

ICON

ELECTRIC VEHICLES

OWNER'S MANUAL

Table of Contents

California Proposition 65	6	Exclusions:	17
Contact Us	8	Vehicle Model Information	18
Introduction	10	Seatbelts.....	27
About This Publication.....	11	Fastening and Unfastening the Seatbelts.....	28
Illustrations.....	11	Fastening the Seatbelts.....	28
About This Manual	11	Unfastening the Seatbelts.....	28
Practice Safety	12	Seatbelt Precautions	28
Safety Considerations.....	13	Seatbelt Extensions	29
Safety Precautions During Maintenance.....	13	Key	30
Operator Safety	14	Vehicle Key.....	31
Warranty Information	15	Vehicle Direction Selector	31
Terms and Conditions for Electric Vehicles.....	16	Lift Bed	32

Exterior Mirrors	34	Operator Safety	47
Instrument Cluster	36	AGM Leoch 6, 8 Volt	48
Seats	38	Trojan Flooded Lead Acid 6, 8 Volt.....	48
Front Seats.....	39	Battery Pack Service Warnings.....	49
Rear Seats.....	39	AGM Battery Warning	50
High Voltage Batteries	40	Power Save Mode.....	51
Battery Disconnection	41	Brakes	52
Style A Electric Vehicle Battery Configuration.....	41	Brake Precautions.....	53
Style B Electric Vehicle Battery Configuration.....	41	Locating the Brake Fluid Reservoir	53
Style C Electric Vehicle Battery Configuration.....	41	Checking the Brake Fluid	53
Battery Cable Removal - Gasoline.....	41	Brake Fluid Specification	53
Battery Installation	42	Magnetic Brake.....	54
Battery cables diagram	42	How to Manually Disengage the Magnetic Brake.....	54
Battery Preparations	42	Rear View Camera	55
Battery Maintenance	43	Load Carrying	57
Common mistakes made by flooded battery owners.....	43	Towing	59
Description of Charger.....	44	Towing Warnings.....	60
Power Recharging Procedure.....	44	Fuses	61
Power Requirements Necessary to Recharge Vehicle.....	45	Fuse Precautions.....	62
Description of Batteries	46	Maintenance	63

Wheel Replacement	64	When Should Water be Added to Batteries.....	74
Brake Adjustment	64	How Often Should Water be Added to Batteries.....	74
Jacking Points	64	When to Equalization Charge	74
Periodic Maintenance Chart.....	65	Vehicle Starting Procedure	75
Storing the Vehicle.....	66	Starting Procedure	76
Preparation	67	Pre-operation Procedure	76
Operation and Control.....	68	Pre-Operation Checklist.....	76
Turning on Main Switch.....	69	Reverse Alarm.....	77
Key Switch.....	69	Brake Pedal Operation.....	77
Forward/Reverse Switch.....	69	Accelerator Pedal Operation	77
Instrument Cluster	70	Reporting Safety Defects	78
Combination Switch.....	70	Reporting Safety Defects in the US.....	79
Brake Pedal	70	Reporting Safety Defects in Canada.....	79
Wheels & Tires	71	Notice.....	80
Tire Conditions	72		
Tire Air Pressure.....	72		
Tire Wear Limit	72		
Tire Precautions	72		
Scheduled Maintenance.....	73		
Proper Electrolyte Level.....	74		

6

California Proposition 65



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.



Warning: Battery posts, terminals and related accessories contain lead and lead compounds, chemical known to the State of California to cause cancer and reproductive harm. Wash your hands after handling.

8

Contact Us

ICON Electric Vehicles

(866)426-6380 sales@iconev.com

4406 Madison Industrial Lane, Suite 200

Tampa, FL 33619

www.iconev.com

10

Introduction

About This Publication

Thank you for your purchase of an ICON Electric Vehicle. This Owner's Manual contains information you will need to read and understand for proper operation, maintenance, and care of your new ICON. A thorough understanding of this information will help you achieve the maximum use and enjoyment of your new ICON. If you have additional questions, or do not completely understand anything about the operation or maintenance of your new ICON please contact your ICON dealer, or visit iconev.com.

Note: Use and operate your vehicle with all applicable laws and regulations.

Note: Pass on all printed owner's information when selling this vehicle.



Warning: Driving while distracted can result in loss of vehicle control, crash and injury. We strongly recommend that you use extreme caution when using any device that may take your focus off the road. Your primary responsibility is the safe operation in your vehicle. We recommend against the use of any hand-held device while driving and encourage the use of voice-operated systems when possible. Make sure you are aware of all applicable local laws that may affect the use of electronic devices while driving.

Illustrations

Some of the illustrations in this manual could show features as used in different models, some can appear different to you on your vehicle.

About This Manual

By reading this manual you will have a thorough understanding of your ICON vehicle.

Important Information



WARNING: The safety alert symbol means attention! Be alert! Your safety is involved!

Failure to follow all WARNING instructions could result in severe injury or even death to the vehicle occupants or bystanders.

CAUTION: Messages with this heading describe special precautions that should always be taken to avoid damaging your vehicle.

Note: ICON Electric Vehicles continually strives to produce the highest quality possible. Although this manual contains the latest product information available at the time of printing, there may be slight differences between this manual and your particular vehicle. Should you have any questions, please contact your ICON dealer or visit iconev.com.

12

Practice Safety

Safety Considerations

Safety Precautions During Maintenance

When performing maintenance, follow all safety instructions contained in the manufacturer's operation and service manuals, as well as the following safety procedures:

- Properly immobilize vehicle before beginning any maintenance to avoid any unexpected vehicle movement.
- Properly block chassis before working underneath vehicle to avoid any unexpected vehicle movement.
- When working on the fuel system or the battery, do not smoke, or allow any sparks or open flames near the vehicle, to avoid any fires or explosions.
- Before working on an electric vehicle, disable the vehicles electrical system in accordance with the manufacturer's instructions to avoid electrical shock or damage to the electrical system.
- Use only properly insulated tools when working on electrically powered vehicles or around batteries to avoid electrical shock or damage to the electrical system.
- Maintain all safety devices including brakes, steering mechanisms, warning devices, and governors, in a safe operating condition. Do not modify these safety devices as supplied by the manufacturer.
- After each maintenance or repair, the vehicle must be driven by a qualified, trained, and authorized person - in an area free of pedestrian traffic - to ensure proper operation and adjustment.
- Record all maintenance performed in a maintenance record log by date, name of person performing maintenance, and type of maintenance. Periodically inspect maintenance log to ensure accurate and complete entries.
- Provide operator comment cards to assist in identifying non-periodic maintenance needs for specific vehicles.
- Maintain in a legible condition all nameplates, warnings, and instructions provided by the manufacturer.

Operator Safety

- Read this manual and safety instructions labels on the vehicle before driving.
- Be sure that passengers are seated and belted.
- Turn key on.
- Select “forward” or “reverse”
- Push the accelerator to start moving and use the parking pedal to stop.
- Drive safely according to the terrain, visibility, and driving conditions; drive carefully in crowded and slippery conditions.



Warning: Do not attempt to cross a deep or flowing body of water. Failure to follow this instruction could result in the loss of control of your vehicle, personal injury or death.



Warning: If you are driving in slippery conditions that require tire chains or cables, then it is critical that you drive cautiously. Keep speeds down, allow for longer stopping distances and avoid aggressive steering to reduce the chances of a loss of vehicle control which can lead to serious injury or death. If the rear end of your vehicle slides while cornering, steer in the direction of the slide until you regain control of your vehicle.



Warning: Driving while distracted can result in loss of vehicle control, crash and injury. We strongly recommend that you use extreme caution when using any device that may take your focus off the road. Your primary responsibility is the safe operation in your vehicle. We recommend against the use of any hand-held device while driving and encourage the use of voice-operated systems when possible. Make sure you are aware of all applicable local laws that may affect the use of electronic devices while driving.



