

Owner's Guide GASOLINE POWERED VEHICLE



628442

ISSUED MAY 2012 REVISED APRIL 2014

WELCOME

Thank you for purchasing this vehicle. Before driving the vehicle, we ask you to spend some time reading this Owner's Guide. This guide contains the information that will assist you in maintaining this highly reliable vehicle. Some illustrations may show items that are optional for your vehicle. This guide covers the operation of several vehicles; therefore, some illustrations may not represent your vehicle. Physical differences in controls will be illustrated.

Most of the service procedures in this guide can be accomplished using common, automotive hand tools. Contact your service representative on servicing the vehicle in accordance with the Periodic Service Schedule.

Service Parts Manuals, as well as Repair and Service Manuals, are available from a local Distributor, an authorized Branch, or the Service Parts Department. When ordering parts or requesting information for your vehicle, provide the vehicle model and Serial Number.

The following information is needed when contacting E-Z-GO concerning service or parts for your vehicle
Serial Number
Vehicle Model
Manufacturing Date Code



OWNER'S GUIDE GASOLINE POWERED VEHICLE

TXT VALOR

STARTING MODEL YEAR 2012

Never modify the vehicle in any way that will alter the weight distribution of the vehicle, decrease its stability or increase the speed beyond the factory specifications. Such modifications can cause serious personal injury or death. E-Z-GO Division of Textron Inc. prohibits and disclaims responsibility for any such modifications or any other alteration which would adversely affect the safety of the vehicle.

E-Z-GO Division of Textron Inc. reserves the right to incorporate engineering and design changes to products in this manual, without obligation to include these changes on units sold or leased previously.

The information contained in this manual may be revised periodically by E-Z-GO, and therefore is subject to change without notice. E-Z-GO DISCLAIMS LIABILITY FOR ERRORS IN THIS MANUAL, and SPECIFICALLY DISCLAIMS LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES resulting from the use of the information and materials in this Manual.

These are the original instructions as defined by 2006/42/EC.

TO CONTACT US

E-Z-GO Division of Textron Inc. 1451 Marvin Griffin Road. Augusta, Georgia, USA 30906-3852

North America:

Technical Assistance & Warranty PHONE: 1-800-774-3946 FAX: 1-800-448-8124 Service Parts PHONE: 1-888-GET-EZGO (1-888-438-3946) FAX: 1-800-752-6175

International:

PHONE: 001-706-798-4311 FAX: 001-706-771-4609

FOREWORD

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

This vehicle has been designed and manufactured in the United States of America (USA). The Standards and Specifications listed in the following text originate in the USA unless otherwise indicated.

The use of non Original Equipment Manufacturer (OEM) approved parts may void the warranty.

Overfilling battery may void the warranty.

Tampering with or adjusting the governor to permit vehicle to operate at above factory specifications will void the vehicle warranty.

When servicing engines, all adjustments and replacement components must be per original vehicle specifications in order to maintain the United States of America Federal and State emission certification applicable at the time of manufacture.

BATTERY PROLONGED STORAGE

All batteries will self discharge over time. The rate of self discharge varies depending on the ambient temperature and the age and condition of the batteries.

A fully charged battery will not freeze in winter temperatures unless the temperature falls below -75°F (-60°C).

BATTERY DISPOSAL

Lead-acid batteries are recyclable. Return whole scrap batteries to distributor, manufacturer or lead smelter for recycling. For neutralized spills, place residue in acid-resistant containers with absorbent material, sand or earth and dispose of in accordance with local, state and federal regulations for acid and lead compounds. Contact local and/or state environmental officials regarding disposal information.

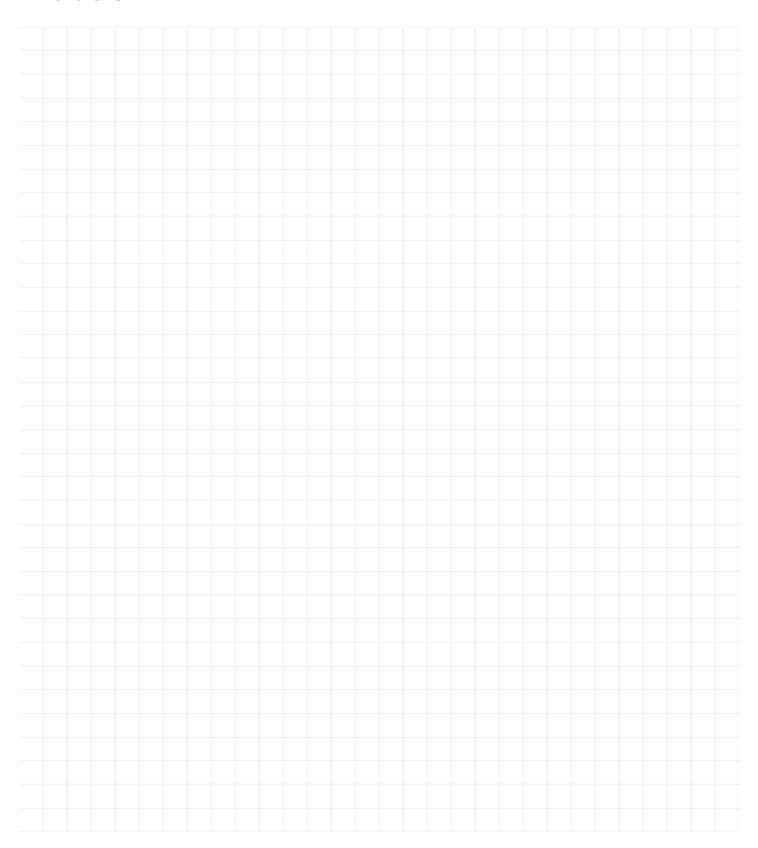
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Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

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SAFETY

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GENERAL

For any questions on material contained in this manual, contact an authorized representative for clarification.

Read all labels located on the vehicle. Always replace any damaged or missing labels.

On steep hills it is possible for vehicles to coast at greater than normal speeds encountered on a flat surface. To prevent loss of vehicle control and possible serious injury, speeds should be limited to no more than the maximum speed on level ground. See GENERAL SPECIFICATIONS. Limit speed by applying the service brake.

Catastrophic damage to the drivetrain components due to excessive speed may result from driving the vehicle above specified speed. Damage caused by excessive speed may cause a loss of vehicle control, is costly, is considered abuse and will not be covered under warranty.

Use extra caution when towing the vehicle(s). Do not tow a single vehicle at speeds in excess of 12 mph (19 kph). Do not tow more than three vehicles at a time. Do not exceed 5 mph (8 kph) while towing multiple vehicles. Towing the vehicle at above the recommended speed may result in personal injury and/or damage to the vehicle and other property. Vehicles equipped with the AC Drive motor must be towed with the Run-Tow switch, located under the passenger seat, in the 'Tow' position.

If the vehicle is to be used in a commercial environment, signs similar to the ones illustrated should be used to warn of situations that could result in an unsafe condition.



WASH HANDS AFTER HANDLING!

chemicals known to cause cancer and reproductive harm.







WARNING



APPLY BRAKE TO LIMIT SPEED



APPLY BRAKE TO LIMIT SPEED



EXCESS OF 14°

NOTICES, CAUTIONS, WARNINGS, AND DANGERS

Throughout this guide NOTICE, CAUTION, WARNING, and DANGER will be used. Please observe these NOTICES, CAUTIONS, WARNINGS, and DANGERS; be aware that servicing a vehicle requires mechanical skill and a regard for conditions that could be hazardous. Improper service or repair may damage the vehicle or render it unsafe.

NOTICE

Address practices not related to personal injury.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or other reproductive harm.

NOTICE

The exhaust emissions of this vehicles' engine complies with regulations set forth by the Environmental Protection Agency (EPA) of the United States of America (USA) at time of manufacture. Significant fines could result from modifications or tampering with the engine, fuel, ignition or air intake systems

A WARNING

Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

NOTICE

This spark ignition system meets all requirements of the Canadian Interference-Causing Equipment Regulations.

This manual has been designed to assist in maintaining the vehicle in accordance with procedures developed by the manufacturer. Adherence to these procedures and troubleshooting tips will ensure the best possible service from the product. To reduce the chance of personal injury or property damage, the following must be carefully observed:

WARNING

Certain replacement parts can be used independently and/or in combination with other accessories to modify an E-Z-GO-manufactured vehicle to permit the vehicle to operate at or in excess of 20mph. When an E-Z-GO-manufactured vehicle is modified in any way by the Distributor, Dealer or customer to operate at or in excess of 20mph, UNDER FEDERAL LAW the modified product will be a Low Speed Vehicle (LSV) subject to the strictures and requirements of Federal Motor Vehicle Safety Standard 571.500. In these instances, pursuant to Federal law the Distributor or Dealer MUST equip the product with headlights, rear lights, turn signals, seat belts, top, horn and all other modifications for LSV's mandated in FMVSS 571.500, and affix a Vehicle Identification Number to the product in accordance with the requirements of FMVSS 571.565. Pursuant to FMVSS 571.500, and in accordance with the State laws applicable in the places of sale and use of the product, the Distributor, Dealer or customer modifying the vehicle also will be the Final Vehicle Manufacturer for the LSV, and required to title or register the vehicle as mandated by State law.

E-Z-GO will NOT approve Distributor, Dealer or customer modifications converting E-Z-GO products into LSV's.

The Company recommends that all E-Z-GO products sold as personal transportation vehicles BE OPERATED ONLY BY PERSONS WITH VALID DRIVERS LICENSES, AND IN ACCORDANCE WITH APPLICABLE STATE REQUIREMENTS. This restriction is important to the SAFE USE AND OPERATION of the product.

All customers should adhere to this SAFETY RESTRICTION, in connection with the use of all E-Z-GO products, new and used, the Distributor or Dealer has reason to believe may be operated in personal transportation applications.

Information on FMVSS 571.500 can be obtained at Title 49 of the Code of Federal Regulations, section 571.500, or through the Internet at the web site for the U.S. Department of Transportation - at Dockets and Regulation, then to Title 49 of the Code of Federal Regulations (Transportation)

GENERAL OPERATION

All vehicles can be used for a variety of tasks beyond the original intended use of the vehicle; therefore, it is impossible to anticipate and warn against every possible combination of circumstances that may occur. No warning can take replace good common sense and prudent driving practices.

Good common sense and prudent driving practices do more to prevent accidents and injury than all of the warnings and instructions combined. E-Z-GO strongly suggests that all users and maintenance personnel read this entire manual paying particular attention to the CAUTIONS, WARNINGS and DANGERS contained therein.

1

SAFETY

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

If you have any questions regarding this vehicle, contact your E-Z-GO dealer or write to the address on the back cover of this publication, Attention: Customer Care Department.

E-Z-GO reserves the right to make design changes without obligation to make these changes on units previously sold. The information contained in this manual is subject to change without notice.

E-Z-GO IS NOT LIABLE FOR ERRORS IN THIS MANUAL. E-Z-GO IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES THAT RESULT FROM THE USE OF THE MATERIAL IN THIS MANUAL.

This vehicle conforms to the current applicable standard(s) for safety and performance requirements.

These vehicles are designed and manufactured for off-road use. They DO NOT conform to Federal Motor Vehicle Safety Standards of the United States of America (USA) and are not equipped for operation on public streets. Some communities may permit these vehicles to be operated on their streets on a limited basis and in accordance with local ordinances.

