AUSTRACK
CAMPERS & CARAVANS®
BUILT TOUGH, BUILT TO LAST

USER MANUAL

ALL AUSTRACK SIMPSON X MODELS

(2025 - 2026)

Please read owner's manual before using the equipment. Third party component manuals should be read in conjunction with this manual. Maintenance guidelines must be met or exceeded, failing to meet these guidelines may result in serious injury or death and property damage. Specification may change without notice.

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Introduction

Welcome to the Austrack family.

This guide has been created to help you become familiar with your new camper and ensure you get the most out of your Austrack investment. Please take the time to read through the following information before setting off on your adventures.

This manual has been written to cover our wide range of Hardfloor Camper Trailers. Please refer to each section to find the information relevant to your specific model.

The manual is available as a download from our website, and we recommend saving it to your mobile phone, so you have access to it at any time.

If you require further assistance, our team is always happy to help—please don't hesitate to give us a call. Our online chat window also includes a troubleshooting guide, and during business hours you can use the chat feature to speak directly with our technical support team.

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Store Locator

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73 Lear Jet Drive Caboolture, QLD 4510
07 5408 7111
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Lansvale Showroom
286 Hume Hwy, Lansvale, NSW 2166
02 8776 6933
sydney@austrackcampers.com.au

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7 Collinsvale Street Rocklea, QLD 4106
07 3112 7868
rocklea@austrackcampers.com.au

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03 9357 5081
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35 Bowen Road Rosslea, QLD 4812
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03 5908 2229
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4/2364 Pacific Highway Heatherbrae, NSW 2324
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08 6252 7007
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Suppliers, Brands, and Partners

All Offroad Equipment
AusTuff Suspension and Accessories, ARCTIC Fridges, AOE Jockey Wheels
https://www.alloffroadequipment.com.au/
1800 026 337

AOE RV Service Centre
Caravan Service Centre
https://www.aoervservicecentre.com.au/
1300 349 226

ARK
Off Road Jockey Wheels
https://www.arkcorp.com.au/
Customer Service & Support 02 9678 9036

AU FOCUS
Diesel Heater
https://aufocus.com.au/
03 8597 0396

Aussie Traveller
Entry Doors and Windows
https://www.aussietraveller.com.au/
1300 663 868

Cruisemaster
Off Road Trailer Couplings
https://cruisemaster.com.au/
Customer Service & Support 1300 35 45 65

DOMETIC
Air Conditioning, DRS, and Refrigeration
https://www.dometic.com/en-au/support/service-locator
Technical support 1800 21 21 21

Hip Camp
Premium Camping Locations
https://www.hipcamp.com/en-AU

LogMate
Digital Logbook App
https://awchosting.com.au/logmate/
0494 062 330

McHitch Uniglide Trailer Couplings
Off Road Trailer Couplings
https://mchitch.com.au
Customer Service & Support: 1800 624 482

myCOOLMAN
Air Conditioning
https://www.mycoolman.com.au/
1300 072 018

Pedders
Suspension
https://www.pedders.com.au/

REDARC
Electrical System
www.redarc.com.au
Technical support 1300 733 272

RENOGY
Electrical System
https://au.renogy.com
1800 560 588

Seaflo
Water Pumps
https://www.seaflo.com/

Thetford
Refrigeration
https://www.thetford.com/au/
03 9358 0700

TRUMA
Air Conditioning, Refrigeration, and Hot Water Systems
https://www.leisure-tec.com.au/services/
Technical support 1300 072 018

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General Safety Introduction

⚠ WARNING– Before using this product you should read this manual and those manuals supplied by component manufacturers applicable to this product.

This manual is supplied as a reference to required maintenance of your new Austrack Campers Hybrid offroad camper.

Failure to use and maintain the product in accordance with what is outlined in this manual may affect your warranty.

Incorrect and/or insufficient maintenance may cause product failure resulting in property loss, damage or injury or death.

Maintenance intervals are critical for normal use; extreme use may require shorter or additional maintenance intervals. See Maintenance Schedule for more details.

This manual content does not imply, express or other any warranty, the owner should read the Warranty T&C's included in this manual.

Before using this product, you need to be certain that your tow vehicle is suitably rated and equipped to tow the product safely and legally.

The trailer and vehicle pairing must we within the safe "Maximum Towing Capacity", "Ball Weight Capacity" and "Gross Combination Mass" as stated by the vehicle manufacturer.

This Hybrid camper is fitted with electric brakes and a "Breakaway System". Requirements for breakaway systems can vary from state to state. The breakaway battery draws its charge from the house battery system of the Gibb. See Braking Systems section for more details.

Austrack Campers reserves the right to modify an advertised component (e.g., air conditioning unit, stove, inverter) with an item of similar value and quality, due to supply and availability. In order to fulfill orders, all Austrack Campers are subject to change at Austrack's discretion.

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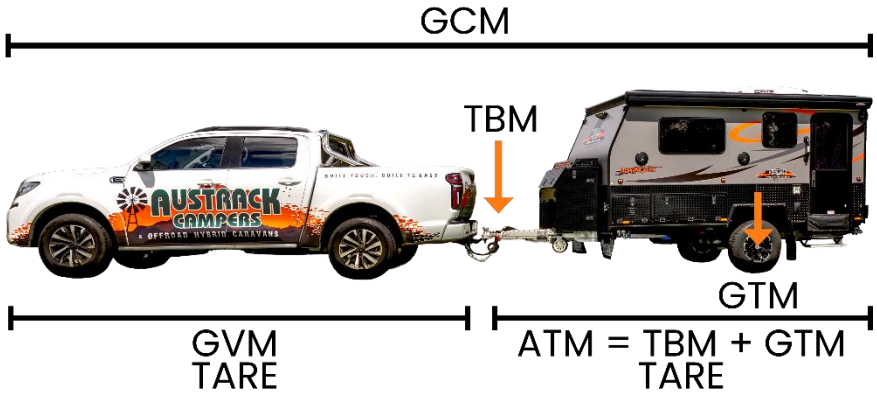
Weight Explanations



GCM Gross Combination Mass. The weight of your fully loaded vehicle and fully loaded trailer when hitched together.

GVM Gross Vehicle Mass. This is the weight of your fully loaded vehicle.

TARE The weight of the vehicle or trailer without water, fuel or any cargo.

ATM Aggregate Trailer Mass. The maximum your trailer can weigh fully loaded.

GTM Gross Trailer Mass. The maximum weight on the axle when fully loaded.

TBM Tow Ball Mass. The weight exerted on the vehicle when hitched. This weight transfers to your vehicle when hitched and becomes a part of the vehicles GVM.

GCM = ATM + GVM

ATM = TBM + GTM

Payload = ATM – TARE

Your Vehicle's towing capacity is the maximum weight your vehicle can legally and safely pull when towing, however it is also crucial to know the Gross Combination Mass allowed by the towing vehicle. State laws regulate all towing requirements, including speed limits. It's crucial to understand and adhere to towing capacity limits for several reasons.

Exceeding these limits is both dangerous and against the law. It also places undue stress on your vehicle's brakes and components, leading to damage and wear. Furthermore, an overweight vehicle usually isn't covered by insurance.

When it comes to towing your camper, one of the most critical factors to consider is the tow ball weight. This often-overlooked aspect of towing can significantly impact your safety and the handling of your camper on the road.

A general rule of thumb is that the tow ball weight should be around 9-11% of the loaded camper's total weight. For example, if your loaded camper weighs 3,000 kg, your ideal tow ball weight should be between 270 kg (9%) and 330 kg (11%).

Load Distribution

When heading away on your next big adventure it is important to load your caravan correctly to distribute weight evenly and achieve a suitable ball weight load and prevent loading in a manner that can cause a caravan to sway and/or roll excessively left and right. The optimum ball weight on a caravan is between 9% and 11% of the total caravan weight.

WARNING: BALL LOADING (DOWNWARD LOAD ON TOW HITCH) MUST NOT EXCEED 350KG OR THE MAXIMUM ALLOWABLE LOAD BY THE VEHICLE MANUFACTURER OR TOW BAR RATING, WHICH EVER IS THE LOWEST.

Exceeding these limits may result in an accident, causing property damage and/or serious injury or death.

• Always load both sides of the caravan evenly

• Load heavy items low and directly over the axle.

• Secure all items to prevent damage to the caravan during travel.

• Consider water tank levels and how they may affect the balance front and back and the percentage of ball weight.

• Overhead cupboards should only be used for lightweight items such as clothes, personal items, bedding etc.

• Never store heavy items in overhead cupboards.

• Heavy cooking equipment should be stored in lower cupboards.

• Tinned and bottled food for cooking etc. should be stored in the pantry drawer.

• Never load in a manner that causes the ball weight to exceed the limit of the tow vehicle.

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Drawbar

The drawbar forms the critical connection between your Austrack camper and the tow vehicle. It is responsible not only for physically coupling the camper to the vehicle, but also for integrating essential safety, braking, and electrical systems required for towing.

Mounted on or around the drawbar are several key components that enable secure attachment, controlled braking, electrical communication, and emergency safety functions. These components work together to ensure stable towing behaviour, legal compliance, and safe operation in both on-road and off-road conditions.

Because the drawbar and its associated systems are exposed to high loads, vibration, and environmental conditions, owners must be familiar with the purpose and correct operation of each component. Routine inspection, correct setup before travel, and safe use are essential to maintaining towing safety and preventing equipment failure.

This section of the Owners Manual provides operating guidance, safety information, and owner-safe inspection advice for the following drawbar-mounted components fitted to Austrack caravans:

- Coupler
- Jockey Wheel
- Spare Tyre
- Trailer Plug and Wiring
- Handbrake
- Anderson Plug

Each subsection should be read carefully before towing and reviewed regularly as part of your pre-departure checks.

McHitch Coupler

Austrack Campers models are supplied as standard with a McHitch Drop-On Off Road Coupler and may be upgraded to the McHitch Automatic Off Road Coupler at additional cost.

McHitch Off Road Couplers are designed specifically for off-road towing conditions and provide exceptional articulation. When correctly connected, the coupler allows up to 90 degrees of movement in all directions, significantly reducing stress on the tow vehicle and camper during uneven terrain, steep inclines, ruts, and tight manoeuvring. This articulation improves towing stability, control, and overall safety when travelling off road.

To ensure correct operation, safety and long service life, the McHitch coupler must be inspected and maintained regularly.

McHitch Drop-On Coupler

The McHitch Drop-On coupler uses a solid steel tow pin fitted to the vehicle's tow tongue. The coupler locates over the pin and is mechanically secured using the rotating head and locking pin.

To assist correct engagement, position the camper so the coupler is slightly forward of the tow pin, with the head of the coupler angled approximately 45 degrees downward toward the pin. Using the jockey wheel, slowly lower the drawbar until the coupler self-locates and drops fully onto the tow pin.

In some cases, minor misalignment may occur due to terrain or vehicle position. A gentle shake or slight repositioning of the drawbar may be required to allow the coupler head to sit fully flish against the tow tongue.

Once the coupler is seated correctly:

1. Rotate the coupler head clockwise to tighten and clamp securely onto the tow pin.
2. Insert the supplied locking pin through the front hole of the coupler.
3. Secure the locking pin using the R-Clip and Key Barrel supplied.

The locking pin provides a secondary safety mechanism and acts as a deterrent against unauthorised removal.

DO NOT TOW unless the coupler is fully seated, tightened, and the locking pin and R-clip are correctly installed.

Quick Tips:

- If engagement stalls, stop, pull forward slightly, and realign to keep the receiver and shaft in a straight line.
- On uneven ground, a small height adjustment with the jockey wheel can help alignment.
- Keep the receiver and shaft clean for smooth auto-locking and reduced wear.

McHitch Automatic Coupler

The McHitch Automatic Coupler provides full off road articulation with a horizontal, reverse on engagement system for quick, repeatable hitch-ups.

The tow vehicle is fitted with a square receiver on the tow tongue. The camper's coupler features a horizontal engagement shaft at the front of the coupler (ahead of the uni-joint). There is no vertical operation when connecting.

1. Align the vehicle so the square receiver is in line with the coupler's horizontal engagement shaft.
2. Reverse slowly. As the receiver contacts and slides straight onto the shaft, the locking handle auto-lifts and snaps into its locked position.
3. Continue reversing until the receiver seats firmly against the coupler body and the handle remains positively locked (it should not move freely).
4. Insert the locking pin through the aligned holes in the receiver and shaft.
5. Secure with the R-clip and key barrel to prevent accidental removal.

The locking pin acts as a secondary safety lock and deters unauthorised disconnection.

Post Connection Checks:

- Handle is fully locked and cannot be moved out of lock.
- Receiver is fully seated against the coupler shaft.
- Locking pin + R-clip installed.

- Safety chains crossed and connected, electrical plug and breakaway cable attached.

DO NOT TOW unless handle is locked and the locking pin and R-clip are installed.

Maintenance and Inspection Guide

This maintenance and inspection guide applies to both the Drop-On and Automatic Coupler.

Regular maintenance ensures safe operation and long service life, especially after off road use such as dust, mud, corrugations and water crossings.

Safety First

- Level ground, tow vehicle in park (or in gear for manuals), handbrake on.
- Chock wheels, support drawbar with jockey wheel and/or stands.
- Wear eye protection. Do not heat, weld, or modify coupler components.

Service Intervals

Before each trip

- Coupler, drawbar, and mounting hardware have no cracks, bending or corrosion.
- Pins & R-clips present, straight and secure.
- Safety chains, shackles, electrical plug, and breakaway cable in good condition.
- Engagement faces (pins/receiver/shaft) are clean and dry (no grease).

Every month or 1,000km (shortened after heavy off road use):

- Clean away mud, sand, and grit; dry thoroughly.
- Check main shaft (both couplers) rotates freely but no vertical or side play.
- Inspect nylon bushes for wear.

- Drop-On: Inspect vehicle tow pin; Automatic: Inspect vehicle square nreceiver – both secure and unworn.

After water crossings / heavy dust / beach use:

- Rinse with fresh water, dry completely, re-inspect.

Annually

- Full coupler and uni-joint inspection; replace any worn pins, clips bushes or hardware.

Cleaning and Lubrication Policy

- Cleaning: Soft brush + low pressure water; avoid harsh solvents that can damage nylon. Dry fully.
- Lubrication:
    - **Do not** lubricate external engagement faces such as tow pin, receiver, horizontal shaft, or locking handle. Keep clean and dry.
    - **Uni-joint only:** grease at normal service intervals; wipe away excess
    - **If main shaft is removed, or nylon bushes are replaced**: Apply a light, even coat of grease inside the coupler bore and on the shaft during reassembly; wipe excess. External faces remain dry.

Main Shaft and Nylon Bushes – Check and Adjustment:

Both the Drop-On and Automatic couplers have a central/main shaft running through nylon bushes. This shaft should rotate smoothly with no vertical or lateral play. If you can feel the head move up/down or rattle, adjust as below.

Symptoms of Bush/Nut Looseness:

- Noticeable up/down or side play when you lift/push on the coupler head.
- Rattle or clunk through the coupler during towing or hitching.

- Engagement feels inconsistent even when externally clean and dry.

Tools:

- Correct size spanner/socket for the rear nut.
- Allen key for the grub screw.
- Clean rags.
- Grease only if removing the shaft or replacing bushes.

Procedure – Tighten Main Shaft Nut & Lock Grub Screw:

1. Secure the camper. Ensure access to the rear of the main shaft.
2. Locate the main nut at the rear of the shaft and its grub screw.
3. Loosen the grub screw slightly with the Allen key.
4. Tighten the main nut with a spanner/socket until all free play is eliminated, while the shaft still rotates smoothly in the bushes.
    a. Do not over tighten. Over preload can bind the shaft and damage the bushes.
5. Re-tighten the grub screw against the nut to lock it in and prevent loosening.
6. Function test – Rotate the head and check again for zero play and smooth movement.

If play persists, inspect nylon bushes for wear or ovalisation. Replace bushes if worn, then repeat the adjustment and re-lock the grub screw.

Nylon Bushes – Inspection & Replacement

Inspect:

- Bush ID not ovalised, no cracking, or glazing. Correct clearing to shaft.
- Shaft surface is smooth, free of burrs/scoring that would damage new bushes.

Replace (overview)

1. Camper unhitched and supported; clean the area.
2. Loosen the grub screw and remove the rear main nut and retainers/washers.

3. Withdraw the main shaft carefully.
4. Remove nylon bushes; clean the bore and the shaft.
5. Apply a light coat of grease to the bore and shaft, fit new bushes.
6. Reinsert the shaft, refit washers and main nut; adjust to zero free play with smooth rotation.
7. Lock the grub screw onto the main nut.
8. Wipe away any excess grease; leave external engagement faces dry.

Uni-Joint – Excessive Slack / Movement

If the coupler head exhibits excessive movement slack at the uni-joint (beyond normal articulation), you can take up the slack by tightening the uni-joint dust caps:

Procedure

1. Support the drawbar; ensure safe access to the uni-joint.
2. Using a ¼″ drive ratchet (and appropriate socket/bit), tighten the dust caps carefully and evenly.
3. Check articulation remains smooth, without binding.
4. Do not overtighten — overtightening can restrict movement and increase wear.

If slack persists after adjustment, or if movement feels notchy/binding, stop and have the uni-joint inspected for bush or cap wear and replace components as needed.

Coupler Specific Checks

Drop-On Coupler

- Rotating head clamps securely on the tow pin; threads clean, no galling.
- Vehicle tow pin is round, smooth, and mounted to spec.
- Locking pin hole round; R-clip retains positively.
- External parts clean/dry.

Automatic Coupler

- Vehicle square receiver firmly mounted; internal faces clean, no burrs.
- Horizontal reverse-on action locks the handle positively.
- Locking pin aligns and inserts without force; R-clip secure.
- External parts clean/dry.

Quick Owner Checklist

- Coupler clean/dry; no cracks or corrosion of concern
- Main shaft: rotates smoothly, no vertical/side play
- Grub screw locked against the tight main nut
- Nylon bushes in good condition (no ovalisation)
- Uni-joint greased; no excessive slack (dust caps set)
- Locking pin & R-clip present and secure
- Vehicle tow pin/receiver sound and firmly mounted
- Safety chains, shackles, electrical plug, breakaway cable OK

Cruisemaster Coupler

Austrack Campers have can be upgraded to the Cruisemaster DO35 off-road coupler, with the option to upgrade to the DO45 for higher towing capacity.

The DO35/DO45 is a fully articulated off-road coupling system designed for safe, quiet, and controlled towing across uneven terrain, steep angles, ruts, and tight manoeuvring. When correctly connected, the coupling provides smooth articulation in all directions, reducing stress on both the tow vehicle and caravan.

Cruisemaster DO35/DO45 Coupler

The DO35/DO45 uses a vertical drop-on tow pin fitted to the vehicle's tow tongue. The caravan's coupling head locates over the pin and automatically locks into place using the internal slide-lock mechanism and red lock button.

Engaging The Coupler

To assist in correct engagement, position the caravan so the coupling is directly above the tow pin. Using the jockey wheel, raise or lower the drawbar until the coupler sits slightly above the pin.

1- **Unlock the Coupler**
   a. Press down on the red lock button
   b. Slide the locking plate rearward
   c. The viewing port should appear clear, indicating the coupler is ready to drop on.

2- **Lower The Coupler Onto The Tow Pin**
   a. Use the jockey wheel to lower slowly
   b. The coupler will self-locate and drop fully onto the tow pin
   c. Press the red button to engage the locking plate forward.

3- **Fit the Check-Lock Dust Cap**
   a. This provides a visual confirmation that the lock is engaged
   b. The cap must fit flush; if it does not, the coupler is not locked.

In some cases, minor misalignment may occur due to terrain or vehicle angle. A small height adjustment or gentle repositioning of the drawbar may be required to allow the coupler to seat fully.

DO NOT TOW Unless:

- The red button is fully raised
- The locking plate is fully forward
- The Check-Lock cap is installed correctly
- Safety Chains, electrical plug, and breakaway cable are connected
- The handbrake is released before driving

Quick Tips

- If engagement stalls, stop and realign so the coupler and tow pin are centred
- On uneven ground, adjust the jockey wheel height to help the coupler drop cleanly
- Keep the tow pin and coupler mouth clean for smooth locking and reduced wear
- Never force the coupler down. If it doesn't drop freely, realign and try again

Unhitching the DO35/DO45

1- Park on level ground where possible
2- Apply the handbrake
3- Chock the caravan wheels
4- Lower the jockey wheel until it supports the drawbar
5- Press the red lock button and slide the locking plate rearward to unlock
6- Raise the caravan until the coupler lifts cleanly off the tow pin
7- Replace the tow pin cover

Maintenance and Inspection Guide

Regular maintenance ensures safe operation and long service life, especially after off-road use such as dust, mud, corrugations, and water crossings.

Safety First

- Park on level ground; tow vehicle in park (or in gear for manuals)
- Apply the handbrake and chock wheels
- Support the drawbar with the jockey wheel or stands
- Do not heat, weld, or modify the coupler components

Service Intervals

Before Each Trip:

- Coupler, drawbar, and mounting hardware show no cracks, bending or corrosion
- Tow pin is clean, smooth, and firmly mounted
- Locking plate and red button move freely
- Safety chains, shackles, electrical plug, and breakaway cable are in good condition
- Tow pin and coupler mouth are clean and lightly lubricated.

Every Month or 1,000 km (shortened after heavy off-road use):

- Clean away mud, sand, and grit; dry thoroughly
- Check the coupling head articulates smoothly with no binding
- Inspect the tow pin for wear, scoring, or corrosion
- Check mounting bolts for correct torque and no elongation of mounting holes
- Inspect the Check-Lock dust cap for damage

After Water Crossings / Heavy Dust / Beach Use:

- Rinse with fresh water
- Dry completely
- Re-inspect the locking mechanism and tow pin

Annually:

- Full inspection by a Cruisemaster-approved service agent
- The internal yoke pivot bolt must not be adjusted by the owner
- Replace worn components as required

Cleaning and Lubrication Policy

Cleaning:

- Use a soft brush and low-pressure water
- Avoid harsh solvents that may damage seals or internal components
- Dry thoroughly before storage or towing

Lubrication:

- Apply a light coat of grease to the tow pin before each trip

- Grease the coupler via the grease nipple at recommended intervals
- Do not over-grease. Excess grease attracts dust and grit, causing premature wear
- Keep the locking plate and red button area clean and dry at all times

Coupler Specific Checks

DO35 / DO45:

- Red button pops up positively when locked
- Locking plate moves smoothly without sticking
- Tow pin is round, smooth, and torqued to specification
- Check-Lock dust cap fits flush
- No excessive play or looseness in the coupling head
- No binding during articulation

Quick Owners Checklist

- Coupler clean and free of debris
- Red button fully raised when locked
- Locking plate fully forward
- Check-Lock dust cap installed
- Tow pin clean, smooth, and lightly greased
- No cracks, corrosion, or loose hardware
- Safety chains, shackles, electrical plug and breakaway cable connected
- Handbrake applied when parked

Jockey wheel

Your Austrack hybrid caravan is supplied with either an **ARK XO750 jockey wheel** or an **AOE JW750 jockey wheel**. Both units are heavy-duty off-road jockey wheels designed to support the caravan during coupling, uncoupling, levelling, and setup on a wide range of ground conditions.

These jockey wheels offer not only standard winding adjustment but also **multiple height adjustment positions on the outer shaft**, allowing the wheel height to be set correctly for different tow vehicles and uneven terrain. This flexibility helps maintain safe working angles and reduces strain on both the jockey wheel and drawbar.

 It is important however, to never move the hybrid when the jockey wheel is extended past the safe moving line on the extension shaft. The safe working load limit reduces past this line, and it may cause the jockey wheel to bend or break under the load.

Operation and Adjustment

The jockey wheel height can be adjusted in two ways:

- **Primary winding adjustment** using the hand crank
- **Secondary height adjustment** via the outer shaft locking system

When setting up, always use the outer shaft adjustment first to achieve the correct height range, then fine-tune the height using the winding mechanism. This ensures the load remains within the jockey wheel's safe operating range.

The **handle is removable** and should be taken off before travel. Store the handle securely inside the hybrid or tow vehicle to prevent loss or vibration damage while driving.

Austrack recommends familiarising yourself with correct operation techniques. ARK provides a helpful demonstration video that applies to both the ARK XO750 and the AOE JW750 jockey wheels: https://www.youtube.com/watch?v=Ibe7zrAs0nc

Safe Operating Limits

It is *critical* that the caravan is **never moved** when the jockey wheel is extended past the **safe moving line** marked on the extension shaft.

Once extended beyond this line:

- The safe working load capacity is reduced

- The risk of bending or structural damage increases
- Failure of the jockey wheel may occur under towing or repositioning loads

Always retract the jockey wheel fully and confirm it is securely locked and clear of the ground before moving the caravan.

Troubleshooting and Owners Checks

(Applies to both ARK XO750 and AOE JW750 models)

Because the AOE JW750 is based on the proven ARK XO750 design, general behaviour and troubleshooting are similar across both units.

Jockey Wheel Feels Hard to Wind

This may be caused by:

- Excessive load on the wheel (use outer shaft adjustment to reduce winding load)
- Uneven or soft ground causing drag
- Dirt, dust, or debris in the winding mechanism

Action:
Reduce load using shaft adjustment, reposition on firmer ground if possible, and inspect for dirt buildup.

Jockey Wheel Will Not Hold Height or Slips

This can occur when:

- Locking pins or clamps are not fully engaged
- The shaft is positioned too high beyond its optimal range

Action:
Lower the wheel, re-position the outer shaft, ensure all locking mechanisms are fully engaged, then retighten and test.

Excessive Movement or Wobble

Possible causes include:

- Operating outside the safe extension range
- Wear or loosening of mounting hardware
- Uneven or unstable footing

Action:
Retract the jockey wheel to a safer position, confirm hardware is secure, and avoid soft or sloping ground where possible.

Wheel Does Not Roll Freely

This may be due to:

- Loose stones or debris lodged in the wheel
- Bent components caused by overload or misuse
- Ground conditions unsuitable for rolling movement

Action:
Clear debris, avoid pushing the caravan with the jockey wheel under heavy load, and use the tow vehicle where repositioning is required.

IMPORTANT NOTICE

The jockey wheel is designed to **support and position the caravan only**. It must not be used to tow, drag, or manoeuvre the caravan over long distances or rough terrain.

Any signs of bending, cracking, excessive play, or mechanical failure should result in the jockey wheel being removed from service and inspected by a qualified technician.

Spare Tyre

The Austrack Simpson X is fitted with a **single full-size spare tyre**, mounted at the **front of the camper body on an angled bracket positioned in front of the toolbox**. This mounting arrangement differs from other Austrack models, which commonly utilise rear-mounted spare tyre systems.

The front-mounted spare tyre configuration is intentional and forms part of the camper's overall **weight distribution strategy**. On the Simpson X, a significant proportion of fixed mass is located toward the rear of the camper, including the **main water tank positioned behind the axle line**. Mounting the spare tyre at the front assists in balancing this rearward weight bias, contributing to improved towing stability, more consistent tow ball load, and better overall handling characteristics.

In addition to weight distribution benefits, the front-mounted position provides:

- Improved accessibility compared to rear-mounted configurations
- Reduced interference with rear structural components
- A simple removal process without the need to lower panels or assemblies

The spare tyre supplied with the Simpson X is **identical in size, specification, load rating, and construction** to the tyres fitted to the camper axle. It is therefore considered a **full-duty operational tyre**, suitable for normal towing use and not limited to emergency application.

Mounting System and Construction

The spare tyre is secured to a **fixed angled mounting bracket** integrated into the front structure of the camper. This bracket is designed to retain the spare wheel securely under sustained vibration, corrugations, and off-road loading without reliance on additional moving assemblies.