Warning: Do not allow a passenger to hold a child on their lap when your vehicle is moving. Failure to follow this instruction could result in personal injury or death in the event of a sudden stop or crash.



Warning: Do not use pillows, books or towels to boost your child's height. Failure to follow this instruction could result in personal injury or death.



Warning: Do not put the shoulder section of the seatbelt or allow the child to put the shoulder section of the seatbelt under their arm or behind their back. Failure to follow this instruction could reduce the effectiveness of the seatbelt and increase the risk of injury or death in a crash.



Warning: Do not leave children or pets unattended in your vehicle. Failure to follow this instruction could result in personal injury or death.

15

Warranty Information

Limited Warranty Terms and Conditions for Electric Vehicles

ICON Electric Vehicles© LLC ("ICON") hereby warrants that any new ICON Electric Vehicle purchased from ICON, or any Authorized Dealer in the United States, will be free from defects in material and workmanship for THREE years from date of purchase, subject to the stated limitations. AGM batteries will be free of defects in material and workmanship for two years from date of purchase. During the term of said warranty, any authorized ICON service technician or ICON dealer will, free of charge, repair or replace (at ICON's option) any part determined to be defective by ICON due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the vehicle's warranty period. All parts replaced under warranty become property of ICON Electric Vehicles LLC.

Major Components	
Frame	3 Years
Electric Motor	3 Years
Motor Controller	3 Years
Onboard Battery Charger	3 Years
Transaxle	3 Years
Brakes (excludes shoes/pads)	3 Years
Suspension Components	3 Years
Steering Components	3 Years
AGM Battery	2 Years

Parts & Accessories	
Windshield	3 Years
Charger Cord	3 Years
Charger Receptacle	3 Years
Body Panels	3 Years
Instrument Cluster	3 Years
Bumpers	3 Years
Electrical Wires / Relays	3 Years

Exclusions:

Specifically EXCLUDED from this Limited Warranty are:

- Routine maintenance items, normal wear and tear, cosmetic deterioration, or electrical components damaged as a result of fluctuations in electrical current.
- Damage to or deterioration of a vehicle resulting from inadequate maintenance, neglect, abuse, accident, or collision.
- Damage resulting from installation of use parts or accessories not approved by ICON.
- Warranty repairs made by other than an ICON Factory Service Center or an authorized and qualified Dealer or designee. Warranty repairs made by other than an ICON Factory Service Center or an authorized and qualified Dealer or designee shall void the Limited Warranty.
- Damage or loss resulting from acts of nature, weather events, vandalism, theft, war or other circumstances over which ICON has no control.
- Any and all expenses incurred in transporting the Vehicle to and from ICON or an authorized Dealer, technician, or designee for warranty service.
- Storing vehicle outside 24/7.

Disclaimer: this limited warranty is the sole and exclusive warranty provided for the vehicle and is made in lieu of all other warranties, expressed or implied, including but not limited to the implied warranties of merchantability or fitness for a particular purpose, all such other warranties being explicitly disclaimed.

Liability Limitations: in no case shall Icon be liable for indirect, incidental, special, punitive or consequential damages. Including but not limited to death, personal injury or property damage arising from or related to any alleged failure in a vehicle or battery charger, or any damage or loss to the purchaser or any third party for lost time, inconvenience or any economic loss, whether or not icon was apprised of the foreseeability of such damages or losses. The right of purchaser to recover damages within the limitations set forth in this section is purchaser's exclusive alternative remedy if the limited remedy of repair or replacement of the vehicle fails essential purpose. The parties agree that this alternative remedy will be enforceable even if the limited remedy of repair or replacement fails of its essential purpose. The parties agree that this alternative remedy will be enforceable even if the limited remedy of repair or replacement fails of its essential purpose. Any legal claim or action arising that alleges breach of warranty must be brought within three (3) months from the date the warranty claim arises. This limited warranty gives you specific legal rights and you may have other rights that vary from state to state some states do not allow the exclusion of incidental damages or limitations on how long an implied warranty may last, so the above exclusions and limitations may not apply to you.

Warning: any modification or change to the vehicle or battery charger which alters the weight distribution or stability of the vehicle, increases the vehicle's speed, or alters the output of the battery charger beyond factory specifications, can result in property damage, personal injury or death. Do not make any such modifications or changes. Such modifications or changes will void the limited warranty. Icon disclaims responsibility for any such modifications, changes, or such alterations that would adversely impact the safe operation of the vehicle or battery charger.

18

Vehicle Model Information



Note: Range varies based on battery options, road conditions, road grade, number of passengers, and other factors.

Disclaimer: Illustration is representative of product, actual cart may vary

ICON i20 Golf Cart	
Controller	ICON 450A
Batteries	Lead Acid - 8v x 6 units Lead Acid - 6v x 8 units AGM 8v - 6 units AGM 6v - 8 units
Motor	5kw AC Drive
Battery Charger	ICON 1.5kw Onboard
Passengers	2
Dimensions	Length x Width x Height: 8' x 4' x 6.5'
Wheelbase	65"
Curb Weight (Including batteries)	1187 (lbs.)
Load Capacity	370 (lbs.)
Max. Speed	15 MPH
Range	20-50 miles*
Turning Radius	10'
Climbing Capacity	25% grade
Stopping Distance	7'
Ground Clearance	4.5"



Note: Range varies based on battery options, road conditions, road grade, number of passengers, and other factors.

Disclaimer: Illustration is representative of product, actual cart may vary

ICON i20L Golf Cart	
Controller	ICON 450A
Batteries	Lead Acid - 8v x 6 units Lead Acid - 6v x 8 units AGM 8v - 6 units AGM 6v - 8 units
Motor	5kw AC Drive
Battery Charger	ICON 1.5kw Onboard
Passengers	2
Dimensions	Length x Width x Height: 8' x 4' x 6.5'
Wheelbase	65"
Curb Weight (Including batteries)	1240 (lbs.)
Load Capacity	370 (lbs.)
Max. Speed	15 MPH
Range	20-50 miles*
Turning Radius	10'
Climbing Capacity	25% grade
Stopping Distance	7'
Ground Clearance	7"



Note: Range varies based on battery options, road conditions, road grade, number of passengers, and other factors.

Disclaimer: Illustration is representative of product, actual cart may vary

ICON i40	
Controller	ICON 450A
Batteries	Lead Acid - 8v x 6 units Lead Acid - 6v x 8 units AGM 8v - 6 units AGM 6v - 8 units
Motor	5kw AC Drive
Battery Charger	ICON 1.5kw Onboard
Passengers	4
Dimensions	Length x Width x Height: 9' x 4' x 6'
Wheelbase	65"
Curb Weight (Including batteries)	1366 (lbs.)
Load Capacity	370 (lbs.)
Max. Speed	25 MPH
Range	20-50 miles*
Turning Radius	10'
Climbing Capacity	25% grade
Stopping Distance	7'
Ground Clearance	4.5"



Note: Range varies based on battery options, road conditions, road grade, number of passengers, and other factors.

Disclaimer: Illustration is representative of product, actual cart may vary

ICON i40L	
Controller	ICON 450A
Batteries	Lead Acid - 8v x 6 units Lead Acid - 6v x 8 units AGM 8v - 6 units AGM 6v - 8 units
Motor	5kw AC Drive
Battery Charger	ICON 1.5kw Onboard
Passengers	4
Dimensions	Length x Width x Height: 9' x 4' x 6'
Wheelbase	65"
Curb Weight (Including batteries)	1344 (lbs.)
Load Capacity	370 (lbs.)
Max. Speed	25 MPH
Range	20-50 miles*
Turning Radius	10'
Climbing Capacity	25% grade
Stopping Distance	7'
Ground Clearance	4.5"



Note: Range varies based on battery options, road conditions, road grade, number of passengers, and other factors.