With electric powered vehicles, be sure that all electrical accessories are grounded directly to the negative (-) battery post. **Never use the chassis or body as a ground connection.**

Refer to GENERAL SPECIFICATIONS for vehicle seating capacity.

Never modify the vehicle in any way that will alter the weight distribution of the vehicle, decrease its stability or increase the speed or extend the stopping distance beyond the factory specification. Such modifications can result in serious personal injury or death.

Do not make any such modifications or changes. E-Z-GO prohibits and disclaims responsibility for all such modifications or and alterations which would adversely affect the safety of the vehicle.

Vehicles that are capable of higher speeds must limit their speed to no more than the speed of other vehicles when used in a golf course environment. Additionally, speed should be further moderated by the environmental conditions, terrain and common sense.

Operation of the vehicle is limited to persons above the height of 59 inches (150 cm).

ALWAYS:

- Use the vehicle in a responsible manner and maintain the vehicle in safe operating condition
- Read and observe all warnings and operation instruction labels affixed to the vehicle
- Follow all safety rules established in the area where the vehicle is being operated
- Leave the vehicle when there is a risk of lightning
- Reduce speed to compensate for poor terrain or conditions
- Apply service brake to control speed on steep grades
- Maintain adequate distance between vehicles
- Reduce speed in wet areas
- Use extreme caution when approaching sharp or blind turns
- Use extreme caution when driving over loose terrain
- Use extreme caution in areas where pedestrians are present

MAINTENANCE

ALWAYS:

- Replace damaged or missing warning, caution or information labels
- Maintain the vehicle in accordance with the manufacturer's periodic service schedule
- Ensure that repairs are performed by trained and qualified personnel
- Follow the manufacturer's maintenance procedures
- Insulate any tools used within the battery area in order to prevent sparks or battery explosion
- Use specified replacement parts, NEVER use replacement parts of lesser quality



- · Use recommended tools
- Determine that tools and procedures not specifically recommended by the manufacturer will not compromise the safety of personnel nor jeopardize the safe operation of the vehicle
- Support the vehicle using wheel chocks and jack stands, NEVER get under a vehicle that is supported by a jack, lift the vehicle in accordance with the manufacturer's instructions
- Empty the fuel tank or plug fuel hoses to prevent fuel leakage.
- Maintain the vehicle in an area away from exposed flame or persons who are smoking
- · Be aware that a vehicle that is not performing as designed is a potential hazard and must not be operated
- Test drive the vehicle after any repairs or maintenance in a safe area that is free of both vehicular and pedestrian traffic
- · Keep complete records of the maintenance history of the vehicle

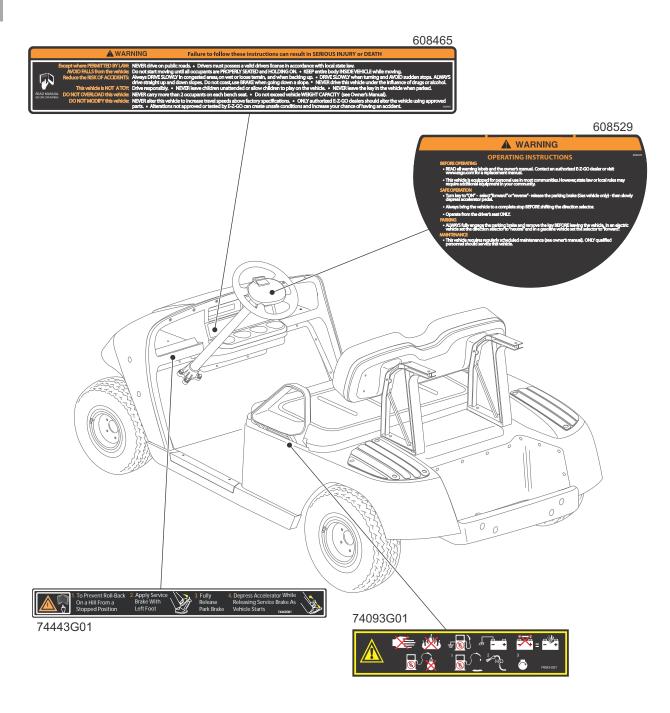
The manufacturer cannot anticipate all situations, therefore people attempting to maintain or repair the vehicle must have the skill and experience to recognize and protect themselves from potential situations that could result in severe personal injury or death and damage to the vehicle. Use extreme caution and, if unsure as to the potential for injury, refer the repair or maintenance to a qualified mechanic.

VENTILATION

ALWAYS:

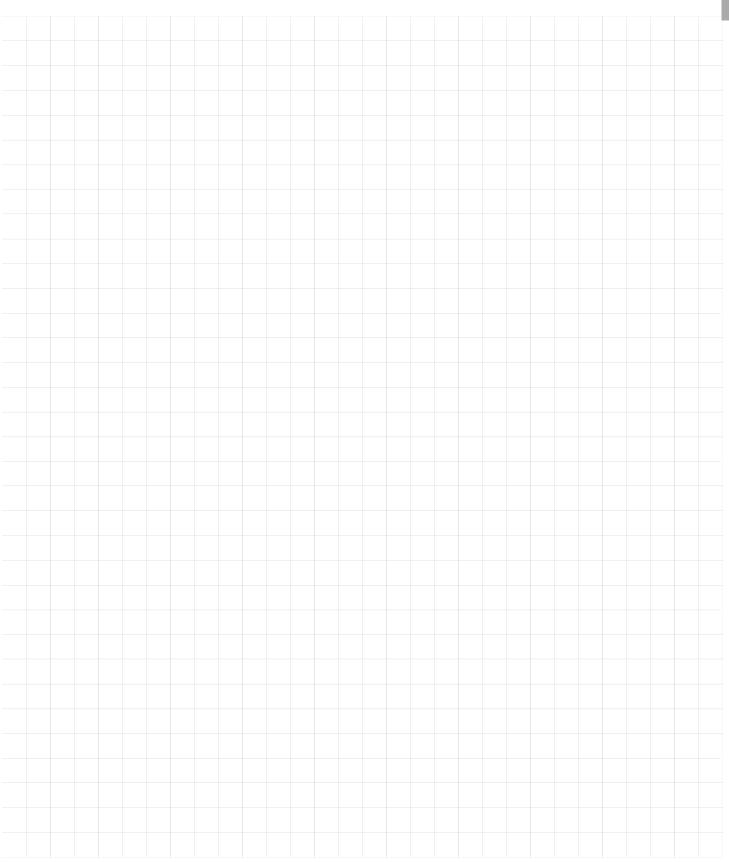
- Store gasoline vehicles in a well ventilated area to prevent gasoline fumes from accumulating
- Fuel vehicle in an area free from flame or spark, pay particular attention to natural gas or propane water heaters and furnaces
- Work on or operate the vehicle in a well ventilated area to prevent the accumulation of exhaust gases such as carbon monoxide

LABELS AND PICTOGRAMS



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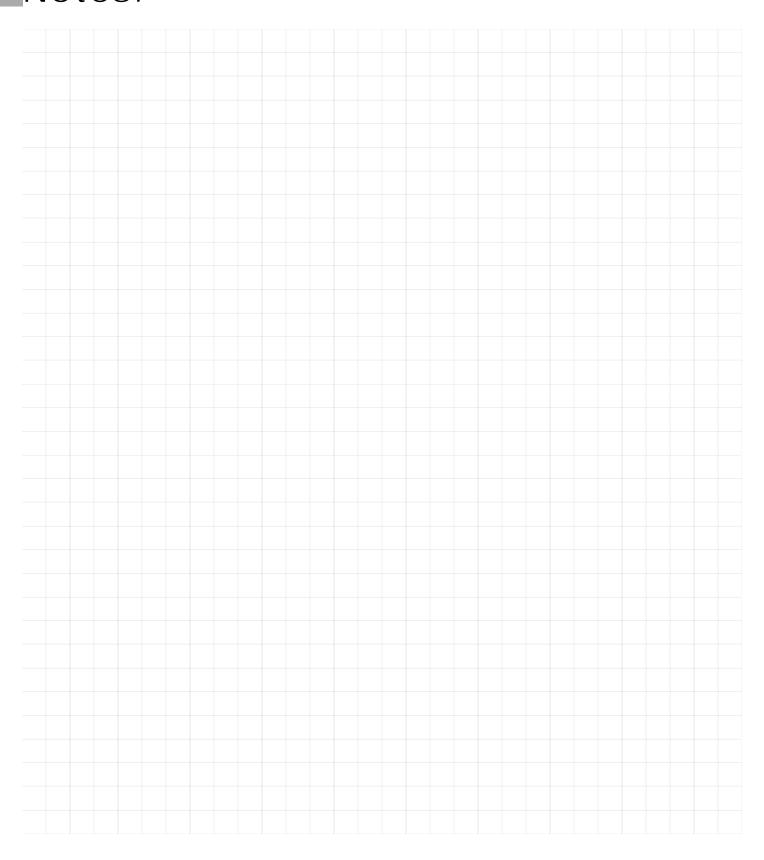
Notes:



SAFETY

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

¹Notes:



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Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.



A Textron Company

MODEL: TXT LIFTED VALOR GAS

TYPE: GAS PERSONAL USE LIFTED GOLF CAR

MODEL YEAR: 2012

Part No.: 628444



PRODUCT SPECIFICATION

CONFIGURATION HIGHLIGHTS

Engine: 13.5 hp (10.1 kW) Exceeds SAE J1940 Standard, 4 cycle, 24.5 ci (401 cc) single cylinder, air-cooled by Kawasaki

• Valve Train: Overhead valve

Lubrication: Pressurized oil system, spin-on oil filter
 Balancer: Internal counter rotating balance shaft

Fuel System: Fixed float bowl with remote pulse fuel pump

Ignition: Electronic spark/magnetoAir Cleaner: Replaceable dry cartridge

Electrical: Starter/Generator, solid-state regulator, 12 Volt maintenance free battery (425 CCA, 60 minute reserve)

Drive Train: Automatic, continuously variable transmission (CVT)

Brakes: Dual rear wheel mechanical self-adjusting drum brakes. Single point park brake release with self-compensating system

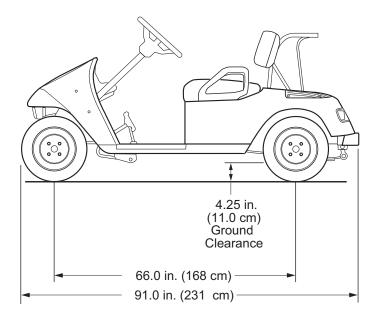
Transaxle: Differential with helical gears, ground speed governor, forward/reverse