The mounting system is designed to:

- Securely retain a **full-size wheel and tyre assembly**
- Resist movement under both on-road and off-road conditions
- Allow direct external access for inspection and removal
- Operate independently of other structural systems

No additional panels, hinges, or access mechanisms are required to access the spare tyre.

Removing the Spare Tyre

Due to its exposed front-mounted position, the spare tyre can be removed quickly and directly when required.

To remove the spare tyre:

- Support the weight of the wheel prior to loosening fasteners
- Remove the **wheel nuts securing the spare tyre to the mounting studs**
- Carefully lift the wheel clear of the mounting bracket

No additional latches, panels, or structural components need to be removed. The process is identical in principle to removing a standard wheel, with the exception that the tyre is vertically mounted.

Refitting the Spare Tyre

When reinstalling the spare tyre:

- Align the wheel correctly with the mounting studs
- Install all wheel nuts and tighten them evenly
- Confirm the wheel is seated flush against the mounting surface

Even clamping is important to prevent movement during travel. Loose or uneven fastening may result in vibration, noise, or damage over time.

Pre-Travel Inspection

As part of standard pre-departure checks, the spare tyre and its mounting system should be inspected to confirm correct condition and secure retention.

Owners should verify:

- All wheel nuts are present and correctly tightened
- The wheel is seated evenly against the mounting bracket

- The tyre is inflated to the correct pressure
- There is no visible movement, looseness, or damage

Issues should be rectified before towing.

Maintenance and Care

The spare tyre mounting system requires minimal maintenance but should be checked periodically, особенно following off-road travel.

Austrack recommends:

- Inspecting mounting studs and wheel nuts regularly
- Cleaning accumulated dust, mud, and debris from the mounting area
- Checking for signs of corrosion or wear
- Maintaining correct tyre pressure

Routine inspection ensures the spare remains secure and ready for use at all times.

Handling and Safety

Spare wheels are heavy and must be handled carefully to prevent injury.

When removing or refitting the spare tyre:

- Maintain full control of the wheel at all times
- Use proper lifting technique
- Avoid placing hands or feet beneath unsupported components

Assistance should be used if required.

IMPORTANT NOTICE

- The spare tyre is mounted at the **front of the camper on an angled bracket**
- Front mounting is part of the camper's **designed weight distribution**
- Removal is achieved by **removing the wheel nuts only**
- The spare is a **full-size, fully compatible wheel and tyre**
- The mounting system is not designed to carry additional loads
- No accessories or equipment should be attached to the spare tyre
- Loose or incorrectly secured wheel nuts may result in movement or damage during travel

Handbrake

The handbrake on your Austrack hybrid caravan operates via a **mechanical cable system** that engages the trailer braking assembly. When the handbrake is applied, tension in the cable pulls on the brake actuator attached to the backing plate, forcing the primary and secondary brake shoes to spread outward until they contact the inside surface of the brake drum.

This mechanical action locks the wheels and helps prevent the caravan from rolling when stationary. Correct adjustment of the handbrake system is essential to ensure it operates effectively and safely.

It is very important to always use wheel chocks and levelling ramps, **do not** rely solely on the handbrake even if on a level surface.

Handbrake Adjustment and Operation

For correct operation, the handbrake cable must be adjusted so that sufficient braking force is applied without causing constant brake drag.

As a general guide:

- When the hybrid is **unloaded**, the handbrake lever should engage firmly at approximately **one-third of its total travel**

- Once the hybrid is **fully loaded**, the handbrake should be tested again and adjusted if required

A handbrake that is not adjusted tightly enough may still allow the caravan to move even when the handbrake is fully raised. This can create a serious safety risk, particularly on slight slopes or uneven ground.

Use of Wheel Chocks and Levelling Equipment

It is very important to understand that the handbrake is **not intended to be the sole means of securing the caravan** when stationary.

Austrack strongly recommends:

- Always using **wheel chocks** when parked
- Using **levelling ramps** as required
- Never relying solely on the handbrake, even on level ground

This is especially important during setup, hitching, unhitching, or when the caravan is unattended.

Adjusting the Handbrake

The handbrake adjustment mechanism is located on the **handbrake cable at the drawbar**.

To tighten the handbrake:

1. Locate the cable adjuster on the drawbar
2. Loosen the locking nut
3. Turn the adjuster wheel **clockwise** to increase cable tension

4. Re-tighten the locking nut once the desired adjustment is achieved

After adjustment, always test the handbrake function by attempting to move the caravan slightly and confirming that the wheels remain firmly locked.

Important Adjustment Warnings

Over-tightening the handbrake can be just as harmful as insufficient adjustment.

An over-tightened handbrake may:

- Cause the brake shoes to drag continuously inside the drum
- Generate excessive heat
- Lead to premature wear or permanent damage to braking components

If correct adjustment cannot be achieved, or if braking performance feels inconsistent, the system should be inspected by an authorised service technician.

IMPORTANT NOTICE

The handbrake forms part of the caravan's **primary safety system** and must be kept correctly adjusted and in good working order. Regular inspection as part of your pre-departure and setup routine will help ensure reliable operation and towing safety.

Anderson plug

Austrack Hard Floor camper trailers are fitted with an **Anderson plug connection at the drawbar**, providing a heavy-duty electrical link between the tow vehicle and the camper's battery system during travel. This connection allows power from the tow vehicle to be supplied to the camper while the engine is running.

Depending on model and build period, Hard Floor campers may be fitted with **one of two different charging configurations**. It is important that owners understand which system is installed in their camper, as operation and charging behaviour differs between setups.

Configuration 1 – Direct Battery Charging (No Rengoy)

Some earlier camper trailers were supplied with a **direct vehicle-to-battery charging arrangement**, with:

- The Anderson plug wired directly to the camper battery system
- No DC/DC charger installed
- A **PROJECTA AC battery charger** used only for 240 V mains charging

In this configuration:

- DC charging relies on the tow vehicle and cabling only
- Charging performance may vary based on vehicle type, wiring length, and alternator behaviour
- The system does not actively regulate charge voltage while driving

This setup was standard for its time and functions as designed within its limits.

Configuration 2 – DC/DC Charging System (RENOGY MODELS)

Later Hard Floor models may be fitted with a **RENOGY DC/DC charging system**, similar to Austrack Hybrid electrical systems but **without integrated solar regulation**.

In this configuration:

- The Anderson plug feeds into the **DC/DC charger**
- The DC/DC charger regulates voltage and current from the tow vehicle
- Battery charging is controlled and optimised while driving

This setup provides improved charging performance across a wider range of driving conditions.

Purpose of the Anderson Plug Connection

On all Hard Floor camper trailers, the Anderson plug is intended **only for tow vehicle alternator or starter battery voltage input** while the engine is running.

Its purpose is to:

- Supply charging power from the tow vehicle to the camper
- Support battery charging during travel

The Anderson plug is **not designed for solar input**. Solar panels — whether regulated or unregulated — must only be connected via the camper's designated solar input (where fitted).

Ignition Trigger Wire

Hard Floor campers fitted with a DC/DC charger incorporate **automatic voltage sensing and protection** within the charging system.

This protection:

- Prevents the camper battery system from drawing power when the vehicle is not charging
- Helps avoid discharge of the tow vehicle's starter battery
- Ensures charging occurs only under safe conditions

On some models, an **ignition trigger wire** may be present but not connected as standard. This allows flexibility to suit different tow vehicle electrical systems.

Where required, ignition trigger wiring must be connected by a **qualified auto electrician** to an ignition-controlled circuit in the tow vehicle.

Circuit Protection

Where applicable, a **dedicated circuit breaker or fuse** is installed in the charging circuit to protect against electrical overloads or faults. The location of this protection device varies depending on model and electrical layout.

Owners should familiarise themselves with the protection device location specific to their camper.

Important Usage Notes

When using the Anderson plug connection:

- Ensure the plug is fully seated and secured before travel
- Do **not** connect solar panels to the Anderson plug
- Regularly inspect the plug and cables for damage, wear, or corrosion
- Ensure all wiring modifications are carried out by qualified personnel only

If charging performance appears inconsistent or ceases while driving, the system should be inspected by a qualified technician.

IMPORTANT NOTES

The Anderson plug and charging system form a critical part of the camper's electrical system. Any modification, repair, or rewiring must be carried out by a **licensed auto electrician or authorised service provider**.

Incorrect wiring or unauthorised modifications may compromise safety and affect warranty coverage.

Trailer Plug Wiring

Austrack hybrid caravans are fitted **as standard** with a **7-pin flat trailer plug**, which provides the required electrical connections between the tow vehicle and the caravan for lighting and auxiliary trailer functions.

The 7-pin flat plug configuration used is the industry-standard arrangement and is suitable for the majority of modern tow vehicles. Correct connection of the trailer plug is essential to ensure that all mandatory lighting and safety functions operate correctly while towing.

Wiring Configuration

This Owners Manual includes an image showing the **standard wiring diagram for the 7-pin flat trailer plug**. Owners should refer to this diagram when checking plug function, troubleshooting lighting issues, or confirming compatibility with a tow vehicle.

Always rely on the wiring diagram provided in this manual when identifying pin functions or diagnosing faults. Incorrect assumptions or improper wiring can result in malfunctioning lights, electrical damage, or non-compliance with road regulations.

Pin No.	Circuit	Colour
1	Left-Hand Turn	Yellow
2	Reversing Signal	Black
3	Earth Return	White
4	Right-Hand Turn	Green
5	Service Brakes	Blue
6	Stop Lamps	Red
7	Rear Lamps, Clearance & Side Marker Lamps	Brown

Cable Entry View

7 Pin Plug 7 Pin Socket

Alternative Plug Options

While the 7-pin flat plug is supplied as standard, **alternative trailer plug configurations can be fitted by arrangement**, including:

- 7-pin round (small)
- 7-pin round (large)

If a different plug type has been requested at the time of purchase, or if a change is required after delivery, please contact your **local Austrack showroom or the Austrack Service Department** to obtain the correct wiring diagram and discuss suitable options.

Any changes to trailer plug configuration should be carried out by a qualified auto electrician to ensure correct function and compliance with Australian standards.

IMPORTANT NOTES

- Always ensure the trailer plug is fully inserted and securely connected before travel
- Check trailer lights as part of your pre-departure inspection
- Inspect the plug and wiring regularly for damage, corrosion, or loose connections
- Do not force incorrect plug types together using adapters unless properly wired and approved

If any trailer lighting or electrical functions are not operating correctly, refer to the wiring diagram in this manual or seek professional assistance.

Passenger Side

The passenger side of your Austrack camper houses many of the key **external access, living, and convenience features** designed to support day-to-day operation, campsite setup, and outdoor living. Depending on model and layout, this side of the van may include refrigeration, cooking facilities, entry access, shade structures, and annex or enclosure systems.

Components located on the passenger side are intended to be **easily accessible and regularly used**, particularly during setup, meal preparation, and extended stays. Correct operation, routine inspection, and proper setup of these features are essential to ensure safety, reliability, and long-term durability.

This section of the Owners Manual provides operating guidance, safety information, and owner-safe setup advice for the following passenger-side components fitted to Austrack caravans:

- External Kitchen
- External Control Panel
- AusTuff Batwing Awning

Each subsection should be read carefully before use, particularly during initial setup and whenever operating conditions change.

External Kitchen

The external kitchen fitted to your Austrack Simpson X is designed for regular outdoor use and exposure to a wide range of environmental conditions. Components such as sinks, benches, racks, and storage systems are constructed from **stainless steel and durable metal finishes**, providing long-term durability while maintaining ease of cleaning and hygiene.

Unlike other Austrack models, the Simpson X kitchen is designed with **space efficiency and modular connections**, meaning some components are not permanently connected for travel. The water tap is a **setup-required component**, and certain accessories must be deployed and secured each time the kitchen is used or packed away.

Because the external kitchen is exposed to dust, moisture, grease, heat, and vibration, correct use and regular maintenance are essential to preserve performance, appearance, and safe operation.

Sink Use and Care

The external kitchen sink is constructed from **stainless steel** and is intended for food preparation, utensil washing, and general campsite use. The Simpson X sink is supplied with **cold water only**, and the tap is not permanently plumbed.

Due to the compact design of the kitchen:

- The tap and hose assembly must be **connected during setup**
- The tap and hose must be **disconnected during pack-down**

Good sink use practices include:

- Rinsing the sink after each use
- Avoiding disposal of excessive food scraps, grease, or fats
- Keeping the drain clear of debris

After use, the sink should be flushed with clean water and dried before storage.

Water Connection (Nitto Fittings)

The Simpson X kitchen is supplied with a **dedicated water hose fitted with Nitto quick-connect fittings**, allowing fast, secure, and leak-resistant connection to the camper's water system.

Connection points are typically located:

- On the **side of the kitchen assembly**, beneath or near the sink
- Positioned closer to the camper body for protection

When setting up:

- Connect the hose using the Nitto fittings until fully engaged
- Ensure the connection is secure before turning on the pump

When packing down:

- Disconnect the hose and tap assembly
- Store all components to prevent movement during travel

Failure to disconnect fittings may result in damage to the kitchen or plumbing.

Drainage and Waste Water

The Simpson X is **not fitted with a grey water tank**, and all sink discharge drains **directly to ground** beneath the camper via gravity.

Because no onboard collection system is provided:

- Wastewater is discharged continuously while the sink is in use
- Owners must manage drainage responsibly

Austrack recommends:

- Using a bucket, container, or portable waste tank where required
- Following campsite and local council regulations
- Avoiding discharge near campsites or high-traffic areas

Responsible wastewater handling is essential to maintain campsite hygiene and environmental compliance.

Stainless Steel Surface Care

External kitchen surfaces, including sinks and preparation areas, require regular cleaning to prevent staining, corrosion, and grease build-up.

To maintain stainless steel surfaces:

- Clean using warm water and mild detergent
- Rinse thoroughly after cleaning
- Dry with a soft cloth to prevent water spotting

Avoid:

- Abrasive pads or scourers
- Steel wool
- Harsh chemicals or chlorine-based cleaners

Dish Rack, Storage and Accessories

The Simpson X kitchen incorporates several integrated storage and utility features to maximise usability within a compact footprint.

These include:

- A **fold-out dish rack**, mounted beside the stove
    - Folds outward during use
    - Folds back over the stove for storage
    - Secured with a **bungee strap** during travel
- A **slide-out cutlery drawer**, located beneath the stove
    - Provides secure storage for utensils
    - Must be closed before pack-down
- **Utility hooks** on the inside of the compartment door
    - Suitable for tea towels and lightweight items

All components must be dry and secured before closing the kitchen.

General Cleaning and Hygiene

Outdoor cooking environments require consistent hygiene practices to ensure safe food handling.

Recommended hygiene practices include:

- Cleaning all food-contact surfaces before and after use
- Using food-safe cleaning products
- Drying surfaces thoroughly before closing or storing

In dusty, sandy, or coastal environments, increased cleaning frequency may be required.

Cooking System – Dometic 2 Burner Stove

The Simpson X kitchen is fitted with a **Dometic 2-burner gas stove**, integrated into the benchtop and protected by a **tempered glass lid**.

The stove is connected to the camper's internal gas system and is ready for use once the gas supply is turned on.

Critical Warning – Glass Lid

The stove lid must **never be closed while the stove is still hot**.

Closing the lid prematurely can cause:

- Thermal stress
- Sudden glass failure or shattering

The lid must only be closed:

- After burners are turned off

Once the unit has cooled completely

Operating External Gas Appliances

(Bayonet Connections)

The Simpson X is fitted with **two external gas bayonet outlets**, designed to supply LPG to external appliances.

These are typically configured as:

- One bayonet located for **external kitchen or general appliance use**
- One bayonet primarily intended for the **hot water system (HWS)**

Intended use of Bayonets

- Either bayonet can be used to connect an external BBQ or appliance
- The **HWS bayonet is generally preferred for BBQ use**, as it is typically better suited for this purpose
- The kitchen operates on its **own integrated gas supply** and does not require a bayonet connection

Owners may choose either outlet, provided correct operating procedures are followed.

Connecting an External Appliance

Before connecting:

- Ensure all appliance controls are OFF
- Position the appliance on a stable, non-combustible surface

To connect:

- Insert the bayonet fitting securely
- Confirm it locks into place

Turn on the gas supply at the cylinder

Safe Operation

When operating external gas appliances:

- Use only in open, well-ventilated areas
- Keep flammable materials clear of burners
- Never leave the appliance unattended

Keep children and pets well away

After Use

After cooking:

- Turn off all burners
- Turn off the gas supply at the cylinder
- Allow the appliance to cool
- Disconnect and store securely

After Use and Pack Down

Before closing the kitchen:

- Disconnect and store the water hose and tap
- Ensure the stove is fully cooled
- Fold and secure the dish rack
- Close the cutlery drawer
- Clean and dry all surfaces
- Remove all loose items

Improper packing may result in damage during travel.

IMPORTANT NOTICE

The external kitchen is designed for outdoor use and requires correct setup, operation, and pack-down.

- The sink is **stainless steel and cold water only**
- The tap must be **connected during setup and removed during pack-down**
- The system uses **Nitto quick-connect fittings**

- Wastewater drains **directly to ground** and must be managed responsibly
- The stove lid must **never be closed while hot**
- Two gas bayonets are fitted; either may be used, with the **HWS bayonet preferred for BBQ use**
- All components must be secured before travel

Incorrect use, poor maintenance, or failure to follow these guidelines may result in damage not covered under warranty.

External Control Panel

Simpson X models are fitted with an **external control panel**, providing convenient access to key electrical and system functions during setup and use. This control panel is located **inside the middle compartment on the passenger side**, mounted on a panel above the storage area.

The layout and components of the external control panel vary depending on whether the camper is fitted with a **RENOGY electrical system** or a **non-RENOGY electrical system**.

Non-RENOGY Control Panel Configuration

Simpson X models **not fitted with a RENOGY system** use an external control panel consisting of **blue, round, push-style switches**.

These switches are used to control various camper functions, which may include:

- Main 12 V system power
- Water pump operation
- Lighting circuits
- Accessory and socket power
- Other model-specific electrical functions

Each switch is clearly labelled for its intended function.

Operation is simple:

- Press the switch inwards for it to light up blue, indicating it is on.
- Press again to turn the switch off.

These switches provide simple, reliable manual control without the need for screens or software interfaces.

RENOGY Control Panel Configuration

Simpson X models fitted with a **RENOGY electrical system** use a different external control panel setup.

The external control panel on RENOGY-equipped models includes:

- A **RENOGY ONE Core display screen**
- A **physical inverter on/off switch**
- A **blue push-button used to power the RENOGY system on and off**
- A **RENOGY control panel for all other functions**

These components are all mounted **inside the middle compartment on the passenger side**, mounted on a panel above the storage area.

RENOGY System Power Button

The **blue push-button** controls overall RENOGY system power:

- Press to turn the RENOGY system **on**
- Press again to turn the system **off**

When the system is off, the Core screen will be inactive and system functions will be unavailable.

Inverter Switch (RENOGY MODELS)

A **dedicated physical inverter switch** is provided on the external control panel.

This switch:

- Turns the inverter **on or off**
- Allows manual control of inverter operation
- Should be turned **off when the inverter is not required**

The inverter should not be left on unnecessarily, particularly when operating off-grid.

RENOGY ONE Core Screen

The **RENOGY ONE Core screen** provides system information such as:

- Battery status
- Charging inputs
- System warnings and data

This screen is informational and works in conjunction with the RENOGY system power button and inverter switch.

General Usage Notes

For all Simpson X models:

- Ensure required systems are switched **off** before travel
- Avoid unnecessary electrical use when operating off-grid
- Do not force switches or buttons

If a system does not operate as expected, refer to the **Troubleshooting Guide** in this manual.

Service and Support

If the external control panel:

- Fails to respond
- Shows intermittent operation
- Has damaged switches or buttons

Austrack recommends contacting AOE RV Service Centre as the primary point of support. If AOE RV Service Centre is not accessible, assistance should be sought from a suitably qualified caravan service technician.

IMPORTANT NOTICE

The external control panel is exposed to frequent use and outdoor conditions. Damage caused by moisture ingress, physical impact, forcing controls, or unauthorised modification may not be covered under warranty.

Always ensure the external kitchen compartment is closed properly when not in use.

AusTuff Batwing Awning

The Austrack Simpson X is equipped with the **AusTuff 270° Batwing Awning with integrated LED lighting**, designed to provide **rapid, wrap-around shelter** across the side and rear of the camper. This awning system is engineered for **single-person deployment**, allowing quick setup while delivering expansive coverage suitable for cooking, access, and general campsite use.

The 270-degree configuration provides continuous shelter without poles or interruptions across the primary working area, improving usability in both harsh sunlight and wet conditions. The awning is designed for Australian environments and is built to withstand exposure to UV, wind, and dust when used correctly.

Pre-Deployment Considerations

Before deploying the awning, it is essential to confirm that the surrounding environment allows safe and complete operation. The awning swings outward in a wide arc and requires adequate clearance and stable ground.

The following conditions must be verified prior to deployment:

- The camper is positioned on **stable, level ground**

- There is sufficient **side and rear clearance** for full 270° opening
- Environmental conditions are suitable for deployment
- Wind conditions are light to moderate only
- Suitable anchor points are available for **guy ropes and pegs if required**

Deploying the awning in unsuitable conditions may result in structural stress or damage.

Deploying the Batwing Awning

The awning is housed within a protective bag and unfolds in a controlled sequence via hinged arms.

To deploy the awning:

- Fully unzip the awning bag along its length
- Begin extending the awning arms outward, one section at a time
- Allow the awning structure to progressively wrap around the side and rear of the camper
- Continue unfolding until all arms are fully extended and the awning fabric is properly spread

Depending on conditions:

- The awning may be used in **freestanding mode** in calm weather
- In any wind, **support legs, guy ropes, and pegs must be used**

Once deployed:

- Lower any drop-down support legs if required
- Secure the awning using the supplied guy ropes and pegs
- Adjust rope tension until the fabric is evenly tensioned and free from sagging

⚠️ Guy ropes must always be used whenever wind is present.

Integrated Lighting System

(USB Powered – White and Amber Modes)

The AusTuff batwing awning is fitted with an integrated LED lighting system designed to provide effective illumination for campsite activities.

The lighting system includes:

- **White mode**
    - Bright illumination suitable for cooking and general tasks
- **Amber/orange mode**
    - Reduced glare
    - Insect-friendly lighting for evening use

The system is **USB powered** and operates from the camper's electrical system via standard USB outlets.

To operate:

- Connect the USB cable to a suitable power source
- Use the inline controller to select the desired lighting mode
- Adjust brightness or mode as required

Before packing away:

- Disconnect all power
- Ensure cables are clear of moving parts

Wind, Weather, and Operational Safety

The batwing awning is designed for durability but must be used correctly to prevent damage or unsafe conditions.

When using the awning:

- Always secure with **guy ropes in any wind condition**
- Never leave the awning deployed unattended
- Monitor weather conditions closely

- Close the awning if wind strength increases
- Use appropriate anchors in sand or soft ground
- Do not apply body weight to awning arms or structure
- Do not use the awning as a climbing support

The awning fabric provides **partial UV protection only**. Additional sun protection measures should be used where necessary.

Packing Down the Awning

Correct pack-down is essential to prevent damage and ensure ease of future deployment.

To close the awning:

- Turn off and disconnect all lighting
- Remove and store all guy ropes, pegs, and support legs
- Fold each awning arm back toward the camper in the reverse deployment sequence
- Guide the fabric neatly as the arms fold inward
- Ensure fabric is not excessively bunched or twisted

Before securing:

- Roll or fold the fabric evenly into the awning housing
- Confirm no material is trapped or protruding

Finally:

- Fully close and secure the awning bag zip
- Ensure the bag is sealed to protect against dust and weather during travel

Storage and Maintenance

Routine care and maintenance are essential to extend the life of the awning and maintain performance.

Austrack recommends:

- Allowing the awning to **dry completely before long-term storage**

- Cleaning using **mild soap and fresh water only**
- Avoiding harsh chemicals or abrasive cleaning methods
- Regularly inspecting fabric, stitching, and arm joints
- Checking hinges and pivot points for smooth operation
- Avoiding storage while damp to prevent mould or mildew

Regular inspection is particularly important after off-road travel or exposure to harsh conditions.

Troubleshooting

Issue	Possible Cause	Recommended Action
Awning fabric sagging	Arms not fully extended or insufficient tension	Re-extend arms fully and tighten guy ropes evenly
Lighting flickering or not operating	Loose USB connection or power supply issue	Check cable connections, confirm power source, or try alternative USB port
Awning difficult to fold away	Fabric bunched or folding sequence incorrect	Reopen partially, straighten fabric, and fold in correct sequence
Awning unstable	Wind conditions or poor ground anchoring	Deploy support legs and secure with guy ropes and appropriate anchors

IMPORTANT NOTICE

The AusTuff 270° Batwing Awning is designed for rapid deployment and reliable shelter but must be used in accordance with operating guidelines.

- Always assess environmental conditions before deployment
- Use guy ropes whenever wind is present
- Do not leave the awning unattended
- Ensure fabric is correctly packed before closing
- Disconnect all electrical connections before pack-down

Incorrect use, failure to secure the awning, or improper pack-down may result in damage not covered under warranty.

Rear of the Camper

The rear of your Austrack Hard Floor camper trailer is engineered to support essential storage, access, recovery, and rear-mounted functions, while maintaining structural integrity, correct weight distribution, and safe handling during both on-road and off-road travel. The design and components fitted to the rear of the camper are **model-specific** and are determined by the camper's construction, rear layout, and intended use.

Depending on the Austrack Hard Floor model, the rear assembly may incorporate features such as a rear-mounted spare tyre, integrated recovery points, fold-down rear bar systems, or model-specific rear slide-out components. These features are not optional add-ons, but form part of the camper's engineered design and structural requirements.

Because rear-mounted components influence access, weight balance, and towing dynamics, owners must familiarise themselves with the specific rear configuration fitted to their camper. Understanding how each component is intended to be used, along with its limitations, is essential for safe recovery operations, correct setup, and long-term durability.

This section of the Owners Manual provides operating guidance, safety information, and owner-level inspection advice for the following rear-mounted components, where fitted to applicable Austrack Hard Floor camper trailer models:

- Spare Tyre
- Recovery Points
- Rear Bar Fold-Down Assemblies (model-dependent)
- Rear Slide-Out Systems (Savannah X models only)

Only the components applicable to your specific model will be present. Each relevant subsection should be read carefully before use.

External Fridge / Freezer

The Simpson X is equipped with an **externally mounted ARCTIC compressor fridge/freezer**, providing convenient access to refrigerated or frozen storage without occupying internal space within the camper. The external mounting configuration allows the unit to be accessed directly from

outside the camper, improving usability during camp setup and day-to-day operation. Designed for use in off-road and touring environments, the fridge operates independently of internal cabinetry systems and integrates with the camper's electrical infrastructure to provide reliable cooling performance in a wide range of conditions.

ARCTIC Fridge/Freezer

Your camper or caravan may be equipped with an **ARCTIC branded portable compressor fridge/freezer**, designed to deliver consistent and reliable refrigeration performance across a wide range of operating conditions. These units are specifically engineered for mobile applications and are suitable for installation in **recreational vehicles, caravans, camper trailers, and similar environments** where stable cooling must be maintained despite fluctuating power supply and ambient temperatures.

The appliance is capable of operating from both **low-voltage DC power (12 V or 24 V)** and **standard AC mains supply (100–240 V)**, allowing seamless use whether connected to a vehicle, an onboard battery system, or external mains power. Internally, the unit utilises a **high-efficiency inverter-driven compressor system**, which adjusts operating speed in response to cooling demand. This results in improved thermal stability, reduced power consumption, and quieter operation compared to traditional fixed-speed compressor systems.

