiator and Coolant Reservoir (under hood) – diesel engine model only

MODEL IDENTIFICATION

The serial number of each vehicle is printed on a decal mounted under and slightly behind the passenger side of the dash **(Figure 3-3, Page 3-3)**. It is also on the passenger side of the engine compartment near the top of the side panel. **See following NOTE.**

NOTE: *Have the vehicle serial number available when ordering parts or making inquiries.*

IDENTIFICATION NUMBERS

Write your vehicle model number, model serial number and engine serial number on the lines provided below. If needed, give these numbers to your dealer when you need parts or information for your vehicle. Make a record of the numbers. Keep the record and your Manufacturer's Statement of Origin in a safe place. If the vehicle is stolen, report the numbers to your local law enforcement agency.

Vehicle Model and Type **(Figure 3-3, Page 3-3)**	
Vehicle Serial Number **(Figure 3-3, Page 3-3)**	
Year of Build **(Figure 3-3, Page 3-3)**	
ROPS Serial Number **(Figure 3-4, Page 3-3)**	
Engine Serial Number **(Figure 3-5, Page 3-3) (Figure 3-6, Page 3-3)**	
Differential Serial Number **(Figure 3-7, Page 3-3)**	

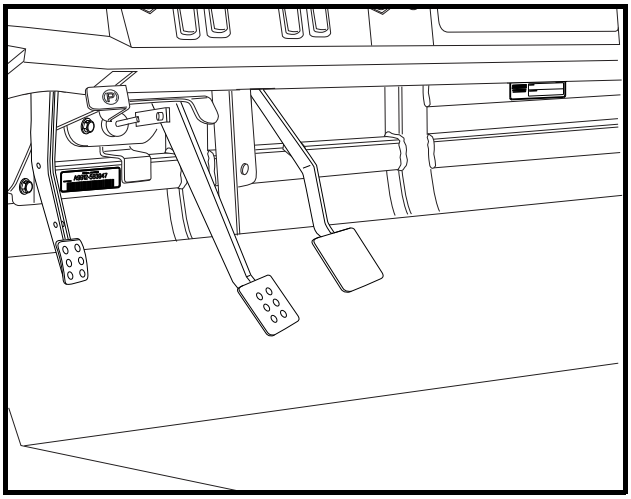

Figure 3-3 Vehicle Serial Number Location

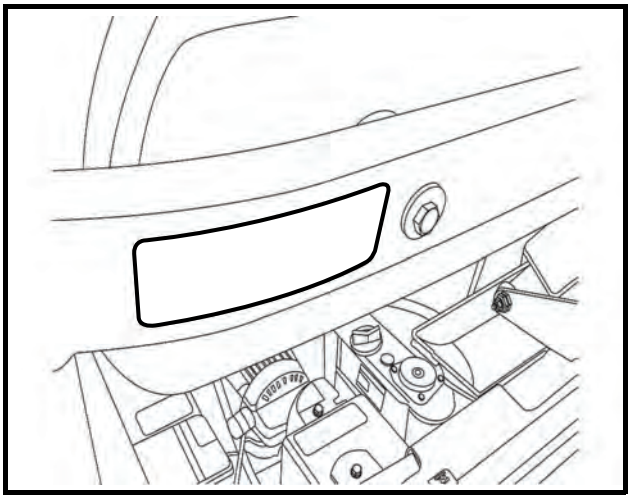

Figure 3-4 ROPS Serial Number Location

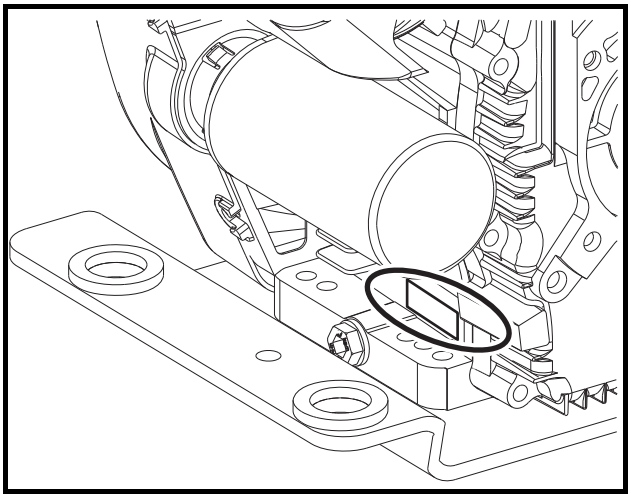

Figure 3-5 Gasoline Engine Serial Number Location

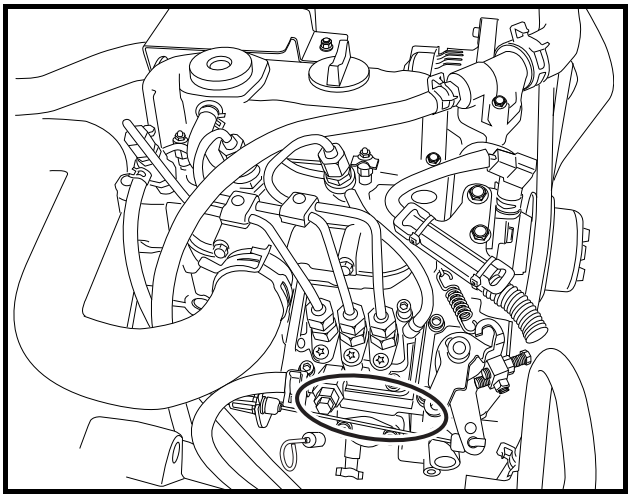

Figure 3-6 Diesel Engine Serial Number Location

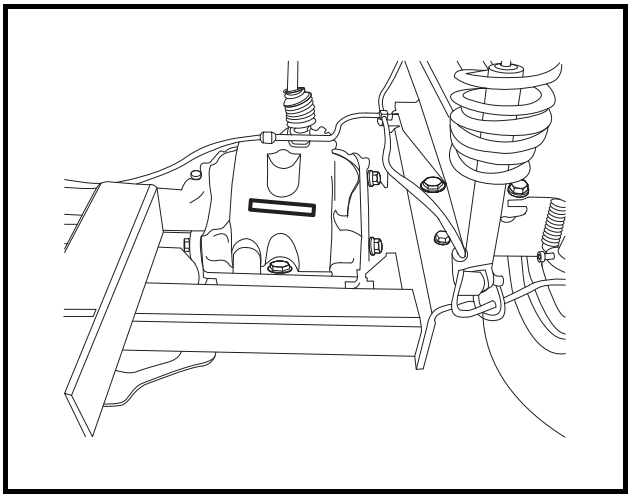

Figure 3-7 Differential Serial Number Location

STORAGE

See General Warning, Section 1, Page 1-2.

⚠ DANGER

- **Do not attempt to drain fuel when the engine is hot or while it is running.**
- **Clean up any spilled fuel before operating the vehicle.**
- **Store fuel in an approved fuel container only. Store in a well-ventilated area away from sparks, open flames, heaters, or heat sources.**
