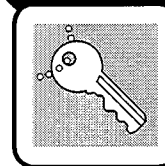


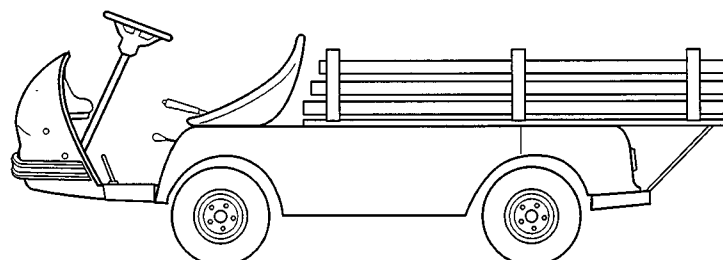
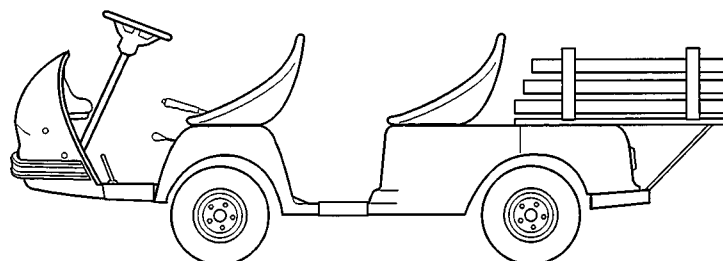
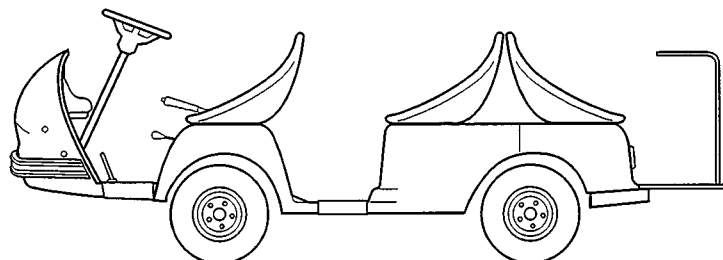
34889-G01



a **TEXTRON** Company



# OWNER'S MANUAL AND SERVICE GUIDE



## **GASOLINE POWERED CARGO AND PERSONNEL CARRIERS (950 SERIES)**

STARTING MODEL YEAR: 1999

# SAFETY

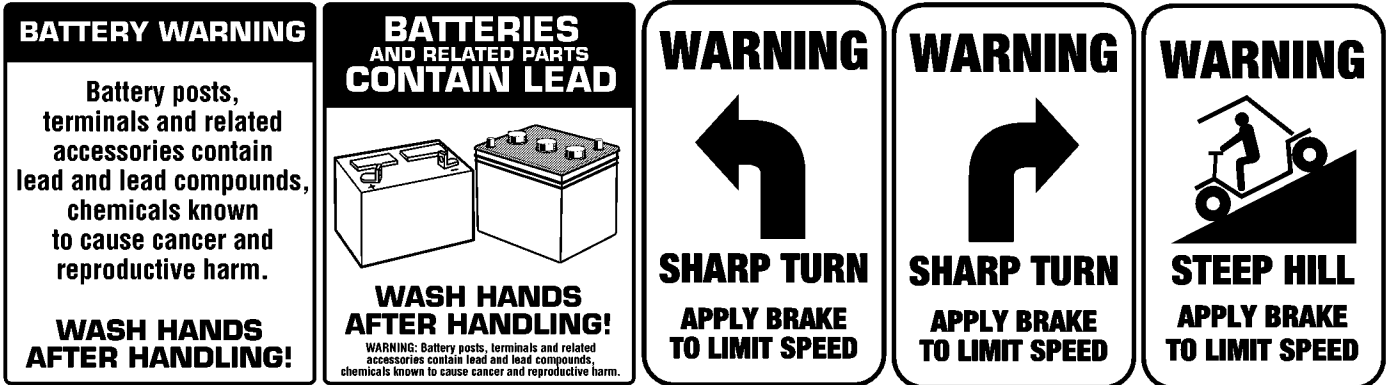
Read and understand all labels located on the vehicle. For any questions on any of the information, contact an E-Z-GO representative for clarification.

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 vehicle specification.) Limit speed by applying the service brake.

Catastrophic damage to the drive train 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.

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.



Be sure that this manual remains as part of the permanent service record should the vehicle be re-sold.

## NOTES, CAUTIONS AND WARNINGS

Throughout this guide **NOTE**, **CAUTION** and **WARNING** will be used.

**NOTE** A **NOTE** indicates a condition that should be observed.

**CAUTION** A **CAUTION** indicates a condition that may result in damage to the vehicle.

**WARNING** A **WARNING** indicates a hazardous condition that could result in severe injury or death.

Please observe these **NOTES**, **CAUTIONS** and **WARNINGS**; 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** Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or other reproductive harm.

**NOTE** The exhaust emissions of this vehicles engine is regulated by the Federal EPA. Significant fines could result from modifications or tampering with the engine, fuel, ignition or air intake systems.

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

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

Ce système d'allumage par étincelle de véhicule respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

**(NOTES, CAUTIONS AND WARNINGS CONTINUED ON INSIDE OF BACK COVER)**

# **OWNER'S MANUAL AND SERVICE GUIDE**

## **GASOLINE CARGO AND PERSONNEL CARRIERS (950 SERIES)**

### **VEHICLES**

**SHUTTLE 952G**

**SHUTTLE 954G**

**SHUTTLE 956G**

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

E-Z-GO Division of Textron is not liable for errors in this manual or for incidental or consequential damages that result from the use of the material in this manual.

**CUSTOMER SERVICE DEPARTMENT IN USA PHONE: 1-800-241-5855 FAX: 1-800-448-8124**

**OUTSIDE USA PHONE: 010-1-706-798-4311, FAX: 010-1-706-771-4609**

**E-Z-GO DIVISION OF TEXTRON, INC., P.O.BOX 388, AUGUSTA, GEORGIA USA 30903-0388**



## **NOTES**

**To obtain a copy of the limited warranty applicable to the vehicle, call or write a local distributor, E-Z-GO Branch or the E-Z-GO Warranty Department with vehicle serial number and manufacturer code.**

**The use of non E-Z-GO parts may void the warranty.**

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

**When servicing engines, all adjustments and replacement components must be per original vehicle specifications in order to maintain Federal and State emission certification.**

### **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).**

# TABLE OF CONTENTS

NOTES .....	ii
SAFETY INFORMATION .....	v
BEFORE INITIAL USE .....	1
Preparation of Seats for Service .....	1
<i>Fig. 1 Initial Service Chart</i> .....	1
SERIAL NUMBER PLATE LOCATION .....	1
<i>Fig. 2 Serial Number Plate Location</i> .....	1
CONTROLS AND METERS .....	2
Key/Light Switch .....	2
<i>Fig. 3 Key/Light Switch, Fuel Gauge and Low Oil Pressure Indicator Light</i> .....	2
Fuel Gauge .....	2
Low Oil Pressure Indicator Light .....	2
Direction Selector .....	2
<i>Fig. 4 Direction Selector, Parking Brake and Choke</i> .....	2
Parking Brake .....	2
Choke .....	2
Accelerator Pedal .....	3
Service Brake Pedal .....	3
Horn .....	3
<i>Fig. 5 Accelerator, Service Brake and Horn</i> .....	3
BEFORE ENTERING VEHICLE .....	3
OPERATING THE VEHICLE .....	3
Cold Starting .....	4
Starting the Vehicle on a Hill .....	4
Starting a Vehicle with a Discharged Battery .....	4
COASTING .....	4
FUEL .....	4
<i>Fig. 6 Fuel Tank Location</i> .....	4
BREAK-IN .....	5
<i>Fig. 7 Check Oil Level on Dipstick</i> .....	5
SERVICING THE GASOLINE VEHICLE .....	5
NEUTRAL LOCK .....	5
<i>Fig. 8 Neutral Lock</i> .....	5
LIFTING THE VEHICLE .....	6
<i>Fig. 9 Lifting the Vehicle</i> .....	6
ROUTINE MAINTENANCE .....	6
<i>Fig. 10 Lubrication Points</i> .....	6
POWERTRAIN MAINTENANCE .....	7
Direction Selector .....	7
<i>Fig. 11 Shift Cable Adjustment</i> .....	7
Checking the Oil Level .....	7
<i>Fig. 12 Clean Entire Dipstick</i> .....	7
<i>Fig. 13 Check Oil Level on Dipstick</i> .....	7
Changing the Oil .....	7
<i>Fig. 14 Oil Viscosity Chart</i> .....	8
<i>Fig. 15 Clean Top of Engine</i> .....	8
<i>Fig. 16 Remove Oil Filter</i> .....	8
<i>Fig. 17 Cleaning the Oil Filter</i> .....	8
<i>Fig. 18 Blowing Out Oil Filter</i> .....	8
<i>Fig. 19 Adding Engine Oil</i> .....	9

# TABLE OF CONTENTS

AIR CLEANER INSPECTION/REPLACEMENT .....	9
<i>Fig. 20 Air Cleaner</i> .....	9
REAR AXLE .....	10
Checking the Lubricant Level .....	10
<i>Fig. 21 Add, Check and Drain Rear Axle Lubricant</i> .....	10
STARTER/GENERATOR BELT TENSION .....	10
<i>Fig. 22 Checking Belt Tension with Gauge</i> .....	10
<i>Fig. 23 Checking Belt Tension with Finger</i> .....	10
Adjusting the Belt .....	10
<i>Fig. 24 Adjusting the Belt Tension</i> .....	11
AIR INTAKE AND COOLING FINs .....	11
<i>Fig. 25 Cleaning Air Intake</i> .....	11
<i>Fig. 26 Cleaning the Cooling Fins</i> .....	11
SPARK PLUGS .....	11
<i>Fig. 27 Gapping the Spark Plug</i> .....	11
ROUTINE MAINTENANCE .....	12
BRAKES .....	12
<i>Fig. 28 Accessing Master Cylinder</i> .....	12
DAILY BRAKE TEST .....	12
TIRES .....	12
Tire Repair .....	12
Wheel Installation .....	13
<i>Fig. 29 Wheel Installation</i> .....	13
LIGHT BULB REPLACEMENT .....	13
CARE AND CLEANING OF THE VEHICLE .....	13
VEHICLE CARE PRODUCTS .....	14
TOP AND WINDSHIELD .....	14
Cleaning .....	14
TRAILERING .....	14
WINTER OR PROLONGED STORAGE .....	14
HARDWARE .....	15
<i>Fig. 30 Bolt Grades</i> .....	15
TORQUE SPECIFICATIONS .....	15
<i>Fig. 31 Torque Specifications</i> .....	15
PERIODIC SERVICE SCHEDULE .....	16
<i>Fig. 32 Periodic Service Schedule</i> .....	16
GENERAL SPECIFICATIONS.....	19
SHUTTLE 952G .....	20
SHUTTLE 954G .....	21
SHUTTLE 956G .....	22
<i>Fig. 33 Vehicle Dimensions</i> .....	23
<i>Fig. 34 Vehicle Dimensions and Incline Specifications</i> .....	24
<i>Fig. 35 Vehicle Turning Clearance Diameter</i> .....	25
LIMITED WARRANTY .....	27
FEDERAL EMISSION COMPONENT DEFECT WARRANTY.....	28
CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT (1999).....	30
CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT (2000).....	33



## SAFETY INFORMATION

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

### GENERAL

Many vehicles are 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 warnings can take the place of 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 the owner-operator read this entire manual paying particular attention to the CAUTIONS and WARNINGS contained therein. It is further recommended that employees and other operators be encouraged to do the same.

If you have any questions, contact your closest E-Z-GO representative or write to the address on the back cover of this publication, Attention: Product Service Department.

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

E-Z-GO Division of Textron is not liable for errors in this manual or for incidental or consequential damages that result from the use of the material in this manual.

This vehicle conforms to the current applicable standard 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 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.

Refer to GENERAL SPECIFICATIONS for vehicle seating capacity.

**Never modify the vehicle in any way that will alter the weight distribution of the vehicle, decreases its stability or increases the speed beyond the factory specification. Such modifications can cause serious personal injury or death.** Modifications that increase the speed and or weight of the vehicle will extend the stopping distance and may reduce the stability of the vehicle. Do not make any such modifications or changes. E-Z-GO prohibits and disclaims responsibility for any such modifications or any other alteration 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.

### GENERAL OPERATION

Always use the vehicle in a responsible manner and maintain the vehicle in safe operating condition.

Always read and observe all warnings and operation instruction labels affixed to the vehicle.

Always follow all safety rules established in the area where the vehicle is being operated.

Always reduce speed to compensate for poor terrain or conditions.

Always apply service brake to control speed on steep grades.



## **SAFETY INFORMATION**

Always maintain adequate distance between vehicles.

Always reduce speed in wet areas.

Always use extreme caution when approaching sharp or blind turns.

Always use extreme caution when driving over loose terrain.

Always use extreme caution in areas where pedestrians are present.

## **MAINTENANCE**

Always maintain your vehicle in accordance with the manufacturer's periodic service schedule.

Always ensure that mechanics performing repairs are trained and qualified to do so.

Always follow the manufacturer's directions if you do any maintenance on your vehicle. Be sure to disable the vehicle before performing any maintenance. Disabling includes removing the key from the key switch and removal of a battery wire.

Always insulate any tools used within the battery area in order to prevent sparks or battery explosion caused by shorting the battery terminals or associated wiring. Remove the battery or cover exposed terminals with an insulating material.

Always use specified replacement parts. Never use replacement parts of lesser quality.

Always use recommended tools.

Always 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.

Always support the vehicle using wheel chocks and safety stands. Never get under a vehicle that is supported by a jack. Lift the vehicle in accordance with the manufacturer's instructions.

Always empty the fuel tank or plug fuel hoses to prevent fuel leakage.

Never attempt to maintain a vehicle in an area where exposed flame is present or persons are smoking.

Always be aware that a vehicle that is not performing as designed is a potential hazard and must not be operated.

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.

Always test drive the vehicle after any repairs or maintenance. All tests must be conducted in a safe area that is free of both vehicular and pedestrian traffic.

Always replace damaged or missing warning, caution or information labels.

Always keep complete records of the maintenance history of the vehicle.



## **SAFETY INFORMATION**

### **VENTILATION**

Always store gasoline vehicles in a well ventilated area. Ventilation prevents gasoline fumes from accumulating.

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

Never work around or operate a vehicle in an environment that does not ventilate exhaust gases from the area. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal.



# SAFETY INFORMATION

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

## GENERAL

The following text is provided as recommended by part II of ASME/ANSI B56.8-1988. E-Z-GO strongly endorses the contents of this specification.

## PART II FOR THE USER

### 4 GENERAL SAFETY PRACTICES

#### 4.1 Introduction

**4.1.1** Like other machines, carriers can cause injury if improperly used or maintained. Part II contains broad safety practices applicable to carrier operations. Before operation, the user shall establish such additional specific safety practices as may reasonably be required for safe operation.

#### 4.2 Stability

**4.2.1** Experience has shown that this vehicle, which complies with this standard, is stable when properly operated and when operated in accordance with specific safety rules and practices established to meet actual operating terrain and conditions. However, improper operation, faulty maintenance, or poor housekeeping may contribute to a condition of instability and defeat the purpose of the standard. Some of the conditions which may affect stability are failure of the user to follow safety practices; also, ground and floor conditions, grade, speed, loading, the operation of the carrier with improper loads, battery weight, dynamic and static forces, and the judgement exercised by the carrier operator.

(a) The user shall train carrier operators to adhere strictly to the operating instructions stated in this Standard.

(b) The user shall survey specific operating conditions and environment, and establish and train carrier operators to comply with additional, specific safety practices.

#### 4.3 Nameplates, Markings, Capacity, and Modifications

**4.3.1** The user shall maintain in a legible condition all nameplates, warnings, and instructions which are supplied by the manufacturer.

**4.3.2** The user shall not perform any modification or addition which affects capacity or safe operation, or make any change not in accordance with the owner's

manual without the manufacturer's prior written authorization. Where authorized modifications have been made, the user shall ensure that capacity, operation, warning, and maintenance instruction plates, tags, or decals are changed accordingly.

**4.3.3** As required under paras. 4.3.1 or 4.3.2, the manufacturer shall be contacted to secure new nameplates, warnings, or instructions which shall then be affixed in their proper place on the carrier.

#### 4.4 Fuel Handling and Storage

**4.4.1** The user shall supervise the storage and handling of liquid fuels (when used) to be certain that it is in accordance with appropriate paragraphs of ANSI/NFPA 505 and ANSI/NFPA 30.

**4.4.2** Storage and handling of liquefied petroleum gas fuels shall be in accordance with appropriate paragraphs of ANSI/NFPA 505 and ANSI/NFPA 58. If such storage or handling is not in compliance with these standards, the user shall prevent the carrier from being used until such storage and handling is in compliance with these standards.

#### 4.5 Changing and Charging Storage Batteries for Electric Personnel and Burden Carriers

**4.5.1** The user shall require battery changing and charging facilities and procedures to be in accordance with appropriate paragraphs of ANSI/NFPA 505.

