

A new and improved

WESTWARD
Industries

TASK SPECIFIC VEHICLES

***GO-4* EV** *INTERCEPTOR IV*

SPACE SAVING - ERGONOMICAL - EFFICIENT - 100% ELECTRIC
TAILORED DESIGN - RETURN ON INVESTMENT - DOMESTICALLY BUILT

OPERATOR'S MANUAL



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IMPORTANT SAFETY NOTICE:

All vehicle operators must read the entirety of this manual before operating the vehicle. This is to ensure that all operators are familiar with the vehicle so that they can operate the vehicle safely and effectively.

CALIFORNIA PROPOSITION 65 WARNING



WARNING: Operating, servicing and maintaining a passenger vehicle or off-highway motor vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

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1. GENERAL INFORMATION

1.1 Introduction

Congratulations on the purchase of your new GO-4 EV. This manual outlines the systems, features, operation and maintenance of the GO-4 EV.

The Westward Industries GO-4 EV is powered by a 96 volt lithium ion battery. It can be charged by 120 volt (Level 1) or 240 volt (Level 2) current. Electric vehicles have less moving components than traditional gas engines and are overall more reliable. Greater care and attention must be paid to charging and travel distance.

1.2 Vehicle Identification Number (VIN #)

The VIN # can be found on the vehicle information decal is located inside the cab on the front left upper post near the left side of the dash.

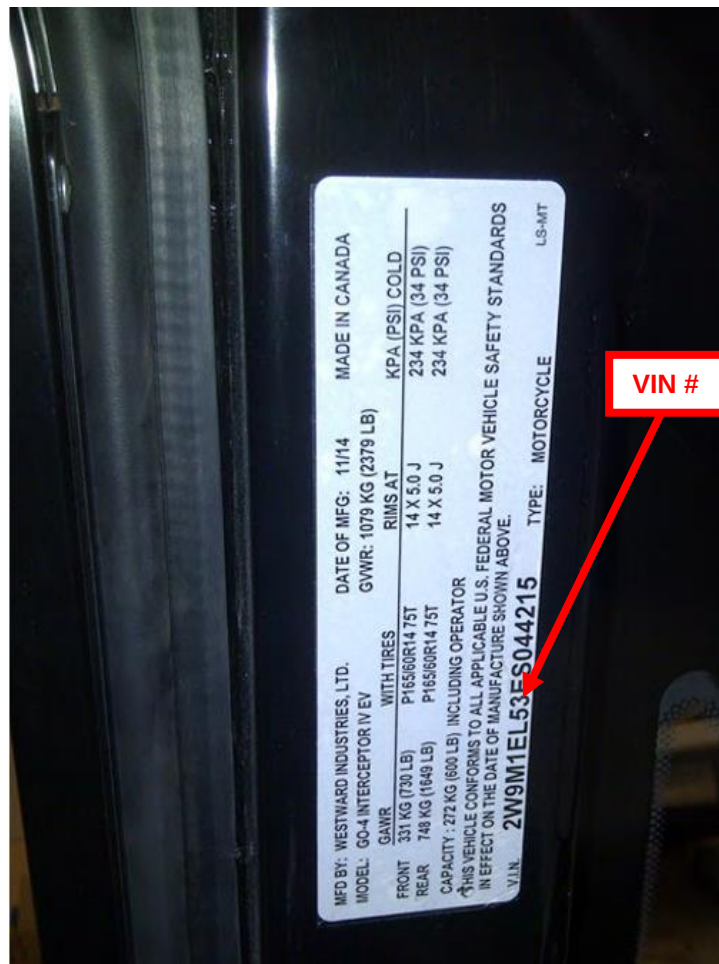
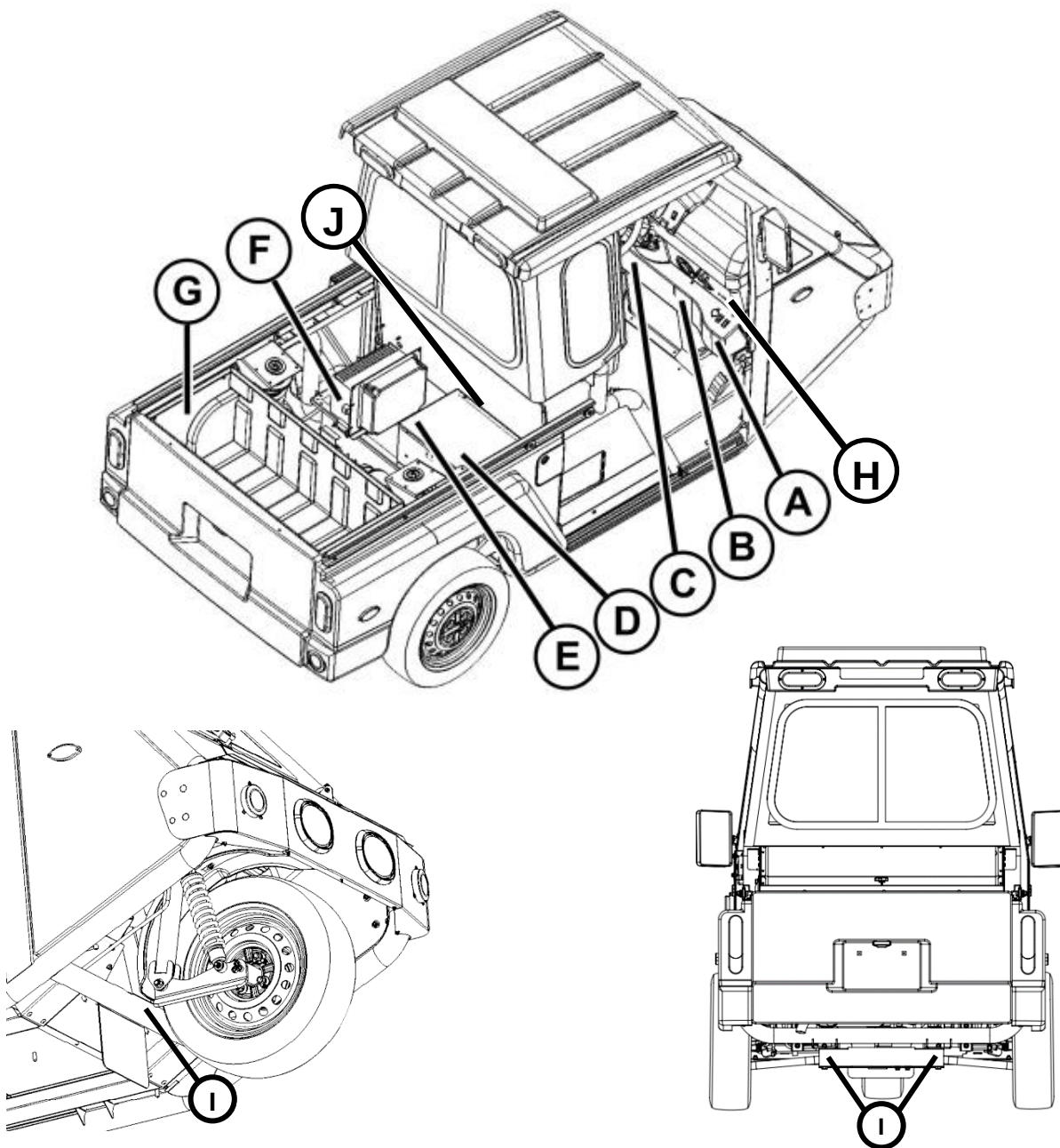


Figure 1: VIN Number Location

Note: VIN sticker above is for illustrating sticker location only. See the VIN sticker on your vehicle for correct specifications.

1.3 Important Vehicle Decals

1.3.1 Decal Locations



- A. Operating Speed Warning Decal
- B. Towing Warning Decal
- C. General Vehicle Operation Warnings Decal
- D. Electrocution/Shock Hazard Decal
- E. Electrocution/Shock Hazard Decal
- F. Electrocution/Shock Hazard Decal
- G. Non-flammable Storage Warning Decal
- H. LTA Location Decal
- I. Jacking Location Decals
- J. Air Conditioning System Warning and Information Decal:

1.3.2 Decal Images and Descriptions

A. Operating Speed Warning Decal

Specifies maximum safe vehicle operating speed.



B. Towing Warning Decal

Warns that rear wheel dollies must be used to tow the vehicle.



C. General Vehicle Operation Warnings Decal

Warns the operator of driving practices that must be followed for safe vehicle operation and informs the operator of hazards associated with operation of the vehicle.

**WARNING**

FAILURE TO OBEY SAFETY WARNING MAY RESULT IN INJURY TO YOU OR OTHERS. THIS VEHICLE IS OF SUFFICIENT SIZE AND WEIGHT TO CAUSE SERIOUS INJURY IN CASE OF UPSET OR COLLISION.

BEFORE STARTING ENGINE - Read and understand Operator's Manual. Do not exceed payload capacity given on vehicle name plate or permit passengers any place on vehicle. Cornering ability of a 3-wheel vehicle is not as great as a 4-wheel vehicle. Place heavy loads forward of rear axle. Unbalanced or top heavy loads can cause upset. Helmet is recommended.

WHILE OPERATING VEHICLE - Remain seated: use both hands for steering. Keep arms and legs within vehicle body. Avoid sudden starts and stops. Sudden sharp turns can cause upset. Regulate speed to meet road and weather conditions. Do not operate in or near an explosive environment. If a malfunction occurs, cease operation - Do not operate vehicle until condition is corrected. Loud noise occurs if front skidbar strikes road surface. This indicates vehicle is being operated recklessly and is near upset.

BEFORE LEAVING VEHICLE - Turn ignition to "Off" position-remove key. Apply parking brake - parking brake is not automatically applied. Follow procedure in Operator's Manual for parking on an incline.

BEFORE SERVICING ENGINE - Make sure engine is not running and key is removed from ignition switch before proceeding. Place a safety bar on all hydraulic cylinders to prevent cylinders from retracting while working underneath any hydraulic attachment. This vehicle is licensed under the motorcycle category and must be operated in accordance with the laws.

1 PERSON ONLY

D. Electrocutation/Shock Hazard Decal

Warns that only trained technicians may service the high voltage control box. Warns not to lay any weight on the control box cover as this may deform the cover and cause it to contact electrical components. Warns not to drill into or mount anything to the control box cover as contact with electrical components may occur.

**WARNING**

**Cover should only be removed by
personel trained in high voltage.**

Do not lay any weight on this cover.

**Do not drill or mount anything on
cover.**

E. Electrocution/Shock Hazard Decal

Warns that high voltage is present in the control box which may cause electrical shock and electrocution. **WARNING:** Only trained technicians may service the high voltage battery pack and disconnect the BMS connectors in the high voltage control box.

F. Electrocution/Shock Hazard Decal

Warns not to open the cover for the charger as the high voltage present in charger may cause electrical shock and electrocution.

G. Non-flammable Storage Warning Decal

Warns not to store flammable liquids or reactive flammable materials in the trunk. Electrical sparks and static electricity are in close vicinity to the trunk and may cause a fire hazard. Materials that react with air and water may cause a fire hazard.



H. LTA Location Decal

Indicates location of Lateral Thrust Alarm (LTA).



I. Jacking Location Decals

Indicate locations of jacking points.



J. Air Conditioning System Warning and Information Decal:

Warns that only trained service technicians are to service the air conditioning system and that the system cannot be vented to the atmosphere. Provides air conditioning system specifications.



2. SAFETY

2.1 Cautions and Warnings

Throughout this operator's manual, you will find **CAUTIONS** and **WARNINGS**. **WARNINGS** are provided to warn against actions or operating procedures that could cause vehicle damage and/or bodily injury and/or death. **CAUTIONS** are provided to warn the operator of important details and to indicate that extra care should be taken.