- **Keep fuel out of the reach of children.**
- **Do not siphon fuel from the vehicle.**

⚠ WARNING

- **Turn the key switch to the OFF position, remove the key, and leave the Forward/Reverse handle in the NEUTRAL position during storage. This is to prevent unintentionally starting the vehicle or a fire hazard.**
- **Gasoline vehicles only: Turn fuel shut-off valve to the closed (OFF) position (Figure 3-10, Page 3-6).**
- **Do not attempt to charge frozen batteries or batteries with bulged cases. Discard the battery. Frozen batteries can explode.**

⚠ CAUTION

- **Batteries in a low state of charge will freeze at low temperatures.**

PREPARING THE VEHICLE FOR EXTENDED STORAGE

1. Unload the vehicle so that the tires are supporting only the weight of the vehicle.
2. Store the vehicle in a cool, dry place. This will minimize battery self-discharge. If the battery appears to be weak, have it charged by a trained technician. Use an automotive-type 12-volt battery charger rated at 10 amps or less. Check electrolyte level after charging and add distilled water if necessary.
3. Make sure the key switch is in the OFF position and the Forward/Reverse handle is in the NEUTRAL position. Chock the wheels.

Gasoline vehicles:

4. Prepare the fuel tank.
   - 4.1. Fill the fuel tank with fresh fuel.
   - 4.2. Following manufacturer's directions, add a commercially available fuel stabilizer (such as Sta-Bil®). Run the engine in a well-ventilated area to allow treated fuel to replace untreated fuel in the carburetor.
   - 4.3. Disconnect the fuel vent line from the fuel tank vent nipple **(Figure 3-8, Page 3-5)**.
   - 4.4. Plug the fuel tank vent nipple so that it is air tight. The manufacturer recommends using a slip-on vinyl cap.
5. Remove both spark plugs and pour 1/2 ounce (14.2 mL) of SAE 10 weight oil through each of the two spark plug holes. Rotate the engine crankshaft by hand several times, then install both spark plugs.