**4.5.2** The user shall periodically inspect facilities and review procedures to be certain that appropriate paragraphs of ANSI/NFPA 505, are strictly complied with, and shall familiarize carrier operators with it.

#### 4.6 Hazardous Locations

**4.6.1** The user shall determine the hazard classification of the particular atmosphere or location in which the carrier is to be used in accordance with ANSI/NFPA 505.

**4.6.2** The user shall permit in hazardous areas only those carriers approved and of the type required by ANSI/NFPA 505.

#### 4.7 Lighting for Operating Areas

**4.7.1** The user, in accordance with his responsibility to survey the environment and operating conditions, shall determine if the carrier requires lights and, if so, shall equip the carrier with appropriate lights in accordance with the manufacturer's recommendations.



# SAFETY INFORMATION

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

## 4.8 Control of Noxious Gases and Fumes

**4.8.1** When equipment powered by internal combustion engines is used in enclosed areas, the atmosphere shall be maintained within limits specified in the American Conference of Governmental Industrial Hygienists publication, "Threshold Limit Values for Chemical Substances and Physical Agents in the Workroom Environment". This shall be accomplished by ventilation provided by the user, and/or the installation, use, and proper maintenance of emission control equipment recommended or provided by the manufacturer of the equipment.

## 4.9 Warning Device(s)

**4.9.1** The user shall make periodic inspections of the carrier to be certain that the sound-producing and/or visual device(s) are maintained in good operating condition.

**4.9.2** The user shall determine if operating conditions require the carrier to be equipped with additional sound-producing and/or visual devices and be responsible for providing and maintaining such devices, in accordance with the manufacturer's recommendations.

## 5 OPERATING SAFETY RULES AND PRACTICES

### 5.1 Personnel and Burden Carrier Operator Qualifications

**5.1.1** Only persons who are trained in the proper operation of the carrier shall be authorized to operate the carrier. Operators shall be qualified as to visual, auditory, physical, and mental ability to safely operate the equipment according to Section 5 and all other applicable parts of this Standard.

### 5.2 Personnel and Burden Carrier Operators' Training

**5.2.1** The user shall conduct an operators' training program.

**5.2.2** Successful completion of the operators' training program shall be required by the user before operation of the carrier. The program shall be presented in its entirety to all new operators and not condensed for those claiming previous experience.

**5.2.3** The user should include in the operators' training program the following:

- (a) instructional material provided by the manufac-

turer;

- (b) emphasis on safety of passengers, material loads, carrier operator, and other employees;

- (c) general safety rules contained within this Standard and the additional specific rules determined by the user in accordance with this Standard, and why they were formulated;

- (d) introduction of equipment, control locations and functions, and explanation of how they work when used properly and when used improperly, and surface conditions, grade, and other conditions of the environment in which the carrier is to be operated;

- (e) operational performance tests and evaluations during, and at completion of, the program.

### 5.3 Personnel and Burden Carrier Operator Responsibility

**5.3.1** Operators shall abide by the following safety rules and practices in paras. 5.4, 5.5, 5.6, and 5.7.

### 5.4 General

**5.4.1** Safeguard the pedestrians at all times. Do not drive carrier in a manner that would endanger anyone.

**5.4.2** Riding on the carrier by persons other than the operator is authorized only on personnel seat(s) provided by the manufacturer. All parts of the body shall remain within the plan view outline of the carrier.

**5.4.3** When a carrier is to be left unattended, stop carrier, apply the parking brake, stop the engine or turn off power, turn off the control or ignition circuit, and remove the key if provided. Block the wheels if machine is on an incline.

**5.4.4** A carrier is considered unattended when the operator is 25 ft. (7.6 m) or more from the carrier which remains in his view, or whenever the operator leaves the carrier and it is not within his view. When the operator is dismounted and within 25 ft. (7.6 m) of the carrier still in his view, he still must have controls neutralized, and the parking brake(s) set to prevent movement.

**5.4.5** Maintain a safe distance from the edge of ramps and platforms.

**5.4.6** Use only approved carriers in hazardous locations, as defined in the appropriate safety standards.

**5.4.7** Report all accidents involving personnel, building structures, and equipment.

**5.4.8** Operators shall not add to, or modify, the carrier.

# SAFETY INFORMATION

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

**5.4.9** Carriers shall not be parked or left unattended such that they block or obstruct fire aisles, access to stairways, or fire equipment.

## 5.5 Traveling

**5.5.1** Observe all traffic regulations, including authorized speed limits. Under normal traffic conditions keep to the right. Maintain a safe distance, based on speed of travel, from a carrier or vehicle ahead; and keep the carrier under control at all times.

**5.5.2** Yield the right of way to pedestrians, ambulances, fire trucks, or other carriers or vehicles in emergency situations.

**5.5.3** Do not pass another carrier or vehicle traveling in the same direction at intersections, blind spots, or at other dangerous locations.

**5.5.4** Keep a clear view of the path of travel, observe other traffic and personnel, and maintain a safe clearance.

**5.5.5** Slow down or stop, as conditions dictate, and activate the sound-producing warning device at cross aisles and when visibility is obstructed at other locations.

**5.5.6** Ascend or descend grades slowly.

**5.5.7** Avoid turning, if possible, and use extreme caution on grades, ramps, or inclines; normally travel straight up and down.

**5.5.8** Under all travel conditions the carrier shall be operated at a speed that will permit it to be brought to a stop in a safe manner.

**5.5.9** Make starts, stops, turns, or direction reversals in a smooth manner so as not to shift the load, endanger passengers, or overturn the carrier.

**5.5.10** Do not indulge in dangerous activities, such as stunt driving or horseplay.

**5.5.11** Slow down when approaching, or on, wet or slippery surfaces.

**5.5.12** Do not drive carrier onto any elevator unless specifically authorized to do so. Approach elevators slowly, and then enter squarely after the elevator car is properly leveled. Once on the elevator, neutralize the controls, shut off power, and set parking brakes. It is advisable that all other personnel leave the elevator before a carrier is allowed to enter or exit.

**5.5.13** Avoid running over loose objects, potholes, and bumps.

**5.5.14** To negotiate turns, reduce speed to improve stability, then turn hand steering wheel or tiller in a

smooth, sweeping motion.

## 5.6 Loading

**5.6.1** Handle only stable and safely arranged loads. When handling off-center loads which cannot be centered, operate with extra caution.

**5.6.2** Handle only loads within the capacity of the carrier as specified on the nameplate.

**5.6.3** Handle loads exceeding the dimensions used to establish carrier capacity with extra caution. Stability and maneuverability may be adversely affected.

## 5.7 Operator Care of Personnel and Burden Carriers

**5.7.1** At the beginning of each shift during which the carrier will be used, the operator shall check the carrier condition and inspect the tires, warning devices, lights, battery(s), speed and directional controllers, brakes, and steering mechanism. If the carrier is found to be in need of repair, or in any way unsafe, the matter shall be reported immediately to the designated authority and the carrier shall not be operated until it has been restored to safe operating condition.

**5.7.2** If during operation the carrier becomes unsafe in any way, the matter shall be reported immediately to the designated authority, and the carrier shall not be operated until it has been restored to safe operating condition.

**5.7.3** Do not make repairs or adjustments unless specifically authorized to do so.

**5.7.4** The engine shall be stopped and the operator shall leave the carrier while refueling.

**5.7.5** Spillage of oil or fuel shall be carefully and completely absorbed or evaporated and fuel tank cap replaced before starting engine.

**5.7.6** Do not operate a carrier with a leak in the fuel system or battery(s).

**5.7.7** Do not use open flames for checking electrolyte level in storage battery(s) or liquid level in fuel tanks.

# 6 MAINTENANCE PRACTICES

## 6.1 Introduction

**6.1.1** Carriers may become hazardous if maintenance is neglected. Therefore, maintenance facilities, trained personnel, and procedures shall be provided. Such facilities may be on or off the premises.



# SAFETY INFORMATION

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

## 6.2 Maintenance Procedures

**6.2.1** Maintenance and inspection of all carriers shall be performed in conformance with the manufacturer's recommendations and the following practices.

(a) A scheduled preventive maintenance, lubrication, and inspection system shall be followed.

(b) Only qualified and authorized personnel shall be permitted to maintain, repair, adjust, and inspect carriers.

(c) Before undertaking maintenance or repair, follow the manufacturer's recommendations for immobilizing the carrier.

(d) Block chassis before working underneath it.

(e) Before disconnecting any part of the engine fuel system of a gasoline or diesel powered carrier with gravity feed fuel systems, be sure shutoff valve is closed, and run engine until fuel system is depleted and engine stops running.

(f) Before disconnecting any part of the engine fuel system of LP gas powered carriers, close the LP gas cylinder valve and run the engine until fuel in the system is depleted and the engine stops running.

(g) Operation to check performance of the carrier shall be conducted in an authorized area where safe clearance exists.

(h) Before commencing operation of the carrier, follow the manufacturer's instructions and recommended procedures.

(i) Avoid fire hazards and have fire protection equipment present in the work area. Do not use an open flame to check level or leakage of fuel, battery electrolyte, or coolant. Do not use open pans of fuel or flammable cleaning fluids for cleaning parts.

(j) Properly ventilate the work area.

(k) Handle LP gas cylinders with care. Physical damage, such as dents, scrapes, or gouges, may dangerously weaken the tank and make it unsafe for use.

(l) Brakes, steering mechanisms, speed and directional control mechanisms, warning devices, lights, governors, guards, and safety devices shall be inspected regularly and maintained in a safe operating condition.

(m) Special carriers or devices designed and approved for hazardous area operation shall be inspected to ensure that maintenance preserves the original approved safe operating features.

(n) Fuel systems shall be checked for leaks and condition of parts. If a leak is found, action shall be taken to

prevent the use of the carrier until the leak has been eliminated.

(o) The carrier manufacturer's capacity, operation, and maintenance instruction plates, tags, or decals shall be maintained in legible condition.

(p) Batteries, motors, speed and directional controllers, limit switches, protective devices, electrical conductors, and connections shall be inspected and maintained in conformance with manufacturers recommended procedures.

(q) Carriers shall be kept in a clean condition to minimize fire hazards and facilitate detection of loose or defective parts.

(r) Modifications and additions which affect capacity and safe machine operation shall not be performed by the customer or user without manufacturer's prior written authorization; where authorized modifications have been made, the user shall ensure that capacity, operation, warning, and maintenance instruction plates, tags, or decals are changed accordingly.

(s) Care shall be taken to ensure that all replacement parts are interchangeable with the original parts and of a quality at least equal to that provided in the original equipment.

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

Thank you for purchasing an E-Z-GO vehicle. This vehicle is equipped with a twin cylinder overhead cam 4 cycle engine that is the most advanced engine in the industry. Before driving the vehicle, we ask you to spend some time reading this Owner's Manual and Service 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.

Most of the service procedures in this guide can be accomplished by an individual using common automotive hand tools. Refer to an E-Z-GO representative for information on servicing the vehicle in accordance with the Periodic Service Schedule.

To facilitate maintenance, a Service Parts Manual and a Technician's Repair and Service Manual is available from a local Distributor, an E-Z-GO Branch or the E-Z-GO Service Parts Department. When ordering parts or requesting information for your vehicle, provide vehicle model, serial number and manufacture code.

## BEFORE INITIAL USE

Be sure you understand the vehicle, its equipment and how to use it safely. Although E-Z-GO vehicles have been designed to provide safe and reliable operation, maintaining good performance depends to a large extent on the operator.

**⚠ WARNING ⚠** *Hydrogen gas is generated as a natural part of the charging process. A 4% concentration of hydrogen gas is explosive. Charging must take place in an area that is adequately ventilated. (Minimum of 5 air exchanges per hour.)*

*Never charge a battery in an area that has open flame or electrical equipment that could cause an electrical arc.*

*Never smoke around battery.*

Before a new vehicle is put into operation, it is recommended that the items shown in the INITIAL SERVICE CHART be performed (Ref Fig. 1 on page 1).

Vehicle battery must be fully charged before initial use.

## Preparation of Seats for Service

Remove the protective plastic coverings from the seats before placing the vehicle in service. The **only** function of the plastic covering is to protect the seat bottom and back rest during shipping. If the plastic covering is left on the seat and becomes torn, dirt may get under the plastic covering and be ground into the cover material. Water

ITEM	SERVICE OPERATION
Battery	Charge battery
Seat	Remove protective plastic covering
Brakes	Check operation and adjust if necessary
	Check hydraulic brake fluid level
Tires	Check pressure
Fuel	Fill tank with correct fuel
Engine	Check oil level

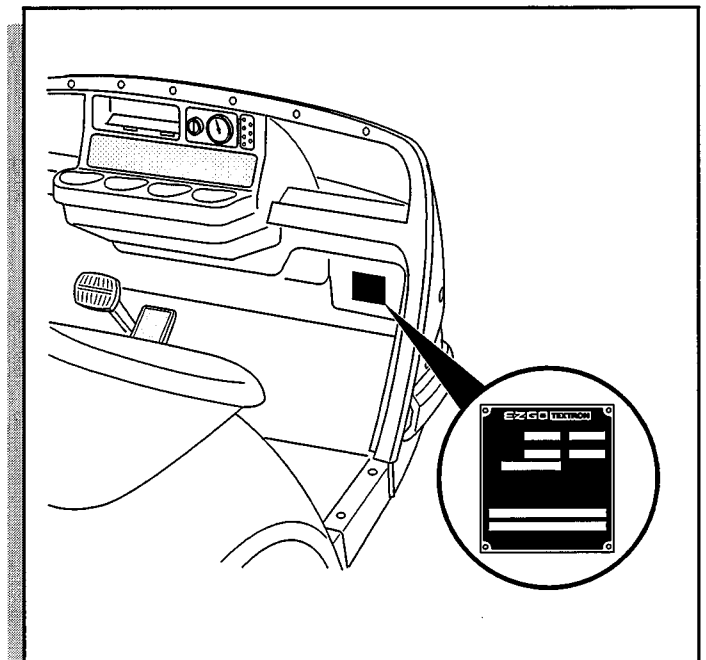
**Fig. 1 Initial Service Chart**

getting under the plastic covering can become trapped and eventually will damage the seat assembly.

## SERIAL NUMBER PLATE LOCATION

The serial and manufacturing numbers are located on a plate underneath the dash on the passenger side of the vehicle (Ref Fig. 2 on page 1).

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



**Fig. 2 Serial Number Plate Location**

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

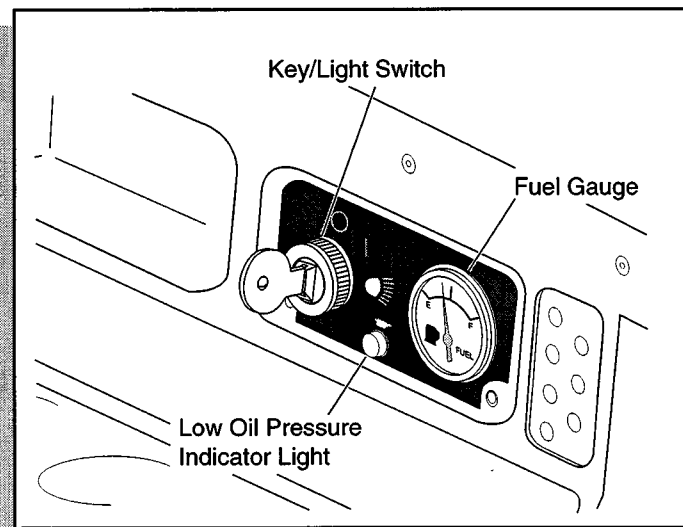
## CONTROLS AND METERS

The controls on the vehicle consist of the following:

- key/light switch
- fuel gauge
- low oil pressure indicator light
- direction selector lever
- parking brake
- choke
- accelerator pedal
- service brake pedal
- horn

### Key/Light Switch

Located on the dash panel, the key/light switch enables the basic electrical system of the vehicle to be turned on and off by turning the key. This switch also has a position for operating the lights. The lights will illuminate only when the key is turned to the light icon position (Ref Fig. 3 on page 2).



**Fig. 3 Key/Light Switch, Fuel Gauge and Low Oil Pressure Indicator Light**

For added security when the vehicle is left unattended, the key should be removed while in the 'OFF' position, to prevent inadvertent operation of the vehicle.

#### **NOTE**

*If the vehicle is equipped with E-Z-GO installed custom accessories, some accessories remain operational with the key switch in the 'OFF' position.*

### Fuel Gauge

An electric fuel gauge is located to the right of the key/light switch that indicates the amount of fuel in the tank (Ref Fig. 3 on page 2).