The fridge/freezer is suitable for general food and beverage storage and may also be used for freezing applications by selecting an appropriate temperature setting within the available operating range of **-18 °C to +10 °C**.

Key Features

The ARCTIC fridge/freezer incorporates a number of integrated protection systems and user-controlled functions designed to maximise reliability in mobile environments.

Core system features include:

- A **compressor-based refrigeration system** designed for mobile use
- Adjustable temperature range from **-18 °C to +10 °C**, allowing both refrigeration and freezing
- A **digital control system with LCD interface**, providing real-time temperature and status feedback
- Internal removable storage basket to assist with organisation and airflow

- Integrated **low-voltage battery protection system**, preventing excessive discharge of the supply battery
- Reverse polarity protection to prevent electrical damage during incorrect connection
- Thermal protection systems to safeguard internal components under high load conditions
- A low-current **USB output (5 V / 500 mA)** suitable for charging small electronic devices

⚠️ Where the appliance is used for temperature-sensitive storage (such as medication or specialised products), it is the responsibility of the operator to verify that the selected temperature setting and operating conditions are suitable for that purpose.

Safety Instructions

Correct installation, operation, and maintenance are essential to ensure safe use and prevent damage to the appliance or connected electrical systems.

General Safety Requirements

- Always verify that the **input voltage matches the rating label** before connection
- Disconnect the appliance from all power sources before cleaning or conducting maintenance
- Damaged power cables must only be replaced by **qualified personnel**
- Do not attempt to modify, dismantle, or repair internal components

Failure to follow these instructions may result in equipment damage or personal injury.

Usage and Environmental Considerations

The appliance is designed for controlled use within a ventilated environment and must be operated within its intended limits.

To ensure correct operation:

- Do not expose the unit to excessive moisture or immerse it in liquid
- Maintain a safe distance from heat sources such as exhaust systems or direct sunlight
- Ensure ventilation openings remain unobstructed at all times
- Do not store corrosive, flammable, or hazardous substances inside the unit

- This appliance is not intended for unsupervised use by children

Electrical Protection Considerations

Because the unit is commonly connected to mobile power systems, correct electrical practices are essential.

- Disconnect from the battery before connecting high-output charging equipment
- Avoid operation under unstable or over-voltage conditions

Servicing must only be performed by authorised service personnel

Energy Efficiency and Performance Optimisation

Achieving optimal cooling performance and energy efficiency requires correct placement and usage habits.

To maximise operating efficiency:

- Install the unit in a **well-ventilated location** to allow heat dissipation
- Avoid direct sunlight exposure or enclosed, heat-retaining compartments
- Allow hot food or beverages to cool before placing inside the unit
- Minimise the frequency and duration of lid openings
- Maintain internal cleanliness and perform defrosting as required
- Select a temperature appropriate to the intended use rather than defaulting to maximum cooling

These practices significantly reduce compressor workload and improve long-term reliability.

Operation and Function

Power Supply and Connection

The fridge/freezer supports both AC and DC operation, making it suitable for a wide range of power setups.

- **AC Supply:** 100–240 V mains input
- **DC Supply:** 12 V / 24 V system (vehicle or auxiliary battery)

All connections should be checked for correct fit and stability prior to operation. The system should be operated in **normal mode** during regular use.

Emergency override mode is available but should only be used under fault conditions.

Control Interface and System Operation

The control panel provides all necessary user interaction and system monitoring functions.

The interface includes:

- An ON/OFF control button
- A SET button for system configuration
- A digital display indicating temperature and system status

Increment and decrement buttons for temperature adjustment

Starting the Unit

To power the unit:

- Press and hold the ON/OFF button for approximately **3 seconds**
- The display will activate and begin showing internal temperature
- A cooling indicator will display once the compressor engages

The system will automatically begin cooling once powered.

Temperature Configuration

The operating temperature range of the appliance allows for flexibility between refrigeration and freezing modes.

To adjust the temperature:

- Press the SET button to activate adjustment mode
- Use the + or − buttons to select the desired temperature
- Settings are automatically saved within the system memory

To change between Celsius and Fahrenheit:

- Press the SET button repeatedly until the display changes

Battery Protection System

A key feature of the appliance is the integrated **low-voltage cut-off system**, designed to prevent excessive discharge of the connected battery.

The system includes three selectable protection levels:

Mode	Description
VL (Low)	Allows extended runtime with minimal protection
VM (Medium)	Balanced protection and performance
VH (High)	Maximum battery protection

Recommended usage:

- VH for starter batteries
- VL for auxiliary camping battery systems

The system automatically shuts down the compressor when voltage drops below a defined threshold and restarts once voltage recovers.

Shutdown Procedure

To switch off the appliance:

- Press and hold the ON/OFF button for approximately 3 seconds
- Disconnect the power supply if not in use

Emergency Operation Mode

Emergency operation mode allows continued operation if the electronic control panel fails.

Limitations include:

- No temperature adjustment capability
- Reduced efficiency and system performance
- Intended as a temporary measure only

⚠ This mode is not suitable for long-term food preservation.

USB Power Output

The appliance is equipped with a low-current USB output:

- Output: **5 V / 500 mA**
- Intended for small devices such as mobile phones or lighting

This output does not support high-draw devices.

Defrosting

Over time, frost accumulation may occur, reducing cooling efficiency and airflow.

To defrost:

- Remove all contents from the unit
- Disconnect power and turn the appliance off
- Leave the lid open to allow ice to melt naturally
- Dry all internal surfaces before restarting

⚠️ Do not use sharp tools or mechanical force to remove ice.

Cleaning and Maintenance

Routine cleaning and inspection will ensure optimal operation and longevity.

Recommended practices include:

- Cleaning internal surfaces with a damp cloth and mild detergent
- Avoiding abrasive materials and strong chemical cleaners
- Keeping ventilation openings clear of dust and debris
- Inspecting seals, cables, and connections periodically

Troubleshooting

Fault	Possible Cause	Recommended Action
No power	No supply	Check power source
	Blown fuse	Replace fuse
	Loose connection	Reconnect properly
Insufficient cooling	High ambient temperature	Improve airflow
	Incorrect setting	Adjust temperature
Unit shuts down	Low voltage protection activated	Recharge battery
Error codes displayed	Internal fault	Seek authorised service
Compressor fails to start	Voltage instability	Allow system to stabilise

Error Code Diagnostics

The ARCTIC fridge/freezer includes internal system monitoring. When a fault is detected, an error code may be displayed.

Error Code	Meaning	System Behaviour	Recommended Action
E1	Low voltage protection or sensor fault	Compressor stops to protect system	Check power supply voltage and battery condition. Recharge battery. If issue persists, inspection required
E2	Fan over-current or abnormal load	Cooling efficiency reduced or system stops	Ensure vents are clear and fan is unobstructed. Service may be required
E3	Compressor start failure	Compressor attempts automatic restart	Allow system time to retry. Confirm stable voltage supply
E4	Low compressor operating speed	Reduced cooling performance	Improve ventilation and ensure adequate power supply
E5	Controller overheating	System may temporarily shut down	Turn off unit, allow cooling, improve airflow around vents

Packing List

Supplied items may include:

- ARCTIC compressor fridge/freezer
- DC power cable
- AC power cable
- Internal storage basket
- Handle components (if applicable)
- Documentation

IMPORTANT NOTICE

The ARCTIC fridge/freezer is designed for use in **mobile recreational environments**, including campers and caravans, and must be operated within its specified limits.

- Ensure a stable and suitable power supply
- Maintain adequate ventilation at all times
- Follow proper operating and maintenance procedures
- Monitor battery protection settings where applicable

Failure to operate the appliance correctly may result in reduced performance, system faults, or damage not covered under warranty.

Recovery Points

Austrack campers are fitted with **dedicated rear recovery points** intended to assist in controlled recovery situations where the camper has become immobilised in sand, mud, or similarly low-traction environments. These recovery points are engineered into the caravan structure to allow recovery loads to be applied in a predictable and managed way when correct recovery techniques are used.

Recovery operations are inherently high-risk activities. The forces involved can be extreme, unpredictable, and potentially dangerous if incorrect attachment points, techniques, or equipment are used. Because of this, recovery should only be attempted by persons with appropriate knowledge and experience, using properly rated recovery equipment and safe recovery methods.

This section explains how the rear recovery points are configured, how they are intended to be used, and—just as importantly—what **must not** be used during recovery operations.

Rear Recovery Point Configuration

Austrack campers are fitted with **two designated rear recovery points**, installed as part of the rear structure of the caravan.

These are positioned:

- One on the **left-hand side** of the rear of the camper
- One on the **right-hand side** of the rear of the camper

The recovery points are designed to work **together**, allowing recovery loads to be shared and distributed evenly across the rear structure rather than being concentrated in a single location.

Mandatory Use of a Bridle or Equaliser Strap

When performing any recovery from the rear of the caravan, **both rear recovery points must always be used together**. This is not optional.

A **bridle strap or equaliser strap** must be fitted between the two rear recovery points before attaching the recovery rope, strap, or winch line. The purpose of the bridle is to divide the recovery load evenly, minimise twisting forces, and reduce the risk of structural damage.

Using a single rear recovery point on its own:

- Introduces uneven loading
- Places torsional stress on the rear structure
- Increases the risk of recovery point or chassis failure

Under no circumstances should only one rear recovery point be used.

50mm Rear Receiver – CRITICAL SAFETY WARNING

Some Austrack camper models are fitted with a **50 mm square receiver** at the rear of the camper. This receiver is provided **for accessory mounting purposes only**.

⚠️ **The rear 50 mm square receiver is NOT a rated recovery point and must NEVER be used for vehicle recovery.**

The rear receiver is **not designed**, **not tested**, and **not rated** to withstand the loads generated during recovery operations. It is not part of the caravan's recovery system.

If used during recovery, the rear receiver or any attached accessory can become a **high-energy flying projectile**, posing a significant risk of **serious injury, death, or damage to vehicles and equipment**.

This is not a hypothetical risk. Recovery failures caused by incorrect attachment points can result in catastrophic outcomes in a matter of seconds.

Approved Rear Recovery Method

If rear recovery of the camper is required, the correct process is as follows:

- Connect a **bridle or equaliser strap** to both rear recovery points
- Ensure all shackles, straps, and recovery gear are correctly rated and in good condition
- Attach the recovery strap, rope, or winch line to the centre of the bridle strap
- Confirm **no attachment is made to the 50 mm rear receiver**
- Clear all persons from the recovery area
- Conduct the recovery in a slow, controlled manner

Dynamic or snatch recoveries should **only** be undertaken by experienced operators who understand the risks and limitations of recovery systems.

Pre-Recovery Inspection

Before attempting any recovery, a visual and physical inspection must be carried out to ensure all components are suitable for use.

Check that:

- Recovery points show no visible bending, cracking, or deformation
- Mounting hardware is secure
- Surrounding structure shows no signs of damage or fatigue
- Recovery straps, bridles, and shackles are undamaged and appropriately rated

If there is any doubt about the condition of a recovery point or attachment, **do not proceed** with the recovery until the system has been assessed.

Post-Recovery Inspection

After a recovery operation has been completed, the rear recovery points and surrounding structure should be inspected again.

Austrack recommends:

- Checking recovery points for distortion or movement
- Inspecting mounting areas for cracks or stress marks
- Checking that fasteners remain tight
- Inspecting all recovery equipment used

Any damage identified should be addressed before further travel.

IMPORTANT SAFETY NOTICE

Recovery operations carry a high risk of serious injury or death when performed incorrectly. Incorrect attachment points, poor technique, or unsuitable equipment can turn recovery gear into dangerous projectiles under load.

Austrack recovery points are designed **only for camper recovery when used correctly and in accordance with this manual**. They must not be modified, overloaded, or used in any way not intended.

If unsure at any stage, do not attempt recovery. Seek assistance from experienced recovery operators or professional recovery services.

50mm Square Hitch Receiver

Some Austrack camper models are fitted with a **50 mm square hitch receiver** at the rear of the camper. This receiver is provided specifically to allow the installation of a **rear-mounted bicycle rack** for transporting bicycles during travel.

The rear hitch receiver is **not a recovery point**, **not a towing point**, and **not designed to accept dynamic loads**. It is intended only for light, static accessory loads and must be used strictly within its designed purpose and rating.

Understanding how this receiver works, how loads are carried, and how misuse can dramatically increase risk is essential for safe operation.

Load Rating and Intended Use

The 50 mm square hitch receiver is rated to a **maximum vertical load of 80 kg**. This figure represents the **absolute maximum combined weight** supported by the receiver and includes:

- The bike rack itself
- All bicycles mounted to the rack
- Any additional carriers, adapters, or accessories attached

Exceeding this rating places excessive stress on the receiver and rear structure, potentially resulting in cracking, deformation, or failure.

The receiver is intended **only** for bicycle rack use. It must **never** be used for:

- Recovery or towing
- Snatch straps or winching

- Cargo trays or load platforms
- Spare wheel mounting

Fuel or water container carriage

How the Receiver Carries Load

The rear hitch receiver supports loads **behind the axle line** of the camper. This means the weight is carried on a lever arm, which magnifies forces acting on the receiver and its mounting points.

Driving conditions that increase these forces include:

- Corrugated roads
- Sharp dips or washouts
- Braking and acceleration
- Uneven off-road terrain

Small increases in weight or distance from the receiver can result in **large increases in stress** on the mounting system. For this reason, staying well within load limits is critical.

Hitch Extenders and Load Derating

On some Austrack camper models, rear geometry, spare tyre placement, rear bar design, or rear fold components may require the use of a **hitch extender** to correctly position a bike rack.

While extenders can improve clearance, they also **increase leverage**, which significantly **reduces the effective load capacity** of the receiver.

Important considerations:

- The further rearward the load is moved, the greater the bending force
- Using a hitch extender **automatically reduces the safe load limit below 80 kg**
- Longer extenders reduce load capacity more than shorter ones

Austrack strongly recommends:

- Using the **shortest possible hitch extender**
- Minimising total rack and bicycle weight
- Avoiding extenders unless absolutely necessary for fitment

ABSOLUTE PROHIBITION ON RECOVERY USE

⚠️ **The 50 mm square hitch receiver must NEVER be used as a recovery point.**

This cannot be overstated.

The rear receiver is **not designed**, **not tested**, and **not rated** for recovery forces. Recovery loads are dynamic, violent, and often several times higher than static accessory loads.

If used during recovery, the rear receiver or any attached accessory can become a **high-energy flying projectile**, posing a significant risk of **serious injury, death, or catastrophic damage to vehicles and equipment**.

This type of failure happens without warning and at extreme speed. People have been seriously injured or killed by components launched during failed recoveries. The presence of a square receiver **does not mean it is safe to recover from**.

No strap, shackle, or clever workaround makes this safe. **Do not do it.**

Bike Rack Selection and Fitment

Because the receiver is designed specifically for bicycle transport, rack choice matters.

When selecting a bike rack:

- Choose a rack **rated for caravan or RV use**
- Avoid racks intended only for passenger vehicles
- Confirm the rack design suits high-vibration environments
- Ensure bicycles are rigidly secured with minimal movement

Bicycles must not sway, bounce, or rotate while travelling, as this rapidly increases load and fatigue on the receiver and mounting hardware.

Pre-Travel Safety Checks

Before travelling with a bike rack installed, always confirm:

- The rack is fully inserted and secured with a rated pin or locking device
- All mounting bolts and clamps are tight
- Total combined load is within allowable limits
- Any hitch extender is correctly installed and in good condition
- Bicycles are firmly restrained with no free movement
- No contact occurs between rack, bikes, rear bar, or caravan body

Checks should be repeated during long trips and after rough road sections.

Maintenance and Inspection

The rear hitch receiver is subjected to constant vibration and environmental exposure. Regular inspection is essential.

Maintenance checks should include:

- Visual inspection for cracking, bending, or distortion
- Ensuring mounting hardware remains tight
- Cleaning accumulated dust, salt, or mud
- Inspecting rack attachment points for wear

Any sign of damage or looseness requires immediate attention.

IMPORTANT NOTICE

The 50 mm square hitch receiver is rated for **light accessory loads only** and must never be repurposed beyond its design intent. Misuse, overloading, or recovery attachment may result in injury, equipment loss, or structural damage and is not covered by warranty.

Water Tank Inlets

Austrack campers are fitted with **dedicated water tank inlet ports** for filling the onboard fresh water tanks. These inlets are designed to provide a simple and reliable method of replenishing water supplies while travelling or at camp.

The water tank inlets operate as **gravity fill points** and are fitted with a **breather system** to allow air to escape as the tank fills. This breather plays an important role in preventing pressure build-up during filling and normal operation.

Unlike the mains water connection, the water tank inlets are **not designed for direct hose attachment**, and correct filling technique is required.

Filling the Water Tanks

The water tank inlet does not lock a hose in place.

When filling the tanks:

- Insert a small-diameter hose into the filler opening, **or**
- Hold the hose securely in position while filling
- Fill at a steady, controlled flow rate
- Monitor the fill process visually

Because the inlet is a gravity fill, the hose must be supported by the user to prevent it slipping out during filling.

Do not force oversized hoses into the filler opening, as this may damage seals or surrounding components.

Breather Port Operation and Overfilling Behaviour

Austrack water tank inlets have a **breather port** above the main inlet to allow displaced air to escape as the tank fills.

When the water tank becomes full:

- Excess water will typically **spit or trickle out of the breather outlet**
- This is a normal indication that the tank has reached capacity
- The spitting usually occurs for a short period and then subsides

⚠️ This behaviour is **normal** and does not indicate a fault or damage to the tank.

Once water is seen exiting the breather, the tank is full and filling can be stopped. Overfilling does **not** damage the tank, provided filling pressure is reasonable and controlled.

Austrack recommends not standing directly in front of the breather port if you wish to remain dry.

Locking Filler Cap and Key Operation

Each water tank inlet is fitted with a **key-locked filler cap** to help prevent contamination and unauthorised access.

Some owners may experience:

- A stiff or tight lock barrel
- Difficulty turning the key
- Resistance when opening or closing the cap

This is commonly caused by dust ingress, dry lock barrels, or infrequent use.

Tips for Stiff Filler Cap Locks

If the filler cap lock is difficult to operate:

- Ensure the cap is seated squarely before turning the key
- Apply gentle pressure and avoid forcing the key
- Use a **small amount of graphite powder or silicone-based lubricant** in the lock barrel
- Operate the lock several times to distribute lubricant

Do **not** use oil-based or sticky lubricants, as these attract dust and can worsen the problem over time.

Recommended Use of a Water Filter

Although not supplied as standard, Austrack **strongly recommends the use of a water filter** when filling onboard water tanks.

Using a suitable inline or hose-end filter helps:

- Reduce sediment and debris entering the tank
- Improve taste and odour
- Support cleaner plumbing components
- Provide better quality water for drinking and cooking

This is particularly important when filling from:

- Caravan park taps of unknown quality
- Rural or remote water supplies
- Older infrastructure that may carry sediment

Water Quality and Best Practices

To maintain clean onboard water:

- Use potable (drinking-grade) hoses only

- Store hoses clean and capped when not in use
- Replace damaged or contaminated hoses promptly
- Periodically flush tanks if water is stored for long periods

Good filling habits help keep tanks hygienic and extend component life.

After Filling

Once filling is complete:

- Remove the hose carefully
- Allow any residual water to drain from the filler area
- Ensure the filler cap is free of dirt or debris
- Secure and lock the cap fully

A properly sealed cap prevents contamination and water ingress during travel.

Common Questions and Observations

Water coming out from the top of the inlet while filling

This is normal once the tank is full and water exits via the breather.

Key difficult to turn in filler cap

Typically resolved with proper alignment and dry lubrication.

Concern about water quality

Use a filter and clean hoses to improve quality.

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IMPORTANT NOTICE

The water tank inlet is designed for manual gravity filling. Normal breather discharge during filling is expected and does not indicate a fault.

Damage caused by forced hose insertion, incorrect locking, or poor maintenance may not be covered under warranty.

Driver Side

The driver side of the Simpson X is primarily dedicated to **tent access, general storage, and the main electrical system enclosure**, forming a functional service and access area of the camper. While exterior components on this side are minimal compared to other areas of the camper, it plays a critical role in housing key operational systems.

The most significant feature on the driver side is the **electrical compartment**, which contains the primary electrical components responsible for battery management, charging, and power distribution throughout the camper. In addition, this side provides access to the rooftop tent via the ladder when deployed, along with designated storage areas depending on configuration. Understanding the layout and purpose of this side of the camper is important for safe operation, maintenance, and day-to-day usability.

Electrical Compartment

The Simpson X is equipped with a dedicated **electrical compartment located on the driver side**, which houses the primary components responsible for power storage, charging, conversion, and distribution throughout the camper. This compartment acts as the central hub of the camper's electrical system and is designed to contain all major electrical components in a protected and organised environment.

Within this compartment, key components are **permanently installed, pre-configured, and secured at the factory**, with all wiring, protection devices, and load pathways designed specifically for the camper. The compartment provides controlled access for inspection and servicing but is not intended for routine adjustment or modification by the owner.

This area is critical to the overall operation of the camper and must be treated as a **service and inspection zone only**.

System Configurations

Depending on the specific build configuration, the Simpson X may be fitted with one of two electrical system architectures.

RENOGY Power Management System

Some models are equipped with a **fully integrated Renogy electrical system**, similar in concept to those used across other platforms.

In these configurations:

- Charging sources are managed through Renogy system architecture
- Battery charging and load distribution are handled automatically
- System behaviour is monitored via Renogy interface controls
- Electrical protection and regulation are managed internally

This setup provides a more automated electrical system requiring minimal user input beyond normal operation.

Standard Battery Charging System

(Projecta Charger + Renogy Inverter)

Other Simpson X models utilise a **simplified, non-integrated electrical system**, designed for reliability and straightforward operation.

In these configurations:

- A **Projecta mains charger** provides battery charging when connected to 240 V
- A **Renogy inverter** supplies 240 V power when operating off-grid
- Charging sources (mains, vehicle, solar) operate independently
- No centralised control or power management unit is installed

This system relies more on **user awareness of power usage and charging conditions**.

Components Within the Compartment

Depending on configuration, the electrical compartment may contain the following:

- **Battery System**
    - Stores energy for all 12 V loads and inverter operation
- **Battery Charger (Projecta or integrated system)**
    - Charges the battery when connected to 240 V mains power
- **Inverter (Renogy)**
    - Converts 12 V DC battery power into 240 V AC

  - Used to supply selected 240 V appliances when off-grid

- **240 V Circuit Breakers and Protection Devices**
  - Protect circuits from overload and fault conditions
- **Cabling and Distribution Wiring**
  - Connect all system components safely and securely

All components are mounted to withstand vibration, movement, and environmental exposure associated with off-road use.

Solar Input and Regulation

The Simpson X does **not include an onboard solar regulator or MPPT controller** within the electrical compartment. This is an intentional design feature of the system.

Solar charging is instead handled **entirely by externally regulated solar equipment**.

The camper is fitted with an **Anderson plug for solar input**, which provides a direct connection into the battery system. This connection is designed to accept **regulated DC input only**.

Solar Operation Method

In the standard configuration:

- Solar charging is achieved using the **AusTuff portable solar blanket**
- The solar blanket incorporates a **built-in regulator**
- Regulation occurs before power enters the camper
- The regulated output is delivered via the Anderson plug

Because there is no internal regulator, the camper **does not condition or control incoming solar voltage**.

Critical Solar Requirements

Because of this configuration:

- All solar input **must be regulated externally**
- The AusTuff blanket's regulator must remain active
- Unregulated solar panels must never be connected directly

- Inline regulators must not be bypassed

Failure to follow these requirements may result in:

- Over-voltage charging
- Battery damage
- Electrical system faults

User Responsibility

Owners are responsible for ensuring that any solar equipment connected to the camper:

- Includes an appropriate regulator
- Is compatible with the battery system
- Is correctly connected and polarity-matched

Incorrect solar configuration may cause damage not covered under warranty.

User Access and Interaction

The electrical compartment is designed for:

- Visual inspection
- Servicing (when required)

There are **no user-adjustable components** intended for routine interaction inside this compartment.

Owners should:

- Avoid contacting exposed wiring
- Avoid modifying or adjusting components
- Use only approved interfaces (e.g. switches or displays)

⚠️ Both DC and 240 V AC systems are present within this compartment. Improper handling may result in injury or damage.

Inspection and Maintenance

Periodic inspection is recommended to ensure system integrity.

Owners should check:

- All electrical components are securely mounted
- No loose or exposed wiring is present
- No signs of overheating or discolouration
- No moisture or debris has entered the compartment

Any abnormal findings should be addressed by a **qualified technician**.

Normal System Behaviour

The following conditions are considered normal:

- Chargers and inverters becoming warm during operation
- Cooling fans activating under load
- Battery charging when connected to mains or solar
- Inverter shutting down if battery voltage becomes low

These are protective and operational characteristics of the system.

Troubleshooting

The following guidance is limited to **owner-safe checks only**.

General Electrical Issues

Issue	Possible Cause	Recommended Action
No 12 V power	Battery disconnected or flat	Check battery condition and connections
	Main fuse or breaker tripped	Inspect and reset if safe
No 240 V output (inverter)	Inverter switched off	Turn inverter on
	Low battery voltage	Recharge battery
	Overload condition	Remove high-draw appliances
No mains charging	No 240 V input	Confirm external power connection
	Charger fault or breaker	Inspect or seek service
No solar charging	Solar not connected	Check Anderson plug connection
	No sunlight	Confirm conditions
	External regulator issue	Check solar blanket regulator
System shuts down	Low battery voltage	Recharge battery
	Over-current protection	Reduce load

Renogy System (Where Fitted)

Issue	Possible Cause	Recommended Action
No display or response	No battery supply	Check battery connection
Charging not active	No input source	Check solar or mains
Incorrect readings	Normal variation	Verify if required
Fault indications	System fault	Refer to Renogy interface or service

Standard System (Projecta + Renogy Inverter)

Issue	Possible Cause	Recommended Action
Charger not operating	No mains power	Check external connection
	Charger fault	Seek service
Inverter shuts down	Low voltage or overload	Recharge battery / reduce load
Poor vehicle charging	Smart alternator	Fit DC-DC charger (recommended)

When to Seek Professional Service

Service is required if:

- Electrical components show heat damage or wear
- Wiring is loose or damaged
- Breakers trip repeatedly
- Charging systems fail after checks
- Inverter or battery behaviour is inconsistent

IMPORTANT NOTICE

The electrical compartment contains **critical electrical infrastructure** and is not intended for modification or non-qualified servicing.

- Do not alter system wiring or component configuration
- Do not install additional equipment without approval
- Always isolate power before inspection where possible
- Only qualified personnel should perform repairs or upgrades

Incorrect handling or unauthorised modification may result in damage, safety risks, or voided warranty.

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AusTuff Roof Top Tent

The Austrack Simpson X is equipped as standard with the **AusTuff hard-shell rooftop tent**, a purpose-built, side-opening tent system designed for **rapid deployment, weather protection, and elevated sleeping comfort**. The tent is factory-installed and pre-aligned to the camper, meaning no additional assembly, calibration, or adjustment is required by the owner.

The hard-shell construction provides:

- Enhanced protection during transport
- Reduced setup and pack-down time
- Improved resistance to dust, moisture, and environmental exposure

When deployed, the tent provides a **stable elevated sleeping platform for two occupants**, with integrated ventilation, insect protection, and lighting. The design is optimised for Australian conditions and is intended for repeated use across a wide range of environments.

Pre-Deployment Considerations

Before opening the rooftop tent, it is essential that the camper is positioned correctly to ensure safe and reliable operation.

