

TXT ELECTRIC OWNER'S GUIDE



613272

ISSUED DECEMBER 2009

REVISED JUNE 2012

SAFETY

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

Read and understand 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/Maintenance/Storage switch, located under the passenger seat, in the 'Tow/Maintenance/Storage' 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

BATTERY WARNING

Battery posts,
terminals and related
accessories contain
lead and lead compounds,
chemicals known
to cause cancer and
reproductive harm.

WASH HANDS AFTER HANDLING!











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.

NOTICES, CAUTIONS, WARNINGS AND DANGERS

NOTICE

Address practices not related to personal injury.



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

WARNING

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.

Please observe these **NOTICES**, **CAUTIONS** and **WARN-INGS** 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.

WARNING

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

(NOTICES, CAUTIONS, WARNINGS AND DANGERS CONTINUED ON INSIDE OF BACK COVER)

OWNER'S GUIDE

ELECTRIC POWERED GOLF CAR

TXT 48 FLEET

STARTING MODEL YEAR 2010

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 leased/sold previously.

The information contained in this Manual may be revised periodically by the E-Z-GO Division, and therefore is subject to change without notice.

The E-Z-GO Division DISCLAIMS LIABILITY FOR ERRORS IN THIS MANUAL, and the E-Z-GO Division 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

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

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

E-Z-GO DIVISION OF TEXTRON INC., 1451 MARVIN GRIFFIN ROAD, AUGUSTA, GEORGIA USA 30906-3852

GENERAL INFORMATION

This vehicle has been designed and manufactured in the United States of America (USA) as a 'World Vehicle'. 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 batteries may void the warranty.

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).

For winter storage, the batteries must be clean, fully charged and disconnected from any source of electrical drain.

On all electric vehicles, set the key switch to 'OFF'. Make sure that the 'RUN/TOW' switch, located under the passenger seat, is set to the 'TOW/MAINTENANCE/STORAGE' position; if the switch is left in the 'RUN' position, it will drain the batteries.

As with all electric vehicles, the batteries must be checked and recharged as required or at a minimum of 30 day intervals.

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Read all of manual to become familiar with vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

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:

A CAUTION

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 20 mph. When an E-Z-GO-manufactured vehicle is modified an any way by the Distributor, Dealer or customer to operate at or in excess of 20 mph, 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 website for the U.S. Department of Transportation - at Dockets and Regulation, then to Title 49 of the Code of Federal Regulations (Transportation)

GENERAL

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.

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 battery (-) post. **Never use the chassis or body as a ground connection.**

Refer to GENERAL SPECIFICATIONS for vehicle seating capacity.

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Read all of manual to become familiar with vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

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).

GENERAL OPERATION

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
- 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
- check the polarity of each battery terminal and be sure to rewire the batteries correctly
- 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
- 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

Read all of manual to become familiar with vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

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

Hydrogen gas is generated in the charging cycle of batteries and is explosive in concentrations as low as 4%. Because hydrogen gas is lighter than air, it will collect in the ceiling of buildings necessitating proper ventilation. Five air exchanges per hour is considered the minimum requirement.

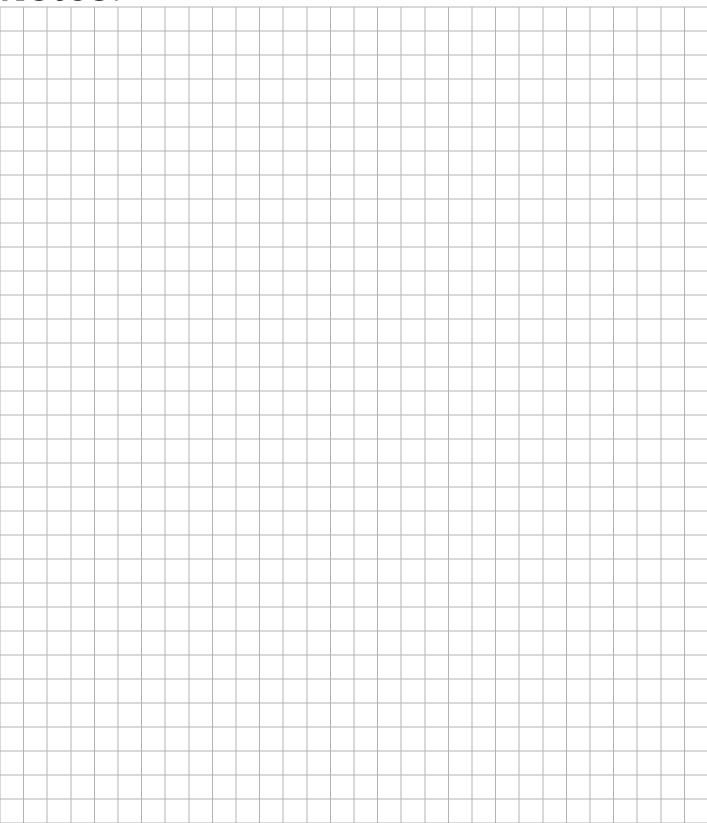
NEVER charge a vehicle in an area that is subject to flame or spark. Pay particular attention to natural gas or propane water heaters and furnaces.

Always use a dedicated circuit for each battery charger. Do not permit other appliances to be plugged into the receptacle when the charger is in operation.

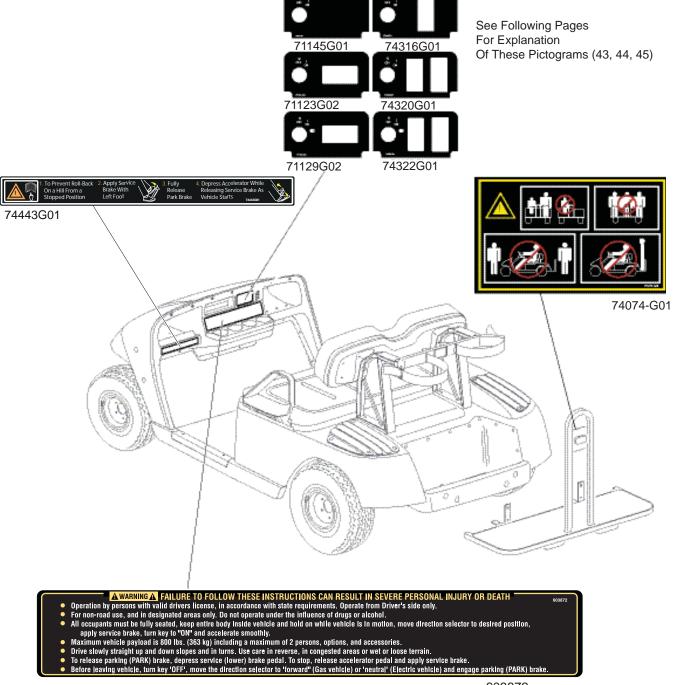
Chargers must be installed and operated in accordance with charger manufacturers recommendations or applicable electrical code (whichever is higher).

Read all of manual to become familiar with vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

Notes:



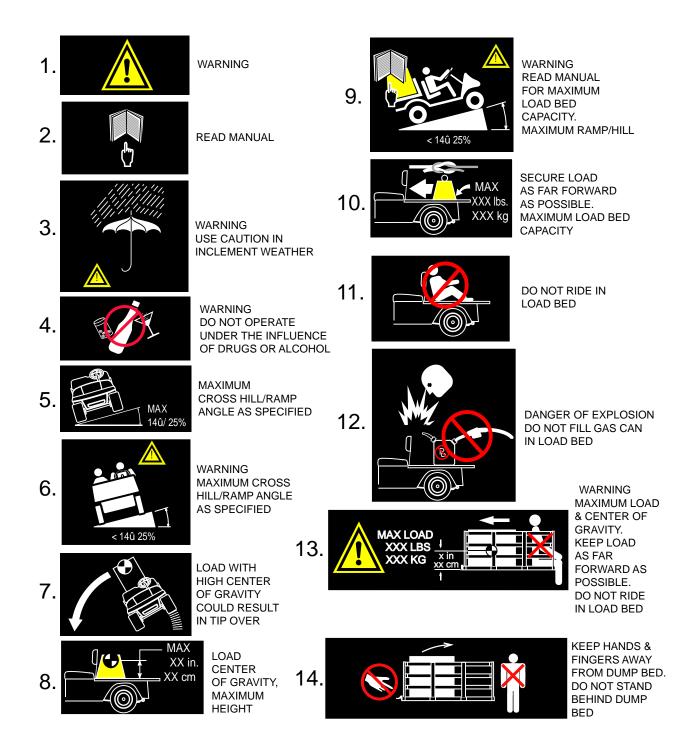
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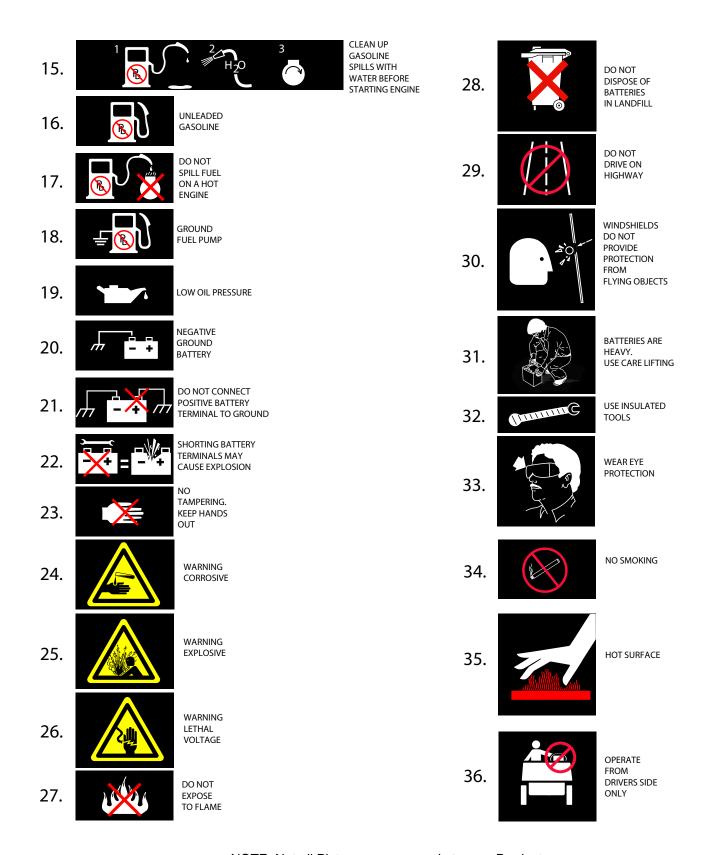
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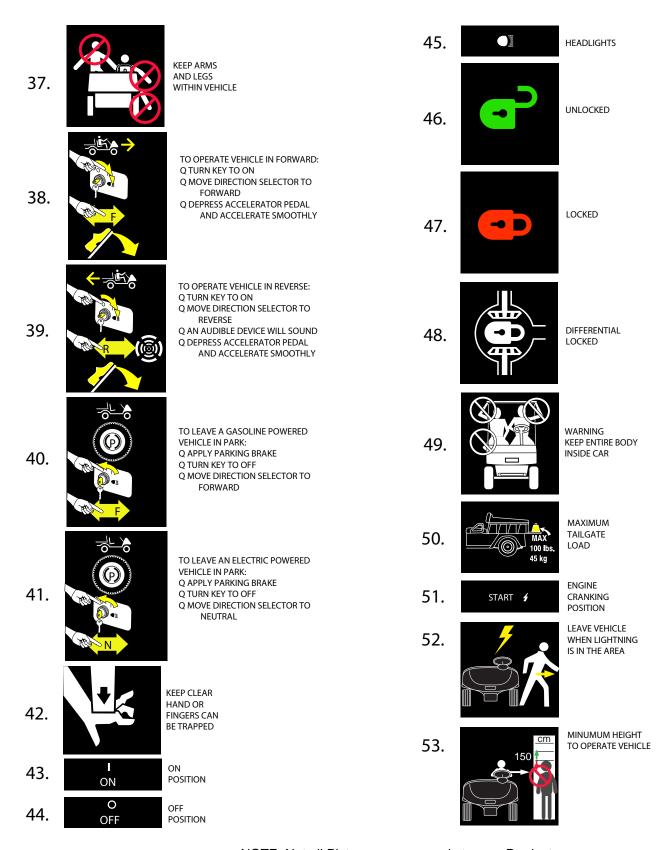


NOTE: Not all Pictograms may apply to your Product.



NOTE: Not all Pictograms may apply to your Product.

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NOTE: Not all Pictograms may apply to your Product.

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

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.

This vehicle has been designed and manufactured as a 'World Vehicle'. Some countries have individual requirements to comply with their specifications; therefore, some sections may not apply in your country.

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, serial number and manufacture date code.

BEFORE INITIAL USE

Read 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

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 (Ref. Fig. 1).

The vehicle batteries must be fully charged before initial use.

Check for correct tire inflation. See GENERAL SPECIFICATIONS.

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

Remove the protective clear plastic from the seat bottom and back rest before placing the vehicle in service

ITEM	SERVICE OPERATION			
Batteries	Charge batteries			
Seats	Remove protective plastic covering			
Brakes	Check operation			
	Establish acceptable stopping distance			
Tires	Check air pressure (see SPECIFICATIONS)			
Portable Charger	Remove from vehicle and properly mount			

Fig. 1 Initial Service Chart

PORTABLE CHARGER INSTALLATION

A WARNING

Use charger ONLY on 48 volt battery systems. Other usage may cause personal injury and damage. Lead acid batteries may generate explosive hydrogen gas during normal operation. Keep sparks, flames, and smoking materials away from batteries. Provide adequate ventilation during charging. Never charge a frozen battery. Study all battery manufacturers' specific precautions such as recommended rates of charge and removing or not removing cell caps while charging.

A DANGER

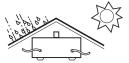
Risk of electric shock. Connect charger power cord to an outlet that has been properly installed and grounded in accordance with all local codes and ordinances. A grounded outlet is required to reduce risk of electric shock — do not use ground adapters or modify plug. Do not touch uninsulated portion of output connector or uninsulated battery terminal. Disconnect the DC supply before making or breaking the connections to the battery while charging. Do not open or disassemble charger. Do not operate charger if the AC supply cord is dam-

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

aged or if the charger has received a sharp blow, been dropped, or otherwise damaged in any way – refer all repair work to qualified personnel. Not for use by children.

Portable chargers are shipped with the vehicles. Prior to vehicle or charger operation, the charger must be removed and mounted on a platform or wall above the ground to permit maximum air flow around and underneath the charger. A dedicated circuit is required for the charger. Refer to the charger manual for appropriate circuit protection. For optimum performance and shortest charge times, place the charger in an area with adequate ventilation. The charger should also be placed in an area that will be relatively free of dirt, mud, or dust since accumulations within the fins of the charger will reduce their heat-dissipating qualities. Optimal cooling also occurs when the charger is placed on a horizontal surface with the fins vertical. More airflow from below the charger will help cool the fins, so placement above open areas or areas with cut-outs for airflow is desirable. If the charger is operated in an outdoor location, rain and sun protection must be provided. The charger may get hot during operation and must be placed such that risk of contact by people is reduced. The charger may be mounted on a wall or shelf using #10-M5 screws. The charger's status display must be visible to the user.

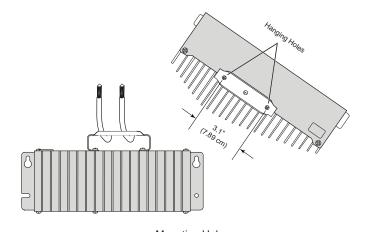
Provide Protection From Elements



Keep cooling fins clean and free of dirt and debris
NEMA 15 - 5R Grounded AC Receptacle
110 - 120 VAC. Dedicated 15 AMP Circuit

Locations outside the US and Canada: Reference appropriate local electrical code and charger manufacturer recommendations for AC power requirements

Fig. 2 Charger Installation



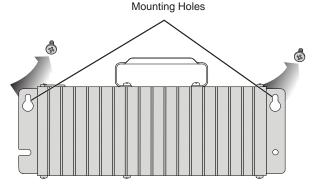


Fig. 3 Charger Mounting

NOTICE

Looping the DC cord through the steering wheel when charging serves as a good reminder to store the cord out of the way when finished with charging. The DC plug can be damaged by driving over or catching the cord on the vehicle when driving away.

A WARNING

An ungrounded electrical device may become a physical hazard that could result in an electrical shock or electrocution.

Using the Charger

The charger may remain plugged into the AC outlet when not in use. To charge the vehicle refer to the instruction labels on the charger. Insert the polarized DC plug completely into the vehicle receptacle. The charger will automatically start a few seconds after the plug is in place. The charger will automatically stop when the batteries are fully charged and the DC plug can be removed to permit use of the vehicle.

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Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

A WARNING

To prevent a physical hazard that could result in an electrical shock or electrocution, be sure that the charger plug is not damaged and is inserted into a grounded receptacle.

The power (AC) cord is equipped with a grounded plug. Do not attempt to pull out, cut or bend the ground post.

The charging (DC) cord is equipped with a polarized connector that fits into a matching receptacle on the vehicle. The receptacle is located on the driver side of the vehicle just below the seat bottom.



Fig. 4 Charger Receptacle

NOTICE

If vehicle is to be charged with a non E-Z-GO charger, refer to the instructions supplied with the charger.

Understanding the Charger

Plugging the charger into the vehicle's charger receptacle will lock the vehicle out of operation. When the charger is plugged into the vehicle's charger receptacle, the charger will automatically turn on and the charger's LED and the vehicle receptacle's LED will start flashing GREEN to indicate the batteries are charging.

Once a minimum battery voltage of 2 volts per cell (Vpc) is reached, the charger's output current will change from a full current charge to the trickle rated charging current. The length of charge time will vary by how depleted the batteries are, the input AC voltage, and/or charger ambient temperatures. The charger's LED will give a SHORT flash if the charge is less than 80% and a LONG flash if the charge is greater than 80%. If the charger's LED is a steady GREEN the batteries are fully charged and the charger may be unplugged, although not necessary. The charger may be left plugged in for long periods of time to maintain the batteries charge level.

If a fault occurred anytime during the charging the charger's LED will quickly flash RED. The specific fault

is indicated by the number of RED flashes that occur, there will be a pause and then the flashes will repeat again. There are several possible conditions that will generate errors. Some errors will require human intervention to first resolve the problem and then reset the charger by unplugging the DC cord from the vehicle.

If the AC voltage is interrupted and restored, the charger will turn back on automatically.