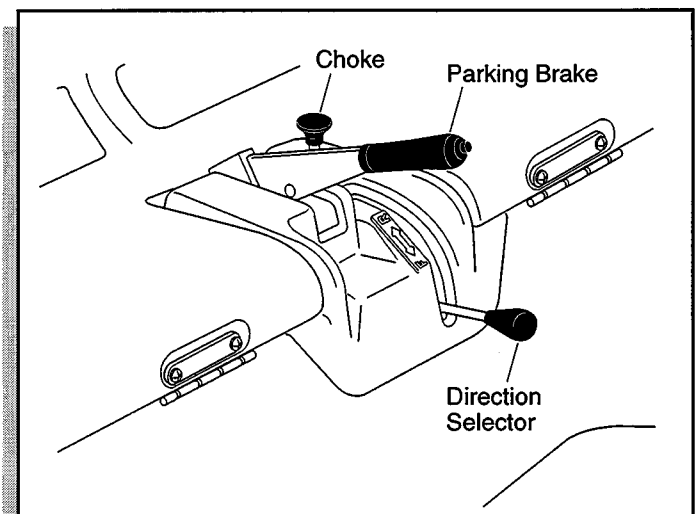
### Low Oil Pressure Indicator Light

A low oil pressure indicator light located between the key/light switch and the fuel gauge illuminates when the oil pressure gets low (Ref Fig. 3 on page 2).

### Direction Selector

Located on the panel in the center of the front seat, this lever permits the selection of either forward or reverse (Ref Fig. 4 on page 2). It should be left in 'F' (forward) position when the vehicle is left unattended.

**CAUTION** To prevent component damage, the vehicle must be completely stopped before moving the direction selector.



**Fig. 4 Direction Selector, Parking Brake and Choke**

### Parking Brake

The hand operated parking brake is located on the panel in the center of the front seat (Ref Fig. 4 on page 2). The brake is engaged when the handle is raised and is disengaged when the handle is parallel to the seat bottom.

When leaving the vehicle unattended, engage the parking brake by raising the handle until it locks in place. To release the parking brake, depress the release button in the end of the handle while slightly raising the handle, then lower the parking brake handle.

### Choke

Located on the panel in the center of the front seat, the choke is used to aid cold starting (Ref Fig. 4 on page 2). Pull the choke knob out for the first start of the day, or if the vehicle does not start within ten seconds after moving the ignition switch to start and depressing the accelerator. After engine runs smoothly, push choke back to normal position. Do not operate at full throttle until engine has reached operating temperature.



# GASOLINE CARGO AND PERSONNEL CARRIERS

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## Accelerator Pedal

Depressing the accelerator pedal starts the engine. When the pedal is released, the engine will stop (Ref Fig. 5 on page 3).

## Service Brake Pedal

Depressing the foot operated service brake pedal activates the wheel brakes, slowing or stopping the vehicle (Ref Fig. 5 on page 3).

## Horn

The horn can be activated by depressing the button located on the floor to the left of the steering column (Ref Fig. 5 on page 3). The horn is located at the front of the vehicle underneath the cowl.

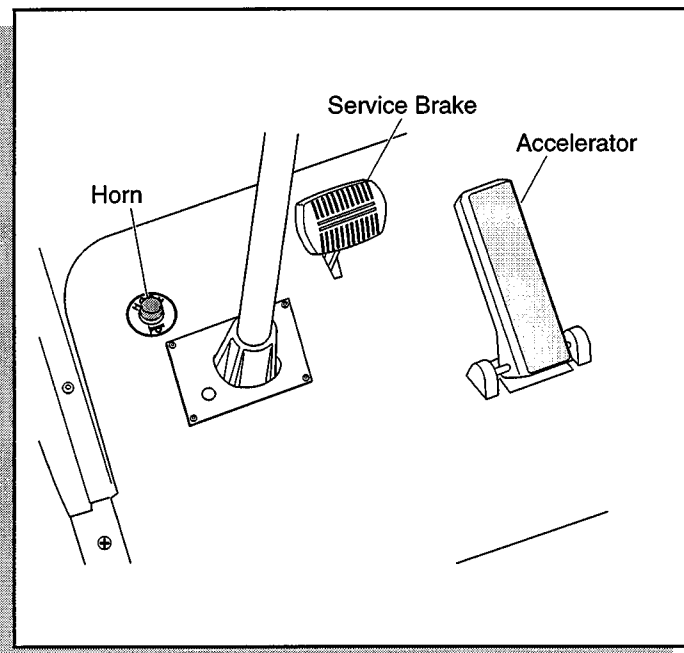


Fig. 5 Accelerator, Service Brake and Horn

## BEFORE ENTERING VEHICLE

1. Check for correct tire inflation.
2. Inspect for fluid leaks.
3. Be sure everything is properly stored and secured.

## OPERATING THE VEHICLE

**CAUTION** Improper use of the vehicle or the lack of proper maintenance may result in decreased performance or damage to the vehicle.

**NOTE** Read and understand the following warnings before attempting to operate the vehicle.



**Drive the vehicle only as fast as terrain and safety considerations allow.**

**Consider the terrain and traffic conditions. Also, consider the environmental factors which effect the terrain and the ability to control the vehicle.**

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

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

**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 steep slopes. Use the parking brake whenever the vehicle is parked.**

**Avoid extremely rough terrain.**

**Check the area behind the vehicle before operating in reverse.**

**Make sure that the direction selector is in correct position before starting the vehicle.**

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

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

**Always remain seated and hold on while the vehicle is in motion.**

**Do not take vehicle out of gear while in motion (do not allow vehicle to coast).**

**All travel should be directly up or down hills.**

**Use extra care when driving the vehicle across any incline.**

**When the vehicle is to be left unattended, engage the parking brake, place the direction selector in 'F' (forward) position, turn the key to the 'OFF' position and remove the key.**

Depressing the accelerator pedal energizes the starter and ignition circuits which cause the engine to run. To start the gasoline vehicle: Apply the service brake, place the key in the key switch and turn it to the 'ON' position. Move the direction selector to the direction desired. While depressing and holding the service brake pedal, release the parking brake. Slowly depress the accelerator pedal to start the engine. Release the service brake once the vehicle has started.

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

When the accelerator pedal is released, the ignition circuit is de-energized and the engine stops. To stop the vehicle more quickly, depress the service brake pedal.

## Cold Starting

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

If the vehicle has been running but the engine does not re-start within ten seconds, use the choke.

**CAUTION** Do not allow the starter to operate continuously for more than 30 seconds. Allow 10 seconds before attempting a second time. If the vehicle does not start on the third attempt, turn the key switch off, lock the parking brake and determine the cause of the problem.

## Starting the Vehicle on a Hill

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

When starting the vehicle on a hill, it is important to follow the procedure below to prevent excessive roll-back or permanent damage to the drive system.

Place left foot on service brake and release the parking brake. Place right foot on accelerator. As accelerator is depressed with the right foot, release the service brake by removing the left foot.

## Starting a Vehicle with a Discharged Battery

**WARNING** Do not attempt to 'jump start' a vehicle using another vehicle.

The vehicle is equipped with a starter/generator. When starting the engine, the starter/generator functions as a starter and with the engine running, it functions as a generator.

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

Since the engine stops when the accelerator is released, **jump starting should not be attempted.**

If the vehicle battery has become discharged, it must be charged using a 12V charger that is rated at 10 amps or less.

Observe all instructions provided by the manufacturer of the charger.

## COASTING

On steep hills, it is possible for the vehicle to coast at greater than normal speeds encountered on a flat surface. To prevent loss of vehicle control, speeds should be limited to no more than the maximum governed speed on level ground (see vehicle specification). Limit speed by applying service brake. Severe damage to the drive train components may result due to excessive speed. Damage caused by excessive speed may cause a loss of control, is costly to repair, is considered abuse and will not be covered under warranty.

## FUEL

The fuel tank cap is located toward the rear, on the passenger side of the vehicle (Ref Fig. 6 on page 4). Fill the tank with fresh, clean, automotive grade, unleaded, 87 octane (minimum) gasoline. High altitude or heavy use/load applications may benefit from higher octane gasoline.

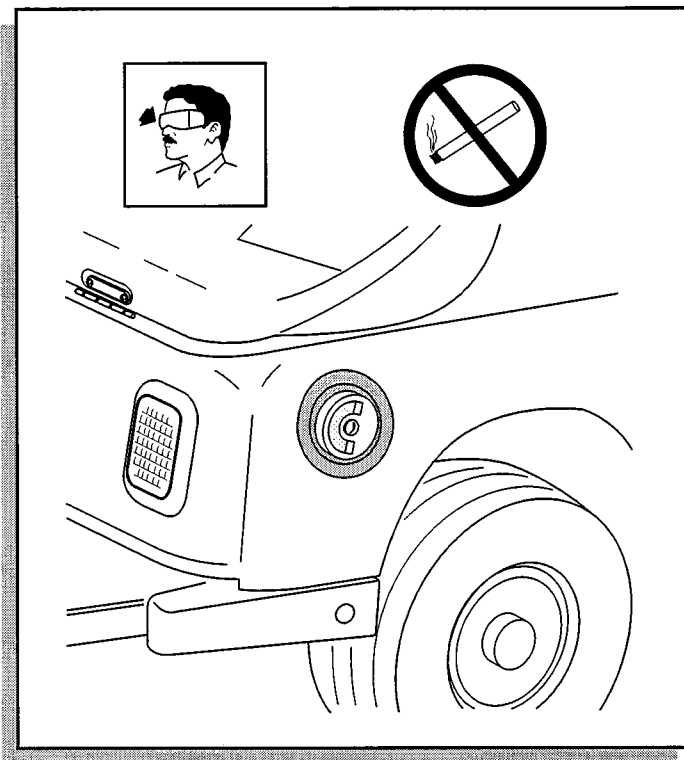


Fig. 6 Fuel Tank Location

**CAUTION** Do not over fill the fuel tank. Allow adequate space for the expansion of gasoline.

# GASOLINE CARGO AND PERSONNEL CARRIERS

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



**WARNING** To prevent a possible explosion, do not smoke near the fuel tank or refuel near open fire or electrical items which could produce a spark.

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

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

Do not handle fuel in an area that is not adequately ventilated. Do not permit anyone to smoke in an area where vehicles are being fueled.

## SERVICING THE VEHICLE



**WARNING** Before attempting any service operation, read and understand all the NOTES, CAUTIONS and WARNINGS in this manual.

It is in the best interest of both vehicle owner and servicing dealer to carefully follow the procedures recommended in this manual. Adequate preventative maintenance, applied at regular intervals, is the best guarantee for keeping the E-Z-GO vehicle both dependable and economical.



**Wear eye protection when working on the vehicle. In particular, use care when working around batteries, or when 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 any heavy gauge battery wires.

### Break-In

An initial oil change is required at 100 hours. Check for any oil or fuel leaks that could have developed in shipment from the factory. As in normal driving, avoid full throttle starts and rapid acceleration until the engine has achieved operating temperature.

All engines consume more oil than normal during the first hours of operation. As internal moving parts are run in, oil consumption should gradually decrease until the rate of consumption stabilizes. All engines use some oil even when in perfect condition and properly broken in. During the initial period, check the oil level at least every 8 operational hours (Ref Fig. 7 on page 5). Add oil if the level on the dipstick indicates that oil is in the lower portion of the safe operating range.

### CAUTION

Never overfill the engine with oil, foaming may result and enter the breather system.

### NOTE

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

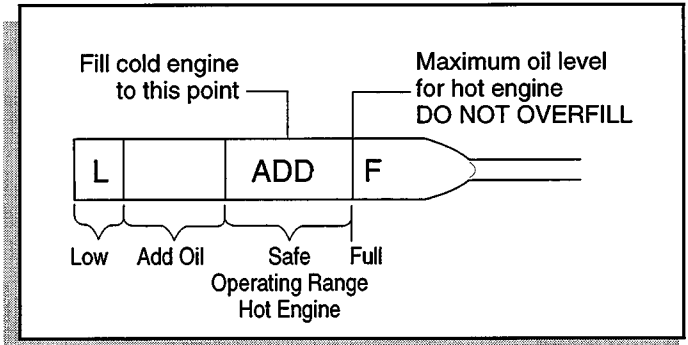


Fig. 7 Check Oil Level on Dipstick

The oil should be changed after the first 100 hours of operation and should be drained while the engine is warm. See POWERTRAIN MAINTENANCE for checking oil level and changing oil procedures.

## NEUTRAL LOCK

To prevent the driven clutch from turning the rear axle during any service operations, a neutral lock is located on the rear axle. Place the direction selector in the neutral position (between 'F' and 'R') and place the neutral lock in the neutral position as shown in illustration (Ref Fig. 8 on page 5).

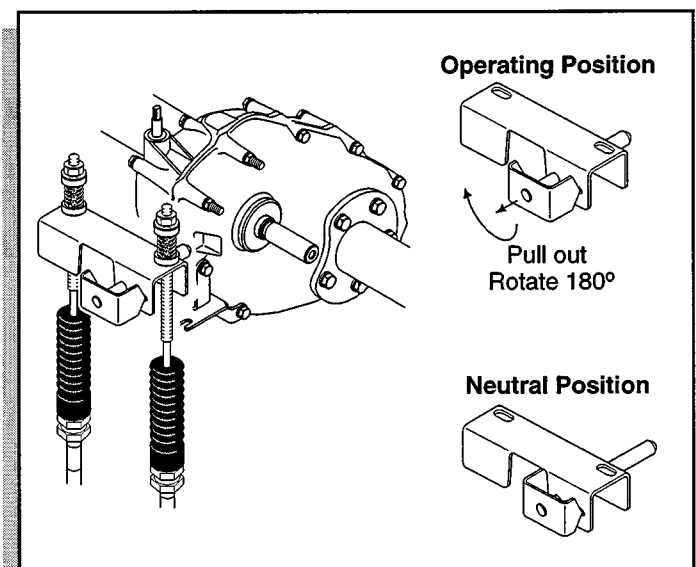


Fig. 8 Neutral Lock

# GASOLINE CARGO AND PERSONNEL CARRIERS

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## LIFTING THE VEHICLE

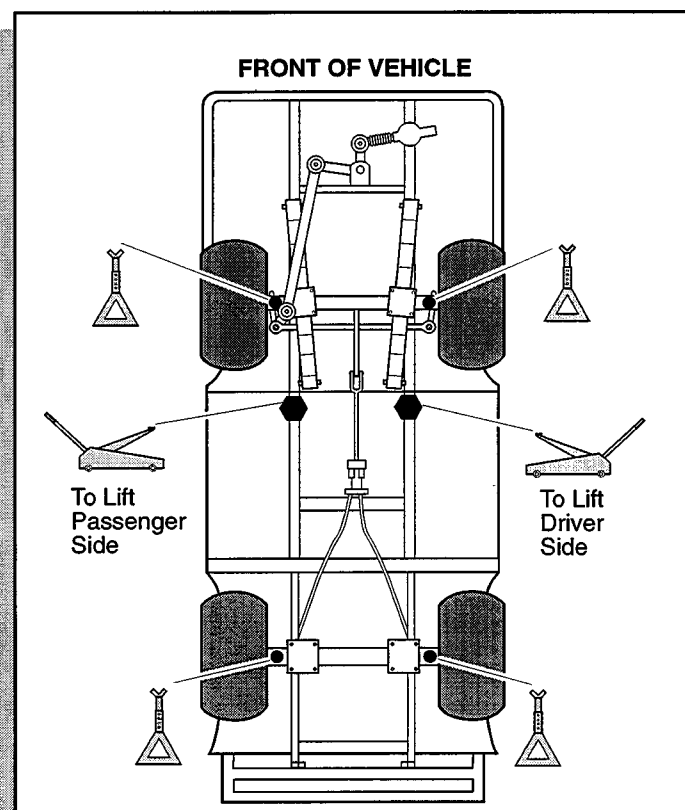
Some servicing operations may require the vehicle be raised. It is recommended this vehicle be lifted on one side or the other or the entire vehicle be lifted. Do not attempt the raise only the front end or rear end of the vehicle.

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



**To prevent possible injury or death, 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.**

**To prevent possible injury or death, 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.**



**Fig. 9 Lifting the Vehicle**

Install chocks in front and behind each wheel not being raised. Place the jack under the frame directly behind the front wheel on the side to be lifted as indicated (Ref Fig. 9 on page 6). Raise the vehicle and locate a jack stand

under the outer end of the rear axle. Place a jack stand under the outer end of the front axle.

