

Owner's Manual

Trail Buggy® Electric Hunting Vehicle

Trail Buggy® builds purpose-built electric hunting vehicles in South Carolina.

READ THIS FIRST

Safety before every ride

Read this manual and the vehicle's warning labels before your first trip. Improper use or neglected maintenance can cause serious injury, damage, or reduced performance.

Contents & Welcome

A living document — we will revise this guide as the product line grows

Thank you for choosing a **Trail Buggy®**. This Owner's Manual covers safety, charging overview, controls, operation, maintenance, transport, and how to reach us. Your exact build (2WD / 4WD / 4WD XL, bed style, winch, battery size) may differ from the examples shown here. If anything in this manual doesn't match your Trail Buggy®, follow what is actually on **your** vehicle, and call us with any questions.

01	Safety	3
02	About Your Trail Buggy®	4
03	Batteries & Charging	5
04	Vehicle Overview & Controls	6
05	On-The-Fly (OTF) Programmer	7
06	Operating	8–9
07	Optional Accessories	10
08	Tire Pressure & Range	11
09	Maintenance & Cleaning	12
10	Maintenance Schedule	13
11	Transport & Storage	14
12	Electric Park Brake — Manual Release	15
13	Support, Warranty & Contact	16
A	Appendix — Charging Guide	17+

How to use this manual

- **Safety labels** on the vehicle are part of the product. Keep them readable; replace if damaged.
- **DANGER / WARNING / CAUTION / NOTE** callouts highlight injury and damage risks — do not skip them.
- **Charging details** (outlet amps, generator size, solar planning) are in **Appendix A — Charging Guide** at the end of this manual.
- **Common sense** and local rules still apply. No manual can cover every trail, weather day, or hunting-property situation.

Please note: Specifications, features, and options may change. Models and photos on trailbuggy.us may vary from your build. Trail Buggy® will continue expanding this guide over time.

1 • Safety

Read, understand, and follow these warnings before every use

Improper use and ignored maintenance can cause serious injury, damage, and poor performance. Pay close attention to the signal words below and to the warning decal on the vehicle.

DANGER

Hazardous situation. Failure to avoid **will** result in severe injury or death.

WARNING

Hazardous situation. Failure to avoid **could** result in severe injury or death.

CAUTION

Failure to avoid could result in minor to moderate injury or damage.

NOTE

Important information and best practices not primarily about injury.

VEHICLE WARNING DECAL

Safety and Operating Instructions

WARNING! Failure to comply with all safety warnings may cause bodily injury or death for vehicle operator and/or passengers.

- **ROLLOVER HAZARD!** Extreme care must be used to prevent loss of control or vehicle rollover during abrupt or maneuvers. NEVER maneuver abruptly or at high speeds through curves or rough terrain.
- Keep entire body in vehicle and hold on when vehicle is in motion.
- Only qualified people with a valid driver's license should operate this vehicle.
- Do not operate this vehicle under the influence of drugs or alcohol.
- Make sure all passengers are securely seated before driving.
- Apply parking brake into the locked position when the vehicle is parked or unattended.
- Constant maintenance is required to keep the vehicle safe. Thoroughly inspect vehicle regularly, especially before and after every use.
- By operating this vehicle, the operator assumes all liability for any injury or damage caused by operation.

WARNING — OPERATOR & PASSENGERS

Keep arms, legs, and feet inside the vehicle while moving. Never ride in the cargo bed. Never leave young children unattended on or around the vehicle. Electric vehicles are quiet — pedestrians and other hunters may not hear you coming.

CAUTION — INTENDED USE

Your Trail Buggy® is built for hunting property, farms, ranches, and private trails. Observe local laws for registration, insurance, and where off-highway vehicles may be operated. Do not treat public-road use as approved unless your locality and equipment specifically allow it.

2 • About Your Trail Buggy®

Purpose-built electric hunting UTV — quiet 70V power from South Carolina

A **Trail Buggy®** is engineered for hunters and large-property owners who need durable, whisper-quiet transport through woods and pasture. It is a purpose-built electric hunting vehicle — engineered for the woods and farm, not converted from a passenger fairway vehicle. Licensed TrueTimber®, Realtree®, and Mossy Oak® camo options, 25" UTV tires, and a hunting-focused accessory package come standard on the base build (winch bundle optional).

MODELS

2WD • 4WD • 4WD XL

Standard & extended chassis

DRIVE BATTERY

70.4 V lithium

105 Ah std • 165 Ah optional

FACTORY TOP SPEED

25 mph

Programmed limit for safety

Navitas drivetrain

600 A controllers • ~19.5 HP AC motors • On-The-Fly Programmer (see §5). 4WD uses dual motors/controllers.

Four-wheel disc brakes

Hydraulic disc brakes at all four corners for strong, consistent stopping power.

25" 8-ply UTV tires

Size 25×10-12 off-road tires for traction on soft ground, roots, and farm roads.

Brush guard & hitch

Heavy-duty steel brush guard with winch mount + front 2" receiver; rear 2" hitch welded to chassis.

Serial number

Trail Buggy® serial plate on the front of the chassis, left / driver side — **serial number only** (not a vehicle identification number). See §13 Support.

