CUSHMAN™

Owner's Guide

ELECTRIC POWERED VEHICLE



628570

ISSUED OCTOBER 2012 **REVISED FEBRUARY 2013**

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

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CUSHMAN

MODEL: STOCK CHASER
TYPE: 3 WHEEL ELECTRIC POWERED PARTS PICKER
MODEL YEAR: 2013
Part No:. 628521



PRODUCT SPECIFICATION

CONFIGURATION HIGHLIGHTS

Speed Control: Solid State 275 amp controller. Potentiometer throttle sensor

- Dash mounted direction selector switch (Forward-Neutral-Reverse)
- Four, Six Volt Deep Cycle

Battery Charger: 24 Volt On-Board. Fully line compensating. Underwriters Laboratories (U.L.) Recognized, and CE Marked

- Input: 100 – 240 Volt, 50/60 Hz, 12/6A
- Output: 24 Volt, 25A, 20A@100V

Motor: 24 Volt DC series wound, brazed armature, solid copper armature. 8.94 hp (6.67 kW) @ 1490 rpm
Drive Train: Direct motor shaft connected to transaxle pinion shaft
Electrical System: 24 Volt DC, four, 6 volt deep cycle batteries (115 minute minimum, 225 amp-hour @ 20 hr. discharge rate)
Transaxle: Differential with helical gears
Brakes: Dual rear wheel mechanical drum brakes. Automatic park brake
Convenience: 4 & 6 rung ladders available
Towing Capacity: Normal Draw Bar Pull 60 lb (27.2 kg). Maximum Draw Bar Pull 715 lb (324 kg)

PRODUCT OVERVIEW

Dimensions	
Overall Length	88.4 in (225 cm)
Overall Width	29.5 in (75 cm)
Overall Height (No Ladder)	48.0 in (122 cm)
Overall Height (4 Step Ladder)	78.0 in (198 cm)
Overall Height (6 Step Ladder)	97.0 in (246 cm)
Wheel Base	48.3 in (123 cm)
Front Wheel Track	N/A
Rear Wheel Track	24.75 in (63 cm)
Gnd Clearance @ Differential	4.0 in (10 cm)
Cargo Deck Width	29.0 in (74 cm)
Cargo Deck Length	48.0 in (122 cm)
Cargo Deck Material	Plywood

Vehicle Power	
Power Source	24 Volts DC
Motor Type	Series Wound
Max. Horsepower (kW)	8.94 hp (6.67 kW) @ 1490 rpm
Electrical System	24 Volt
Batteries (Qty, Type)	Four, 6 Volt Deep Cycle
Key or Pedal Start	Pedal Start
Battery Charger	24 V, 100-240 VAC On-Board, UL & CE
Speed Controller	Solid State 275 Amp Rated
Drive Train	Motor Shaft Direct Drive
Transaxle	Differential with helical gears
Gear Selection	Dash Mounted Forward-Neutral-Reverse
Rear Axle Ratio	14.78:1

Performance	
Capacity	1 Person (Standing)
Dry Weight	522.0 lb (237 kg) (Without Batteries)
Curb Weight	810.0 lb (367 kg)
Cargo Deck Load Capacity	750.0 lb (340 kg)
Vehicle load capacity	1000.0 lb (450 kg)
Outside Clearance Circle	12.4 ft (3.8 m)
Intersecting Aisle Clearance	56.0 in (142 cm)
Speed (Level Ground)	6.5 mph max (13.7 kph max)
Towing Capacity (Draw Bar)	60 lb (27.2 kg) Normal, 715 lb (324 kg) Max.