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

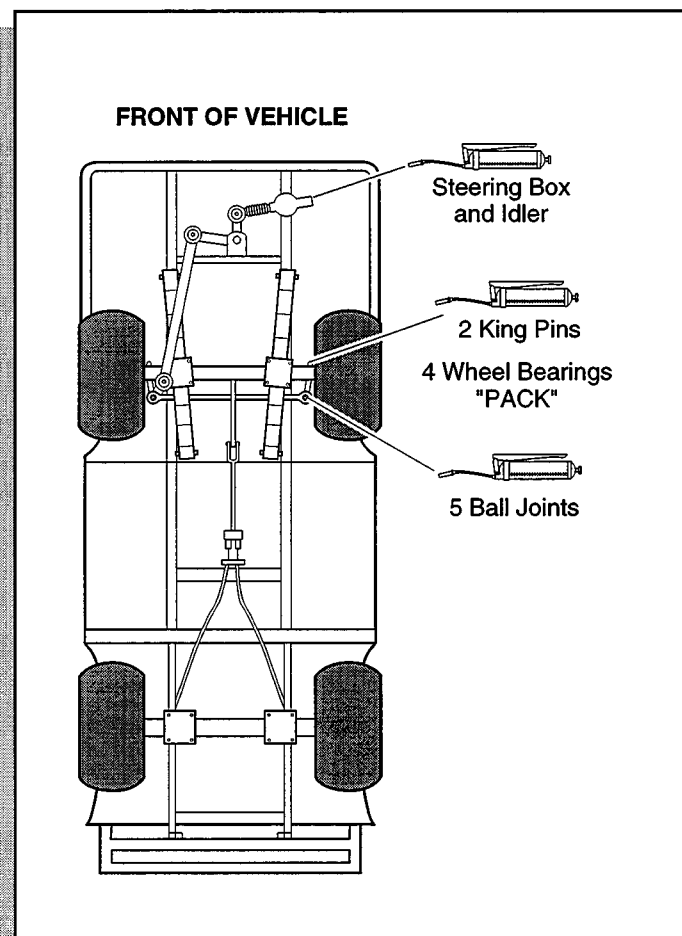
If the entire vehicle is to be lifted, follow the same procedure at the other side of the vehicle.

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

Lower the vehicle by reversing the lifting sequence.

## ROUTINE MAINTENANCE

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. 32 on page 16). Refer to Lubrication Points (Ref Fig. 10 on page 6) for appropriate lubrication locations.



**Fig. 10 Lubrication Points**

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

# GASOLINE CARGO AND PERSONNEL CARRIERS

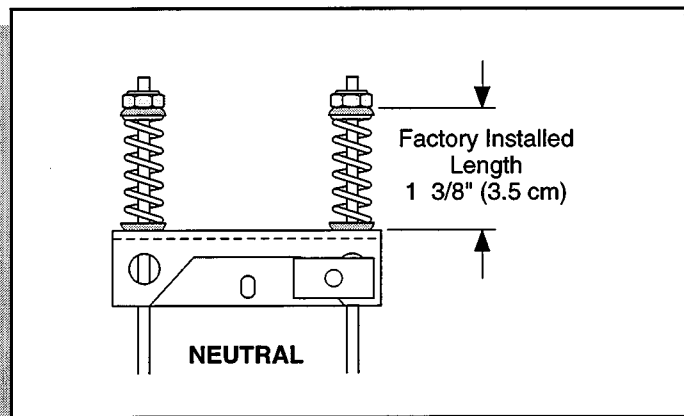
*Read all of manual to become thoroughly familiar with this vehicle. Pay particular attention to all Notes, Cautions and Warnings*

## POWERTRAIN MAINTENANCE

Access to the powertrain can be obtained by raising the seats and/or the cargo deck panels. Some service procedures may require the vehicle be lifted. Refer to **LIFTING THE VEHICLE** for proper lifting procedure and safety information.

### Direction Selector

The direction selector is a mechanical device that operates cables connected to the transmission. The cables are sealed and do not require lubrication, but may require occasional adjustment. The factory installed length should be maintained (Ref Fig. 11 on page 7).

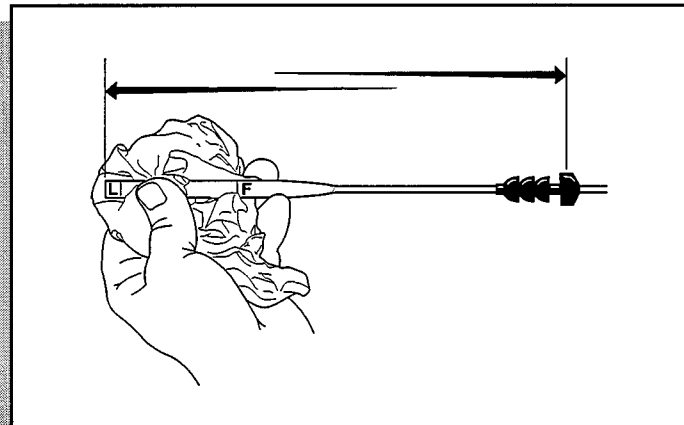


**Fig. 11 Shift Cable Adjustment**

### Checking the Oil Level

The oil should be checked with the engine warm and the vehicle on a level surface with the parking brake engaged. Allow adequate time for oil to drain into the crankcase before checking.

Remove the dipstick and wipe off the entire area indicated with a lint free cloth (Ref Fig. 12 on page 7).

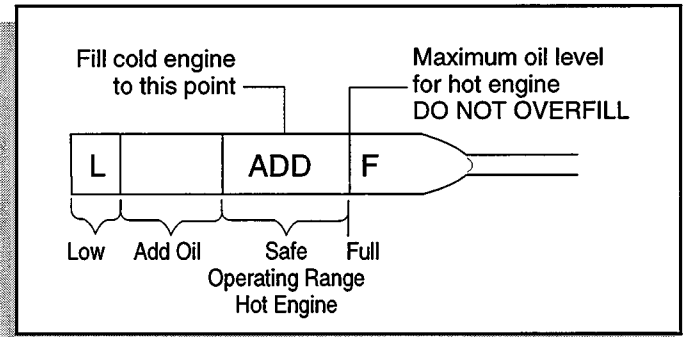


**Fig. 12 Clean Entire Dipstick**

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

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

Oil should be added to bring the level into the safe operating range (Ref Fig. 13 on page 7). Remember that oil expands as it gets hot. **Do not overfill.** Check that the oil fill cap is firmly in place.



**Fig. 13 Check Oil Level on Dipstick**

**NOTE** When adding oil between oil changes, do not mix brands and viscosity grades of oil.

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

### Changing the Oil

Tool List	Qty. Required
Wrench, 10 mm.....	1
Oil drain pan.....	1

For maximum engine performance and longevity, the engine oil should be replaced after the first 100 hours of operation. After the initial oil change, it should be repeated every 200-250 hours of operation or yearly, whichever comes first. Vehicles used under harsh or dirty conditions should have the oil changed every 100-150 hours of operation. **Never** exceed 300 hours of operation before an oil change.

The selection of oil is dependent upon the service that the vehicle will perform (Ref Fig. 14 on page 8). Most vehicles require 10W-30 oil, whereas vehicles used at capacity or near capacity load applications will require 10W-40 oil after a break-in period of 100 hours.

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

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

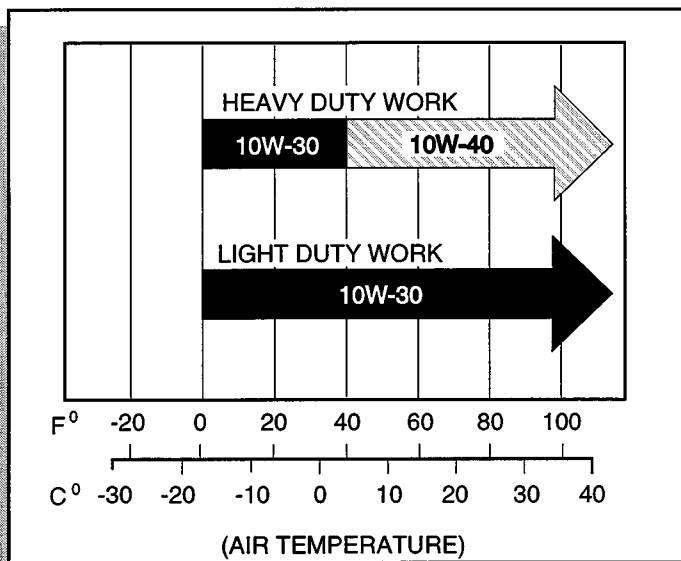


Fig. 14 Oil Viscosity Chart

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

The oil should be changed with the engine warm. Park the vehicle on a level surface, engage the parking brake and remove the key. Place a drain pan under the engine. Wipe the top of the engine clean with a cloth and remove the oil fill cap (Ref Fig. 15 on page 8).

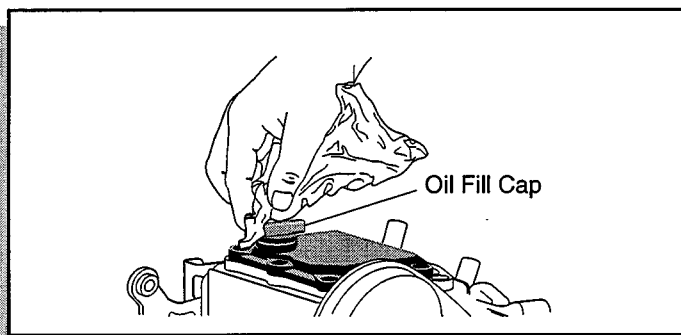


Fig. 15 Clean Top of Engine

Clean the area around the filter. Remove the three bolts securing the oil filter to the engine. Remove the filter by pulling it from the engine and allow the oil to drain (Ref Fig. 16 on page 8). The 'O' rings may remain on the engine or the filter.

Inspect the filter. At the first oil change, **small** metal chips and lint may be found. This is normal, resulting from the break-in period. Inspect the filter at every oil change. The presence of large metal chips could indicate possible damage to the engine.

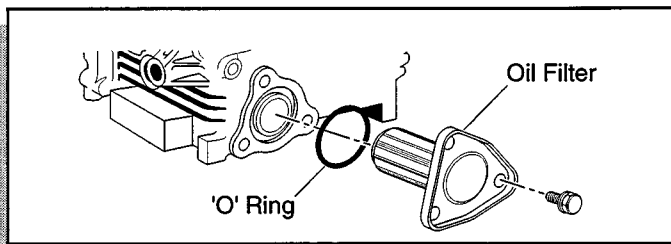


Fig. 16 Remove Oil Filter

**⚠ WARNING ⚠** Wear eye protection to prevent splashed solvent from contacting the eyes when cleaning oil filter.

Clean the filter by washing in any shop degreaser and brushing the metal screen clean with a soft brush (Ref Fig. 17 on page 8).

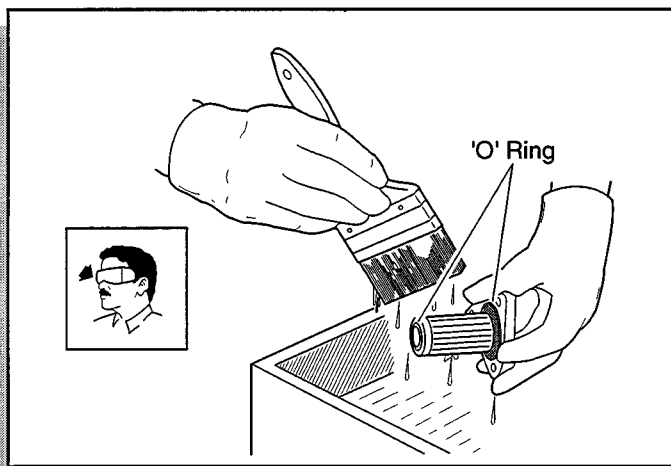


Fig. 17 Cleaning the Oil Filter

Blow out the filter with low pressure air, 30 psi (210 kPa) or less, from no closer than 3" (8 cm) and allow to air dry (Ref Fig. 18 on page 8).

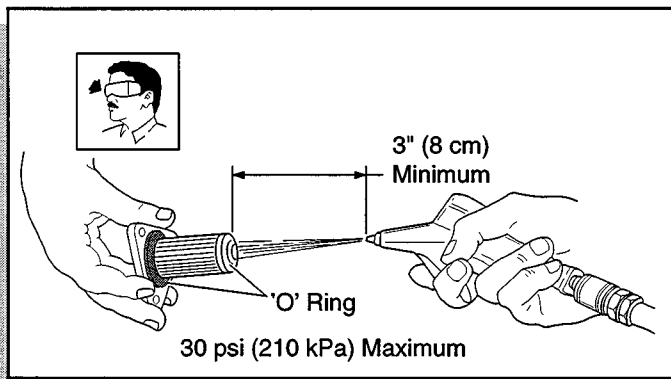


Fig. 18 Blowing Out Oil Filter

Wipe the area around the filter mount with a clean, lint free cloth and inspect both filter 'O' rings for damage;

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

replace if necessary. Install the filter into the engine. The filter engages over a short nipple in the engine. The filter should slide easily onto the nipple and seat against the engine using light hand pressure only. Align the holes in the filter mounting plate with the holes in the engine. Install and snug the bolts before tightening them firmly.

Oil capacity is 1 1/2 quarts (1.4 liters). Add slightly less than 1 1/2 quarts (1.4 liters) to allow for possible residual oil left in engine (Ref Fig. 19 on page 9). The oil must be high quality oil that meets or exceeds API SF, SG, CC standards. Check oil level on dipstick (Ref Fig. 13 on page 7). Oil should be slightly below 'F' to allow for expansion. If necessary, continue to add oil slowly and allow time for oil to flow down into engine. Check oil level on dipstick. **Do not overfill.**

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

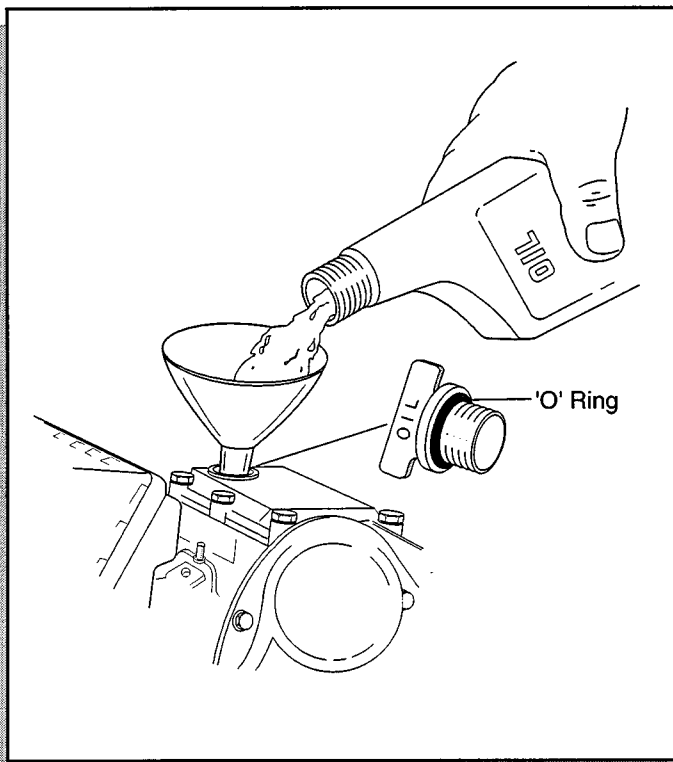


Fig. 19 Adding Engine Oil

Install the oil fill cap. Run the vehicle for one or two minutes and check the filter for oil leaks.

## AIR CLEANER INSPECTION/REPLACEMENT

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

The air cleaner element is accessible by unsnapping the top clips from the air box and swinging the cover open. **Remove the cover and the air filter element** (Ref Fig. 20 on page 9). Clean inside of cover and enclosure.

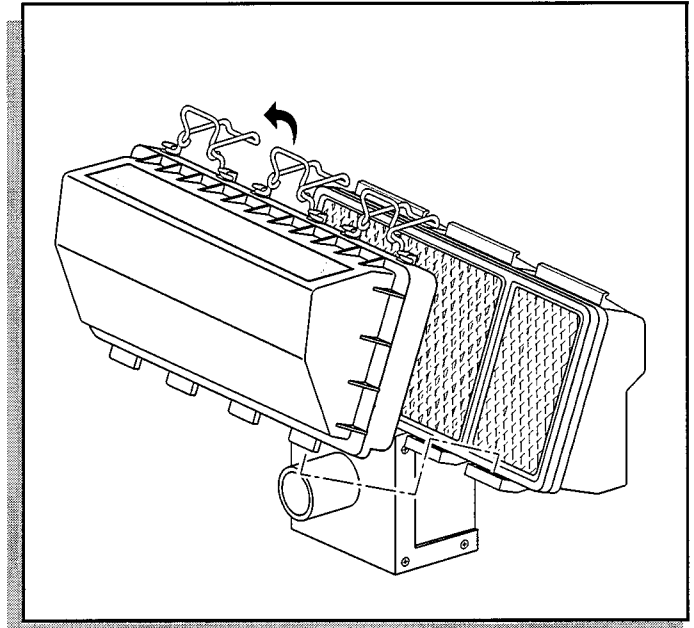


Fig. 20 Air Cleaner

If the element is in acceptable condition, loose dirt may be removed by tapping the filter **lightly**. The air cleaner element may be washed if required up to two times but replacement is recommended for optimum performance. To wash the element, gently wash the element in a mixture of non-sudsing cleaner (liquid automatic dishwasher detergent) and water. Rinse in 'non-pressurized' clear water.

Allow to air dry completely before reinstalling. Do not force dry the filter. Replacement is mandatory at the first signs of filter paper deterioration or if the element has holes in it.

**CAUTION** Do not use pressurized water or compressed air to clean the air filter. Doing so will damage the filter and will damage the engine.

After the initial cleaning, the second cleaning may be required sooner than the first due to the deterioration of the filter material.

**NOTE** To aid sealing, light grease may be applied to each side of the filter seal.

Install the element in the same way it was removed, being sure that the filter seal is correctly installed. Attach the lower portion of the enclosure and swing it up into place. Squeeze housing together and secure with top clips. Be sure all clips are fastened securely.