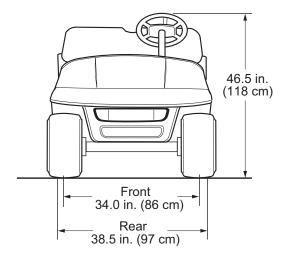
PRODUCT OVERVIEW

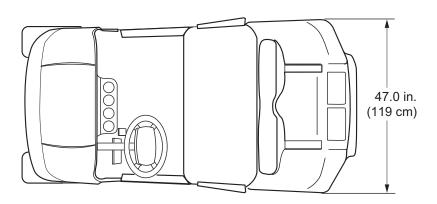
Dimensions		Performance	
Overall Length	91.0 in (231 cm)	Seating Capacity	2 Person
Overall Width	47.0 in (119 cm)	Dry Weight	610 lb (277 kg)
Overall Height (No Canopy)	46.5 in (118 cm) (Top of steering wheel)	Curb Weight	650 lb (295 kg)
Overall Height (With Canopy)	68.0 in (173 cm)	Vehicle load capacity	800 lb (360 kg)
Wheel Base	66.0 in (168 cm)	Outside Clearance Circle	19.0 ft (5.8 m)
Front Wheel Track	34.0 in (86 cm)	Speed (Level Ground)	19 mph \pm 0.5 mph (31 kph \pm 0.8 kph)
Rear Wheel Track	38.5 in (97 cm)	Steering & Suspension	
Ground Clearance (at Different	tial) 5.0 in (12.7 cm)	Steering	Self-compensating rack and pinion
Vehicle Power		Front Suspension	Leaf springs with hydraulic shock absorbers
Power Source	4 Cycle 24.5 cu in (401 cc)	Rear Suspension	Leaf springs with hydraulic shock absorbers
Valve Train	Single Cylinder OHV	Service Brake	Rear wheel mechanical self-adjusting drum
Horsepower (kW)	13.5 hp (10.1 kW) Exceeds SAE J1940 Std.	Parking Brake	Self-compensating, single point engagement
Electrical System	Starter/Generator. Solid State Regulator	Front Tires	Turf Saver 20 x 10 x 10 on Black Wheel
Batteries (Qty, Type)	One, 12 Volt Maintenance Free	Rear Tires	Turf Saver 20 x 10 x 10 on Black Wheel
Key or Pedal Start	Pedal	Body & Chassis	
Air Cleaner	Industrial Rated Dry Filter with Remote Intake	Frame	Welded steel. DuraShield™ powder coat
Lubrication	Pressurized Oil System	Body & Finish	Injection molded TPO
Oil Filter	Spin On	Standard Color	Black
Cooling System	Air Cooled		
Fuel Capacity	5.3 gallons (20.0 L) tank		
Drive Train	Continuously variable transmission (CVT)		
Transaxle	Differential with helical gears		
Gear Selection	Forward - Reverse		
Rear Axle Ratio	11.42:1 (Forward) 15.78:1 (Reverse)		

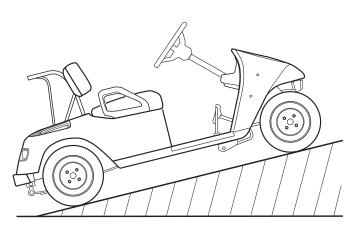
Specifications are subject to change without notice

^{*} Field installed accessories may require installation charges

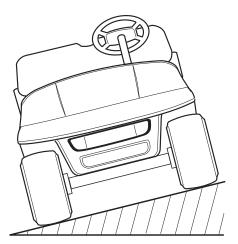




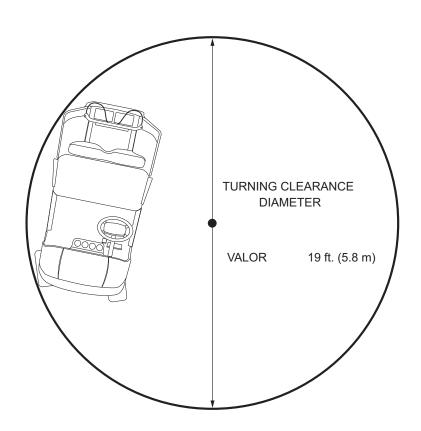




RECOMMENDED MAX RAMP 25% GRADE or 14⁰MAX



RECOMMENDED MAX SIDE TILT 25% GRADE or 14⁰MAX

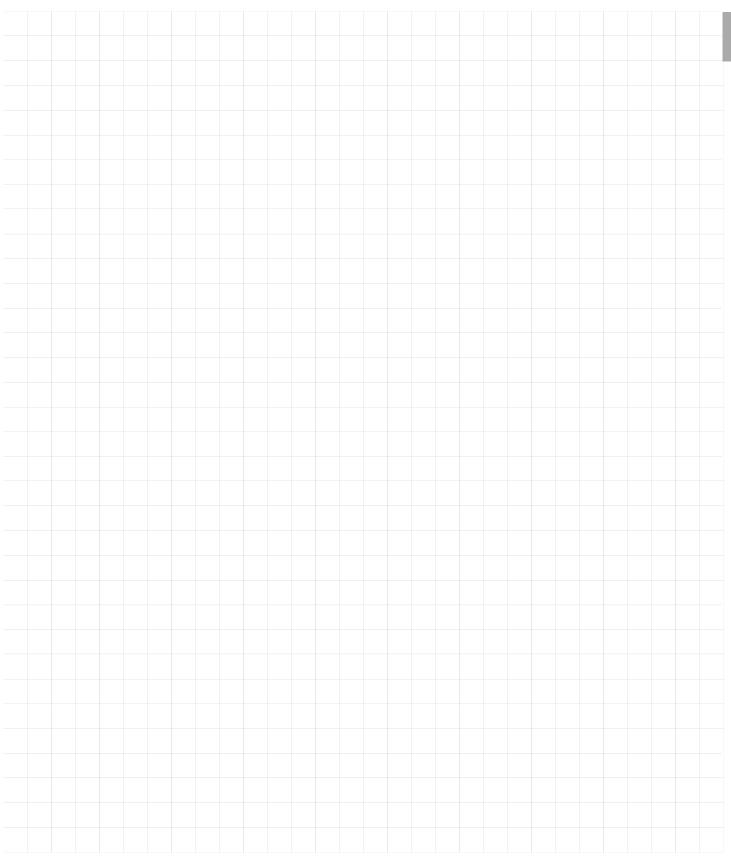


2

GENERAL SPECIFICATIONS

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

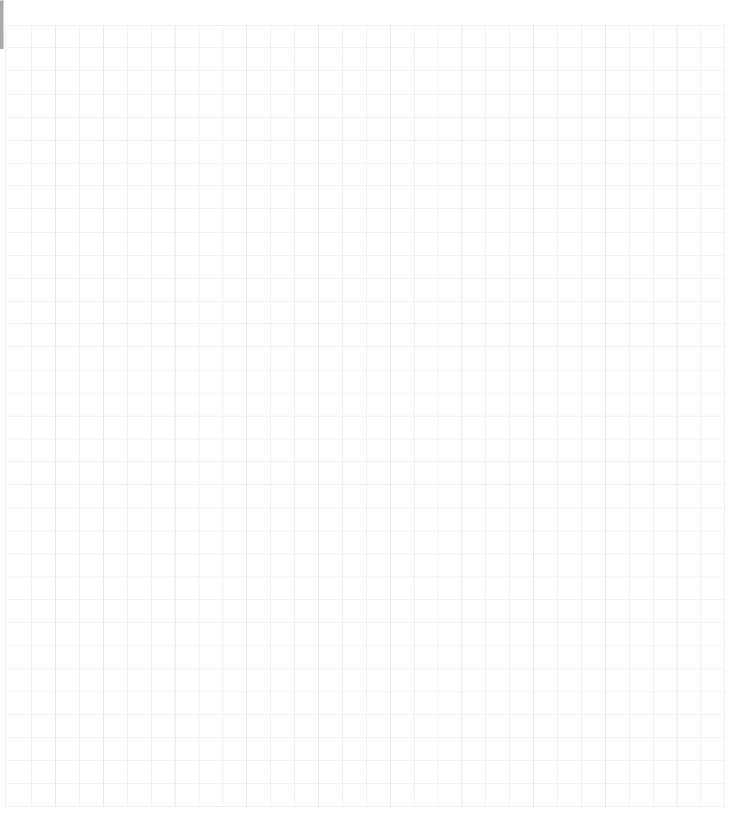
Notes:



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Notes:

2



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INTRODUCTION

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INTRODUCTION

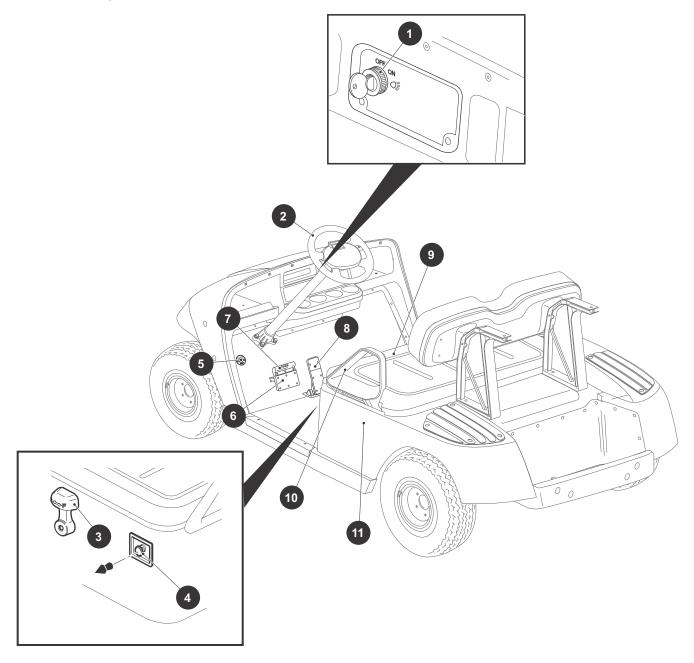
Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

FEATURES

General Information

NOTICE

If the vehicle is equipped with factory installed custom accessories, some accessories remain operational with the key switch in the 'OFF' position.



3 - 2

INTRODUCTION

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

1. Key Switch / Headlight Switch

Located on the dash panel, this switch enables the basic electrical system of the vehicle to be turned on and off by turning the key. The switch has 3 positions, OFF, ON and Headlights. To prevent inadvertent operation of the vehicle when left unattended, the key should be turned to the 'OFF' position and removed.

2. Steering Wheel

The steering wheel located in front of the driver seat is used to steer the vehicle.

3. Direction Selector



To reduce the possibility of component damage, the vehicle must be completely stopped before moving the direction selector.

Located on the seat support panel, this lever permits the selection of either 'F' (forward) or 'R' (reverse). Vehicle should be left in 'F' when unattended.

4. Choke

The choke is used to aid cold starting. See COLD STARTING section for operating instructions.

5. Horn

The horn is operated by pushing the horn button located on the floor to the left of the brake pedal.

6. Brake Pedal

Depress the lower portion of the brake pedal to slow or stop the vehicle.

7. Park Brake

The park brake is activated by pushing on the top portion of the brake pedal until it locks in place. The park brake will release when the service brake pedal (lower portion of the brake pedal) is depressed.

8. Accelerator Pedal

With the key switch 'ON', depressing the accelerator pedal starts the engine. When the pedal is released, the engine will stop. To stop the vehicle more quickly, depress the brake pedal.

9. Seat

The bench seat is designed for two occupants, one on each side of the seat.

10. Hip Restraint

The hip restraints for the bench seat are designed to help keep the occupants properly positioned in the event of sudden vehicle position changes.

11. Engine Compartment

The engine compartment is accessed by raising the bench seat bottom.