Steering & Suspension	
Steering	Direct Chain & Linkage
Front Suspension	Solid
Rear Suspension	Solid
Service Brake	Rear Wheel Mechanical Drum
Parking Brake	Automatic
Front Tires	4.80 x 8 (Load Range B)
Rear Tires	4.80 x 8 (Load Range B)

Body & Chassis	
Frame & Body	Welded steel with DuraShield™ powder coat
Body & Finish	Diamond plate pattern. Polyester primer/Acrylic
Standard Color	Safety Yellow

Noise & Vibration	
Noise	Sound pressure, continued A-weighted equal to or less than 70 db(A)
Vibration, WBV	Highest RMS value of weighted acceleration is less than 2.5 m/s^2
Vibration, HAV	Highest RMS value of weighted acceleration is less than 2.5 m/s^2
	The uncertainty of measurement is 0.12 m/s

Measurement methods were applied per the ISO 2631 and ISO 5349 standards under conditions of typical vehicle surfaces.

Some items shown may be optional equipment

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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.

Read the following warnings before attempting to operate the vehicle.

⚠ WARNING

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

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

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

Avoid extremely rough terrain.

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.

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

All travel should be directly up or down hills.

Use extra care when driving the vehicle across any incline.

Do not permit anyone to ride on cargo deck.

⚠ WARNING

Stay in designated areas and avoid steep slopes. To reduce the possibility of severe injury or death resulting from improper vehicle operation, the following warnings must be observed:

Refer to GENERAL SPECIFICATIONS for capacity.

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

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

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

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

Check the area behind the vehicle before operating in reverse.

Always remain standing with back against backrest and hold on while the vehicle is in motion. Keep feet, legs, hands and arms inside the vehicle at all times.

Check stability of vehicle when using optional ladder for reaching or placing cargo on shelves. Do not overextend reach.

To prevent inadvertent movement when the vehicle is to be left unattended, release pedal completely, move direction selector to neutral position, turn key to 'OFF' position and remove key.

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Lubrication Points

⚠ CAUTION

Use maximum of three pumps of grease for each grease fitting - Over greasing may damage grease seals.

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



Steering with steering wheel and cover removed for clarity

Tire Inspection

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

BRAKES

⚠ WARNING

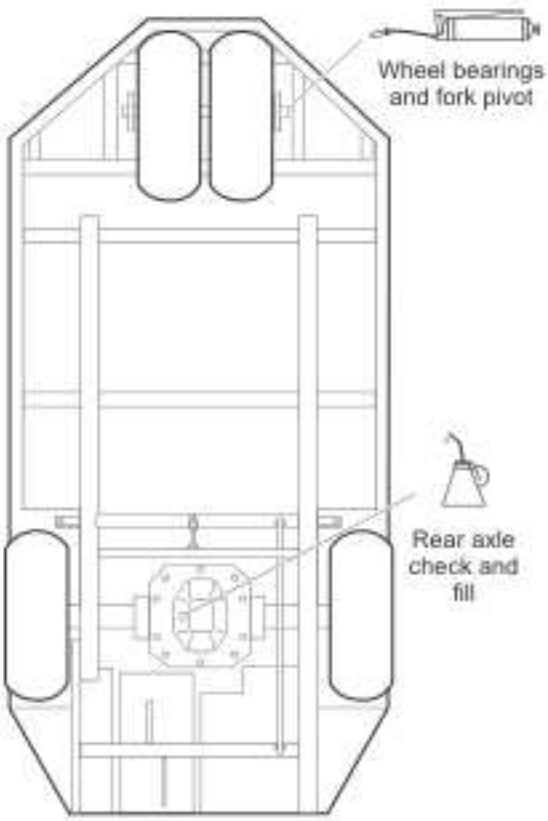
To reduce the possibility of severe injury or death, always evaluate pedal travel before operating a vehicle to verify some braking function is present.

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

NOTICE

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

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



View from underside of vehicle

Periodic Brake Test For Hydraulic Brakes

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 indicates that a brake inspection is required. A brake pedal that fails after it is applied indicates a leak in the master or wheel cylinders.

It is important to periodically check and maintain proper brake fluid levels in the brake master cylinder. The fill cap for the master cylinder is located under the access panel in the front floorboard. When checking the fluid, wipe off any dirt from the fill cap before removing it to reduce the possibility of contamination. Fluid level should be maintained between the MAX and MIN fill lines. If fluid must be added, inspect the system for fluid leaks.