The following conditions should always be confirmed:

- The camper is parked on **stable, level ground**
- There are **no overhead obstructions**, including branches, awnings, or structures
- The ladder can be extended to the ground safely at an angle of approximately **60–70 degrees**
- The surrounding area provides adequate clearance for full deployment

Failure to confirm these conditions may result in unsafe operation or damage to the tent system.

Opening the Tent

The AusTuff rooftop tent on the Simpson X is configured to open toward the **driver's side** of the camper. The opening process is designed to be **assisted by gas struts**, reducing effort and ensuring controlled movement of the hard shell.

To deploy the tent:

- Release all external latches securing the hard shell
- Begin lifting the upper shell section
- Allow the **gas struts to assist and complete the opening motion**
- Extend the ladder fully from its stored position
- Use the ladder as a **lever to pull out the fold-out base section**
- Continue until the extension floor reaches its fully open and locked position
- Position the ladder securely on firm ground
- Adjust the ladder angle to ensure stability and proper load distribution

The ladder is not only an access point but also serves as a **structural support component**, transferring load from the extension floor to the ground.

Installing Window Tension Rods

The rooftop tent is supplied with **tension rods**, designed to support the window hoods and improve weather shedding and airflow.

When installing tension rods:

- Insert each rod through the **eyelet provided in the window hood fabric**
- Flex the rod slightly and locate its lower end into the **designated receiver point on the tent base**
- Ensure the rod is seated correctly and tension is applied evenly

This process should be repeated for all applicable windows.

Proper installation improves:

- Water runoff during rain
- Ventilation within the tent

Structural stability of the window hoods

Integrated Tent Lighting System

(USB Powered – White and Amber Modes)

The AusTuff rooftop tent includes an integrated **dual-zone LED lighting system**, designed to provide both internal illumination and low-impact ambient lighting.

Internal Tent Light

- Powered via **USB connection** to the camper's electrical system
- Provides two selectable lighting modes:
    - **White light** for general illumination
    - **Amber/orange light** for reduced glare and insect attraction

Under-Base Light

- Positioned beneath the tent floor
- Provides illumination for:
    - Ladder access
    - Ground area below the tent
- Controlled via the same inline switch system

Lighting levels will vary based on power supply and connection integrity.

Interior Features

The rooftop tent provides a compact but functional living space, including:

- A **flat sleeping platform suitable for two occupants**
- Ventilated window openings
- Integrated **insect mesh screening**
- Fabric designed for airflow and weather resistance
- Internal lighting and cable routing

The tent is not designed for excessive storage, and weight inside the tent should remain within normal use limits.

Packing Down the Tent

Correct pack-down is critical to prevent damage to the tent fabric, shell, and supporting components.

To close the tent:

- Turn off and disconnect all USB lighting
- Remove all tension rods and store securely
- Arrange bedding flat within the tent to avoid interference with hinges
- Fold the extension floor upward using the ladder as leverage
- Guide all canvas and mesh inward carefully
- Ensure no fabric protrudes beyond sealing edges
- Lower the hard shell evenly, allowing gas struts to compress

- Engage all external latches securely
- Perform a final visual inspection to confirm no material is trapped

The shell must sit completely flush before latches are secured.

Safety Guidelines

Safe operation of the rooftop tent requires attention to positioning, load management, and environmental conditions.

Owners must ensure:

- The ladder is positioned at a **safe angle (60–70 degrees)** and securely grounded
- No open flames, heaters, or fuel-based appliances are used inside the tent
- Adequate ventilation is maintained to reduce condensation
- All latches are secured before travel
- The tent is not used during extreme wind or unsafe weather conditions without additional precautions

Failure to follow these guidelines may result in injury or system damage.

Care and Maintenance

Routine maintenance ensures long-term reliability and preserves the condition of the tent.

Recommended practices include:

- Allowing the tent to **fully dry before long-term storage**
- Cleaning fabric with **mild soap and water only**
- Avoiding harsh chemicals or pressure washing
- Periodically lubricating hinges and moving components
- Inspecting seals, straps, and stitching for wear

- Keeping USB cables and ports clean and dry

Regular inspection will help identify issues early and prevent deterioration.

Troubleshooting

Issue	Possible Cause	Recommended Action
Hard shell will not close smoothly	Canvas or mesh caught between shell edges	Reopen slightly, carefully tuck fabric inward, and close evenly
Ladder feels unstable	Incorrect angle or uneven ground	Adjust ladder to 60–70° and reposition on firm, level ground
Lights not turning on	USB cable not fully inserted or power not active	Check connection, confirm camper power supply, or test alternative port/cable
Tent difficult to open	Wind resistance or obstruction	Open slowly, maintain control until gas struts assist fully
Tent difficult to close	Excess bedding or trapped material	Reopen, flatten internal contents, and ensure all fabric is properly stowed

IMPORTANT NOTICE

The AusTuff rooftop tent is a structural and functional component of the Simpson X and must be operated correctly.

- Always ensure **safe ladder positioning and ground stability**
- Confirm all fabric is clear before closing
- Do not close the tent forcefully under resistance
- Never travel with unsecured latches
- Proper care and maintenance are essential for long-term performance

Damage caused by incorrect use, improper pack-down, or lack of maintenance may not be covered under warranty.

Electrical System

Your Austrack camper is equipped with an integrated **12-volt and 240-volt electrical system**, designed to provide reliable power for lighting, appliances, charging, and off-grid operation. The electrical system supports both campsite use and independent camping, with configuration varying depending on model and specification.

Austrack campers are fitted with one of two primary electrical system architectures:

- A **comprehensive power management system** (Renogy-based), or
- A **simplified mains-priority battery charging system**, designed for straightforward operation without advanced power management features

While both systems supply and manage electrical power safely and effectively, the way charging, monitoring, and solar input are handled differs between them. It is important to understand which system is fitted to your camper, as capabilities, controls, and user interaction will vary.

This section explains all electrical components fitted to your camper, including battery charging, solar input, 240-volt operation, and auxiliary inputs. Each subsection applies **only where the relevant equipment is fitted**.

Simple Battery Charging System

(Non-Renogy Configuration – Mains-Priority Electrical Architecture)

Certain Austrack campers are equipped with a **standardised, mains-priority electrical architecture** rather than a fully integrated power management system. This configuration is deliberately modular in design, relying on **discrete electrical subsystems**—each with a clearly defined function—rather than a single centralised control unit. The result is an electrical system that places a greater emphasis on **user awareness, manual system control, and predictable electrical behaviour** under a wide range of operating conditions.

This system architecture is commonly favoured where simplicity, serviceability, and electrical transparency are prioritised over automation. Rather than attempting to dynamically balance multiple charge sources through electronic logic, the system allows each charging input and output stage to operate independently, with the owner responsible for understanding which supply path is active at any given time.

Overall Electrical Architecture

The standard battery charging configuration employed in these campers is best described as a **segmented electrical system**, in which each major electrical function—charging, inversion, distribution, and auxiliary input—is handled by a dedicated component operating within defined electrical boundaries. There is no cross-communication between subsystems beyond their shared connection to the battery bank.

This configuration removes automated source prioritisation in favour of **manual system engagement**, making electrical state changes clearly observable and mechanically deterministic rather than software-driven.

The principal components forming this architecture are as follows:

- A **Projecta-based 240 V AC mains battery charger**, operating as the primary charging device
- A **12 V DC battery bank**, serving as the central energy storage medium
- A RENOGY **1000 W pure sine wave inverter**, supplying limited AC power off-grid
- A **dedicated 240 V campground inlet**, electrically isolated from inverter output
- External **Anderson plug interfaces** for vehicle-based and photovoltaic charging inputs

Notably absent from this architecture are the following elements:

- Any form of centralised power management controller
- A permanently installed DC-DC charge converter

- An automatic transfer switch (ATS) or change-over relay

The absence of these components is a **deliberate design decision**, not an omission.

Battery Charging Methodologies

In this electrical architecture, battery charging is not governed by a single control logic but rather achieved through **three physically separate charging pathways**, each dependent on its own connection method, voltage characteristics, and operational constraints. Understanding how each pathway functions—and under what conditions it is most effective—is essential for correct system operation.

240 V Mains Battery Charging (Primary Charging Circuit)

When connected to external 240 V AC power, the camper's electrical inlet provides supply **exclusively to the onboard Projecta battery charger**. There is no intermediary distribution stage, no power sharing with inverter circuits, and no direct energisation of general-purpose 240 V outlets.

In this configuration, the system operates purely as an **AC-to-DC conversion and charging circuit**, with all AC energy being consumed for battery replenishment.

The mains charging behaviour is characterised as follows:

- 240 V AC power enters the camper via the dedicated inlet
- Supply is routed directly to the Projecta charger
- The charger manages charge stages internally using its own control logic
- Maximum charging output is capped at **25 amps DC**
- No automatic back-feed to inverter circuits occurs

This approach ensures electrical isolation between AC charging infrastructure and inverter supply paths, eliminating any possibility of unintended power crossover.

Tow Vehicle Charging via Anderson Interface

Although a fixed DC-DC charging device is not included in this system, the camper battery **can still accept charge from the tow vehicle** through direct DC coupling using the Anderson connector. This

method relies entirely on the electrical behaviour of the vehicle's alternator and associated charging hardware.

In effect, this charging path operates as a **parallel DC supply connection**, with no voltage conditioning occurring within the camper itself.

The effectiveness of this charging path is wholly dependent on alternator design.

Vehicles with Conventional Alternator Systems

Vehicles equipped with **fixed-output, non-adaptive alternators** typically provide a stable and continuous charging voltage whenever the engine is running. In these systems, alternator output is maintained independently of vehicle load monitoring algorithms.

When paired with an appropriately installed **Voltage Sensitive Relay (VSR)**, these vehicles are capable of delivering consistent charging current to the camper battery while driving.

Key traits of this configuration include:

- Continuous charging voltage while engine is running
- Predictable charge behaviour during travel
- No dynamic voltage reduction under normal conditions

This arrangement is generally sufficient for maintaining battery charge during transit.

Vehicles with Smart or Variable Voltage Alternators

Modern vehicles increasingly utilise **smart alternator systems**, which dynamically adjust output voltage in response to vehicle demand, emission reduction strategies, and energy-saving algorithms. These systems frequently reduce alternator output once the vehicle's own battery reaches a predetermined state of charge.

When coupled directly to a camper battery via an Anderson plug, this behaviour can result in **intermittent, insufficient, or entirely absent charging**.

For these vehicles, the installation of a **DC-DC charger** is not merely beneficial but strongly advised, as it conditions the variable alternator output into a stable charging voltage suitable for auxiliary batteries.

DC-DC chargers must be installed by qualified personnel and are outside the scope of this manual.

Solar Charging via External Photovoltaic Source

Photovoltaic charging within the standard electrical system is achieved through the use of a **portable, externally regulated solar blanket**, supplied by Austrack as part of the camper's standard equipment.

Solar input is delivered to the system **exclusively through the rear Anderson plug**, maintaining consistency with vehicle charging interfaces and reducing connector complexity.

The AusTuff solar blanket performs all voltage regulation externally before energy enters the camper's electrical system, effectively treating solar input as a pre-conditioned DC supply rather than raw panel output.

Solar Regulation Requirements

Because no onboard solar regulation circuitry exists within this system, it is absolutely critical that **all photovoltaic input be regulated prior to connection**.

This requirement exists to prevent uncontrolled charging voltages from reaching the battery bank.

The following rules must always be observed:

- External solar input **must be regulated**
- The AusTuff blanket's integrated regulator **must remain active**
- Unregulated panels must never be connected directly

Failure to comply may result in battery damage or system instability.

12 V Distribution System

The 12-volt DC distribution network within the camper operates continuously and independently of inverter or mains charging states. All primary camper utilities draw energy directly from the battery bank.

This system supplies:

- Internal and external LED lighting
- Water pump
- USB charging ports
- Auxiliary 12 V sockets

- Control circuits for fitted accessories

The battery remains the sole supply source for all 12 V loads at all times.

240 V System Behaviour and Separation

In this configuration, **two entirely separate 240-volt domains exist**, with no automatic bridging between them.

These domains operate as follows:

Mains Charging Domain

- Activated only when external 240 V is connected
- Supplies the Projecta charger exclusively
- Charges the battery at up to **25 A**

Inverter Supply Domain

- Activated only when the inverter is manually engaged
- Supplies selected outlets from battery power
- Limited by inverter and battery capacity

Understanding this separation is critical to correct and safe system operation.

Monitoring, Feedback, and User Awareness

This system intentionally omits any form of digital energy monitoring, state-of-charge display, or automated load management interface.

As a result, system status must be inferred through:

- Observed electrical behaviour
- Projecta Charger indicator screen
- Appliance performance
- User operational discipline

This design philosophy trades automation for reliability and simplicity.

Intended Limitations and Design Philosophy

Compared to integrated power management systems, this configuration:

- Eliminates automated source prioritisation
- Requires manual inverter control
- Relies on external regulation for solar
- Provides no digitally displayed diagnostics except for current voltage

These characteristics are fundamental to the system's design and should be viewed as operational traits, not deficiencies.

IMPORTANT NOTICES

- No onboard DC-DC charger is fitted as standard
- Vehicle charging behaviour depends on alternator design
- DC-DC chargers are recommended for smart alternator vehicles
- Solar input must be externally regulated
- The inverter must be manually switched on to supply 240 V outlets
- Maximum mains charging output is **25 amps**
- The inverter fitted is a **RENOGY 1000 W unit**
- Incorrect system use may result in damage not covered under warranty

RENOGY SYSTEM

The **Renogy Electrical System** section contained within this manual is largely identical to the Renogy section used in the Austrack **Hybrid Owners Manual**, as the same core Renogy components and system architecture are used across both ranges.

For Austrack Hard Floor models, there are some **intentional configuration differences** owners should be aware of:

- Most Hard Floor models **do not include a separate solar regulator**, by design
- This is because Austrack supplies an **AusTuff solar blanket**, which incorporates its **own integrated solar regulator**

- When using the AusTuff solar blanket on these models, solar input is regulated at the blanket and supplied safely to the camper without the need for an additional onboard regulator

Some Hard Floor models may be fitted with a **dedicated onboard solar regulator**. Where this is the case:

- The **solar blanket's built-in regulator must NOT be used**
- The solar blanket must be connected **without its regulator active**, allowing the onboard regulator to manage solar input
- Using two regulators in series may cause charging faults or reduce system performance

Hard Floor models operate via the **Renogy VISION control panel**. A separate VISION display screen is **not fitted**.

Owners must always refer to the physical components installed in their camper and the relevant sections of this manual to determine the correct solar connection method for their specific configuration.

Some Austrack caravans are fitted with a **RENOGY-based electrical system**, incorporating the RENOGY ONE ecosystem, distributed charging components, battery monitoring hardware, and digital control interfaces. This system is designed to provide detailed insight into energy production, storage, and consumption through a combination of hardware, software, and user interaction.

Unlike electrical systems that operate primarily through background automation, the RENOGY system places significant emphasis on **active user involvement**, **system configuration**, and **interface management**. Correct operation relies not only on physical installation but also on correct pairing, software state, and precise configuration of multiple independent system elements.

This means that while the RENOGY system is capable of presenting a wide range of electrical information, achieving accurate and predictable behaviour requires owners to understand how each component interacts with the others, and how system behaviour may change based on settings, charging conditions, and connectivity.

General System Philosophy and Design Approach

The RENOGY system is best understood as a **modular digital electrical environment**, rather than a single integrated controller. Each major function — charging, monitoring, display, and control — is handled by a separate device that communicates electronically with the others.

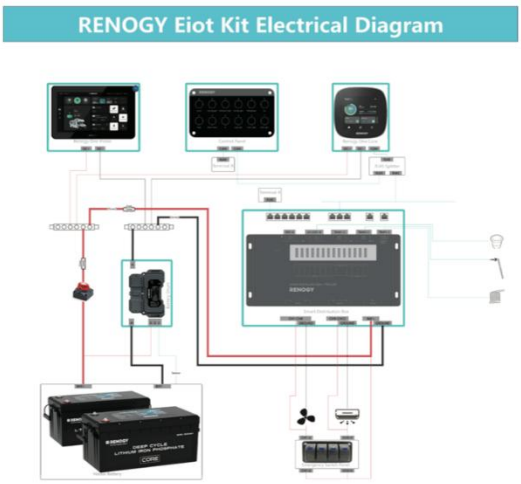
This design approach offers flexibility and configurability, but also introduces multiple dependencies. System accuracy and stability depend on:

- Correct device pairing
- Consistent network connectivity
- Proper shunt configuration
- Accurate battery capacity data
- Appropriate charging profile selection
- Ongoing verification of system state after changes

Because of this, owners may need to regularly review system settings to ensure displayed data accurately reflects real-world battery and charging behaviour.

RENOGY System Components and Relationships

A typical RENOGY electrical installation in an Austrack caravan may consist of the following interconnected components:



- **RENOGY ONE Core display module**
- **RENOGY ONE Vision touchscreen module**
- **Battery shunt (RENOGY RSHST series)**
- **RENOGY DC/DC charger**
- **RENOGY inverter (where fitted)**
- **Mobile device running the RENOGY App**

Each of these components performs a specific role and relies on communication with others in order to present meaningful information or allow user control.

Failure or misconfiguration of any one component can affect system-wide behaviour, even if other components remain operational

Renogy ONE Core – System Control Hub

The **RENOGY ONE Core** acts as the primary configuration and monitoring hub for the system. It is responsible for displaying battery data, system status, and charging information derived from other connected components.

The Core does not directly manage charging hardware; instead, it **interprets data provided by**:

- The battery shunt
- The DC/DC charger
- Solar inputs
- Inverter status

Because of this, the accuracy of the information displayed on the Core is dependent on:

- Proper shunt calibration
- Correct battery capacity input
- Consistent communication with connected devices

The Core also manages system network functions, including WLAN connectivity and hotspot broadcasting.

RENOGY ONE Vision – User Interface Extension

Where fitted, the **RENOGY ONE Vision** provides a secondary touchscreen interface designed for direct interaction with system controls and loads.

The Vision screen allows:

- Visualisation of power flow
- Control of DC outputs
- Navigation between system overview pages
- Access to pairing and hotspot menus

The Vision screen does not replace the Core; rather, it operates as an **additional interface layer**, and must be correctly paired with the Core to function as intended.

Because the Vision relies on internal wireless communication, its behaviour may be affected by:

- Network state
- Software synchronisation
- Initial startup sequence

Core ↔ Vision Wireless Interconnection

When both a RENOGY ONE Core and Vision are installed, they must be connected to each other using WLAN.

This internal wireless link allows:

- Shared system data
- Mirrored control states
- Unified system snapshots

The connection is established manually by selecting the Vision network from within the Core's WLAN menu. Once connected, the two devices must remain within operational wireless range to maintain synchronisation.

System Ownership Expectations

Because the RENOGY electrical system distributes responsibility across hardware, displays, and software, owners should expect to:

- Spend time navigating multiple menus
- Verify system configuration after changes
- Confirm displayed metrics periodically
- Understand that displayed data reflects calculated values, not direct measurements
- Recognise that behaviour may vary depending on system state

This is normal behaviour within a digitally managed electrical environment.

Service and Professional Support

Due to the configurational nature of the RENOGY system, diagnosing concerns may require reviewing both hardware condition and software settings.

For any issues relating to:

- Inconsistent readings
- Charging behaviour
- Connectivity problems
- Unexpected system responses

Austrack recommends contacting AOE RV Service Centre as the primary point of support, as they are familiar with Austrack installations and RENOGY system layouts.

If AOE RV Service Centre is not accessible due to geographic location, owners should seek assistance from a suitably qualified caravan or RV service technician experienced with RENOGY systems.

RENOGY Mobile Application – Extended Interaction Layer

The RENOGY mobile application provides yet another interface layer through which the user can view system data and issue commands.

The application allows:

- Monitoring of battery state of charge
- Viewing of charging inputs
- Control of selected loads
- Access to system configuration menus

However, the mobile application does not function independently. It requires:

- Prior successful pairing with the Core or Vision
- Correct network conditions
- Active user account login
- Proper app permissions

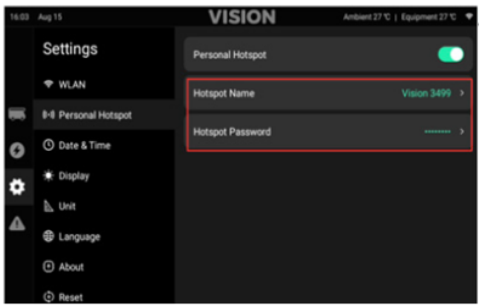
Because the application operates through wireless communication, its responsiveness and accuracy may vary depending on connectivity and software state.

Network Behaviour and Dependency Awareness

A key aspect of the RENOGY system is its reliance on **temporary local Wi-Fi networks** during initial setup and pairing.

During pairing:

- The RENOGY device broadcasts a local hotspot
- The user's phone must disconnect from normal internet access
- Mobile data must be disabled manually
- WLAN and hotspot modes must not conflict



Failure to perform these steps in the correct order may prevent pairing or result in incomplete device registration.

This requirement exists because many mobile devices will prioritise cellular data over local Wi-Fi networks, preventing proper communication between the app and the RENOGY hardware.

Initial Pairing – Vision Screen to Mobile Device

Pairing a mobile device with the RENOGY electrical system is a **multi-stage process** that relies on correct network selection, temporary changes to your phone's connectivity settings, and QR-code-based authentication. The RENOGY system does not use your normal home or mobile internet connection during initial setup. Instead, it creates a **temporary local Wi-Fi hotspot** that must be joined manually.

Correct pairing depends heavily on completing each step **in the correct order**. Skipping steps, enabling conflicting network settings, or leaving mobile data enabled during pairing may prevent successful connection.

Step-by-Step Pairing Procedure

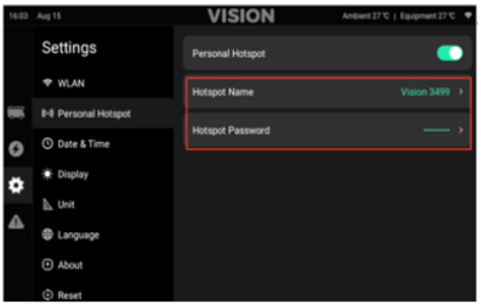
(RENOGY ONE Vision → Mobile Phone)

Step 1 – Enable Personal Hotspot on the RENOGY ONE Vision

On the RENOGY ONE Vision screen:

1. Tap the **Settings (Cog Wheel)** icon (third button down on the left-hand side of the screen).
2. Select **Personal Hotspot**.

3. Ensure the **Personal Hotspot switch is turned ON**.



⚠️ **Important:**
Do **NOT** turn on **WLAN** at this stage. Enabling WLAN will automatically disable the Personal Hotspot and prevent pairing.

Take note of:

- **Hotspot Name**
- **Hotspot Password** (commonly set to 12345678 unless changed)

Step 2 – Prepare Your Phone for Initial Connection

On your mobile phone:

1. **Disable Mobile Data**
   This is critical, as mobile data signals are typically stronger than the Vision's Wi-Fi signal and may block the connection process.
2. Open your phone's **Wi-Fi settings**.
3. Locate the hotspot broadcast by the RENOGY ONE Vision (e.g. *VISION-000##*).
4. Connect to the hotspot using the password shown on the Vision screen.

Your phone is now directly connected to the Vision screen via local Wi-Fi only.

Step 3 – Open the RENOGY Mobile App

Once connected to the Vision hotspot:

1. Open the **RENOGY App** on your phone.
2. If prompted, log in to your RENOGY account or complete account setup.

Step 4 – Add a New Device in the App

Within the RENOGY App:

1. Tap the **"+" (Add Device)** icon in the top-right corner of the app.
2. Select **Scan QR Code**.

The app is now waiting for a QR code from the RENOGY system.

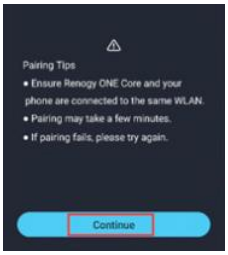
Step 5 – Display the QR Code on the RENOGY ONE Vision

On the RENOGY ONE Vision screen:

1. Tap the **System Wheel** (bottom-right corner of the screen).
2. Tap the **System Box** to expand the menu.
3. Scroll down and select **Pair with App** (approximately three-quarters of the way down).

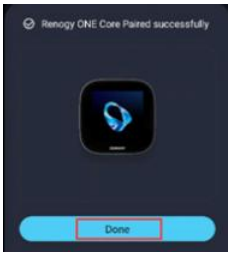
The Vision screen will now display a QR code.

Step 6 – Scan the QR Code Using Your Phone



1. Hold your phone steady and allow the RENOGY App to scan the QR code displayed on the Vision screen.
2. Once scanned, tap **Continue** in the app.
3. Follow any on-screen prompts.

Step 7 – Confirm Successful Pairing



If pairing is successful:

- The app will display a **"Paired Successfully"** confirmation screen.

Tap **Done** to complete the process.

Step 8 – Finalise the Connection

To complete pairing:

1. **Close the RENOGY App completely** (do not leave it running in the background).
2. Re-open the app.
3. Confirm that system data and controls are now visible.
4. **Re-enable Mobile Data** on your phone.

The RENOGY App is now paired with your caravan's electrical system.

After Pairing – What Should Work

Once pairing is complete, you should be able to:

- View battery and charging information
- Monitor solar and vehicle charging inputs
- Control DC loads mapped to the Vision system
- Access system snapshots and status information

Controls can now be accessed via:

- The RENOGY ONE Vision screen
- The RENOGY mobile app

Important Notes and Common Pairing Issues

- Pairing **must** be done using the Personal Hotspot, not WLAN
- Mobile data **must be disabled** during initial pairing
- WLAN and Personal Hotspot cannot be active simultaneously
- Closing and reopening the app is required to stabilise the connection
- If pairing fails, restart the process from Step 1

If repeated pairing attempts fail or behaviour appears inconsistent, **Austrack recommends contacting AOE RV Service Centre as the primary point of support**. If AOE RV Service Centre is not accessible, assistance should be sought from a suitably qualified caravan or RV service technician familiar with RENOGY systems.

Battery Monitoring Fundamentals within the RENOGY Ecosystem

Within the RENOGY electrical system, battery monitoring is not derived directly from the battery itself, but instead relies on **interpretation of current flow data** via a **separate external battery**

shunt. This shunt functions as the primary data source for calculating battery State of Charge (SOC), voltage trends, and historical energy usage.

It is important to understand that the RENOGY system does **not** inherently "know" the condition of the batteries. Instead, it performs calculations based on:

- User-entered battery capacity values
- Measured current flowing into and out of the battery
- Voltage thresholds
- Historical charge and discharge behaviour

As a result, the accuracy of all battery-related data depends heavily on **correct initial configuration** and **ongoing calibration discipline**.

RENOGY Battery Shunt – Role and Limitations

The RENOGY battery shunt acts as a current-sensing device that tracks all electrical flow into and out of the battery bank. In Austrack installations, this is commonly listed in the system as a device identifier such as:

RSHST-B02P300-G1

The shunt itself does not store energy, control charging, or regulate battery behaviour. Its sole purpose is data collection, which is then interpreted by the RENOGY ONE Core and Vision interfaces.

Because the shunt is passive and calculation-based:

- Any incorrect capacity input will scale SOC values inaccurately
- Any wiring imbalance can skew measurements
- Any load that bypasses the shunt will not be reflected in system data

Manual Entry of Battery Capacity – A Required Step

Unlike systems that automatically recognise battery chemistry and capacity, the RENOGY system requires **manual input of total battery capacity**. This step is critical and directly affects:

- SOC percentages

- Remaining runtime estimates
- Charge acceptance calculations
- Alarm thresholds

Battery capacity must be entered via the system design menus accessed through the RENOGY ONE Core interface.

