AUSTRACK
CAMPERS & CARAVANS®
BUILT TOUGH, BUILT TO LAST

USER MANUAL

ALL AUSTRACK STOCKTON 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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Lansvale Showroom
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02 8776 6933
sydney@austrackcampers.com.au

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

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03 5908 2229
eastmelbourne@austrackcampers.com.au

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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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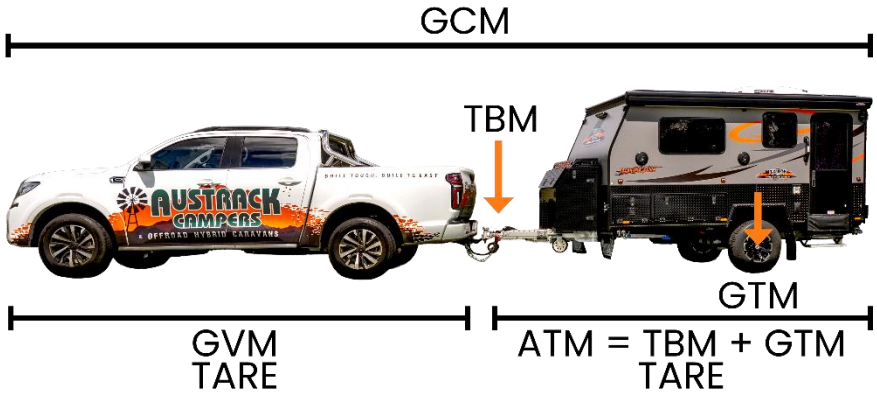
Weight Explanations



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
- Trailer Plug and Wiring
- Brake-Away System
- 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.

Trailer Breakaway

Your Austrack hybrid caravan is fitted with a **trailer breakaway system**, which is a critical safety feature designed to automatically apply the caravan's brakes in the unlikely event of an accidental disconnection from the tow vehicle.

The breakaway system consists of a switch mounted on the drawbar and a **steel activation cable** with a removable pin. Under normal towing conditions, the pin remains inserted in the switch and the system remains inactive.

Do not use the breakaway system as an alternative to the handbrake or remove the pin from the breakaway switch as an anti-theft measure, this will cause a rapid discharge of your house batteries. This will leave your hybrid without power and can cause damage to the batteries.

How The Breakaway System Works

The steel breakaway cable attached to the drawbar switch must be connected to a **solid, non-detachable part of the tow vehicle**, such as a chassis-mounted recovery point or designated breakaway attachment point.

In the event the caravan becomes separated from the tow vehicle:

- The breakaway cable is pulled tight
- The pin is removed from the drawbar-mounted switch
- The caravan brakes are immediately activated

Once activated, the brakes will remain **fully applied** for as long as:

- The breakaway pin remains out of the switch, and
- There is sufficient power available in the breakaway battery system

This action significantly reduces the risk of an uncontrolled trailer movement following a disconnection.

Correct Attachment of the Breakaway Cable

It is essential that the breakaway cable is attached correctly every time you tow.

- **Do not attach the cable to the tow bar**, hitch, or safety chains
- Attach the cable directly to the **tow vehicle itself**

This ensures the breakaway system will still function if the tow coupling or tow bar assembly were ever to fail or separate from the vehicle.

The cable should have enough slack to allow full turning movements without pulling the pin during normal driving, but not so much slack that it would delay activation in the event of a separation.

Breakaway Battery and Power Supply

The breakaway system is powered by a **dedicated breakaway battery**, which is typically located under a seat inside the hybrid caravan. This battery is designed to supply sufficient power to the braking system to keep the brakes applied for **a minimum of 15 minutes**, as required by safety regulations.

The breakaway battery is automatically charged from the caravan's main (house) battery system. Under normal conditions, this means the system remains charged and ready whenever the caravan batteries are healthy.

Breakaway Control Box and Testing

The breakaway control box includes indicator lights and a test function to confirm correct operation.

- A **charging indicator light** should be visible when the system is receiving power
- Pressing the **test button** should result in a **green indicator light**, confirming normal operation

If any light other than green is displayed during testing, or if the system does not appear to be charging correctly, **do not tow until the system has been inspected**. In this case, contact the Austrack Service Department for further advice.

Important Safety Notes

- Always check the breakaway cable attachment as part of your pre-departure checks
- Never tow with the breakaway pin removed
- Do not allow the cable to drag on the ground or wrap around the coupling
- Do not rely on safety chains as a substitute for the breakaway system

The breakaway system is a **legal and safety-critical component** of your caravan's braking system and must be kept in proper working order at all times.

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 Hard Floor 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 Fridge
- External Kitchen
- Main Entry Door
- External Control Panel
- Awning

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

External Fridge

Austrack Stockton Campers may be fitted with an **externally mounted portable fridge/freezer**, providing convenient access to refrigerated and frozen storage during travel and campsite use. Depending on model and specification, this may be either an **ARCTIC branded compressor fridge/freezer** or an **unbranded Fridge Drawer**, both designed for operation in mobile and off-grid environments.

The external mounting configuration allows the fridge to be easily accessed without occupying internal storage space, while integrating with the camper's electrical system to provide reliable cooling performance under a range of environmental conditions. Although appearance and

branding may vary between units, the general operating principles, power requirements, and maintenance considerations remain consistent.

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.

ARCTIC Drawer Fridge

The **ARCTIC Fridge Drawer** is a compressor-driven refrigeration unit designed in a **slide-out drawer format**, providing convenient access to stored contents while maintaining efficient cooling performance. The unit is intended for **fixed installation** within a caravan, camper trailer, or similar

application, and operates using a sealed compressor system to deliver consistent cooling under normal operating conditions.

The fridge is suitable for general storage of food and beverages and is designed to operate from **12V or 24V DC power systems**. It is not intended for the storage of temperature-sensitive items such as medical supplies or scientific materials.

Due to the drawer-style design, correct usage and loading practices are important, as cold air can be lost more easily when the drawer is opened compared to top-opening units.

General Operation

The ARCTIC Fridge Drawer is designed for straightforward use; however, correct operation is essential for reliable performance.

Before initial use, the unit must:

- Be kept upright for a minimum of **6 hours before powering on**.

During normal operation:

- Open and close the drawer smoothly
- Avoid leaving the drawer open for extended periods
- Allow time for the internal temperature to stabilise after loading

Frequent opening or leaving the drawer open will reduce cooling efficiency and increase compressor workload.