Disclaimer: Illustration is representative of product, actual cart may vary

ICON i40F	
Controller	ICON 450A
Batteries	Lead Acid - 8v x 6 units Lead Acid - 6v x 8 units AGM 8v - 6 units AGM 6v - 8 units
Motor	5kw AC Drive
Battery Charger	ICON 1.5kw Onboard
Passengers	4
Dimensions	Length x Width x Height: 10' x 4' x 6'
Wheelbase	65"
Curb Weight (Including batteries)	1275 (lbs.)
Load Capacity	370 (lbs.)
Max. Speed	25 MPH
Range	20-50 miles*
Turning Radius	10'
Climbing Capacity	25% grade
Stopping Distance	7'
Ground Clearance	4.5"



Note: Range varies based on battery options, road conditions, road grade, number of passengers, and other factors.

Disclaimer: Illustration is representative of product, actual cart may vary

ICON i40FL	
Controller	ICON 450A
Batteries	Lead Acid - 8v x 6 units Lead Acid - 6v x 8 units AGM 8v - 6 units AGM 6v - 8 units
Motor	5kw AC Drive
Battery Charger	ICON 1.5kw Onboard
Passengers	4
Dimensions	Length x Width x Height: 10' x 4' x 6'
Wheelbase	65"
Curb Weight (Including batteries)	1338 (lbs.)
Load Capacity	370 (lbs.)
Max. Speed	25 MPH
Range	20-50 miles*
Turning Radius	10'
Climbing Capacity	25% grade
Stopping Distance	7'
Ground Clearance	7"



Note: Range varies based on battery options, road conditions, road grade, number of passengers, and other factors.

Disclaimer: Illustration is representative of product, actual cart may vary

ICON i60	
Controller	ICON 450A
Batteries	Lead Acid - 8v x 6 units Lead Acid - 6v x 8 units AGM 8v - 6 units AGM 6v - 8 units
Motor	5kw AC Drive
Battery Charger	ICON 1.5kw Onboard
Passengers	6
Dimensions	Length x Width x Height: 13' x 4' x 6'
Wheelbase	65"
Curb Weight (Including batteries)	1451 (lbs.)
Load Capacity	370 (lbs.)
Max. Speed	25 MPH
Range	20-50 miles*
Turning Radius	12'
Climbing Capacity	25% grade
Stopping Distance	7'
Ground Clearance	4.5"



Note: Range varies based on battery options, road conditions, road grade, number of passengers, and other factors.

Disclaimer: Illustration is representative of product, actual cart may vary

ICON i60L	
Controller	ICON 450A
Batteries	Lead Acid - 8v x 6 units Lead Acid - 6v x 8 units AGM 8v - 6 units AGM 6v - 8 units
Motor	5kw AC Drive
Battery Charger	ICON 1.5kw Onboard
Passengers	6
Dimensions	Length x Width x Height: 13' x 4' x 6'
Wheelbase	65"
Curb Weight (Including batteries)	1514 (lbs.)
Load Capacity	370 (lbs.)
Max. Speed	25 MPH
Range	20-50 miles*
Turning Radius	12'
Climbing Capacity	25% grade
Stopping Distance	7'
Ground Clearance	4.5"

27

Seatbelts



Fastening and Unfastening the Seatbelts


Fastening the Seatbelts

01. Insert the tongue into the buckle.
02. Pull the seatbelt tight to remove any slack.


Unfastening the Seatbelts


01. Press the red button on the buckle to release the seatbelt.
02. Hold the seatbelt tongue and let it retract completely and smoothly to its stowed position.


Seatbelt Precautions


 **Warning:** Always drive and ride with your seatbelt upright and the lap belt snug and low across the hips.


 **Warning:** Children must always be properly restrained.


 **Warning:** Do not allow a passenger to hold a child on their lap when your vehicle is moving. Failure to follow this instruction could result in personal injury or death in the event of a sudden stop or crash.


 **Warning:** All occupants of your vehicle, including the driver, should always properly wear their seatbelts, even when an airbag supplemental restraint system is provided. Failure to properly wear your seatbelt could seriously increase the risk of injury or death.


 **Warning:** It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a crash, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and seatbelts. Make sure everyone in your vehicle is in a seat and properly using a seatbelt. Failure to follow this warning could result in serious personal injury or death.


 **Warning:** In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seatbelt.


 **Warning:** Each seating position in your vehicle has a specific seatbelt assembly made up of one buckle and one tongue designed to be used as a pair. Use the shoulder belt on the outside shoulder only. Never wear the shoulder belt under the arm. Never use a single seatbelt for more than one person.

 **Warning:** Even with advanced restraints systems, properly restrain children 12 and under in a rear seating position. Failure to follow this could seriously increase the risk of injury or death.


 **Warning:** Seatbelts and seats may be hot in a vehicle that is in the sunshine. The hot seatbelts or seats may burn a small child. Check seat covers and buckles before you place a child anywhere near them.


 **Warning:** If your vehicle is involved in a crash, have the seatbelts and associated components inspected as soon as possible. Failure to follow this instruction could result in personal injury or death.


 **Warning:** This system will only provide protection when you use the seatbelt correctly.

 **Warning:** Do not use cleaning solvents, bleach or dye on the vehicle's seatbelts, as these actions may weaken the belt webbing.


Seatbelt Extensions

 **Warning:** Depending on where you secure a child restraint, and depending on the child restraint design, you may block access to certain seatbelt buckle assemblies and LATCH lower anchors, rendering those features potentially unusable. To avoid risk of injury, make sure occupants only use seating positions where they are able to be properly restrained.

 **Warning:** Persons who fit into the vehicle's seatbelt should not use an extension. Unnecessary use could result in serious personal injury in the event of a crash.

 **Warning:** Only use extensions provided free of charge by our dealers. The dealer will provide an extension designed specifically for this vehicle, model year and seating position. The use of an extension intended for another vehicle, model year or seating position may not offer you the full protection of your vehicle's seatbelt restraint system.

 **Warning:** Never use seatbelt extensions to install child restraints.

 **Warning:** Do not use extensions to change the way the seatbelt fits across the torso, over the lap or to make the seatbelt buckle easier to reach.

30

Key



Vehicle Key

Insert the vehicle key into the ignition slot and turn the key to the right to operate the vehicle. The key cannot be removed until turning the vehicle off.





Vehicle Direction Selector


01. Turn key on.
02. Select "forward" or "reverse."
03. Push the accelerator to start moving and use the parking pedal to stop.
04. Drive safely according to the terrain, visibility, and driving conditions; drive carefully in crowded and slippery conditions.