If capacity is:

- Entered incorrectly
- Not entered at all
- Adjusted without recalibration

then the battery data presented across all interfaces may become progressively less reliable over time.

State of Charge (SOC) Calculation Behaviour

SOC within the RENOGY system is a **derived value**, not a direct measurement. It is calculated based on cumulative amp-hours in versus amp-hours out, starting from a reference point that must be defined by the user.

This reference point is established through **SOC calibration**, which typically requires a full battery charge cycle.

Until this calibration has been correctly completed:

- SOC values may fluctuate unexpectedly
- Displayed percentages may not correspond to actual usable capacity
- System behaviour tied to SOC thresholds may not perform as intended

SOC accuracy degrades further if:

- Batteries are only partially recharged for extended periods
- Inverter loads are heavy and irregular
- Solar input varies significantly day-to-day

SOC Source Selection – Internal vs External Logic

Within the RENOGY system menus, the user must explicitly select the **SOC source**. This selection determines whether SOC calculations are derived from:

- Internal battery logic (used by some RENOGY batteries)
- External battery shunt only

In Austrack installations not using RENOGY-branded batteries with internal shunts, this setting must be configured to **"From Battery Shunt Only."**

Failure to configure this correctly may result in:

- Conflicting SOC values
- Unstable charge percentage reporting
- Unexpected behaviour during charging or discharge events

This setting is not auto-detected and must be manually confirmed.

Full Charge Calibration – Why It Matters

A **full charge calibration** is required to synchronise the calculated SOC with actual battery capacity. This occurs when:

- Batteries reach 100% charge under controlled conditions
- Charging current tapers appropriately
- The system is allowed to complete its charging algorithm uninterrupted

For best results, this calibration should be performed:

- While connected to stable 240 V mains power
- With minimal load activity
- After SOC and capacity settings are verified

Skipping this step or performing it under fluctuating conditions may lock inaccurate reference data into the system.

RENOGY Inverter Interaction with Battery Logic

Where a RENOGY inverter is installed, it introduces a significant load source that directly affects battery behaviour and SOC calculation.

Inverter operation requires:

- Correct REM mode selection at the inverter
- Correct frequency (50 Hz for Australia)
- Adequate battery discharge capability

High inverter loads will:

- Rapidly draw current through the shunt
- Cause visible voltage sag
- Influence SOC calculation accuracy if calibration is incomplete

Battery Discharge vs Battery Capacity

In inverter-based systems, **discharge capability** is often more critical than total capacity.

RENOGY systems do not automatically enforce inverter-to-battery suitability. Owners must ensure that:

- Battery discharge ratings are sufficient for inverter demand
- Parallel battery configurations are balanced
- Wiring resistance is minimised

SOC values alone do not indicate whether the system can sustain high-load inverter operation.

Battery Discharge Depth and Longevity

While lithium batteries allow deeper discharge than older chemistries, RENOGY system users are encouraged to manage depth of discharge proactively.

General guidance recommends:

- Avoiding discharge below **20% SOC**
- Recharging promptly after heavy usage
- Avoiding repeated deep-discharge cycles

Although battery protection systems may prevent complete depletion, reliance on these protections as a routine operating condition is not recommended.

Behaviour Under Heavy Load

During high-load events (e.g. heating appliances, cooking devices, or air conditioning where supported), owners may observe:

- Rapid drops in displayed SOC
- Alarms triggered by voltage sag
- Increased charger activity following load removal

These behaviours are expected within the RENOGY system and must be interpreted in context with battery configuration and charging availability.

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austrackcampers.com.au

RENOGY DC/DC Charger – Behavioural Overview

Austrack caravans fitted with RENOGY systems utilise a **RENOGY RBC50D1S-AU DC/DC charger**, designed to manage charging from the tow vehicle alternator and solar input.

The light indicators on the RBC50D1S-AU are as follows (from left to right)

1. Light indicator shows charge from your alternator when connected to your car

2. Light indicator shows solar when panels connected and receiving over 15V

3. Light indicator shows battery charging (Yellow means charging, Green means fully charged)

4. Blue light indicates Lithium Battery is connected. This will be a different colour for different battery chemistries (eg, AGM, Gel etc)

This unit does not charge batteries continuously at a fixed rate. Instead, it operates within a **conditional logic framework** that prioritises and balances available inputs based on voltage thresholds and configured profiles.

DC/DC Charging Logic While Driving

When the caravan is connected to the tow vehicle and in motion:

- Alternator input becomes available
- The DC/DC charger monitors system voltage
- Charging current is progressively applied up to rated capacity

If solar panels are also connected:

- Solar contribution is evaluated first
- When solar output reaches approximately **25 amps or greater**, alternator charging is reduced or paused
- Below this threshold, solar and alternator inputs may be combined

This behaviour is dynamic and may change continuously while driving depending on:

- Sun angle
- Panel shading
- Vehicle speed
- Alternator output characteristics

DC/DC Charging at Night or Without Solar

If:

- Driving occurs at night
- Solar panels are disconnected
- Solar output is insufficient

then the DC/DC charger will default to supplying up to **50 amps** from the vehicle alternator, subject to battery acceptance limits and charge stage.

Charging will reduce automatically as batteries approach their absorption or float stages.

DC/DC Charger Indicator Interpretation

The RENOGY DC/DC charger uses multiple indicator lights to communicate operating status. These lights must be interpreted correctly to understand charging behaviour.

Indicators typically represent:

- Alternator input presence
- Solar input presence
- Battery charging state
- Battery chemistry selection

Because these indicators do not display numerical values, owners must rely on **combined interpretation** of:

- Charger LEDs
- RENOGY ONE display data
- Mobile app metrics

Understanding charger state therefore requires cross-checking multiple interfaces.

Summary of User Responsibility in Battery Management

Due to the calculation based nature of the RENOGY battery monitoring system, owners are responsible for:

- Correct initial configuration
- Periodic verification of capacity and SOC settings
- Understanding that displayed values are estimates
- Recognising the limitations of calculated SOC
- Avoiding reliance on a single data point

Accurate system operation depends on informed ownership.

Solar Input within the RENOGY System – General Characteristics

Solar charging within the RENOGY electrical system is highly dependent on environmental conditions, system wiring configuration, and regulator logic. Unlike fixed-output charging sources, solar input is inherently variable and must be interpreted within the context of real-world conditions rather than nominal panel ratings.

RENOGY systems typically integrate solar charging through one of two pathways:

- Via the DC/DC charger's internal solar regulator
- Via a standalone RENOGY solar regulator

In either case, solar input is subject to prioritisation rules that influence how charging current is distributed across available inputs.

Real World Solar Expectations

Although solar panels are rated under standard test conditions, actual output during use varies significantly. Under ideal conditions, most caravan-sized panels typically generate **approximately 9–11 amps per panel**, but sustained output at these levels is rarely achieved.

Factors affecting solar performance include:

- Angle of sunlight
- Time of day
- Geographic latitude
- Seasonal variation
- Weather conditions
- Panel cleanliness
- Partial shading
- Cable length and conductor size

The RENOGY system does not normalise solar output based on these variables; instead, it reports instantaneous conditions that must be interpreted by the user.

Solar Priority Logic in Combined Charging Scenarios

When a RENOGY DC/DC charger with integrated solar regulation is used, the system follows a conditional priority logic.

While driving:

- Solar input is evaluated continuously
- Once solar current reaches a defined threshold (commonly around 25 A), alternator contribution may be reduced or suspended
- Below this threshold, alternator and solar inputs may be combined

This behaviour is dynamic and subject to frequent transition as conditions change. As a result, displayed charging values may fluctuate rapidly, particularly when driving in intermittent shade or variable weather.

External Solar Blankets and Regulator Interaction

When using **external portable solar blankets** with a RENOGY-equipped Austrack caravan, additional consideration is required due to differences between RENOGY's general system recommendations and Austrack's specific electrical design.

External solar blankets commonly include:

- Integrated solar regulators
- Long extension leads
- Panels designed for manual repositioning and orientation adjustment

In a typical RENOGY system configuration where an external solar connection is wired **directly to the RENOGY solar input**, RENOGY recommends that any regulator supplied with a portable solar blanket be **bypassed**. This is because the RENOGY system expects to manage solar regulation internally, and the presence of multiple regulators in series can result in:

- Regulator conflict
- Reduced charging efficiency

- Input voltage levels too low to trigger charging logic
- Inconsistent or absent solar input readings on the display

However, **Austrack caravans are configured differently**.

Austrack Rear Anderson Plug – Design Intent

In Austrack installations using the RENOGY electrical system, the **rear Anderson plug is not wired to the RENOGY solar input**. Instead, the rear Anderson plug is connected **directly to the battery system**, bypassing the RENOGY solar regulation pathway entirely.

This design choice allows the rear Anderson plug to function as a **dual-purpose input/output connection**, enabling:

- Connection of regulated portable solar blankets
- Connection of external charging sources
- Flexible power exchange without altering internal system configuration

Because the Anderson plug is connected directly to the batteries, **any external solar source connected at this point must retain its own regulator**. In this configuration, the regulator supplied with the portable solar blanket **must not be bypassed**, as it is responsible for ensuring safe and appropriate charge voltage to the battery bank.

Important Operational Clarification

- RENOGY's recommendation to bypass external regulators applies **only** when connecting solar panels directly to a RENOGY-controlled solar input.
- Austrack's rear Anderson plug is **not** a RENOGY solar input.
- External solar connected via the rear Anderson plug **must remain regulated at the source**.
- Solar input connected this way may **not be fully visible or interpreted** by the RENOGY system in the same manner as internally regulated rooftop solar.

Owners should be aware that this is an intentional and considered design choice by Austrack and does not indicate incorrect system operation.

Owner Awareness Note

Because charging via the rear Anderson plug occurs **outside the RENOGY solar regulation path**, the RENOGY display may not always accurately reflect the contribution of portable solar blankets connected in this manner. This is expected behaviour and does not indicate a fault or misconfiguration.

Understanding the distinction between **RENOGY-managed solar inputs** and **Austrack-managed battery inputs** is essential for correct interpretation of system behaviour.

Voltage Drop and Wiring Loss Considerations

Solar energy is particularly sensitive to wiring length and conductor size. In RENOGY systems:

- Longer cable runs increase resistance
- Resistance reduces available charging voltage
- Reduced voltage may prevent charging activation

This is especially relevant when:

- Panels are roof-mounted with long cable runs
- External blankets are used with extended leads
- Multiple connection points are involved

The system does not compensate automatically for voltage drop, requiring manual assessment if charging performance appears reduced.

Battery Expansion – Compatibility and Uniformity Requirements

If additional lithium batteries are added to a RENOGY-equipped system, strict compatibility guidelines must be followed to prevent imbalance and premature degradation.

Best practice requires that additional batteries:

- Are of the **same brand**
- Have the **same capacity**
- Use the **same cell chemistry**

- Are manufactured within a similar timeframe

Mixing batteries of different capacities or ages can result in unequal charging and discharging, impacting system behaviour and long-term reliability.

Parallel Battery Wiring and Load Distribution

In parallel battery configurations, wiring layout has a direct impact on how current is shared.

Correct practice dictates:

- Positive connection taken from one end of the battery bank
- Negative connection taken from the opposite end
- Equal-length conductors where possible

This arrangement helps ensure balanced charge and discharge across all batteries. Incorrect wiring may cause certain batteries to work harder than others, distorting SOC calculations and reducing lifespan.

Inverter Sizing and Discharge Capability

Inverter performance within the RENOGY system is tied not only to inverter wattage rating but also to **battery discharge capability**.

Indicative discharge requirements include:

- 2000 W inverter → ~175–200 A discharge
- 3000 W inverter → ~250–300 A discharge

Battery capacity alone does not guarantee adequate discharge performance. Total system discharge must account for:

- Battery internal resistance
- Parallel battery count
- Wiring losses
- Temperature effects

RENOGY systems do not automatically enforce inverter-to-battery suitability

Simultaneous Appliance Load Behaviour

When multiple 240 V appliances are used simultaneously:

- Inverter load increases cumulatively
- Battery discharge demand escalates rapidly
- Voltage sag may occur
- Protective alarms may activate

These effects are normal within high-load scenarios and reflect system limits rather than faults

Alarm Behaviour and Breaker Operation

Inverter alarms serve as warnings of approaching operational limits. These may indicate:

- Low battery voltage
- Excessive load
- Thermal stress

Ignoring alarms may result in:

- Inverter shutdown
- Tripped breakers
- Loss of 240 V supply

Although alarms can sometimes be disabled, this does not remove the underlying system constraints.

System Scalability Considerations

The RENOGY system offers multiple pathways for expansion and modification; however, each change introduces additional complexity.

Common scaling considerations include:

- Wiring upgrades for higher current
- Shunt recalibration after capacity changes
- Reconfiguration of SOC settings
- Increased monitoring requirements

The system does not auto-reconfigure after hardware changes.

Interpretation of Displayed Data

All values displayed in the RENOGY environment represent interpreted information derived from multiple inputs. Users should be aware that:

- Displayed values are not direct measurements of remaining energy
- SOC is an estimate
- Charging currents reflect instantaneous conditions only

Cross-checking information across interfaces may be necessary to understand system behaviour accurately.

"End Consumer Awareness" – Practical Responsibility

Owners should be aware that:

- The RENOGY system rewards attentive configuration
- Behaviour may differ after updates or resets
- Discrepancies may arise without calibration
- Understanding system logic improves outcomes

Time spent familiarising oneself with menus, settings, and system interactions is considered part of normal ownership.

Service, Review, and Ongoing Support

Due to the configurational and software-dependent nature of the RENOGY system, addressing concerns may require methodical review rather than component replacement.

For assistance with:

- Charging inconsistency
- Battery reporting anomalies
- Pairing or connectivity concerns
- System expansion review

Austrack recommends contacting AOE RV Service Centre as the primary point of support, as they are familiar with Austrack electrical installations and RENOGY architectures.

If AOE RV Service Centre is not geographically accessible, owners should seek assistance from a suitably qualified caravan or RV service technician experienced with RENOGY systems.

IMPORTANT NOTICE

The RENOGY electrical system relies on correct configuration, active monitoring, and user awareness. Variations in behaviour may occur due to environmental conditions, system settings, and connectivity state. Incomplete configuration or misunderstanding of system logic may result in inaccurate information or reduced system performance.

Owners are encouraged to review this section in full and consult professional support when required.

System State Awareness and Operational Context

The RENOGY electrical system operates within a continuously changing operational context. Unlike systems that function independently once installed, RENOGY requires periodic awareness of **system state**, which is influenced by variables such as:

- Active charging sources
- Network connectivity
- User-defined configuration settings
- Software state across display modules
- Load demand and discharge rate

As a result, the same user action may lead to different system responses depending on prevailing conditions. Owners should not assume that system behaviour is static or predictable without checking current conditions.

Understanding "Normal" vs "Expected" Behaviour

Within the RENOGY environment, it is important to distinguish between behaviour that is:

- **Normal** (operating within design parameters)
- **Expected** (operating in the way the user anticipates)

These two are not always the same.

For example:

- A sudden drop in displayed SOC may be *normal*, but not *expected*
- Solar charging showing intermittent values may be *normal*, but not *intuitive*
- Inverter alarms activating under moderate load may be *normal*, but not *desirable*

Understanding this distinction reduces unnecessary fault reporting and improves long-term system confidence.

Software-Dependant Behaviour and Assumptions

RENOGY systems rely heavily on firmware and software-level logic to interpret electrical data. As with all software-dependent systems, behaviour may change depending on:

- Firmware version
- Display module state
- App version
- Pairing order
- System reset history

No assumption should be made that behaviour observed today will remain unchanged following updates, resets, or re-pairing processes.

Power Cycling and Reset Implications

Power cycling parts of the RENOGY system may affect:

- SOC reference values
- Pairing persistence
- Display synchronisation
- Network behaviour

While power cycling is sometimes necessary, it should not be relied upon as a routine troubleshooting method without understanding which components are being reset and which are not.

Display Data Interpretation Discipline

Owners are encouraged to interpret RENOGY display data **contextually rather than absolutely**.

Examples include:

- Using voltage trends instead of single voltage values
- Observing charging direction rather than instantaneous current
- Using SOC as a general reference rather than a precise indicator
- Reviewing multiple screens to confirm behaviour

No single screen or app page should be considered authoritative in isolation.

Redundancy in Monitoring Interfaces

Because data is available via:

- RENOGY ONE Core
- RENOGY ONE Vision
- Mobile application

Owners may encounter situations where:

- Values differ slightly between interfaces
- Updates appear delayed on one device
- Certain controls are accessible in one location but not another

These differences are a consequence of device communication timing and should be interpreted accordingly.

Continuity of Configuration After Changes

Any change to system configuration may alter behaviour elsewhere.

Examples include:

- Updating battery capacity affecting SOC tracking
- Changing SOC source affecting displayed percentage
- Modifying inverter settings influencing battery alarms
- Altering solar wiring affecting charging logic

After any configuration change, the system should be observed over a full charge and discharge cycle to confirm steady-state behaviour.

Operational Changes During Travel

Electrical behaviour may differ significantly between:

- Stationary use
- Driving conditions
- Engine-on vs engine-off states

This is particularly noticeable when:

- DC/DC charging begins or ends
- Solar input fluctuates rapidly

- Vehicle alternator supply is intermittent

Owners should expect system values to change dynamically during travel without necessarily indicating faults.

Environmental Influence on System Behaviour

Environmental factors influence multiple aspects of the RENOGY system, including:

- Battery acceptance rates
- Solar panel output
- Inverter efficiency
- Cooling of power electronics

Cold temperatures, for instance, may reduce charge acceptance or alter charging stage timing, which can affect SOC behaviour and displayed metrics.

Load Management as an Ownership Responsibility

RENOGY systems do not prevent users from over-requesting power. Instead, load management relies on user awareness.

Owners should be mindful of:

- Total inverter load
- Simultaneous appliance usage
- Available battery discharge capability
- Charging availability during load usage

Failure to manage load appropriately may result in protective shutdowns or alarms.

Alarm Interpretation and Owner Response

Alarms within the RENOGY system are informational by design and may require interpretation.

Common alarm triggers include:

- Low voltage conditions
- Over-current situations
- Peak inverter load events

Owners should treat alarms as indicators to **review system state**, not automatically as component failures.

Persistence of Historical Data

Some displayed data within the RENOGY system reflects accumulated historical values rather than live conditions. These values may not reset automatically and should be reviewed with an understanding of their time basis.

Long-Term Ownership Considerations

Over time, RENOGY system owners should expect to:

- Periodically review configuration settings
- Re-verify battery capacity values
- Confirm SOC accuracy after prolonged storage
- Check pairing integrity after power interruptions

This ongoing involvement forms part of normal ownership of a digitally managed electrical system.

Storage Behaviour and Background Loads

Even when the caravan is not actively in use, RENOGY system components may continue to draw small amounts of power.

Owners should:

- Ensure a charging source is available during storage
- Monitor battery state regularly

- Avoid long-term storage without solar or mains input

Failure to do so may result in unexpected battery depletion.

Responsibility for System Literacy

The RENOGY system provides a high level of information and configurability. Extracting value from this capability requires a degree of system literacy on the part of the owner.

Austrack encourages owners to:

- Read this section in full
- Become familiar with system menus
- Understand inter-component relationships
- Seek clarification before making changes

Service, Review, and Professional Support

Given the complexity and configurational nature of the RENOGY system, professional assessment may be beneficial when behaviour is unclear.

For configuration review, diagnostics, or system performance concerns, **Austrack recommends contacting AOE RV Service Centre as the primary point of support**.

AOE RV Service Centre is familiar with:

- Austrack electrical layouts
- RENOGY ONE systems
- Battery integration practices
- Charging logic across multiple sources

If AOE RV Service Centre is not accessible due to geographic location, assistance should then be sought from a suitably qualified caravan or RV service technician experienced with RENOGY systems.

Concluding Operational Notice

The RENOGY electrical system is capable of supporting a wide range of travel scenarios when configured and managed correctly. At the same time, it requires careful interaction, thorough configuration, and ongoing awareness.

Owners are encouraged to treat the RENOGY system as an active component of caravan operation rather than a passive background system.

Solar

The Simpson X utilises a **portable solar-based charging system**, designed to provide supplementary battery charging during off-grid use. Unlike other camper and caravan systems that incorporate fixed roof-mounted solar panels or onboard solar controllers, the Simpson X relies entirely on **externally connected solar equipment** for photovoltaic charging.

Solar input is achieved exclusively through the use of the **AusTuff portable solar blanket**, which connects to the camper via the **rear Anderson plug**. This design simplifies the onboard electrical architecture while still providing an effective method of maintaining battery charge during daylight hours.

Because solar charging is not permanently installed or integrated into the camper structure, it must be **manually deployed, connected, and positioned** by the user during setup.

Solar Charging Method

The Simpson X does not include any fixed solar panels or internal solar regulation hardware. All solar energy is generated externally and delivered to the camper as a pre-regulated DC supply.

In normal operation:

- The **AusTuff solar blanket is positioned externally**, in direct sunlight
- The blanket's **built-in regulator manages voltage and charge output**
- Regulated power is delivered to the camper via the **rear Anderson plug**
- The battery system receives this energy as a controlled charging input

This method ensures that battery charging occurs safely without the need for additional onboard solar control components.

Solar Blanket and Regulation

The AusTuff solar blanket is an **all-in-one solar solution**, incorporating both photovoltaic panels and a **dedicated solar regulator** within the unit.

This regulator performs several critical functions:

- Controls the voltage delivered to the battery system
- Limits current to safe charging levels
- Adjusts output based on battery state and sunlight conditions
- Prevents over-charging of the battery

Because there is **no onboard solar regulator**, the blanket's regulator is the **only active control point** in the solar charging pathway.

Critical Operating Requirements

Due to the system design, correct use of the solar blanket is essential for safe operation.

Owners must ensure:

- The solar blanket is always used with its **integrated regulator active**
- No attempt is made to bypass or remove the regulator
- Only regulated solar equipment is connected to the camper
- Connections are secure and correctly polarised before use

⚠️ Connecting unregulated solar panels directly to the Anderson plug may result in:

- Over-voltage charging
- Battery damage
- Electrical system faults

Deployment and Positioning

Effective solar charging is dependent on correct positioning of the solar blanket.

For optimal performance:

- Position the blanket in **direct sunlight**, free from shade

- Adjust the angle periodically to maximise exposure throughout the day
- Place the blanket away from foot traffic and hazards
- Keep the surface clean and free of dust or debris

Because the solar source is portable, it provides flexibility to position the panels independently of where the camper is parked.

Performance Expectations

Under suitable conditions, the solar blanket is capable of providing **supplementary charging** to maintain battery levels during off-grid use.

However, performance will vary based on several factors:

- Sunlight intensity and duration
- Cloud cover and weather conditions
- Panel orientation and cleanliness
- Daily electrical consumption

Solar charging should be considered as a **supporting energy source**, not a guaranteed method of fully replenishing batteries under all conditions.

System Limitations

As the Simpson X does not include fixed solar panels or onboard control systems:

- Solar input is **not automatic** and requires user setup
- Charging output is limited to the capacity of the portable solar blanket
- There is no central monitoring or optimisation of solar input
- Charging will cease if the blanket is disconnected or shaded

Users must actively manage solar deployment to maintain effective charging.

Troubleshooting

Issue	Possible Cause	Recommended Action
No solar charging	Solar blanket not connected	Check Anderson plug connection
	No sunlight	Reposition blanket into direct sunlight
	Regulator not operating	Inspect solar blanket connections
Low charging performance	Partial shading	Remove shading
	Poor panel angle	Reposition for better exposure
	Dirty panel surface	Clean blanket surface
System shuts down while charging	Low battery voltage	Recharge via mains or vehicle

IMPORTANT NOTICE

The Simpson X solar system is designed around **externally regulated portable solar input only**.

- There is **no onboard solar regulator**
- Solar charging requires manual setup and connection
- Only the **AusTuff solar blanket (or equivalent regulated source)** should be used
- All solar input must be regulated before entering the system

Failure to follow correct solar usage practices may result in damage not covered under warranty.

Mains Power (240 V)

All Austrack campers are fitted as standard with a **240 V mains power input**, allowing the electrical system to be supplied directly from an external power source such as a caravan park power outlet or suitable household supply (via an approved adapter).

Mains power provides the most stable and continuous source of electrical energy for the caravan and is used to:

- Charge the onboard battery system

When mains power is connected, the caravan's electrical system will automatically distribute power as designed, depending on whether the caravan is fitted with a PROJECTA or RENOGY electrical system.

Mains Power Inlet Location

The **240 V mains power inlet** is located at the **rear side of the camper**, externally mounted for easy access.

Although the image provided shows an earlier white inlet with a clear weather cover, current Austrack campers are fitted with a **black mains inlet and black weather cover**. The function, rating, and operation remain exactly the same regardless of colour.

15 Amp Mains Connection Requirement

Austrack campers are fitted with a **15 amp (15 A) inlet**, which is specifically designed for caravan and RV use. A 15 A connection is identified by:

- A **larger earth pin** than standard household plugs
- Matching larger earth pins on both ends of a 15 A extension lead

Because of this, a standard household extension lead **cannot be connected directly** to the camper.

To connect mains power correctly, you must use:

- A **15 A caravan extension lead**, or
- A **10 A to 15 A adaptor** (commonly referred to as an Amphibian lead or safety adaptor)

Any 10 A to 15 A adaptor used **must incorporate a safety switch (RCD)**. These adaptors are widely available from camping, caravan, and hardware retailers.

Using a 10 A Power Outlet Safely

If the camper is being connected to a **standard household 10 A power outlet**, the following rules apply:

- A **10 A–15 A adaptor with an integrated safety switch must be used**
- The adaptor must be in good condition and correctly rated

- The power point supplying the adaptor must be known to be in safe working order

⚠️ **Important Safety Warning:**
Attempting to connect the camper directly to a 10 A outlet **without an approved adaptor** is extremely dangerous and may result in serious injury or death. Incorrect use can also cause damage to electrical equipment and wiring.

Residual Current Device (RCD) Safety Switch

For protection against electrical faults, Austrack caravans are fitted with an **RCD (Residual Current Device) safety switch** for the 240 V circuits.

The RCD safety switch is located:

- **Inside the Electrical Compartment on the Driver Side**

The RCD is designed to:

- Detect electrical leakage
- Immediately disconnect power in the event of a fault
- Reduce the risk of electric shock

Owners should familiarise themselves with the RCD location and test its operation periodically using the test button.

Normal Operation on Mains Power

When 240 V mains power is connected and available, system behaviour differs depending on the **electrical platform fitted to the camper**.

PROJECTA Equipped Caravans

In campers fitted with a **PROJECTA electrical system**, mains power charging operation is fully automatic.

When mains power is connected:

- Battery charging begins automatically

- The inverter does need to be turned on

RENOGY Equipped Caravans

In campers fitted with a **RENOGY electrical system**, operation differs.

When mains power is connected on RENOGY-equipped campers:

- Battery charging via the mains charger may occur automatically
- Some 240 V appliances may still require the **inverter to be turned ON manually**
- The RENOGY system relies on **user-initiated control** via the screen, switch panel, or mobile app

Owners of RENOGY-equipped caravans must ensure the inverter and relevant outputs are correctly enabled when operating on mains power, as system behaviour is not fully automated.

Important Owner Note

Because mains power behaviour differs between PROJECTA and RENOGY systems, owners should familiarise themselves with the specific electrical platform fitted to their caravan to ensure appliances operate as expected and unnecessary inverter use is avoided.