Independent suspension

Front and rear independent suspension on 2WD and 4WD for a smoother trail ride.

Electric park brake

Automatic electric park brake engages when parked or when the vehicle is turned off.

Cargo / seating

Folding rear cargo box converts to a rear seat; fixed or tilt/dump bed options available.

Hunting gear

LED light bar (green/white or red/white), gun rack options, flip-down windshield, clays basket, USB + 12 V aux.

Key dimensions • from trailbuggy.us specifications

Chassis **SIZE**

Length: 121" standard • 138" XL

Width: 58"

Height: 84"

Frame: Made in the U.S.A. tubular steel DOM / A513 construction

Range **TYPICAL**

Typical: about 20–25 miles

Up to: about 30 miles*

***Varies** with speed, load, terrain, [tire pressure](#), temperature, and driving style

Energy: 7,392 Wh (105 Ah) • ≈ 11,616 Wh (165 Ah)

Features listed as standard on trailbuggy.us except the optional winch bundle. Confirm your build sheet for exact equipment.

3 · Batteries & Charging

Maintenance-free Eco Battery lithium — follow the manufacturer; outlet-amp tables are in Appendix A

Your drive pack is a **70V Eco Battery lithium** system (standard **105 Ah / 7,392 Wh**; optional **165 Ah**). Lithium packs are sealed and maintenance-free — **do not** add water, open cells, or treat them like flooded lead-acid batteries. Always follow Eco Battery's manuals for charge, storage, and cold-weather rules.

MAIN DRIVE PACK

Eco Battery 70V Lithium

Dedicated Eco Battery charger (~15 A DC into the pack · roughly **10–11 A AC / ~1,200 W** from a 120 V outlet).
Optional 165 Ah pack uses the **same charger**, so outlet draw is unchanged, charge time longer.

OPTIONAL WINCH BUNDLE

12 V accessory + NOCO

Separate 12.8 V ~100 Ah lithium (e.g. GRENERPOWER) with a NOCO onboard charger (~1.25 A AC). With the winch bundle, both chargers often share **one AC inlet** — plan for ~11–12 A AC combined.

DANGER — CHARGING & ELECTRICAL

Charge only with the charger(s) supplied or approved for your pack. Plug into a properly rated, grounded outlet. Prefer a **dedicated 15 A** circuit for the Eco Battery charger (and for the winch-bundle combined load). Never charge a damaged, swollen, leaking, or frozen pack. Do not open the charger or battery. Keep cords inspected; avoid thin, long extension cords.

WARNING — ENVIRONMENT

Charge in a ventilated area away from open flames and smoking materials. Never run a generator indoors or in an enclosed shed — carbon monoxide can kill. Follow Eco Battery guidance for cold-temperature charging (some packs require self-heating / warm conditions).

Basic charge routine

1. Park on a firm, level surface. Confirm the park brake is engaged / vehicle is off and key removed as applicable.
2. Connect the vehicle charge cord to the outlet (or winch-bundle single AC port) using a short, heavy-gauge cord if needed.
3. Allow the charger to complete its cycle. Unplug from the outlet first when disconnecting mid-cycle if you must interrupt.
4. Store the cord clear of tires and walking paths before driving.

Always follow Eco Battery charging recommendations and manuals. FAQ: ecobattery.com/pages/faq · Manuals: ecobattery.com/pages/product-manuals

More charging detail

- Full outlet-amp tables, winch-bundle combined draw, generator sizing, and solar planning are in **Appendix A — Charging Guide** at the end of this manual.

4 · Vehicle Overview & Controls

Learn the controls on your build before the first trail ride

Layouts can vary slightly by year and options. Use this section as a guide to the systems on a typical Trail Buggy®, then walk your own vehicle and locate each control before you drive.

Driver controls **TYPICAL**

Ignition / key: Turns vehicle electrical systems on and off. Remove the key when you leave the vehicle.

Direction selector: Forward / Neutral / Reverse. Bring the vehicle to a **complete stop** before changing direction.

Accelerator pedal: Press gradually to move; release to slow under motor control.

Service brake: Four-wheel disc brakes — press to slow or stop. Verify feel before every ride.

Electric park brake: Engages automatically when parked or when the vehicle is turned off. Confirm it is holding before you walk away.

Steering: Keep both hands on the wheel on rough ground and slopes.

Lights & power **PORTS**

LED light bar: Elusive Wildlife Kill Light Predator Series (green/white or red/white) — standard.

Head / tail / markers: Use as equipped for dusk, dawn, and property roads.

USB charge port: For phones and small devices.

12 V auxiliary: For seed/feed spreaders and other 12 V accessories within circuit limits.

Charging plug: Plug your extension cord in here to charge the main battery. If your Buggy has the winch package, this same plug also charges the winch battery.

WARNING — DIRECTION SELECTOR

Never move the direction selector while the vehicle is in motion. Unexpected braking or loss of control can occur. Stop fully, then select the new direction.