Diesel vehicles:

NOTE: *If biodiesel fuel is used,* ***See Fueling Instructions on page 10-14.***

6. Prepare the fuel tank.
   6.1. Fill the fuel tank with fresh fuel.
   6.2. Disconnect the fuel vent line from the fuel tank vent nipple **(Figure 3-9, Page 3-5)**.
   6.3. Plug the fuel tank vent nipple so that it is air tight. The manufacturer recommends using a slip-on vinyl cap.

All vehicles:

7. Disconnect the battery cables, negative (–) cable first. **See WARNING "To avoid unintentionally starting..." in Section 1 – Safety on page 1-3.**
8. Change engine oil. **See Engine Oil and Filter Change on page 10-7.**
9. Batteries should be clean and free of corrosion. Wash tops and terminals of batteries with a solution of baking soda and water (1 cup (237 mL) baking soda per 1 gallon (3.8 L) of water). Rinse solution off batteries. Do not allow this solution to enter the batteries. Be sure terminals are tight. Let the terminals dry and then coat them with Battery Terminal Protector Spray (P/N CLC1014305).
10. Adjust the tires to the recommended tire pressure. **See Section 8 – Wheels and Tires.**
11. Perform semiannual periodic lubrication. **See Periodic Lubrication Schedule on page 10-4.**
12. Thoroughly clean the front body, rear body, seats, cargo bed, engine compartment, and underside of vehicle.
13. Do not engage the park brake. Chock the wheels to prevent the vehicle from rolling.

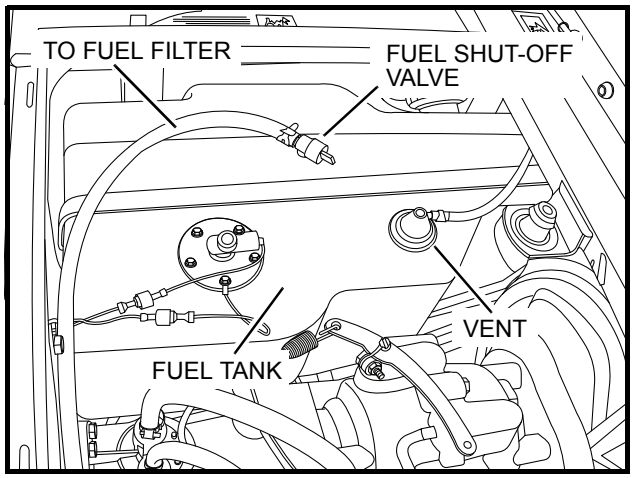

Figure 3-8 Fuel Tank – Gasoline Vehicles

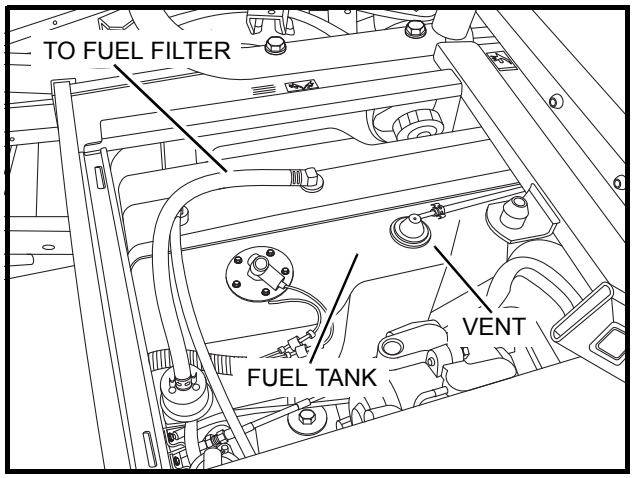

Figure 3-9 Fuel Tank – Diesel Vehicles

RETURNING THE STORED VEHICLE TO SERVICE

1. Make sure the key switch is in the OFF position and the Forward/Reverse handle is in the NEUTRAL position. Chock the wheels.
2. Restore the fuel system to operation **(Figure 3-8, Page 3-5 or Figure 3-9, Page 3-5)**.
   2.1. Remove the plug from the fuel tank vent.
   2.2. Connect the vent tube to the fuel tank vent.