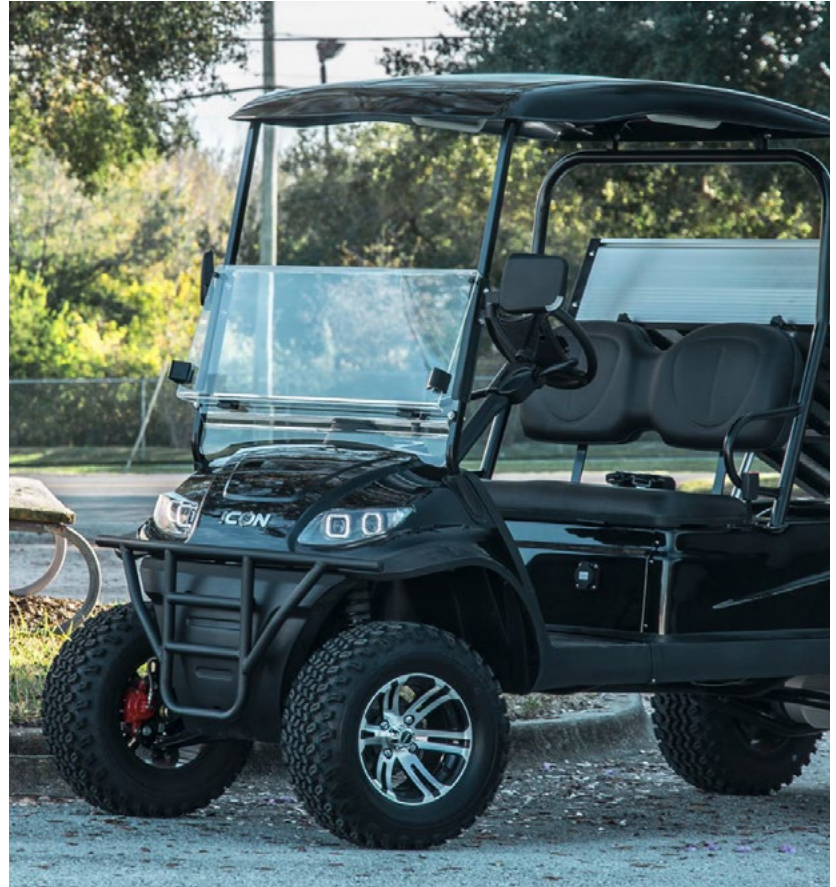
32

Lift Bed

 **Warning:** It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a crash, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and seatbelts. Make sure everyone in your vehicle is in a seat and properly using a seatbelt. Failure to follow this warning could result in serious personal injury or death.

 **Warning:** Keep keys out of reach of children. Do not allow children to operate or play near an open or moving liftgate. You should supervise the operation of the power liftgate at all times.

 **Warning:** Do not leave switch in on-position. Doing so can cause the electric lift to fail.



34

Exterior Mirrors



Manually adjust each mirror before turning the key on to drive the vehicle.



Warning: Do not adjust the mirrors when your vehicle is moving. This could result in the loss of control of your vehicle, serious personal injury or death.

Note: A 10mm socket can be used to tighten or loosen mirror.

36

Instrument Cluster

The instrument cluster displays important information to the operator. Vehicle Speed, Battery State of Charge, Battery Volts, and Total Miles Traveled are constantly displayed. At the top of the instrument cluster, a row of alert lights illuminates when the turn signals, headlights, high beams, reverse, or brakes are in use.

Note: Each time you press the brakes, a red circle will appear on the speedometer.



38

Seats



Front Seats

The front seats are designed for a maximum of two occupants. The drive and front seat passenger must use safety belts when the vehicle is in motion.



Rear Seats

The rear seats are designed for a maximum of two occupants. The drive and front seat passenger must use safety belts when the vehicle is in motion.

40

High Voltage Batteries

Battery Disconnection

Refer to the following figures for correct battery disconnection information for your vehicle.

Battery Cable Removal - Style A Electric Vehicle Battery Configuration



*Viewed from driver side of vehicle

01. Place TOW/RUN Switch in TOW before disconnecting or connecting battery cables.
02. Remove negative battery cable.
03. Remove positive battery cable.
04. Connect battery cables in reverse order.

Battery Cable Removal - Style B Electric Vehicle Battery Configuration



*Viewed from driver side of vehicle

01. Place TOW/RUN Switch in TOW before disconnecting or connecting battery cables.
02. Remove negative battery cable.
03. Remove positive battery cable.
04. Connect battery cables in reverse order.

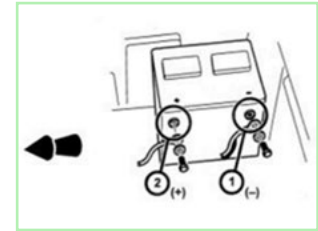
Battery Cable Removal - Style C Electric Vehicle Battery Configuration



*Viewed from driver side of vehicle

01. Remove negative battery cable.
02. Remove positive battery cable.
03. Connect battery cables in reverse order.

Battery Cable Removal - Gasoline



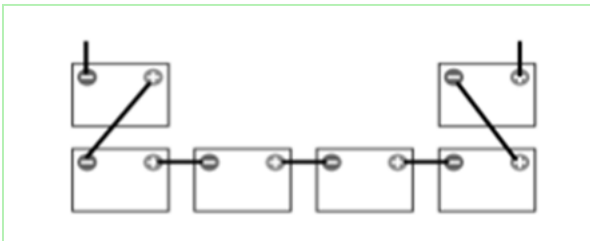
*Viewed from driver side of vehicle


01. Remove negative battery cable.
02. Remove positive battery cable.
03. Connect battery cables in reverse order.


Battery Installation


01. Turn main power switch to "off" position.
02. Remove battery hold-down bar.
03. Remove battery cables.
04. Remove old batteries and dispose of properly.
05. Install new batteries with posts in proper location.
06. Re-install battery hold-down bar.
07. Re-install battery cables per diagram and torque to 80lb.
08. Spray battery terminal protectant directly to the terminals. (every 6 months)

Battery cables diagram



 When working with batteries, do not put wrenches or other metal objects across the battery terminals. An arc can occur causing an explosion or fire at the battery.

 Carefully place battery cables and hold-downs making sure that cables do not lay across vent caps.

 Always remove the negative (-) cable to the motor controller first, and install it last. A spark can occur causing an explosion or fire at the battery.

Battery Preparations

01. Remove the batteries from the vehicle and store them in a cool, dry place that stays between 0°C (32°F) and 30°C (90°F).
02. Have the batteries recharged every 60-90 days to keep them fully charged. The batteries must be kept fully charged to avoid damage.

Note: Your cart may be equipped with maintenance-free AGM batteries. These still require regular usage and charging cycles to keep them active

Battery Maintenance

Deep cycle batteries provide power for your vehicle and must be properly maintained and recharged for maximum performance and service life.

To maintain your batteries:

01. Clean the tops of the batteries with a solution of baking soda and water, as necessary, to remove corrosion. Reapply Terminal Protection Spray after cleaning.
02. Check the fluid level before and after charging.
03. Using a hydrometer, check the specific gravity of the battery fluid in each cell against the readings on the Hydrometer Chart. Consult an ICON dealer if any low readings are found, or if readings vary more than one point between cells.

Hydrometer Chart		
Temperature		Satisfactory Uncorrected Hydrometer Reading
°C	°C	
48.9	120	1.244
43.3	110	1.248
37.8	100	1.252
32.2	90	1.256
26.7	80	1.260
21.1	70	1.264
15.6	60	1.268
10.0	50	1.272
4.4	40	1.276
-1.1	30	1.280

Common mistakes made by flooded battery owners

- **Undercharging:** Continually operating the battery in a partial state of charge or storing the battery in a discharged state results in the formation of lead sulfate compounds on the plates. This condition is known as sulfation. Both conditions reduce the battery's performance and may cause premature battery failure. Undercharging will also cause stratification. Reapply Terminal Protection Spray after cleaning.
- **Overcharging:** Continuous charging causes accelerated corrosion of the positive plates, excessive water consumption, and in some cases, damaging temperatures within a lead acid battery.
- **Under-watering:** In flooded batteries water is lost during the charging process. If the electrolyte level drops below the tops of the plates, irreparable damage may occur. Water levels should be checked and maintained routinely.
- **Over-watering:** Excessive watering of a battery results in additional dilution of the electrolyte, resulting in reduced battery performance. Additionally, watering the battery before charging may result in electrolyte overflow and unnecessary additional maintenance.
- Use **only** distilled water.