If unsure, **Austrack recommends contacting AOE RV Service Centre** for clarification or system orientation. If AOE RV Service Centre is not accessible due to location, assistance should be sought from a suitably qualified caravan or RV service technician.

Disconnecting Mains Power

Before disconnecting mains power:

- Switch off the supply at the power outlet
- Disconnect the extension lead from the camper inlet
- Store leads and adaptors in a dry location

Always disconnect power **before relocating the camper**.

Service and Safety Support

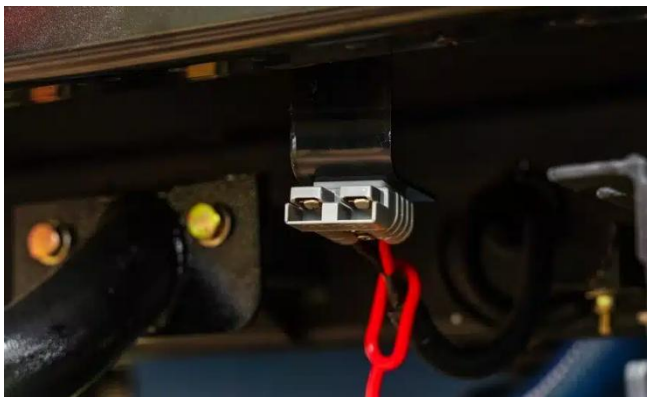
If there are any concerns regarding:

- Mains power connection
- Tripping RCDs
- Burnt plugs, leads, or inlets
- Intermittent 240 V supply

Austrack recommends contacting AOE RV Service Centre as the primary point of contact for inspection and rectification. AOE RV Service Centre is familiar with Austrack electrical systems and caravan wiring standards.

If AOE RV Service Centre is not accessible due to geographic location, assistance should then be sought from a suitably qualified 240 V electrician or RV service technician with a 240 V electrician.

Rear Anderson Plug – External Power & Solar Input



Austrack Hard Floor campers are equipped with a **rear-mounted Anderson plug**, typically located on the driver's side toward the rear of the camper. This plug is designed as a **12-volt direct current (DC) interface**, intended to allow external DC power sources to be connected to the camper's electrical system in a controlled manner.

The rear Anderson plug plays a key role in off-grid operation, particularly when using **portable solar equipment** or when supplementary charging is required beyond fixed or vehicle-based charging sources. When used correctly, this connection provides flexibility in campsite selection, allows solar equipment to be positioned independently of the camper, and enables controlled DC energy transfer into the battery system.

Because this plug interfaces directly with the camper's DC electrical infrastructure, correct understanding of its function and wiring is essential to avoid charging faults or electrical damage.

Intended Purpose of the Rear Anderson Plug

The rear Anderson plug on Austrack Hard Floor campers is primarily intended as an **external DC connection point**, most commonly used for portable solar charging applications. It is designed to accept DC input from sources that have already been appropriately regulated to suit the camper's battery system.

In normal use, the rear Anderson plug may be utilised for the following purposes:

- Connection of **regulated portable solar panels or solar blankets**
- Supplementary battery charging when fixed solar exposure is limited
- Controlled DC input from approved external sources
- Limited 12 V DC output for suitable external equipment, where appropriate

It is important to note that the rear Anderson plug is **not a raw solar input by default**, and its behaviour depends on the electrical configuration of the specific camper.

Electrical Routing and System Variations (IMPORTANT)

Across the Austrack Hard Floor range, the electrical destination of the rear Anderson plug **can vary depending on model and electrical system specification**.

On many Hard Floor models, the rear Anderson plug is wired **directly to the battery system**, bypassing any onboard solar regulation. In these cases, the camper expects that any solar or DC input provided through this connection is **already regulated** to a battery-safe voltage and current.

However, on some Hard Floor models fitted with a **RENOGY electrical system**, the rear Anderson plug **may be routed into an internal MPPT charging pathway** rather than directly to the battery.

Because both configurations exist:

- Owners **must not assume** that the rear Anderson plug always connects directly to the batteries
- Owners **must not assume** that solar regulation is or is not present upstream of this connection

This distinction is particularly important on **RENOGY-equipped Hard Floor models**, including the new-body Plenty X.

Solar Charging via the Rear Anderson Plug

When portable solar equipment is connected via the rear Anderson plug, correct regulation is critical. Solar panels generate variable voltage depending on sunlight conditions, and unregulated input may exceed the safe charging limits of the battery system.

Where the rear Anderson plug connects **directly to the battery system**, the solar source must provide its **own active regulation** before being connected.

In these configurations:

- A solar regulator is required
- The regulator may be integrated into the solar blanket (e.g. AusTuff)
- Alternatively, an inline regulator may be used
- Only regulated DC output must be supplied to the Anderson plug

⚠️ **Important Safety Warning**
Connecting an unregulated solar panel directly to a rear Anderson plug that feeds the battery system may result in over-voltage charging. This can cause severe battery damage, overheating, or damage to associated electrical components.

Always confirm that any external solar equipment connected:

- Has a functional regulator, and
- Is correctly configured for the camper's battery chemistry and system voltage

Regulator Use and "Single Regulation" Requirement

Solar charging systems must always follow the principle of **single-point regulation**. At no time should solar current pass through more than one active regulator in series.

Accordingly:

- If the rear Anderson plug feeds **directly to the battery**, the external solar regulator **must remain active**
- Regulators built into solar blankets **must not be bypassed** in this configuration
- If the rear Anderson plug feeds into an **internal MPPT regulator**, external regulators **must not be active**

Using two regulators in series can cause:

- Erratic charging behaviour
- Reduced charging efficiency
- MPPT tracking errors
- Protective shutdowns or system faults

Because rear Anderson routing may vary on RENOGY Hard Floor models, verification is required before connection.

Circuit Protection – 50A DC Circuit Breaker

The rear Anderson plug circuit is protected by a **50 A, 12 V DC circuit breaker**, installed within the camper's electrical system.

This circuit breaker:

- Protects cabling and battery systems from over-current events
- Interrupts power flow in the event of a short circuit or overload
- Automatically isolates the rear Anderson plug when tripped

If the breaker trips:

- Power flow through the rear Anderson plug will cease
- External solar charging or DC output will stop
- The cause must be identified and resolved before resetting

⚠️ Repeated breaker tripping is not normal and indicates:

- Incorrect equipment connection
- Excessive load
- Faulty solar regulation
- Polarity or wiring issues

Such events should not be ignored.

Input and Output Capability

The rear Anderson plug functions as a **bi-directional DC connection**, meaning it can act as both a power input and a power output, depending on what is connected.

As an input:

- It commonly receives regulated solar charging current

As an output:

- It may supply 12 V DC power to suitable external equipment

Owners must remain aware that:

- Power drawn from this connection comes directly from the battery
- Loads connected here are not load-managed by the control system
- Excessive external use may deplete battery capacity rapidly

Do Not Confuse with the Front Anderson Plug

Some Austrack Hard Floor campers are also fitted with an **Anderson plug at the front of the camper**, typically associated with tow-vehicle charging.

These two connections serve **entirely different purposes**:

- **Rear Anderson plug**: external solar input and DC accessory connection
- **Front Anderson plug**: vehicle-based charging input only

They are **not interchangeable**.

Incorrect connection may result in charging faults, ineffective operation, or electrical damage.

Best Practice Guidelines for Owners

To ensure safe and effective use of the rear Anderson plug, Austrack recommends that owners:

- Use regulated solar equipment only
- Confirm Anderson plug routing before first use
- Verify polarity before every connection
- Monitor battery voltage during operation

- Disconnect external equipment prior to towing
- Seek clarification if unsure of compatibility

Service and Support

If there is any uncertainty regarding:

- Rear Anderson plug wiring
- Solar regulator requirements
- MPPT interaction on RENOGY systems
- Circuit breaker behaviour
- Unexpected charging behaviour

Austrack recommends contacting **AOE RV Service Centre** as the primary point of support. If this is not accessible due to location, assistance should be sought from a suitably qualified RV or automotive electrical technician.

IMPORTANT NOTICE

The rear Anderson plug interfaces directly with the camper's DC electrical system and is protected by a 50 A circuit breaker. Incorrect use, connection of unregulated power sources, double regulation, reversed polarity, or repeated breaker tripping may result in damage or safety risks.

Always verify regulation requirements and electrical routing before connecting external equipment.

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Gas System

Austrack Campers and Caravans are equipped with a professionally installed LPG gas system designed to safely supply approved external gas appliances only. There are only select models with a gas stove fitted inside, and internal gas cooking is not permitted for those without under any circumstances.

The gas system has been designed with safety, simplicity, and flexibility in mind, allowing owners to use approved external cooking appliances via the rear-mounted (front for some models) bayonet gas outlet. Correct operation and adherence to the guidelines in this manual are essential for safe use.

Gas Cylinders and Connections

LPG gas cylinders are securely mounted in the front-mounted gas bottle holders, which are specifically designed to allow safe ventilation and easy access. The system is fitted with a single LCC27 gas hose connection, suitable only for compatible LPG cylinders approved for use in Australia.

Austrack campers are not fitted with an automatic gas bottle changeover or switching valve. Gas is supplied from one cylinder at a time, and manual connection is required when changing bottles.

To ensure safe operation of the system:

- Only compliant LPG cylinders may be used
- Ensure the LCC27 connection is fully tightened before opening the cylinder valve
- When a cylinder is empty, turn the gas off before disconnecting the hose
- Manually reconnect the hose to a full cylinder before resuming use

Gas Bottle Holder Safety

The front gas bottle holder is generally stored inside the front toolbox with gas-only compartments and must never be used for general storage.

LPG gas is highly flammable. In the unlikely event of a gas leak, gas can accumulate rapidly. Even a minor ignition source — including static electricity — can cause fire or explosion, resulting in serious injury or damage.

For this reason, the following rules must always be followed:

- Do NOT store tools, recovery gear, electrical items, or loose equipment in the gas bottle compartment
- Ensure gas cylinders are correctly secured at all times
- Regularly inspect hoses and fittings for damage, wear, or leaks

⚠ The front toolbox that houses the gas cylinders **MUST** not be used to store anything but the gas cylinders. In the event of a gas leak, a spark as small as static electricity can cause the gas to ignite, causing an explosion.

Ventilation and Safe Use

All LPG gas appliances produce heat and combustion gases. Adequate ventilation is critical whenever the gas system is in use.

Before operating any gas appliance, the camper or caravan must be set up correctly to allow airflow:

- All appliance covers must be removed
- The vinyl cover on the lower main door vent must be removed
- No ventilation openings are obstructed

Failure to ventilate correctly may result in unsafe operating conditions

Travelling With Gas

For safety and compliance, the gas supply must be turned off at the gas cylinder before travel.

Austrack strongly recommends purging gas from the system prior to travelling to reduce risk. This is done by allowing the gas already in the lines to burn off.

To purge the gas lines safely:

- Light the external kitchen gas burner or connected appliance
- Turn off the gas cylinder valve in the front gas bottle
- Allow the flame to extinguish naturally
- Wait until the appliance is cool to the touch
- Close and stow the kitchen or appliance

Gas System Modifications

Any modification to the gas system may compromise safety and compliance. Under Australian regulations, all gas system alterations are considered gas work and must only be carried out by a licensed gas fitter.

This includes, but not limited to:

- Changes to the gas piping, hoses, or regulators
- Installation of alternative appliances
- Addition or modification of ventilation or covers

Unauthorised modifications may void warranties and create serious safety risks.

Any changes to the gas system, including the addition of vent covers, is considered to be gas work and must be completed by holder of a gas work licence.

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Water System

The Simpson X is equipped with a **simplified onboard water system** designed to provide a reliable supply of water for general campsite use while maintaining ease of operation and minimal system complexity. The system consists of three primary functional components: **freshwater storage**, **pressurised water delivery**, and **hot water generation**, each working together to supply water where required throughout the camper.

This section outlines the configuration, operation, and maintenance considerations for the **water tank, 12 V pressure pump, and hot water system**, allowing owners to understand how water is stored, delivered, and used under both normal and off-grid conditions.

Water Tanks

The Simpson X is fitted with a **single onboard freshwater storage tank**, designed to supply water for general campsite use through the camper's pressurised water system. This configuration simplifies system operation by eliminating the need for multiple tanks, changeover valves, or flow management controls, resulting in a more **reliable and user-friendly water supply system**.

Water is stored within the tank and distributed via the 12 V pressure pump when required. Because the system relies on a single storage source, all water supply within the camper is directly dependent on the available capacity of this tank.

Water Tank Capacities by Model

The Simpson X is equipped with a single freshwater tank sized to support general camping use. Tank capacity may vary depending on production specification or updates over time.

Refer to the table below for the **specific water tank capacity applicable to your model**, noting that values represent total usable freshwater storage under normal operating conditions.

Model	Front Fresh Water Tank	Rear Fresh Water Tank	Grey Water Tank
X Model Range			
Simpson X	120 L	-	-

Fresh Water Tank Operation

The freshwater tank functions as the **sole water reserve** for the camper and supplies all connected outlets via the pressure pump system. When the pump is activated, water is drawn directly from the tank and delivered through the plumbing system to fixtures such as the external kitchen or other outlets where fitted.

Because only one tank is installed:

- There is **no tank selection or switching required**
- Water flow is consistent and uninterrupted while the tank contains sufficient volume
- The system will cease supplying water once the tank is empty

The tank is vented to allow proper filling and prevent pressure build-up, and should always be filled using clean, potable water suitable for intended use.

Filling Fresh Water Tanks

The freshwater tank is filled via the designated **water filler inlet**, typically located externally on the camper body. Filling should be carried out using a clean hose and potable water supply to maintain system hygiene.

When filling the tank:

- Ensure the hose is clean and suitable for drinking water
- Insert the hose securely into the filler inlet
- Fill slowly to allow air to escape through the tank vent
- Monitor the tank during filling to prevent overfilling

Once filled:

- Remove the hose and securely close the filler cap
- Check for any leaks or spillage around the inlet

Overfilling may result in water discharging from the vent or filler area, which is normal behaviour once the tank reaches capacity.

IMPORTANT NOTICE

The Simpson X is fitted with a **single freshwater tank only**, and no secondary tank or changeover system is provided.

- All water supply is drawn from this single tank
- There is **no backup or reserve tank available**
- Water availability is entirely dependent on remaining tank volume

Owners are responsible for monitoring water usage and ensuring adequate supply is maintained, particularly during extended off-grid use.

Failure to manage water consumption may result in complete loss of water supply during operation.

If any issues arise relating to tank selection, water supply, filling, or drainage, **Austrack recommends contacting AOE RV Service Centre as the primary point of support**. If AOE RV Service Centre is not accessible due to geographic location, assistance should be sought from a suitably qualified caravan or RV service technician.

Water Pump

The Simpson X is fitted with a **12 V electric pressure water pump**, designed to draw water from the onboard freshwater tank and supply it to all connected outlets under consistent pressure. The pump operates automatically when the system is in use and is responsible for maintaining flow throughout the camper's plumbing system.

As part of a simplified water system, the pump draws from a **single freshwater tank**, with no secondary tanks or changeover valves. This results in straightforward and predictable operation, with water availability determined solely by tank capacity and pump functionality.

Water Pump On/Off Switch – Purpose and Use

The water pump is controlled via a **dedicated on/off switch**, allowing the user to enable or disable system pressurisation as required.

The switch serves several key functions:

- Activates the pump when water supply is needed
- Isolates the system when the camper is not in use
- Prevents unnecessary pump cycling or accidental operation

The pump should be turned:

- **ON** during normal use when water is required
- **OFF** when travelling, when the tank is empty, or when the system is not in use

This helps prevent unintended pump operation and reduces wear on system components.

How the Water Pump Operates

The water pump operates as an **on-demand pressure system**, meaning it will only run when water flow is required.

In operation:

- Opening a tap or outlet reduces system pressure
- The pump automatically activates to restore pressure
- Once pressure is restored and flow stops, the pump switches off

This automatic cycling allows the system to maintain pressure without continuous pump operation.

Because the system uses a single tank:

- Water is drawn directly from that tank only
- Flow will cease once the tank is empty

Tank Selection and Pump Operation

The Simpson X does not include multiple tanks or a changeover system.

Accordingly:

- There are **no tank selection controls**
- The pump draws from the **single freshwater tank at all times**
- Operation is consistent regardless of usage conditions

This simplifies system use and reduces the likelihood of incorrect configuration.

Airlocks – Identification and Correction

Airlocks can occasionally occur within the water system, particularly:

- After refilling an empty tank
- After initial system setup
- If the pump has been run without water

An airlock is typically identified by:

- Pump running continuously without delivering water
- Irregular or intermittent water flow
- Presence of air or sputtering at outlets

To clear an airlock:

- Ensure the tank contains sufficient water
- Turn the pump ON
- Open the tap fully and allow it to run
- Wait until a steady, uninterrupted flow is achieved

In some cases, cycling the pump off and on may assist in clearing trapped air.

Dry-Running and Pump Protection

The water pump is designed to operate with water present in the system. Running the pump without water (dry-running) can cause premature wear or damage.

To prevent dry-running:

- Always ensure sufficient water is present in the tank before operating the pump
- Turn the pump OFF if the tank becomes empty
- Do not allow the pump to run continuously without water flow

Short periods of dry-running may occur during normal use (e.g. when the tank empties), however prolonged operation without water should be avoided.

Noise, Vibration, and Normal Behaviour

During operation, the water pump will produce **audible mechanical noise and vibration**, which is a normal characteristic of pressure pump systems.

Due to the **compact design and smaller internal volume of the Simpson X**, pump noise may be **more noticeable** compared to larger campers or caravans. This is not a fault condition and does not indicate a problem with the system.

Normal characteristics include:

- Audible motor noise when the pump is running
- Vibration through the camper structure during operation
- Short bursts of operation as the system cycles

These behaviours are expected and form part of standard operation.

Service and Support

The water pump requires minimal maintenance but should be inspected periodically as part of general system checks.

Owners should monitor:

- Consistent water flow
- Normal pump cycling behaviour
- Absence of leaks in connected fittings

Service or inspection should be arranged if:

- The pump fails to operate
- Water pressure drops significantly
- The pump runs continuously without flow
- Abnormal noise or vibration develops beyond normal characteristics

Where required, servicing should be carried out by a **qualified technician**.

Austrack recommends contacting AOE RV Service Centre as the primary point of support. AOE RV Service Centre is familiar with Austrack plumbing systems and pump installations.

If AOE RV Service Centre is not accessible due to geographic location, assistance should be sought from a suitably qualified caravan or RV service technician.

IMPORTANT NOTICE

The water pump is a **critical component of the pressurised water system** and must be operated correctly to ensure reliable performance.

- Always ensure water is present in the tank before operating the pump
- Turn the pump OFF when not in use or when travelling
- Do not allow the pump to run continuously without water
- Increased noise levels are normal due to the compact design of the camper

Failure to use the system correctly may result in reduced performance, component wear, or damage not covered under warranty.

Hot Water System

The Simpson X is supplied with an **AusTuff portable hot water system**, providing a flexible and practical solution for hot water generation during campsite use. Unlike fixed, permanently installed systems, the AusTuff unit is designed to operate **externally to the camper**, allowing it to be deployed only when required and stored away securely during travel.

The system draws water from the camper's onboard supply and uses an external gas connection to heat water on demand, delivering a continuous flow of hot water suitable for washing, showering, and general use. As a portable unit, it must be **set up, connected, and operated independently** of the camper's internal plumbing systems, requiring correct positioning, connection, and safe operation practices to ensure reliable performance.

AusTuff Portable Hot Water System

Most of our Camper Trailers come with the AusTuff portable LPG hot water system as a standard inclusion. This is designed to work with the gas and water fittings on the drawbar of the camper to provide a hot shower for use in the ensuite.

The AusTuff hot water system is activated by water pressure, without water pressure it will not operate. You need to ensure that the water tank being drawn from is full enough to provide a consistent flow of water to the hot water system.

The full user manual can be found in the box.

Inside the hot water system box you will find hoses and fittings to connect the hot water system to the water connection on your drawbar.

All adjustments and maintenance must only be carried out by an authorised person. The installation of all gas and combustions appliances MUST comply with the standards in force.

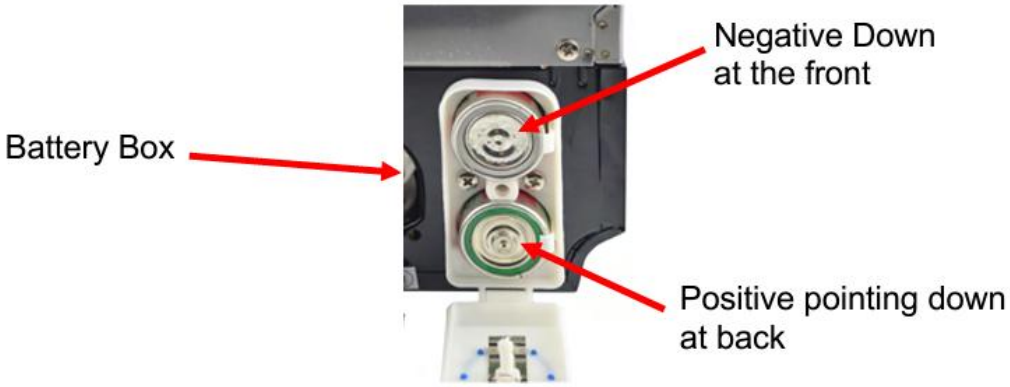
Carbon Monoxide warning - This appliance is designed for outdoor use only and must be used in well ventilated areas. Use in enclosed areas, including inside the camper annex, may result in injury or death.

Accessible parts of the Country Comfort hot water system may be very hot, keep young children away.

Preparing the Hot Water System for use

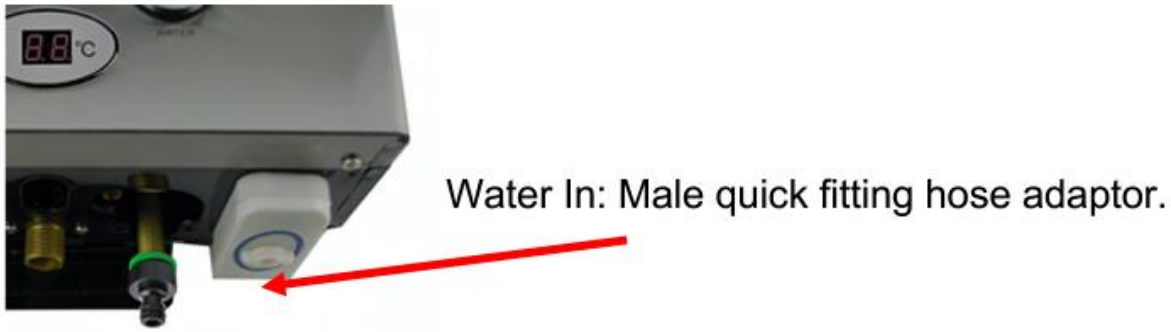
1.Remove the heater along with all the components from the box and place them on a table in front of you. Notice that there is a gas input, hot water output, cold water Input as well as a battery box.

2. Insert two ‘D’ batteries into the ‘battery box’ and close the battery box lid. Note: The orientation of the battery terminals. Positive down at the back. Negative down at the front.



For garden hose water supply use, install a male garden hose attachment to allow for a 'snap on' connection (not supplied) to a garden hose. First, install a reducer fitting to increase the 'water input' size from ½" to ¾" to suit the 'quick fitting' attachment. Male quick fitting hose adaptor (supplied)

3. Wrap the 'water input' thread with two rotations of Teflon tape before installing the reducer fitting. Tighten the adaptor, taking care not to over tighten as this could break or crack the inlet pipe. Finally, connect the male garden hose attachment.



4. Shower hose and rose: Check that the seal is secure in both ends of the flexible shower hose. Attach the shower rose to the flexible shower hose using the conical end fitting. Hand force only. Do not over tighten.

Setting Up the Hot Water System

1. Hang the appliance on a suitable vertical surface by the top hanger attached to the back cover of the heater.

2. The 'gas inlet' will be used to connect to the gas hose regulator.

3. Attach the flexible gas hose and regulator to the 'gas inlet'. Slowly using two (2) spanners, tighten this connection, taking care not to over tighten as doing so may damage the pipe. DO NOT OVERTIGHTEN.

The hot water system is ready to connect to the water hoses.

4. Attach to other end of the flexible shower hose to the “water OUT connection (middle connection) on the water heater. Do not over tighten. Note that you can also apply Teflon tape to this threaded connection to avoid leaks.


5. Connect the bayonet end of the gas hose to the bayonet fitting on the drawbar and turn on the gas cylinder.

Operating the Hot Water System

1. It is preferable to set the BURNER control to LOW

2. IMPORTANT: It is important that when starting the appliance that the gas regulator is set to the ‘min’ position.

3. IMPORTANT: It is important that when starting the appliance that the water regulator is set to the ‘min’ position.

4. Switch LPG Water Heater ON using the rocker switch located at the bottom on the LPG Portable Water Heater. Do this by having the red dot pushed in.

5. Ensure that the button on the shower rose is in the “Off” position.

6. Open the valve for your input water source. This can come from your 12v pump or mains supply. When ready push the button “On” your shower rose. Water should start to flow through the shower unit.
7. Note: You should hear a series of clicks and then the burner should ignite. The burner flame can be seen operating through the ‘viewing window’ located at the front of the appliance.

8. Adjust the temperature of the water flowing from the showerhead by turning the ‘gas regulator’ and ‘water regulator’ knobs.

Note: For higher temperatures, increase the gas regulator control and decrease the water regulator control. Switching the BURNER control from LOW to HIGH will increase the temperature further.

A temperature in excess of 50° C will activate the Over Temperature Safety Sensor and will shut down the burners. To relight the burners, you will need to turn the water flow OFF and then back ON.

Chassis, Running Gear & Structural Systems

The Austrack chassis, running gear, and structural systems form the **foundation of the camper's strength, stability, and safety**, both on-road and off-road. These systems are engineered to work as an integrated package, supporting the camper's weight, managing loads during travel, absorbing terrain impacts, and maintaining structural integrity throughout setup, use, and transport. Collectively, they govern how the camper brakes, rolls, suspends, levels, and folds, and they directly influence towing performance, durability, and occupant safety.

This section covers all major underbody, suspension, and structural components, including the **braking system, wheel studs and nuts, suspension assemblies, tyres, hubs, stabiliser legs, and fold-over roof structures**. While individual components may vary slightly by model and specification, the principles of operation and required handling remain consistent across the Austrack range. Understanding these systems, their correct use, and their maintenance requirements is critical to safe operation, reliable performance, and long-term service life of the camper.

Braking Systems

Austrack caravans are fitted with **electric drum brakes**, designed to operate in conjunction with the towing vehicle's braking system to provide safe, controlled stopping performance. These brakes reduce the load placed on the tow vehicle and improve stability during braking under a wide range of conditions.

Because electric trailer brakes rely on signals from the tow vehicle, correct setup, adjustment, and ongoing maintenance are essential for safe operation.

Electric Trailer Brakes

All Austrack campers are equipped with **electric override brakes**, which require a **brake controller** to be installed and operational in the towing vehicle.

The brake controller allows the driver to:

- Control the amount of braking force applied to the camper
- Adjust braking response to suit load, road conditions, and driving style
- Manually apply trailer brakes if required

Brake controllers may be:

- Permanently installed in the tow vehicle, or
- Wireless / Bluetooth-based units mounted on the camper and controlled remotely from the driver's seat

⚠️ **Important Handover Requirement:**
A functioning brake controller **must be installed and operational** in the towing vehicle on the day of handover. Austrack units will **not be released** without confirmation that trailer braking can be controlled from the driver's position.