LED Operation Codes:

SHORT GREEN FLASH = less than 80% charged LONG GREEN FLASH = more than 80% charged SOLID GREEN = 100% charged RED FLASH = fault code

LED Fault Codes:

RED FLASH: Light turns on briefly, but does not flash after that - check for valid AC voltage.

ONE RED FLASH: One flash, a pause and then again one flash and a pause - Charge Enable Fault: poor contact in the DC connector or dirty contacts or Battery Temperature Fault: battery temperature is greater than 122° F (50° C) or less than 14° F (-10° C).

TWO RED FLASHES: Two flashes, a pause and then again two flashes and a pause - Battery Voltage Fault: Battery pack is less than 36.0 Volts or more than 67.2 Volts. Battery pack is too discharged or over charged for the charger to work.

THREE RED FLASHES: Three flashes, a pause and then again three flashes and a pause - Battery Charge Time-out: Charge time exceeded 24 hours. This may indicate a problem with the battery pack or that the charger output current was severely reduced due to high ambient temperatures.

FOUR RED FLASHES: Four flashes, a pause and then again four flashes and a pause - Battery Fault: Charge time exceeded. This indicates a problem with the battery pack voltage not reaching the required nominal level within the maximum time allowed.

SIX RED FLASHES: Six flashes, a pause and then again six flashes and a pause - Charger Fault: An internal fault has been detected. If this fault is displayed again after unplugging the charger's DC power cord and plugging it back in, the charger must be taken to a qualified service center.

MAINTENANCE INSTRUCTIONS

 For flooded lead-acid batteries, regularly check the water levels of each battery cell after charging and add distilled water as required to the level specified by the battery manufacturer. Follow the safety instruc-

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

tions recommended by the battery manufacturer.

- Make sure the charger connections to the battery terminals are tight and clean. Check for any deformations or cracks in the plastic parts. Check the charger harness for chaffing and rubbing. Inspect all wiring for fraying, loose terminals, chaffing, corrosion or deterioration of the insulation.
- 3. Keep the cooling fins free of dirt and debris, do not expose the charger to oil, dirt, mud or to direct heavy water spray when cleaning equipment.
- Inspect the plug of the battery charger and the vehicle receptacle housing for dirt or debris. Clean the DC connector monthly or more often if needed.

NOTICE

If vehicle is to be charged with a non E-Z-GO charger, refer to the instructions supplied with the charger.

CONTROLS AND INDICATORS

Vehicle controls and indicators consist of:

- direction selector
- · state of charge meter
- accelerator pedal
- combination service and park brake pedal
- run tow/maintenance/storage switch

KEY/ STATE OF CHARGE METER

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. To prevent inadvertent operation of the vehicle when left unattended, the key should be turned to the 'OFF' position and removed (Ref. Fig. 5).

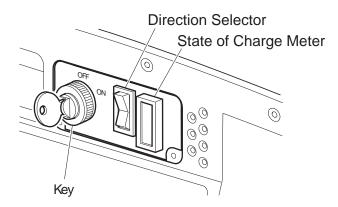


Fig. 5 Key & State of Charge Meter

STATE OF CHARGE METER

Located in the dash, the state of charge meter indicates the amount of usable power in the batteries (Ref. Fig. 5)

DIRECTION SELECTOR

A WARNING

To prevent loss of control, do not move vehicle direction selector while the vehicle is in motion. Moving the selector will result in sudden slowing of the vehicle and the beeping of a warning device.

CAUTION

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

If the direction selector is shifted before the vehicle comes to complete stop, a warning beeper will activate.

Located on the dash panel, this switch permits the selection of either 'F' (forward), 'R' (reverse) or neutral (the position between forward and reverse). Vehicle should be left in neutral when unattended (Ref. Fig. 6).





Fig. 6 Direction Selector

ACCELERATOR PEDAL

WARNING

Unintentional movement of the accelerator pedal will release the park brake and may cause the vehicle to move which could result in severe injury or death.

With the key switch 'ON', depressing the accelerator pedal starts the motor. When the pedal is released, the motor will stop (Ref. Fig. 7). To stop the vehicle

more quickly, depress the service brake.

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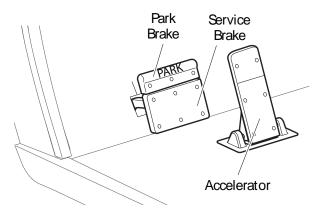


Fig. 7 Accelerator and Brake Controls

If key switch is 'ON' and park brake is set, depressing the accelerator inadvertently will release the park brake and will cause the vehicle to move which could cause severe injury or death.

Depressing the accelerator pedal will release the park brake if it is engaged. This is a feature to assure the vehicle is not driven with the park brake engaged. Depressing the accelerator pedal is **not** the preferred method of releasing the park brake.

NOTICE

Depressing the **lower section of the brake pedal** is the preferred method of releasing the park brake to assure the longest service life of brake components.

COMBINATION BRAKE AND PARK BRAKE PEDAL

The brake pedal incorporates a park brake feature (Ref. Fig. 7). To engage, push down on the upper section of the pedal until it locks in place. The park brake will release when the service brake pedal is depressed. Use the lower section of the brake pedal to operate the service brake system.

RUN - TOW/MAINTENANCE/STORAGE SWITCH

A WARNING

To reduce the possibilty of severe injury or death resulting from loss of vehicle control, consider the grade of the terrain the vehicle is on and set vehicle's park brake accordingly before switching the Run - Tow/Maintenanc/Storage switch to the 'Tow/Maintenance/Storage' position. When in the 'Tow/Maintenance/Storage' position, the Anti-Roll Back and Walk-Away

safety features of the system no longer function.

A CAUTION

Before attempting to tow vehicle, move the Run-Tow/Maintenance/Storage switch to the 'Tow/Maintenance/Storage' position. Failure to do so will damage the controller or motor.

Before disconnecting or connecting a battery, or any other wiring, move the Run-Tow/Maintenance/Storage switch to the 'Tow/Maintenance/Storage' position.

After connecting a battery, or any other wiring, wait a minimum of 30 seconds before moving the Run-Tow/Maintenance/Storage switch to the 'Run' position.

The vehicle is equipped with a two position switch located under the passenger side of the seat on the controller environmental cover (Ref. Fig. 8).

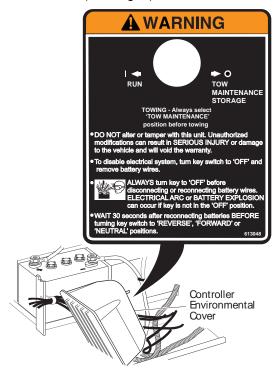


Fig. 8 Run-Tow Maintenance/Storage Switch

With the switch in 'TOW/MAINTENANCE/STORAGE' position:

- the controller is deactivated
- the electronic braking system is deactivated which allows the vehicle to be towed or roll freely
- · the warning beeper is deactivated

With the switch in 'RUN' position:

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

- the controller is activated
- the electronic braking system and warning beeper features are activated.

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.

To prevent loss of control, do not move the direction selector of a vehicle while the vehicle is in motion. Moving the selector will result in a sudden slowing of the vehicle and the beeping of a warning device.

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).

MARNING

To reduce the possibility of severe injury or death resulting from improper vehicle opera-

tion, 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.

TRUCOURSE TECHNOLOGY SYSTEM™

TruCourse Technology System™ vehicles are operated in one of three modes or "performance options". All options have standard features that control, protect and diagnose the vehicle.

NOTICE

TruCourse Technology vehicles operate only when the Run-Tow/Maintenance/Storage switch is in the 'RUN' position.

Performance Options

The options are defined as follows:

Performance Option	Top Speed	Pedal-Up Braking Strength
1. All Terrain	10.2-14.8 mph (16.4-23.8 kmph)	None
2. Steep Hill	10.2-14.8 mph (16.4-23.8 kmph)	Heavy
3. Mild Hill	10.2-14.8 mph (16.4- 23.8kmph)	Mild

Fig. 9 Performance Options

1. The All-Terrain performance option: The vehicle's top speed is sensed and regulated directly by the control-

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Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

ler.

- 2. The Steep Hill performance option: This option includes all of the driving features and top speed of All-Terrain plus pedal-up braking. This is the strongest of the two pedal-up braking options.
- 3. The Mild Hill performance option: This option includes all of the driving features of the Steep Hill option, except the pedal-up braking feel is milder and the top speed is slightly higher.

The vehicle performance option can be determined by placing the vehicle in diagnostic mode. See Technician's Repair and Service Manual. The number of beeps heard immediately after entering diagnostic mode corresponds to the above option numbers.

Regenerative Braking



To prevent the possibility of loss of control that could cause severe injury or death, use service brake to control speed. The TruCourse technology system is not a substitute for the service brake.

TruCourse Technology models are equipped with a regenerative motor control system.

Example: If all of the following events occur...

- a) the vehicle is being driven down a slope
- b) the vehicle attempts to exceed the specified top speed with the accelerator pedal depressed or released

the regenerative braking will limit the speed of the vehicle to the specified top speed (the warning beeper will **not** sound). When the regenerative braking system is activated by this sequence of events, the motor generates power which is returned to the batteries.

If the operator attempts to override the regenerative braking feature by moving the direction selector or key switch to another position, the warning beeper will sound and the vehicle will brake **rapidly** until it reaches the speed of approximately 2 mph (3 kph).

Pedal-Up Braking

Pedal-up braking is regenerative braking that occurs when the accelerator pedal is released while the vehicle is moving between 8 mph (13 kph) and the vehicle's top speed.