Description of Charger

The on-board charger is located beneath the seat. It begins the charge cycle after connecting the power plug to the charging receptacle cap located below the driver's seat. The 48v ICON (1.5kw) On-Board Charger. This charger comes with a 48 Volt output and a max amperage output of 19 Amps

It is connected with the AC power grid through the charging plug. The 110VAC alternating current is converted into direct current to charge the power batteries. The charging state is monitored, and the charging power is adjusted according to the charging state to realize the intelligent control of electric vehicle charging.



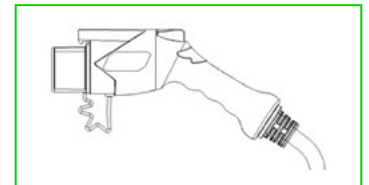
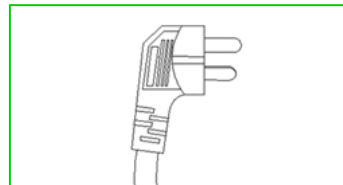
Power Recharging Procedure

The charger can detect, track, and protect charged batteries in a dynamic and automatic manner, maintaining them in the optimal critical state.

01. Open the charging port lid and align and insert the plug of the power cord to the charging socket.
02. Connect the other end of the power cord to a 110V household power source.
03. There is a charge indicator when charging starts: 100% green, >80% yellow, <80% red
04. It will automatically turn off when the battery is fully charged, and the charging gun stops working.



05. When charging is completed, unplug the household power supply first and the charging socket connecting to the vehicle body. Push the charging port lid back to its original position.



Warning: Do not allow charging equipment to be immersed in water or liquids. Failure to follow this warning could result in fire, serious personal injury or death.

Warning: Do not attempt to open the charging equipment. Failure to follow this instruction could result in personal injury, death or property damage.

Warning: Do not use the charging equipment if it is faulty or has been damaged. Failure to follow this instruction could result in personal injury, death or property damage.

Warning: Install charging equipment in compliance with local regulations. Failure to follow this instruction could result in personal injury, death or property damage.

Power Requirements Necessary to Recharge Vehicle

The vehicle is designed to accept AC current for 110 - 140v outlets with a supply a minimum of 15A, 50 or 60 Hz. 20 AMP Output Automatically shuts off when the vehicle has been fully charged.



46

Description of Batteries



Operator Safety

- All batteries will self discharge over time. The rate of self discharge varies depending on the ambient temperature and the age and condition of the batteries.
- A fully charged battery will not freeze in winter temperatures unless the temperature falls below -75°F (-60°C).
- For winter storage, the batteries must be clean, fully charged and disconnected from any source of electrical drain.
- On all electric vehicles, set the key switch to 'N' and the 'RUN/TOW' switch, located under the passenger seat, to the 'TOW' position before towing the vehicle.
- As with all electric vehicles, the batteries must be checked and recharged as required or at a minimum of 30 day intervals.


AGM Leoch 6, 8 Volt


- **Battery Type:** AGM Leoch
- **Model:** LDC6-210-GC2, LDC8-165-GC8
- **Number of Batteries:** 6, 8-volt
- **Number of Cells:** 4
- **Each Battery Capacity 10 Hrs. (Ah):**
200-220A 6v, 160-165A 3v
- **Maximum Battery Voltage:** 9.2
- **Each Battery Weight (kg):** 27.2, 29.3
- **Total weight of battery system (kg):** 192
- **Total battery system voltage:** 48
- **Minimum battery voltage for safe operation:** 33
- **Total battery system energy capacity (Ah):** 165 00
220A
- **Total battery system specific energy density (Whr/kg):** 48.2


Trojan Flooded Lead Acid 6, 8 Volt

- **Battery Type:** Trojan Flooded Lead Acid
- **Model:** T-105, T-875 with Bayonet Cap
- **Number of Batteries:** 6, 8-volt
- **Number of Cells:** 4
- **Each Battery Capacity 10 Hrs. (Ah):**
207 6v, 147 8v
- **Maximum Battery Voltage:**
- **Each Battery Weight (kg):** 28, 29
- **Total weight of battery system (kg):**
- **Total battery system voltage:**
- **Minimum battery voltage for safe operation:**
- **Total battery system energy capacity (Ah):**
- **Total battery system specific energy density (Whr/kg):**

Battery Pack Service Warnings


 **Warning:** This battery pack should only be serviced by an authorized electric vehicle technician. Improper handling can result in personal injury or death.


 **Warning:** Improper connection of the electrical outlet grounding conductor might result in a risk of electric shock. Check with a qualified electrician if you are uncertain whether or not the electrical outlet is properly grounded. Do not modify the plug provided with the product if it does not fit in the outlet. Have a proper outlet installed by a qualified electrician.

 **Warning:** It is recommended that electrical outlets for use with your charger be installed by a licensed, qualified electrician. To avoid serious injury or death, installation must comply with the provisions of the National Electric Code (NEC) and all local codes. In cases of conflict between local codes and the NEC, local codes shall take precedence.


 **Warning:** Do NOT DROP the control box or coupler.


 **Warning:** Do NOT use if stored outside temperature range specified.

 **Warning:** IF the cable becomes separated from the control box or the charger coupler, DO NOT ATTEMPT TO REPAIR THE CABLE YOURSELF. Contact your dealer for assistance.


 **Warning:** See warnings on charger cord label. Read warnings before operating the unit the first time. Read all instructions in this guide before using this product.


 **Warning:** Never use the charger with an extension cord.

 **Warning:** Shock hazard - make sure the plug is fully inserted into the wall outlet so that there are no exposed blade surfaces.

 **Warning:** Children should be supervised when in the vicinity of the charger while plugged in.

 **Warning:** Do not put fingers into the electric charge coupler.

 **Warning:** To reduce the risk of fire, connect only to a circuit provided with 40 amps maximum branch circuit overcurrent protection installed in accordance with NEC and local electrical code.

 **Warning:** Do not expose the charge cord to flammable vapors while in use as an explosion could result.

 **Warning:** Be sure to have proper ventilation in your space, especially when charging batteries.

AGM Battery Warning

These batteries **DO NOT** require water.
DO NOT WATER your AGM batteries.



Eco Battery

Warranty

8 Year Prorated

Power Save Mode

If your battery was built after 08/01/2022 (or has updated firmware) it will be programmed to enter Power Save Mode after extended periods of inactivity. Power Save Mode will ensure that your battery will not be fully depleted in the event that your cart sits for an extended time. The time that must elapse before Power Save Mode will be activated, is dependent on SOC (see below). When Power Save is active, the battery will be completely powered off (no charge or discharge) and the meter will turn off.

SOC = 21% - 100%

The battery power and gauge will power off after 7 days of inactivity.

SOC = <20%

The battery power and gauge will power off after 24 hours of inactivity.

When in Power Save Mode, the green LED on the power button will not be illuminated, even if the power button is in the on position. To wake the battery from Power Save Mode, turn the battery's power button off, then back on.

If your battery has gone to sleep on its own, we suggest fully charging it before using it again.

Battery operation

Battery on/off switch must be in the on position to operate the cart.





52


Brakes

Be sure the brakes function properly. When brake pedal is pressed using moderate pressure, the vehicle should come to a smooth, straight stop. If the vehicle swerves or fails to stop, stops abruptly, or makes a grinding or squeaking noise, have the brake system checked and adjusted as required. Continued, moderate brake pedal pressure should be able to lock the wheels, but using lesser pressure should also permit a slow, gradual deceleration.

Brake Precautions

 **Warning:** Do not use fluid other than the recommended brake fluid as this will reduce brake efficiency. Use of incorrect fluid could result in the loss of vehicle control, serious personal injury or death.