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

## REAR AXLE

The rear axle is provided with a lubricant level check plug located on the driver's side at the rear of the housing (Ref Fig. 21 on page 10). Unless leakage is evident, an annual lubricant check is sufficient.

### Checking the Lubricant Level

Tool List	Qty. Required
Socket, 13 mm, 3/8" drive .....	1
Ratchet, 3/8" drive .....	1
Funnel .....	1

Clean the area around the check and fill plugs. Remove the check plug (Ref Fig. 21 on page 10). The correct lubricant level is **just** below the bottom of the threaded hole. If lubricant is to be added, remove the fill plug and add lubricant using a funnel. Add lubricant slowly until lubricant starts to seep from the check plug hole. Install the check plug and the fill plug. In the event that the lubricant is to be replaced, a drain plug is provided at the bottom of the differential housing. Capacity of axle is 40 oz. (1.2 liters).

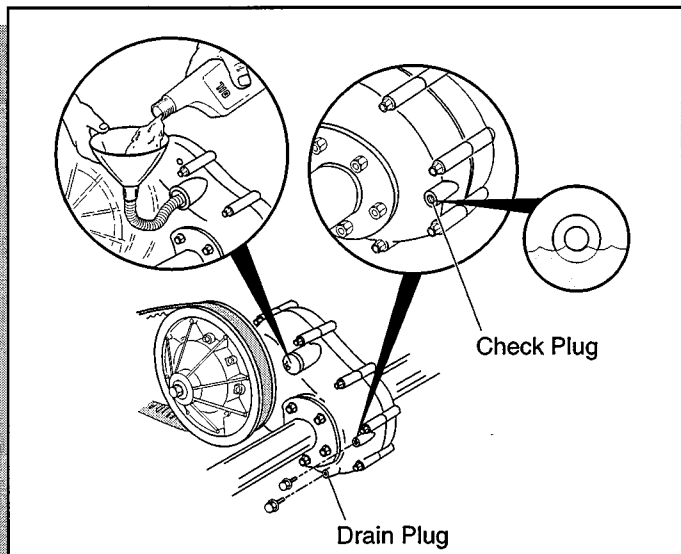


Fig. 21 Add, Check and Drain Rear Axle Lubricant

## STARTER/GENERATOR BELT TENSION

Tool List	Qty. Required
Belt tension gauge.....	1
Wrench, 3/4".....	1
Wrench, 9/16".....	2
Ratchet, 3/8" drive.....	1
Socket, 3/4", 3/8" drive.....	1

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

**NOTE** A loose belt can cause audible vibration and squeal.

Tighten a **new** starter/generator belt to 90-110 lbs. (41-50 kg) tension when a gauge is applied half way between the two pulleys (Ref Fig. 22 on page 10).

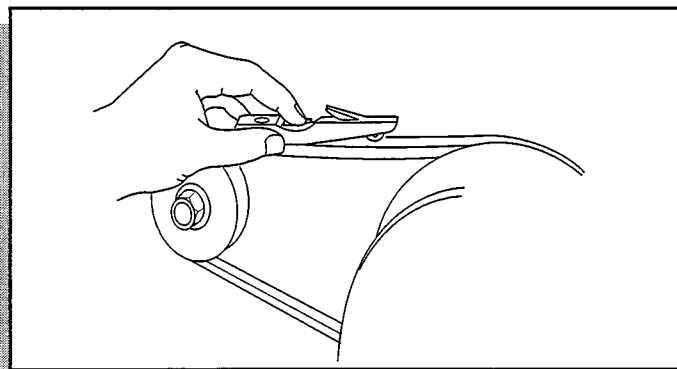


Fig. 22 Checking Belt Tension with Gauge

Although not as accurate, the belt may be depressed with a finger. A maximum deflection of 3/8" (10 mm) is acceptable (Ref Fig. 23 on page 10).

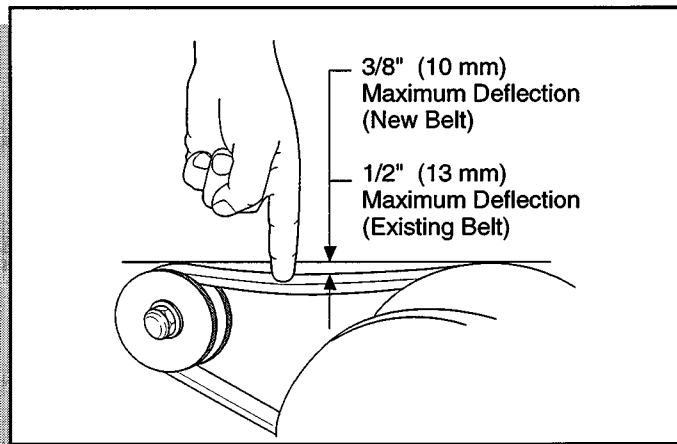


Fig. 23 Checking Belt Tension with Finger

Re-tighten an **existing** belt to 75-80 lbs. (34-36 kg) tension using the same technique. A maximum deflection of 1/2" (13 mm) is acceptable.

### Adjusting the Belt

Using a 3/4" socket and open end wrench, loosen the starter/generator pivot bolt.

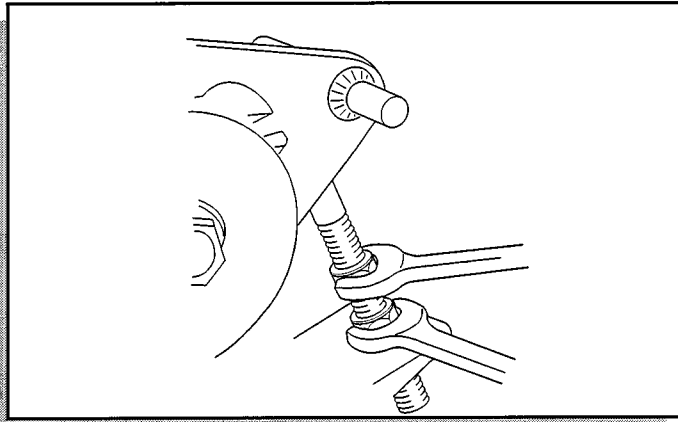
While holding the lower adjusting nut with a 9/16" wrench, loosen the upper jam nut with another 9/16" wrench. Move the lower nut up or down the adjustment bolt until proper belt tension is achieved. Hold the lower



# GASOLINE CARGO AND PERSONNEL CARRIERS

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

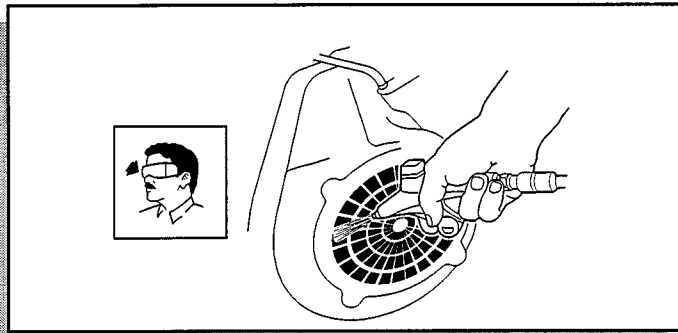
nut in place and tighten the upper jam nut against it (Ref Fig. 24 on page 11).



**Fig. 24 Adjusting the Belt Tension**

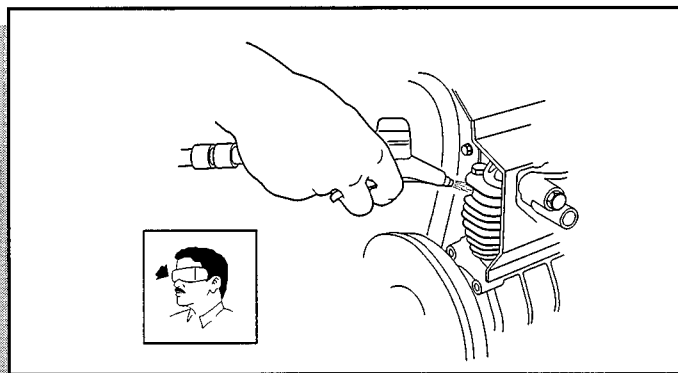
Using a 3/4" socket and open end wrench, tighten the starter/generator pivot bolt.

## AIR INTAKE AND COOLING FINS



**Fig. 25 Cleaning Air Intake**

Every 20 hours, check for a build up of debris in the air intake and cooling fins. Blow or brush out debris from these areas. (Ref Fig. 25 on page 11) (Ref Fig. 26 on page 11)



**Fig. 26 Cleaning the Cooling Fins**

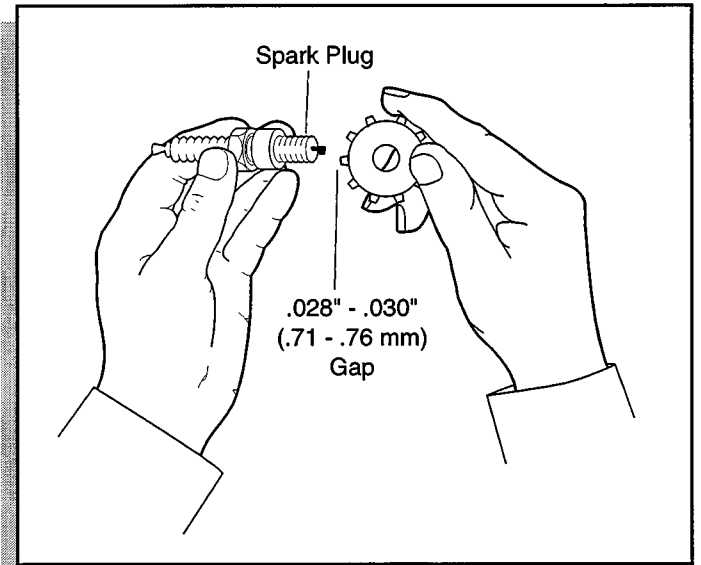
## SPARK PLUGS

### Tool List

### Qty. Required

Spark plug wrench, 13/16" .....	1
Plug gauge, wire type.....	1

Using a 13/16" spark plug wrench, remove the spark plugs at 250-300 hours or annually and inspect. Clean and gap to .028"-.030" (.71-.76 mm). If a plug has been burned beyond .035" (.89 mm), it should be replaced. (Ref Fig. 27 on page 11)



**Fig. 27 Gapping the Spark Plug**

Fouled spark plugs are indicated by a wet, black appearance. This could be caused by a dirty air filter element or other restrictions in the air intake system. Incorrectly adjusted valves, spark plug wires which are in poor condition or poor quality fuel could also contribute to the problem. All new spark plugs should be properly gapped to .028"-.030" (.71-.76 mm). Use NGK BPR5ES for replacement plugs.

Tighten to 18 ft. lbs. (24 Nm) torque.

### **CAUTION**

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

## ROUTINE MAINTENANCE

DAILY, MONTHLY, QUARTERLY, SEMI-ANNUAL AND ANNUAL service requirements are detailed in the 'Periodic Service Schedule'.

### **NOTE**

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

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

## BRAKES

The fill cap for the master cylinder is located under the front seat. Remove the screw and raise the seat. Remove the four screws securing the control panel and lift off panel to access master cylinder (Ref Fig. 28 on page 12).

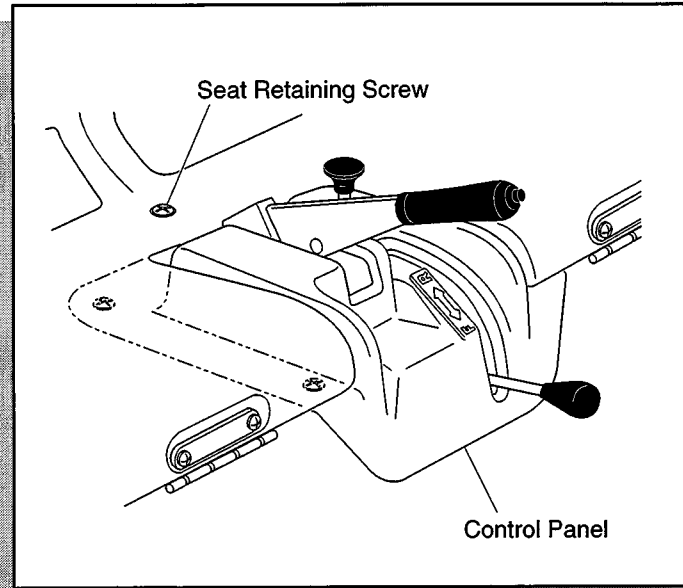


Fig. 28 Accessing Master Cylinder

It is important to maintain proper fluid levels in the brake master cylinder. When checking the fluid, wipe off any dirt from the fill cap before removing it to prevent contamination. Fluid level should be maintained at 1/8" (3 mm) below the top of the housing.

## DAILY BRAKE TEST

After the vehicle has been put into service, it is recommended that the brakes be checked daily by performing the following test:



**All driving brake tests must be done in a safe location with regard for**

**the safety of all personnel.**

Depress the brake pedal. The pedal should have some free travel and then become hard. A brake pedal that has no free travel, excessive free travel or a spongy feel is indicating that a brake inspection is required. A brake pedal that falls after it is applied indicates a leak in the master or wheel cylinders. Check for adequate brake fluid level. Adjust brakes if required and inspect system for fluid leaks.

## TIRES

### Tools List

### Qty. Required

Lug wrench, 3/4" .....	1
Impact wrench, 1/2" drive .....	1
Impact socket, 3/4", 1/2" drive .....	1
Torque wrench, 1/2" drive, ft. lbs.....	1

Tire condition should be inspected on a daily basis. Inflation pressures should be checked on a weekly basis when the tires are cool.



**Never exceed inflation pressure rating on tire sidewall.**

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 prevents tires from 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 careful not to overinflate. Due to the low volume of these small tires, overinflation can occur in a matter of seconds. Be sure to install the valve dust cap after checking of inflating.

### Tire Repair

The vehicle is fitted with low pressure tubeless tires mounted on one piece rims.

Generally, the most cost effective way to repair a flat tire resulting from a puncture in the tread portion of the tire is to use a commercial tire plug.



**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 specifications.

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

# GASOLINE CARGO AND PERSONNEL CARRIERS

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



**Pressurize tire with small amount of air applied intermittently to seat**

**beads. Never exceed the tire manufacturer's recommendation.**

**Protect face and eyes from escaping air when removing valve core.**

**Be sure mounting/demounting machine is anchored to floor.**

**Wear safety equipment when mounting/demounting tires.**

**Follow all instructions and safety warnings provided by the mounting/demounting machine manufacturer.**

## Wheel Installation

With the valve stem to the outside, mount the wheel onto the hub with lug nuts. Finger tighten lug nuts in a 'cross sequence' pattern. (Ref Fig. 29 on page 13) Then, tighten lug nuts to 50 - 85 ft. lbs. (73 - 124 Nm) torque in 20 ft. lbs. (29 Nm) increments following the same 'cross sequence' pattern.

### NOTE

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



**To prevent injury caused by a broken socket, use only sockets designed**

**for impact wrench use. Never use a conventional socket.**

### CAUTION

**Do not tighten lug nuts to more than 85 ft. lbs. (115 Nm) torque.**

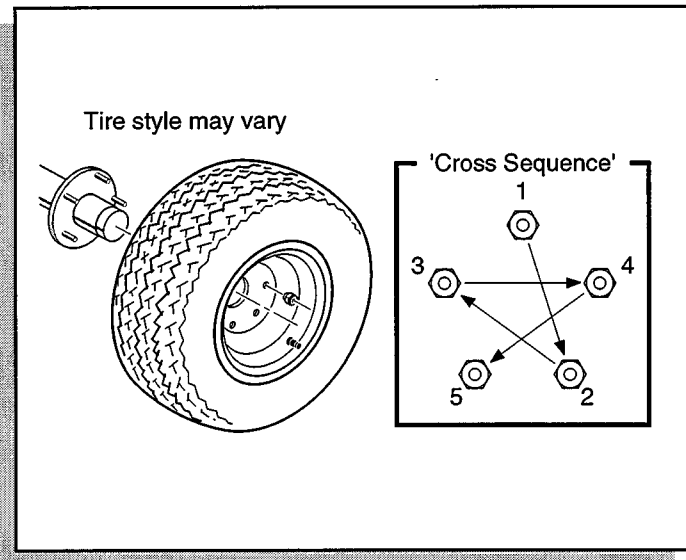


Fig. 29 Wheel Installation

## LIGHT BULB REPLACEMENT

### CAUTION

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

To replace a headlight, marker or turn signal bulb, remove access panel and remove bulb base with bulb from rear of light bar. Replace bulb and reinsert base into rear of light bar.

To replace the taillight bulb, roll the rubber bezel from around the edge of the taillight and remove lens. Replace with new bulb.

## CARE AND CLEANING OF THE VEHICLE

### CAUTION

**To prevent cosmetic damage, do not use any abrasive or volatile solvents to clean plastic parts.**

It is important that proper techniques and cleaning materials be used.

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 is the best method of preserving the painted surfaces.