2.2 General Warnings

WARNING:

- Make sure the vehicle operator has read the entirety of this operator's manual and understands it before operating the vehicle.
- Any modifications made to the GO-4 EV may affect its operation and safety. This could lead to an accident resulting in serious injury or death.
- Do not let children operate vehicle.
- This vehicle is to carry one person ONLY. No riders!
- Use a seat belt for optimum safety. It's the law.
- Keep legs and arms in the vehicle when it is in motion.
- Always shut off vehicle when it is being charged.
- Only qualified dealers and technicians should work on the high voltage battery.
- Never make sudden turns or stops when not necessary.
- The vehicle is equipped with a safety device called a lateral thrust alarm (LTA). The LTA monitors vehicle stability and will sound a warning buzzer and illuminate a dash mounted indicator light if the vehicle is operating on too much of a slope or if a corner is taken at too high a rate of speed. If the LTA comes on slow the vehicle down. However, do not perform any abrupt maneuvers including sudden heavy braking as this could decrease vehicle stability.
- Always keep within load limits and never overload the vehicle.
- Never start charging the vehicle with wet hands, while standing in water, or with damaged equipment.
- Always slow down before you turn and when travelling over rough areas.
- Always wear a helmet where law requires. **Note:** The GO-4 EV is classed as a motorcycle.
- Always place drive selector switch in park when leaving the vehicle.
- Always use parking brake when leaving the vehicle on inclines.
- Always take precautions approaching traffic and or pedestrians, keeping in mind that electric vehicles are much quieter than gas vehicles.
- Keep both hands on steering wheel whenever possible.
- Always signal lane changes and turns.
- If using high beams, switch to low beams when approaching oncoming traffic. Switch back to high beams once the oncoming traffic has passed.
- Do not store flammable liquids or reactive flammable materials in the trunk. Electrical sparks and static electricity are in close vicinity to the trunk and may cause a fire hazard. Materials that react with air and water may cause a fire hazard.

3. CONTROLS AND VEHICLE SYSTEMS

3.1 Digital Display

3.1.1 Instrumentation Screen

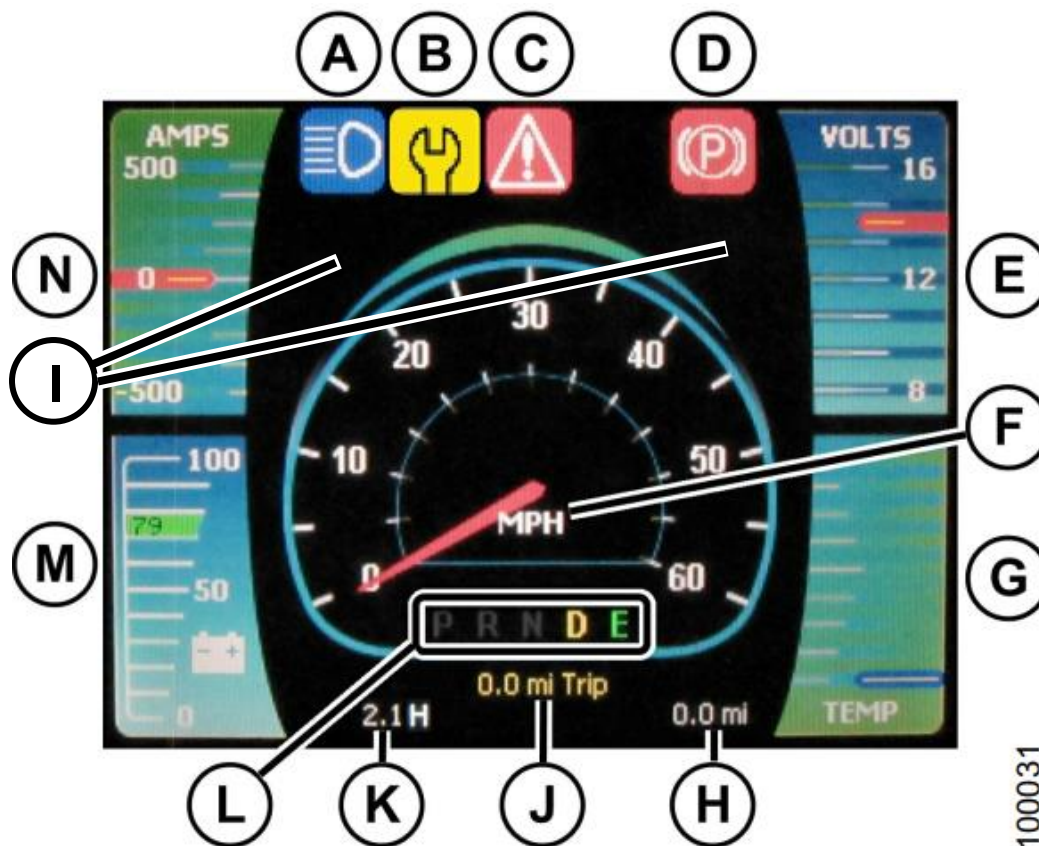


Figure 2: Instrumentation Screen

- A. High Beam Indicator
- B. Service Required Alert
- C. Drive Locked Alert
- D. Parking Brake Indicator/Brake System Warning Light
- E. Voltage Indicator For 12 Volt Auxiliary Battery
- F. Speedometer
- G. Motor temperature gauge
- H. Odometer
- I. Turn Signal Indicators
- J. Trip Odometer
- K. Hourmeter
- L. Drive Mode Indicator
- M. Main Battery Pack State of Charge (SOC)
- N. Amperage draw

Headlight High Beam Indicator Light

The blue indicator light comes on when the headlights are on and in the high beam position.

Drive Locked Alert

Illuminates when the forward and reverse drive is locked. Refer to section 3.2.1 - Ignition Procedure for more details.

Parking Brake Indicator/Brake System Warning Light

This light serves two functions:

1. Parking brake warning light. This indicates when the parking brake is engaged when the vehicle is started. Release the parking brake fully before moving vehicle. The light should go off when the parking brake is released.
2. Brake fluid level warning light. If the warning light is still on even when the parking brake is completely released it may indicate low brake fluid level in the reservoir.

If the warning light stays on:

1. Make sure parking brake is fully released.
2. Carefully stop your vehicle. Put in park and apply emergency brake.
3. When vehicle is parked, check brake fluid level. Check all brake components for leaks.
4. If any leaks are found, if warning light continues to stay on, or the brakes do not operate properly do not drive vehicle. Have your vehicle towed to an authorized dealer for a full brake examination. Let them do the necessary repairs.

WARNING: Driving your vehicle with improperly operating brakes can cause severe damage to your vehicle and possible injury to the operator.

Speedometer

The speedometer indicates the forward speed of the vehicle in miles per hour.

Odometer

The odometer indicates the total distance (in miles) the vehicle has driven.

Turn Signal Indicators

Illuminate if left or right signal is engaged.

Trip Odometer

Distance vehicle traveled per defined trip. Press the ▼ display button to reset the trip odometer to 0.1.

Note: When the ignition is switched to "LOCK" or "ACC" and back to "ON" the trip odometer will be reset to match the Odometer distance.

Hourmeter

Records the number of hours that the vehicle has run and is important if your vehicle operates at slow speeds for a good portion of its daily operation. It may at times be a better indicator when maintenance items should be carried out, and for determining the duration of your battery.

Drive Mode Indicator

Shows current drive mode. "R" is reverse, "N" is park, "D" is forward, "P" is not used, "E" is econo mode. Note: Econo mode is only available in forward. Both "D" and "E" will be lit on the display while in econo mode.

Main Battery Pack State of Charge (SOC)

The state of charge readout is located in the bottom left of the center display. As the battery depletes and reaches 20%, the green percentage indicator will turn amber. At this point keep a close eye on range and your remaining SOC, planning to return to a charging station is recommended. To extend your range, use econo mode.

IMPORTANT: You should no longer continue driving at 0% SOC as it will damage the battery. If 0% is reached, park the vehicle and call a tow truck.

After a full charge your SOC (state of charge should) be near 100%.

Amperage Draw

Shows the current being drawn from the main battery pack.

3.1.2 Digital Display Control Buttons

Left (◀):

Pressing the left button while the instrumentation screen is up will bring up the reverse camera. The left button can also be used to navigate menus or adjust settings.

Up (▲):

The up button is used to navigate menus or adjust settings.

Enter/Select (●):

Pressing the enter/select button while the instrumentation screen is up will bring up the main setup screen. The button is also used to select items within menus.

Down (▼):

The down button is used to navigate menus or adjust settings.

Right (▶):

The right button can also be used to navigate menus or adjust settings.



Figure 3: Display Buttons

3.1.3 Setup Screens

The setup screens allow the operator to view and modify various digital display settings. To access the main setup screen, press the enter/select **•** button.

Main Setup Screen:

Use the up (**▲**) and down (**▼**) display buttons to highlight the menu item.

Press enter/select (**•**) to enter the screen for the highlighted menu item.

Highlight and select "Exit Menu" to return to the instrumentation screen.

Note: Cycle the ignition switch from "ON" to "LOCK" or "ACC" and back to "ON" to regain ability to use the right (**►**) display button to cycle through the instrumentation and diagnostic screens.

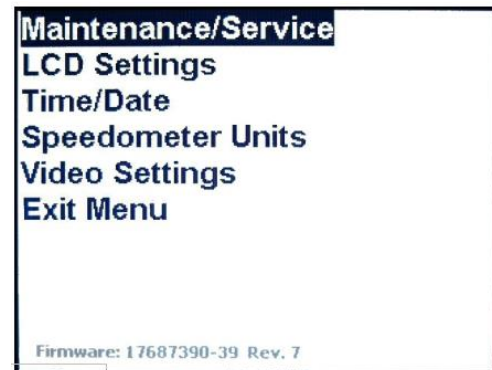


Figure 4: Main Setup Screen

CAUTION: The maintenance/service and video settings screens are to be accessed by certified technicians only.

LCD Settings Screen:

Use the up (**▲**), down (**▼**), left (**◀**), right (**►**) and select/enter (**•**) display buttons to navigate, view and modify settings.

The LCD Settings screen sets the display's backlight brightness. Setting "1" is the dimmest lighting and "10" is the brightest.

"Backlight Low" setting is activated when the headlight **high beams** are turned on. "Backlight High" setting is for all driving conditions.

After setting the desired brightness, select "Save & Exit" to retain modified settings.

Select "Cancel" if no modifications are required.

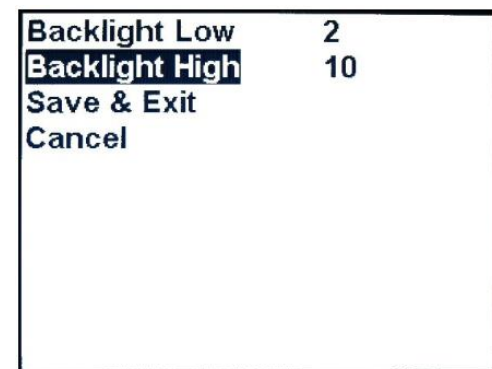


Figure 5: LCD Settings Screen

Time/Date Screen:

Note: In an effort to reduce draw on the 12 volt auxiliary battery, power to the digital display is cut when the ignition switch is in the lock position. As a result, time and date settings will be reset on each vehicle startup.

Use the up (**▲**), down (**▼**), left (**◀**), right (**►**) and select/enter (**•**) display buttons to navigate, view and modify settings.

After setting the desired time and date, select "Save & Exit" to retain modified settings.

Select "Cancel" if no modifications are required.

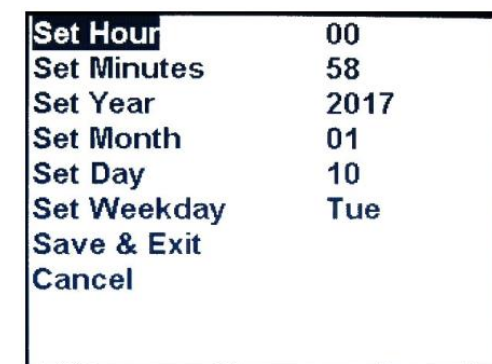


Figure 6: Time/Date Screen

Speedometer Units Screen:

Use the up (▲), down (▼), left (◀), right (▶) and select/enter (●) display buttons to navigate, view and modify settings.

The Speedometer Units screen sets the "Speedometer Units" in "MPH" or "Km/h".

After setting the desired time and date, select "Save & Exit" to retain modified settings.

Select "Cancel" if no modifications are required.