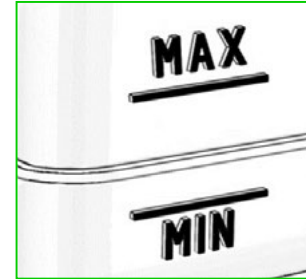
 **Warning:** Only use brake fluid from a sealed container. Contamination with dirt, water, petroleum products or other materials may result in brake system damage or failure. Failure to adhere to this warning could result in the loss of vehicle control, serious personal injury or death.

 **Warning:** Do not allow the fluid to touch your skin or eyes. If this happens, rinse the affected areas immediately with plenty of water and contact your physician.

 **Warning:** The brake system could be affected if the brake fluid level is below the **MIN** mark or above the **MAX** mark on the brake fluid reservoir.

Locating the Brake Fluid Reservoir

Checking the Brake Fluid



01. Park your vehicle on a level surface.
02. Look at the brake fluid reservoir to see where the brake fluid level is relative to the MIN and the MAX marks on the reservoir.

Note: To avoid fluid contamination, the reservoir cap must remain in place and fully tight, unless you are adding fluid. Location of reservoir is typically under the cup holder.

Brake Fluid Specification

Use fluid that meets the defined specification and viscosity grade. (DOT4)

If you do not use fluid that meets the defined specification and viscosity grade, it could result in:

- Component damage that your vehicle warranty does not cover
- Reduced brake performance.

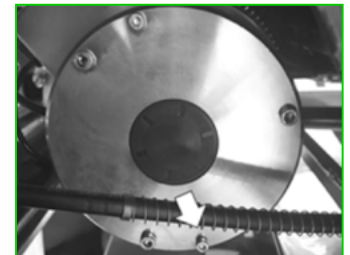
Magnetic Brake

Your vehicle is equipped with a magnetic parking brake, there are several things you need to be aware of.

01. The magnetic parking brake engages automatically every time your vehicle comes to a complete stop.
02. The magnetic brake is disengaged by stepping on the accelerator pedal.
03. In the event you need to manually push your vehicle, you can use the MANUAL EMB function.
In the battery compartment under the seat, flip the main switch to the MANUAL EMB position.
This sends electrical current to the magnetic brake, disengaging it, and allowing the cart to be manually pushed. Once the vehicle has been pushed to its desired location, flip the switch to either the OFF position, or the AUTO EMB position.
04. While the vehicle is in the MANUAL EMB setting, the vehicle will have no parking brake, and the vehicle will freely roll. Do not leave a vehicle unattended in the MANUAL EMB setting as the vehicle may roll and injure someone.
05. DO NOT LEAVE THE SWITCH IN THE MANUAL EMB SETTING FOR AN EXTENDED PERIOD OF TIME. This may result in damage to the magnetic brake.
06. If your vehicle has had a catastrophic battery or other failure and does not have the necessary 48 volts required to disengage the magnetic brake, you may disengage it manually. Instructions on manually disengaging the magnetic brake are on the next page.


How to Manually Disengage the Magnetic Brake


01. Locate the magnetic brake assembly behind the right rear wheel.
02. Of the (5) screws on the magnetic brake assembly, locate the (2) smaller ones.
03. With a #4 Allen wrench, lightly tighten the (2) smaller bolts. (DO NOT over-tighten).
04. Once the smaller (2) bolts are tightened, the vehicle may be manually pushed.
05. The magnetic brake will NOT be able to re-engage until the (2) small bolts are loosened back up.
06. When the vehicle has had the (2) small screws on the magnetic brake tightened, the vehicle will have no parking brake and will freely roll. Do not leave a vehicle unattended in the MANUAL EMB setting as the vehicle may roll and injure someone. Leaving the vehicle in MANUAL EMB can result in overheating of the EMB resulting in premature failure, damage to batteries, and risk of burn injuries.




55

Rear View Camera

 **Warning:** The rear view camera system is a reverse aid supplement device that still requires the driver to use it in conjunction with the interior and exterior mirrors for maximum coverage.

 **Warning:** Objects that are close to either corner of the bumper or under the bumper, might not be seen on the screen due to the limited coverage of the camera system.

 **Warning:** Reverse your vehicle slowly. Failure to follow this instruction could result in the loss of control of your vehicle, personal injury or death.


Note: The rear view camera is an optional equipment piece that may not be required on off-road vehicles.





57


Load Carrying


Keep your loaded vehicle weight within its design rating capability. Properly loading your vehicle provides maximum return of vehicle design performance. Before you load your vehicle, become familiar with the following terms for determining your vehicle's weight rating, from the vehicle's Safety Compliance Certification Label.


 **Warning:** The appropriate loading capacity of your vehicle can be limited either by volume capacity (how much space is available) or by payload capacity (how much weight the vehicle should carry). Once you have reached the maximum payload of your vehicle, do not add more cargo, even if there is space available. Overloading or improperly loading your vehicle can contribute to loss of vehicle control and vehicle rollover.


 **Warning:** Exceeding the Safety Compliance Certification label vehicle weight limits can adversely affect the performance and handling of your vehicle, cause vehicle damage and can result in the loss of control of your vehicle, serious personal injury or death.

 **Warning:** Do not use replacement tires with lower load carrying capacities than the original tires because they may lower your vehicle's GVWR and GAWR limitations. Replacement tires with a higher limit than the original tires do not increase the GVWR and GAWR limitations.

 **Warning:** Do not exceed the GVWE or the GAWR specified on the certification label.

 **Warning:** Exceeding any vehicle weight rating can adversely affect the performance and handling of your vehicle, cause vehicle damage and can result in the loss of control of your vehicle, serious personal injury or death.

 **Warning:** When loading the roof racks, we recommend you evenly distribute in the load, as well as maintain in a low center of gravity. Loaded vehicles, with higher centers of gravity, may handle differently than unloaded vehicles. Take extra precautions, such as slower speeds and increased stopping distance, when driving a heavily loaded vehicle.

 **Warning:** For a standard 4 or 6 seat cart, do not exceed 300 lbs on rear plastic flip seats.

59

Towing

Towing Warnings

Do not tow with this vehicle.

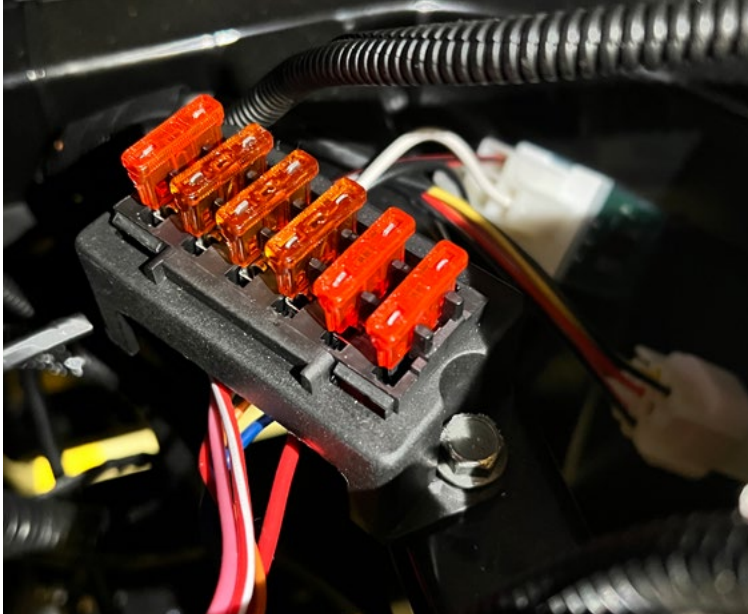


Warning: Your vehicle is not approved for trailer towing. Never tow a trailer with your vehicle.