How Electric Trailer Brakes Work

Electric trailer brakes operate by:

1. Receiving a braking signal from the tow vehicle brake controller
2. Energising electromagnets inside the brake drums
3. Applying brake shoes against the inner surface of the drum
4. Creating controlled friction to slow the camper

This system is designed to **assist**, not replace, the tow vehicle brakes. Maximum braking performance depends on correct brake controller setup and proper brake adjustment.

Brake System Type – Drum Brakes with Brake Shoes

Austrack campers use a **12-inch electric drum brake system**, which incorporates **brake shoes** rather than brake pads.

Brake shoes are curved friction linings located inside the brake drum. When braking is applied, the shoes press outward against the inside of the drum to generate stopping force.

This design is robust and well-suited to touring and off-road use but requires periodic inspection and adjustment to maintain optimal performance.

Brake Bedding-in (Run-in Period)

New trailer brakes require an initial **bedding-in (run-in) period**.

During this period:

- Brake shoes gradually seat against the drum surface
- Braking effectiveness will increase progressively
- Brake controller settings may need adjustment

The length of the run-in period can vary depending on load and driving conditions.

Brake Inspection, Adjustment, and Servicing

Trailer brakes must be **inspected and serviced at regular intervals** to ensure safe and effective operation.

Austrack recommends that brake inspection, adjustment, and servicing be carried out **in accordance with the Camper Service Schedule**, which is located **near the end of this manual (second-last page)**.

During scheduled servicing, a qualified professional will:

- Inspect brake shoes for wear
- Check drum condition
- Confirm correct brake adjustment and operation

Brake shoes typically require replacement when:

- The friction lining is worn to approximately **1.5 mm**
- The lining shows abnormal or uneven wear

The lining is scored, cracked, or contaminated

Brake Shoe Wear, Scoring, and Gouging

Scoring or gouging of brake shoe linings may occur due to:

- Overheating from incorrect adjustment

- Prolonged heavy braking
- Dirt, sand, or debris entering the drum
- Water crossings without subsequent cleaning

After off-road use or water crossings, Austrack strongly recommends that the brakes be **cleaned and inspected** in line with the service schedule to prevent premature wear and maintain braking performance.

Service Responsibility and Safety

Both the **tow vehicle braking system** and the **camper braking system** must be properly maintained for safe towing. Trailer brakes should only be adjusted or serviced by **qualified professionals** familiar with electric drum brake systems.

Important Safety Notes

- Trailer brakes rely entirely on a functioning brake controller
- Incorrect adjustment can result in poor braking or overheating
- Reduced braking performance significantly increases stopping distance
- Operating the caravan with ineffective brakes may create unsafe towing conditions

If braking performance feels weak, inconsistent, or unpredictable, towing should be discontinued until the system has been inspected.

Service and Support

If you experience:

- Uneven braking
- Excessive brake controller settings
- Noise or heat from hubs or brakes
- Reduced braking performance

Austrack recommends contacting AOE RV Service Centre as the primary point of support. AOE RV Service Centre is familiar with Austrack chassis, axle, and braking systems.

If AOE RV Service Centre is not accessible due to geographic location, assistance should be sought from a suitably qualified caravan or trailer brake specialist.

Wheel Nuts

Wheel nuts are a **critical safety component** of the camper's running gear and must be checked and maintained correctly to ensure safe towing. Incorrect wheel nut tension or poor installation technique can lead to wheel vibration, stud damage, or wheel separation, all of which present a serious safety risk.

Austrack campers are fitted with **6-stud wheel hubs**, and correct tightening sequence and torque are essential.

Torque Specification

All wheel nuts must be tightened using a **calibrated torque wrench** to a torque setting of:

140 Nm

This torque ensures the wheel is securely seated against the hub without overstressing the studs or wheel nuts.

Use of Power Tools (Rattle Guns)

Austrack **does not recommend** using rattle guns or impact tools to tighten wheel nuts.

Rattle guns:

- Do not provide accurate torque readings
- Make it impossible to confirm correct tightening force
- Can easily over-tighten wheel nuts

Over-tightening may:

- Stretch or weaken wheel studs

- Damage wheel nuts
- Cause premature stud failure

Under-tightening may:

- Allow wheel movement
- Cause vibration
- Lead to loosening of wheel nuts
- Result in stud or nut failure over time

For these reasons, wheel nuts should always be tightened and checked using a torque wrench.

Wheel Nut Tightening Pattern (6-Stud Hubs)

Wheel nuts **must be tightened in a star (criss-cross) pattern**, not in a circular sequence.

Tightening in a star pattern:

- Ensures the wheel seats evenly against the hub
- Prevents wheel distortion
- Reduces stud stress
- Provides accurate torque readings

Checking Wheel Nut Torque (Routine Inspection)

For routine wheel nut checks:

- It is **recommended** to lightly lift the camper so that not all weight is on the wheels, if practical
- However, wheel nut torque **can still be checked with the full weight on the ground** for convenience and ease of access

When checking wheel nuts:

- Use a torque wrench set to **140 Nm**
- Do not loosen the nut first — simply confirm it is correctly torqued

- Tighten in a **star pattern**

Wheel nut checks should be performed in accordance with the recommended check schedule and more frequently during rough or corrugated road travel.

Changing a Wheel – Correct Installation and Tightening Procedure

The following procedure applies **only when fitting or refitting a wheel**, such as after a tyre change.

Wheel Installation

1. Ensure the **hub face and wheel mounting surface are clean and free of debris**
2. Lift the wheel onto the hub and confirm it sits **flush against the hub both top and bottom**
3. Install the **bottom wheel nut first** and wind it on **finger-tight all the way**
    - This supports the wheel and prevents it from popping off the hub
4. Fit the remaining wheel nuts **finger-tight only**
    - These do **not** need to be fully wound in by hand

Initial Tightening

With the camper:

- **Jacked up**, and
- **Handbrake engaged** to prevent wheel rotation,

tighten the wheel nuts evenly using a wheel brace or socket **just enough to seat the wheel firmly**, without allowing the wheel to rotate.

Final Torque Tightening

1. Lower the camper so the tyre **just contacts the ground**, but **does not carry the full weight**
2. Using a **calibrated torque wrench**, tighten the wheel nuts to **140 Nm**
3. Tighten in a **star (criss-cross) pattern**

Once complete:

- Fully lower the camper to the ground
- Remove the jack
- Recheck torque after initial travel

Use of Power Tools

Austrack **does not recommend** using rattle guns or impact tools to tighten wheel nuts.

Rattle guns:

- Do not provide accurate torque control
- Can easily over-tighten wheel nuts

Over-tightening may stretch or weaken wheel studs.
Under-tightening may cause vibration and loosening.

Always use a **torque wrench** for final tightening.

Initial Wheel Nut Check Schedule

When the camper is new, or after wheels have been removed and refitted, wheel nuts must be re-checked at:

- **50 km**
- **100 km**
- **250 km**
- **500 km**

After this period, wheel nuts should be checked regularly and more often during off-road or corrugated road travel.

Wheel Nut and Stud Variations

Wheel nut and stud sizes may vary depending on axle, hub, and wheel configuration.

If replacements are required:

- Measure existing components
- Check any size or specification markings
- Ensure replacements match the original specifications

Service and Support

If wheel nuts:

- Will not maintain correct torque
- Continually loosen
- Show signs of damage
- Are associated with vibration or noise

The caravan should be inspected before further towing.

Austrack recommends contacting AOE RV Service Centre as the primary point of support. If AOE RV Service Centre is not accessible, assistance should be sought from a suitably qualified caravan or trailer service technician.

Important Notice

Correct wheel nut torque, tightening sequence, and installation method are essential for safe towing. Damage caused by incorrect installation, tightening, or neglect may not be covered under warranty.

Always torque wheel nuts correctly before travel.

Suspension

Austrack campers are fitted with a **heavy-duty independent suspension system** designed specifically for touring and off-road conditions. The suspension system plays a critical role in ride quality, handling, tyre contact, braking effectiveness, and overall durability of the caravan.

Austrack campers utilise **AusTuff swing arm suspension**, combined with **AusTuff coil springs**, **AusTuff-supplied Pedders shock absorbers**, **limiting straps**, and **serviceable suspension bushes**.

This system is engineered to provide controlled vertical wheel movement while maintaining correct wheel alignment and stability under load.

Suspension System Components

The Austrack suspension system consists of the following primary components:

- **AusTuff Swing Arms**
- **AusTuff Coil Springs**
- **AusTuff / Pedders Shock Absorbers (Foam Cell type)**
- **Suspension Limiting Straps**
- **Serviceable Suspension Bushes**
- **Toe and Camber Adjustment Pins**

All components are designed to operate as a complete system and should not be modified independently.

AusTuff Swing Arm Suspension

Austrack campers are fitted with **AusTuff swing arms**, a robust, chassis-mounted independent suspension design.

Unlike some suspension systems that allow sideways articulation, AusTuff swing arms are designed to:

- Articulate **parallel to the chassis**
- Control **vertical wheel movement only**
- Maintain consistent wheel alignment under load

This design prioritises:

- Towing stability
- Predictable handling
- Reduced lateral stress on suspension and chassis mounting points

Coil Springs and Shock Absorbers

Camper load support is provided by **AusTuff coil springs**, which carry the weight of the camper and allow controlled suspension movement.

Damping is provided by **Pedders shock absorbers**, manufactured in partnership with AusTuff and supplied to Austrack:

- Manufactured by **Pedders**
- Distributed via **AusTuff**
- Identified by **orange paint and AusTuff branding**
- **Foam Cell shock absorbers**, suitable for off-road heat control and durability

Shock absorbers:

- Control spring movement
- Reduce bounce and oscillation
- Improve tyre contact with the ground
- Reduce shock loads transferred to the chassis

Suspension Limiting Straps

The suspension system incorporates **limiting straps** to prevent over-extension of the swing arms.

Limiting straps:

- Control maximum downward suspension travel
- Protect shock absorbers from topping out
- Reduce stress on suspension mounts
- Prevent damage during extreme articulation or uneven terrain

Limiting straps are a critical protective component and must not be removed, adjusted, or bypassed.

Suspension Bushes and Lubrication

The AusTuff swing arm suspension uses **serviceable suspension bushes** at key pivot points.

These bushes:

- Allow controlled movement of the swing arms
- Reduce vibration and wear
- Maintain correct suspension geometry

Bush Maintenance

- Suspension bushes **require regular greasing**
- Greasing reduces wear and extends bush life
- Lack of lubrication may result in:
    - Squeaking or noise
    - Accelerated wear
    - Increased suspension movement
    - Reduced ride quality

Bushes should be greased **in accordance with the Camper Service Schedule**, located **near the end of this manual (second-last page)**, and more frequently when operating in dusty, wet, or off-road environments.

Suspension Alignment – Toe and Camber

The AusTuff swing arm suspension includes **adjustment pins** that allow for:

- **Toe-in adjustment**
- **Camber adjustment**

Correct alignment:

- Improves tyre life
- Enhances tracking stability

- Maintains predictable towing behaviour

Alignment adjustments should only be carried out by **qualified caravan or suspension specialists**, as incorrect adjustment may negatively impact handling and tyre wear.

Suspension Bolt Inspection and Torque

All suspension mounting bolts must be:

- **Visually inspected regularly**
- Checked for any signs of movement, loosening, or damage

Austrack recommends a **visual inspection before travel**, particularly after off-road or corrugated road use.

Suspension mounting bolts must be tightened to:

180 Nm

⚠️ Suspension bolts must not be over-tightened or under-tightened, as incorrect torque can lead to component damage or movement.

Servicing and Maintenance

The suspension system must be serviced **in accordance with the Camper Service Schedule**, located **near the end of this manual (second-last page)**.

Scheduled servicing includes:

- Inspection of swing arms and mounting points
- Checking bolt torque
- Greasing suspension bushes
- Inspecting coil springs
- Checking shock absorbers for leaks or damage
- Inspecting limiting straps for wear or stretching

Off Road and Corrugated Road Use

After extended travel on rough, corrugated, or off-road terrain, Austrack recommends:

- Visual inspection of all suspension components
- Checking bush condition and lubrication
- Checking suspension bolt torque

Early identification of issues helps prevent more serious damage.

Important Safety Notes

- Suspension components are safety-critical and load-bearing
- Suspension modifications may affect handling and warranty
- Bush lubrication is essential for long-term reliability
- Alignment should only be adjusted by qualified professionals

If abnormal noises, uneven tyre wear, or changes in handling are observed, the suspension system should be inspected before further towing.

Service and Support

For suspension-related concerns such as:

- Noises or squeaks
- Uneven tyre wear
- Loose or damaged components
- Alignment concerns

Austrack recommends contacting AOE RV Service Centre as the primary point of support. AOE RV Service Centre is familiar with Austrack suspension geometry and AusTuff installations.

If AOE RV Service Centre is not accessible due to geographic location, assistance should be sought from a suitably qualified caravan suspension specialist.

Tyres & Wheels

Austrack caravans are fitted with **heavy-duty alloy wheels and off-road-rated tyres**, selected to suit touring, off-road travel, and Australian conditions. Correct tyre selection, inflation pressure, inspection, and maintenance are essential for safe towing, suspension performance, braking effectiveness, and long-term durability.

This section covers general information on the wheels and tyres supplied with Austrack caravans, along with essential owner responsibilities regarding their use and care.

Wheels

Austrack caravans are supplied with **alloy wheels** as standard.

Wheel characteristics:

- **Alloy construction**
- **Zero (0) offset**

A zero-offset wheel places the wheel centreline directly in line with the hub mounting surface. This configuration:

- Maintains correct suspension geometry
- Ensures even load distribution through wheel bearings and hubs
- Reduces unnecessary stress on suspension and axle components

Any replacement wheels must match the original specifications to ensure correct fitment and safe operation.

Tyres

Austrack caravans are supplied with **Goodride off-road tyres**, selected depending on model and intended use.

Standard Fitment

- **Goodride Radial M/T (Mud Terrain)** tyres are fitted to most Austrack models

These tyres are designed to:

- Provide strong off-road traction
- Resist damage from rough terrain
- Withstand extended remote touring conditions

Tyre fitment may vary depending on model and build specification.

Tyre Pressure Guidelines

Correct tyre pressure is critical for safety and performance and must always be adjusted to suit conditions and load.

Standard Road Use

Under **normal conditions on sealed roads**, Austrack recommends:

Minimum tyre pressure: 50 PSI

This pressure is suitable when:

- Travelling on sealed roads
- Carrying typical touring loads
- Operating under standard conditions

Tyre pressures **must not be set below 50 PSI for sealed road use**, as under-inflation can lead to excessive heat build-up, irregular wear, reduced handling, and increased risk of tyre failure.

Off Road and Variable Conditions

Tyre pressures may need to be **adjusted from the standard road setting** when:

- Travelling off-road or on corrugated surfaces
- Driving on sand, gravel, or uneven terrain
- Operating with unusually heavy or light loads

Pressure adjustments should be made with care and only within appropriate limits based on:

- Tyre manufacturer recommendations
- Load carried

- Speed and terrain

Tyres should be returned to **road-appropriate pressures** before resuming sealed road travel.

Tyre Inspection and Care

Tyres should be inspected regularly for:

- Tread depth and even wear
- Cuts, cracks, or damage to sidewalls
- Embedded stones or debris in tread blocks
- Signs of pressure loss

After off-road or corrugated travel, Austrack recommends:

- Visual inspection of all tyres
- Pressure checks
- Re-checking wheel nut torque

Tyre Rotation and Replacement

Tyres should be:

- Rotated periodically to promote even wear
- Replaced when tread depth approaches legal or manufacturer limits
- Replaced immediately if damaged beyond safe repair

Replacement tyres should:

- Match the original size and load rating
- Be suitable for caravan use
- Maintain compatibility with suspension and braking systems

Compatibility and Changes

Changing tyre or wheel specifications may affect:

- Suspension geometry
- Wheel bearing and hub life
- Braking performance
- Towing stability

Austrack recommends consulting **AOE RV Service Centre** before changing wheel or tyre specifications. If AOE RV Service Centre is not accessible, seek advice from a suitably qualified caravan or tyre specialist.

Service and Support

If you experience:

- Uneven tyre wear
- Vibration while towing
- Repeated pressure loss
- Damage after off-road travel

Austrack recommends contacting AOE RV Service Centre as the primary point of support. If AOE RV Service Centre is not accessible due to geographic location, assistance should be sought from a suitably qualified caravan or tyre professional.

IMPORTANT NOTICE

Tyres and wheels are safety-critical components. Incorrect tyre pressures, incompatible replacements, or neglect may result in reduced handling, increased stopping distances, or tyre failure.

Always maintain correct tyre pressures for the conditions and inspect tyres before travel.

Hubs

The wheel hubs fitted to Austrack campers are a **critical mechanical component**, supporting the wheels, housing the braking system, and allowing the caravan to roll smoothly under load. The hub

assembly also plays a central role in braking performance, wheel alignment, and overall towing safety.

Austrack caravans utilise **traditional trailer hub assemblies with electric drum brakes**, incorporating **TIMKEN tapered roller bearings**. Correct inspection, lubrication, and servicing of the hubs and bearings is essential to safe and reliable operation.

Hub and Bearing Design

Austrack hubs are fitted with **TIMKEN tapered roller bearings**, chosen for their durability, load-carrying capability, and reliability in touring and off-road conditions.

These bearings:

- Support the weight of the caravan
- Allow the hub and wheel to rotate smoothly
- Maintain correct hub alignment under load
- Form an integral part of the hub assembly

The hub is retained on the spindle by the **inner and outer bearings**, meaning the bearings physically **locate and secure the hub in position**.

Brake Drum and Hub Relationship

Austrack campers are fitted with **drum brakes**, with the brake drum integrated into the hub assembly.

Important points to understand:

- The **brake drum cannot be removed independently of the hub**
- To remove the brake drum, the **hub must be removed from the spindle**
- To remove the hub, the **outer bearing must first be removed**
- Brake shoe inspection, drum inspection, or replacement requires hub and bearing removal

Because of this design, **hub, bearing, and brakes are all serviced together**.

TIMKEN Bearings – Inspection and Maintenance

The TIMKEN bearings used in Austrack hubs are **serviceable bearings**, meaning they require:

- Periodic inspection
- Cleaning
- Re-greasing
- Correct re-adjustment during reassembly

Bearing maintenance is essential to:

- Prevent overheating
- Avoid premature wear or failure
- Maintain safe braking and wheel operation

Service Intervals

Hub and bearing servicing must be carried out in accordance with the **Camper Service Schedule**, located **near the end of this manual (second-last page)**.

This includes:

- Bearing inspection
- Bearing cleaning and re-greasing
- Seal replacement if required
- Hub nut adjustment
- Brake inspection while hubs are removed

Failure to service hubs at the required intervals may lead to bearing failure, wheel loss, or brake damage.

Signs of Hub or Bearing Issues

Owners should be alert for early warning signs of hub or bearing issues, including:

- Excessive heat from a hub after travel
- Grinding, rumbling, or squealing noises
- Grease leakage from the hub or seal
- Wheel play when rocked by hand
- Vibration or resistance while towing

If any of these symptoms are observed, **do not continue towing** until the issue has been inspected.

Owner Responsibility and Limitations

While owners may visually inspect hubs and check for heat during stops, **hub disassembly and bearing servicing should only be performed by qualified professionals**.

Incorrect bearing adjustment or contamination can:

- Cause rapid bearing failure
- Damage the hub or spindle
- Result in wheel loss
- Compromise braking performance

Austrack does not recommend owners attempt bearing removal or hub disassembly without proper tools, training, and experience.

Post Trip Inspection Recommendations

After off-road travel, water crossings, or extended corrugated road use, Austrack recommends:

- Visual inspection of hubs and seals
- Checking for grease leakage
- Feeling hubs for abnormal heat during stops

Water crossings in particular can introduce moisture into bearings, which may require earlier servicing.

Service and Support

For any concerns related to:

- Hub heat
- Bearing noise
- Grease leakage
- Brake inspection requiring hub removal

Austrack recommends contacting AOE RV Service Centre as the primary point of support. AOE RV Service Centre is familiar with Austrack hub, brake, and bearing assemblies and their correct service procedures.

If AOE RV Service Centre is not accessible due to geographic location, assistance should be sought from a suitably qualified caravan, trailer, or bearing service technician.

Important Notice

Hub and bearing systems are safety-critical. Damage caused by lack of lubrication, incorrect adjustment, contamination, or improper servicing may not be covered under warranty.

Always service hubs and bearings in accordance with the service schedule and ensure only qualified personnel perform disassembly and adjustment.

Stabiliser Legs

The Simpson X are fitted with **two stabiliser legs**:

- **Two stabiliser legs at the rear**

These stabiliser legs are designed to **reduce movement and increase stability** once the caravan has been correctly positioned and levelled at camp. They are **not designed to level the camper or support load**, and must only be used for stabilisation purposes.

Levelling the Caravan (Before using Stabiliser Legs)

Correct levelling **must be completed before** deploying the stabiliser legs.

Side-to-Side Levelling

- Use **levelling ramps** if side-to-side adjustment is required
- Stabiliser legs must **never** be used to correct side-to-side level

Front-to-Back Levelling

- Front-to-back levelling is achieved using the **jockey wheel**
- Adjust the jockey wheel until the caravan is level

Once the caravan is correctly levelled, the stabiliser legs may be deployed.

Operating the Stabiliser Legs

After levelling:

1. Lower the **rear stabiliser legs** until they firmly contact the ground
2. Adjust each leg evenly so they provide **light support only**

The stabiliser legs are designed to:

- Reduce movement when walking inside the caravan
- Improve stability during general use
- Increase comfort when set up at camp

They are **not designed to lift, level, or carry the weight of the caravan**.

What Stabiliser Legs Must NOT Be Used For

⚠️ Stabiliser legs must **never** be used for:

- Levelling the camper
- Lifting the camper
- Supporting axle or suspension weight
- Changing wheels or tyres

Using stabiliser legs for any of the above purposes may result in damage to the legs, mounting points, or chassis.

Use of Power Tools (Strictly Prohibited)

Austrack **does not permit the use of drills, rattle guns, or any power tools** to raise or lower stabiliser legs.

Using power tools:

- Can damage internal gears and threads
- May cause uncontrolled movement
- Will **void the stabiliser leg warranty**

Stabiliser legs must always be adjusted **by hand only**.

Retracting Stabiliser Legs Before Travel

Before towing the caravan:

- Fully retract **all two stabiliser legs**
- Confirm they are secured in the stowed position
- Ensure no part of the legs is hanging below the chassis

Failure to fully retract stabiliser legs before travel may cause serious damage.

Inspection and Care

Stabiliser legs should be:

- Visually inspected during setup and pack-down
- Checked for smooth operation
- Inspected after rough or off-road travel

If a stabiliser leg becomes stiff, bent, or difficult to operate, it should not be forced.

Service and Support

If stabiliser legs:

- Will not extend or retract smoothly
- Appear bent or damaged
- Do not provide stable support

Austrack recommends contacting AOE RV Service Centre as the primary point of support. If AOE RV Service Centre is not accessible, assistance should be sought from a suitably qualified caravan service technician.

IMPORTANT NOTICE

Stabiliser legs are designed solely to reduce caravan movement when stationary. Damage caused by misuse, over-loading, levelling attempts, or power tool use may not be covered under warranty.

Always level the caravan correctly before deploying stabiliser legs and operate them by hand only.

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Care Advice

Regular care and maintenance of your Austrack camper will help preserve its appearance, durability, and functionality over time. Touring environments, weather conditions, and storage methods can all affect the condition of the caravan if not managed correctly.

This section outlines general care recommendations for key external and internal areas of the caravan and should be followed as part of normal ownership.

External Paint

The external surfaces of the camper require regular care, similar to that of a tow vehicle.

Austrack recommends:

- Washing using **mild, ammonia-free detergents**
- Using a **non-abrasive sponge or wash pad**
- Rinsing thoroughly to remove dirt, dust, and contaminants

Only **wax-based polishes** should be used on the exterior finish.

Do **not** use:

- Cutting compounds
- Abrasive polishing pastes
- Harsh or aggressive cleaners

These products can scratch the surface and may expose the underlying material, leading to premature wear or damage.

Corrosion Protection

Australia offers some of the most unique and remote touring environments, however many of these conditions are harsh on vehicles and trailers.

Beach driving and water crossings are particularly aggressive due to:

- Salt exposure
- Moisture retention
- Sand and debris accumulation

After any water crossing or beach driving, it is essential that the caravan is:

- Thoroughly cleaned **from top to bottom**
- Flushed underneath, including the **chassis and running gear**

After all uses of the camper, Austrack recommends a complete clean both internally and externally to maintain condition and prevent long-term issues.

Protective products such as **Lanotec, WD-40, and Inox** are suitable for protecting exposed metal fittings and components. These products should be applied regularly to assist with corrosion prevention.

Internal surfaces

Benchtops, walls, and other solid internal surfaces should be cleaned using:

- A soft, damp cloth
- Mild detergent where required

Do **not** use:

- Ammonia-based cleaners
- Caustic or abrasive products

Incorrect cleaning agents may damage finishes and surface coatings.

Condensation and Mould

Condensation is a normal occurrence in Australia, particularly when camping. Temperature differences between inside and outside the camper, combined with ambient humidity and the compact nature of campers, can result in condensation forming overnight.

This is normal behaviour and not a fault.

To manage condensation:

- Ensure adequate **airflow inside the camper**
- Use vents, windows, and openings where appropriate
- Avoid sealing the caravan completely overnight

If condensation builds up, it should be:

- Wiped down in the morning
- Managed promptly to prevent moisture absorption into soft furnishings, particularly mattresses

Austrack recommends placing **moisture-absorbing tubs** inside the camper during storage. These should be checked and replaced regularly to reduce the risk of mould growth.

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Setting Up Your Campsite

Correct campsite selection and setup are essential for comfort, safety, and the proper operation of your Austrack camper. Taking the time to choose a suitable location and position the camper correctly will reduce stress on components, improve water management, and ensure a more enjoyable stay.

This section outlines key considerations for selecting a campsite, positioning the camper, and planning where to camp.

Selecting a Suitable Campsite

When choosing a campsite, aim to select an area that is:

- **Relatively level**, minimising the amount of levelling required
- **Firm and stable**, capable of supporting the weight of the caravan
- **Exposed to sunlight during the day**, particularly when relying on solar charging
- **Clear of large overhanging trees**, especially gum trees

Avoid setting up directly under large trees, as falling branches, sap, leaves, and bird droppings can cause damage to exterior surfaces and increase cleaning requirements.

Water Run-Off Considerations

When positioning the camper, it is important to:

- Set the camper close to level for comfort and correct system operation
- Maintain a **small amount of run-off toward the rear** of the caravan

A slight rearward fall helps ensure rainwater drains correctly and does not pool on the roof, reducing the risk of standing water or debris buildup.

Free Camping Safety Considerations

When free camping, additional care must be taken when selecting a site.

Do **not** set up:

- Too close to rivers, creeks, or watercourses
- In low-lying areas where water may collect
- In locations prone to **flash flooding**, even if conditions appear dry at the time

Weather conditions upstream can change quickly, and water levels may rise unexpectedly.

Final Positioning Before Setup

Before beginning the full setup of the camper:

- Confirm the position allows for safe levelling
- Ensure there is adequate clearance around the caravan for doors, awnings, and access
- Consider prevailing wind direction and weather exposure
- Check that ground conditions are suitable for stabiliser legs and steps

Once the caravan is correctly positioned, normal setup procedures such as levelling, deploying stabiliser legs, and operating onboard systems can be carried out.

Finding and Booking Campsites

Planning ahead and selecting approved campsites helps ensure a safe, enjoyable, and environmentally responsible camping experience. When travelling in unfamiliar areas or outside of caravan parks, it is important to confirm land access permissions and campsite suitability before setting up.