CAUTION — PARK BRAKE & KEY

The automatic electric park brake is a major safety feature — but you are still responsible for confirming the vehicle will not roll on slopes. Turn the vehicle off and remove the key when parked or unattended. Do not leave the ignition on for extended periods; accessories can drain the pack. With a dead pack the brake stays locked — see §12 for the rear-motor manual release before towing.

Body & hunting equipment

- **Flip-down windshield** with magnetic latches — fold down for airflow; raise for weather. The windshield, top, and roof supports are **not** roll-over or falling-object protection.
- **Gun rack** — vertical floor-mount or horizontal behind the windshield (relocatable / removable).
- **Front clays basket** — small gear, ammo, or tools within easy reach.
- **Rear cargo box / seat** — converts between cargo and seating; optional fixed or tilt/dump bed.
- **High-back seats** with headrests — all riders must remain seated with feet on the floor while moving.

⚠ WARNING: NO ROLL-OVER PROTECTION

A roll-over can cause severe injury or death. The top, windshield, accessory frames, and roof supports are for weather and light debris only. They are **never** intended to provide roll-over protection (ROPS) and will not protect you in a roll-over. Drive slowly on slopes and side hills, avoid sharp turns at speed, and keep all riders seated with arms and legs inside.

5 · On-The-Fly (OTF) Programmer

Navitas OTF — adjust speed, acceleration, and regen while you drive

Your Trail Buggy® includes a **Navitas On-The-Fly (OTF) Programmer** on the dash. When unlocked, three knobs let you fine-tune driving feel in real time — each from **0–100%** of the maximums set in the Navitas Dashboard App. A physical **lock and key** (pair of keys) freezes those settings when you do not want changes.

Clockwise = increase that setting · Counterclockwise = decrease that setting



Navitas OTF
On-The-Fly Programmer
as equipped on Trail Buggy®

1 SPEED

Forward speed limit (MPH)

Sets how fast the vehicle is allowed to go forward. Turning **clockwise increases** the limit; **counterclockwise decreases** it. Lower speed settings typically mean more range and less battery current.

2 REGEN

Regenerative braking strength

Sets how strongly the motor slows the vehicle when you **lift off the throttle**. **Clockwise = more regen**. Useful on descents; still use the service brake for controlled stops.

3 ACCEL

Maximum forward acceleration

Controls how quickly the vehicle builds speed when you press the accelerator. **Clockwise = more snap**; **counterclockwise = softer takeoff**. Limiting accel reduces hard current peaks.

LOCK + KEY

Turn the key to **LOCK (12 o'clock)** so knob turns no longer change vehicle behavior, or to **UNLOCK (3 o'clock)** for live changes. Then **remove the key** — it is not meant to stay in the OTF. **Unplugging** the OTF also locks settings in. When **unlocked**, the OTF overrides the Dashboard App for SPEED, REGEN, and ACCEL. Lock it when others drive your Trail Buggy®.

WARNING — OTF KEY USE

The lock is a **¼ turn only** — and a very easy turn. Do not force the key; people have broken keys by over-turning. Turn to **lock (12 o'clock)** or **unlock (3 o'clock)**, then **remove the key**. The key is not meant to stay in the OTF.

How to use the OTF · quick steps

1. **Unlock** with the OTF key (¼ turn to **3 o'clock**), then **remove the key** before you want live changes.
2. **Adjust while driving** — turn a knob clockwise to increase that setting, counterclockwise to decrease. Change one setting at a time so you can feel the difference.
3. **Lock when done** (¼ turn to **12 o'clock**), then **remove the key** — or whenever you leave the vehicle — so settings stay where you put them.

CAUTION — LEARN THE TRAIL FIRST

Do not turn SPEED or ACCEL all the way up until you know the trail, the load, and how your build responds. Start moderate. High accel on loose ground or with cargo can reduce control.

WARNING — SHARED VEHICLES

Do not leave the OTF unlocked if others may drive. Unexpected speed or accel changes can surprise another operator. Keep the spare key with your vehicle papers.

Field tips

■ **Range:** Dial SPEED down when you need more distance from the pack.

■ **Trail Buggy®** More REGEN on long descents helps hold speed and can reduce brake wear — still use the service brake as needed.

6 • Operating

Pre-ride checks, driving, parking, and terrain awareness

Pre-ride checklist • every trip

Walk-around

Body: loose, damaged, or missing parts

Leaks under / around the vehicle

Tires: pressure, tread, cuts, debris

Wheels: lug hardware present & snug

Suspension / brush guard hardware

Charge cord stored clear of path

Before you roll

Brake pedal: firm feel, returns

Park brake: holds on a mild slope

Accelerator: free travel & return

Steering: no excessive play / odd noise

Battery: adequate charge for the trip

Lights / horn (as equipped): function

WARNING — BRAKES

Never operate if the braking system feels soft, pulls, or fails to hold. A damaged brake system can cause severe injury or death. Have the vehicle serviced before the next ride.

Starting & driving

1. Confirm charger is unplugged and cord is stowed.
2. All passengers seated with bodies inside; cargo secured; firearms secured in the rack or case as appropriate.
3. Select direction (F / R) only while stopped.
4. Turn ignition ON. Look all around — electric vehicles are quiet.
5. Release park brake if your sequence requires a manual step; otherwise confirm automatic park brake has released as designed when you begin to move.
6. Press the accelerator smoothly. Build speed only as conditions allow.