Example: If all of the following events occur...

a) the vehicle is being driven down a slope

b) the accelerator pedal is released for more than one second

the pedal-up braking will slow the vehicle (the warning beeper will **not** sound) until either the vehicle speed is reduced to 8 mph (13 kph), at which it freely coasts between 8 and 3 mph (5 kph), or the accelerator pedal is applied. When pedal-up braking system is activated by this sequence of events, the motor generates power which is returned to the batteries.

Walk-Away Feature

Walk-Away limits vehicle movement without driver input, slowing the vehicle to 2 mph (3 kph) and sounding an audible alarm (reverse beeper).

Example: If all of the following events occur...

- a) the vehicle has been stopped for more than 1.5 seconds
- b) the accelerator pedal has been released for more than one second
- c) the vehicle begins to roll above 2 mph (3 kph)

the electronic braking will limit speed to approximately 2 mph (3 kph) and the warning beeper will sound. When the accelerator pedal is depressed, the electronic braking and warning beeper will be overridden and normal vehicle operation resumes. Any unusual situation sensed by the TruCourse Technology system will cause a similar response. The system functions in all key switch positions.

Anti-Roll Back Feature

Anti-Roll Back, like Walk-Away, limits backward motion of the vehicle down an incline to less than 2 mph (3 kph). See 'Walk-Away Feature' above.

Anti-Stall Feature

Anti-Stall protection prevents motor damage from stalling the vehicle against an object or on a hill.

Example: If all of the following events occur...

- a) the system senses that the accelerator pedal is depressed (power applied to motor)
- b) the motor is stalled long enough that any more time may cause motor damage

the TruCourse Technology system will momentarily interrupt power to the motor. This brief interruption will permit the car to roll backwards slightly before again stopping in the stalled condition. This process will repeat itself periodically until the car is moved from the stalled condition.

Example: If all of the following events occur...

 a) the system senses that the accelerator pedal is depressed (power applied to motor)

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

b) the brake is engaged so as to prevent vehicle motion

the TruCourse Technology system will sense a stalled motor condition and remove power from the motor. When the brake pedal is released, the car will roll backwards slightly before power is returned to the motor.

High Pedal Disable Feature

High pedal disable prevents undesired acceleration if the direction selector lever is changed, or the key is turned on while the accelerator is depressed.

Diagnostic Mode Feature

Diagnostic mode eases troubleshooting.

In the unlikely event of certain electrical system failures, the Tru Course Technology controller will default to a mode that will permit the vehicle to operate, but at a very reduced speed.

This feature allows the vehicle to be driven back to its storage facility where the problem can be diagnosed.

The controller can be put in diagnostic mode by the technician and the controller will report the failure mode.

STARTING AND DRIVING

A WARNING

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

All vehicles are equipped with an interlock system that disables the controller and prevents the vehicle from being operated or towed while the charger is connected. Remove the charger plug from the vehicle receptacle and properly store the cable prior to moving the vehicle.

To operate the vehicle:

- Place the key in the key switch and turn it to the 'ON'/'N' position.
- Move the direction selector to the direction desired.
- Slowly depress the accelerator pedal to start the motor.
- When the accelerator pedal is released, the motor controls the deceleration. 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 VEHICLE ON A HILL

The parking brake will activate automatically when the vehicle comes to a stop. To start the vehicle on a hill depress the accelerator pedal and the parking brake will be released.

COASTING

WARNING

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

Uncontrolled coasting does not occur with this model. However, this is not a substitute for the service brake which should be used to slow the speed of the vehicle quickly.

NOTICE

This model is equipped with a feature (pedal-up braking) that slows the vehicle's speed when the accelerator pedal is released until the vehicle stops.

LABELS AND PICTOGRAMS

Vehicles may be labeled with pictograms as a method of conveying information or warnings. The Vehicle Label Identification Section of this manual explains the labels that are used on this vehicle.

SUN TOP AND WINDSHIELD

MARNING

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.

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

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Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

nor does the windshield protect against flying objects and tree limbs. Keep arms and legs inside of the vehicle while it is moving.

VEHICLE CLEANING AND CARE

VEHICLE CLEANING



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.

REPAIR

LIFTING THE VEHICLE

Tool List	Qty. Required
Floor jack	1
Jack stands	4
Chocks	4

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

MARNING

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

To raise the entire vehicle, install chocks in front and behind each front wheel (Ref. Fig. 10). 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 crossmember as indicated.

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

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

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.

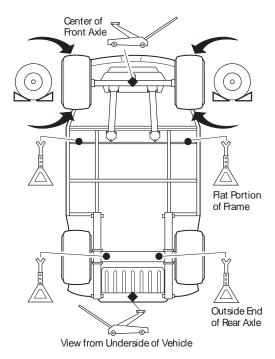


Fig. 10 Lifting the Vehicle

WHEELS AND TIRES

TIRE REPAIR

Tool List	Qty.
Lug Wrench, 3/4"	1
Impact Socket, 3/4"	1
Impact Wrench	1
Torque Wrench, ft. lbs	1

A 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, pressurize tire with small amount 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.

To reduce the possibility of severe injury caused by a broken socket when removing wheels, use only sockets designed for impact wrench use.

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.

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 quide.

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.

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.

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Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

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

A 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 (1) in a 'cross sequence' pattern (Ref. Fig. 11). Tighten the lug nuts to 50 - 85 ft. lbs. (70 - 115 Nm) torque in 20 ft. lbs. (30 Nm) increments following the 'cross sequence' pattern.

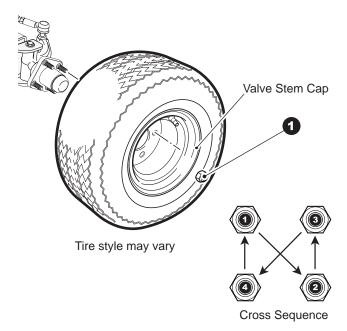


Fig. 11 Wheel Installation

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.

HAULING

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.

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

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.



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.

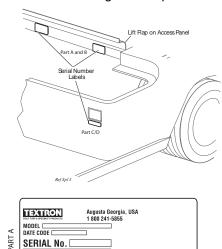
It is in the best interest of both vehicle owner and service technician to carefully follow the procedures recommended in this manual. Preventative maintenance, applied at recommended intervals, is the best guarantee for keeping the vehicle both dependable and economical.

This vehicle will give years of satisfactory service, providing it receives regular maintenance. Refer to the Periodic Service Schedule for appropriate service intervals (Ref. Fig. 14).

SERIAL NUMBER PLATE & LOCATION

Two serial number and manufacture date code plates are on the vehicle. One is placed on the body below the front, driver side of the 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.



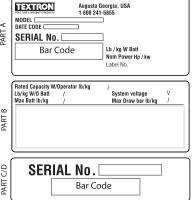


Fig. 12 Serial Number Plate & Location

Owner's Guide

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

ROUTINE MAINTENANCE

CAUTION

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

To access the powertrain for routine maintenance, lift or remove the seat 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.

HARDWARE

Periodically, the vehicle should be inspected for loose fasteners. Fasteners should be tightened in accordance with the Torque Specifications table (Ref. Fig. 13).

Use care when tightening fasteners and refer to the Technician's Repair and Service Manual for specific torque values.

Generally, three classes of standard hardware and two classes of metric 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. Metric hardware is marked on the head with 8.8 or 10.9. Unmarked hardware is Grade 2.

		his chart sp	otherwise no ecifies 'lubri	oted in text, cated' torqu	ie figures. F	ardware in a asteners tha	accordance at are plated	or lubricate		S.
BOLT SIZE	BOLT SIZE 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1"									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) 8.8	2 (3)	4 (6)	7 (10)	18 (24)	35 (47)	61 (83)	97 (131)			
Class 10.9 (Grade 8)	3 (4)	6 (8)	10 (14)	25 (34)	49 (66)	86 (117)	136 (184)			

Fig. 13 Torque Specifications and Bolt Grades

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

PERIODIC SERVICE SCHEDULE

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

REMARKS	before each use DAILY	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	~	~	~	~	~		13
Hardware - loose or missing	~	~	~	~	~		
Reverse Warning Indicator	~	~	~	✓	✓		
Overall Vehicle Condition	~	~	✓	✓	✓		
Batteries - state of charge, condition, loose terminals, corrosion, hold down & hardware	~	CL	CL	CL	CL		15
Batteries* - check electrolyte level, fill if required		C&A	C&A	C&A	C&A		16
Brakes - smooth operation of pedal, stopping distance	>	~	>	✓	>		
Brakes - aggressive stop test, does brake hold on a hill		✓	~	~	~		
Accelerator - smooth operation	>	~	>	~	>		
Wiring - loose connections, broken or missing insulation		~	~	~	~		
Charger Receptacle - clean connections		CL	CL	CL	CL		
Steering Assembly - excessive play, loose or missing hardware		~	~	~	~		
Tie Rods - excessive play, bent rods, loose or missing hard- ware		~	~	~	~		
Rear Axle - oil leakage, noise, loose or missing hardware		~	>	~	>		13
Rear Axle - drain & replace fluid						R	13
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		
Rear Suspension - shock oil leakage, worn bushings, loose or missing hardware			~	~	~		

Fig. 14 Periodic Service Schedule

^{*}Use only distilled or purified water that is free of contaminants to fill batteries.