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GENERAL

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

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

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

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

Use extra caution when towing the vehicle. Do not tow a single vehicle at speeds in excess of 12 mph (19 kph). 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.



NOTICES, CAUTIONS, WARNINGS, AND DANGERS

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

NOTICE

Address practices not related to personal injury.

⚠ CAUTION

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

⚠ WARNING

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

⚠ DANGER

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

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

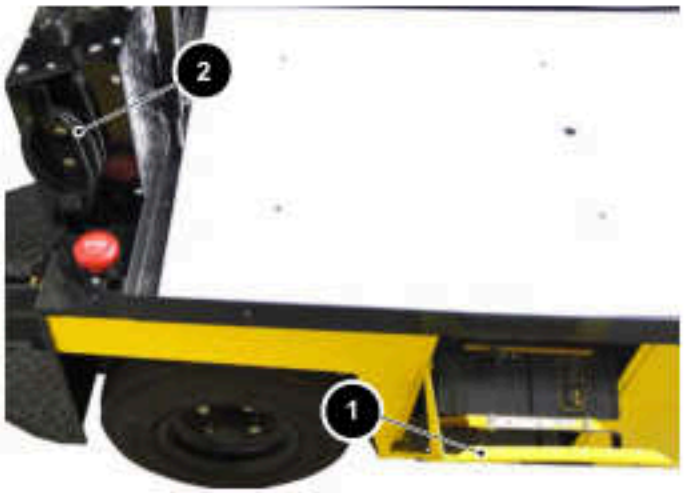
⚠ CAUTION

Certain replacement parts can be used independently and/or in combination with other accessories to modify an E-Z-GO-manufactured vehicle to permit the vehicle to operate at or in excess of 20 mph. When an E-Z-GO-manufac-

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The on-board charger is located under the cargo deck on the right hand side of the vehicle, it is wired directly to the batteries. Before charging the batteries park the vehicle in a well ventilated area, set the parking brake, turn the key switch to OFF and remove the key. Open the Charger Door (1) and unwrap the charger cord (2) from the storage area and plug into a dedicated 15 amp AC outlet to start the charger.

When the charging cycle is complete, disconnect the AC cord and rewrap the cord in storage area provided and close the charger door.



PORTABLE CHARGER (if equipped)

⚠ WARNING

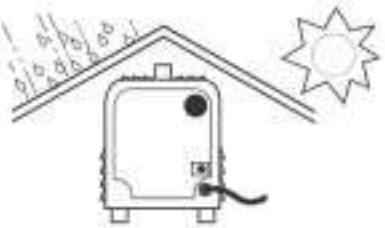
To prevent overheating that may cause serious damage to the charger and create the potential for fire, do not block or obstruct the airways. Portable chargers must be mounted on a platform above the ground or in such a manner as to permit the maximum air flow underneath and around the charger.

Portable chargers are shipped with the vehicle. Prior to vehicle or charger operation, chargers must be removed and mounted on a platform or wall above the ground to permit maximum air flow around and underneath the charger. If the charger is operated in an outdoor location, rain and sun protection must be provided.

A dedicated circuit is required for the charger. Refer to label on side of charger for appropriate circuit protection. The charger may remain plugged in to the AC outlet. To charge the vehicle, refer to the instruction labels on the charger. Insert the DC plug completely into the vehicle receptacle. The receptacle is located on the side of the instrument panel to the left of the steering wheel. After inserting the polarized DC plug, wait a few seconds and observe ammeter on charger to make sure it moves indicating that charger is charging.

The charger will automatically start a few seconds after plug insertion. The charger will automatically stop when batteries are fully charged and the DC plug can be removed to permit use of the vehicle.

Provide Protection From Elements



Do Not Block Louvered Airways



NEMA 15 - 5R Grounded AC Receptacle
110 - 120 VAC. Dedicated 15 AMP Circuit

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

NOTICE

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

⚠ WARNING

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

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

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