CAUTION — REVERSE

Check carefully behind and to the sides before reversing. Use a spotter when visibility is limited by brush, trailers, or low light.

Stopping & parking

- Press the service brake to slow or stop. Do not rely on motor slowdown alone on steep grades.
- When parked: stop completely, set / confirm park brake, select a safe direction state if required by your control layout, turn ignition OFF, remove the key.
- On slopes and while loading/unloading, verify the automatic electric park brake is holding before you exit.
- If the pack has no power, the electric park brake stays locked. For towing or pushing, use the **manual release** in §12 Electric Park Brake — Manual Release before you move the vehicle.

Terrain, slopes & load

Rollover and loss-of-control risks rise fast on uneven ground

DANGER — ROLLOVER HAZARD

Extreme care must be used to prevent loss of control or rollover during abrupt maneuvers. **NEVER** maneuver abruptly or at high speeds through curves or rough terrain. Keep the entire body in the vehicle and hold on when moving.

Driving condition tips

- **Speed:** Factory top speed is limited to **25 mph**. Drive much slower on soft soil, wet leaves, gravel, roots, and blind curves.
- **Slopes:** Avoid steep grades. Drive straight up and down when possible. Do not turn sharply on a side-hill. Control downhill speed with the service brake.
- **Surface:** Reduce speed on mud, sand, wet grass, and ice. Watch for stumps, washouts, and hidden ditches.
- **Cargo:** Keep heavy loads low and centered. Sudden weight shifts raise tip risk. Never carry passengers on the cargo bed.
- **Heat & brush:** Motors and brakes get hot — use caution near dry grass and after hard climbs.
- **Weather:** Leave the vehicle and seek shelter if lightning is a risk.

WARNING — OPERATOR RULES

Only qualified operators with a valid driver's license. No drugs or alcohol. No more passengers than seats. Children who require child seats are not appropriate passengers — this vehicle is not designed for child safety seats.

Regenerative / motor slowing · if equipped

Many electric drivetrains provide motor-controlled slowing when you lift off the accelerator. This is **not** a substitute for the service brake. Always use the brake pedal when you need a controlled stop or when descending a grade.

Towing other vehicles

- Tow with a proper tow bar — never ropes or chains as the primary link.
- Tow only one vehicle; keep speeds very low; no riders on the towed vehicle.
- Never tow on public highways. Practice handling changes in an open area first.

NOTE — PROPERTY RULES

Follow the rules of the land you hunt or work. Quiet electric access is an advantage — use it responsibly around other hunters, livestock, and trails shared with ATVs or trucks.

7 • Optional Accessories

Winch bundle, battery upgrade, and power planning

OPTIONAL • 2WD OR 4WD

3,500 lb Winch Bundle

Self-recovery, gate/log work, and a dedicated 12 V accessory power source that does **not** borrow from the main 70V hunting pack. Mounts to the standard brush guard's integrated winch mount.

BUNDLE TYPICALLY INCLUDES

3,500 lb winch + synthetic cable

Wired remote

12 V ~100 Ah lithium accessory battery

Dedicated onboard charger (e.g. NOCO)

WARNING — WINCH SAFETY

Stay within the 3,500 lb rating. Use proper anchors and recovery technique. Keep people clear of the cable path. Wear gloves. A winch is a tool — it does not replace common-sense recovery practice. Ask us to walk through basic use when you order.

Battery upgrade

Most builds ship with the **70V 105 Ah** Eco Battery pack. The optional **70V 165 Ah** pack increases range using the **same Eco Battery charger** (same outlet draw, longer charge time). See **Appendix A — Charging Guide** for time tables.

Off-grid charging • solar & generator

- **Simple path:** solar or generator → 120 V AC outlet → your existing Trail Buggy® chargers.
- **Generator:** size for continuous watts with headroom (~2,000 W class typical for Eco alone or winch bundle). Never run indoors.
- **Solar:** empty-to-full in one day needs a large array; most hunters top up from 30–50% or spread charge over several sunny days.

Details and planning tables: see **Appendix A — Charging Guide** at the end of this manual.

Other common options

Bed configurations

Folding cargo/seat, fixed cargo bed, or tilt/dump bed — match to how you haul gear and game.

Light bar color

Green/White or Red/White Kill Light Predator Series blackout LED bar.

Camo packages

Licensed TrueTimber®, Realtree®, and Mossy Oak® finishes as offered on trailbuggy.us.

Gun rack style

Vertical floor mount or horizontal behind the windshield (relocatable).

8 · Tire Pressure & Range

Proper inflation cuts rolling resistance, protects tires, and stretches battery miles



Check cold

Quality gauge · small air adds · match side-to-side

Tire pressure drives **rolling resistance** — the force opposing the tire as it rolls. Underinflated tires make the motor work harder and draw more battery current, which means **shorter range** between charges. On a quiet electric hunting vehicle, that also means more heat, more wear, and a less predictable feel on the trail.