Do not use hot water, strong soap or harsh chemical detergents.

Rubber parts should be cleaned with non-abrasive household cleaner.

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 could cause corrosion of underbody parts. It is recommended that the underbody be 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 its removal, taking care not to chip or otherwise damage paint.

### NOTE

*If the engine does not start or runs improperly after washing, remove the spark plug wires (by pulling the spark plug boots, never by the wires) and blow them dry with air hose. Reinstall the wires. Remove moisture from ignition coil by blowing across top with air hose.*

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

## VEHICLE CARE PRODUCTS

E-Z-GO has several products, available through a local Distributor, an E-Z-GO Branch, or the E-Z-GO Service Parts Department, to help maintain the vehicle.

- Touch-up paint specially formulated to match vehicle colors for use on both metal and TPE (plastic) bodies. (P/N 28140-G\*\* and 28432-G\*\*)
- Multi-purpose Battery Protectant formulated to form a long-term, flexible, non-tacky, dry coating that will not crack, peel or flake over a wide temperature range. (P/N 75500-G01)
- White Lithium Grease designed to provide lubrication protection in areas where staining or discoloring is a problem, or in areas of extreme temperature ranges. (P/N 75502-G01)
- Penetrant/Lubricant, a 4-in-1 product that penetrates the most stubborn of frozen parts, lubricates leaving a light lubricating film, prevents corrosion by adhering to wet or dry surfaces and displaces moisture, sealing against future moisture return. (P/N 75503-G01)
- Multi-purpose Cleaner and Degreaser that contains natural, environmentally safe solvents. (P/N 75504-G01)
- Multi-purpose Hand Cleaner is an industrial strength cleaner containing no harsh solvents, yet gently lifts grease off hands. May be used with or without water. (P/N 75505-G01)
- Battery Cleaner that promotes easy, non-violent neutralization of battery acids and battery acid crystals. The resulting sodium salts are water soluble and easily washed away. (P/N 75506-G01)
- Biodegradable Cleaner that cleans the toughest dirt and heavy soils by breaking down grease to be easily wiped or rinsed away. (P/N 75507-G01)
- Multi-purpose Value Pack sampler package including 4 ounce (118 ml) aerosol cans of Battery Protector, Penetrant/Lubricant, White Lithium Grease, and Carburetor and Choke Cleaner. (P/N 75508-G01)
- Plexus plastic cleaner and polish removes minor scratches from windshield. (P/N 28433-G\*\*)

## TOP AND WINDSHIELD



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

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

### Cleaning

Clean with lots of water and a clean cloth. Minor scratches may be removed using a commercial plastic polish or Plexus plastic cleaner available from E-Z-GO.

## TRAILERING



**Personal injury to occupants of other highway vehicles may occur if**

**vehicle and contents are not adequately secured to trailer.**

**Do not ride on vehicle being trailered.**

**Remove windshield before trailering. Maximum speed with top is 50 mph (80 kph).**

If the vehicle is to be transported on a trailer at highway speeds, the windshield must be removed and the seat(s) secured. Always check that the vehicle and contents are adequately secured before trailering the vehicle. The rated capacity of the trailer must exceed the weight of the vehicle (see GENERAL SPECIFICATIONS section for vehicle weight) and load. Lock the parking brake and secure the vehicle to the trailer using ratchet tie downs.

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

## WINTER OR PROLONGED STORAGE



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

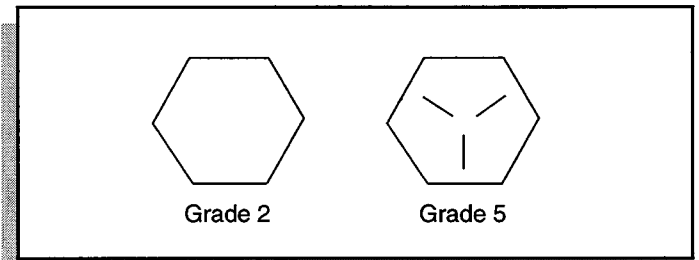
Preparing the engine for winter or a prolonged storage calls for a few simple steps to prevent a build up of varnish and gum in the carburetor and corrosion in the engine.

Raise the vehicle and support on jack stands. (See LIFTING THE VEHICLE for procedure and safety information.) Add fuel stabilizer to the tank in accordance with the manufacturer's recommendations. Disconnect the fuel line from the engine **at the fuel tank**. With area properly ventilated, start the engine and allow to run until the engine stops due to lack of fuel. Drain carburetor bowl using drain screw and re-tighten the drain screw. Remove the air filter and spray a commercial fogging or cylinder oil into the carburetor while operating the starter for 2-3 seconds. Reinstall the air filter and re-attach the fuel line to the tank.

## HARDWARE

Periodically, the vehicle should be inspected for loose fasteners. Fasteners should be tightened in accordance with the Torque Specifications table (Ref Fig. 32 on page 16). Use care when tightening fasteners and refer to the Technician's Repair and Service Manual for specific torque values.

Generally, two grades of hardware are used in the vehicle. Grade 5 hardware can be identified by the three marks on the hexagonal head. Unmarked hardware is Grade 2 (Ref Fig. 30 on page 15).



**Fig. 30 Bolt Grades**

## TORQUE SPECIFICATIONS

<b>ALL TORQUE FIGURES ARE IN FT. LBS. (Nm)</b>										
Unless otherwise noted in text, tighten all hardware in accordance with this chart.										
The table below specifies 'lubricated' torque figures. Fasteners that are plated or lubricated when installed are considered 'wet' and require approximately 80% of the torque required for 'dry' fasteners.										
<b>BOLT SIZE</b>	<b>1/4"</b>	<b>5/16"</b>	<b>3/8"</b>	<b>7/16"</b>	<b>1/2"</b>	<b>9/16"</b>	<b>5/8"</b>	<b>3/4"</b>	<b>7/8"</b>	<b>1"</b>
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)

**Fig. 31 Torque Specifications**

# GASOLINE CARGO AND PERSONNEL CARRIERS

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

## PERIODIC SERVICE SCHEDULE

✓ Check	◆ Clean, Adjust, etc.	▲ Replace
<b>NOTE:</b> Some maintenance items must be serviced more frequently on vehicles used under severe driving conditions		
<b>DAILY</b>		
BODY	◆ Clean body components as required	
SERVICE BRAKE	✓ Check brake performance, smooth operation and adjust if required	
PARKING BRAKE	✓ Check brake performance and adjust if required	
REVERSE WARNING DEVICE	✓ Check operation when direction selector is in reverse	
TIRES	✓ Examine for cuts, excessive wear and pressure (See Specifications)	
WHEELS	✓ Check for bent rims, missing or loose lug nuts	
FUEL GAUGE	✓ Check for proper operation (at fueling), and fuel cap vent is free of dirt	
<b>MONTHLY - 20 HOURS (includes items listed in previous tables &amp; the following)</b>		
BATTERY	◆ Clean battery & terminals with 1/4 cup (60 ml) baking soda to 1 1/2 gallons (6 liters) water solution, rinse with clear water ✓ Check charge condition and all connections	
WIRING	✓ Check all wiring for loose connections and broken/missing insulation	
ACCELERATOR CABLE	✓ Check for smooth movement - DO NOT LUBRICATE CABLE	
CHOKE CABLE	✓ Check for smooth movement and adjustment - DO NOT LUBRICATE CABLE	
CARBURETOR LINKAGE	✓ Check attachment, adjust as required	
DIRECTION SELECTOR	✓ Check attachment, tighten as required	
ENGINE	✓ Check for unusual noise, vibration, acceleration, oil leaks	
STARTER/GENERATOR BELT	✓ Check for tension, wear, cracks	
COOLING FAN	✓ Check for build-up of foreign matter inside blower housing and fins, clean if required	
STEERING ASSEMBLY	✓ Check for abnormal play, tightness of all hardware	
TIE RODS/LINKAGES	✓ Check for excessive play, bent components or loose connections	
REAR AXLE	✓ Check for leakage, add SAE 30 oil as required	
<b>QUARTERLY - 50 HOURS (includes items listed in previous tables &amp; the following)</b>		
FRONT AXLE	✓ Check for damage to axle and loose or missing hardware	
FRONT SHOCK ABSORBERS	✓ Check for oil leakage and loose fasteners	
FRONT SPRINGS	✓ Check for loose hardware, cracks at attachments	
FRONT WHEEL ALIGNMENT	✓ Check for unusual tire wear, align if required	

**Fig. 32 Periodic Service Schedule**



## GASOLINE CARGO AND PERSONNEL CARRIERS

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

PARKING BRAKE	<ul style="list-style-type: none"> <li>✓ Check for bent/binding linkage rod</li> <li>✓ Check for damage or wear</li> <li>◆ Lubricate, use light oil. DO NOT LUBRICATE CABLES</li> </ul>
HYDRAULIC BRAKE FLUID	✓ Check level, add DOT 3 standard automotive fluid if required and check for leakage
REAR SHOCK ABSORBERS	✓ Check for oil leakage, loose mounting hardware
ENGINE ELECTRICAL SYSTEM	✓ Check coil/spark plug wires for cracks/loose connections
FUEL SYSTEM	<ul style="list-style-type: none"> <li>✓ Check for leaks at tank cap, lines, filters, pump, carburetor</li> <li>✓ Check fuel lines for cracks/deterioration</li> </ul>
THROTTLE/GOVERNOR LINKAGE	✓ Check operation and governed speed
<b>SEMI-ANNUAL - 125 HOURS (includes items listed in previous tables &amp; the following)</b>	
DIRECTION SELECTOR	<ul style="list-style-type: none"> <li>✓ Check for wear and smooth movement (lubricate shaft with light oil if required)</li> <li>✓ Check shift cable spring length</li> </ul>
KING PINS	<ul style="list-style-type: none"> <li>✓ Check for excessive play and tightness of retaining nuts</li> <li>◆ Lubricate, use wheel bearing grease</li> </ul>
STEERING ASSEMBLY	◆ Lubricate linkage, use wheel bearing grease
TIE RODS/LINKAGES	◆ Lubricate, use wheel bearing grease
REAR AXLE	✓ Check for unusual noise and mounting hardware
AIR CLEANER	✓ Check filter element, clean/replace as required
<b>ANNUAL - 250-300 HOURS (includes items listed in previous tables &amp; the following)</b>	
FRONT WHEEL BEARINGS	<ul style="list-style-type: none"> <li>◆ Adjust, see Technician's Repair and Service Manual</li> <li>◆ Pack, use multi-purpose grease</li> </ul>
REAR AXLE	<ul style="list-style-type: none"> <li>✓ Check lubricant, if oil seepage is evident, add lubricant (SAE 30 oil) as required</li> <li>▲ Replace lubricant after 500 hours or 5 years</li> </ul>
SERVICE BRAKES	<ul style="list-style-type: none"> <li>◆ Clean and adjust, see Technician's Repair and Service Manual</li> <li>✓ Check brake shoe linings, see Technician's Repair and Service Manual</li> </ul>
ENGINE OIL	▲ Replace with SAE 10W-30 or 10W-40 that meets or exceeds SF, SG, CC oil - DO NOT OVERFILL
FUEL FILTER	✓ Check for dirt buildup
OIL FILTER	◆ Clean in solvent (at oil change), replace 'O' ring if required
SPARK PLUGS	▲ Gap .028 - .030 in. (.71 - .76 mm) (replace if required)
MUFFLER/EXHAUST	✓ Check mounting hardware; check for leaks at head and muffler gaskets
VALVES	✓ Check cold at cam (intake/exhaust), see Technician's Repair and Service Manual
TIMING BELT	✓ Check tension, and for signs of wear/damage, see Technician's Repair and Service Manual

**Fig. 32 Periodic Service Schedule**





# **GENERAL SPECIFICATIONS**

# GENERAL SPECIFICATIONS

## SHUTTLE 952G 2 Passenger Personnel/Cargo Carrier

WEIGHT (without fuel) .....	1,005 lbs. (456 kg)
HEIGHT (at top of sun top) .....	76 in. (193 cm)
TIRES.....	5.70 x 8 (6 ply rated)
TIRE PRESSURE .....	50 psi (344 kPa)
LOAD CAPACITY (including operator, passenger, cargo and accessories) .....	1,600 lbs. (726 kg)
CHASSIS .....	Welded high yield strength tubular steel with Durashield™ powder coat paint
BODY & FINISH .....	Champagne molded fiberglass reinforced plastic
BODY PROTECTION.....	Wrap around bumper and protective side molding
SAFETY .....	Removable switch key, electric horn, brake lights, handgrip and hip restraints, reverse warning indicator, "deadman" accelerator control, manual F and R switch with "neutral"
LIGHTING PACKAGE .....	Single light bar assembly, taillights and brake lights
FEATURES .....	Low oil pressure indicator light and analog fuel level gauge
STEERING WHEEL .....	Dual handgrips and pencil holder integrated in clipboard
BRAKES.....	Dual rear wheel, hydraulic drum brakes. Hand operated park brake
CARGO DECK.....	Hinged plywood for access to drive train and rear storage area
FRONT SUSPENSION .....	Multiple leaf springs with hydraulic shock absorbers
REAR SUSPENSION.....	Multiple leaf springs with hydraulic shock absorbers
STEERING.....	Self-compensating double reduction rack and pinion
SEATING.....	One molded one piece seat. Seating for two occupants. Seat tilts for access to steering linkage
SPEED .....	15 mph (24 kph)
ELECTRICAL SYSTEM .....	External starter/generator, 12 volt maintenance free battery, 360 CCA, 51 minute reserve
DRIVE TRAIN .....	Automatic, continuously variable transmission (CVT), forward and reverse
ENGINE .....	11 hp (8.2 kw) rated, 4 cycle, 350 cc, twin cylinder, air cooled
VALVE TRAIN.....	Overhead valve, overhead cam
LUBRICATION .....	Pressurized oil system, washable permanent filter, wet sump
BALANCER.....	Internal counter rotating balance shaft
IGNITION .....	Solid state with crank trigger and electronic timing advance
CARBURETOR .....	Fixed jet float bowl with remote pulse fuel pump
AIR CLEANER .....	Replaceable dry cartridge
TRANSAXLE.....	High efficiency differential with helical gears, 13.32:1 ratio, ground speed governor
FUEL SYSTEM .....	6.5 gal. (25 liters) tank with instrument panel mounted fuel gauge

\* Specifications subject to change without notice.

# GENERAL SPECIFICATIONS

## SHUTTLE 954G 5 Passenger Personnel/Cargo Carrier

WEIGHT (without fuel) .....	1,005 lbs. (456 kg)
HEIGHT (at top of sun top) .....	76 in. (193 cm)
TIRES .....	5.70 x 8 (6 ply rated)
TIRE PRESSURE .....	50 psi (344 kPa)
LOAD CAPACITY (including operator, passenger, cargo and accessories) .....	1,600 lbs. (726 kg)
CHASSIS .....	Welded high yield strength tubular steel with Durashield™ powder coat paint
BODY & FINISH .....	Champagne molded fiberglass reinforced plastic
BODY PROTECTION .....	Wrap around bumper and protective side molding
SAFETY .....	Removable switch key, electric horn, brake lights, handgrip and hip restraints, reverse warning indicator, "deadman" accelerator control, manual F and R switch with "neutral"
LIGHTING PACKAGE .....	Single light bar assembly, taillights and brake lights
FEATURES .....	Low oil pressure indicator light and analog fuel level gauge
STEERING WHEEL .....	Dual handgrips and pencil holder integrated in clipboard
BRAKES .....	Dual rear wheel, hydraulic drum brakes. Hand operated park brake
CARGO DECK .....	Hinged plywood for access to drive train and rear storage area
FRONT SUSPENSION .....	Multiple leaf springs with hydraulic shock absorbers
REAR SUSPENSION .....	Multiple leaf springs with hydraulic shock absorbers
STEERING .....	Self-compensating double reduction rack and pinion
SEATING .....	Two molded one piece seats. Seating for five occupants. Seats tilt for access to steering linkage and drive train
SPEED .....	15 mph (24 kph)
ELECTRICAL SYSTEM .....	External starter/generator, 12 volt maintenance free battery, 360 CCA, 51 minute reserve
DRIVE TRAIN .....	Automatic, continuously variable transmission (CVT), forward and reverse
ENGINE .....	11 hp (8.2 kw) rated, 4 cycle, 350 cc, twin cylinder, air cooled
VALVE TRAIN .....	Overhead valve, overhead cam
LUBRICATION .....	Pressurized oil system, washable permanent filter, wet sump
BALANCER .....	Internal counter rotating balance shaft
IGNITION .....	Solid state with crank trigger and electronic timing advance
CARBURETOR .....	Fixed jet float bowl with remote pulse fuel pump
AIR CLEANER .....	Replaceable dry cartridge
TRANSAXLE .....	High efficiency differential with helical gears, 13.32:1 ratio, ground speed governor
FUEL SYSTEM .....	6.5 gal. (25 liters) tank with instrument panel mounted fuel gauge

\* Specifications subject to change without notice.