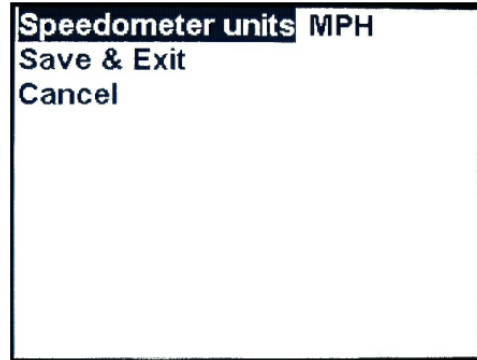


Figure 7: Speedometer Units Screen

3.1.4 Diagnostics Screens

Note: These screens are for use by certified service technicians only.

If the right (▶) button is pressed while the instrumentation screen showing on the digital display, diagnostic screens will appear. An example is shown to the right. To return to the instrumentation screen continue hitting the right (▶) button to cycle through all the diagnostic screens until the instrumentation screen appears.

BATTERY DIAGNOSTICS	
Pack Voltage	115.31 VOLTS
DC Current	0.3 AMPS
SOC	95 %
High Cell Volts	4.115 VOLTS
Low Cell Volts	4.108 VOLTS
Ahrs Remaining	191.40 Ahrs
Auxiliary Battery	13.53 VOLTS

Figure 8: Battery Diagnostics Screen

3.1.5 Backup Camera Screen (Option)

If backup camera option is installed the rear camera view displays on the screen when the drive selector is placed in reverse. The back up camera can also be brought up on the digital display manually by pressing the ◀ button on the display.



Figure 9: Back Up Camera Display

3.2 Ignition Switch

Lock Position: Prevents all electrical powered accessories and motor from running, except hazard warning flasher and allows for key removal. Will also lock the steering wheel as anti-theft feature.

Accessory (ACC) Position: Allows use of various instruments and accessories without the motor powered.

On Position: This allows all accessories to be run and allows for power to be supplied to the motor (after ignition).

Start Position: By holding the key to its furthest position, the motor is allowed power (ignition procedure must be followed) This allows all accessories and electric motor to engage. After releasing forward pressure on the key, it will automatically return to the on position.



Figure 11: Ignition Switch Location



Figure 10: Ignition Switch Positions

3.2.1 Ignition Procedure

As electric motors are very quiet upon start, precautions have been developed to assure the operator has the brake pressed before drive position is chosen. To start the GO-4 EV, please follow these procedures:

1. Engage the parking brake (It is not required, but always preferable).
2. Verify that drive selector switch is in park position.
3. Depress brake pedal.
4. Turn key all the way to starting position for one second until drive locked alert in the dash disappears, then release.
5. Disengage parking brake, select drive direction, slowly release brake pedal, gently press drive pedal.



Figure 12: Drive Selection Switch



Figure 13: Parking Brake

3.3 Dash Mounted Controls and Features

3.3.1 Drive Selector

The drive selector switch is located on the right side of the dash. It is far simpler than a traditional gas vehicle.

Park: This is the center selection. On the digital display park is designated by "N". As per the ignition procedure, the vehicle must be in park for starting. The GO-4 EV is equipped with an electromagnetic brake (EMB) (see section 4.5 - Electromagnetic Brake (EMB) for more information). The EMB engages when the drive is in park. You will not be able to push the vehicle in park.

WARNING: The electromagnetic brake does NOT replace your parking brake, please always use your parking brake when parking the vehicle. Relying on the EMB will result in premature wear and replacement.

Forward: Following the ignition procedure forward drive may be selected. To drive forward, press accelerator pedal gently until the operator is comfortable with power.

Reverse: Following the ignition procedure reverse drive may be selected. Always check that the vehicle is clear to back up and no obstacles are in the way. A back up alarm (if equipped) will sound when in reverse. An optional back up camera is mounted on the rear truck bed panel. If the back up camera is equipped, the center display will automatically switch to the rear view camera upon moving the drive selector switch to the reverse position.

NOTE: When switching between reverse and forward, please allow a moment for the drive to switch before applying the accelerator pedal.



Figure 14: Drive Selector Switch



Figure 15: Back Up Camera (Optional)

3.3.2 Climate Control System

Fan Speed:

The fan speed control dial (D) is located on the right side of the dash. Turn clockwise to increase fan speed and counter clockwise to decrease fan speed. The dial has 4 speeds, the first two speeds are for low speed, the last two are for high speed.

Air Conditioner (Option):

To activate the optional air conditioning:

1. Push the black slider (A) all the way into the dash.
2. Depress the A/C button (C) in the middle of the fan speed control dial (D). The A/C light on the button should illuminate to indicate the A/C is on.
3. Turn the temperature control dial (B) to a cool or cold setting.

Heater:

To activate heater:

1. Pull the black slider (A) fully outwards.
2. Ensure the A/C button (C) is not depressed.
3. Turn the temperature control dial (B) to a warm or hot setting.

Temperature Adjustment:

Temperature is adjusted by turning the dial (B) on the left side of the dash to the left for cooler air and to the right for warmer air.

Adjustable Vents/ Windshield Defrost: The GO-4 EV has two adjustable vents mounted in the dash. Closing these vents will direct more airflow to the windshield. To defrost the front windshield, close these vents while the heater is on.

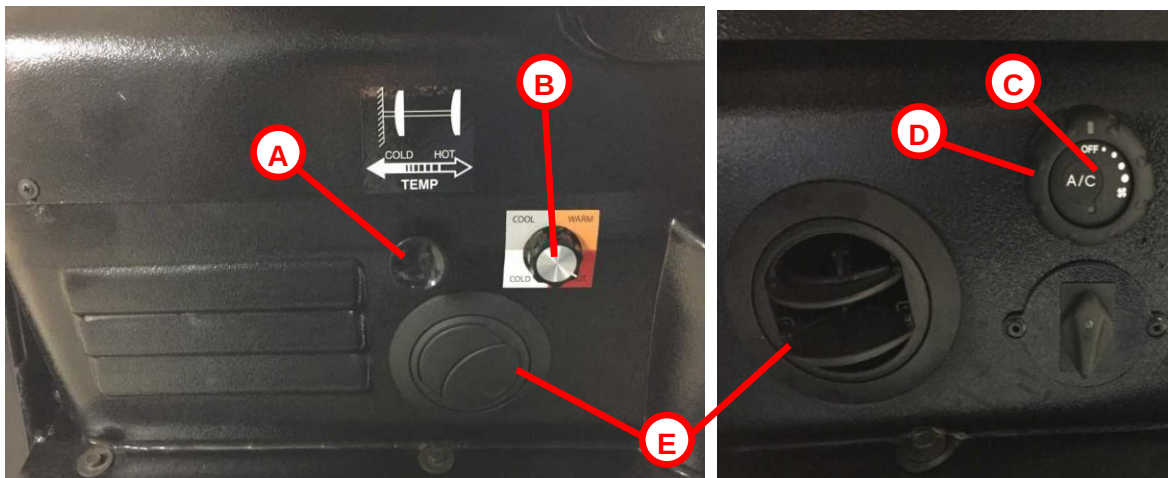


Figure 16: Climate Control Component Locations

- A. A/C and heater control slider
- B. Temperature control dial
- C. A/C on/off button
- D. Fan speed control dial
- E. Adjustable vents

Note: In an electric vehicle, use heat and A/C only as needed. Do not use heat with doors and windows open. Heating the cab draws significant energy from the battery pack. Using heat with moderation allows for much greater range.

3.3.3 Econo Mode Switch

The econo mode switch can be found on the upper dash to the right of the digital display. Econo mode conserves main battery charge by reducing current available for acceleration and increasing the regeneration capabilities of the EM brake and motor. This allows for greater range. When the vehicle is in econo mode both "D" and "E" will be illuminated on the drive mode indicator on the digital display.



Figure 17: Econo Mode Switch

3.3.4 Auxiliary Switches

The illuminated rocker switches located on the lower right side of the dash operate the roof mounted work lights as well as various customer installed options. A 12 volt power socket is located next to the auxiliary switches.

For connecting the roof lights, see the inside cab ceiling access panels. There is a pre-wired connector inside with power to the dash switch. A second dash switch is available for work lights or other customer installed options.

For further questions please contact your dealer or Westward Industries.



Figure 18: Auxiliary Switches

3.3.5 Lateral Thrust Alarm (LTA)

The LTA is a safety device that monitors the stability of the vehicle. If the vehicle is operating on too much of a slope, or if a corner is taken at too high a rate of speed, a warning buzzer will sound and the LTA indicator light that is mounted in the dash will illuminate. If the LTA comes on slow the vehicle down. However, do not perform any abrupt maneuvers including sudden heavy braking as this could decrease vehicle stability.



Figure 19: LTA Indicator Light

3.4 Steering Column Controls



Figure 20: Steering Column Stalk and Hazard Flasher Button Locations

3.4.1 Left Multifunction Steering Column Stalk

The left steering column stalk is used to operate the turn signals and lights.

Turn Signals: Pull stalk down until it latches to signal a left turn and push it up for a right turn. The indicator lights on the digital display will indicate which turn signal is active. When the turn is complete the steering wheel will self-cancel the turning signal. If the turn signal continues to flash, push the stalk switch back to the OFF position.

Dimmer Switch: To change the headlamps from the low to high beam setting, push the stalk away from you until it latches, then release the stalk. The blue high beam indicator on the dash will illuminate when the headlamps are on the high beam setting. To change your headlamps from high to low beam, pull the lever toward you and release.

Flash to Pass: Pull the stalk toward you and hold to momentarily turn on the high beam.

Lights: Rotate the knob on the end of stalk to the first position to activate the clearance, parking, license, and taillights. Rotate the knob to second position to activate headlights, license, and taillights.

Daytime running lights: Once the vehicle is running the daytime running lights automatically come on.

WARNING: The daytime running lights should not be relied upon for night driving, use the vehicle's headlights instead and use high beams as necessary

3.4.2 Right Steering Column Stalk

The right steering column stalk is used to operate the windshield wiper. Move the stalk down to activate the wiper and select wiper speed. The available speed settings as the stalk moves downwards are intermittent (INT), low (LO), and high (HI).

3.4.3 Tilt Adjustment

The steering wheel is tilt adjustable. The adjustment lever is on the right side of the steering column. To adjust the steering wheel tilt position follow these steps:

1. Loosen the adjustment lever by turning the lever counter clockwise.
2. Move the wheel to the desired location.
3. Lock the wheel in position by tightening the adjustment lever.

Note: If the lever's position is too close to the dash and does not permit enough room to loosen, pull on the lever away from the column and reposition the lever pointing away from the dash and push back in.

3.4.4 Hazard Flasher Button

The hazard flasher button is located on the top of the steering column. Press once to activate hazard flashers and press again to turn off.

3.5 Roof Mounted Controls

3.5.1 Dome Light

The dome light is located on the right side of the roof in the cab and is activated by a rocker switch built into the light. The light can be rotated for optimal lighting.

3.5.2 Rear View Mirror

The adjustable rear view mirror is mounted to the front right corner of the roof.

3.5.3 Radio (Option)

If the vehicle is equipped with a radio the radio controls will be located at the front of the roof in a central position.



Figure 21: Roof Controls

3.5.4 Traffic Advisor Lights/Additional Light Controls (Option)

If the vehicle is equipped with traffic advisor lights or other custom light options, the controls may be mounted to the roof.

3.6 Parking Brake

Located next beside the seat on the left. Pull up to engage. Depress button on end of handle and push lever down to release parking brake. Brake warning light on digital display will come on when parking brake is engaged.

WARNING: Even if the parking brake is pulled, the operator must not leave the vehicle while it is in the forward or reverse drive mode. The drive mode selector must be in park if the operator is leaving the vehicle.



Figure 22: Parking Brake Location

3.7 Pedals

3.7.1 Accelerator Pedal

The accelerator pedal is the right pedal. Press the pedal to accelerate. Idle position is when no force is being applied to the pedal.

WARNING: At idle electric motors are much quieter than traditional gas or diesel engines. Some extra caution should be taken when engaging the motor and beginning to drive. Pedestrians will not easily hear the vehicle move.

3.7.2 Brake Pedal

The brake pedal is the left pedal. When the pedal is depressed, the vehicle's brakes are applied and the vehicle will slow down to a stop. The GO-4 EV is also equipped with brake regeneration technology which takes some of the energy from the moving vehicle and stores it back in the high voltage battery.