61

Fuses



Fuses

01. A fuse block for the 12 V circuits is located under the dash.
02. A single inline fuse is located approx. 12" under the dash.
03. A single inline fuse is located inline before the 12V receiver.
04. An inline fuse is located approx. 24" before the Tow Switch.

Fuse Precautions



Warning: Always disconnect the battery before servicing high current fuses.



Warning: To reduce risk of electrical shock, always replace the cover to the power distribution box before reconnecting the battery or refilling fluid reservoirs.



Warning: Always replace a fuse with one that has the specified amperage rating. Using a fuse with a higher amperage rating can cause severe wire damage and could start a fire.

63

Maintenance

Wheel Replacement

To remove and install a wheel on your vehicle:


01. With the wheels blocked to prevent the vehicle from moving, loosen the wheel nuts.
02. Elevate the vehicle with a jack and remove the wheel nuts and the wheel.
03. Reverse the removal steps when installing the wheel.

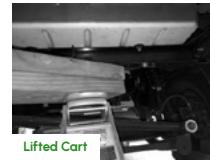
 **Warning:** Before performing wheel or brake maintenance, verify that the main switch is in the "OFF" position.

Accidental starting of the vehicle could cause the vehicle to move, causing death or serious personal injury.

Brake Adjustment

Before you operate the vehicle, press down on the brake pedal several times to make sure the brakes are functioning properly.

 **Warning:** Consult your ICON dealer before using your vehicle if you suspect brake problems. Brake failure could result in a serious accident. Death or serious personal injury can result from failing to comply with the safety instructions in this manual.



Jacking Points

On Non-Lifted Carts there are several Lifting points to safely lift your cart.

01. Rear of cart-cross brace of frame just behind the rear bumper.
02. Behind the front wheels on either side of the frame.
03. Front lower control arm mounting points on both sides.

On Lifted Carts there are several Lifting points to safely lift your cart.

01. Rear of cart-cross brace of frame just behind the rear bumper.
02. Anywhere along the side of the frame as long as there is a stable contact point.
03. The center frame directly behind the steering rack.

Periodic Maintenance Chart

Regular maintenance is required for the best performance and safe operation of your electric vehicle.

	Remarks	Daily Pre-Operation	40 rounds 20 hours 100 miles 160 kms (Every Month)	250 rounds 125 hours 600 miles 1000 kms (Every 6 Months)	500 rounds 250 hours 1200 miles 2000 kms (Every Year)	1000 rounds 500 hours 2500 miles 4000 kms (Every 2 Years)	2000 rounds 1000 hours 5000 miles 8000 kms (Every 4 Years)
PRE-OP	Charge	S	S	S	S	S	S
	Clean battery tops, check for tightness of hold-down screws and terminals	S	S	S	S	S	S
	Check brake pedal freeplay and adjust if necessary	C	CA	CA	CA	CA	CA
	Check steering operation	C	C	C	C	C	C
	Check tire pressure, tread depth, tire surface for damage	C	CA	CA	CA	CA	CA
	Check tightness of all bolts, nuts, screws, and rivets	C	C	C	C	C	C
	Check reverse alarm operation	C	C	C	C	C	C
EVERY MONTH	Check electrolyte level		C	C	C	C	C
	Check for loose or broken connections		C	C	C	C	C
	Clean/Lube pedal control area		CL				
EVERY 6 MONTHS	Check all wire insulation for cracks and/or worn spots			C	C	C	C
	Check shock absorbers for oil leaks and damaged springs			C	C	C	C

66

Storing the Vehicle



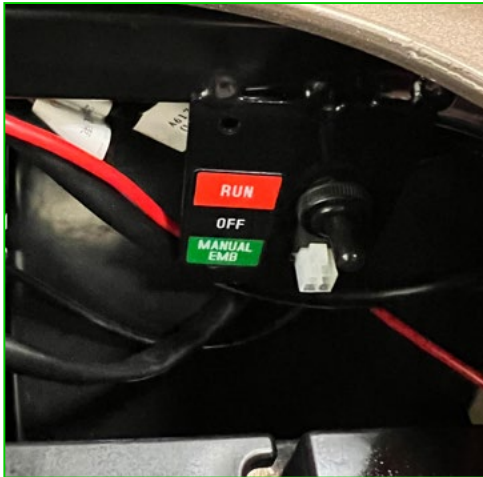
Preparation

01. Verify the tire pressure is set to 137 kPa, 1.4 kgf/cm² (25 psi).
02. Clean exterior of the vehicle.
03. For short-term storage (1-30 days), flip tow switch to "Tow" setting.
04. For long-term storage (> 30 days), disconnect negative terminal to minimize drain.
05. Cover the vehicle with a breathable cover and store it in a dry, well-ventilated area.
06. Vehicles do NOT like to be stored for extended periods of time with Lead Acid or AGM batteries. They will discharge and can make the next use after the long period difficult to start or require jumping off. It is best practice to move/use/charge the cart every 30 days.

68

Operation and Control

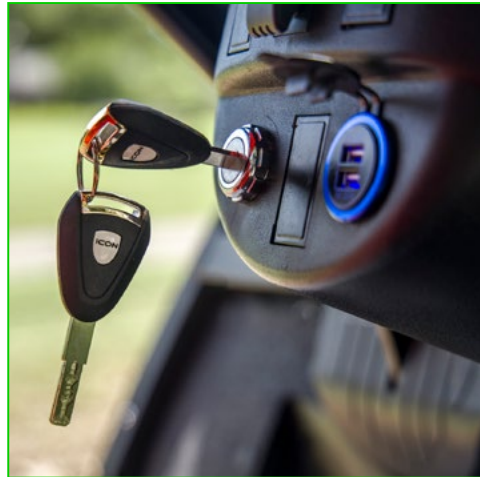
Turning on Main Switch



The main power switch is located underneath the seat in the battery compartment. It is a 3-position switch. RUN is the normal run position. The center position is OFF.

The MANUAL EMB position is for times when the vehicle must be manually pushed.

Key Switch




Insert the vehicle key into the ignition slot and turn the key to the right to operate the vehicle. The key cannot be removed until turning the vehicle off.

Forward/Reverse Switch





The Forward/Reverse switch determines which direction the vehicle will travel. When changing directions, always allow the vehicle to come to a complete stop before switching directions.

 **Warning:** Always make sure vehicle comes to a **COMPLETE** stop before using the F/R switch to change directions.

Pressing the F/R switch while the vehicle is still in motion may damage the switch, the speed sensor, the motor or other components.

Move the transmission selector to forward (F) or reverse (R) only when your vehicle is stationary.

 **Warning:** When your vehicles is stationary, keep the brake pedal fully pressed when shifting gears. Failure to follow this instruction could result in personal injury, death or property damage.

 **Warning:** Do not apply the brake pedal and accelerator pedal simultaneously. Applying both pedals simultaneously for more than a few seconds will limit power, which may result in difficulty maintaining speed in traffic and could lead to serious injury.




Instrument Cluster

The instrument cluster displays important information to the operator. Vehicle Speed, Battery State of Charge, Battery Volts, and Total Miles Traveled are constantly displayed. At the top of the instrument cluster, a row of alert lights illuminates when the turn signals, headlights, high beams, reverse or brakes are in use.



Combination Switch

This switch operates the turn signals, headlights, and horn.

 **Warning:** The daytime running lamps system does not activate the rear lamps and may not provide adequate lighting during low visibility driving conditions. Make sure you switch the headlamps on, as appropriate, during all low visibility conditions. Failure to do so may result in a crash.



Brake Pedal

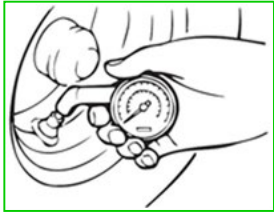
Your vehicle equipped with two braking systems, 1) The 4wheel Hydraulic brake system and 2) An electromagnetic brake system, please see the section in this manual regarding magnetic brake operation.