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

BATTERIES AND CHARGING

SAFETY

NOTICE

Always observe the following warnings when working on or near batteries:

A WARNING

To prevent battery explosion that could result in severe personal injury or death, keep all smoking materials, open flames or sparks away from the batteries.

Hydrogen gas is formed when charging batteries. Do not charge batteries without adequate ventilation. A 4% concentration of hydrogen gas is explosive.

Be sure that the key switch is off and all electrical accessories are turned off before starting work on the vehicle.

Never disconnect a circuit under load at a battery terminal.



Batteries are heavy. Use proper lifting techniques when moving them. Always lift the battery with a commercially available battery lifting device.

Use care not to tip batteries when removing or installing them; spilled electrolyte can cause burns and damage.

The electrolyte in a storage 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.



Always wear a safety shield or approved safety goggles when adding water or charging batteries.

Any electrolyte spills should be neutralized with a solution of 1/4 cup (60 ml) sodium bicarbonate (baking soda) dissolved in 1 1/2 gallons (6 liters) of water and flushed with

water.

Overfilling batteries may result in electrolyte being spilled from the battery during the charge cycle. Expelled electrolyte may cause damage to the vehicle and storage facility.

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



Wrap wrenches with vinyl tape to prevent the possibility of a dropped wrench from 'shorting out' a battery, which could result in

an explosion and severe personal injury or death.

BATTERY

A battery is defined as two dissimilar metals immersed in an acid. If the acid is absent or if the metals are not dissimilar, a battery has not been created. The batteries most commonly used in these vehicles are lead acid.

A battery does not store electricity, but is able to produce electricity as the result of a chemical reaction which releases stored chemical energy in the form of electrical energy. The chemical reaction takes place faster in warm conditions and slower in cold conditions. Temperature is important when conducting tests on a battery and test results must be corrected to compensate for temperature differences.

As a battery ages, it still performs adequately except that its **capacity** is diminished. Capacity describes the time that a battery can continue to provide its design amperes from a full charge.

A battery has a maximum life, therefore good maintenance is designed to maximize the **available** life and reduce the factors that can reduce the life of the battery.

BATTERY MAINTENANCE

Tool List	Qty
Insulated Wrench, 9/16"	1
Battery Carrier	1
Hydrometer	1
Battery Maintenance Kit P/N 25587-G01	1

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

At Each Charging Cycle

WARNING

To reduce the possibility of fire, never attach a battery charger to a vehicle that is to be unattended beyond the normal charging cycle. Overcharging could cause damage to the vehicle batteries and result in extreme overheating. The charger should be checked after 24 hours and unplugged after the charge cycle is complete.

Before charging the batteries, inspect the plug of the battery charger and vehicle receptacle housing for dirt or debris.

Charge the batteries after each day's use.

Monthly

- Inspect all wiring for fraying, loose terminations, corrosion or deterioration of insulation.
- Check that the electrolyte level is correct and add suitable water as required.
- Clean the batteries and wire terminations.
- Coat battery terminals with commercially available protectant.

Electrolyte Level and Water

The correct level of the electrolyte is 1/2" (13 mm) above the plates in each cell.

This level will leave approximately 1/4" - 3/8" (6 - 10 mm) of space between the electrolyte and the vent tube. The electrolyte level is important since any portion of the plates exposed to air will be ruined beyond repair. Also avoid filling with too much water, which will result in electrolyte being forced out of the battery due to gassing and a decrease in volume of the electrolyte that results from the charging cycle.

A CAUTION

DO NOT overfill batteries. The charging cycle will expel electrolyte and result in component damage

A battery being charged will 'gas' with the majority of the gassing taking place at the end of the charging cycle. This gas is hydrogen which is lighter than air. Water and sulfuric acid droplets will be carried out of the battery vents by the hydrogen gas, however, this loss is minimal. If the battery electrolyte level is too high, the electrolyte will block the vent tube and the gas will force it out of the vent tube and battery cap. The water will evaporate but the sulfuric acid will remain where it can

damage vehicle components and the storage facility floor. Sulfuric acid loss will weaken the concentration of acid within the electrolyte and reduce the life of the battery.

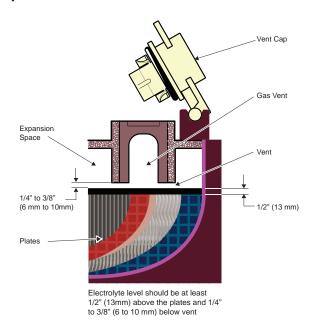


Fig. 15 Correct Electrolyte Level

Over the life of the battery, a considerable amount of water is consumed. It is important that the water used be pure and free of contaminants that could reduce the life of the battery by reducing the chemical reaction. The water must be distilled or purified by an efficient filtration system. Water that is not distilled should be analyzed and, if required, filtration installed to permit the water to meet the requirements of the water purity table (Ref. Fig. 16).

Even if the water is colorless, odorless, tasteless and fit for drinking, the water should be analyzed to see that it does not exceed the impurity levels specified in the table.

Parts Per <u>Million</u>
Clear
Trace
100
40
5
8
50
5
10
5

Fig. 16 Water Purity Table

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Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

Automatic watering devices such as the one included in the Battery Maintenance Kit (P/N 25587-G01) can be used with an approved water source. These watering devices are accurate, easy to use and allow for rapid filling. They also maintain the correct electrolyte level within the battery cells.

WATERING GUN SIMILAR TO THE TYPE INCLUDED
IN THE E-Z-GO BATTERY MAINTENANCE KIT

VALVE
CONSISTENTLY
FILLS TO A
PREDETERMINED
LEVEL

PURE WATER

ELECTROLYTE
LEVEL

SINGLE BATTERY CELL

Fig. 17 Automatic Watering Gun

NOTICE

The watering device should only be used if the electrolyte level is less than 1/2" (13 mm) above top of plates.

A WARNING

The electrolyte in a storage 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.



Always wear a safety shield or approved safety goggles when adding water or charging batteries.

Any electrolyte spills should be neutralized with a solution of 1/4 cup (60 ml) sodium bicarbonate (baking soda) dissolved in 1 1/2 gallons (6 liters) of water and flushed with water.

Battery Cleaning

When cleaning the outside of the batteries and terminals, do not use a water hose without first spraying the batteries with a solution of baking soda (sodium bicarbonate) and water to neutralize any acid deposits. Use of a water hose without first neutralizing the acid will move the acid from the top of the batteries to another area of the vehicle or storage facility, where it will attack the metal structure or the concrete/asphalt floor. After hosing down the batteries, a residue will be left on the batteries which is conductive and will contribute to the discharge of the batteries.

CAUTION

To prevent battery damage, be sure that all battery caps are tightly installed.

The correct cleaning technique is to spray the top and sides of the batteries with a solution of baking soda and water. This solution is best applied with a garden-type sprayer equipped with a non-metallic spray wand. The solution should consist of 1/4 cup (60 ml) of baking soda mixed with 1 1/2 gallons (6 liters) of clear water. In addition to the batteries special attention should be paid to metallic components adjacent to the batteries, these should also be sprayed with the baking soda solution.

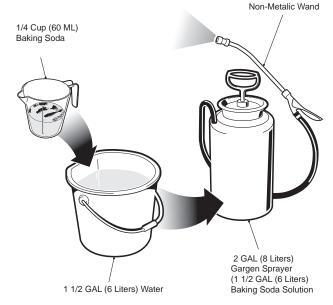


Fig. 18 Preparing Acid Neutralizing Solution

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

Allow the solution to set for at least three minutes; use a soft bristle brush or cloth to wipe the tops of the batteries in order to remove any residue that could cause the self-discharge of the battery. Rinse the entire area with low pressure clear water. All of the items required for complete battery cleaning and watering are contained in the Battery Maintenance Kit (P/N 25587-G01).

Cleaning should take place once a month or more often under extreme conditions. After batteries are clean and dry, the terminals should be coated with a commercially available protectant. Aerosol containers of battery terminal protectant must be used with extreme care. Insulate the metal container to prevent the can from contacting the battery terminals.

Battery Replacement



CAUTION

Before any electrical service is performed on TruCourse echnology model vehicles, the Run-Tow/Maintenance/Storage switch must be placed in the 'Tow/Maintenance/Storage' position.

If a power wire (battery, motor or controller) is disconnected for any reason, the Run-Tow/Maintenance/Storage switch must be left in the 'Tow/Maintenance/Storage' position for at least 30 seconds after the circuit is restored.

Remove battery hold downs and cables. Lift out batteries with a commercially available lifting device.

If the batteries have been cleaned and any acid in the battery rack area neutralized as recommended, no corrosion to the battery racks or surrounding area should be present. Any corrosion found should be immediately removed with a putty knife and a wire brush. The area should be washed with a solution of sodium bicarbonate (baking soda) and water and thoroughly dried before priming and painting with a corrosion resistant paint.

The batteries should be placed into the battery racks and the battery hold downs tightened to 45 - 55 in. lbs. (5 - 6 Nm) torque, to prevent movement but not tight enough to cause distortion of the battery cases.

Inspect all wires and terminals. Clean any corrosion from the battery terminals or the wire terminals with a solution of sodium bicarbonate (baking soda) and brush clean if required.



To prevent battery explosion that could result

in severe personal injury or death, extreme care must be used with aerosol containers of battery terminal protectant. Insulate the metal container to prevent the metal can from contacting battery terminals which could result in an explosion.