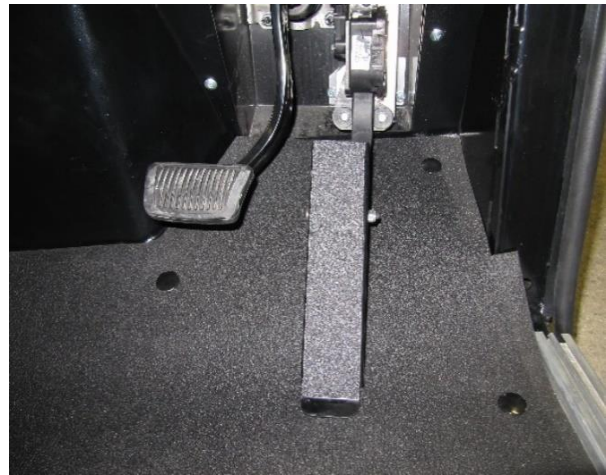


Figure 23: Pedals

3.8 Doors

The doors slide on tracks to ease opening and closing. The window can be opened separately from inside (e.g. to provide ventilation) without affecting door operation and safety.

Door: Open door by pulling on lower red handle and sliding the door back on its tracks. Close door by pushing on the upper red handle and allowing door to travel forward until click is heard.

Window: Pull back upper red handle and slide window back to first notch (vent position) or back until it locks in the fully open position.



Figure 24: Door Mechanism

3.9 Seat

3.9.1 Adjustment

Regular Seat

The regular seat has 4 forms of adjustment. The seat can be slid forwards and backwards by pulling up on the lever under the front of the seat while sliding seat until it is in the desired position and then releasing the lever. The front or rear of the seat can also be tilted. This is done by pulling one of two levers located on the left side of the bottom cushion of the seat (as shown below), while leaning in the appropriate direction. Do not put pressure on the seat back while attempting to lift lever as this could bind the system. Finally, the seat back angle can be adjusted using the lever located on the left side of the seat where the seat back meets the bottom cushion.

CAUTION: Do not put pressure on the seat back while attempting to lift lever as this could bind the system.



Figure 25: Regular Seat Adjustment Controls

Premium Seat (Option)

Vehicles may be equipped with an air-ride, air-adjustable, premium seat with power controls as an option. This seat has a wide range of adjustment to ensure the most comfortable seating position for operators. This greatly reduces operator fatigue and improves the driving experience.

The premium seat has six methods of adjustment.

Sliding Adjustment:

The seat can be slid backwards and forwards by pulling upwards on the lever located under the front right corner side of the seat cushion, then sliding the seat to the desired position and releasing the lever.

Seat Back:

The seat back can be tilted backwards or forwards by pulling upwards the lever located where the seat back meets the bottom cushion on the left side of the seat, then tilting the seat back and releasing the lever.



Figure 26: Back Tilt Adjustment Lever

Power Controls:

The power controls are located on the left side of the seat cushion and are used to adjust seat height, the side bolstering and the lumbar support of the seat.

Height:

The seat can be raised or lowered using the rocker switch with the upwards pointing arrow icon on it. Press and hold the bottom of the switch to lower the seat and press and hold the top of the switch to raise the seat. Release the rocker switch when the seat is at the desired height.



Figure 27: Power Seat Controls (Height, Bolstering, Lumbar)

Side Bolstering:

The side bolsters can be adjusted for a tighter or wider seat fit. The frontmost switch of the set of three rocker switches with the + and – symbols is used to adjust the side bolstering. Press the top (+) side of the switch to increase the side bolstering support and press the bottom (-) side of the switch in to reduce side bolstering support.

Lower Lumbar Support Adjustment:

Use the center rocker switch in the group of three switches to adjust lower lumbar support. Press the top (+) side of the switch to increase lower lumbar support, press the bottom (-) side to reduce support.

Upper Lumbar Support Adjustment:

Use the rearmost rocker switch to adjust upper lumbar support. Press the top (+) side of the switch to increase upper lumbar support, press the bottom (-) side to reduce support.

Heated Seat (Option):

The premium seat may be equipped with an optional seat heater. The seat heater can be activated using the seat heater rocker switch located just forwards of the power controls on the left side of the seat. There are two heating settings. Press the bottom of the rocker switch to activate the low heat setting. Press the top of the rocker switch to activate the high heat setting. To turn the seat heater off return the rocker switch to the neutral position where neither the top of bottom of the rocker switch is depressed.

Heated and Cooled Seat (Option):

The premium seat may be equipped with both heating and cooling systems as an option. These systems can be activated using the rocker switch located just forwards of the power controls on the left side of the seat that has the letters H and C on it. Press the bottom of the rocker switch to activate seat cooling. Press the top of the rocker switch to activate the seat heating. To turn the systems off return the rocker switch to the neutral position where neither the top of bottom of the rocker switch is depressed.

3.9.2 Seat Belt

The lap/shoulder belt should be used at all times when the vehicle is in motion.

To fasten seat belt:

1. Grasp the buckle end and tongue plate.
2. Slowly pull out the tongue plate section.
3. Insert the tongue plate into the open end of the buckle. A noticeable click will indicate the seat belt is securely locked.

To unfasten seat belt:

1. Push button on buckle end to release.
2. The tongue end will automatically return to its resting position alongside of seat.

WARNING: To help decrease the possibility or severity of injury in sudden stops and accidents, buckle up at all times when using your vehicle. Position the belt low on the hips and make sure it always is snug. Use the seat belt at all times when the vehicle is in operation.

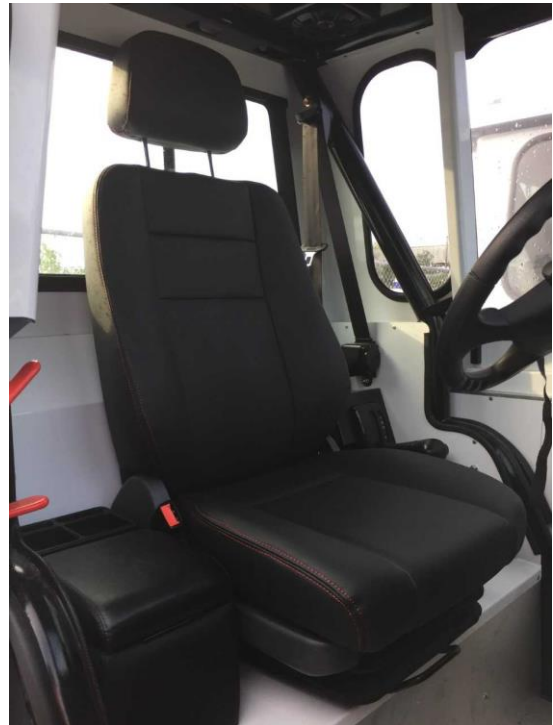


Figure 28: Seat Assembly

4. OPERATION

4.1 General Warnings for Vehicle Operation

WARNING:

- Do not exceed payload capacity given on vehicle nameplate or permit passengers any place on the vehicle. This is a one occupant vehicle only.
- Avoid erratic steering maneuvers and avoid abrupt maneuvers such as sudden turns or stops. Take corners at a slow speed. Slow down when traveling over rough areas. Be especially careful on downhill slopes where the vehicle will be less stable. Pay attention to the LTA (Lateral Thrust Alarm) which will sound a warning buzzer and illuminate an indicator light if the vehicle is operating on too much of a slope or if a corner is taken at too high a rate of speed. If the LTA comes on slow the vehicle down. However, do not perform any abrupt maneuvers including sudden heavy braking as this could decrease vehicle stability.
- Place heavy loads forward of rear axles. Unbalanced or top-heavy loads can cause vehicle upset.
- Use a seat belt for optimum safety. It's the law.
- Always wear a helmet where law requires. **Note:** The GO-4 EV is classed as a motorcycle.
- In rain or snow, or any slippery conditions always proceed with caution. Allow for more time, and greater distance between vehicles.
- Electric vehicles are much more silent than traditional vehicles. Operators **MUST** assume that pedestrians and other vehicles will not easily hear the vehicle approach.
- Distracted Driving: Distracted driving comes in many forms which can remove your attention from the road. Always exercise good judgement and make sure you are familiar with local government laws on distracted driving.
- Always use parking brake and curb the front wheel (see section 4.4 - Stopping and Leaving the Vehicle) when leaving the vehicle on inclines.
- Even if the parking brake is pulled, the operator must not leave the vehicle while it is in the forward or reverse drive mode. The drive mode selector must be in park before leaving the vehicle.
- Do not use the GO-4 EV to tow trailers, other vehicles or any other objects. The GO-4 EV was not designed for towing.
- Do not let children operate vehicle.
- Keep legs and arms in the vehicle when it is in motion.
- When switching between forward and reverse drive modes always be at a complete stop and allow a second for drive to engage. Before releasing the brake, make sure your path is clear.
- Keep both hands on steering wheel whenever possible.
- If using high beams, switch to low beams when approaching oncoming traffic. Switch back to high beams once the oncoming traffic has passed.
- Always signal lane changes and turns.
- If the vehicle is to be driven in conditions where snow or ice may be present, winter tires must be installed before driving in such conditions.
- Do not store flammable liquids or reactive flammable materials in the trunk. Electrical sparks and static electricity are in close vicinity to the trunk and may cause a fire hazard. Materials that react with air and water may cause a fire hazard.

4.2 Driving Practices for Safe Vehicle Operation

In addition to the warnings on the previous page, follow all driving practices explained in this section to make vehicle operation safer.

4.2.1 General Practices

- Expect that other road users will make mistakes. Be alert and prepared.
- Be smooth with vehicle inputs (steering, brakes, accelerator) to help maintain vehicle control and stability.
- Adjust your speed according to conditions (weather, road surface, visibility, etc.)

4.2.2 Distracted Driving

Avoid distractions when driving. Do not perform tasks that are not driving related. Keep your eyes on the road and hands on the steering wheel as much as possible.

4.2.3 Steering

- Be smooth with the steering wheel. Avoid any aggressive or abrupt maneuvers as these will negatively affect vehicle stability.
- Always keep two hands on the steering wheel when possible. This allows for better vehicle control.

4.2.4 Braking

- Do not ride the brakes (resting foot on brake pedal while driving or applying pressure to the brake pedal while accelerating or maintaining speed), this could overheat the brakes, causing the brakes to be less effective. In addition, this will cause premature wear of the brake pads and rotors.
- GO-4 EV vehicles are not equipped with an anti-lock braking system (ABS). This means that the wheels can lock under heavy braking in normal traction conditions or under moderate to light braking if traction is significantly reduced. When a wheel locks it stops rotating and skids across the road. In general, when wheels lock up the vehicle may slide. If the front wheel locks you will not be able to steer the vehicle. To regain steering control, reduce pressure on the brake pedal to allow the front wheel to unlock and rotate. To avoid locking the brakes under heavy braking, use a quick pulsing motion when applying the brake pedal (quick on and off application). This will allow for some steering while also slowing the vehicle down.
- Be careful when applying the brakes for the first few times after driving through standing water such as puddles, or after any time the brakes may have become significantly wet, such as after the vehicle has been washed. The vehicle's brakes will be less effective after becoming significantly wet. The braking performance should gradually return to normal after several instances of braking, provided that the brakes do not continue to get significantly wet.
- Be aware that when travelling on steep or long downhill slopes, depending on how hard and frequently the brakes are applied to slow vehicle down, the brakes may overheat, which will cause the brakes to be less effective.
- Avoid unnecessary heavy braking.
- Allow enough space to the vehicle in front to slow to a stop in case of an emergency braking situation. Keep in mind that it takes time to process what is happening around you, decide to brake and move your foot to apply the brakes.

4.2.5 Acceleration

- Avoid heavy acceleration. Heavy acceleration can cause wheel slip and can reduce your control of the vehicle.
- Take extra care to accelerate gently in slippery conditions.

4.2.6 Turns

- Always slow down for turns and take them at a slow speed. This is especially important in a 3 wheeled vehicle such as the GO-4 EV.
- Pay attention to the Lateral Thrust Alarm (LTA) which will warn you if you are taking a corner too quickly. See section 3.3.5 – Lateral Thrust Alarm (LTA) for more information.
- Do not accelerate until vehicle has exited the turn.