Placement and Ventilation Behaviour

The fridge relies on proper airflow to remove heat generated by the compressor.

The supplied manual specifies that:

- Ventilation must not be obstructed
- The compressor requires clear space for heat dissipation
- Objects must not be placed close to the ventilation openings

If airflow is restricted, this may result in:

- Reduced cooling performance
- Increased noise
- Overheating or system protection faults

Temperature and Internal Cooling Behaviour

The cooling performance of the ARCTIC Fridge Drawer is influenced by both load and internal air movement.

The manual highlights that:

- The **bottom and sides cool more effectively**, as this is where the temperature sensors are located
- The **upper section of the drawer may cool more slowly**
- Cold air naturally settles, resulting in temperature variation within the drawer

To ensure correct operation:

- Avoid overloading the drawer
- Do not place large quantities of warm food inside
- Allow air to circulate between items

Food Storage Guidelines

The internal surfaces of the fridge are not treated with antibacterial coatings, therefore proper storage practices must be followed.

When storing food:

- Food should be wrapped or stored in containers
- Do not place food directly on internal surfaces

- Do not store opened food for extended periods
- Avoid storing volatile or flammable substances

Additionally:

- Bottles or fragile items should not be frozen, as expansion may cause breakage

Moisture-heavy or strong-smelling items should be sealed before storage

Maintenance and Cleaning

Before performing any cleaning or maintenance, the unit must be turned off and disconnected from the power supply.

To clean the fridge:

- Wipe internal surfaces with a soft cloth
- Use mild detergent if required
- Dry all surfaces thoroughly

The manual specifically notes:

- The unit must **not be rinsed with water**

Harsh chemicals or solvents must not be used

Defrosting

Frost may develop during operation, particularly with regular use and humid conditions.

To defrost:

- Remove all contents
- Turn off the unit
- Allow frost to melt naturally
- Wipe away excess moisture

Sharp or pointed tools must not be used, as this may damage internal components

Storage When Not in Use

When the fridge is not being used for an extended period:

- Remove all contents
- Clean and dry the interior
- Leave the drawer open for ventilation

This helps prevent odour, moisture build-up, and mould development

Troubleshooting

The ARCTIC Fridge Drawer is designed for reliable operation, however certain conditions may result in reduced performance or system warnings.

Before seeking service, basic checks should be carried out.

Common Issues and Checks

If the fridge is not operating correctly, the following should be inspected:

- Confirm the power supply is active
- Check both AC adapter and DC supply (if applicable)
- Ensure the drawer is fully closed
- Avoid frequent opening
- Reduce load if overfilled

The following behaviours are considered normal:

- **Hissing sound** – refrigerant flowing through the system
- **Light vibration** – compressor operation
- **Condensation** – moisture forming on surfaces

These are standard operating characteristics and not signs of faults

Error Codes

The ARCTIC Fridge Drawer includes a protection system that displays **error codes** when abnormal operating conditions are detected. These codes are based directly on the manufacturer's system and assist with identifying faults.

Error Code	Description	Possible Causes	Recommended Action
E1	Low voltage protection	Input voltage too low, battery protection activated	Check battery voltage and recharge if required. Lower battery protection setting if applicable.
E2	Fan overload protection	Fan operating beyond allowable load	Turn off the unit, check wiring or obstruction, and restart after approximately 5 minutes.
E3	Compressor protection	Compressor cycling too frequently	Turn off the unit and restart after approximately 10 minutes.
E4	Compressor speed/load fault	Compressor operating abnormally or under load	Turn off the unit and restart after approximately 1 hour.
E5	Overheat protection	Insufficient ventilation or high ambient temperature	Improve airflow and ventilation. Restart after cooling down.
F6	Temperature sensor fault	Sensor loose or connection issue	Check sensor if accessible. If issue persists, contact service.

IMPORTANT NOTICE

To ensure safe and reliable operation of the ARCTIC Fridge Drawer:

- Do not block ventilation openings

- Do not expose the unit to moisture or water
- Do not tilt excessively during operation
- Do not attempt internal repairs

If faults persist after completing the recommended checks, the unit should be inspected by a qualified technician.

External Kitchen

The Stockton models are equipped with an **externally deployed kitchen system**, designed to provide a practical and self-contained cooking and preparation area for campsite use. The kitchen is integrated into the camper structure and is accessed through a dedicated external compartment, allowing it to be extended into position during setup and securely stowed during travel.

This configuration provides a balance between accessibility, functionality, and space efficiency, enabling cooking, washing, and basic food preparation to be carried out without occupying internal living space. The external kitchen incorporates a range of components depending on model specification, and must be correctly deployed, connected, and maintained to ensure safe and reliable operation.

Sink Use and Care

The external kitchen sink is intended for food preparation, utensil washing, and general campsite use. Correct care helps prevent staining, odours, and drainage issues.

Good sink use practices include:

- Rinsing the sink after each use to remove food and residue
- Avoiding disposal of excessive food scraps, grease, or fats into the drain
- Using a sink strainer where fitted to prevent debris entering the plumbing

After use, the drain should be flushed with clean water. If the caravan is not being used for an extended period, ensure the sink is clean, free of residue, and fully dry.

Drainage and Sullage Hose

Austrack Stockton caravans are fitted with an external kitchen sink that is connected to an **onboard grey water system**. Unlike Hard Floor camper trailers that rely on direct ground discharge via a sullage hose, Stockton models collect wastewater within a dedicated grey water tank.

All wastewater from the external kitchen sink can be directed into the onboard tank once connected and must be managed by the owner in a responsible and environmentally appropriate manner.

Sullage Hose Operation

Where fitted, the external kitchen sink may utilise a hose connection as part of the drainage system; however, this is used as part of the connection to the caravan's plumbing and grey water system rather than for direct ground discharge.

When using the sink:

- Ensure all drainage connections are correctly fitted and secure
- Check that any associated hoses are free from kinks, twists, or restrictions
- Confirm that water is flowing freely into the onboard system

The drainage system should not be allowed to become restricted, as this may affect sink performance or cause backup within the plumbing.

Waste Water Management

Because Stockton caravans are fitted with an onboard grey water tank:

- Wastewater is stored within the caravan
- Drainage occurs continuously into the tank while the sink is in use

Austrack recommends:

- Monitoring grey water tank levels during use
- Emptying wastewater at an approved disposal point
- Following caravan park, campground, or local council regulations at all times

Direct discharge onto the ground may not be permitted in many camping areas and is not the intended method of operation for this system.