Use care to connect the battery wires as shown (Ref. Fig. 19). Tighten the battery post hardware to 90 - 100 in. lbs. (6 -8 Nm) torque. Do not over-torque the terminal stud nut, this will cause a "mushroom" effect on the battery post which will prevent the terminal nut from being properly tightened.

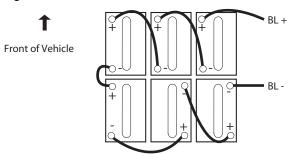


Fig. 19 Battery Connections

Protect the battery terminals and battery wire terminals with a commercially available coating.

Prolonged Storage



CAUTION

Battery charger, controller and other electronic devices need to be disconnected since they will contribute to the premature discharge of batteries.

NOTICE

The 'RUN-TOW/MAINTENANCE/STORAGE' switch, located under the passenger seat is set to 'TOW/MAINTENANCE/STORAGE' position for long term storage of the vehicle to avoid draining of the batteries.

During periods of storage, the batteries will need attention to keep them maintained and prevent discharge.

In high temperatures the chemical reaction is faster, while low temperatures cause the chemical reaction to slow down. A vehicle that is stored at 90° F (32° C) will loose .002 of specific gravity each day. If a fully charged battery has a specific gravity of 1.275, and the battery is allowed to sit unused, it will become partially discharged. When it reaches 1.240, which it will do in less than twenty days, it should be recharged. If a battery is left in a discharged state, sulfating takes place on and

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Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

within the plates. This condition is not reversible and will cause permanent damage to the battery. In order to prevent damage, the battery should be recharged. A hydrometer (P/N 50900-G1) can be used to determine the specific gravity and therefore the state of charge of a battery.

In winter conditions, the battery must be fully charged to prevent the possibility of freezing. A fully charged battery will not freeze in temperatures above -75° F (-60° C). Although the chemical reaction is slowed in cold temperatures, the battery must be stored fully charged, and disconnected from any circuit that could discharge the battery. For portable chargers, disconnect the charging plug from the vehicle receptacle. For on-board chargers, disconnect the charging harness from the batteries. The batteries must be cleaned and all deposits neutralized and removed from the battery case to prevent self discharge. The batteries should be tested or recharged at thirty day minimum intervals.

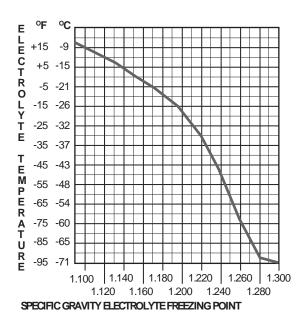


Fig. 20 Freezing Point of Electrolyte

BATTERY CHARGING

The battery charger is designed to fully charge the battery set. If the batteries are severely deep cycled, some automatic battery chargers contain an electronic module that may not activate and the battery charger will not function. Automatic chargers will determine the correct duration of charge to the battery set and will shut off when the battery set is fully charged. Always refer to the instructions of the specific charger used.

Before charging, the following should be observed:

A CAUTION

Do not overfill batteries. The charging cycle will expel electrolyte and result in component damage.

- The electrolyte level in all cells must be at the recommended level and cover the plates.
- The charging must take place in an area that is well ventilated and capable of removing the hydrogen gas that is generated by the charging process. A minimum of five air exchanges per hour is recommended.
- The charging connector components must be in good condition and free from dirt or debris.
- The charger connector must be fully inserted into the vehicle receptacle.
- The charger connector/cord set is protected from damage and is located in an area to prevent injury that may result from personnel running over or tripping over the cord set.
- The charger is automatically turned off during the connect/disconnect cycle and therefore no electrical arc is generated at the DC plug/receptacle contacts.

NOTICE

In **some** portable chargers, there will be a rattle present in the body of the charger DC plug. This rattle is caused by an internal magnet contained within the charger plug. The magnet is part of the interlock system that prevents the vehicle from being driven when the charger plug is inserted in the vehicle charging receptacle.

TROUBLESHOOTING

In general, troubleshooting will be done for two distinct reasons. First, a battery that performs poorly and is outside of the manufacturers specification should be identified in order to replace it under the terms of the manufacturer's warranty. Different manufacturers have different requirements. Consult the battery manufacturer or the manufacturer's representative for specific requirements.

The second reason is to determine why a particular vehicle does not perform adequately. Performance problems may result in a vehicle that runs slowly or in a vehicle that is unable to operate for the time required.

A new battery must **mature** before it will develop its maximum capacity. Maturing may take up to 100 charge/discharge cycles. After the maturing phase, the older a battery gets, the lower the capacity. The only way to determine the capacity of a battery is to perform a load test using a discharge machine following manufacturer's recommendations.

Owner's Guide

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

A cost effective way to identify a poorly performing battery is to use a hydrometer to identify a battery in a set with a lower than normal specific gravity. Once the particular cell or cells that are the problem are identified, the suspect battery can be removed and replaced. At this point there is nothing that can be done to salvage the battery; however, the individual battery should be replaced with a good battery of the same brand, type and approximate age.

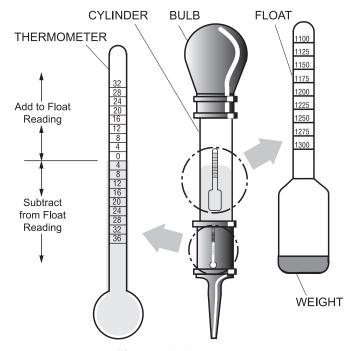


Fig. 21 Hydrometer

Hydrometer

A hydrometer is used to test the state of charge of a battery cell. This is performed by measuring the density of the electrolyte, which is accomplished by measuring the specific gravity of the electrolyte. The greater the concentration of sulfuric acid, the more dense the electrolyte becomes. The higher the density, the higher the state of charge.

MARNING

To prevent battery explosion that could result in severe personal injury or death, never insert a metal thermometer into a battery. Use a hydrometer with a built in thermometer that is designed for testing batteries. Specific gravity is the measurement of a liquid that is compared to a baseline. The baseline is water which is assigned a base number of 1.000. The concentration of sulfuric acid to water in a new golf car battery is 1.280 which means that the electrolyte weighs 1.280 times the weight of the same volume of water. A fully charged battery will test at 1.275 - 1.280 while a discharged battery will read in the 1.140 range.

NOTICE

Do not perform a hydrometer test on a battery that has just been watered. The battery must go through at least one charge and discharge cycle in order to permit the water to adequately mix with the electrolyte.

The temperature of the **electrolyte** is important since the hydrometer reading must be corrected to 80° F (27° C). High quality hydrometers are equipped with an internal thermometer that will measure the temperature of the electrolyte and will include a conversion scale to correct the float reading. It is important to recognize that the electrolyte temperature is significantly different from the ambient temperature if the vehicle has been operated.

Using A Hydrometer

- Draw electrolyte into the hydrometer several times to permit the thermometer to adjust to the electrolyte temperature and note the reading. Examine the color of the electrolyte. A brown or gray coloration indicates a problem with the battery and is a sign that the battery is nearing the end of its life.
- Draw the minimum quantity of electrolyte into the hydrometer to permit the float to float freely without contacting the top or bottom of the cylinder.
- Hold the hydrometer in a vertical position at eye level and note the reading where the electrolyte meets the scale on the float.
- 4. Add or subtract four points (.004) to the reading for every 10° F (6° C) the electrolyte temperature is above or below 80° F (27° C). Adjust the reading to conform with the electrolyte temperature, e.g., if the reading indicates a specific gravity of 1.250 and the electrolyte temperature is 90° F (32° C), add four points (.004) to the 1.250 which gives a corrected reading of 1.254. Similarly if the temperature was 70° F (21° C), subtract four points (.004) from the 1.250 to give a corrected reading of 1.246.
- 5. Test each cell and note the readings (corrected to 80° F or 27° C). A variation of fifty points between any two cell readings (example 1.250 1.200) indicates a

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OPERATION AND SERVICE INFORMATION

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

problem with the low reading cell(s).

As a battery ages the specific gravity of the electrolyte will decrease at full charge. This is not a reason to replace the battery providing all cells are within fifty points of each other.

Since the hydrometer test is in response to a vehicle exhibiting a performance problem, the vehicle should be recharged and the test repeated. If the results indicate a weak cell, the battery or batteries should be removed and replaced with a good battery of the same brand, type and approximate age.

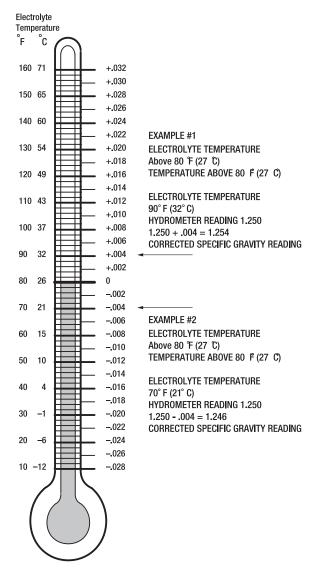


Fig. 22 Hydrometer Temperature Correction

OPERATION AND SERVICE INFORMATION

Read all of manual to become familiar with this vehicle. Pay attention to all NOTICES, CAUTIONS, WARNINGS and DANGERS.