4.2.7 Driving in Wet Conditions

- In wet weather the vehicle will likely have less traction. This can negatively affect the vehicle's ability to brake, accelerate and steer. Keep this in mind when driving in wet conditions.
- In wet conditions always reduce speed compared to dry conditions.
- Be aware that the wheels will lock up more easily under braking.
- Hydroplaning can occur in wet conditions. Hydroplaning is when the tire rides on water that builds up underneath the tire. When this occurs the tire has minimal or no contact with the road. This can result in the vehicle sliding around and a decrease in steering control. To avoid hydroplaning it is best to simply to drive at slower speeds when the road is wet.
- If the streets are flooded or there are very deep puddles do not drive the vehicle. Do not attempt to drive through deep puddles, areas with lots of flowing water, or flooded areas. You could get stuck. The current of the flowing water could carry you or the vehicle away. Debris may be hidden by the water and there may be deep areas that you cannot see.
- Expect stopping distances to be greater than in dry conditions. As a result, leave extra distance to the car in front.

4.2.8 Driving in Poor Visibility Conditions

Fog, haze, smoke, dust, heavy snow and heavy rain can significantly reduce visibility. If visibility is significantly reduced pull over in a safe location, keep headlights on and turn on hazard flashers to help indicate your presence. Wait until visibility improves to a safe level before continuing to drive.

4.2.9 Driving on Inclines

- Be aware that when travelling on steep or long downhill slopes, depending on how hard and frequently the brakes are applied to slow vehicle down, the brakes may overheat, which will cause the brakes to be less effective.
- Pay attention to the LTA (Lateral Thrust Alarm) which will indicate if the vehicle is operating on too much of a slope. Take extra care when travelling on a downhill slope as the vehicle will be less stable.
- Be careful when turning around blind corners or coming to the top of an incline. There could be obstructions in your path. Prepare for the unexpected.

4.2.10 Driving on Uneven Terrain

When driving on uneven terrain, slow down and pay attention to the LTA (Lateral Thrust Alarm) which will indicate if the vehicle is operating on too much of a slope. Avoid uneven terrain as much as possible as the GO-4 EV is not suited for driving on significantly uneven terrain.

4.2.11 Driving in Near or Below Freezing Temperatures

- The vehicle will have less traction in cold, wintry conditions, especially when driving on snow or ice. This will reduce the vehicle's acceleration, braking and cornering performance. Always slow down when driving in such conditions.
- Be aware that "black ice" could be present. This is a nearly invisible layer of ice that can form on the road when temperatures are near or below freezing.
- Be aware that the wheels will lock up more easily under braking.
- Be sure to clear all windows, exterior lights and indicators, as well as license plates of snow and ice before driving the vehicle. Clear the area around the vehicle so that you do not have to drive over high or uneven areas of snow.
- Avoid driving over uneven snow and on ice when possible.

4.3 Starting the Vehicle

Before you start your vehicle, do the following:

1. Make sure the drive selector switch is in park and the parking brake is set.
2. If the vehicle has been charging, disconnect the charging cable.
3. Do a quick exterior check.
 - a) Check the overall condition of vehicle.
 - Look around and under the vehicle for leaks.
 - Check that tires are inflated correctly and are not damaged in any way.
 - Check that there is no damage that may affect the operation of the vehicle.
 - b) Make sure there are no obstructions, such as pedestrians, ice, or any dangerous conditions, and that you have a clear safe path for entering traffic.
4. Adjust the seat for easy access to switches and controls.
5. Adjust side mirrors and rear-view mirror for a clear view behind and to the sides of the vehicle.
6. Fasten seat belt. See section 3.9.2 - Seat Belt for more details.

To start vehicle:

1. Depress brake pedal.
2. Verify that the drive selector switch is in park position. **Note:** Vehicle will not start if the vehicle is in the forward or reverse drive modes.
3. Turn key all the way to starting position for one second until drive locked alert on the digital display disappears, then release.
4. Disengage parking brake, select drive direction, slowly release brake pedal, gently press accelerator pedal.

4.4 Stopping and Leaving Vehicle:

To stop the vehicle:

1. Fully stop vehicle with brake pedal.
2. Put drive selector switch in park.
3. Apply parking brake.
4. Turn vehicle off by turning key to the lock position and remove key.

WARNING: When leaving the vehicle on an uphill or downhill grade, the vehicle should be "curbed" (front wheel positioned and pointed towards the curb so that downhill momentum of the vehicle should it roll, will force the tire against the curb).

WARNING: Even if the parking brake is pulled, the operator must not leave the vehicle while it is in the forward or reverse drive mode. The drive mode selector must be in park if the operator is leaving the vehicle.

4.5 Electromagnetic Brake (EMB)

The GO-4 EV has an integrated electromagnetic brake. It will engage in park when at a full stop and release in forward or reverse, assuming the ignition procedure was followed. Allow one full second for the EMB to engage with your foot on the brake.

The EMB is also operated as an additional hill locking feature. If operating the vehicle on hills, the magnetic brake will engage if it senses the vehicle moving in the opposite direction of your drive selection. If for example while driving uphill in forward, the vehicle is slowed and begins moving in reverse while still in forward, the brake will engage and stop the vehicle. Your foot must be completely off the brake and accelerator for the hill locking feature to activate. To release the EMB, simply touch the accelerator pedal and accelerate with the drive selector in the correct direction, or restart your ignition procedure.

WARNING: The EMB is not intended to replace your parking brake. Relying strictly on the EMB will cause premature wear and replacement. Always use your parking brake as needed, as you would with any other vehicle.

CAUTION: If power is lost from the main battery pack or the 12 volt battery it will not be possible to disengage the EMB. If this occurs the vehicle should be towed with the rear wheels on dollies as the EMB locks the rear wheels from moving. Alternatively, the EMB can be manually backed off. **WARNING:** The process of manually backing off the EMB is to be performed by certified technicians only. If the EMB is manually backed off, ensure that the bolts have been retightened to the appropriate torque specification before using the vehicle again. See service manual for details of this process.

4.6 Charging

4.6.1 Safety Information

WARNING: Before connecting your charger, check that the vehicle is parked and off.

WARNING: Charging the high voltage battery under certain conditions is a potential source of shock or serious injury. Example conditions to avoid are:

- Charging during an electric storm
- Handling the charger with wet hands or having the cable near water.
- Using the charger if it seems broken or damaged.

WARNING: The GO-4 EV has a 96V high voltage battery, running at times up to 400 amps of current. **NEVER** attempt to check any connections on the high voltage battery. This must be checked by qualified technicians only.

WARNING: The vehicle cannot be moved while charging.

WARNING: Be sure to always disconnect the charging cable before starting or moving the vehicle.

4.6.2 Charging Port

The charging port is located on the right side of the vehicle near the top front corner of the rear fender, just behind the cab area. Make sure the passenger door is closed before opening the lid and connecting the charger. Just in front of the fender you will see the charger lid, open the lid with the lid key. The charging port accepts standard J1772 charger plugs.

WARNING: Be very careful opening the right sliding door when charging. The door will hit the lid if fully opened.



Figure 29: Charging Port



Figure 30: Typical J1772 Adaptor

4.6.3 Charging Process

The GO-4 EV can be charged with a Level 1 (120 volt) or a Level 2 (240 volt) charger.

Level 1 Charging

Level 1 charging equipment provides charging via a 120V, alternating current (AC) plug and requires a dedicated circuit.

Level 1 charging with a charge cord can be used with any dedicated 15 amp standard household outlet.

Level 1 charging with a dedicated hardwired EVSE (electric vehicle supply equipment) Level 1 wall charger will need a dedicated 120V, 20 amp circuit.

CAUTION: Level 1 charging is for light usage only, it should not be used to regularly charge your GO-4 EV in fleet or commercial applications.

Level 2 Charging

Level 2 charging equipment provides charging via a 240V, alternating current (AC) plug and requires a dedicated circuit.

Level 2 charging with a charge cord can be used with a dedicated 240V, 20 amp AC plug and circuit.

Level 2 charging with a dedicated hardwired EVSE (electric vehicle supply equipment) Level 2 wall charger can also be used.

Typical charge times are:

Level 2 - 240 volt charging: 5-7 hours for a complete charge

Level 1 - 120 volt standard charging: 10-16 hours for a complete charge.

Steps to Charge Vehicle:

1. **WARNING:** Before connecting your charger, check that the vehicle is parked and off. When charging the vehicle is not permitted to move in any drive direction.
2. Couple J1772 plug (A) with J1772 charging port (B) on the vehicle.
3. Wait for the vehicle to charge to the desired level.
4. Press the release button (D) on the J1772 plug, to conclude charging.
5. Uncouple the J1772 plug from the charging port (B).

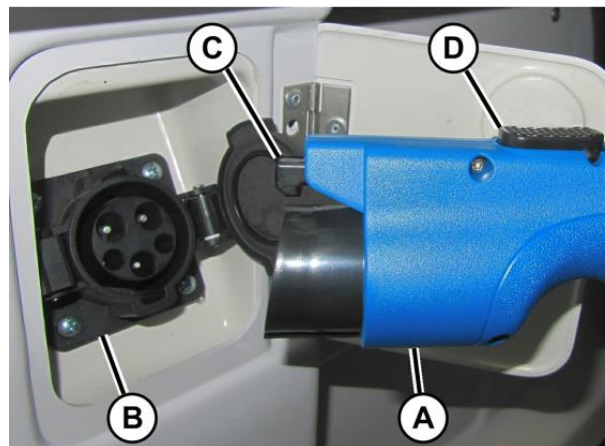


Figure 31: Charging Port and J1772 Plug

The unit will automatically stop charging when the battery is fully charged. To verify your charge, check the SOC readout in the bottom left of the center display panel on the dash the percentage should be near 100%.

If charging is not working, please verify your contact source. Is the J1772 properly connected? Is your breaker not dedicated, and potentially tripped? Check the panel to verify.

NOTE: It is recommended to charge the vehicle before the SOC drops below 20% to extend the life of the main battery pack.

IMPORTANT: It is critical to charge the battery at least once per month. Lithium ion batteries can be damaged by allowing the battery to completely deplete. If the vehicle will not be used for an extended period of time please charge it at least once a month. It is also highly recommended to store the vehicle indoors and away from freezing temperatures. Failure to maintain the battery in good operating condition will void the manufacturer's warranty. Do not leave the main battery for many days at a severely depleted charge.

4.6.4 Balancing

The purpose of battery balancing is to maximize the battery pack's useable capacity. In all battery packs each cell will have a slightly different capacity. The total capacity of the entire battery pack is limited by the lowest capacity cell.

The battery management system equipped on the GO-4 EV removes charge from the highest capacity cells in the pack through the balancing process in order to equalize all the cells and maximize the capacity of the system.

Balancing occurs while the vehicle is connected to a charger, towards the end of the charge cycle. Typically balancing starts when the main battery pack is about 80% fully charged.

NOTE: Balancing continues until all cells are balanced and may continue after the charger has been automatically switched off by the vehicle.

IMPORTANT: To keep your battery in best health it is highly recommended for the vehicle to stay connected to the charger for at least 3 to 4 hours after the battery has been fully recharged. This is to allow for battery balancing to occur on a regular basis. This will maximize the useable capacity of the battery.

4.7 EV Range:

The range of the GO-4 EV varies according to type of usage and usage conditions. Be sure to regularly pay attention to the range of the vehicle as it takes substantially longer time to charge an electric vehicle than it does to fill up a gas vehicle.

IMPORTANT: You should no longer continue driving at 0% SOC as it will damage the battery, if 0% is reached, park the vehicle and call a tow truck.

4.7.1 Factors Affecting Range

Range: Up to 100 miles

The manufacturer's estimated cruising range for the GO-4 EV is a maximum of 100 miles, based on measured range tests at our facility in Manitoba, Canada. The test region is a flat prairie terrain. Tests were completed in varying temperatures of 35 - 75°F. Actual range will vary. Some of the factors influencing range include driving conditions, terrain, speed, vehicle load, use of air conditioner or heater, tire inflation, acceleration and braking, and battery temperature. Combined these factors can decrease driving range by more than 50 percent. In fact, battery temperature alone can decrease range by 15 percent in extremely cold conditions.