Responsible Sullage Use

Proper management of sink wastewater helps maintain cleanliness and reduces environmental impact.

Austrack recommends:

- Emptying the grey water tank regularly to reduce odours
- Avoiding food scraps, oils, and fats entering the drain
- Using biodegradable dishwashing products where possible

Wastewater containing food or grease can attract insects and animals and should be disposed of appropriately.

IMPORTANT NOTICE

Stockton caravans utilise an onboard grey water system. Failure to manage wastewater responsibly may result in environmental harm or breaches of campsite regulations.

Always comply with local rules and dispose of wastewater at approved locations.

Stainless Steel Surface Care

Many external kitchen components, including sinks, benches, splashbacks, and racks, are manufactured from stainless steel. While stainless steel is corrosion resistant, it is not maintenance free, particularly in outdoor or coastal environments.

To maintain stainless steel surfaces:

- Clean regularly using warm water and mild detergent
- Wipe in the direction of the grain where visible
- Rinse thoroughly and dry with a soft cloth to prevent water spotting

Avoid leaving salt residue, acidic substances, or food spills on surfaces for extended periods, as these may cause staining or corrosion over time.

Cleaning Warnings

Stainless steel surfaces must not be cleaned using:

- Abrasive pads or scourers
- Steel wool
- Chlorine-based cleaners
- Highly acidic or harsh degreasers

These products can damage the surface and compromise corrosion resistance.

Racks, Trays, and Storage Components

External kitchen racks and storage systems are designed to support cookware, utensils, and food preparation items. These components are exposed to movement, vibration, and weather during use and travel.

Best practice includes:

- Cleaning racks regularly to remove grease, dust, and residue
- Ensuring all components are dry before packing away
- Inspecting mounting points and fasteners periodically

Before travel, all items should be removed or securely stored to prevent movement, noise, or damage.

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.

After Use and Pack Down

Before closing or packing away the external kitchen:

- Ensure sinks, benches, and racks are clean and dry
- Remove all food scraps and waste
- Confirm the drainage system and grey water system are functioning correctly
- Secure all movable components

If the caravan is to be stored for an extended period, an additional clean is recommended to prevent odours, staining, or corrosion.

Operating External Gas Appliances

(Bayonet Connection)

Austrack Hybrid Campers and Caravans are fitted with a rear-mounted (front mounted for some models) bayonet gas outlet, allowing connection of approved external gas appliances. These may include the supplied external 4-burner gas stove or, alternatively, a compatible external gas BBQ.

All appliances connected to the bayonet fitting must be designed for LPG use, fitted with an approved bayonet hose, and intended for outdoor use only.

Gas appliances must never be operated inside the camper, caravan, or any enclosed space.

Connecting an External Stove or BBQ

Before connecting any appliance, ensure it is positioned on a stable, non-combustible surface and all controls are turned off. Correct connection is essential to ensure a secure gas seal and safe operation.

To connect an external stove or BBQ:

- Confirm all appliance control knobs are in the OFF position
- Connect the appliance hose to the bayonet fitting, ensuring it locks securely into place

Open the gas cylinder valve at the front of the camper

Lighting the Appliance

If the gas system has not been used recently, air may be present in the gas lines, which can result in a short delay before ignition.

To light an external stove or BBQ:

- Turn the selected burner control knob to the HIGH position
- Press and hold the control knob in
- While holding the knob, press the ignition switch
- Initial ignition may take up to two minutes
- Once lit, continue holding the knob in for approximately 5 seconds

If the burner does not remain lit, turn it off, wait one minute, and try again.

Gas Flow Tip

If gas appliances have not been used for a period of time, Austrack recommends lighting an external stove or BBQ first before operating other gas appliances. This helps draw gas through the lines more efficiently and can reduce ignition time.

Safe Operation

External gas appliances produce high heat and must be used with care at all times.

When operating an external stove or BBQ:

- Use only in open, well ventilated outdoor areas

- Keep flammable materials well clear of burners
- Never leave the appliance unattended while in use
- Keep children and pets well away from the cooking area

Do not modify the appliance or use unauthorised accessories

After Use

Correct shutdown and storage of external gas appliances helps prevent damage and injury.

After cooking:

- Turn all burner controls to OFF
- Turn off the gas cylinder at the front of the caravan
- Allow the appliance to cool completely
- Disconnect the bayonet fitting only when cool
- Store the appliance securely before travel

Troubleshooting – External 4 Burner Stove

This section applies only to external gas stove tops connected to the Austrack gas system via the bayonet fitting. The information below is intended to assist with common operating issues using owner-safe checks only.

If the issue cannot be resolved using the steps provided, discontinue use and contact an authorised service agent.

Stove Top Will Not Ignite

If the stove top does not ignite when following the correct lighting procedure, the most common causes are air in the gas line or restricted gas flow.

Check the following before attempting to relight:

- Ensure the gas cylinder valve is fully open
- Confirm the bayonet fitting is fully inserted and locked
- Check that the stove control knob is turned to the HIGH position during ignition
- If the stove has not been used recently, allow time for gas to flow through the system (initial ignition may take up to two minutes)

If ignition is unsuccessful, turn the control knob off, wait at least one minute, and try again.

Burner Lights but Will Not Stay Alight

If the burner ignites but goes out when the control knob is released, the flame failure safety device may not have had sufficient time to activate.

Check the following:

- Hold the control knob in for longer after ignition (approximately 5 seconds)
- Ensure the burner is fully lit before releasing the knob
- If the burner goes out, wait one minute before attempting to relight

Uneven or Yellow Flame

A correctly operating stove top burner should produce a steady blue flame. A yellow, uneven, or weak flame may indicate blocked burner ports or incorrectly positioned components.

Check the following once the stove top has cooled:

- Ensure burner heads and caps are seated correctly
- Inspect burner ports for food residue, dirt, or debris
- Clean burner components as required and refit correctly

Do not continue using the stove top if abnormal flame behaviour persists.

Ignition Spark Present but Burner Does Not Light

If the ignitor produces a spark but the burner does not ignite, gas may not be reaching the burner correctly.

Check the following:

- Confirm the gas cylinder is turned on
- Ensure the bayonet fitting is secure and locked
- Check that no appliance isolation valves have been closed

Verify appliance controls are set correctly during ignition

Smell of Gas While Using the Stove Top

If a gas smell is detected at any time during stove top operation, this may indicate a gas leak or unburnt gas.