WARNING — FOLLOW THE SIDEWALL (AND TB GUIDANCE)

Use the cold pressure on the **tire sidewall** and any Trail Buggy® guidance for your build. **Never exceed** the sidewall maximum. Add air in **small amounts** — these low-volume UTV tires over-inflate quickly. Match pressures side-to-side.

MILD UNDERINFLATION

~10–15% low

Roughly ~3–7% range loss (approximate; terrain & load vary)

MODERATE UNDERINFLATION

~20–30% low

Range loss can reach ~10%+ — miles you need on a long hunt

OVERINFLATION

Too high

Less often an energy issue; can hurt traction and cause uneven wear

Why underinflation costs range

- A soft tire forms a **larger contact patch** and flexes the sidewall more.
- That extra resistance turns battery energy into **heat** instead of forward motion.
- Result: higher current draw, warmer tires, and fewer quiet miles per charge.

Terrain & payload trade-offs

Terrain TRADE-OFFS

Soft / muddy: Slightly lower pressure can help traction but costs range. Reinflate before firm trails or roads.

Hard-packed trails / roads: Stay at recommended pressure or the slightly higher end of the allowed range for efficiency.

Payload GEAR / PASSENGER

Extra weight raises rolling resistance.

Stay within the recommended pressure range; adjust upward per load guidance when you have it for your tires / build.

Still never exceed sidewall max.

Best practices

- **Quality gauge** (digital recommended). Check when tires are **cold** — before a long run, not after hard miles.
- At least **weekly** if you use the Trail Buggy® often, and **before every long outing**.
- Keep tread healthy and alignment sound; remove sticks/thorns. Carry a **12V or portable inflator**, digital gauge, and patch kit in the field.
- **Handling & stealth:** Proper pressure keeps the vehicle more predictable and the motor load quieter — a bonus when you hunt.

NOTE

Low tire pressure is also a common reason an electric hunting vehicle feels slow or "heavy." If range or pep drops suddenly, check the tires first. More detail: [trailbuggy.us blog](https://trailbuggy.us/blog) — *How Tire Pressure Affects Battery Range*.

9 • Maintenance & Cleaning

Keep the vehicle safe after mud, rain, and hard hunting weeks

DANGER — SERVICE SAFETY

Park on firm level ground, confirm park brake, turn the vehicle off, and remove the key before service. High voltage, hot components, and crush hazards exist. Remove jewelry; wear eye protection. If you lack tools or training, have a qualified technician perform the work.

Cleaning after the hunt

- Wash with mild soap and lukewarm water; soft cloth or sponge. Avoid harsh solvents on plastics and seats.
- Pressure washing: keep pressure moderate (do not exceed ~700 psi) and avoid blasting seals, bearings, and electrical connectors head-on.
- Flush the underbody after mud, fertilizer, or salt exposure. Clear packed mud from suspension and brake areas.
- Clean the windshield with clear water and a soft cloth; plastic polish for light scratches. Some glass cleaners can haze polycarbonate.
- Wipe seats and rubber trim with mild soap; vinyl/rubber cleaner for tar or sap.

Tires & wheels

SEE ALSO • §8 TIRE PRESSURE & RANGE

Pressure, range, and terrain tips are covered in detail on page 11. Reminder: never exceed sidewall max; add air in small amounts; match side-to-side; check cold.

- Replace damaged valve stems and cracked sidewalls. Inspect for even tread wear; rotate periodically. Remove sticks and thorns before they work deeper.
- Wheel work: loosen lugs on the ground, lift safely with chocks, tighten in a star pattern to **60 ft-lb** (dry threads unless otherwise specified for your hardware). Re-check torque after the first short drive following a wheel removal.

Battery & electrical (lithium)

- Keep pack and charger connections clean, dry, and tight. Inspect cords for cuts or crushed sections.
- Eco Battery terminal bolts (M8): torque to **6 ft-lb** (72 in-lb) using the ring terminals and hardware supplied. Do not over-tighten. Only check or tighten terminals if you are properly trained and the pack is switched off; otherwise call Trail Buggy®.
- No cell watering. No baking-soda “acid neutralizing” baths intended for flooded lead-acid packs.
- If the pack shows damage, error states, unusual heat, or odor — stop using it and contact Trail Buggy® / Eco Battery support channels.

Brakes, fasteners & underbody

- Listen for rubs or grinding; investigate soft pedals immediately.
- Electric park-brake release screws (rear motor): after any manual release for towing, **loosen both screws again** so the park brake can re-engage. Do not leave them tightened. See §12.
- After rough trails, re-check critical fasteners (wheels, brush guard, hitch, seat mounts, rack).
- If equipped with a winch: inspect cable/synthetic line, hook, and mount bolts; keep the line free of kinks.

10 · Maintenance Schedule

Baseline intervals for normal private-property use — service more often in mud, dust, or heavy loads

A vehicle that needs repair is potentially hazardous. Do not ride until issues are fixed. Keep a simple log of service dates. Severe use (deep mud, frequent creek crossings, max cargo, extreme heat/cold) means shorter intervals.