4.7.2 Tips for Extended Range

- Keep tires properly inflated. Low tire pressure reduces range.
- Avoid unnecessary loads. Weight reduces range.
- Slow down in wet conditions. Wet and muddy roads increase rolling resistance and decreases range.
- Lower or shut off the heater when the cabin reaches a comfortable temperature and recirculate air to maximize efficiency.
- Using the heater or air conditioning continuously at the highest setting can reduce range by as much as 30-50%.
- Use econo mode.
- Do not leave AC, radio, additional lights and strobes running if not actually needed.
- Avoid hard acceleration unless required.

4.7.3 Typical Range Scenarios

The chart below provides estimates for typical ranges in a variety of driving scenarios:

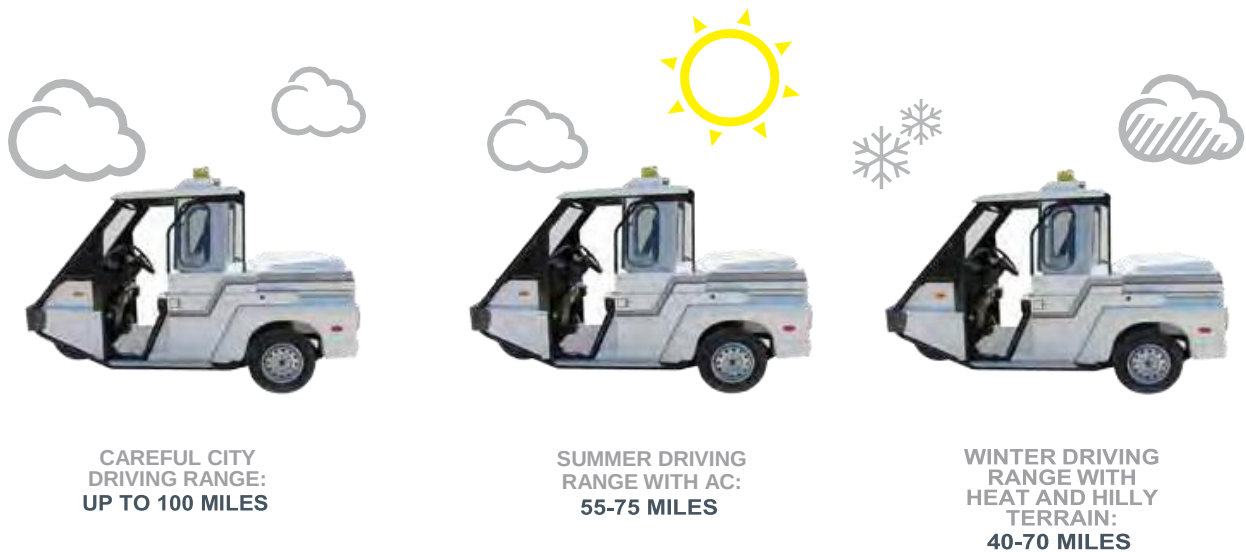


Figure 32: Summary of Expected Ranges for Various Driving Conditions

Condition	Range
Manufacturer's estimated cruising range as measured by the test procedure	Up to 100 miles
Careful city driving, no heat or air conditioning, mild outside temperatures, normal terrain	Up to 100 miles
Winter driving (approximately 32°F) with heat	55-75 miles
Summer driving with A/C	55-75 miles
Extreme terrain with heat or A/C	40-70 miles

As an EV user, you can have a great influence on the actual range achieved. Smooth acceleration and minimized use of accessory loads, such as the heater, will greatly increase your range between battery charges. As an example, driving at a constant speed, which puts a stable load on the battery, is much more efficient compared to driving with hard acceleration and braking. Although lithium ion phosphate batteries are among the longest lasting batteries on the market, they will eventually hold less charge and have to be fully or at least partially replaced.

4.8 Tire Pressure

Check tire pressure each time you fill up with fuel. Maintain tire pressure of 35 psi (241 kPa) – front; and 35 psi (241 kPa) – rear. See VIN sticker for additional tire information.

5. SERVICE AND MAINTENANCE

5.1 Lifting the Vehicle

5.1.1 Using a Jack:

WARNING: IMPORTANT: Read the following steps and warnings before attempting to lift the vehicle. Failure to follow these warning and guidelines may result in bodily injury or death

WARNING:

- Only lift the vehicle in an area with firm, level ground.
- Place the drive selector in the park position before lifting. When one rear wheel is lifted off the ground, having the vehicle in the park drive mode will not prevent the vehicle from moving and possibly slipping off the jack.
- To prevent inadvertent vehicle movement, always set the parking brake fully. Block the other wheels still in contact with the ground at front and rear.
- Only lift one point at a time. Do not attempt to lift vehicle off ground entirely using a jack and jack stands. If the entire vehicle needs to be lifted off the ground, use a hoist.
- Do not lift either rear tire more than 1 in (25 mm) off the ground.
- Do not lift the front tire more than 6 in (152 mm) off the ground.
- Use the correct front (A) and rear (B) jacking points on the vehicle as shown below. Never use the bumpers or any other part of vehicle for jack support. Jacking points are marked with "Place Jack Here" decals.
- Do not exceed the jack's maximum permissible load. The jack provided is for emergency wheel and tire change only.
- Never go beneath the vehicle while using a jack.
- To reduce the risk of injury due to inadvertent jack lowering or jack failure, support raised position with a jack stand.
- Do not start or run the vehicle while the vehicle is jacked up.
- Never attempt vehicle repairs in the traffic lanes of a public road or highway. Always move the vehicle completely off the road and to the shoulder before attempting repairs. If you cannot find a firm, level place off of the road, call a service truck.
- Follow all warnings and instructions to reduce the possibility of injury or damage.

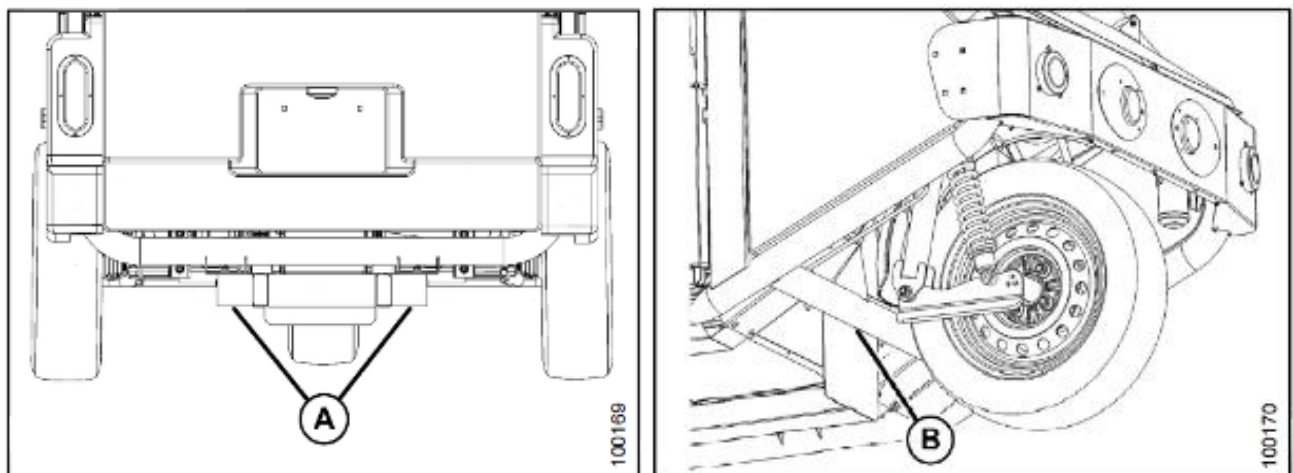


Figure 33: Diagram of Front and Rear Jacking Points

5.1.2 Using a Hoist:

WARNING: The points used for lifting the vehicle on a hoist are not the same as the jacking points. The correct hoist lift points are on the outer chassis tubes under the driver compartment. These points are outlined in red in the image below. The vehicle must be supported at all four points when being lifted or while raised.

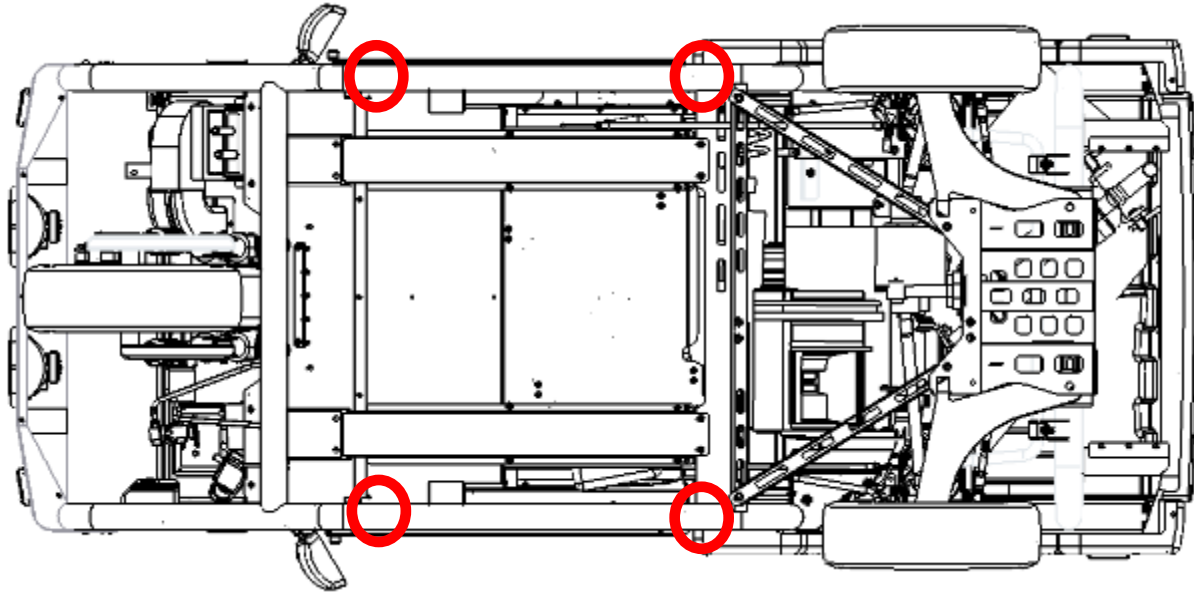


Figure 34: Underbody View of Hoist Lift Points

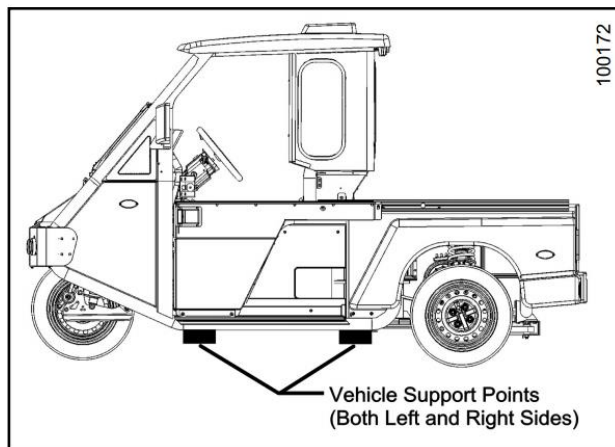


Figure 35: Side View of Hoist Lift Points



Figure 36: GO-4 EV on Hoist

5.2 Towing

If the vehicle needs to be towed, call a professional towing service.

Since the GO-4 EV is a 3 wheeled vehicle, extra care should when the vehicle is being towed. The recommended method to tow or transport this vehicle is using a flatbed truck. Alternatively, the GO-4 EV can be loaded onto the decks of various trucks or trailers or be towed using wheel dollies. If towing the vehicle using wheel dollies, both the rear wheels must be supported by the dollies, as the GO-4 EV is a rear wheel drive vehicle.

WARNING: Never tow vehicle with just a rope or chain. Never tow the vehicle by the method of a suspension (front or rear) lift.

WARNING: Always exercise extra caution when towing the vehicle. Be sure to take the following precautions:

- Do not permit anyone to ride in the GO-4 EV while it is being towed.
- Drive at a reduced speed.
- Turn slowly and carefully.
- Avoid any abrupt driving maneuvers.
- Avoid steep inclines and sharp turns.