Notes:



GENERAL SPECIFICATIONS

GENERAL SPECIFICATIONS



A Textron Company

MODEL: TXT 48 FLEET GOLF CAR TYPE: ELECTRIC 48V FLEET GOLF CAR

MODEL YEAR: 2010

Part No:. 612623



PRODUCT SPECIFIC (TIG)

CONFIGURATION HIGHLIGHTS

TrueCourse Technology: Programmable to any golf course terrain, with expanded regenerative braking function, and vehicle charger lockout

- · Solid State continuously variable seperately excited speed controller
- Dash mounted direction selector switch (Forward-Neutral-Reverse)
- · Anti-roll back, walkaway braking and alarm
- · Programmable regenerative braking, acceleration and speed
- Six, 8 Volt Deep Cycle
- · Full torque, reduced speed reverse
- · Inductive throttle sensor
- · Handheld vehicle diagnostics and rounds tracking

Battery Charger: PowerWise™ 48QE high frequency, fully line compensating. 10 ft (3 m) DC Cord.Underwriters Lab. (U.L.) Listed, (C.S.A. Certified)

Input: 120 Volts AC, 50/60 Hz, 8 amps

Output: 48 Volts DC at 13 amps

Motor: 48 Volt DC shunt wound, brazed armature, solid copper windings

Drive Train: Direct motor shaft connected to transaxle pinion shaft

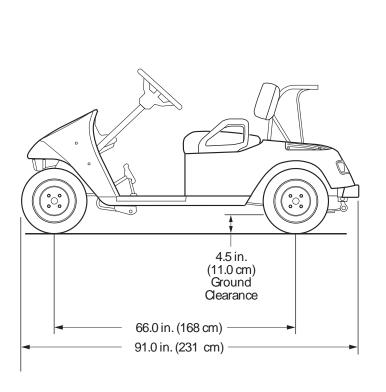
Electrical System: 48 Volt DC, six, 8 volt deep cycle batteries (117 minute minimum, 170 amp-hour @ 20 hr. discharge rate)

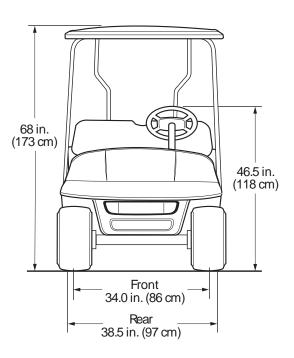
Transaxle: Differential with helical gears

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

PRODUCT OVERVIEW

Dimensions			Performance	
Overall Length		91.0 in (231 cm)	Seating Capacity	2 Person
Overall Width		47.0 in (119 cm)	Dry Weight	557 lb (253 kg) (Without Batteries)
Overall Height (No Canopy)		46.5 in (118 cm) (Top of steering wheel)	Curb Weight	935 lb (424 kg) (Trojan T-875)
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)	10.2-14.8 mph (16.4-23.8 kph)
Rear Wheel Track		38.5 in (97 cm)	Towing Capacity	3 Golf Cars with Approved Permanent Tow Bar
Ground Clearance (at Differential)		4.5 in (11 cm)	Steering & Suspension	
Vehicle Power			Steering	Self-compensating rack and pinion
Power Source	48 Volts DC		Front Suspension	Leaf springs with hydraulic shock absorbers
Motor Type	Shunt Wound		Rear Suspension	Leaf springs with hydraulic shock absorbers
Horsepower (kW)	3.0 HP (2.2 kW) Continuous		Service Brake	Rear wheel mechanical self-adjusting drum
Electrical System	48 Volt		Parking Brake	Self-compensating, single point engagement
Batteries (Qty, Type)	Six, 8 V	olt Deep Cycle	Front Tires	Hole-in-One 18 x 8.50 - 8 (4 Ply Rated)
Key or Pedal Start	Pedal Start		Rear Tires	Hole-in-One 18 x 8.50 - 8 (4 Ply Rated)
Battery Charger	48 VDC PowerWise™ QE, 120 VAC, UL/CSA		Body & Chassis	
Speed Controller	250 Amp Solid State Controller		Frame	Welded steel. DuraShield™ powder coat
Drive Train	Motor Shaft Direct Drive		Body & Finish	Injection molded TPO
Transaxle	Differential with helical gears		Standard Color	Champagne
Gear Selection	Dash Mounted Forward-Neutral-Reverse		Noise & Vibration	
Rear Axle Ratio 12.44:1			Noise Vibration, WBV Vibration, HAV	Sound pressure; continued A-weighted equal to 68 db(A Highest RMS value of weighted acceleration is: less tha 2.5m/s ² Highest RMS value of weighted acceleration is: less tha
				2.5m/s ² The uncertainty of mesurement is 0.46 m/s ²





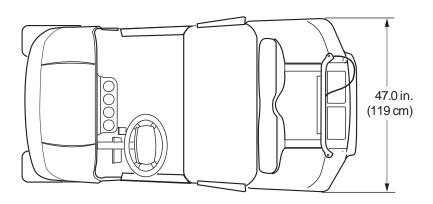
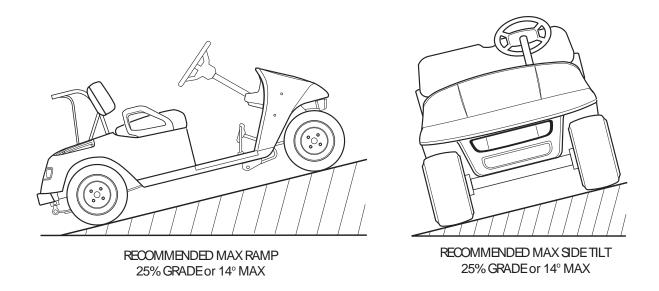


Fig. 23 Vehicle Dimensions



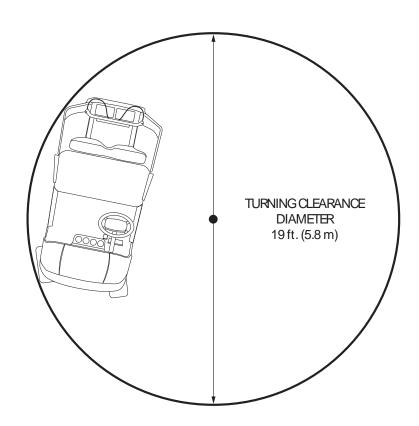


Fig. 24 Vehicle Dimensions, Incline Specifications and Turning Clearance Diameter

LIMITED WARRANTIES

DOMESTIC WARRANTY

(U.S. AND CANADA)

To obtain a copy of the limited warranty applicable to the vehicle, call or write a local distributor, authorized Branch or the Warranty Department with vehicle serial number and manufacturer date code.

DECLARATION OF CONFORMITY (EUROPE ONLY)

DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY • ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ • PROHLÁŠENÍ O SHODĚ •
OVERENSSTEMMELSESERKLÆRING • CONFORMITEITSVERKLARING • VASTAVUSDEKLARATSIOON •
VAATIMUSTENMUKAISUUSVAKUUTUS • DECLARATION DE CONFORMITE • KONFORMITÄTSERKLÄRUNG • ΔΗΛΩΣΗ
ΣΥΜΜΟΡΦΩΣΗΣ • MEGFELELŐSÉGI NYILATKOZAT • DICHIARAZIONE DI CONFORMITÀ • ATBILSTĪBAS DEKLARĀCIJA •
ATITIKTIES DEKLARACIJA • DIKJARAZZJONI TAL-KONFORMITÀ • DEKLARACJA ZGODNOŚCI • DECLARAÇÃO DE
CONFORMIDADE • DECLARAŢIE DE CONFORMITATE • VYHLÁSENIE O ZHODE • IZJAVA O SKLADNOSTI • DECLARACIÓN
DE CONFORMIDAD • DEKLARATION OM ÖVERENSSTÄMMELSE • SAMRÆMISYFIRLÝSING • KONFORMITETSERKLÆRING