INTRODUCTION

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

Notes:

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OPERATING PROCEDURES

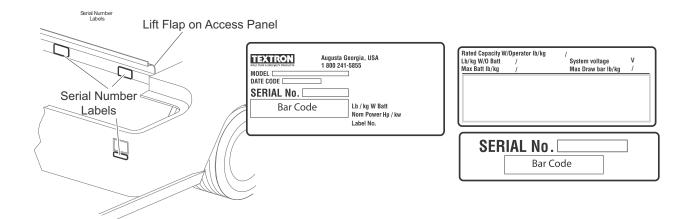
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Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

SERIAL NUMBER LOCATION

Two serial number and manufacture date code plates are on the vehicle. One is placed on the body below the front, driver side seat. The other is located on the chassis between the seat back supports. To access it, raise the seat and lift up the flap on the access panel.

Design changes take place on an ongoing basis. In order to obtain correct components for the vehicle, the manufacture date code, serial number and vehicle model mustacture date code, serial number and vehicle model must be provided when ordering service parts.



Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

BEFORE INITIAL USE

Read, understand and follow the safety label on the instrument panel. Be sure you understand how to operate the vehicle and its equipment as well as how to use it safely. Maintaining good performance depends to a large extent on the operator.

A WARNING

Improper use of this vehicle could result in severe injury or death. The series of vehicles are light duty utility vehicles. They are NOT all terrain Vehicles (ATVs).

This vehicles is not a toy and using it while engaging in horseplay is dangerous.

Hydrogen gas is generated as a natural part of the lead acid battery charging process. A 4% concentration of hydrogen gas is explosive and could cause severe injury or death. Charging must take place in an area that is adequately ventilated (minimum of 5 air exchanges per hour).

To reduce the chance of battery explosion that could result in severe injury or death, never smoke around or charge batteries in an area that has open flame or electrical equipment that could cause an electrical arc.

Before a new vehicle is put into operation, the items shown in the *INITIAL SERVICE CHART* must be performed.

Vehicle battery must be fully charged before initial use.

Check for correct tire inflation. See GENERAL SPECIFICATIONS.

Check for oil or fuel leaks that could have developed in shipment from the factory.

Determine and record braking distance required to stop vehicle for future brake performance tests.

Remove the protective clear plastic, that protect the seat bottom and back rest during shipping, before placing the vehicle in service.

ITEM	SERVICE OPERATION
Battery	Charge battery
Seats	Remove protective plastic covering
Brakes	Check operation and adjust if necessary
	Check hydraulic brake fluid level
	Establish mechanical brake base line
Tires	Check pressure (see SPECIFICATIONS)
Fuel	Fill tank with correct fuel
Engine	Check oil level

INITIAL SERVICE CHART

OPERATING THE VEHICLE

A CAUTION

Improper use of the vehicle or the lack of proper maintenance may result in damage or decreased performance. Read and understand the following warnings before attempting to operate the vehicle.

A WARNING

To reduce the possibility of severe injury or death resulting from loss of vehicle control, the following warnings must be observed:

When driving vehicle, consider the terrain, traffic conditions and the environmental factors which effect the terrain and the ability to control the vehicle.

Use extra care and reduced speed when driving on poor surfaces, such as loose dirt, wet grass, gravel, etc.

Stay in designated areas and avoid extremely rough terrain.

Maintain a safe speed when driving down hill. Use service brake to control speed when traveling down an incline. A sudden stop or change of direction may result in loss of control.

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

Slow down before and during turns. All turns should be made at reduced speed.

Never drive vehicle up, down, or across an incline that exceeds 14° (25% grade).

WARNING

To reduce the possibility of severe injury or death resulting from improper vehicle operation, the following warnings must be observed:

Refer to GENERAL SPECIFICATIONS for seating capacity.

Depressing accelerator pedal will release foot operated park brake and may cause inadvertent vehicle movement. Turn the key to the 'OFF' position whenever the vehicle is parked.

To prevent inadvertent movement when the vehicle is to be left unattended, engage the park brake, move direction selector to forward position, turn key to 'OFF' position and remove key.

Make sure that the direction selector is in correct position before attempting to start the vehicle.

Always bring the vehicle to a complete stop before shifting the direction selector.

Do not take vehicle out of 'gear' while in motion (coast).

Check the area behind the vehicle before operating in reverse.

All occupants must be seated. Keep entire body inside vehicle and hold on while vehicle is in motion.

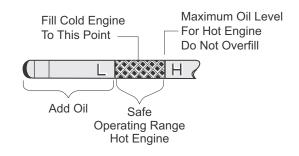
Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

Run-in

Check for oil or fuel leaks that could have developed in shipment from the factory. Avoid full throttle starts and rapid acceleration until the engine has achieved operating temperature.

All engines consume more oil than normal during the first hours of operation. As internal moving parts are run-in, oil consumption should gradually decrease until the rate of consumption stabilizes.

Check the oil level per the Periodic Service Schedule. Add oil if the level on the dipstick indicates that oil is in the add oil range.



A CAUTION

Do not overfill engine. Too much oil may cause smoking or allow oil to enter the air filter enclosure.

NOTICE

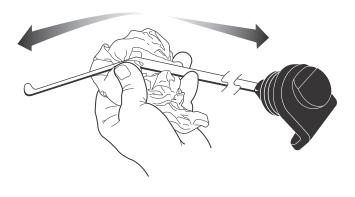
The oil dipstick/fill cap must be in place before operating the engine. Failure to install the dipstick/fill cap will result in oil becoming contaminated and/or being discharged into the engine compartment.

Oil dipsticks are unique to this model vehicle. Do not interchange oil dipsticks between models.

The oil should be changed in accordance with the Periodic Service Schedule while the engine is warm. See SERVICE AND MAINTENANCE for checking oil level and changing oil procedures.

Cold Starting

Starting a cold engine **may** require use of the choke. Depress the accelerator approximately 1" (2.5 cm) or until the starter just begins to operate. Pull the choke out if required. Accelerate slowly and push the choke in completely when the engine runs smoothly.



A CAUTION

Do not allow the starter to operate continuously for more than 10 seconds. Allow 30 seconds between starting attempts. If the vehicle does not start on the third attempt, turn the key switch off, set the park brake and determine the cause of the problem.

If the vehicle had been running and the engine does not start within 10 seconds, use the choke.

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

STARTING AND DRIVING

WARNING

To reduce the possibility of roll-back which could result in severe injury or vehicle damage, do not release service brake until engine has started.

To operate vehicle:

- Apply the service brake, place the key in the key switch and turn it to the 'ON' position.
- Move the direction selector to the direction desired.
- Release the park brake by pushing the park brake lever downward towards the floor.
- Slowly depress the accelerator pedal to start the engine. Release service brake when engine starts.
- When the accelerator pedal is released, the ignition circuit is de-energized and the engine stops. To stop the vehicle more quickly, depress the **service brake pedal**

NOTICE

When the direction selector is in the reverse position, a warning signal will sound to indicate that the vehicle is ready to run in reverse.

STARTING THE VEHICLE ON A HILL

WARNING

To reduce the possibility of roll-back which could result in severe injury or vehicle damage, do not release service brake until engine has started.

A CAUTION

Do not hold vehicle on hill by using accelerator and engine. This will cause premature and excessive wear to drive train components.

To reduce the possibility of permanent damage to the drive system, it is important to prevent excessive roll-back when starting the vehicle on a hill.

Place left foot on service brake and release the park brake. Depress accelerator with right foot and release the service brake by lifting left foot.

COASTING

WARNING

To reduce the possibility of severe injury or death from coasting at above recommended speeds, limit speed with service brake.

On steep hills, it is possible for the vehicle to coast at greater than normal speeds encountered on a flat surface. To reduce the possible loss of vehicle control and severe drivetrain damage, speeds should be limited to no more than the maximum governed speed on level ground (see GENERAL SPECIFICATIONS). Limit speed by applying service brake.

4

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

FUEL

WARNING

To reduce the possibility of severe injury or death from improper fuel handling:

Do not smoke near the fuel tank.

Do not refuel near open flame or electrical items which could produce a spark.

Always handle gasoline in a well ventilated area.

Always wear eye protection to protect against splashed fuel and fuel vapors.

Always allow adequate space for the expansion of gasoline. Leave at least 1" (2.5 cm) space below bottom of filler neck.

Inspect fuel cap, tank and other components for leaks or deterioration that could cause a hazardous condition.

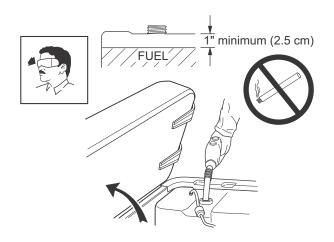
The fuel tank is located under the seat on the passenger side of the vehicle. Fill the tank with fresh, clean, automotive grade gasoline. High altitude or heavy use/load applications may benefit from higher octane gasoline.

Do not use gasoline which contains Methanol.



Some fuels, called oxygenated or reformulated gasoline, are gasoline blended with alcohols or ethers. Excessive amounts of these blends can damage the fuel system or cause performance problems. If any undesirable operating symptoms occur, use gasoline with a lower percentage of alcohol or ether.

Use fresh regular grade unleaded fuel. Ethanol blend fuel up to 10% is permissible.



BATTERY

A CAUTION

Excessive use of accessories may drain the battery and leave insufficient reserve to start the vehicle.

The vehicle uses a combination starter/generator to both start the engine and charge the battery. The engine will not idle; therefore, the battery cannot be charged while the vehicle is stopped. Do not operate accessory items (such as lights) excessively while the vehicle is stopped.

The generator is capable of supplying 35 amps; therefore, operation of all accessories could result in the discharge of the battery even though the engine is running and the generator operating. Discharging the battery is known as deep cycling. The battery is not a deep cycle model, but is a starting battery. Multiple deep cycling will result in the premature failure of the battery.

If the vehicle battery has become discharged, it must be charged using a 12 volt charger that is rated at 10 amps or less and in accordance with all instructions provided by the manufacturer of the charger.

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

SUN TOP AND WINDSHIELD

WARNING

The sun top does not provide protection from roll over or falling objects.

The windshield does not provide protection from tree limbs or flying objects.

A CAUTION

To prevent damage to the vehicle, do not hold on to sun top struts and stand on body panels.

The sun top and windshield provide some protection from the elements; however, they will not keep the operator and passenger dry in a downpour. This vehicle is not equipped with seat belts and the sun top has not been designed to provide roll over protection. In addition, the sun top does not protect against falling objects nor does the windshield protect against flying objects and tree limbs. Keep arms and legs inside of vehicle while it is moving.

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Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

VEHICLE CLEANING AND CARE

Vehicle Cleaning

🕰 WARNING

To reduce the possibility of severe injury or vehicle damage, read and understand all instructions supplied by manufacturer of pressure washer.

A CAUTION

When pressure washing exterior of vehicle, do not use pressure in excess of 700 psi. To reduce the possibility of cosmetic damage, do not use any abrasive or reactive solvents to clean plastic parts.

It is important that proper techniques and cleaning materials be used. Using excessive water pressure may cause severe injury to operator or bystander, damage to seals, plastics, seat material, body finish or electrical system. Do not use pressure in excess of 700 psi to wash exterior of vehicle.

Clean windshield with lots of water and a clean cloth. Minor scratches may be removed using a commercial plastic polish or Plexus[®] plastic cleaner available from the service parts department.

Normal cleaning of vinyl seats and plastic or rubber trim requires the use of a mild soap solution applied with a sponge or soft brush and wipe with a damp cloth.