If you smell gas:

- Turn off all stove control knobs immediately
- Turn off the gas supply at the cylinder
- Do not attempt to relight the stove
- Do not use matches, lighters, or electrical switches
- Ventilate the area if possible
- Have the stove and gas system inspected by an authorised service agent

⚠️ Never attempt to check for gas leaks using a naked flame.

Professional Servicing

If the stove top continues to malfunction after performing the checks above, do not attempt repairs or adjustments yourself. Stove top servicing and gas system work must only be carried out by qualified personnel. Please visit your local authorised service centre for inspection and repair.

IMPORTANT NOTICE

The external kitchen is designed for general outdoor food preparation and support of cooking activities. Proper care, responsible water management, and correct operation of gas appliances will maintain performance, appearance, and safety.

Damage caused by misuse, improper connection, failure to follow safe operating procedures, or lack of maintenance may not be covered under warranty.

Entry Door System

Stockton models are fitted with a **two-piece entry door system**, consisting of a **lower fixed door section** and a **separate upper folding door assembly**. This design allows the door to remain functional in both **travel and setup configurations**, while maintaining compatibility with the camper's folding roof and wall system.

The operation of this door differs from a conventional single-piece caravan door and requires a **specific sequence of use** depending on whether the camper is in:

- **Packed (travel) mode**
- **Set-up (fully deployed) mode**

Correct operation of both door sections is essential to prevent damage and ensure smooth functionality.

Lower Door Section

The **lower door section** functions as a conventional solid entry door and remains installed at all times, regardless of whether the camper is open or closed.

This door:

- Is a rigid, fixed lower panel
- Is fitted with a standard handle and key locking mechanism
- Can be opened and closed from both inside and outside

Important Operational Limitation

When the camper is in the **closed (travel) position**, the roof structure prevents the lower door from opening.

Accordingly:

- The **roof must be raised before attempting to operate the door**
- Attempting to force the door open while the camper is closed may result in damage

Upper Door Section (Folding Door Assembly)

The **upper door section** is a large framed assembly incorporating an integrated door panel. This section forms the **upper half of the entryway once the camper is fully set up**.

The assembly is:

- **Mounted to the ceiling structure**
- Stored in the raised position when the camper is closed
- Designed to **fold downward into position during setup**

This is not a removable component, but a permanently attached folding structure.

Deploying the Upper Door

The upper door may only be operated once the camper is **fully set up**, including:

- Roof fully raised
- Slides fully deployed

To Deploy the Upper Door

- Locate the door assembly in its **stored, raised position against the ceiling**
- Release the **two twist-lock retaining tabs** securing the door
- Carefully lower the door downward

Due to its construction:

- The assembly is **relatively heavy**
- Controlled, steady movement should be used at all times

Hinge Operation

The upper door utilises a **multi-stage hinge plate system**, which requires a specific folding sequence.

When lowering the door:

- The **upper section of the hinge plate must fold inward first**
- Followed by the **lower hinge section and the remainder of the door assembly**

If this sequence is not followed naturally:

- Resistance may be felt
- The hinge may bind or misalign

The door should not be forced. If resistance occurs, reposition slightly and allow the hinge to articulate correctly.

Securing the Upper Door in Use

Once fully lowered:

- The door aligns with the lower door section
- **Locking tabs at the top secure the door in position**

In addition:

- **Velcro attachment strips are used to secure surrounding canvas walls to the door frame**

This provides:

- Improved sealing
- Reduced airflow and dust ingress
- Insect protection

Stowing the Upper Door

Before closing the camper, the upper door must be returned to its stored ceiling position.

To Store the Upper Door

- Release the locking tabs securing the door in its lowered position
- Carefully lift the door assembly upward toward the ceiling

During folding:

- The hinge system must fold in the **reverse sequence**:
    - Lower hinge section folds first
    - Upper hinge section folds inward last

Once fully raised:

- Secure the door using the **two twist-lock retaining tabs**
- Confirm the door is firmly held and cannot drop

Roof Interlock Safety Feature

The system incorporates a **sensor within the roof structure** designed to prevent the roof from closing if the upper door is not correctly stowed.

If the upper door is not fully raised and secured:

- The roof may **refuse to lower**
- This is a protective feature

Forcing the roof closed in this condition may result in damage to the door or roof system.

General Operating Behaviour

The following characteristics are considered normal for this door system:

- The upper door assembly has noticeable weight during operation
- Hinges may feel firm unless correctly aligned
- Controlled movement is required when folding and lowering the door
- The system must be operated in a **specific sequence**

These behaviours are inherent to the design and are not faults.

Common Issues and Causes

Issue	Likely Cause	Recommended Action
Lower door will not open	Roof not raised	Fully raise roof before use
Upper door difficult to lower	Hinge sequence not aligning	Reposition and allow hinge to articulate correctly
Door will not stay in place	Locking tabs not engaged	Check and secure tabs
Roof will not close	Upper door not fully stowed	Fold and secure door correctly
Resistance during folding	Incorrect hinge sequence	Reverse slightly and re-fold properly

IMPORTANT NOTICE

- The entry door system must be operated in the correct sequence
- The lower door cannot be opened when the camper is closed
- The upper door must be fully deployed before use and fully secured before pack-down
- Do not force the hinge mechanism or locking components

Incorrect operation or misuse may result in damage not covered under warranty.

External Control Panel

Austrack Stockton 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 bar counter compartment, mounted on a panel next to the slide out drawers.

The external control panel is based on the **RENOGY electrical system**, with layout and functions configured to suit the installed RENOGY components and battery management system.

RENOGY Control Panel Configuration

Stockton Models are fitted with a **RENOGY electrical system** use an external control panel setup.

The external control panel on RENOGY-equipped models includes:

- A **RENOGY ONE Core display screen**

These components are all mounted **together in the external kitchen compartment**.

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.

Note: The **RENOGY Vision control panel with physical buttons** is located **inside the camper**, not on the external control panel.

General Usage Notes

For all Hard Floor camper trailers:

- 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.

Outside Shade

Austrack caravans are equipped with an integrated **external shade system**, designed to expand the usable living space of the caravan and provide protection from direct sunlight during campsite use. This system typically consists of a **motorised roll-out awning**, which provides immediate overhead cover, and an optional **awning annex**, which can be installed beneath the awning to create an enclosed or semi-enclosed outdoor area.

The awning serves as the primary structure, providing a stable overhead canopy when correctly deployed and supported. The annex, where fitted, attaches to the awning and extends this space further by forming a sheltered area protected from sun exposure and, in some configurations, limited environmental elements. Together, these components create a versatile outdoor setup suited to a wide range of camping conditions.