One option available to Austrack owners is **Hipcamp**, an online platform that allows users to:

- Discover campsites across Australia
- Book private and hosted camping locations

- Access property-based campsites not available through traditional caravan parks
- Review site descriptions, access conditions, and terrain suitability before arrival

Hipcamp can be particularly useful when travelling off the beaten track or when seeking unique camping locations with clear permission to stay.

Austrack encourages owners to ensure any campsite selected:

- Is suitable for caravan access and size
- Permits overnight stays
- Provides guidance on setup requirements and ground conditions

Regardless of how a campsite is sourced, always follow local rules, landowner instructions, and leave the site as it was found.

IMPORTANT NOTICE

Poor campsite selection or incorrect positioning can lead to water pooling, discomfort, unnecessary stress on the caravan structure, or safety risks. Owners are responsible for ensuring the campsite selected is suitable for both the environment and the caravan.

Always assess conditions carefully before setting up.

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Troubleshooting

Category	Issue	Troubleshooting Steps
Electrical – 12 V	Not charging from 240 V	• Check mains power is connected • Check RCD not tripped externally • Check RCD not tripped inside the caravan • Check charger is plugged in and switched on near batteries • Ensure batteries are above 10 V • Contact AOE RV Service Centre
Electrical – 12 V	No 12 V power	• Ensure main 12 V master switch is ON • Check battery charge level • Inspect fuse box for blown fuses
Electrical – 12 V	Power dropping quickly	• Ensure inverter is not left ON continuously • Ensure breakaway pin is correctly installed on drawbar • Reduce unnecessary lighting and appliance use when off-grid • Check fridge temperature settings and lid usage
Electrical – Inverter	No power at remote	• Ensure inverter rocker switch is set to REM / "=" position
Electrical – Inverter	No power at inverter	• Ensure battery voltage is at least 12.2 V • Check inverter RCD has not tripped
Electrical – Inverter	Inverter shuts off under load	• Reduce appliance load • Ensure total appliance wattage is below inverter capacity
Electrical – Solar	No solar charging	• Ensure solar panels are clean and unshaded • Check system display for solar input • Confirm daylight conditions • Note: Rear Anderson solar requires a regulator

Electrical – Anderson Plug	No charging via rear Anderson	• Ensure external solar panel is regulated • Check 50 A DC circuit breaker inside electrical compartment • Inspect Anderson plug and wiring
Water System	No water to taps	• Ensure water pump is ON • Confirm selected tank contains water • Change freshwater tank selection • Run tap for 20 seconds to clear air
Water System	Water pump not turning on	• Ensure pump switch is ON • Check 12 V power supply • Inspect pump fuse
Water System	Pump running continuously	• Confirm selected tank contains water • Clear airlocks by opening all taps fully • Purge hot water system • Inspect for leaks in cupboards and under seats • Contact AOE RV Service Centre
Gas System	External cooker not lighting	• Ensure bayonet hose is connected correctly • Check gas hose is not kinked • Confirm gas in selected cylinder • Ensure correct cylinder selected on regulator • Hold knob down to purge air
Gas System	No spark at cooktop	• Ensure ignition power cable is connected • Ensure 12 V system is ON
Gas System	Flame will not stay lit	• Check gas supply level • Reduce wind exposure • Hold ignition button for 2 seconds after ignition
Fridge	Not switching on	• Ensure fridge switch is ON • Check fuse in fuse box • Try a different power lead • Check fuse in cigarette plug

Fridge	E1 error code	• Ensure fridge is set to VL mode • Confirm battery voltage above 12.0 V • Use Anderson lead where applicable
Stabiliser Legs	Difficult to operate	• Ensure legs are not under load • Operate by hand only (no power tools) • Inspect for bending or impact damage
Suspension & Wheels	Vibration while towing	• Check wheel nut torque (140 Nm, star pattern) • Inspect tyres and suspension visually • Contact AOE RV Service Centre
Hubs & Bearings	Hub hot to touch	• Stop towing immediately • Allow hub to cool • Do not continue until inspected

For any further issues or troubleshooting, please call the Service & Warranty department.

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austrackcampers.com.au

Warranty T&C's

The following relates to warranties offered by Auscamper Pty Ltd (**Austrack Campers**). Please read this information carefully, and should you have any questions, please contact Austrack Campers Head Office by telephone: (07) 5498 3888 or email: service@austrackcampers.com.au.

By purchasing an item from Austrack Campers, you agree to all terms and conditions of warranty below. Austrack Campers registered business address is 73 Lear Jet Drive, Caboolture, QLD, 4510.

Trailer Limited Warranty

Austrack Campers warrants to the original retail purchaser that this Austrack Campers product is free from defects in material and workmanship under normal use and maintenance from the date of retail purchase for the applicable Warranty Period. This Warranty may not be transferred to any subsequent purchaser of this Austrack Campers product. Certain components (e.g., wheel bearings) are excluded from coverage, and other limitations apply, as described in this document. Austrack Campers will repair or replace at its discretion, any defective product or part covered by the Limited Warranty, free of charge at any authorised Austrack Campers outlet using original OEM Austrack Campers replacement parts, subject to the limitations and exclusions described below. Austrack Campers does not offer an over-the-counter exchange program.

Disclaimers, limitations and exclusions:

1. **WARRANTY DISCLAIMER**. THIS LIMITED WARRANTY IS THE SOLE EXPRESS WARRANTY PROVIDED BY AUSTRACK CAMPERS AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, EXCEPT AS MAY BE PROVIDED BY AUSTRALIAN CONSUMER LAW. THIS WARRANTY IS GIVEN ONLY BY AUSTRACK CAMPERS, AND MAY BE MODIFIED ONLY BY AUSTRACK CAMPERS. THIS LIMITED WARRANTY IS THE FINAL EXPRESSION OF OUR AGREEMENT AND IS A COMPLETE AND EXCLUSIVE STATEMENT OF THE TERMS OF THAT AGREEMENT. THIS LIMITED WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS UNDER AUSTRALIAN CONSUMER LAW.

   For hybrid campers and campers trailers the warranty period is **12 months** except for Austrack Campers' hybrid campers and camper trailer's draw bar and chassis which are covered by a **lifetime** structural warranty for **fatigue only**.

2. **LIMITED DURATION**. ANY WARRANTY THAT MAY BE IMPLIED BY LAW (INCLUDING ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE AND IMPLIED WARRANTY OF MERCHANTABILITY) IS LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD UNDER THIS LIMITED WARRANTY.

3. **CERTAIN OTHER COMPONENTS ARE NOT COVERED**. THIS LIMITED WARRANTY DOES NOT COVER ANY OF THE FOLLOWING:

   Expendable Parts. This limited warranty does not cover general maintenance parts and items ("Expendable Parts"), including without limitation wheel bearings, bulbs, filters, tires, drainage hoses.

4. **OWNERS (YOUR) RESPONSIBILITIES**. To preserve your rights under this Limited Warranty, you must exercise reasonable care and use of the product, including following the preventative maintenance schedule and storage.

   In addition, you must cease using the product immediately upon any failure or damage. The product should be taken to an authorised Austrack Campers outlet prior to any further use.

5. **Damages resulting from normal aging, wear and tear or neglect are not covered**. The limited Warranty does not cover damage other than that resulting from defects in material or workmanship. The following are NOT considered defects in material or workmanship, and therefore are NOT covered:

   a) tyres damaged by external punctures.

   b) damage to undercarriage by way of contact with rocks, or other structures; and

   c) natural discoloration of materials due to ultraviolet light.

6. This Limited Warranty does not cover damages, malfunctions or failures resulting from abuse or neglect of the product related to or including any of the following:

a) failure to provide or perform required maintenance services as prescribed.

b) abuse, neglect, misuse, modifications, alterations, normal wear, improper servicing, use of unauthorised attachments, lack of lubrication.

c) damage to stabiliser legs or jockey wheels because of incorrect operation or failure to raise prior to movement.

d) tampering with manufacturer fitted safety devices.

e) any removed/damaged air vents, excessive dirt, abrasives, salt water, moisture, corrosion, rust, varnish or any other adverse reaction due to incorrect storage procedures.

f) failures due to improper set up, repair by anyone other than an authorised Austrack Campers outlet during the warranty period; and

g) continued use of the product after initial operational problem or failure occurs.

Canvas Limited Warranty

Austrack Campers warrants to the original retail purchaser that this Austrack Campers product is free from defects in material and workmanship under normal use and maintenance from the date of retail purchase for the applicable Warranty Period. This Warranty may not be transferred to any subsequent purchaser of this Austrack Campers product. Certain components (e.g., Zippers) are excluded from coverage, and other limitations apply, as described in this document. Austrack Campers will repair or replace at its discretion, any defective product or part covered by the Limited Warranty, free of charge at any authorised Austrack Campers outlet using original OEM Austrack Campers replacement parts, subject to the limitations and exclusions described below. Austrack Campers does not offer an over-the-counter exchange program.

Disclaimers, limitations and exclusions:

1. **WARRANTY DISCLAIMER**. THIS LIMITED WARRANTY IS THE SOLE EXPRESS WARRANTY PROVIDED BY AUSTRACK CAMPERS AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, EXCEPT AS MAY BE PROVIDED BY AUSTRALIAN CONSUMER LAW. THIS WARRANTY IS GIVEN ONLY BY AUSTRACK CAMPERS, AND MAY BE MODIFIED ONLY BY AUSTRACK CAMPERS. THIS LIMITED WARRANTY IS THE FINAL

EXPRESSION OF OUR AGREEMENT AND IS A COMPLETE AND EXCLUSIVE STATEMENT OF THE TERMS OF THAT AGREEMENT. THIS LIMITED WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS UNDER AUSTRALIAN CONSUMER LAW.

The warranty period for all Canvas products is **12 months** from the **date of purchase**.

2. **LIMITED DURATION**. ANY WARRANTY THAT MAY BE IMPLIED BY LAW (INCLUDING ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE AND IMPLIED WARRANTY OF MERCHANTABILITY) IS LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD UNDER THIS LIMITED WARRANTY.

3. **CERTAIN OTHER COMPONENTS ARE NOT COVERED**. THIS LIMITED WARRANTY DOES NOT COVER ANY OF THE FOLLOWING:

   Expendable Parts. This limited warranty does not cover general maintenance parts and items ("Expendable Parts"), including without limitation zippers, mesh, aluminium poles, screens.

4. **OWNERS (YOUR) RESPONSIBILITIES**. To preserve your rights under this Limited Warranty, you must exercise reasonable care and use of the product, including following the preventative maintenance schedule and storage.

   In addition, you must cease using the product immediately upon any failure or damage. The product should be taken to an authorised Austrack Campers outlet prior to any further use.

5. **Damages resulting from normal aging, wear and tear or neglect are not covered**. The limited Warranty does not cover damage other than that resulting from defects in material or workmanship. The following are NOT considered defects in material or workmanship, and therefore are NOT covered:

   a) canvas damaged by storm or acts of nature.

b) failure to air canvas after becoming wet; and

c) natural discoloration of materials due to ultraviolet light.

6. This Limited Warranty does not cover damages, malfunctions or failures resulting from abuse or neglect of the product related to or including any of the following:

   a) failure to provide or perform required maintenance services as prescribed in the Maintenance Schedule.

   b) abuse, neglect, misuse, modifications, alterations, normal wear, improper servicing, use of unauthorised attachments.

   c) failures due to improper set up, repair by anyone other than an authorised Austrack Campers outlet during the warranty period; and

   d) continued use of the product after initial operational problem or failure occurs.

Australian Consumer Law Prevails

Austrack Campers consumers have rights under the *Competition and Consumer Act 2010* (Cth), which includes the *Australian Consumer Law 2010* (Cth) and accompanying regulations. Austrack Campers notes that these warranty terms act as an express warranty and do not impact any consumer rights under the relevant legislation. If an inconsistency emerges between these express warranties and any right under law, then the relevant law will prevail.

Austrack Campers also notes that the benefits conferred by this Warranty Terms are in addition to other rights and remedies of the consumer under a law in relation to the goods or services to which the warranty relates.

Our goods and services come with guarantees that cannot be excluded under the Australian Consumer Law. For major failures with the service, you are entitled:

1. to cancel your service contract with us; and

2. to a refund for the unused portion, or to compensation for its reduced value.

You are also entitled to choose a refund or replacement for major failures with goods. If a failure with the goods or a service does not amount to a major failure, you are entitled to have the failure rectified in a reasonable time. If this is not done, you are entitled to a refund for the goods and to cancel the contract for the service and obtain a refund of any unused portion. You are also entitled to be compensated for any other reasonably foreseeable loss or damage from a failure in the goods or service.

Exclusions

Items not covered under warranty include:

1. rust.
2. wheels and tyres.
3. paint.
4. travel covers and straps; and
5. general consumables (bearings, light bulbs etc).

Factory Seconds, Ex-Demonstration and Damages Goods

Occasionally, Austrack Campers may offer items for sale deemed to be “factory seconds”, “ex-demonstration”, or “damaged”. Such items are sold on an “as is” basis.

No warranties, refunds, credits, exchanges or similar associated apply to “factory seconds”, “ex-demonstration”, or “damaged” items. Upon selling these items, Austrack Campers will attempt to provide all relevant information with regards to the item, including faults, defects, or similar. Note, there may be instances where minor defects or imperfections have been overlooked. Understand this is unintentional and in no way alters the nature of the sale.

"Ex-demonstration", "factory seconds" or "damaged", due to their nature, it is reasonable to expect that some imperfections or flaws may exist including were not initially apparent. By purchasing a "factory seconds", "ex-demonstration", or "damaged", you agree to this statement in full and accept that there are no warranties implied or expressed.

Claims Validity

1. Warranties are only available to the original purchaser of the item.
2. Warranties are valid from the original date of purchase only.
3. Warranties apply only to items sold as "new".
4. Warranties do not extend to items deemed to be "factory seconds", "ex-demo" or "damaged". Unless specifically stated otherwise by Austrack Campers in writing, warranties will only apply to items as expressed in Claims Validity 1, 2 and 3 above.
5. Warranties do not apply to items sold via auction.
6. Warranties are not transferable under any circumstances.
7. Should an item be sold by the original purchaser to a third party, all warranties immediately become null and void. The original purchaser will make no claims or be eligible for any claims on behalf of the new owner.
8. Warranties do not extend to any products purchased from Austrack Campers that are used in hire schemes or as rentals.
9. Austrack Campers will not cover damage caused as a result of unauthorised modifications, misuse, abuse, incorrect assembly, improper and irregular maintenance, or accident or collision.
10. Any warranty repairs performed via an authorised warranty claim approved by Austrack Campers must be performed by Austrack Campers, or by an authorised representative of Austrack Campers. In certain circumstances Austrack Campers may authorise repairs by other repairers on a case-by-case basis. Authorisation for these repairs will only be with the express written permission of Austrack Campers.
11. Any affiliates, representatives, associates, agents, suppliers, resellers or similar of Austrack Campers do not have the authority to authorise or deny warranty claims on behalf of Austrack Campers. Austrack Campers Head Office are the only ones who are able to authorise warranty claims.

12. Austrack Campers are not liable, (in part or whole) for any warranties, either express or implied, made by agents or resellers on behalf of Austrack Campers without the knowledge or express written permission of Austrack Campers. Any such unauthorised claims shall be the responsibility of the agent or reseller only.

Shipping Damages

Shipping damage must be filed with the carrier upon receipt of shipment. Where the shipping damage is hidden or unnoticed upon receipt of the good, Austrack Campers Head Office will require the following information as soon practicable:

1. Photos of the damaged goods; and
2. Any other relevant evidence of the shipping damage of the Austrack Campers good.

Warranty Procedures

1. All claims must be lodged by the customer, via our website using our online Warranty Claim Form.
2. All claims must be made within the relevant warranty period for that good type as set out by the terms of these Warranty Terms.
3. The customer bears the responsibility of providing adequate evidence of the failure which amounts to a warranty claim. Austrack Campers may require additional evidence to be produced by the customer in the event Austrack Campers Head Office is not satisfied upon first inspection as to the validity of the claim.
4. Third-party warranty repairs:
    a. If a customer is situated in a remote location or a location where Austrack Campers cannot fix or repair a good with a valid warranty claim under these Warranty Terms, it may authorise a third-party to carry out the repairs.

b. The customer must have written authorisation from Austrack Campers prior to the commencement of any repair work being undertaken on Austrack Campers behalf.

c. Any customer who authorises and third-party repair to an Austrack Campers product without prior written approval from Austrack Campers Head Office will bare all associated costs related to the repair and Austrack Campers will not be held liable for reimbursement to the customer or for any payment to a third-party repairer.

d. Customers who have had authorised third-party repairs will be required to submit to Austrack Campers Head Office any invoices or associated expenses to the repair prior to any reimbursement being made to the customer or 3rd party repairer.

e. Reimbursements will be paid by direct deposit to the customer or third-party repairer's nominated bank account only.

Servicing, Warranty Care, and Service Records

Correct servicing and maintenance are essential to the safety, reliability, and warranty protection of your Austrack caravan. All servicing must be carried out to an appropriate standard, using correct procedures and parts, and by suitably qualified personnel.

This section outlines Austrack's requirements and recommendations for servicing, warranty repairs, and service record keeping to help ensure your caravan remains compliant with warranty terms and operates as intended.

Servicing Your Austrack Camper

Austrack strongly recommends that routine servicing and inspections be carried out by **AOE RV Service Centre**, as they are familiar with Austrack caravan construction, systems, and specifications.

If servicing is carried out by a third party, it **is recommended** to be completed by an approved service technician or a **qualified caravan service technician** who holds recognised and relevant qualifications for recreational vehicle service and repair.

At a minimum, a qualified service technician outside of the approved servicing network should hold:

- **MSM31022 – Certificate III in Recreational Vehicle Service and Repair**

This qualification demonstrates that the technician has received formal training in:

- Recreational vehicle service and repair procedures
- Caravan systems and component inspection
- Safe maintenance and repair practices
- Industry-recognised standards for RV servicing

In addition to the above, technicians must also hold:

- Appropriate licensing for **240 V electrical work**, where applicable
- Appropriate licensing or certification for **gas appliance servicing**, where required

Servicing performed by persons who do not hold the above qualifications or required licences may result in improper workmanship, safety risks, and warranty complications.

Jacking Points

Correct jacking procedure is critical to avoid **damage to the suspension, chassis, and surrounding components**, as well as to ensure safe lifting of the unit.

Austrack models can be lifted from the **chassis**, however due to ride height and suspension design, this is often **not practical with standard jacking equipment**. For this reason, the recommended and most effective jacking method is via the **suspension swing arm (control arm)**.

The jack must always be positioned in a location where it can **sit securely and remain stable under load**, with no risk of slipping or movement during lifting.

Recommended Jacking Location

The preferred jacking point is located on the **underside of the suspension swing arm (control arm)**.

This location provides:

- A structurally strong lifting point
- Lower lift height compared to chassis jacking
- Improved stability during lifting

To correctly position the jack:

- Locate the suspension swing arm beneath the unit
- Identify a **flat, secure section** of the arm
- Position the jack so it sits firmly and cannot move
- Ensure the contact point prevents slipping under load

The jack must be placed on a section where it will remain stable throughout the lifting process.

Chassis Jacking

The chassis can be used as a lifting point; however, it is important to understand the practical limitations.

Due to the height of Austrack models:

- The chassis sits significantly higher than typical jacking range
- Most standard jacks will not reach the chassis safely
- Attempting to reach the chassis may create unstable lifting conditions

For this reason, chassis jacking is **generally not suitable for standard roadside use**, and should only be attempted where appropriate lifting equipment is available.

Incorrect Jacking Locations

The jack must not be placed on components that are not designed to support lifting loads, or where stability cannot be maintained.

Avoid placing the jack on:

- Thin or unsupported sections of the chassis
- Body panels or floor sections
- Suspension brackets or mounts not designed for lifting
- Any angled surface where the jack may slip

Incorrect placement may result in:

- Structural damage
- Component failure
- Loss of stability during lifting

Safety Considerations

Before lifting the unit, safe conditions must always be ensured.

The following requirements apply:

- The unit must be on **level and stable ground**
- The handbrake must be applied
- Wheels must be chocked where required
- The jack must be suitable for the weight of the unit

Lifting on unstable or uneven surfaces significantly increases the risk of the jack shifting or failing under load.

Jack Supply

Austrack models are **not supplied with a jack of any kind**.

It is the responsibility of the owner to ensure that a **suitable and correctly rated jack** is available when required.

The jack used must:

- Be capable of supporting the weight of the unit
- Provide sufficient lifting height for the application

Be used in accordance with manufacturer instructions

IMPORTANT NOTICE

- The preferred lifting point is the **suspension swing arm (control arm)**
- Chassis jacking is possible but often **impractical with standard equipment**
- Always ensure the jack is positioned securely and cannot slip

- No jack is supplied with the unit

Failure to follow correct jacking procedures may result in **damage to the unit or personal injury**, and may not be covered under warranty.

Warranty Repairs and Claims

Any work relating specifically to **warranty repairs or warranty claims** must be:

- Performed by **AOE RV Service Centre**, or
- Carried out by a **repairer formally authorised by Austrack Campers**

Warranty work undertaken without prior approval from Austrack Campers may:

- Delay warranty assessment
- Result in rejection of a warranty claim
- Require re-inspection or corrective work at the owner's cost

If a warranty issue arises, owners should **contact Austrack Campers or AOE RV Service Centre first** before arranging any repairs.

Importance of Service Records

Maintaining accurate service records is an important part of responsible caravan ownership and may be required to support a warranty claim.

Owners are encouraged to:

- Keep records of all scheduled servicing
- Retain invoices and service documentation
- Record dates, work performed, and servicing provider details

Service records should clearly identify:

- The work carried out

- The service provider
- The technician's business name and qualifications where available.

Logbook Servicing

Austrack recommends the use of a **logbook system** to track servicing and maintenance.

Maintaining a service logbook:

- Provides a clear and traceable maintenance history
- Supports warranty assessments
- Helps ensure servicing is completed at the correct intervals
- Adds long-term value and transparency to the caravan's service history

Digital logbook platforms such as ***LogMate*** may be used to store servicing and maintenance records securely and access them when required.

Digital Logbook System – LogMate

Austrack supports the use of **digital logbook platforms**, such as **LogMate**, as an alternative or supplement to traditional paper service records. Digital logbook systems allow servicing and maintenance information to be recorded, stored, and accessed electronically, providing a centralised and organised service history for the camper.

When used consistently, platforms like LogMate can:

- Provide secure, time-stamped records of servicing and maintenance
- Allow owners to upload invoices, inspection reports, and supporting documentation
- Make service history easily accessible for warranty assessment or resale
- Reduce the risk of lost or incomplete paper records

Use of a digital logbook system does not replace the requirement for servicing to be carried out in accordance with Austrack recommendations. Owners remain responsible for ensuring servicing is performed at the correct intervals and by appropriately qualified service providers, regardless of how records are stored.

Maintenance Schedule Compliance

All servicing must be completed in accordance with the **Maintenance Schedule**, located **near the end of this manual**.

Failure to:

- Follow the maintenance schedule
- Use appropriately qualified service technicians
- Retain service records

may affect warranty eligibility.

IMPORTANT NOTICE

Warranty protection depends on correct servicing, appropriate qualifications, approved repair methods, and accurate record keeping. Servicing or repairs carried out by unqualified persons or without authorisation may compromise safety and warranty coverage.

If there is any uncertainty regarding the qualifications of a service provider, owners should contact **AOE RV Service Centre or Austrack Campers** for guidance **before** work is undertaken.

1800 797 797
sales@austrackcampers.com.au
austrackcampers.com.au

Maintenance Schedule

ITEM	RECOMMENDED INTERVALS								
	3 MONTHS OR 1,000KM	2,500KM	6 MONTHS OR 5,000KM	7,500KM	12 MONTHS OR 10,000KM	12,500KM	18 MONTHS OR 15,000KM	17,500KM	24 MONTHS OR 20,000KM
BATTERY CONDITION	Test	Test	Test	Test	Test	Test	Test	Test	Test
LIGHTS	Test	Test	Test	Test	Test	Test	Test	Test	Test
SWITCHES	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect
BATTERY TERMINALS / LEADS	Inspect	Inspect	Inspect	Inspect	Inspect	Inspect	Inspect	Inspect	Inspect
WATER PUMPS / HOSES	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect/Clean	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect/Clean
GAS HOSES / OUTLETS	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect
LOCKS	Test/Inspect/Lubricate	Test/Inspect/Lubricate	Test/Inspect/Lubricate	Test/Inspect/Lubricate	Test/Inspect/Lubricate	Test/Inspect/Lubricate	Test/Inspect/Lubricate	Test/Inspect/Lubricate	Test/Inspect/Lubricate
HINGES	Test/Inspect/Lubricate	Test/Inspect	Test/Inspect/Lubricate	Test/Inspect	Test/Inspect/Lubricate	Test/Inspect	Test/Inspect/Lubricate	Test/Inspect	Test/Inspect/Lubricate
SEALS	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean
BRAKE CABLE	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust/Lubricate	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust/Lubricate
BRAKE LININGS	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust/Clean	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust/Clean
CHASSIS LUBE	Inspect	Inspect	Inspect	Inspect	Inspect/Lubricate	Inspect	Inspect	Inspect	Inspect/Lubricate
HITCH	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect/Lubricate	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect/Lubricate
JOCKEY WHEEL	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect
STABILISER LEGS	Test/Inspect	Test/Inspect	Test/Inspect/Lubricate	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect/Lubricate	Test/Inspect	Test/Inspect
WINCHES	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect/Clean	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect/Clean
SUSPENSION BUSHES	Inspect	Inspect	Inspect	Inspect	Inspect/Lubricate	Inspect	Inspect	Inspect	Inspect/Lubricate
WHEEL ALIGNMENT	Inspect/Adjust	Inspect	Inspect	Inspect	Inspect/Adjust	Inspect	Inspect	Inspect	Inspect/Adjust
WHEEL BEARINGS	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust	Inspect/Adjust
WHEEL NUTS	Inspect/Adjust	Inspect	Inspect/Adjust	Inspect	Inspect/Adjust	Inspect	Inspect/Adjust	Inspect	Inspect/Adjust
TYRES	Inspect	Inspect	Inspect	Inspect	Inspect	Inspect	Inspect	Inspect	Inspect
TYRE PRESSURE	Adjust	Adjust	Adjust	Adjust	Adjust	Adjust	Adjust	Adjust	Adjust
GAS STRUTS	Test/Inspect/Lubricate	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect/Lubricate	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect/Lubricate
SHOCK ABSORBERS	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect	Test/Inspect
FRIDGE FAN FILTERS	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean	Inspect/Clean
WATER TANKS	Test/Inspect/Clean	Test/Inspect/Clean	Test/Inspect/Clean	Test/Inspect/Clean	Test/Inspect/Clean	Test/Inspect/Clean	Test/Inspect/Clean	Test/Inspect/Clean	Test/Inspect/Clean

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sales@austrackcampers.com.au
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Quick Links

Austrack Academy

Access step-by-step guides, videos, and training resources to help you understand and get the most out of your Austrack Caravan.

Austrack Blog

Read articles, updates, and tips covering travel, product information, maintenance advice, and Austrack news.

Austrack Spare Parts Shop

Browse and purchase genuine Austrack spare parts and accessories designed specifically for your caravan.

Austrack Warranty Form

Submit warranty claims and enquiries quickly and securely using the official Austrack warranty submission form

Austrack Technical Support

Lodge technical support requests for fault diagnosis, system advice, or assistance from the Austrack support team.