ITEM	EACH USE	MONTHLY / 20 H	QUARTERLY / 60 H	6 MO / 125 H	ANNUAL / 250 H
Walk-around: body, leaks, hardware	✓	✓	✓	✓	✓
Tires: pressure, tread, damage	✓	✓	✓	✓	✓
Brakes & park brake function	✓	✓	✓	✓	✓
Accelerator / steering feel	✓	✓	✓	✓	✓
Battery state of charge	✓	✓	✓	✓	✓
Charger cord & inlet condition		✓	✓	✓	✓
Lights, USB / 12 V aux		✓	✓	✓	✓
Clean underbody after mud / fertilizer	✓*	✓	✓	✓	✓
Suspension bushings / play			✓	✓	✓
Wheel lug torque check (60 ft-lb)		✓	✓	✓	✓
Wheel rotation				✓	✓
Winch line / mount (if equipped)		✓	✓	✓	✓
Full fastener audit (racks, seats, hitch)			✓	✓	✓
Professional inspection / brake service					✓

* After each muddy or corrosive outing, not only on a calendar.

Lithium note

- There is **no** monthly “add distilled water to cells” step on Eco Battery lithium packs.
- Follow Eco Battery storage and Power Save / sleep guidance for long idle periods.
- Keep the pack reasonably charged in storage; avoid leaving it deeply discharged for weeks.

NOTE — TORQUE & FLUIDS

Wheel lug nuts: **60 ft-lb**. Eco Battery M8 terminal bolts: **6 ft-lb** (72 in-lb). Gearcase intervals and brake-pad wear limits will be refined in later revisions. When unsure about other fasteners, call Trail Buggy® before over-tightening.

11 • Transport & Storage

WARNING — HAULING

Secure the vehicle with quality ratchet straps at proper tie-down points. Remove loose personal gear. No riders on a transported vehicle. Confirm trailer/truck capacity exceeds vehicle + load with margin. Reduce speed and re-check straps after the first few miles.

- Consider removing or securing the windshield and soft accessories before highway transport if they can catch wind.
- On the trailer: park brake confirmed, ignition off, key removed, wheels chocked if appropriate.

DEAD PACK / TOWING

If the pack has no power, the automatic electric park brake stays locked. See **§12 Electric Park Brake — Manual Release** before towing or pushing the vehicle.

Long-term storage

- Cool, dry location protected from harsh weather when possible.
- Charge the lithium pack per Eco Battery guidance before storage; check state of charge periodically (every few weeks).
- Do not store a damaged pack. Avoid extreme heat soak in closed metal trailers when practical.
- Keep tires inflated; roll the vehicle slightly every so often if stored for months. Confirm park-brake release screws are **loosened** (normal) so the brake can hold (see §12).

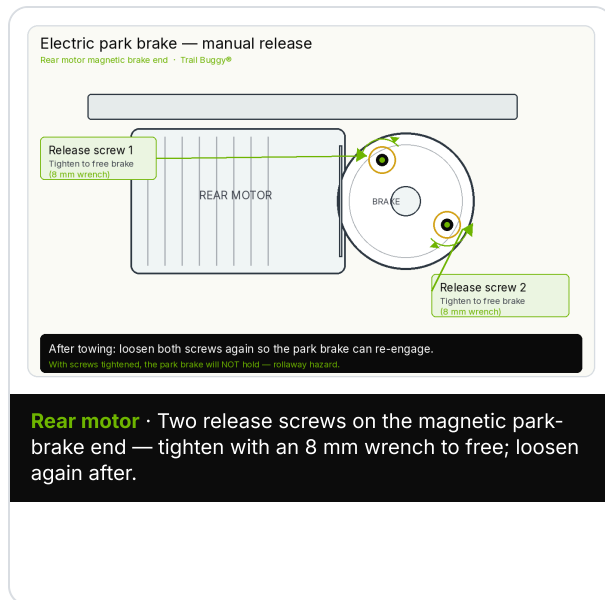
12 · Electric Park Brake — Manual Release

Dead pack / towing — rear-motor release screws

Normally, **power is required** to release the automatic electric park brake. When the Buggy has **no power**, the park brake stays **engaged (locked)**. You must manually release it on the **rear motor** before towing or pushing the vehicle.

DANGER — ROLLAWAY

Never manually release the park brake on a slope unless someone is holding the service brake and can steer. With the release screws tightened, the park brake will **not** hold — the vehicle can roll. Chock the wheels on firm, level ground first.



1. Park on firm, **level** ground. Chock the wheels. Keep one person ready on the service brake / steering if the vehicle must be moved immediately.
2. Locate the two release screws/bolts on the **outside face of the magnetic park brake** on the **rear motor**.
3. Using an **8 mm wrench**, **tighten** (screw in) both bolts to release the park brake.
4. Tow or push only as needed, at very low speed. Prefer a proper tow bar; have a person ready to steer and apply the service brake.
5. When finished: **loosen both screws again** so the park brake can re-engage. Verify it holds before leaving the vehicle unattended.

CAUTION — AFTER RELEASE

Do not leave the release screws tightened. If you cannot find the screws, have a 4WD dual-motor question, or are unsure — call Trail Buggy® before forcing anything.