Removal of oil, tar, asphalt, shoe polish, etc. will require the use of a commercially available vinyl/rubber cleaner.

The painted surfaces of the vehicle provide attractive appearance and durable protection. Frequent washing with lukewarm or cold water and mild detergent is required to preserve the painted surfaces.

Occasional cleaning and waxing with non-abrasive products designed for 'clear coat' automotive finishes will enhance the appearance and durability of the painted surfaces.

Corrosive materials used as fertilizers or for dust control can collect on the underbody of the vehicle. These materials will cause corrosion of underbody parts unless flushed occasionally with plain water. Thoroughly clean any areas where mud or other debris can collect. Sediment packed in closed areas should be loosened to ease it's removal, taking care not to chip or otherwise damage paint.

NOTICE

If the engine does not start or runs improperly after washing, remove the spark plug wires (by pulling the spark plug boots, never the wires). Dry all connections with forced air. Reinstall the wires.

COMMON SENSE OPERATION

A WARNING

To prevent severe injury or death, observe the following:

Never transport loaded firearms on or in vehicle

Check that firearms are unloaded with the safety engaged and are properly secured with muzzle pointing in a safe direction before operating vehicle.

Be aware of other firearms in proximity to operator and passengers.

This vehicle is not a toy. If not operated properly and responsibly, it can cause severe injury or death to the operator, passengers or bystanders. All operators should possess a valid driver's license. Children should not be permitted to operate the vehicle. Children may not have the skill, judgement or strength to operate this or similar vehicles.

Alcohol, drugs and many over the counter medications reduce the ability of the driver to operate the vehicle safely. Always review side effects of any medication with a doctor or pharmacist before operating vehicle.

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

Protective clothing and an approved motorcycle helmet are recommended for operator and passengers when operating vehicle in rough or densely wooded terrain.

When driving at full speed on a dirt road, loose surfaces or wet grass, vehicle stopping distance will increase. If the vehicle is fully loaded, it will take longer to stop than with no load. When operating vehicle in wet weather conditions, remember that the brakes may need to be **lightly** applied in order to provide enough friction to dry the brake unit. If wet, the brakes will lose much of their effect.

Slow down when in unfamiliar terrain. Slow down when cresting a hill in an area that you are unfamiliar with.

Some hills are too steep to climb. If you attempt to climb a hill that is too steep or if you are unable to achieve adequate traction, do not attempt to turn around on the hill. Slowly back straight down the hill using the service brake to control speed.

ENVIRONMENTAL CONCERNS

A WARNING

As a responsible user, practice respect for all wildlife and their habitat. Respect private property and comply with all local laws and regulations governing the use of light duty utility vehicles. To prevent severe injury or death while driving, be aware of the following:

Environmental hazards such as steep slopes, overhanging limbs, etc.

Danger of fire when vehicle is operated over dry combustible organic material.

When driving, be aware of environmental hazards such as steep slopes, overhanging limbs, etc. Be aware of the danger of fire when the gasoline powered vehicle is operated over dry combustible organic material.

REPAIR

Some servicing operations may require the front wheels, the rear wheels, or the entire vehicle to be raised.

A WARNING

To reduce the possibility of severe injury or death from a vehicle falling from a jack:

Be sure the vehicle is on a firm and level surface.

Never get under a vehicle while it is supported by a jack.

Use jack stands and test the stability of the vehicle on the stands.

Always place chocks in front and behind the wheels not being raised.

Use extreme care since the vehicle is extremely unstable during the lifting process.

A CAUTION

When lifting the vehicle, position the jacks and jack stands at the areas indicated only.

Lifting The Vehicle

Tool List	Qty.	Tool List	Qty.
Floor Jack	1	Jack Stands	4
Wheel Chacks	1		

Remove payload from vehicle before lifting. No person(s) should be in or on the vehicle while lifting.

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Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.



To raise the entire vehicle, install chocks in front and behind each front wheel. Center the jack under the rear frame crossmember. Raise the vehicle enough to place a jack stand under the outer ends of the rear axle.

Lower the jack and test the stability of the vehicle on the two jack stands.

Place the jack at the center of the front axle. Raise the vehicle enough to place jack stands under the frame cross-member as indicated.

Lower the jack and test the stability of the vehicle on all four jack stands.

If only the front or rear of the vehicle is to be raised, place the chocks in front and behind each wheel not being raised to stabilize the vehicle.

Lower the vehicle by reversing the lifting sequence.

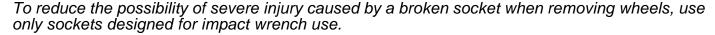
WHEELS AND TIRES

🕰 WARNING

A tire explosion can cause severe injury or death. Never exceed the inflation pressure rating on the tire sidewall.

To reduce the possibility of tire explosion, pres-

surize tire with small amounts of air applied intermittently to seat beads. Due to the low volume of the small tires, overinflation can occur in seconds. Never exceed the tire manufacturer's recommendation when seating a bead. Protect face and eyes from escaping air when removing a valve core.



DO NOT use low inflation tires on any E-Z-GO vehicle. DO NOT use any tire which has a recommended inflation pressure less than the inflation pressure recommended in the owner's guide.

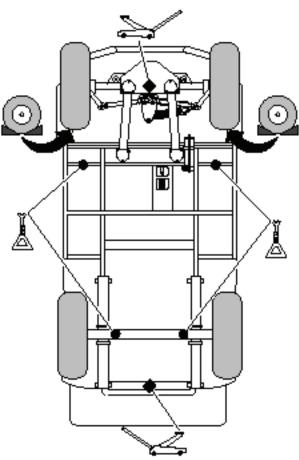
Use caution when inflating tires. Overinflation could cause the tire to separate from the wheel or cause the tire to explode, either of which could cause severe injury.

Tire Repair

Tool List	Qty.	Tool List	Qty.
Lug Wrench, 3/4"	1	Impact Socket, 3/4"	1
Lug Wrench, 5/8"	1	Impact Socket, 5/8"	1
Impact Wrench	1	Torque Wrench, Ft. Lbs	1

Lug wrench and socket size for removal of lug nuts will depend on which wheel and tire assemblies are installed on the vehicle.

Use caution when inflating tires. Due to the low volume of the small tires, overinflation can occur in seconds. Overinflation could cause the tire to separate from the wheel or cause the tire to explode.



View from Underside of Vehicle

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

Tire inflation should be determined by the condition of the terrain. See GENERAL SPECIFICATIONS section for recommended tire inflation pressure. For outdoor applications with major use on grassy areas, the following should be considered. On hard turf, it is desirable to have a **slightly** higher inflation pressure. On very soft turf, a lower pressure reduces the possibility of tires cutting into the turf. For vehicles being used on paved or hard surfaces, tire inflation pressure should be in the higher allowable range, but under no condition should inflation pressure be higher than recommended on tire sidewall. **All four tires** should have the same pressure for optimum handling characteristics. Be sure to install the valve stem dust cap after checking or inflating.

The vehicle is fitted with low pressure tubeless tires mounted on one piece rims; therefore, the most cost effective way to repair a puncture in the tread is to use a commercial tire plug.

NOTICE

Tire plug tools and plugs are available at most automotive parts outlets and have the advantage of not requiring the tire be removed from the wheel.

If the tire is flat, remove the wheel and inflate the tire to the maximum recommended pressure for the tire. Immerse the tire in water to locate the leak and mark with chalk. Insert tire plug in accordance with manufacturer's instructions.

A WARNING

To reduce the possibility of severe injury, be sure the mounting/demounting machine is anchored to floor. Wear OSHA approved safety equipment when mounting/demounting tires.

If the tire is to be removed or mounted, the tire changing machine manufacturer's recommendations must be followed in order to reduce possibility of severe injury.

Wheel Installation

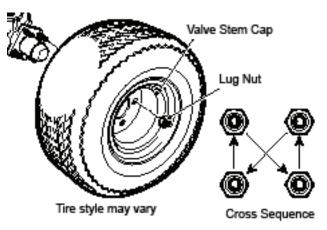
CAUTION

To reduce the possibility of component damage, do not tighten lug nuts to more than 85 ft. lbs. (115 Nm) torque.

NOTICE

It is important to follow the 'cross sequence' pattern when installing lug nuts. This will assure even seating of the wheel against the hub.

With the valve stem to the outside, mount the wheel onto the hub with lug nuts. Finger tighten the lug nuts in a 'cross sequence' pattern. Tighten the lug nuts to 50 to 85 ft. lbs. (68 to 115 Nm) torque in 20 ft. lbs. (27 Nm) increments following the 'cross sequence' pattern.



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Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

LIGHT BULB REPLACEMENT

A CAUTION

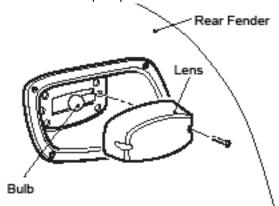
To reduce the possibility of premature bulb failure, do not touch new bulbs with bare fingers. Use clean, dry tissue or paper towel to handle the glass portion of the bulb.

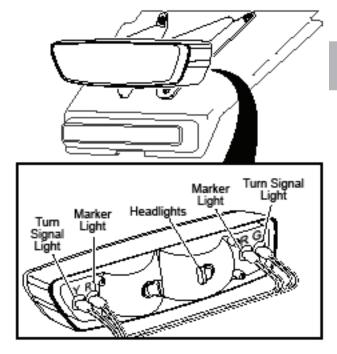
Headlight and Turn Signal

For vehicles equipped with lights mounted below cowl, locate bulb socket on backside of light bar and turn bulb socket a quarter turn counterclockwise to unlock and pull out bulb. Insert new bulb and rotate socket a quarter turn clockwise to secure.

Brake Light

To replace the brake light bulb, remove two phillips head screws securing lens, pull the lens out of the housing. Remove the light bulb and install a new bulb, make sure the bulb makes good contact with the socket. Replace the lens and reinstall the phillips head screws.





FUSE REPLACEMENT

To replace fuses, raise the seat bottom, the fuse block is located on the fender liner on the driver side of the vehicle. Pull out old fuse and replace with a new fuse of the same type and size.



VEHICLE WITH A DISCHARGED BATTERY

A WARNING

To reduce the possibility of severe injury or death from inadvertent motion, do not attempt to 'jump start' a vehicle.

The vehicle is equipped with a starter/generator and does not idle. When starting the engine, the starter/generator functions as a starter and with the engine running, it functions as a generator.

With the short running times associated with this kind of vehicle, the generator is more than adequate to maintain the battery charge level. The generator is not designed to charge a discharged battery.

When engine starts, the clutches engage and cause vehicle to move making 'jump starting' both dangerous and impractical.

If the vehicle battery has become discharged, it must be charged using a 12 volt charger that is rated at 10 amps or less. Read all instructions provided by the manufacturer of the charger.

TRANSPORTING VEHICLE

Towing

A WARNING

To reduce the possibility of severe injury or death:

Use extra caution when towing a vehicle.

DO NOT ride on the vehicle being towed.

DO NOT attempt to tow the vehicle with ropes, chains or any device other than a factory approved tow bar.

DO NOT tow the vehicle on highways.

DO NOT tow a single vehicle at speeds in excess of 12 mph (19 kph).

DO NOT tow more than three vehicles at a time.

DO NOT exceed 5 mph (8 kph) while towing multiple vehicles.