# GENERAL SPECIFICATIONS

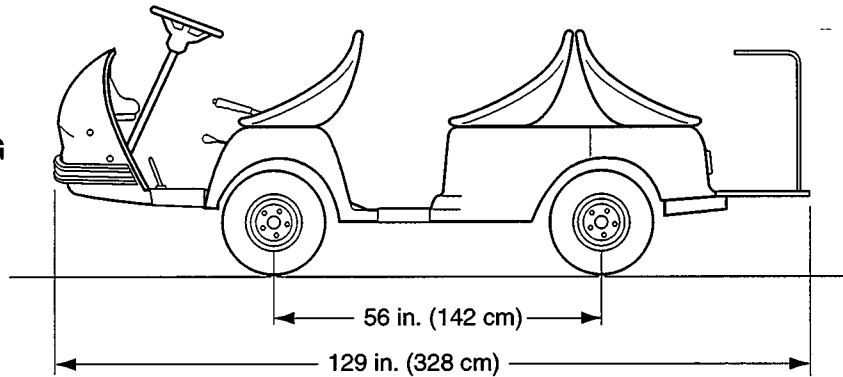
## SHUTTLE 956G 8 Passenger Personnel Carrier

WEIGHT (without fuel) .....	1,005 lbs. (456 kg)
HEIGHT (at top of sun top) .....	76 in. (193 cm)
TIRES.....	5.70 x 8 (6 ply rated)
TIRE PRESSURE .....	50 psi (344 kPa)
LOAD CAPACITY (including operator, passenger, cargo and accessories) .....	1,600 lbs. (726 kg)
CHASSIS .....	Welded high yield strength tubular steel with Durashield™ powder coat paint
BODY & FINISH .....	Champagne molded fiberglass reinforced plastic
BODY PROTECTION.....	Wrap around bumper and protective side molding
SAFETY .....	Removable switch key, electric horn, brake lights, handgrip and hip restraints, reverse warning indicator, "deadman" accelerator control, manual F and R switch with "neutral"
LIGHTING PACKAGE .....	Single light bar assembly, tail lights and brake lights
FEATURES .....	Low oil pressure indicator light and analog fuel level gauge
STEERING WHEEL .....	Dual handgrips and pencil holder integrated in clipboard
BRAKES.....	Dual rear wheel, hydraulic drum brakes. Hand operated park brake
FRONT SUSPENSION .....	Multiple leaf springs with hydraulic shock absorbers
REAR SUSPENSION.....	Multiple leaf springs with hydraulic shock absorbers
STEERING.....	Self-compensating double reduction rack and pinion
SEATING.....	Three molded one piece seats. Seating for eight occupants. Seat tilts for access to steering linkage
SPEED .....	15 mph (24 kph)
ELECTRICAL SYSTEM .....	External starter/generator, 12 volt maintenance free battery, 360 CCA, 51 minute reserve
DRIVE TRAIN .....	Automatic, continuously variable transmission (CVT), forward and reverse
ENGINE .....	11 hp (8.2 kw) rated, 4 cycle, 350 cc, twin cylinder, air cooled
VALVE TRAIN.....	Overhead valve, overhead cam
LUBRICATION .....	Pressurized oil system, washable permanent filter, wet sump
BALANCER.....	Internal counter rotating balance shaft
IGNITION .....	Solid state with crank trigger and electronic timing advance
CARBURETOR .....	Fixed jet float bowl with remote pulse fuel pump
AIR CLEANER .....	Replaceable dry cartridge
TRANSAXLE.....	High efficiency differential with helical gears, 13.32:1 ratio, ground speed governor
FUEL SYSTEM .....	6.5 gal. (25 liters) tank with instrument panel mounted fuel gauge

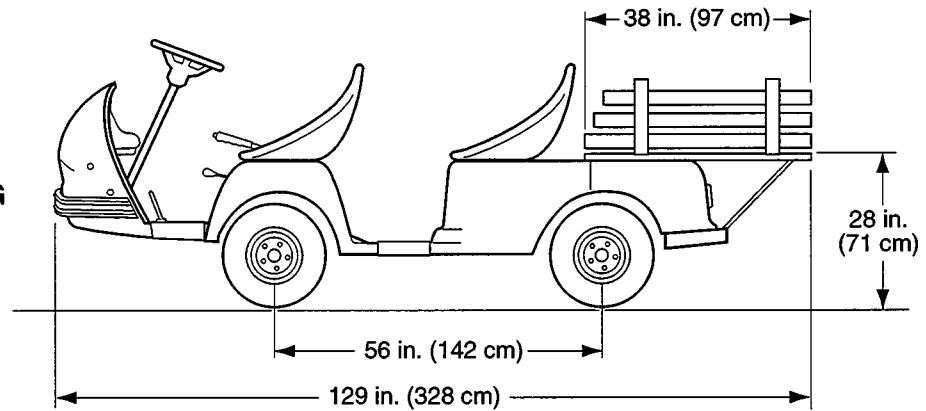
\* Specifications subject to change without notice.

# GENERAL SPECIFICATIONS

SHUTTLE 956G



SHUTTLE 954G



SHUTTLE 952G

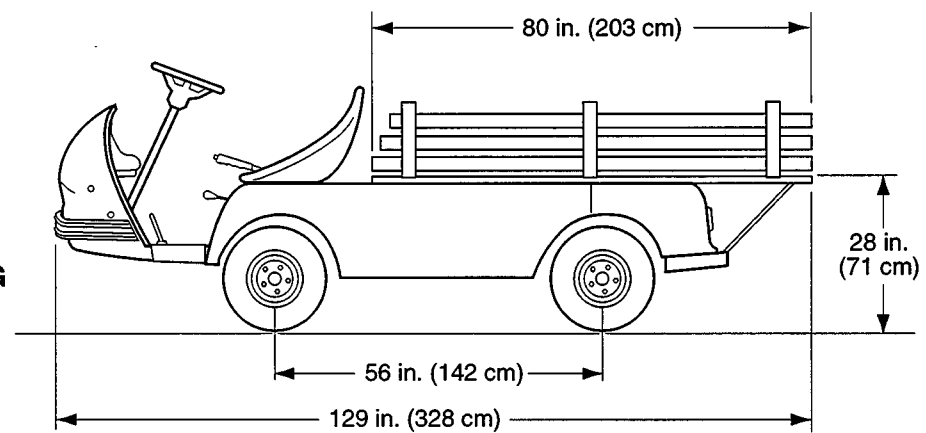
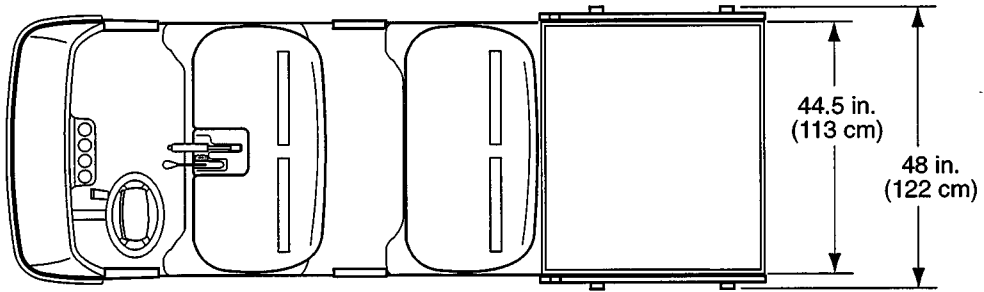
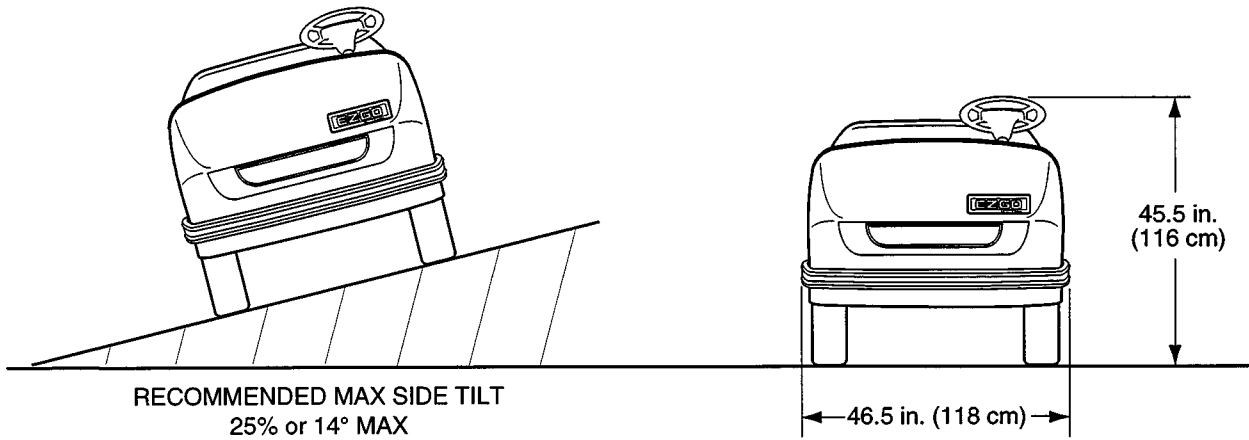


Fig. 33 Vehicle Dimensions

# GENERAL SPECIFICATIONS



NOTE: SHUTTLE 954G shown - same for SHUTTLE 952G



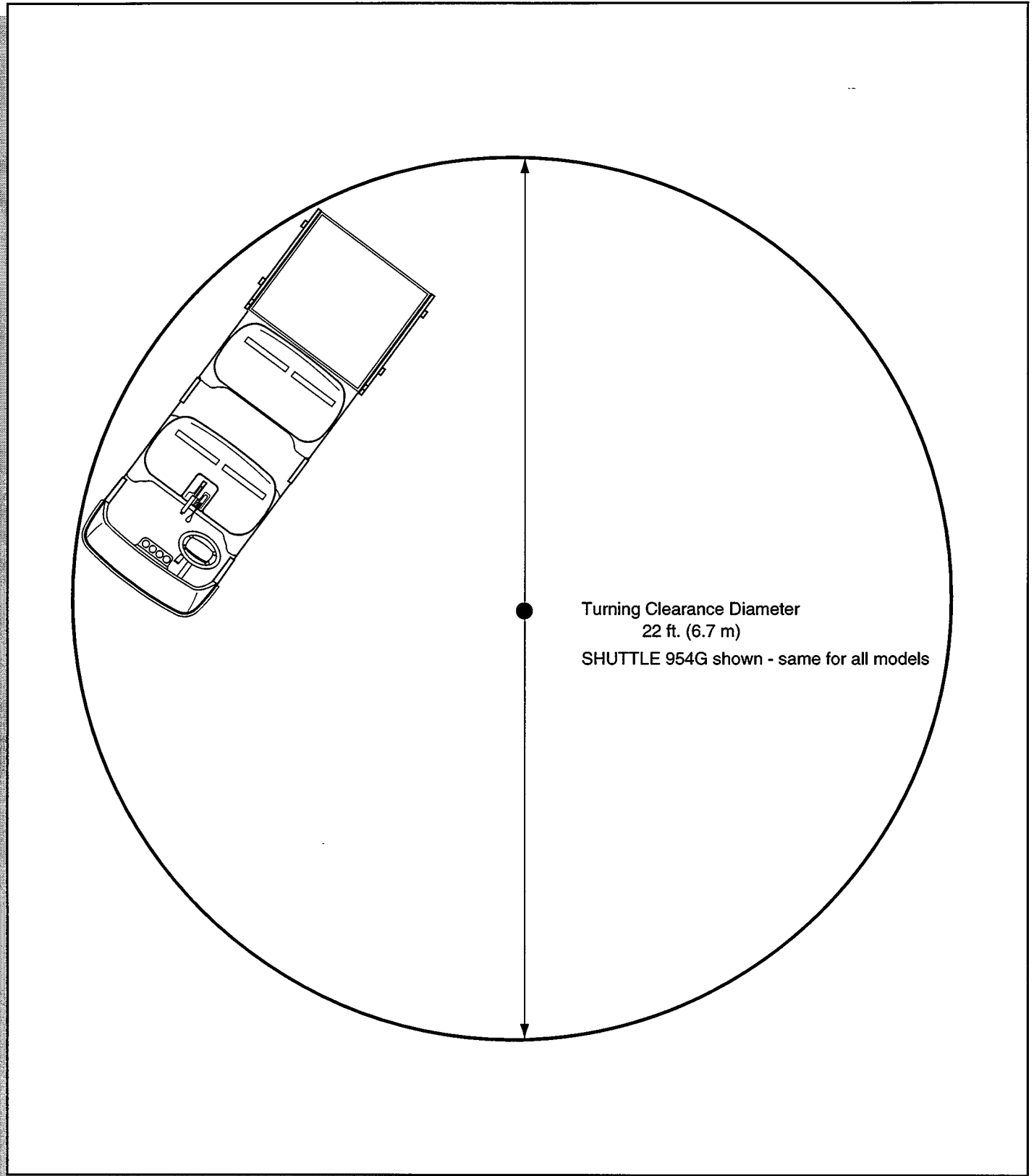
RECOMMENDED MAX SIDE TILT  
25% or 14° MAX

RECOMMENDED MAX RAMP GRADE  
25% or 14° MAX

NOTE: SHUTTLE 954G shown - same for all models

**Fig. 34 Vehicle Dimensions and Incline Specifications**

## GENERAL SPECIFICATIONS



**Fig. 35 Vehicle Turning Clearance Diameter**





# LIMITED WARRANTY

# LIMITED WARRANTY

# LIMITED WARRANTY - FEDERAL

**EMISSION COMPONENT DEFECT WARRANTY COVERAGE** - This emission warranty is applicable in all states, except the State of California.

Fuji Heavy Industries Ltd. (herein "FUJI") and E-Z-GO Division OF TEXTRON, INC. Augusta, Georgia, (herein "E-Z-GO") warrant to the initial retail purchaser and each subsequent owner, that specialty vehicle engine (herein "engine") was designed, built, and equipped to conform at the time of initial sale to all applicable regulations of the U.S. Environmental Protection Agency (EPA), and that the engine is free of defects in materials and workmanship which would cause this engine to fail to conform with EPA regulations during its warranty period.

For the components listed under PARTS COVERED, the dealer or service center authorized by E-Z-GO will, at no cost to you, make the necessary diagnosis, repair, or replacement necessary to ensure that the engine complies with applicable U.S. EPA regulations.

## EMISSION COMPONENT DEFECT WARRANTY PERIOD

The warranty period for this engine begins on the date of sale to the initial purchaser and continues for a period of 2 years.

## PARTS COVERED

Listed below are the parts covered by the Emission Component Defect Warranty. Some of the parts listed below may require scheduled maintenance and are warranted up to the first scheduled replacement point for that part.

- 1) Fuel Metering System
  - (i) Carburetor and internal parts
  - (ii) Choke System
  - (iii) Fuel filter (annual maintenance item)
- 2) Air Induction System
  - (i) Air filter element (annual maintenance item)
- 3) Ignition System
  - (i) Spark plug (annual maintenance item)
  - (ii) Ignition Coil
  - (iii) Ignitor Complete
  - (iv) Pulser Coil
- 4) Exhaust Manifold
- 5) Miscellaneous Items Used in Above Systems
  - (i) Fuel Hoses, clamps and sealing gaskets

## OBTAINING WARRANTY SERVICE

To obtain warranty service, take your engine to the nearest authorized E-Z-GO distributor or dealer. Bring your sales receipts indicating date of purchase for this engine. The dealer or service center authorized by E-Z-GO will perform the necessary repairs or adjustments within a reasonable amount of time and furnish you with a copy of the repair order. All parts and accessories replaced under this warranty become the property of E-Z-GO.

## WHAT IS NOT COVERED

- Conditions resulting from tampering, misuse, improper adjustment (unless they were made by the dealer or service center authorized by E-Z-GO during a warranty repair), alteration, accident, failure to use the recommended fuel and oil, or not performing required maintenance services.
- The replacement parts used for required maintenance services.
- Consequential damages such as loss of time, inconvenience, loss of use of the engine or equipment, etc.
- Diagnosis and inspection charges that do not result in warranty-eligible service being performed.
- Any non-authorized replacement part, or malfunction of authorized parts due to use of non-authorized parts.

## OWNER'S WARRANTY RESPONSIBILITIES:

As the engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. E-Z-GO recommends that you retain all receipts covering maintenance on your engine, but E-Z-GO cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the engine owner, you should, however, be aware that E-Z-GO may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your engine to a dealer, distributor or warranty station authorized by E-Z-GO when a problem exists.

If you have any questions regarding your warranty rights and responsibilities, you should contact the E-Z-GO Warranty Department at 1-800-241-5855 for the information.

## LIMITED WARRANTY - FEDERAL

### THINGS YOU SHOULD KNOW ABOUT THE EMISSION CONTROL SYSTEM WARRANTY

#### MAINTENANCE AND REPAIRS

You are responsible for the proper use and maintenance of the engine. You should keep all receipts and maintenance records covering the performance of maintenance records should be transferred to each subsequent owner of the engine. E-Z-GO reserves the rights to deny warranty coverage if the engine has not been properly maintained. Warranty claims will not be denied, however, solely because of the lack of required maintenance or failure to keep maintenance records.