13 · Support, Warranty & Contact

For questions, parts, service referrals, or warranty help on your Trail Buggy®, contact **Trail Buggy®** directly using the information below.

Trail Buggy® · 340 Mt Pleasant Rd, Spartanburg, SC · **864-410-0410** · Mon–Fri 9:00–5:00 · trailbuggy.us

WARRANTY — CUSTOMER DOCUMENTS CONTROL

Drive-pack coverage follows the **Eco Battery** manufacturer's limited warranty (ask us for the terms that apply to your pack generation). Vehicle and component coverage are described in your **purchase / build documents**. This manual does not invent warranty length or exclusions — keep your invoice and any written warranty with this manual.

When you call, have ready

- Owner name and contact · approximate purchase / delivery date
- Model (2WD / 4WD / 4WD XL) and major options (165 Ah, winch, bed type)
- **Serial number** from the Trail Buggy® plate on your vehicle (see below)
- Clear description of the issue and photos when helpful

Your serial number · chassis plate

Trail Buggy® vehicles use a **serial number only** — they are **not** issued a vehicle identification number. Find the serial on the **Trail Buggy®** plate riveted to the **front of the chassis on the left / driver side**. Record it with your purchase papers.



Serial plate · Front of chassis, left / driver side — Trail Buggy® plate shows your serial (example shown: 260007).

WHERE TO LOOK

Stand at the front of the vehicle on the driver side. The black Trail Buggy® plate is on the forward chassis rail. The number under the Trail Buggy® name is your serial — use that when you call for parts or service.

Revision: User Manual Rev_22 · October 2026. Trail Buggy® / Golf Carts Plus LLC DBA Trail Buggy reserves the right to update specifications and this guide. Always follow state and local regulations. Do not modify the vehicle in ways that reduce stability, raise top speed beyond safe programming, or defeat safety systems.

Legal: By operating this vehicle, the operator assumes liability for injury or damage caused by operation, as stated on the vehicle warning decal. This manual cannot warn of every possible misuse.

Appendix A — Charging Guide

Outlet amps, winch-bundle combined draw, generator sizing, and solar planning

The following pages are the **Trail Buggy® Charging Guide** (Appendix A). Use them for Eco Battery / NOCO outlet-amp facts, winch-bundle combined draw, generator sizing, and solar planning.

What you will find

- AC draw figures for the Eco Battery charger and (when equipped) the winch-bundle / NOCO path
- Planning notes for generators and solar

How Many Amps Do Our Chargers Draw From the Outlet?

Charger Power Draw Guide for your Trail Buggy® electric hunting vehicle

When you plug in to charge, what matters for house circuits and generators is the **AC amps drawn from the outlet**, not just the DC amps going into the battery. Below: each charger on its own, plus the **winch bundle** — both chargers running together from one AC port.

MAIN DRIVE BATTERY

Eco Battery 70V Lithium Pack Charger

A-1071 style

DRAW FROM A STANDARD 120 V OUTLET

~10–11 amps AC

Approx. power: **~1,200 W**

Into the battery	~15 A DC
	measured ~14.9 A during charge
Pack voltage during charge	~72–78 V
Power (approx.)	~1,200 W

WINCH / ACCESSORY 12 V BATTERY

NOCO 10 A Onboard Charger

GENPRO10X1 · for GRENERPOWER 12.8V 100Ah LiFePO4 (Group 24)

DRAW FROM A STANDARD 120 V OUTLET

~1.25 amps AC

Manufacturer max power: **150 W**

Into the battery	10 A DC
Battery voltage	12.8 V nominal
Battery	GRENERPOWER 100Ah · 1,280 Wh

WINCH BUNDLE · BOTH CHARGERS TOGETHER

One AC port. One drop cord.

With the winch bundle your Trail Buggy® carries **both batteries and both chargers**. We tie the two chargers to a **single AC inlet**, so you only need **one outlet and one drop cord** — that cord carries the combined load of both chargers.

COMBINED OUTLET DRAW @ 120 V

~11.25–12.25 amps AC

Approx. **~1,350 W** total (≈ 1,200 W + 150 W)

Why the big difference?

Outlet amps follow total power (volts × amps). A high-voltage traction pack charging at ~15 A needs far more power than a small 12 V accessory battery charging at 10 A.

$$\text{Watts} = \text{Volts} \times \text{Amps}$$

OPTIONAL 70V 165 AH DRIVE PACK

Most buyers get the **70V 105 Ah** pack. The optional **70V 165 Ah** pack uses the **same Eco Battery charger**, so outlet draw is **unchanged** (**~10–11 A AC / ~1,200 W**) — it just takes longer to charge.

CHARGE TIME @ ~15 A	105 AH	165 AH
0% → 100%	~7.0 h	~11.0 h
30% → 100%	~4.9 h	~7.7 h
50% → 100%	~3.5 h	~5.5 h

Practical Tips

- **Winch bundle (one cord, both chargers):** plan for **~11.25–12.25 A AC / ~1,350 W** on that single drop cord.
- **Circuit:** use a dedicated **15 A** household circuit for the combined load (the Eco Battery charger alone also wants a dedicated circuit). Avoid long, thin extension cords; use a heavier-gauge cord and a short run.
- **NOCO 10 A charger by itself:** a light load — fine on a normal household outlet.
- **Generator:** ~1,350 W continuous for both chargers (~1,200 W Eco alone), plus headroom and other loads.