It is important to note that both the awning and annex systems are designed for **temporary use under suitable weather conditions**. Their performance and longevity depend on correct setup, proper support, and responsible use, particularly with regard to environmental exposure. The following sections detail the correct operation, installation, and maintenance of each component to ensure safe and reliable use.

Electric Awning

Austrack caravans fitted with an electric roll-out awning system are designed to provide a **usable and functional outdoor living space**, offering shade and shelter during campsite use. The system consists of a motorised roller assembly, articulated support arms, and integrated support legs, which together form a semi-rigid structure when deployed correctly.

While the awning system is electrically operated for convenience, it remains a **user-supported structure**, meaning that correct setup and handling are essential for safe operation. The awning is engineered specifically for **sun protection and light use**, and must not be relied upon in adverse weather conditions.

This section explains the correct operating procedures, including the **actual switch behaviour, correct setup sequencing, pack-down method, and adjustment requirements**, all of which are critical to preventing damage and ensuring reliable long-term performance.

Operating Principles

The awning is controlled using a **three-position rocker switch**, which governs motor operation.

The switch operates in three distinct positions:

- **Up position** – Opens (extends) the awning
- **Middle position** – Stops the awning (OFF)
- **Down position** – Closes (retracts) the awning

Unlike some systems, the awning does **not require the switch to be held**. Once the switch is moved into the OPEN or CLOSE position, the awning will continue to operate automatically until:

- The switch is returned to the middle position, or
- The awning reaches its full extension or fully closed position

When the awning reaches its end limits, the motor will **automatically stop**, preventing over-travel.

Because the system continues to operate once activated, it is essential that the user remains attentive during operation.

Opening the Awning (Correct Sequence)

Correct sequencing during setup is critical, particularly due to the interaction between the awning and the caravan door. Extending the awning incorrectly or too far before deploying the support legs can create unnecessary stress on the system and make leg setup more difficult.

Before opening, the operator must ensure:

- The surrounding area is clear
- The ground is suitable for placing support legs
- Weather conditions are stable

To correctly open and set up the awning:

- Move the switch to the **OPEN position**

- Allow the awning to extend **slightly past the door opening**
- Return the switch to the centre (OFF) position
- Deploy the support legs (see below)

- Set the legs at a slight **outward angle away from the van**
- Once legs are positioned, resume opening the awning
- Extend to the desired length or full extension

This staged setup method is important because it:

- Prevents interference between the door and awning arms
- Allows proper positioning of the legs without strain
- Reduces load on the awning structure during initial deployment

Support Legs and Setup

The support legs are a critical structural component and must be deployed early in the setup process.

The legs are stored within the front bar and must be positioned correctly to transfer load to the ground.

Before deploying the legs, the awning should only be partially extended to allow safe access.

To deploy the legs:

- Release each leg from its stored position
- Pull outward from the front bar

- Rotate downward toward the ground
- Extend to the appropriate height
- Position each leg firmly on stable ground

Once positioned, the legs should be angled slightly outward away from the van. This improves:

- Structural stability
- Load distribution
- Resistance to inward collapse

Securing the Awning

After the legs are deployed, the awning must be stabilised to prevent movement.

Because the awning has a large surface area, even light wind can cause instability if it is not properly secured.

To secure the awning effectively:

- Use ground pegs through each leg base
- Ensure pegs are firmly driven into the ground
- Use additional pegs or ropes where required

The awning also has the ability to be mounted to the caravan wall using brackets. However, these brackets:

- Are **supplied only**
- Are **not installed from factory**
- Must only be installed into properly reinforced locations

Improper installation of wall brackets may result in damage to the caravan structure.

Closing the Awning (Pack Down Sequence)

Closing the awning must be carried out in the **reverse order of setup**, and proper sequencing is critical to avoid interference with the door and to ensure correct folding of the system.

Before beginning:

- Remove any pegs or tie-downs
- Ensure the awning surface is clean and free of debris

To correctly close the awning:

- Move the switch to the **CLOSE position**
- Allow the awning to retract until it is **just before the door position**
- Return the switch to the centre (OFF) position
- Fold and stow both support legs fully
- Ensure legs are correctly secured in their storage positions
- Resume closing the awning using the switch

Depending on the model, it may be necessary to:

- **Assist the awning slightly over the door area**

This is normal and helps ensure smooth retraction without interference.

Confirming Closure

The awning includes a visual indicator to confirm correct stowage.

To confirm closure:

- The indicator remains visible while the awning is open
- The indicator disappears when the awning is fully closed

This must be checked before travelling to ensure the awning is properly secured.

Environmental Considerations

The awning is designed strictly for **sunshade use** and is not capable of withstanding adverse weather conditions.

Because of its exposed design, it is highly sensitive to environmental forces.

Conditions that must be monitored include:

- Wind speed and gusts
- Rain accumulation on fabric
- Sudden weather changes

The awning must be retracted immediately if:

- Wind begins to increase
- Rain starts to fall
- Storm conditions are expected

Failure to do so may result in:

- Structural damage
- Fabric failure
- Mounting failure

Manual Operation (Emergency Use)

If electrical operation is unavailable, the awning may be operated manually.

When using manual operation, additional care must be taken to avoid over-forcing the system.

To operate manually:

- Insert the crank handle into the drive mechanism

- Rotate steadily in the required direction
- Stop immediately when resistance increases

Do not force the system beyond its natural stopping point.

Troubleshooting

Over time, normal use may cause minor operational inconsistencies.

These issues are typically related to alignment or limit settings.

Common issues include:

- Awning does not fully open
- Awning does not fully close
- Motor continues running at limits
- Awning appears uneven

These conditions can generally be corrected through careful adjustment.

Awning Adjustment

The awning is factory-adjusted but may require fine tuning after extended use.

Adjustment Procedure

Adjustment must be performed cautiously and incrementally to avoid worsening the issue.

To adjust:

- Locate the designated adjustment bolt
- Turn in small increments (0.5–1 turn only)
- Test the awning operation after each adjustment
- Repeat as required

Large adjustments must never be made in a single step.

Adjustment Conditions

Different faults require specific adjustment directions.

The following applies:

- If the awning does not fully open → increase open limit
- If motor runs after opening → reduce open limit
- If motor runs after closing → reduce close limit
- If awning does not fully close → increase close limit

Each adjustment must be tested before further changes are made

IMPORTANT NOTICE

The awning system must always be operated with care and awareness of its limitations.