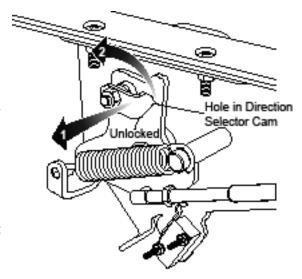
Neutral Lock

To prevent the driven clutch from turning the rear wheels during service operations, a neutral lock is located on the direction selector.

To operate:

- 1. Turn key switch to 'OFF' and lift front seat bottom.
- 2. Pull out and rotate the neutral lock pin handle towards the driver side so that the pointed portion of the handle is to the side of the direction selector cam. Move direction selector towards the area between 'F' and 'R'. During that motion the pin will snap into the hole in the direction selector mounting bracket preventing any movement. When in this position, the direction selector remains locked in the neutral position.

To unlock the direction selector, pull the neutral lock pin handle out and rotate toward the passenger side until the pointed portion of the handle fits into the hole in the direction selector cam.



Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers

Hauling

A WARNING

To reduce the possibility of severe injury or death while transporting the vehicle:

Secure the vehicle and contents.

Never ride on the vehicle being transported.

Always remove the windshield before transporting.

Maximum speed with sun top installed is 50 mph (80 kph).

If the vehicle is to be transported at highway speeds, the sun top must be removed and the seat bottom secured. When transporting vehicle below highway speeds, check for tightness of hardware and cracks in sun top at mounting points. Always remove windshield when transporting. Always check that the vehicle and contents are adequately secured before transporting. The rated capacity of the trailer or truck must exceed the weight of the vehicle (see GENERAL SPECIFICATIONS for vehicle weight) and load plus 1000 lbs. (454 kg). Secure the vehicle using ratchet tie downs.

SERVICE AND MAINTENANCE

A WARNING

To reduce the possibility of severe injury or death from improper servicing techniques:

DO NOT attempt any type of servicing operations before reading all notes, cautions and warnings in this manual.

Any servicing requiring adjustments to be made to the powertrain while the motor is running must be made with both drive wheels raised and vehicle properly supported on jack stands.

To reduce the possibility of motor damage, never operate vehicle at full throttle for more than 4 - 5 seconds while vehicle is in a 'no load' condition.

Reduce the possibility of accidental starting by disconnecting battery at negative terminal before servicing.



Wear eye protection when working on the vehicle. Use extra care when working around batteries, or using solvents or compressed air.

To reduce the possibility of causing an electrical arc, which could result in a battery explosion, turn off all electrical loads from the battery before removing battery wires.



Wrap wrenches with vinyl tape to reduce the possibility of a dropped wrench 'shorting out' a battery, which could result in an explosion.

The electrolyte in a battery is an acid solution which can cause severe burns to the skin and eyes. Treat all electrolyte spills to the body and eyes with extended flushing with clear water. Contact a physician immediately.

Any electrolyte spills should be neutralized with a solution of 2 teaspoons (10 ml) sodium bicarbonate (baking soda) dissolved in 1 quart (1 liters) of water and flushed with water.

Aerosol containers of battery terminal protectant must be used with extreme care. Insulate metal container to reduce the possibility of can contacting battery terminals which could result in an explosion.

It is in the best interest of both vehicle owner and service technician to carefully follow the procedures recommended in this manual. Preventative maintenance, applied at recommended intervals, is the best guarantee for keeping the vehicle both dependable and economical.

This vehicle will give years of satisfactory service, providing it receives regular maintenance. Refer to the Periodic Service Schedule for appropriate service intervals.

ROUTINE MAINTENANCE



To prolong vehicle life, some maintenance items must be serviced more frequently on vehicles used under severe driving conditions such as extreme temperatures, extreme dust/debris conditions, or frequent use with maximum load.

To access the powertrain for routine maintenance, lift or remove the last forward facing seat bottom and remove the rear access panel. For major repair, refer to the appropriate Technician's Repair and Service Manual.

Some service procedures may require the vehicle to be lifted. Refer to LIFTING THE VEHICLE for proper lifting procedure and safety information.

Tire Inspection

Tire condition should be inspected per the Periodic Service Schedule. Inflation pressures should be checked when the tires are cool. Be sure to install the valve dust cap after checking or inflating.

Rear Axle

The only maintenance required for the first five years is the periodic inspection of the rear axle for lubricant leakage. Unless leakage is evident, the lubricant need only be replaced after five years. Refer to the Service and Repair Manual for the fluid replacement procedure.

FOUR CYCLE ENGINE

Engine Specifications

Engine Model	Fj400d
Type	Four Cycle, Ohv
Number Of Cylinders	
Displacement	
Rated Horsepower	

Spark Plug Type	Ngk Bpr2es
Spark Plug Gap	028"031" (.7080 mm)
Cooling	Forced Air Cooled
Oil filter	. Cartridge Type Full Flow Filter
Oil Pump	Positive Displacement Pump

Engine Description

The engine is an air cooled, 4-stroke, OHV, single cylinder gasoline engine. It incorporates a pressure fed lubrication positive displacement oil pump with a cartridge type full flow oil filter and a counter rotating balance shaft.

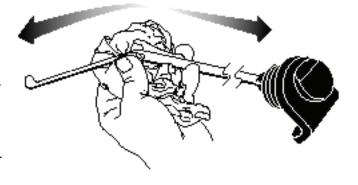
Checking The Oil Level

CAUTION

Do not overfill engine. Too much oil may cause engine to smoke or cause spark plug fouling.

Do not overfill engine. Too much oil may cause smoking or allow oil to enter the air filter enclosure.

The oil should be checked while the engine is warm and vehicle is parked on a level surface and the parking brake engaged. Allow oil to drain into crankcase before checking.



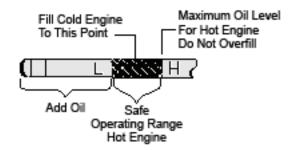
Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

Remove the dipstick and wipe off the entire area with a lint free cloth.

Insert the dipstick **fully** into the dipstick hole and remove. Examine the level of the oil on the dipstick.

The engine can be operated safely as long as oil is within the safe operating range as indicated on the dip stick. **Do not operate vehicle if oil level is below the safe area indicated on the dip-stick.**

Oil should be added to bring the level into the safe operating range. Remember that oil expands as it gets hot, **Do not overfill**. Check that the oil cap is firmly in place.



NOTICE

When adding oil between oil changes, do not mix brands and viscosity grades of oil. The oil dipstick/fill cap must be in place before operating the engine. Failure to install the dipstick/fill cap will result in oil becoming contaminated and/or oil being discharged into the engine compartment.

Changing the Oil

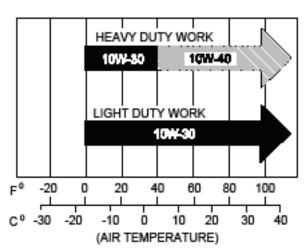
Tool List	Qty.	Tool List	Qty.
Socket, 19 mm	1	Oil Filter Wrench	1
Ratchet	1	Oil Drain Pan	1
Extension 8"	1		

For maximum performance and longevity, the engine oil should be replaced after the first 8 hours of operation. After the initial oil change, it should be changed every 125 hours of operation or semi-annually, whichever comes first.

The selection of oil is dependent upon the service that the vehicle will perform. Most vehicles require 10W-30 oil, whereas vehicles used at capacity or near capacity load applications will utilize 10W-40 oil after a break-in period of 100 hours.

NOTICE

If vehicle is to be stored over winter months, it can be stored with old oil left in engine. The oil should be changed as part of spring maintenance. This will remove any moisture that has accumulated during storage.



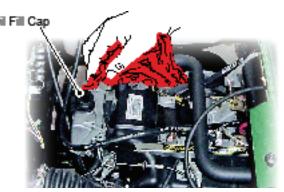
🕰 WARNING

Be aware that engine fluids may be hot and contact to the skin may cause severe burns. Wear rubber gloves to protect skin from exposure to the old oil and degreaser.

The oil should be changed with engine warm. Park vehicle on a level surface, engage parking brake and remove key. Place a drain pan under engine. Wipe top of the engine clean with a cloth. Remove the oil fill cap.

A WARNING

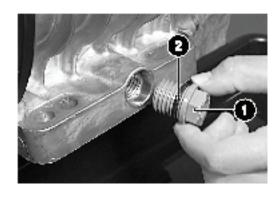
Be careful of hot oil when drained. It may be hot enough to burn you severely

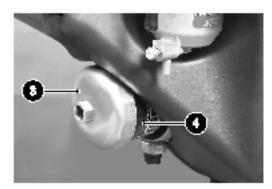


Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

Place the oil drain pan under the oil drain plug (1) found at the rear of the engine base. Remove the drain plug (1), allow the oil to drain into the pan. At the first oil change, **small** metal chips and lint may be found. This is normal, resulting from the break-in period. Inspect the filter at every oil change. The presence of large metal chips could indicate possible damage to the engine. Before installing the drain plug clean the area around the drain hole with a lint free cloth and inspect the drain plug (1) for damage; replace if necessary. If the O-ring (2) on the drain plug is damaged replace it with a new one. Tighten the drain plug to 62 in. lbs (7 Nm) torque.

Clean the area around filter. Using a filter wrench, strap wrench or other suitable wrench (3), remove the filter (4) from the engine and allow the oil to drain.





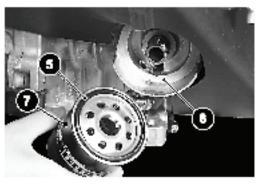
The O-ring (5) may remain on engine (6) or filter (7). Inspect the filter. Make sure the O-ring (5) is not left on the engine surface, if the O-ring (5) remained on the engine surface (6), remove it and discard with the filter (7).

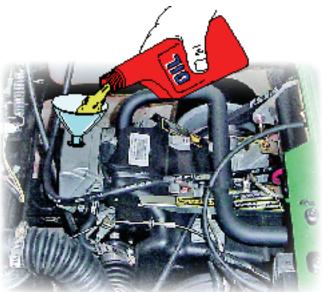
Inspect the new oil filter for any defects, apply engine oil to the oil filter O-ring (5) and install oil filter onto the engine until the seal contacts mounting surface of the engine. Then turn the filter 2/3 to 3/4 rotations by HAND(S). Pour in the specified type and amount of oil See "Capacity and Replacement Parts".

Oil capacity is 1 1/3 quarts (1.3 liters). Add slightly less than 1 1/3 quarts (1.3 liters) to allow for possible residual oil left in engine. The oil must be high quality oil that meets or exceeds API SF, SG, CC standards. Check oil level on dipstick. Oil should be slightly below 'H' to allow for expansion. If necessary, continue to add oil slowly and allow time for oil to flow down into engine. Check oil level on dipstick. **Do not overfill.**



Do not overfill engine. Too much oil may cause smoking or allow oil to enter the air filter enclosure.





Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

NOTICE

Both the oil dipstick and fill cap must be in place before operating the engine. Failure to install the dipstick and fill cap will result in oil being discharged into the engine compartment

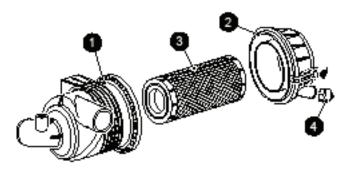
As a final check, check the oil level again with the vehicle on level ground. Like all liquids, oil increases in volume when warm. The full 'H' mark on the dipstick is calibrated for an engine at operating temperature. When the engine is cold, the oil will be below the full mark. The engine can be operated safely as long as the oil is within the safe operating range as indicated on the dipstick. **Do not operate vehicle if oil level is below the safe area indicated on the dipstick.**

AIR FILTER INSPECTION / REPLACEMENT

NOTICE

The air filter assembly on the vehicle is a dry unit. Do not use oil on the filter element or any part of the unit.