CAUTION: If power is lost from the main battery pack or the 12 volt battery it will not be possible to disengage the EMB. If this occurs the vehicle should be towed with the rear wheels on dollies as the EMB locks the rear wheels from moving. It will not be possible to load the vehicle onto the deck of a truck or trailer in this case unless the EMB is manually backed off. **WARNING:** The process of manually backing off the EMB is to be performed by certified technicians only. If the EMB is manually backed off, ensure that the bolts have been retightened to the appropriate torque specification before using the vehicle again. See service manual for details of this process.

WARNING: Failure to follow proper towing procedures will cause damage to the vehicle and may result in bodily injury.

5.3 Brake Fluid

Under normal circumstances, your vehicle should not use brake fluid. However, expect the level of the brake fluid to slowly fall as you put more mileage on your vehicle and the brake pads wear. Check the brake fluid at least once a year. This is done by looking at the fluid level in the plastic see-through reservoir on the master cylinder. The fluid level should be at or slightly below the maximum line. The brake fluid reservoir (A) is located under the front hood on the right side of the vehicle.

WARNING: If you use brake fluid that is not DOT-3 or DOT-4, you will cause permanent damage to your brakes. Never reuse brake fluid that has been drained from the system or that has been allowed to stand in an open container for an extended period of time.

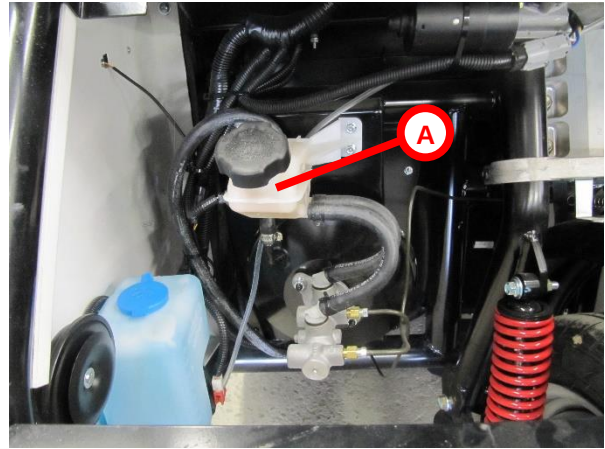


Figure 37: Brake Fluid Reservoir Location

WARNING: Do not let the reservoir for the master cylinder run dry. This may cause the brakes to fail.

Adding Fluid

If the fluid is low:

1. Carefully clean and remove the cap from the reservoir.
2. Fill the reservoir to the maximum line with a DOT-3 or DOT-4 brake fluid.

WARNING: Do not fill the reservoir above the maximum line.

5.4 Windshield Washer Fluid

The windshield washer fluid reservoir (A) is located under the front hood of the vehicle on the right side. To add fluid, remove the cap (B) and fill as necessary.

WARNING: Windshield washer fluid is a poisonous and hazardous substance. Read and follow all warnings and instructions associated with the product you are using.

WARNING: Do not use add any substances other than windshield washer fluid to the reservoir. Other substances could smear on the windshield or freeze, reducing visibility or they could damage your vehicle.

WARNING: Check that the freezing point of the windshield washer fluid being used is adequate for the climate/season.



Figure 38: Windshield Washer Fluid Reservoir

5.5 Tires

5.5.1 Tire Choice

WARNING: When replacing tires, it is recommended to use tires of the same size, speed rating, load range and radial construction as originally installed on the vehicle. Use of any other tire specification may seriously affect ride, handling, speedometer/odometer calibration, vehicle ground clearance, and tire clearance to the body and chassis. Refer to VIN sticker for tire size and proper inflation pressure.

Uniform Tire Quality Grading

The uniform tire quality grading (UTQG) ratings of tires should be taken into account when selecting tires. Westward Industries strongly recommends that any replacement tires have UTQG ratings equal to or better than the original tires supplied with the vehicle.

Grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

DOT Quality Grades:

TREADWEAR: Numerical Value

TRACTION: AA, A, B, C

TEMPERATURE: A, B, C

All Passenger Car Tires Must Conform to Federal Safety Requirements in Addition to These Grades

Treadwear:

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half ($1\frac{1}{2}$) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

Traction:

The traction grades, from highest to lowest, are AA, A, B, and C. Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. Warning: The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature:

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law. Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

5.5.2 Tire Pressure

Maintain tire pressure of 35 psi (241 kPa) – front; and 35 psi (241 kPa) – rear. Check tire pressure each time you fill up with fuel.

5.5.3 Tire Rotation

To equalize tire wear, tires may be rotated. If there is unusual wear on the tire tread do not rotate until the cause of unusual or uneven tire wear is determined and corrected.

Front and rear tires perform different jobs and can wear differently depending on the type of the vehicle and driving habits. To equalize wear and extend tire life, rotate tires every 10,000 miles or 320 hours.

5.5.4 Changing a Tire

WARNING:

- Use the correct front and rear jacking points on the vehicle. Never use the bumpers or any other part of vehicle for jack support.
- Do not exceed the jack's maximum permissible load. The jack provided is for emergency wheel and tire change only.
- Never go beneath the vehicle while using the jack.
- Do not start or run the engine while the vehicle is jacked up.
- Never attempt vehicle repairs in the traffic lanes of a public road or highway. Always move the vehicle completely off the road and to the shoulder before trying to change a tire. If you cannot find a firm, level place off of the road, call a service truck.
- Follow jacking instructions to reduce the possibility of bodily injury.
- When one rear wheel is lifted off the ground, having the vehicle in the park drive mode will not prevent the vehicle from moving and possibly slipping off the jack. To prevent inadvertent vehicle movement while changing a tire, always set the parking brake fully. Block the other two wheels at front and rear.
- Read section 5.1 Lifting the Vehicle and follow all warnings and guidelines in the section.
- Removal and installation of the front wheel is to be performed by certified service technicians only. Do not attempt to remove or change the front wheel yourself. If the front tire becomes flat have your vehicle towed to an authorized Westward GO-4 dealer or service center.

Torque Specifications:

Axle Shaft Bolts:

Torque in three steps:

1st - 25 lb-ft. (33.9 N-m)

2nd - 45 lb-ft. (61 N-m)

Final - 55 lb-ft. (74.6 N-m)

Wheel Lug Nuts: 70-80 lb-ft. (94.9 – 108.5 N-m)

WARNING: It is imperative that the wheel lug nuts are tightened in a crisscross sequence as shown below so that the wheel is evenly torqued down. Do not over torque the lug nuts.

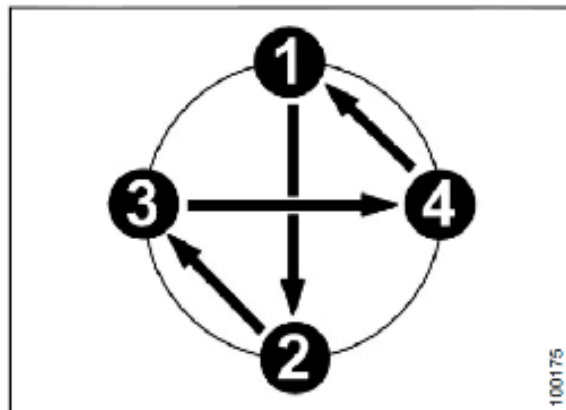


Figure 39: Lug Nut Tightening Sequence for Wheel with Four Lug Nuts

Changing Front Tire

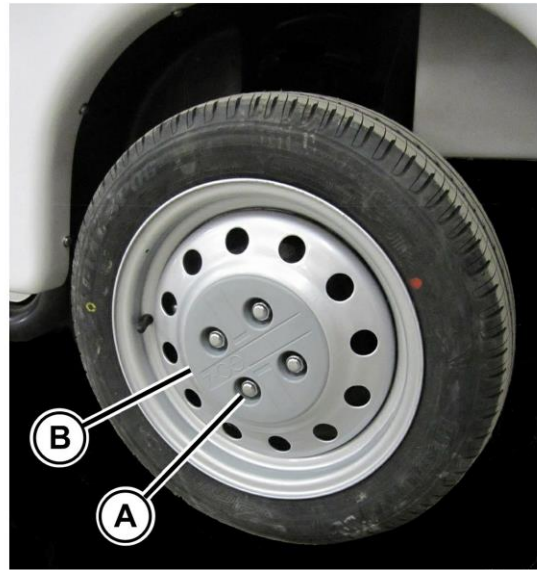
WARNING: Removal and installation of the front wheel is to be performed by certified service technicians only. Do not attempt to remove or change the front wheel yourself. If the front tire becomes flat have your vehicle towed to an authorized Westward GO-4 dealer or service center.

Changing Rear Tire

Removing Rear Wheel:

WARNING: To avoid bodily injury or death from unexpected start-up of vehicle, turn off the vehicle and remove the key from the ignition before starting this procedure.

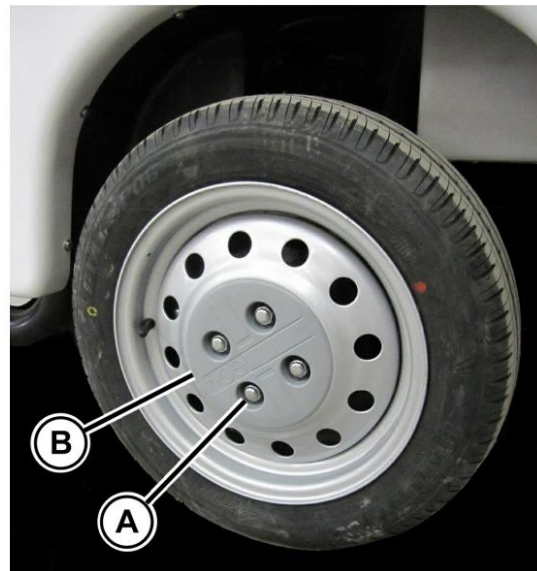
1. Break wheel lug nuts loose but do not remove.
2. Raise vehicle. Refer to section 5.1 - Lifting the Vehicle and follow all warnings and guidelines in the section.
3. Remove four lug nuts (A). Retain lug nuts.
4. Remove wheel cover (B) and tire from wheel drive hub.



Installing Rear Wheel:

WARNING: To avoid bodily injury or death from unexpected start-up of vehicle, turn off the vehicle and remove the key from the ignition before starting this procedure.

1. Align and install tire on wheel drive hub.
2. Align and place wheel cover (B) on rim.
3. Install the four lug nuts (A). Torque nuts to 70 ft-lb [95 Nm] following the proper tightening process described in the Torque Specifications section found at the start of section 5.9.4 Changing a Tire. Torque nuts in sequence twice.
4. Lower vehicle.



5.6 Fuses

The fuse block is located under the right-hand corner of the dash cover.

WARNING: Replace fuses with ones of the same amperage rating.

1. To gain access to fuses, remove the two dash cover retaining screws and gently lift the right hand corner of the cover, exposing the fuse blocks.
2. Remove fuse by grasping each side of it and pulling.
3. Replace fuse by pushing gently in the center of fuse until it seats in place.

There are also 3 fuses in the high voltage control box. A main battery fuse, heater fuse, and controller fuse. **WARNING:** These should only be changed by a qualified technician.

5.7 Vehicle Appearance

NOTE: When using any polish or chemical cleaner always read and follow the directions, warnings and cautions on the label.

Washing and Polishing

- To remove tree sap, insects and road tar; wash with a mild soap solution. Rinse immediately with clean clear water. The longer the time the above objects are on the vehicle, the tougher they are to remove.
- Wash your vehicle often to prevent dirt, salt, chemicals and other material from damaging the paint and other finishes. This is particularly important in areas where chemicals and salts are used on the roads.
- Slow down the corrosion process by applying a semi-annual coat of wax or polish.

WARNING:

- Do not direct high pressure water or solution from a close distance at the front wheel bearings or at the rear wheel bearings. High pressure water at close distances can bypass the seal and contaminate the lubricant causing premature wheel bearing failure.
- Wiping off dust or dirt with a dry cloth will scratch the finish and glass.
- Don't wash the vehicle in direct sun or when the surface is hot.
- When cleaning plastic surfaces use plenty of water and soft cloths to prevent scratching.
- Prevent caustic solutions such as perfume, cosmetic oil, etc., from coming in contact with plastic covers on gauges that may cause damage or discoloration. If the above come in contact, wipe off immediately.
- Test brakes to make sure they were not affected by the water.
- The vehicle should be washed and dried before applying wax or polish. Don't use a polish with a large amount of abrasives as these will damage surfaces.