To ensure safe and reliable use:

- Always use correct setup and pack-down sequence
- Always support the awning using legs
- Never operate in adverse weather conditions
- Always confirm full closure before travel

Failure to follow these requirements may result in damage not covered under warranty.

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AusTuff Anti-Flap Kit

The **AusTuff Anti-Flap Kit (AFK)** is a removable support and stabilisation system designed to enhance the performance and longevity of both the awning and annex during use. It operates by clamping the outer edges of the awning canvas and annex panels, significantly reducing movement caused by wind and maintaining consistent tension across the entire structure.

When installed correctly, the AusTuff Anti-Flap Kit helps to minimise flapping, which is one of the primary causes of canvas wear, noise, and long-term material fatigue. In addition to improving comfort during use, the system also assists in maintaining correct alignment between the awning and annex, resulting in a more stable and secure setup.

The AusTuff Anti-Flap Kit is not a permanent fixture and does not require fixed installation to the caravan, except for the mounting saddles. It is designed to be fitted during setup and removed during pack-down, and must be used in conjunction with a properly deployed awning and correctly installed annex to achieve optimal performance and durability.

Contents

- 1x Anti Flap Bar Kit
- 12x Black Knobs
- 2x Silver Adjusters with bushes
- 4x Rivets
- 2x Saddles
- 2x Rectangular screw in plates
- 1x Storage Bag

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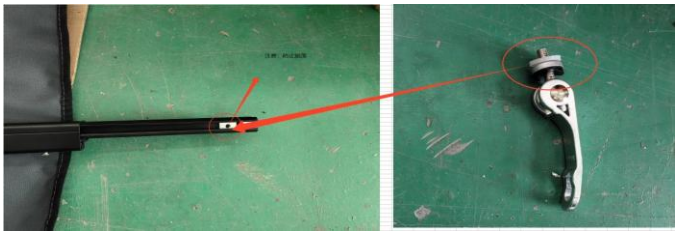
Setup Procedure

Step 1

Install supplied saddles at either end of the awning, 40mm from the top to the centre of hole. Please note that saddles **DO NOT** come pre-fitted from factory and must be installed by the customer.

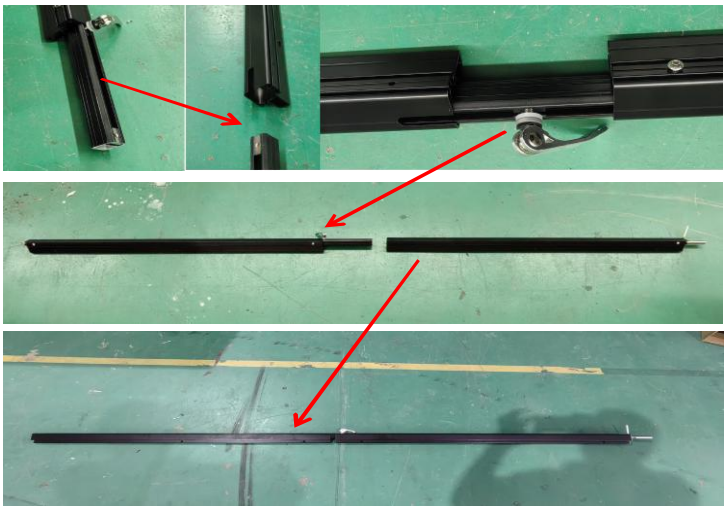
Step 2

Slide rectangular screw plate into the AFK extension shaft. Screw in the Silver Adjusters with the bushes but only lightly, so it can be adjusted later on.



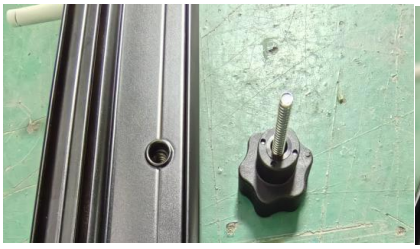
Step 3

Slide the second half of the Anti Flap Bar into the first half and adjust the tightener to desired setting.



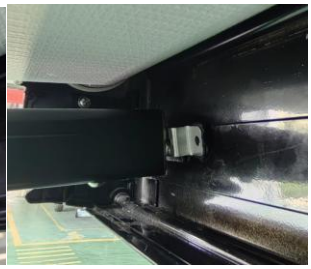
Step 4

Fit the black tightening knobs into the available screw holes, but keep them loose so the flap plate can be removed and adjusted later on.



Step 5

Install Anti Flap Kit onto the awning by sliding the saddle in first, and then placing the spring loaded barrel over the top of the awning leg knuckle. Spread Bars apart firmly, ensuring it is sitting tightly and then adjust silver tightener.



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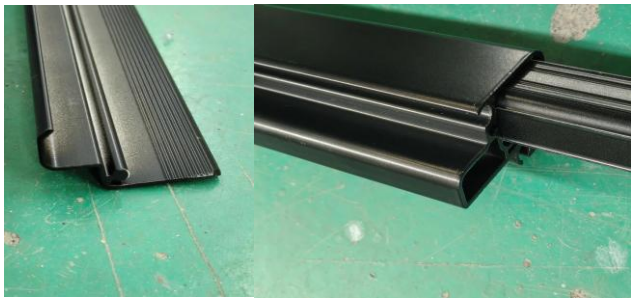
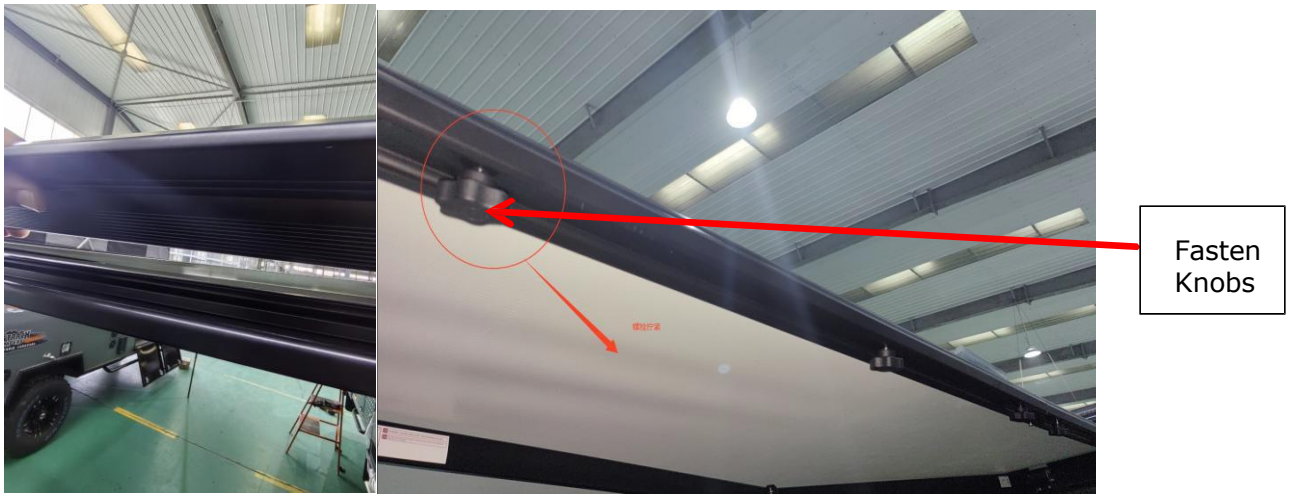
Step 6