The air cleaner is located under the last forward facing seat. Raise the seat bottom and remove if necessary. Unsnap the two clips that secure the cover (2) to the canister (1), remove the cover to access the air filter element (2). Remove the air filter element (3) and clean the inside of the canister (1), the cover (2) and the dust collector (4). Inspect the air filter element (3) and replace it in accordance with the Periodic Service Schedule. Install the air filter element (3) and replace the cover (2), making sure it is properly seated then position the clips and snap them closed.

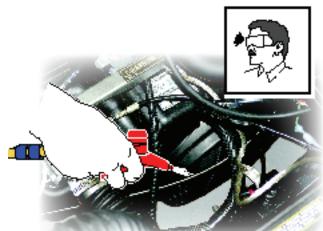


AIR INTAKE AND COOLING FINS

A WARNING

To prevent possible burns, engine parts should be kept clean to reduce risk of overheating and ignition of accumulated debris. After every off road use, allow to cool and then check for a build up of dirt and debris in the air intake and cooling fins. Dirt and debris may clog the engine's air cooling system. Clean areas shown to prevent engine damage. Keep linkages, springs and controls clean. Keep area around muffler free of any combustible material.

At least once a year, (or more often under adverse conditions) the cooling system should be cleaned. Cleaning will assure an adequate supply of air to the cooling fins. Compressed air may be used for routine cooling system maintenance.



STARTER/GENERATOR BELT TENSION

Tool List	Qty.	Tool List	Qty.
Belt Tension Gauge	1	Ratchet	1
Wrench, 13 mm	1	Socket, 13 mm	1
Wrench, 14 mm	2	Socket, 15 mm	1
Wrench, 15 mm	1		

The starter/generator belt tension should be checked after the first 15 - 20 hours and set to 75 - 80 lbs. (34 - 36 kg).

A WARNING

At no time during installation of belt, should the belt tension exceed 160 lbs (73 kg).

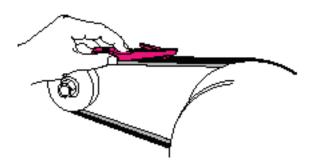


At the time of installation, the belt must not be rolled over the installed edges of the starter/generator or drive clutch pulleys. Excessive stretch in belt may cause cord failure.

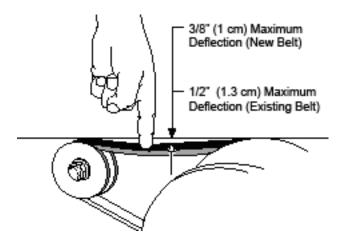
NOTICE

A loose belt can cause audible vibration and squeal.

Tighten a **new** starter/generator belt to 110 - 130 lbs. (50 - 59 kg) tension when a gauge is applied half way between the two pulleys.



Although not as accurate, a new belt may be depressed with a finger. A maximum deflection of 3/8" (10 mm) is acceptable.



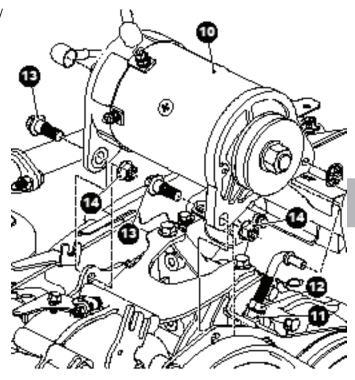
An **existing** belt may be tightened to 75 - 80 lbs. (34 - 36 kg) tension using the same technique and inspect for cracking or wear. A maximum deflection of 1/2" (13 mm) is acceptable.

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

Adjusting The Belt

Loosen the two pivot bolts (13) and nuts (14) on the starter/ generator. Using two 14 mm wrenches; hold the lower nut (1f1) and loosen the upper nut (12) on the adjusting bolt. Move the lower nut (11) up or down the adjustment bolt until proper belt tension is achieved. Hold the lower nut (11) in place and tighten the upper jam nut (12) against it. Tighten the pivot bolts (13) and nuts (14). Torque the pivot bolt nuts (14) and the jam nut (12) to 30 - 35 ft. lbs (40 - 48 Nm) torque.





SPARK PLUGS

Tool List	Qty.	Too
Spark Plug Socket, 13/16"	1	Rato
Plug Gauge, Wire Type	1	Anti-
Torque Wrench, ft. lbs	1	

Tool List	Qty.
Ratchet	1
Anti-seize Compound	AR

CAUTION

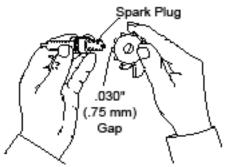
Use care not to over-tighten the plug. Over-tightening can cause damage to the aluminum cylinder head threads.

Remove and inspect the spark plug at intervals indicated in the Periodic Service Schedule. Spark plug should be properly gapped. Tighten to 16 ft. lbs. (22 Nm) torque

Remove and inspect the spark plug at intervals indicated in the Periodic Service Schedule. Spark plug should be properly gapped. Tighten to 16 ft. lbs. (22 Nm) torque.

Fouled spark plug is indicated by a wet, black appearance. This could be caused by a dirty air filter element or other restrictions in the air intake sys-

tem. Incorrectly adjusted valves, spark plug wire which are in poor condition or poor quality fuel could also contribute to the problem.



REAR AXLE

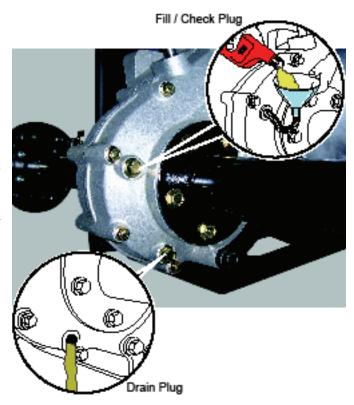
The rear axle is provided with a lubricant level check plug located on the driver side at the rear of the housing. Unless leakage of rear axle lubricant is evident, an annual lubricant check is sufficient.

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

Checking The Lubricant Level

Tool List	Qty
Socket, 13 mm	1
Ratchet	1
Drain Pan	1
Funnel	1

Clean the area around the check and fill plugs. Remove the check plug. The correct lubricant level is **just** below the bottom of the threaded hole. If lubricant is to be added, remove the fill plug and add lubricant using a funnel. Add lubricant slowly until lubricant starts to seep from the check plug hole. Install the check plug and the fill plug. In the event that the lubricant is to be replaced, a drain plug is provided at the bottom of the differential housing.



BATTERY CLEANING

A CAUTION

To reduce the possibility of damage to vehicle or floor, neutralize acid before rinsing battery.

To reduce the possibility of damage to electrical components while cleaning, do not use a pressure washer.

Cleaning should take place per the Periodic Service Schedule (Ref. Periodic Service Schedule)

When cleaning the outside of the battery and terminals, first spray with a solution of sodium bicarbonate (baking soda) and water to neutralize any acid deposits before rinsing with clear water.

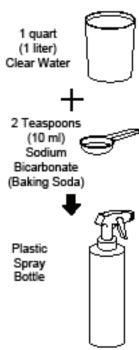
Use of a water hose without first neutralizing any acid, will move acid from the top of the battery to another area of the vehicle or storage facility where it will attack the metal structure or the concrete/asphalt floor. Additionally, a residue will be left on the battery which is conductive and will contribute to the discharge of the battery.

A WARNING

To reduce the possibility of battery explosion that could result in severe injury or death, do not use metallic spray wand to clean battery and keep all smoking materials, open flame or sparks away from the battery.

The correct cleaning technique is to spray the top and sides of the battery with a solution of sodium bicarbonate (baking soda) and water. The solution should consist of 2 teaspoons (10 ml) of sodium bicarbonate (baking soda) and 1 quart (1 liter) clear water mixed in a plastic spray bottle. In addition to the battery, special attention should be paid to metal components adjacent to the battery which should also be sprayed with the sodium bicarbonate (baking soda) solution.

Allow the solution to sit for at least three minutes; use a soft bristle brush or cloth to wipe the tops of the battery to remove any residue that could contribute to the self discharge of the battery. Rinse the entire area with low pressure clear water. Do not use a pressure washer.



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LUBRICATION

A

CAUTION

Do not use more than three (3) pumps of grease in any grease fitting at any one time. Excess grease may cause grease seals to fail or grease migration into areas that could damage components.

Putting more than three pumps of grease in a grease fitting could damage grease seals and cause premature bearing failure.

BRAKES



To reduce the possibility of severe injury or death, always evaluate pedal travel before operating a vehicle to verify some braking function is present.

All driving brake tests must be done in a safe location with regard for the safety of all personnel.

NOTICE

Over time, a subtle loss of performance may take place; therefore, it is important to establish the standard with a new vehicle.

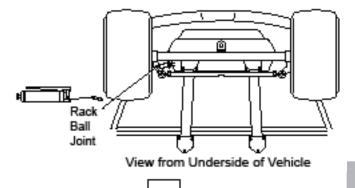
The Periodic Brake Performance Test should be performed regularly as an evaluation of braking system performance. It is useful as a method of identifying subtle loss of performance over time.

Periodic Brake Test For Mechanical Brakes

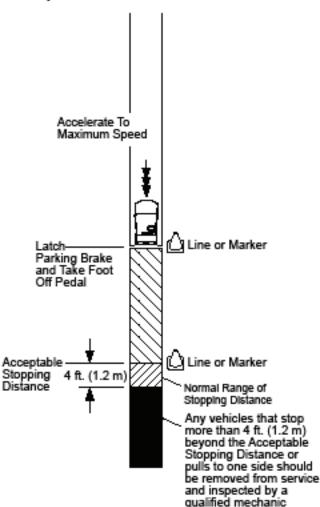
The purpose of this test is to compare the braking performance of the vehicle to the braking performance of new or 'known to be good' vehicles or to an established acceptable stopping distance. Actual stopping distances will be influenced by weather conditions, terrain, road surface condition, actual vehicle weight (accessories installed) and vehicle speed. No specific braking distance can be reliably specified. The test is conducted by latching the parking brake to eliminate different pedal pressures and to include the affects of linkage mis-adjustment.

Establish the acceptable stopping distance by testing a new or 'known to be good' vehicle and recording the stopping location or stopping distance. For fleets of vehicles, several vehicles should be tested when new and the range of stopping locations or distances recorded.

Lubrication Points



Dry, Level, Clean, Paved Surface



Drive the vehicle at maximum speed on a flat, dry, clean, paved surface. Quickly depress the brake pedal to latch the parking brake at the line or marker in the test area and remove foot from pedal. The vehicle should stop aggressively. The wheel brakes may or may not lock. Observe the vehicle stopping location or measure the vehicle stopping distance from the point at which the brakes were latched. The vehicle should stop within the 'normal' range of stopping distances. If the vehicle stops more than 4 ft. (1.2 m) beyond the acceptable stopping distance or pulls to one side, the vehicle has failed the test and should be tested again.

If the vehicle fails the second test, it should **immediately** be removed from service. The vehicle **must** be inspected by a qualified mechanic who should refer to the TROUBLESHOOTING section in the Technician's Repair and Service Manual.