Business name and full address of the manufacturer - Търговско мме и пълен адрес на производителя « Obchodní jméno a plná adress vyrobce - Producentens firmanavn og fulde adresse - Bedrijfsnaam en volledig adress van de fabrikant - Tootja árinimi ja tálelik aadress - Valmistajan foliminimi ja tájdelinen osolte - Nom commercial et adresse compléte du fabricant - Firmername und vollständige Adresse des Herstellers - Επωνυμία και ταχυδρομική διώθυνοη κάτισακευαστή - A gyató úzleti neve és tejles cime - Ragione sociale e indirizzo completo del fabbricante - Uzpémuma nosaukums un plina ražolája adrese - Verslo pavadinimas ir plinas gamintojo adresas - Isem kummercjali u indirizz shih tal-fabbrikant - Nazwa firmy i petny adres producenta - Nome da empresa e endereço completo do fabricante - Denumirea comercialà şi adresa completá a producătorului - Obchodný názov a úplná adresa výrobcu - Naziv podjetja in polni nastov proizvajalca - Nombre de la empresa y dirección completa del fabricante - Tiltverkaráns företagsnamn och kompletia adresa - Fyrintækishetti og fullit heimilistang framleiðanda - Firmanavn og full adresse for produsenten	E-Z-GO Division of Textron Inc 1451 Marvin Griffin Road Augusta, GA 30906 USA
Product Code • Καд на продукта • Κόd γýrobku • Produktkode • Productcode • Toote kood • Tuotekoodi • Code produit • Produktcode • Κωδικός προϊόντος • Termékkód • Codice produito • Produkta kods • Produkta kods • Produkta kods • Produkta kods • Produkta • Codigo de producto • Produkta kod • Výrobku • Oznaka proizvoda • Codigo de produkto • Produktkod • Vőrunúmer • Produktkode	612623, 614265, 614372 When Fitted With CE Kit 614162
dachine Name - Наименование на машината - Název stroje - Maskinnavn - Machinenaam - Masina nimi - Laitteen nimi - Nom de la machine - Maschinenbezeichnung - эчорискіс µпдоvіритоς - Gépnév - Denominazione della macchina - lekātas nosaukums - Masinos pavadinimas - Isem tal-Magna - Nazwa urządzenia - Nome da Adquina - Numete echipamentului - Názov stroja - Naziv stroja - Nombre de la māquina - Maskinens namn - Heiti tækis - Maskinnavn	TXT golf car and personal (electric
Designation - Предназначение - Označeni - Betegneise - Benaming - Nimetus - Туурріmerkinta - Раžуте́рітаs - Sezeichnung - Хороктріоріо́, - Megnevezés - Funzione - Архіте́ріштіs - Lithuanian - Denominazzjoni - Oznaczenie - Designação - Specificație - Označenie - Namen stroja - Descripción - Beteckning - Merking - Konstruksjon	Golf Car
Serial Number - Сернен номер - Sérioyé čislo - Serienummer - Serienummer - Valmistusnumero - Numéro de série - Seriennummer - Στιριακός αριθμός - Sorozatszám - Numero di serie - Sérijas numurs - Serijos numeris - Numru Serjall - Numer seryjny - Número de Série - Număr de serie - Sériové čislo - Serijska številka - účmero de serie - Serienummer - Raðnúmer - Serienummer	2740976 to 3200000
Conforms to Directives • B съответствие с директивите • Spiñuje podminky směrnic • Er i overensstemmelse med direktiver • Voldoel aan de richtlijnen • Vastab direktiividele • Direktiivien mukainen • Conforme aux directives • Entspricht Richtlinien • Ακολουθήστε πιστά τις Οδηγίες • Megfelel az irányelvéknek • Conforme alle Direttive • Athlist direktívám • Attinika direktývų reikalavimus • Valutazzjoni tal-Konformità • Dyrektývy związane • Cumpre as Directivas • Respectă Directivele • Je v súlade so smernicami • Skladnost z direktivami • Cumple con las Directivas • Uppfyller direktiv • Samræmist tilakipunum • I samsvar med direktiv	2006/42/EC 2004/108/EC
Conformity Assessment - Ouenka sa oworzeńczawe - Hodnoceni plnění podminek - Overensstemmelsesvurdering - Conformitelisbeoordeling - Vastavustindamine - Vaatimustenmukaisuuden arviointi - Evaluation de conformité - Konformitatsbeurdeiung - Δumicrown Συμμόρφωσης - Megfelelőség-érlékeiés - Valulazione della conformità - Athiistibas novértějums - Atliitities įvertinimas - Livelt tai-Oawwa tai-Floss imkejjel - Ocena zgodnosó - Availação de Conformidade - Evaluarea conformităji - Vyhodnotenie zhodnosti - Ocena skladnosti - Evaluación de conformidad - Bedomning av överensstämmelse - Samræmismat - Konformitetsvurdering	2006/42/EC Annex II
Harmonised standards used - Иэполэвани хармонизирани стандарти - Použité harmonizované normy - Brugte harmoniserede standarder - Gebruikte geharmoniseerde standards - Kasutatud ühltustatud standardid - Kāytetyt yhdenmukaistetut standardit - Normes harmonizeese utiliseës - Angewandte harmoniserte Normen - «Veuppevorgivtus mpórume muor yponjunominfynav - Harmoniziat standarda armonizati applicatit - Iznaniotile saskanotie standarit - Panaudoli sudermii standardal - Standards armonizzati uzati - Normy spójne powiązane - Normas harmonizadas usadas - Standardele armonizate utilizate - Použité harmonizované normy - Uporabljeni usklajení standardi - Estándares armonizados utilizados - Harmoniserade standarder som används	EN 61000-6-2:2005 EN 61000-6-4:2007 EN ISO 5349:2001 EN ISO 11202:1995
Fechnical standards and specifications used • Използвани технически стандарти и спецификации • Pouzité lechnické normy a specifikace • Brugte tekniské standarder og specifikationer • Sebruikte technische standards en specificaties • Kasulatud tehnilised standardder og specifikationid • Caytety (tekniset standardit ja eritelmät • Specifications et normes lechniques utilisées • Negewandte technische Normen und Spezifikationen • Τεχνικό πρότυπα και προδιαγαφές που χρησιμοποιήθηκαν • Mūszaki szabványok és specifikaciók • Standard senici e specifiche applicati • zmantotie tehniskie standarti un specifikacijas • Panaudoti techniniai standartai ir techninė informacija • Standards u specifikacijonijet teknici uzati • Normy i specyfikacije techniczne powiązane • tormas técnicas e especificacjonijet susadas • Standardele tehnice şi specificacjilie utilizate • bouzitė technické normy a specifikaci puprabljeni tehnicih standardi in specifikacije • istándarder y especificaciones técnicas utilizadas • Tekniska standarder och specifikationer som används • Samræmdir staðiar sem notaðir eru • Benyttede harmoniserte tandarder	ISO 2631-1:1997
The place and date of the declaration • Micro и дата на декларацията • Misto a datum prohlàšeni • Sted og dato for erklæringen • Plaats en datum van de verklæring • Deklaratsiooni väljastamise koht ja kuupäev • Vakuutuksen paikka ja päivämäärä • Lieu et date de la déclaration • Ort und Datum der Erklärung • Tórioς και ημερομηνία ήλλωσης • A nyliatkožari kelte (hely és idő) • Luogo e data della dichiarazione • Deklarácijas vieta in datums • Deklaracijos vieta ir data • Il-post u d-data tad-dikjarazzjoni • Rejsce i data wystawienia deklaracij • Local e data da declaração • Locul şi data declaraţiei • Miesto a dâtum vyhlásenia • Kraj in datum izjave • Lugar y fechă de la teclaracion • Plats och datum for deklaracijonen • Tæknistačiar og tæknijsysingar sem notačar eru • Benyttede tekniske standarder og spesifikasjoner • Staður og tagsetning yfirfysingar • Sted og dato for erklæringen	E-Z-GO Division of Textron Inc. 1451 Marvin Griffin Road Augusta, GA 30906 USA

DECLARATION OF CONFORMITY

Signature of the person empowered to drisw up the declaration on behalf of the manufacturer; holds the technical documentation and its authorised to compile the technical file, and who is established in the Community.

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2006/42/EC Annex II 1A: 2 Tim Lansdell **Technical Director** 24th May 2012 Ransomes Jacobsen Ltd, West Road, Ransomes Europark, Ipswich, England, IP3 9TT

2006/42/EC Annex II 1A: 10 Christopher W. Spencer Vice President of Engineering E-Z-GO Division of Textron Inc, 1451 Marvin Griffin Road Augusta, GA 30906 USA 24th May 2012

























































Owner's Guide

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DECLARATION OF CONFORMITY

NOTICE

Read the following warnings before attempting to operate the vehicle

:

AWARNING

To prevent personal injury or death, observe the following:

When vehicle is to be left unattended, engage park brake, move direction selector to neutral, turn key to 'OFF' position and remove key.

Drive vehicle only as fast as terrain and safety considerations allow. Consider the terrain and traffic conditions. Consider environmental factors which effect the terrain and the ability to control the vehicle.

Avoid driving fast down hill. Sudden stops or change of direction may result in a loss of control. Use service brake to control speed when traveling down an incline.

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

All travel should be directly up or down hills.

Use extra care when driving the vehicle across an incline.

Stay in designated areas and avoid steep slopes. Use the park brake whenever the vehicle is parked.

Keep feet, legs, hands and arms inside vehicle at all times.

Avoid extremely rough terrain.

Check area behind the vehicle before operating in reverse.

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

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

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

See GENERAL SPECIFICATIONS for vehicle load and seating capacity.

NOTICE

Read the following text and warnings before attempting to service vehicle:

In any product, components will eventually fail to perform properly as the result of normal use, age, wear or abuse.

It is virtually impossible to anticipate all possible component failures or the manner in which each component may fail.

Be aware that a vehicle requiring repair indicates that the vehicle is no longer functioning as designed and therefore should be considered potentially hazardous. Use extreme care when working on any vehicle. When diagnosing, removing or replacing any components that are not operating correctly, take time to consider the safety of yourself and others around you should the component move unexpectedly.

Some components are heavy, spring loaded, highly corrosive, explosive or may produce high amperage or reach high temperatures. Battery acid and hydrogen gas could result in serious bodily injury to the technician/mechanic and bystanders if not treated with the utmost caution. Be careful not to place hands, face, feet or body in a location that could expose them to injury should an unforeseen situation occur.

Always use the appropriate tools listed in the tool list and wear approved safety equipment

A WARNING

Before working on the vehicle, remove all jewelry (rings, watches, necklaces, etc.)

Be sure no loose clothing or hair can contact moving parts.

Use care not to touch hot objects.

Raise rear of vehicle and support on jack stands before attempting to run or adjust powertrain.

Wear eye protection when working on or around the vehicle. In particular, use care when working around batteries, using solvents or compressed air.

Hydrogen gas is formed when charging batteries. Do not charge batteries without adequate ventilation.

Do not permit open flame or anyone to smoke in an area that is being used for charging batteries. A concentration of 4% hydrogen gas or more is explosive.



E-Z-GO Division of Textron, Inc.,

1451 Marvin Griffin Road, Augusta, Georgia USA 30906-3852

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



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