Remove Flap Plate and fit over awning canvas while refitting back into the track on the Anti Flap Kit. Clamp down tightly and then fasten the black knobs.





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Rear of the Camper

The rear of the Stockton range is designed to provide access to several **key functional and recovery-related components**, supporting both operational use and off-road capability. This area includes features such as the **spare wheel carrier, manual roof override system, recovery points, and a 50 mm square hitch receiver**, all positioned for accessibility and practical use in a range of conditions.

These components are intended to assist with maintenance, emergency operation, and vehicle recovery where required. Understanding their location, purpose, and correct use is important for safe operation and to prevent damage during off-road or recovery situations.

Spare Tyre

The Stockton range is equipped with a **rear-mounted full-size spare tyre**, providing redundancy in the event of tyre damage or failure during travel. The spare is mounted externally on a dedicated rear carrier, ensuring it is readily accessible when required while maintaining clearance and weight distribution suitable for off-road use.

Access and Removal

To remove the spare tyre, the **number plate bracket must first be removed** to allow clearance for the tyre to be taken off the carrier.

Once the number plate bracket has been removed:

- Access the spare tyre mounting points
- Remove the securing hardware holding the tyre in place
- Carefully lift the tyre clear of the mounting carrier

Due to the size and weight of the spare tyre, controlled handling is recommended during removal.

Spare Carrier Assembly Removal

The rear spare tyre carrier is mounted as part of a **removable rear assembly**, which can be taken off the camper when required.

To remove the spare carrier assembly:

- Locate the **over-centre latch positioned underneath the assembly**
- Release the latch
- Remove the **securing pin**
- Carefully remove the entire rear carrier assembly

Access to Roof Manual Override

Removal of the spare carrier assembly provides access to the **manual roof override system**, located behind or beneath the rear mounting area.

This access is required in situations where manual operation of the roof system is necessary.

The spare carrier must be fully removed to allow unobstructed access to this component.

IMPORTANT NOTICE

- The spare tyre must be securely mounted before travel at all times
- Ensure all retaining hardware and brackets are correctly reinstalled after use
- The rear carrier assembly must be properly latched and pinned before towing
- Do not operate the camper without the spare assembly correctly secured

Failure to correctly secure the spare tyre or carrier assembly may result in damage or loss during travel and may not be covered under warranty.

Roof Manual Override

The Stockton range is equipped with a **manual roof override system**, designed to allow operation of the roof mechanism in the event of **electrical system failure or loss of power**. This system provides a mechanical backup method for raising or lowering the roof when normal powered operation is not available.

The override system operates via a **manual winding mechanism**, requiring user input to move the roof structure through its range of travel.

Access

The manual override system is located behind the **rear spare tyre assembly**.

To access the override:

- Remove the spare tyre carrier assembly as outlined in the Spare Tyre section

Ensure the area is clear before operating the mechanism

Operation

The manual override is operated using a **winding action**, which mechanically drives the roof mechanism.

To operate the override:

- Engage the manual drive point
- Begin winding in the required direction (raise or lower)
- Continue winding steadily until the roof reaches the desired position

Due to the mechanical nature of the system:

- Operation may require **consistent effort over an extended period**
- Movement will be **slower than powered operation**

Operational Considerations

- Manual operation is not intended for routine use
- The system is designed as a **backup only**
- Excessive force should not be applied if resistance is encountered

If abnormal resistance is felt:

- Stop operation immediately
- Check that no obstructions or misalignments are present

IMPORTANT NOTICE

- The manual override system is for **emergency use only**
- It is to be used only when the electrical roof system is not functioning
- Continued use of the manual system in place of normal operation is not recommended

Failure to operate the system correctly or attempting to force the roof mechanism may result in 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.

Driver Side

The driver side of your Austrack Hard Floor camper trailer houses a range of **service, utility, and campsite-use components** that support water management, hygiene, external access, and daily operation while set up at camp. These components are positioned for convenient access and are commonly used during setup, water refilling, washing, and connection to external services.

Driver-side equipment may include water tank filling points, mains water connections, external washing facilities, hot water system access or ventilation, awning systems, and other model-specific features mounted to the camper body. Some components may be grouped within shared external areas or compartments and should be understood as part of an integrated system rather than as isolated features.

Correct operation, regular inspection, and appropriate care of all driver-side components are essential to ensure reliable water supply, safe use of external facilities, effective drainage, proper ventilation where applicable, and long-term durability of the camper.

This section of the Owners Manual provides operating guidance, safety information, and owner-level maintenance advice for driver-side components fitted to the camper. Each relevant subsection should be read carefully before use, particularly when managing water systems, operating external washing facilities, or connecting external services.

Mains water connection

Austrack campers are fitted with a **mains water connection** that allows the onboard water system to be supplied directly from an external pressurised water source, such as town water at a caravan park or serviced campsite.

When connected, mains water **bypasses the camper's water pump** and supplies water to taps and appliances using the pressure provided by the external source. This reduces wear on the water pump and provides a convenient water supply when mains water is available.

The mains water inlet fitted to Austrack campers uses a **Seaflo water inlet**, which requires a hose connection with an **American-thread fitting**. Owners should ensure they have the correct hose or adaptor before attempting connection.

Connecting to Mains Water

To connect mains water to the camper:

- Use a suitable town water hose fitted with an **American-thread connector**
- Connect the hose securely to the Seaflo water inlet on the caravan
- Slowly turn on the water supply at the campsite outlet
- Check all plumbing points for leaks before use

Once connected correctly, water is supplied directly to the caravan without drawing from the onboard tanks.