3. Connect the battery cables, positive (+) cable first, and tighten the terminals to 80 in-lb (9 N·m). Coat terminals with Battery Terminal Protector Spray (P/N CLC1014305).
4. **Gasoline vehicles only:** Completely open the fuel shut-off valve **(Figure 3-10, Page 3-6)**. Ensure that the valve is fully open. A partially closed fuel shut-off valve combined with the use of the choke can result in a fouled spark plug and engine failure.
5. Place the Forward/Reverse handle in the NEUTRAL position. Crank the engine until fuel is pumped into the carburetor (gasoline vehicles) and the fuel lines and the engine starts. Turn the engine off. **See following NOTE.**

NOTE: *Due to the oil added to the engine in preparation for storage, the engine may smoke excessively for a short time when it is run for the first time after storage.*

6. Perform the Pre-Operation and Daily Safety Checklist. **See the Pre-Operation and Daily Safety Checklist in the vehicle owner's manual.**

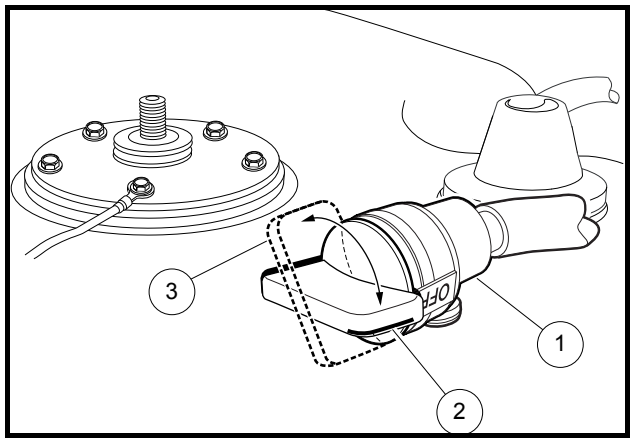

Figure 3-10 Fuel Shut-off Valve

1. Fuel Shut-off Valve
2. Closed (OFF)
3. Open (ON)

NOTE: When selecting valve position, ensure that it is fully opened or fully closed.

USING A BOOSTER BATTERY (JUMP STARTING)

⚠ WARNING

- **Wear safety glasses or approved eye protection when servicing the vehicle. Wear a full face shield and rubber gloves when working on or near batteries.**
- **When jumping from a booster battery make final connection (negative) at engine frame.**
- **Do not jump start or charge a frozen or damaged battery. Unplug charger before connecting or disconnecting cables to the battery. Never lean over battery while boosting, testing, or charging.**

If it is necessary to use a booster battery to start the engine, BE CAREFUL!

1. Turn the key switch to the OFF position. Place the Forward/Reverse handle in the NEUTRAL position, engage the park brake, and chock the wheels.
2. Ensure the booster battery is 12-volt. **See following NOTE.**

NOTE: *A starting battery is recommended but a deep cycle battery can be used if necessary.*

3. Access the engine compartment by raising the cargo bed. **See WARNING "For vehicles with cargo beds..." in General Warning, Section 1, Page 1-2.**
4. Locate the vehicle battery on the driver side of the vehicle under the cargo bed **(Figure 3-11, Page 3-7)**.
5. Connect the end of the first cable (1) to the positive (+) terminal of the booster battery. Connect the other end of the same cable (2) to the positive terminal of the vehicle battery. **See DANGER "Battery – Explosive gases!..." in General Warning, Section 1, Page 1-2.**
6. Connect the end of the second cable (3) to the negative (–) terminal of the booster battery. Connect the other end of the same cable (4) to the battery frame ground.
7. Sit in the driver seat and start the engine.
8. After the engine has started, remove the frame ground (–) cable (4) first. Remove the cable from the positive terminal (2). Then remove the cables from the booster battery. **See following CAUTION.**

CAUTION

- **Damage to the alternator can result if the following actions occur:**
  - **Engine is operated with battery cables disconnected.**
  - **Booster cables are connected incorrectly.**

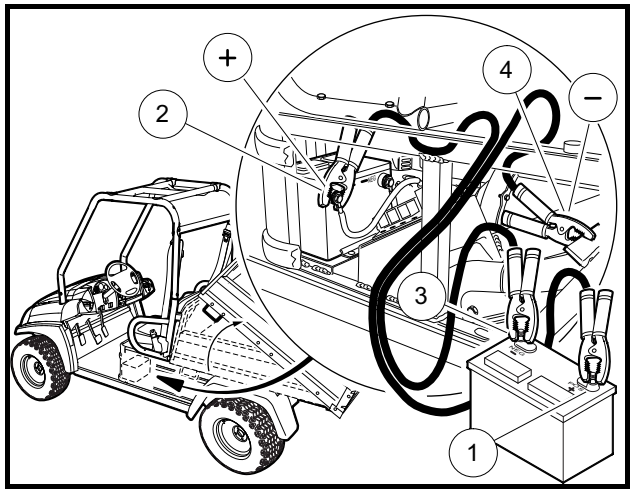

Figure 3-11 Jump Starting