MAINTENANCE, REPLACEMENT OR REPAIR OF EMISSION CONTROL DEVICES AND SYSTEMS MAY BE PERFORMED BY ANY REPAIR ESTABLISHMENT OF INDIVIDUAL; HOWEVER, WARRANTY REPAIRS MUST BE PERFORMED BY A DEALER OR SERVICE CENTER AUTHORIZED BY E-Z-GO. THE USE OF PARTS THAT ARE NOT EQUIVALENT IN PERFORMANCE AND DURABILITY TO AUTHORIZED PARTS MAY IMPAIR THE EFFECTIVENESS OF THE EMISSION CONTROL SYSTEM AND MAY HAVE A BEARING ON THE OUTCOME OF A WARRANTY CLAIM.

If other than the parts authorized by E-Z-GO are used for maintenance replacements or for the repair of components affecting emission control, you should assure yourself that such parts are warranted by their manufacturer to be equivalent to the parts authorized by E-Z-GO in their performance and durability.

#### HOW TO MAKE A CLAIM

All repairs qualifying under this limited warranty must be performed by a dealer or service center authorized by E-Z-GO. In the event that any emission-related parts is found to be defective during the warranty period, you shall notify E-Z-GO Warranty Department at 1-800-241-5855 and you will be given the appropriate warranty service facilities where the warranty repair can be performed.



# LIMITED WARRANTY - CALIFORNIA (1999)

## CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and Fuji Heavy Industries Ltd. (herein "FUJI") are pleased to explain the emission control system warranty on your 1995 and later specialty vehicle engine (herein "engine"). In California, the engine must be designed, built and equipped to meet the State's stringent anti-smog standards. FUJI must warrant the emission control system on your engine for the period of time described below, provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the carburetor and the ignition system. Also included may be hoses, connectors and other emission-related assemblies.

Where a warrantable condition exists, FUJI will repair your engine at no cost to you including diagnosis, parts and labor.

### MANUFACTURER'S WARRANTY COVERAGE:

The 1995 and later engines are warranted for two (2) years. If any emission related part on your engine is defective, the part will be repaired or replaced by FUJI.

### OWNER'S WARRANTY RESPONSIBILITIES:

As the engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. FUJI recommends that you retain all receipts covering maintenance on your engine, but FUJI cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the engine owner, you should, however, be aware that FUJI may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your engine to a dealer, distributor or warranty station authorized by E-Z-GO DIVISION OF TEXTRON, INC. Augusta, Georgia, (herein "E-Z-GO") to which FUJI supplies the engine as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact the E-Z-GO Warranty Department at 1-800-241-5855.

## LIMITED WARRANTY on Emission Control Systems - California Only -

FUJI, Tokyo, Japan, warrants to the owner of the 1995 and later engine that the engine (1) has been designed, built and equipped so as to conform at the time of manufacture with the applicable regulations of the California Air Resources Board, and (2) is free from defects in materials and workmanship which could cause it to fail to conform with those regulations as may be applicable in the terms and conditions stated below.

### A. WARRANTY COMMENCEMENT DATE

The warranty period begins on the date the engine is delivered to a first retail purchaser.

### B. LENGTH OF COVERAGE

FUJI warrants to a first retail purchaser and each subsequent purchaser that the engine is free from defects in materials and workmanship which could cause the failure of a warranted emission-related part for a period of two (2) years after the date of delivery to the first retail purchaser.

### C. WHAT IS COVERED:

#### 1. REPAIR OR REPLACEMENT PARTS

Repairs and replacement of any warranted part will be performed at no charge to you by an authorized dealer, distributor or a warranty station. You may contact the E-Z-GO Warranty Department at 1-800-241-5855 to get the nearest appropriate location where your warranty repairs are performed.

#### 2. WARRANTY PERIOD

This warranty continues for a period of two (2) years and shall apply only to the repair, replacement or adjustment of the component parts which are not scheduled for replacement as required maintenance. Further, component parts which are scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted for the warranty period. Any warranted

## LIMITED WARRANTY - CALIFORNIA (1999)

part which is scheduled for replacement as required maintenance shall be warranted for the period of time up to the first scheduled replacement point for that part.

### 3. DIAGNOSIS

You shall not be charged for diagnostic labor which leads to the determination that a warranted part is defective, if the diagnostic work is performed at an authorized dealer, distributor or warranty station.

### 4. CONSEQUENTIAL DAMAGES

If a warranted part failed causing damages to other engine components, consult a warranty station.

## D. WHAT IS NOT COVERED

1. This limited warranty does not cover any part which malfunctions, fails or is damaged due to failure to follow the maintenance and operating instructions set forth in the 1995 and later Owner's Manual including:

- (1) improper or inadequate scheduled engine inspection and maintenance
- (2) improper or inadequate maintenance of any warranted parts
- (3) improper installation, adjustment or repair of the engine or of any warranted part unless performed by an authorized dealer
- (4) failure to follow recommendations on fuel use contained in the 1995 and later Owner's Manual
- (5) repairs performed outside of the authorized warranty service facilities
- (6) use of parts which are not authorized by FUJI.

### 2. Add-on or modified parts

This warranty does not cover any part which malfunctions, fails or is damaged due to alterations by changing, adding to or removing parts from the engine.

### 3. Expenses incurred by processing warranty claims

FUJI, any authorized dealer, distributors and warranty station shall not be liable for any loss of use of the engine, for any alternative usage, for any damage to goods, loss of time or inconvenience.

## E. HOW TO FILE A CLAIM

All repairs qualifying under this Limited Warranty must be performed by a dealer who sold you the engine or distributors or warranty stations authorized by E-Z-GO. In the event that any emission-related part is found to be defective during the warranty period, you should notify E-Z-GO Warranty Department at 1-800-241-5855 and you will be given the appropriate warranty service facilities where the warranty repair is performed.

## F. WHERE TO GET WARRANTY SERVICE

It is recommended that warranty service be performed by the authorized dealer who sold you the engine, although warranty service will be performed by any authorized dealers, distributors and warranty stations anywhere in the United States. When warranty repair is needed, the engine must be brought to an authorized dealer, distributorship or warranty station's place of business during normal business hours. In all cases, a reasonable time, not to exceed 30 days, must be allowed for the warranty repair to be completed after the engine is received by the authorized dealer, distributor or service station.

## G. MAINTENANCE, REPLACEMENT AND REPAIR OF EMISSION-RELATED PARTS

Only warranted engine replacement parts approved by FUJI should be used in the performance of any warranty maintenance or repairs on emission-related parts. If other than authorized parts are used for maintenance, replacement or repair of components affecting emission control, you should assure yourself that such parts are warranted by their manufacturer to be equivalent to authorized parts in performance and durability. FUJI, however, assumes no liability under this warranty with respect to parts other than authorized parts. The use of non-authorized replacement parts does not invalidate the warranty on other components unless the non-authorized parts cause damage to warranted parts.

## H. PARTS COVERED UNDER THE CALIFORNIA EMISSIONS WARRANTY

- (1) Fuel Metering System
  - (i) Carburetor and internal parts
  - (ii) Choke System
  - (iii) Fuel filter (annual maintenance item)
- (2) Air Induction System
  - (i) Air filter element (annual maintenance item)
- (3) Ignition System
  - (i) Spark plug (annual maintenance item)
  - (ii) Ignition Coil
  - (iii) Ignitor Complete
  - (iv) Pulser Coil



## LIMITED WARRANTY - CALIFORNIA (1999)

- (4) Exhaust Manifold
- (5) Miscellaneous Items Used in Above Systems
  - (i) Fuel hoses, clamps and sealing gaskets

### I. MAINTENANCE STATEMENTS

It is your responsibility to have all scheduled inspection and maintenance services performed at the times recommended in the 1995 and later Owner's Manual and to retain proof that inspection and maintenance services are performed at the times when recommended. FUJI will not deny a warranty claim solely because you have no record of maintenance; however, FUJI may deny a warranty claim if your failure to perform required maintenance resulted in the failure of warranted part. The proof which you maintain should be given to each subsequent owner of the engine. You are responsible for performing the scheduled maintenance described below based on the procedures specified in the 1995 and later Owner's Manual. The scheduled maintenance below is based on the normal engine operating schedule.

PROCEDURE	INTERVAL
a) Check for sealing of fuel cap and proper operation of fuel gauge (at each fueling). Check that fuel cap vent is free of dirt.	WEEKLY
b) Check engine for unusual noise, vibration acceleration.	MONTH (20 HOURS)
c) Check engine electrical system for coil/spark plug wire for cracks/loose connections.	3 MONTH (50 HOURS)
d) Check fuel system for leaks at tank cap, lines, filters, pump, carburetor. Check lines for cracks/deterioration.	3 MONTH (50 HOURS)
e) Check air cleaner filter element.	SEMIANNUAL (125 HOURS)
f) Replace engine oil, DO NOT OVERFILL. g) SAE 10W-30/10W-40 SF,SG,CC oil.	SEMIANNUAL (125-150 HOURS)
h) Clean oil filter in solvent (at oil change). Replace O-rings if required.	SEMIANNUAL (125-150 HOURS)
i) Replace air cleaner filter element if required.	ANNUAL (250-300 HOURS)
j) Check fuel filter for dirt build up. (Replace as required)	ANNUAL (250-300 HOURS)
k) Check the spark plugs for gap 0.030. (Replace if required)	ANNUAL (250-300 HOURS)
l) Check timing belt tension, signs of wear/damage. Replace only if worn or damaged.	ANNUAL (250-300 HOURS)

# LIMITED WARRANTY - CALIFORNIA (2000)

## CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and Fuji Heavy Industries Ltd. (herein "FUJI") are pleased to explain the emission control system warranty on your 2000 and later small off-road engine (herein "engine"). In California, the engine must be designed, built and equipped to meet the State's stringent anti-smog standards. FUJI must warrant the emission control system on your engine for the period of time described below, provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the carburetor and the ignition system. Also included may be hoses, connectors and other emission-related assemblies.

Where a warrantable condition exists, FUJI will repair your engine at no cost to you including diagnosis, parts and labor.

### MANUFACTURER'S WARRANTY COVERAGE:

The 2000 and later engines are warranted for two (2) years. If any emission related part on your engine is defective, the part will be repaired or replaced by FUJI.

### OWNER'S WARRANTY RESPONSIBILITIES:

As the engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. FUJI recommends that you retain all receipts covering maintenance on your engine, but FUJI cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the engine owner, you should, however, be aware that FUJI may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your engine to a dealer, distributor or warranty station authorized by E-Z-GO DIVISION OF TEXTRON, INC. Augusta, Georgia, (herein "E-Z-GO") to which FUJI supplies the engine as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact the E-Z-GO Warranty Department at 1-800-241-5855.

## LIMITED WARRANTY on Emission Control Systems - California Only -

FUJI, Tokyo, Japan, warrants to the owner of the 2000 and later engine that the engine (1) has been designed, built and equipped so as to conform at the time of manufacture with the applicable regulations of the California Air Resources Board, and (2) is free from defects in materials and workmanship which could cause it to fail to conform with those regulations as may be applicable in the terms and conditions stated below.

### A. WARRANTY COMMENCEMENT DATE

The warranty period begins on the date the engine is delivered to a first retail purchaser.

### B. LENGTH OF COVERAGE

FUJI warrants to a first retail purchaser and each subsequent purchaser that the engine is free from defects in materials and workmanship which could cause the failure of a warranted emission-related part for a period of two (2) years after the date of delivery to the first retail purchaser.

### C. WHAT IS COVERED:

#### 1. REPAIR OR REPLACEMENT PARTS

Repairs and replacement of any warranted part will be performed at no charge to you by an authorized dealer, distributor or a warranty station. You may contact the E-Z-GO Warranty Department at 1-800-241-5855 to get the nearest appropriate location where your warranty repairs are performed.

#### 2. WARRANTY PERIOD

This warranty continues for a period of two (2) years and shall apply only to the repair, replacement or adjustment of the component parts which are not scheduled for replacement as required maintenance. Further, component parts which are scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted for the warranty period. Any warranted



## LIMITED WARRANTY - CALIFORNIA (2000)

part which is scheduled for replacement as required maintenance shall be warranted for the period of time up to the first scheduled replacement point for that part.

### 3. DIAGNOSIS

You shall not be charged for diagnostic labor which leads to the determination that a warranted part is defective, if the diagnostic work is performed at an authorized dealer, distributor or warranty station.

### 4. CONSEQUENTIAL DAMAGES

If a warranted part failed causing damages to other engine components, consult a warranty station.

## D. WHAT IS NOT COVERED

1. This limited warranty does not cover any part which malfunctions, fails or is damaged due to failure to follow the maintenance and operating instructions set forth in the 2000 and later Owner's Manual including:

- (1) improper or inadequate scheduled engine inspection and maintenance
- (2) improper or inadequate maintenance of any warranted parts
- (3) improper installation, adjustment or repair of the engine or of any warranted part unless performed by an authorized dealer
- (4) failure to follow recommendations on fuel use contained in the 2000 and later Owner's Manual
- (5) repairs performed outside of the authorized warranty service facilities
- (6) use of parts which are not authorized by FUJI.

### 2. Add-on or modified parts

This warranty does not cover any part which malfunctions, fails or is damaged due to alterations by changing, adding to or removing parts from the engine.

### 3. Expenses incurred by processing warranty claims

FUJI, any authorized dealer, distributors and warranty station shall not be liable for any loss of use of the engine, for any alternative usage, for any damage to goods, loss of time or inconvenience.

## E. HOW TO FILE A CLAIM

All repairs qualifying under this Limited Warranty must be performed by a dealer who sold you the engine or distributors or warranty stations authorized by E-Z-GO. In the event that any emission-related part is found to be defective during the warranty period, you should notify E-Z-GO Warranty Department at 1-800-241-5855 and you will be given the appropriate warranty service facilities where the warranty repair is performed.

## F. WHERE TO GET WARRANTY SERVICE

It is recommended that warranty service be performed by the authorized dealer who sold you the engine, although warranty service will be performed by any authorized dealers, distributors and warranty stations anywhere in the United States. When warranty repair is needed, the engine must be brought to an authorized dealer, distributorship or warranty station's place of business during normal business hours. In all cases, a reasonable time, not to exceed 30 days, must be allowed for the warranty repair to be completed after the engine is received by the authorized dealer, distributor or service station.

## G. MAINTENANCE, REPLACEMENT AND REPAIR OF EMISSION-RELATED PARTS

Only warranted engine replacement parts approved by FUJI should be used in the performance of any warranty maintenance or repairs on emission-related parts. If other than authorized parts are used for maintenance, replacement or repair of components affecting emission control, you should assure yourself that such parts are warranted by their manufacturer to be equivalent to authorized parts in performance and durability. FUJI, however, assumes no liability under this warranty with respect to parts other than authorized parts. The use of non-authorized replacement parts does not invalidate the warranty on other components unless the non-authorized parts cause damage to warranted parts.

## H. PARTS COVERED UNDER THE CALIFORNIA EMISSIONS WARRANTY

- (1) Fuel Metering System
  - (i) Carburetor and internal parts
  - (ii) Choke System
  - (iii) Fuel filter (annual maintenance item)
- (2) Air Induction System
  - (i) Air filter element (annual maintenance item)
- (3) Ignition System
  - (i) Spark plug (annual maintenance item)
  - (ii) Ignition Coil
  - (iii) Ignitor Complete
  - (iv) Pulser Coil



## LIMITED WARRANTY - CALIFORNIA (2000)

- (4) Exhaust Manifold
- (5) Miscellaneous Items Used in Above Systems
  - (i) Fuel hoses, clamps and sealing gaskets

### I. MAINTENANCE STATEMENTS

It is your responsibility to have all scheduled inspection and maintenance services performed at the times recommended in the 2000 and later Owner's Manual and to retain proof that inspection and maintenance services are performed at the times when recommended. FUJI will not deny a warranty claim solely because you have no record of maintenance; however, FUJI may deny a warranty claim if your failure to perform required maintenance resulted in the failure of warranted part. The proof which you maintain should be given to each subsequent owner of the engine. You are responsible for performing the scheduled maintenance described in the Periodic Service Schedule of this manual. The scheduled maintenance is based on the normal engine operating schedule.



**NOTE**

Read and understand the following warnings before attempting to operate the vehicle:



**To prevent personal injury or death, observe the following:**

**When vehicle is to be left unattended, engage parking brake, move direction selector to 'F' (forward) position, 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 parking 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.**

**NOTE**

Read and understand 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.



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

**Be sure that 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 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.**

**Engine exhaust gas (carbon monoxide) is deadly. Carbon monoxide is an odorless, colorless gas that is formed as a natural part of incomplete combustion of hydrocarbon fuels. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal.**

**The following are symptoms of carbon monoxide inhalation:**

- Dizziness
- Vomiting
- Intense Headache
- Muscular Twitching
- Weakness and Sleepiness
- Throbbing in Temples

**If any of these symptoms are experienced, get fresh air immediately. Never work around or operate a vehicle in an environment that does not ventilate exhaust gases from the area.**



a **TEXTRON** Company

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