Always follow Eco Battery's charging recommendations and manuals for your drive pack and charger. Charging FAQ: <https://ecobattery.com/pages/faq> · Battery & CAN charger manuals: <https://ecobattery.com/pages/product-manuals>

Off-Grid Charging: Solar & Generator

For hunting property without grid power — charging your Trail Buggy® electric hunting vehicle

This page assumes the simple path: **solar or generator** → **standard 120 V AC outlet** → **your existing Trail Buggy® chargers** — Eco Battery, NOCO, or the winch-bundle single AC port. Dedicated DC solar gear is a separate topic.

STANDARD DRIVE PACK

7,392 Wh

Eco Battery 70.4 V · 105 Ah

OPTIONAL UPGRADE

~ 11,616 Wh

Eco Battery 70.4 V · 165 Ah

WINCH ACCESSORY

1,280 Wh

GRENERPOWER 12.8 V · 100 Ah

PLANNING ASSUMPTIONS

Charger efficiency **~90%**

Peak sun **~4.5 h/day** (SE US avg.)

Solar path derate **~0.75**

Drive pack — energy to full: 105 Ah vs. 165 Ah · same Eco Battery charger (~15 A DC / ~1,200 W AC)

STATE OF CHARGE	STANDARD 105 AH · 7,392 WH				OPTIONAL 165 AH · ~ 11,616 WH			
	INTO BATTERY	AC (÷ 0.90)	@ ~15 A	1-DAY SOLAR	INTO BATTERY	AC (÷ 0.90)	@ ~15 A	1-DAY SOLAR
0% → 100%	7,392 Wh	~8,213 Wh	~7.0 h	~2,400 W	11,616 Wh	~12,907 Wh	~11.0 h	~3,800 W
30% → 100%	5,174 Wh	~5,749 Wh	~4.9 h	~1,700 W	8,131 Wh	~9,035 Wh	~7.7 h	~2,700 W
50% → 100%	3,696 Wh	~4,107 Wh	~3.5 h	~1,200 W	5,808 Wh	~6,453 Wh	~5.5 h	~1,900 W

Solar array (W) ≈ AC Wh ÷ (4.5 sun h × 0.75). Time ≈ Ah ÷ 15 A (Eco Battery FAQ method). Same outlet draw for both packs.

GRENERPOWER 12 V alone · NOCO 10 A

SOC	BATTERY	AC	@ 10 A	1-DAY SOLAR
0→100%	1,280 Wh	~1,422 Wh	~10 h	~420 W
30→100%	896 Wh	~996 Wh	~7 h	~300 W
50→100%	640 Wh	~711 Wh	~5 h	~210 W

A light load beside the drive pack.

Winch bundle · 105 Ah + 12 V, same starting SOC

SOC	AC ENERGY NEEDED	1-DAY SOLAR
0→100%	~9,636 Wh	~2,850 W
30→100%	~6,745 Wh	~2,000 W
50→100%	~4,818 Wh	~1,430 W

Single AC port. 165 Ah pack: scale drive portion up ~57%.

Solar — Practical Tips

- **Empty → full in one day takes a big array** (~2,400 W for the drive pack alone). Most hunters top up from **30–50%**, or spread the charge across **2–3 sunny days** with a smaller kit — a **~800–1,200 W** portable kit covers a typical mid-day top-up.
- **Inverter must handle the charger continuously:** ~1,200 W for the Eco Battery charger alone, ~1,350 W for the winch bundle. Choose a **~2,000 W continuous** class inverter for headroom, with a battery bank sized to the job.
- **Weather, shade, season, and panel angle** all change results — winter gives fewer sun hours.

GENERATOR CHARGING

Size for continuous watts, with headroom

- **Runtime:** empty → full ~7 h for the 105 Ah pack (~11 h for 165 Ah), plus taper; from 50% ~3.5 h (~5.5 h) — fuel accordingly.
- **Quiet inverter generators** suit hunting property better than open-frame units. Keep it downwind and away from the stand when possible.

ECO BATTERY CHARGER ALONE · ~1,200 W

~2,000 W continuous

Inverter generator; at minimum a solid 1,600–2,000 W class

WINCH BUNDLE · BOTH CHARGERS · ~1,350 W

~2,000 W min.

2,200–2,500 W class is more comfortable with other camp loads

Always follow Eco Battery's charging recommendations and manuals. FAQ: <https://ecobattery.com/pages/faq> · Manuals: <https://ecobattery.com/pages/product-manuals> · Resources: <https://ecobattery.com/pages/resource-center>

Safety: Never run a generator indoors or in an enclosed shed or garage — carbon monoxide can kill.

Please note: All figures are approximate planning estimates based on published specs and the assumptions above; solar output varies with weather, shade, season, and panel angle. A Kill-A-Watt or clamp meter on the cord gives the definitive reading for your setup.