5.8 Owner Maintenance Checks

The following list of vehicle checks and inspections should be performed at the intervals indicated.

Whenever You Stop to Charge

- Check that the vehicle is charging
- Look for underinflated tires.

At Least Monthly

- Check tire pressure. Check the tires when cold, not after a long drive.
- Check the operation of all exterior lamps including the brake lamps, turn signals, and hazard warning flashers.
- It is critical to charge the battery at least once per month. Lithium ion batteries can be damaged by allowing the battery to completely deplete. If the vehicle will not be used for an extended period of time please charge it at least once a month. It is also highly recommended to store the unit indoors and away from freezing temperatures. Failure to maintain the battery in good operating condition will void the manufacturer's warranty. Do not leave the unit for many days at a severely depleted charge.

At Least Twice a Year

- Check windshield wiper operation.
- Check and replace worn windshield wiper blades.
- Check for worn tires and loose wheel hub bolts.
- Check pressure in spare tire (option).
- Check headlamp alignment.
- Check the lap shoulder belt for wear and function.
- Check the heater, and air conditioning hoses for leaks or damage.
- Check the rear axle for any leaks.

At Least Once a Year

- Lubricate all hinges, checks, latches, rollers, and all outside key locks.
- Lubricate/replace the door rubber weatherstrips.
- Check air conditioning system (if so equipped) before the warm weather season.
- Clean door guide rails.
- Check brake fluid level.
- Clean battery connections on the small 12 V battery.
- Inspect the refrigerant amount.
- Inspect the A/C compressor operation.
- Inspect proper lubrication of front suspension. Use only approved Westward lubricant.
- Visual check of all high voltage wires, check for abrasions or wear.
- Clean and check condition of electromagnetic brake

5.9 Servicing

The GO-4 EV needs to be serviced as outlined below to maintain a high level of safety and dependability.

5.9.1 General Maintenance Schedule

MAINTENANCE ACTION	INTERVAL		
	Every 2500 miles (312 hours)	Every 5000 miles (625 hours)	Every 15000 miles (1875 hours)
Inspect front and rear disc brake pads and rotors as well as lines and hoses.	•		
Rotate tires and adjust air pressure.		•	
Replace brake fluid.			•
Inspect rear drive shafts, CV joints and boots.		•	
Inspect front suspension assembly.		•	
Lubricate front suspension pivot bushings.			•
Inspect steering operation and linkage.		•	
Inspect bolts and nuts on chassis and body.		•	
Inspect rear wheel bearings and rear suspension.		•	
Inspect front wheel bearings.		•	
Clean and inspect condition of the electromagnetic brake.		•	
Visually inspect high voltage wiring for wear.		•	
Clean battery connections and terminals on 12V auxiliary battery.		•	
Clean door rail guides.		•	
Lubricate all hinges, latches, rollers and key locks.		•	
Lubricate or replace door weatherstripping.		•	
Inspect brake and vacuum pump hoses for leaks or damage.			•
Inspect air conditioning hoses for leaks or damage (if vehicle is equipped with air conditioning).			•
Inspect refrigerant level (if vehicle is equipped with air conditioning).			•

5.9.2 Transaxle Maintenance Schedule:

After 100 hours:

- Check torque on M8 x 1.25 driveshaft bolts (tightening torque 25 lb·ft).

Every 500 hours:

- Check oil level.
- Check condition of all rubber components, such as polyurethane isolation bushings.
- Inspect transaxle for oil leaks.

After 1000 hours and every 2000 hours or 12 months thereafter:

- Change the oil. See service manual for details. Use SAE 75W-90 GL-5 gear oil. Capacity is 0.5 liters.

Note: Only use Westward approved replacement parts.

6. SPECIFICATIONS

MOTOR

- 96 Volt, 55 peak HP (41 kW), 3 phase AC motor

BATTERY

- 96 Volt, lithium ion battery pack

TRANSMISSION

- Single speed transaxle
- Forward/reverse switch on dash

DIMENSIONS

- 72" Overall height with cab
- 120" Overall length
- 54" Overall width
- 236" Outside turning diameter
- 128" Inside turning diameter
- 83" Wheelbase

BRAKING

- Hydraulic disc brakes on all three wheels with dual master cylinder
- Parking – Hydraulic over mechanical
- Regenerative braking

ELECTRICAL SYSTEM

- J1772 charge port, 120V or 240V charging
- Onboard 3.3 kW charger
- Charges in 5-7 hours with 240V, 10-16 hours with 120V

SPEED

- Electronically governed at 40 or 45 mph

COLOR

- White with all black frame accents (standard)

RANGE

- Up to 100 miles in ideal conditions

SUSPENSION

- Front – Leading link suspension, polyurethane isolation system
- Rear – Independent McPherson strut

CLIMATE CONTROL

- Electric ceramic heater unit
- Air conditioning optional

STEERING

- Adjustable tilt steering wheel with center mounted horn

TIRES

- 165/60 14" Low rolling resistance all-season radials

FEATURES

- 3-Wheel platform with "Tube guard" tubular steel frame
- White aluminum and plastic body panels
- Storage box with lockable cover
- Sliding metal doors with independently sliding windows
- Steel front and rear bumpers
- 3 point shoulder harness seat belt
- Outside rear view mirrors
- Electric windshield wiper with intermittent control and windshield washer
- Dome light, floor mat
- 12V DC accessory port for phone, radio, etc.
- LTA (lateral thrust alarm) safety device
- Optional rear view back up camera

SEAT

- One passenger, adjustable forwards and backwards, adjustable back and headrest
- 3 point seatbelt

WEIGHTS

- Vehicle weight: 1700 lbs
- GVWR: 2300 lbs
- Rated capacity: 600 lbs including operator

7. WARRANTY

7.1 Warranty Service

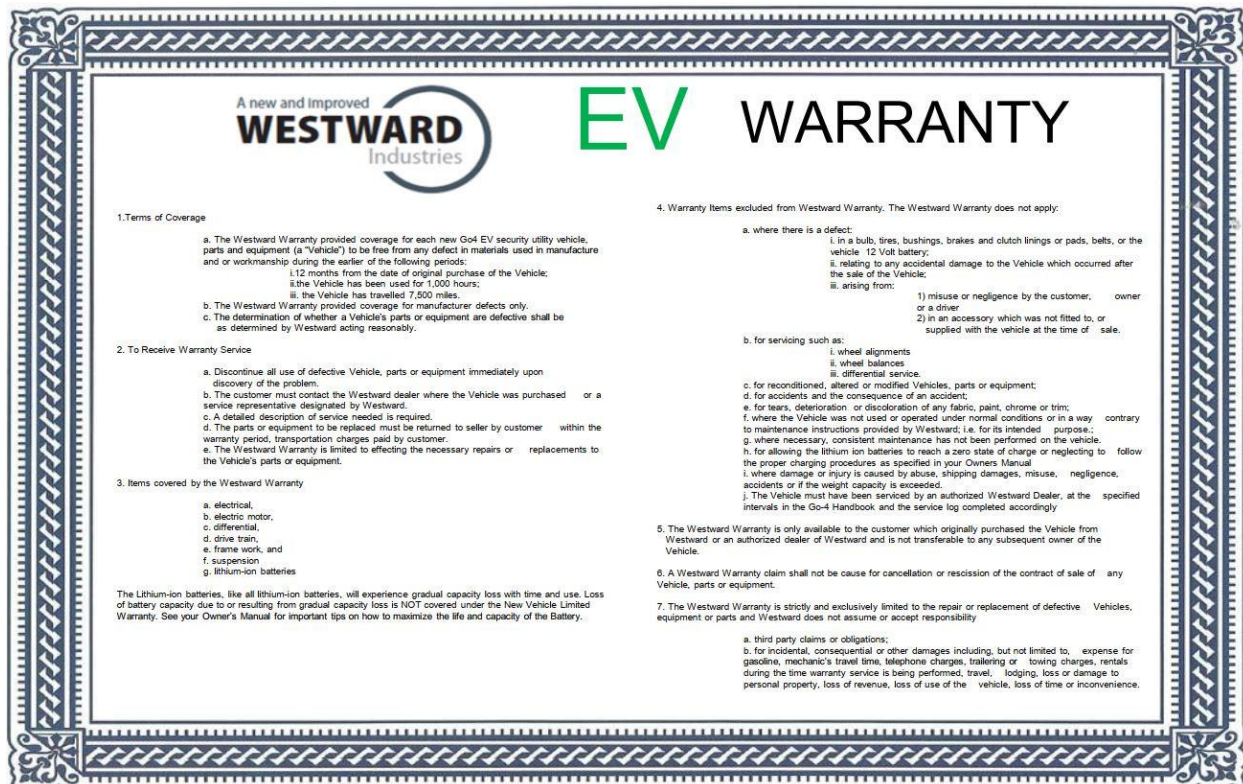
To make a claim under warranty, contact the authorized Westward Industries GO-4 dealer or agent within 30 days upon realizing a problem with your vehicle. We recommend having all warranty work done by the Westward Industries GO-4 dealer or agent that sold you the vehicle. Or, if the selling dealer is not available, any authorized GO-4 agent or dealer. Remember your GO-4 EV vehicle must be delivered to an authorized Westward Industries GO-4 dealer or agent within the warranty period, and all warranty work must be done by an authorized Westward Industries GO-4 dealer or agent. A proof of purchase will be needed by the dealer or agent to follow up any warranty claim.

Items not covered by warranty:

1. Vehicles subject to misuse, neglect, negligence or accident
2. Normal service work beyond the repair and replacement of defective parts.
3. Vehicles that have been modified or altered so as to adversely affect their operation, performance, or durability or to change their intended use.
4. Normal service requirements arising during the warranty period such as rear axle service or ignition adjustment and wear of brake pads.
5. Any expense when your vehicle has warranty done on it such as towing charges to and from your Westward Industries GO-4 dealer or agent.
6. Normal maintenance, adjusting or replacing of items such as fuses.
7. Vehicles that were not maintained or operated as outlined in the GO-4 EV operator's manual.
8. Periodic checking of fluid levels or adding of lubricants.
9. Check-up service, or diagnosis, inclusive of the high voltage battery pack.

refer to warranty statement for greater detail

7.2 Warranty Statement



8. OWNERS' OBLIGATIONS AND RESPONSIBILITIES

Normal maintenance and replacement of service items are the responsibility of the owner and as such are not considered defects in material and workmanship within the terms of the warranty.

The need for, and frequency of, service maintenance will depend on the type of use and manner of operation of the vehicle.

See your Westward Industries GO-4 dealer or agent for proper care and maintenance of your vehicle. Proper care and maintenance will keep your operating costs to a minimum.

To assure a warranty claim, it is the owner's responsibility to:

- Maintain all components in proper adjustment and to service the vehicle as per the GO-4 EV operator's manual
- Ensure proper lubrication of all components
- Maintain the correct tire air pressure
- Properly maintain and charge the battery in an appropriate environment
- Maintain proper documentation

8.1 Changes in Address or Ownership (For Owners/Operators Only)

To comply with the National Traffic and Motor Vehicle Safety Act of 1966, the Williams Steiger Equipment Safety and Health Act of 1970 and the Consumer Product Safety Act, changes in address and/or ownership are to be reported to the manufacturer.

If the name of the owner of the vehicle or the owner's address changes, see your Westward Industries GO-4 dealer who has vehicle registration change forms. These should be filled out and:

1. Returned to the manufacturer.
2. Keep one copy for dealer records.

To find your local Westward Industries GO-4 dealer, inquire to:

Westward Industries Ltd.
75 Archibald Street
Winnipeg, Manitoba
Canada, R2J 0V7

Telephone: 1-204-594-4100
Fax: 1-204-231-2607
Email: info@westwardindustries.com
Website: www.westwardindustries.com

Personal Information

Name _____

Address _____

Telephone _____

Fax _____

Local Westward Industries GO-4 Dealer

Name _____

Address _____

Service Manager _____

Telephone _____

Fax _____

GO-4 EV Information

VIN # _____

Engine # _____

8.2 Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Westward Industries Ltd..

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Westward Industries Ltd..

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to <http://www.safercar.gov>; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.