PROLONGED STORAGE

A WARNING

To reduce the possibility of severe injury or death resulting from a possible explosion:

Do not handle fuel in an area that is not adequately ventilated. Do not smoke near the fuel tank or refuel near open flame or electrical items which could produce a spark.

Store vehicle in a clean, dry area. Do not store in same area as a stove, furnace, water heater, or other appliance that uses a pilot light or has a device that can create a spark.

When refueling, inspect the fuel cap for leaks or breaks that could result in fuel spillage.

Always wear safety glasses while refueling to prevent possible eye injury from gasoline or gasoline vapor.

Keep hands, clothing and jewelry away from moving parts. Use care not to contact hot objects. Raise the rear of the vehicle and support on jack stands before attempting to run the engine.

Preparing the engine for a prolonged storage period (30 days or more) calls for a few simple steps to prevent a build up of varnish and gum in the carburetor and corrosion in the engine.

- Turn the Key Switch to OFF position, and leave the Forward/Reverse switch in the NEUTRAL position during storage.
- Perform all required routine maintenance per the Periodic Service Schedule.
- Properly inflate the tires to recommended pressure (psi) stated on sidewall of tires.
- Place the Forward/Reverse handle in the NEUTRAL position engage the neutral lock.
- Turn the fuel shut-off valve to the closed (OFF) position.
- With proper ventilation, run engine until the remaining fuel in carburetor and fuel lines is depleted and the engine stalls.
- Return the neutral lock to the OPERATE position.
- Loosen, but do not remove the carburetor drain screw. Drain any fuel remaining in bowl into an approved container and pour the fuel collected into the vehicle fuel tank. Add Sea Foam (4 oz. for a full tank of fuel) to stabilize fuel and install the tank cap securely.
- Fuel Shut-off Valve
 Turn to "OFF"
 Position

- Tighten the carburetor drain screw.
- Remove spark plug and pour about 1/2 oz. (15 ml) of SAE 10 30 weight oil or Fogging oil into the cylinder.
 Rotate the crankshaft by hand several times, then install the spark plug.
- Do not engage the park brake, but secure the car from rolling.
- · While engine is still warm, change oil.
- Clean body, chassis and engine of debris, mud, chaff or grass.

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

HARDWARE

Periodically, the vehicle should be inspected for loose fasteners. Fasteners should be tightened in accordance with the Torque Specifications table unless otherwise specified. Use care when tightening fasteners and refer to the Technician's Repair and Service Manual for specific torque values.

Generally, three grades of hardware are used in the vehicle. Grade 5 hardware can be identified by the three marks on the hexagonal head and grade 8 hardware is identified by 6 marks on the head. Unmarked hardware is Grade 2.

	ALL TORQUE FIGURES ARE IN FT. LBS. (Nm) Unless otherwise noted in text, tighten all hardware in accordance with this chart. This chart specifies 'lubricated' torque figures. Fasteners that are plated or lubricated when installed are considered 'wet' and require approximately 80% of the torque required for 'dry' fasteners.									
BOLT SIZE	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Grade 2	4 (5)	8 (11)	15 (20)	24 (33)	35 (47)	55 (75)	75 (102)	130 (176)	125 (169)	190 (258)
Grade 5	6 (8)	13 (18)	23 (31)	35 (47)	55 (75)	80 (108)	110 (149)	200 (271)	320 (434)	480 (651)
Grade 8	6 (8)	18 (24)	35 (47)	55 (75)	80 (108)	110 (149)	170 (230)	280 (380)	460 (624)	680 (922)
BOLT SIZE	M4	M5	M6	M8	M10	M12	M14			
Class 5.8 (Grade 2) 5.8	1 (2)	2 (3)	4 (6)	10 (14)	20 (27)	35 (47)	55 (76.4)			
Class 8.8 (Grade 5)	2 (3)	4 (6)	7 (10)	18 (24)	35 (47)	61 (83)	97 (131)			
Class 10.9 (Grade 8) 10.9	3 (4)	6 (8)	10 (14)	25 (34)	49 (66)	86 (117)	136 (184)			

Torque Specifications and Bolt Grades

CAPACITIES AND REPLACEMENT PARTS

Fuel Tank / Fuel	5.3 gal (20.0 liters) / 87 Octane Min
Engine Oil	1.4 US qt (1.3 liters)
Oil Filter	P/N 607454
Air Filter	P/N 28463G01
Spark Plug	NGK BPR2ES (P/N 607462)
	.028"031" (.7 mm8 mm) Gap
Starter/Generator Belt	P/N 26414G1
Clutch Belt	P/N 618630
Rear Axle Oil	51 oz (1.5 liters) / SAE 30
Fuse	15 amp (P/N 18392G1)
Headlight Sealed Beam	(P/N 20209G3)
Turn Signal Bulb	(P/N 20574G3)
Tail Light Bulb	#1157 (P/N 611242)

Capacities and Replacement Parts

* - CHECK C&A - CHECK & ADJUST CL - CLEAN R - REPLACE

REMARKS	before each use DAILY	WEEKLY	20 rnds/20 hrs 100 miles/160 kms MONTHLY	60 rnds/60 hrs 300 miles/500 kms QUARTERLY	125 rnds/125 hrs 600miles/1000 kms SEMI-ANNUAL	250 rnds/250 hrs 1200miles/2000 kms ANNUAL	5 YEARS	PAGE
Tires - pressure, condition of tires & rims	*	*	*	*	*	*		
Hardware - loose or missing	*	*	*	*	*	*		
Reverse Warning Indicator	*	*	*	*	*	*		
Overall Vehicle Condition	*	*	*	*	*	*		
Battery - state of charge, condition, loose terminals, corrosion, hold down & hardware	*	*	CL	CL	CL	CL		
Brake Pedal - smooth operation	*	*	*	*	*	*		
Brakes - check fluid level in master cylinder						*		
Brakes - aggressive stop test			C&A	C&A	C&A	C&A		
Park Brake - operation, does it hold on a hill	*	*	C&A	C&A	C&A	C&A		
Accelerator - smooth operation	*	*	*	*	*	*		
Starter/Generator Belt - tension, wear, cracks		*	*	*	*	*		
Wiring - loose connections, broken or missing insulation			*	*	*	*		
Carburetor Linkage - attachment			C&A	C&A	C&A	C&A		
Carburetor						CL		
Direction Selector - attachment and mechanism			C&A	C&A	C&A	C&A		
Cooling Fan - build up of debris inside blower housing		C&A	C&A	C&A	C&A	C&A		
Engine Oil ** - oil level		C&A	C&A	C&A	C&A	C&A		
Engine Oil **& Filter - drain and change					R	R		
Engine - noise, vibration, acceleration, oil leaks			C&A	C&A	C&A	C&A		
Valves - check cold - Ref: Repair & Service Manual						C&A		
Cylinder Head & Pistons - remove carbon							CL	
Choke Cable - smooth movement & adjustment			C&A	C&A	C&A	C&A		
Cooling Fan - build-up of foreign matter inside housing & fins			CL	CL	CL	CL		
Steering Assembly - excessive play, loose or missing hardware			*	*	*	*		
Tie Rods - excessive play, bent rods, loose or missing hardware			*	*	*	*		
Rear Axle - fluid level, oil leakage, noise, loose or missing hardware			*	*	*	*		
Rear Axle - drain & replace fluid							R	

^{**}Initial oil change after 8 hours of run time.

NOTE: Some maintenance items must be serviced more frequently on vehicles used under severe driving conditions.

Read all of this manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notices, Cautions, Warnings, and Dangers.

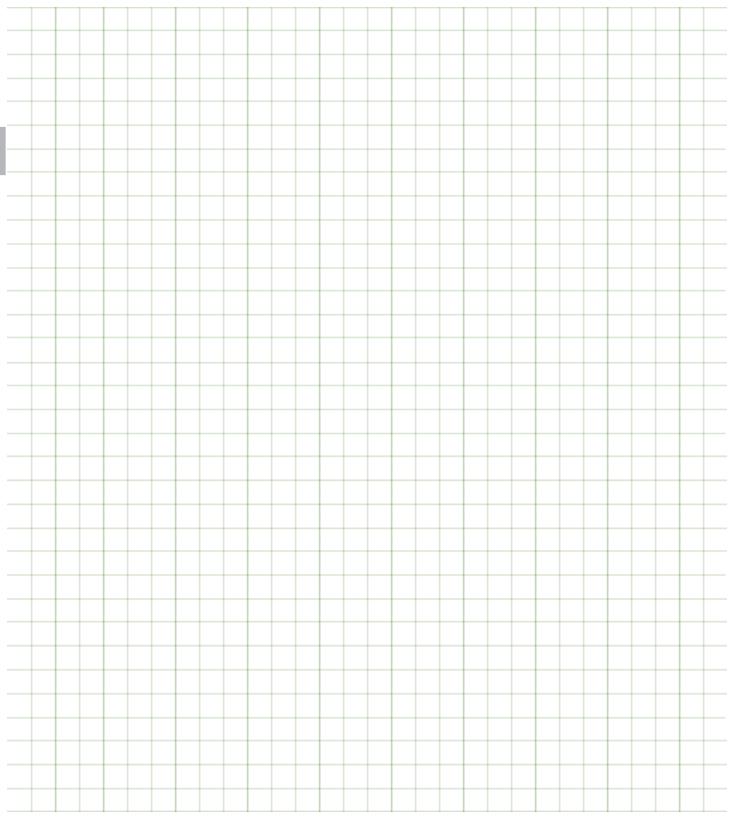
REMARKS	before each use DAILY	WEEKLY	20 rnds/20 hrs 100 miles/160 kms MONTHLY	60 rnds/60 hrs 300 miles/500 kms QUARTERLY	125 rnds/125 hrs 600miles/1000 kms SEMI-ANNUAL	250 rnds/250 hrs 1200miles/2000 kms ANNUAL	5 YEARS	PAGE
Rear Suspension - shock oil leakage, worn bushings, loose or missing hardware				*	*	*		
Front Suspension - strut oil leakage, excessive play in hubs or kingpins, worn bushings, loose or missing hardware			*	*	*	*		
Front Wheel Alignment - unusual tire wear				C&A	C&A	C&A		
Fuel System - leaks at tank, cap, system lines for cracks/deterioration, filters, pump				*	*	*		
Fuel Filter						R		
Spark Plug						R		
Throttle/Governor Linkage - operation & governed speed		_		*	*	*	_	
Air Filter Element - check & replace as necessary					*	*		
Drive Belt - cracks, frayed, excessive wear					*	*		

^{**}Initial oil change after 8 hours of run time.

NOTE: Some maintenance items must be serviced more frequently on vehicles used under severe driving conditions.

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Notes:





E-Z-GO Division of Textron Inc.,

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TO CONTACT US...
North America:

Technical Assistance & Warranty Phone: 1-800-774-3946, FAX: 1-800-448-8124

Service Parts Phone: 1-888-GET-E-Z-GO (1-888-438-3946), FAX: 1-800-752-6175

International: Phone: 001-706-798-4311, FAX: 001-706-771-4609

Service Parts Manuals, as well as Repair and Service Manuals are available from a local Distributor, an authorized Branch, Genuine E-Z-GO Parts & Accessories Department or at www.shopezgo.com.