71

Wheels & Tires

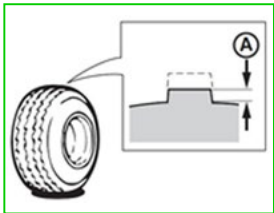
Tire Conditions

Tire Air Pressure



Check the tire air pressure before operating the vehicle.


Tire Wear Limit



Check the tire surface for damage, cracks, or embedded objects. When tire tread wears down to 1 mm (0.04 in.), replace the tire.


- Wheel nut tightening torque:
- 80 Nm, 8.0 m•kg (58 ft•lb)
- Tire pressure is set to: 137 kPa, 1.4 kgf/cm² (25 psi).


Tire Precautions

 **Warning:** Tires degrade over time depending on many factors such as weather, storage conditions, and conditions of use (load, speed, inflation pressure) the tires experience throughout their lives.

In general, tires should be replaced after six years regardless of tread wear. However, heat causes by hot climates or frequent high loading conditions can accelerate the aging process and may require tires to be replaced more frequently.

You should replace your spare tire when you replace the road tires or after six years due to aging even if it has not been used.

 **Warning:** Under-inflation is the most common cause of tire failures and may result in severe tire cracking, tread separation or blowout, with unexpected loss of vehicle control and increased risk of injury. Under-inflation increases sidewall flexing and rolling resistance, resulting in head buildup and internal damage to the tire. It also may result in unnecessary tire stress, irregular wear, loss of vehicle control and accidents. A tire can lose up to half of its air pressure and not appear to be flat!

 **Warning:** When you install a wheel, always remove any corrosion, dirt of foreign materials present on the mounting surfaces of the wheel of the surface of the wheel hub, brake drum or brake disc that contacts the wheel. Make sure to secure any fasteners that attach the rotor to the hub so they do not interfere with the mounting surfaces of the wheel. Installing wheels without correct metal-to-metal contact at the wheel mounting surfaces can cause the wheel nuts to loosen and the wheel to come off while your vehicle is in motion, resulting in loss of vehicle control, personal injury or death.

73

Scheduled Maintenance

The Specific Gravity of a Fully Charged Flooded Battery

A hydrometer reading of 1.277 or greater indicates full charge for most Trojan batteries. This value is based upon a specified temperature of 80°F (27°C). The specific gravity or voltage of flooded batteries should be monitored every 4–6 weeks and should be given a boost charge when they are at 70% state of charge (SOC). When batteries are taken out of long storage, it is recommended to recharge before use.

Proper Electrolyte Level

Liquid levels should be 1/8 inch below the bottom of the vent well (the plastic tube that extends into the battery). The electrolyte level should not drop below the top of the plates.

When Should Water be Added to Batteries

Water is lost during the charging of flooded batteries. The best time to water your batteries is always at the end of the charge cycle however, if the plates are exposed to air, add just enough distilled water to cover the plates before starting the charge cycle. When the charging process is complete, re-check the electrolyte and top off as needed.

I AGM batteries are maintenance free.

How Often Should Water be Added to Batteries

It is best to check your new batteries regularly as this will give you a good feel for how often your application will require battery watering. **WARNING:** A brand new battery may have a low electrolyte level. Charge the battery first and then add water if needed. Adding water to a battery before charging may result in overflow of the electrolyte.

When to Equalization Charge

Equalizing should be performed when a battery is first purchased (called a freshening charge) and on a regular basis as needed. How often this might occur with your battery will vary depending on your application. You will need to monitor your battery voltage and specific gravity to determine when equalization is needed. For example, it is time to equalize if the measured specific gravity values are below manufacturer's recommended values after charging (recommended value for Trojan Deep Cycle batteries is 1.285 +/- .007 at 80° F (27° C)). Equalizing is also required if the specific gravity value of any individual cell varies 30 points or more. In addition, reduced performance can also be an indicator that equalizing is necessary. Equalization should be performed when individual battery voltages in a battery pack range greater than 0.15 volts for 6-volt batteries or 0.30 volts for 12-volt batteries.

75

Vehicle Starting Procedure

Starting Procedure

Remove the battery charger cable if connected. Turn on the main switch. The main switch is located underneath the seat in the battery compartment. It is a 3-position switch. RUN it's the normal run position. The center position is off. Insert the vehicle key into the ignition spot and turn the key to the right to operate the vehicle.

Pre-operation Procedure

Pre-operation checks should be made each time you use your vehicle. Get in the habit of performing the following checks in the same way so that they become second nature.



Warning: To keep car from moving while performing pre-operation checks:

Remove main switch key. Apply parking brake. Death or serious personal injury can result from failing to comply with the safety instructions in this manual.

Pre-Operation Checklist

Before each use check the following:

- ✓ Batteries
- ✓ Mirrors
- ✓ Tire condition
- ✓ Steering system
- ✓ Reverse alarm
- ✓ Pedal operation
- ✓ Body and chassis
- ✓ Steering System

Check the steering system for excessive free play by:

- Moving the steering wheel up and down, and back and forth.
- Turning the steering wheel slightly to the right and left.

If you feel excessive free play or hear rattling sounds which may indicate loose steering components, consult an ICON dealer.



Reverse Alarm

Check the reverse alarm by moving the drive select switch to “REV” for reverse. The alarm should sound.

Brake Pedal Operation

Check the following pedal controls for proper operation. If a pedal does not work properly, consult an ICON dealer.

Accelerator Pedal Operation

The accelerator pedal is the pedal on the right, with the word GO molded into it. The operation of the accelerator pedal differs from that of an automobile. When the key switch is the ON position, and the Forward/Reverse switch is in either the FORWARD or REVERSE position, pressing the accelerator pedal will automatically release the park brake and start the vehicle moving in the direction selected (forward or reverse). As the accelerator pedal is pressed, speed will increase until full speed is reached. When the accelerator is released, power will be cut off and the motor will stop running.



Warning: With the main switch in the “OFF” position, make sure the accelerator pedal operates smoothly.

78

Reporting Safety Defects

Reporting Safety Defects in the US

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 ICON Electric Vehicles.

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 ICON Electric Vehicles.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153): go to www.safercar.gov; or write to:

Administrator

1200 New Jersey Avenue,

Southeast Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from www.safercar.gov.

Reporting Safety Defects in Canada

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform Transport Canada and ICON of Canada.

Notice

ICON Electric Vehicles, LLC. is not liable for errors in this manual or for incidental or consequential damages that result from the use of the material in this manual.

Your vehicle conforms to all applicable Federal Motor Vehicle Safety Standards in effect on the date of manufacture.

Thank you for choosing ICON Electric Vehicles, LLC.. Please protect your investment and ensure that your ICON vehicle provides years of reliable, superior performance by reading and following the maintenance instructions in this manual.

Your comfort and safety are important to us as well, so we urge you to read and follow the step-by-step operating instructions and safety precautions in this manual. These instructions must be followed in order to avoid the risk of severe personal injury. If you rent or loan your vehicle to others, we recommend that you ask them to read this manual before they operate the vehicle.

ICON products are backed by a customer support system designed to offer you fast, courteous service. In the event that your vehicle needs repairs or service, please contact ICON Electric Vehicles, LLC. we will be able to provide technical advice, perform warranty work, and sell parts and service manuals. For the name and address of the ICON dealer or distributor nearest you, call 866-426-6380.

We hope you will consider this owner's manual a permanent part of your vehicle. If you sell the vehicle, please include the manual so that the next owner will have the important operating, safety, and maintenance information it contains.

ICON
ELECTRIC VEHICLES