Water Pressure Variations and Noise

Water pressure from mains supplies can vary significantly between campsites. Some locations provide high pressure, while others supply **very low or inconsistent pressure**, particularly in older parks or where multiple users are drawing water simultaneously.

At some campsites, low or unstable mains pressure can cause a **whining or vibrating noise** from the water inlet or internal plumbing while water is flowing. While this noise does not indicate a fault with the caravan, it can become annoying for occupants or nearby campers.

If this occurs, Austrack recommends:

- Disconnecting from the mains water supply
- Switching to **onboard tank water** using the internal pump
- Using the mains water hose **only to fill the onboard water tanks**, rather than running directly on town pressure

This eliminates the noise and provides a more consistent water supply.

Water Pressure Protection

Because some caravan parks supply water at excessively high pressure, Austrack recommends the use of a **pressure-regulating valve** when connecting to mains water. This helps protect internal plumbing, fittings, and appliances from pressure-related damage.

Always ensure hoses, fittings, and regulators are in good condition.

Water Pump – CRITICAL WARNING

⚠️ **When connected to mains water, the onboard water pump must be switched OFF at the control panel.**

If the pump remains switched on:

- The system may attempt to draw water from onboard tanks
- Mains pressure and pump pressure may act on the system at the same time
- If water tanks are empty, the pump may run dry

Running the pump without water can cause **permanent damage** to the pump, seals, and internal components.

Always confirm the pump switch is **OFF** before turning on the mains supply.

Using Onboard Tanks instead of Mains Water

When operating from onboard tanks:

- Water pressure is generated by the caravan's pump
- Flow is typically more stable than some mains supplies
- Noise associated with low-pressure mains water is eliminated

When switching back to tank use:

- Turn off the mains supply

- Disconnect the hose
- Switch the pump back on
- Confirm correct water tank selection if a change valve is fitted

Disconnecting from Mains Water

When disconnecting:

- Turn off the water supply at the park outlet
- Open a tap briefly to relieve pressure
- Disconnect the hose from the camper
- Store the hose clean and dry

Do not leave the camper connected to mains water unattended for extended periods unless all fittings are secure and compliant.

Inspection and Maintenance

Austrack recommends periodic inspection of:

- The Seaflo water inlet for debris or damage
- Hose threads and sealing washers
- Signs of leaks at fittings or inside compartments

Any leaks or pressure issues should be addressed before continued use.

IMPORTANT NOTICE

The mains water connection is designed for **regulated town water supplies only**. It must not be connected to unregulated pumps, bore systems, or high-pressure sources.

Damage caused by incorrect connection, excessive pressure, or running the water pump while connected to mains water may not be covered under 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.

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.

Shower Awning

The Stockton range is equipped with a **fold-out shower awning**, providing a private and enclosed space suitable for showering, changing, or general use at the campsite. The awning is designed for external deployment and is constructed to withstand outdoor conditions while maintaining ease of setup and pack-down.

In function, the shower awning operates similarly to those fitted to Hybrid caravans; however, due to its mounting position on the **side of the roof structure**, its operation is directly influenced by the position of the camper roof.

Mounting and Access

The shower awning is mounted to the **side of the roof assembly**, meaning its height and accessibility change depending on the roof position.

Because of this:

- When the roof is lowered, the awning will sit higher relative to ground level
- Access may require a **step or ladder** depending on user height and model configuration
- The awning may be easier to deploy **before the roof is fully raised**, depending on conditions

Users should assess the most practical deployment method based on the current setup stage and accessibility.

Deployment

To deploy the shower awning:

- Unclip and unzip the outer awning cover
- Fold the awning outward from the camper body
- Allow the frame to extend fully into position
- Unroll or drop the shower walls as required

Ensure the awning is fully extended and the structure is stable before use.

Depending on conditions:

- Peg out any lower edges or straps where provided
- Allow adequate clearance for full enclosure

Operational Considerations

Due to the roof-mounted configuration:

- The awning height will vary depending on roof position
- Care should be taken when deploying at height
- Ensure footing is stable if using a ladder or step

The awning must only be deployed when:

- The camper is stationary
- The roof is stable and not in motion

Do not attempt to operate the awning while raising or lowering the roof.

Pack Down Procedure

Before packing down:

- Ensure the awning is clean and free of debris
- Allow the fabric to dry where possible
- Fold all walls and material inward neatly
- Retract the awning frame back into its housing
- Secure the outer cover and fasten all clips

Ensure no fabric is caught or protruding before securing.

Storage and Maintenance

To maintain the shower awning in good condition:

- Allow the awning to dry before long-term storage
- Clean with mild detergent and water only
- Avoid harsh chemicals or abrasive cleaning methods
- Inspect hinges, fabric, and mounting points periodically

Moisture left in the awning during storage may result in mould or material deterioration.

IMPORTANT NOTICE

- The shower awning is mounted to the roof and will change height during setup
- Access may require a step or ladder depending on roof position
- The awning should only be deployed when the camper is stable and stationary
- Do not operate the awning while the roof is being raised or lowered

Incorrect use, improper pack-down, or forcing components may result in damage not covered under warranty.

External Shower

The Stockton range is equipped with an **external shower system**, providing a dedicated outlet for water supply during campsite use. This system is designed to support showering, rinsing, cleaning equipment, and general outdoor use, operating as part of the camper's pressurised water system.

The external shower is housed within a **sealed service compartment**, which also contains additional water system components, including the **water tank changeover valve**. As such, this compartment serves as a central access point for both **water delivery and supply management**.

The system operates in a similar manner to those fitted to Hybrid caravans, however correct operation, inspection, and maintenance are required to ensure ongoing reliability and hygiene.

Shower Compartment

The external shower is located within a **dedicated access compartment**, designed to protect internal plumbing components while providing convenient user access.

Within this compartment, users will typically find:

- External shower outlet connection
- Hot and cold water controls (where applicable)
- Water tank changeover valve
- Associated plumbing fittings and connections

The compartment should remain:

- Clean and free of debris
- Dry when not in use
- Properly sealed when closed

Regular inspection of this area is recommended to ensure that all components remain secure and free from contamination or damage.

Water Tank Changeover Valve

The external shower compartment also houses the **water tank changeover valve**, which allows selection between available freshwater tanks.

The valve is manually operated and determines:

- Which tank supplies water to the system
- How water usage is distributed across tanks

When operating the valve:

- Ensure it is moved fully into the selected position
- Avoid leaving the valve between positions
- Confirm water flow is consistent after selection

Incorrect positioning may result in:

- Restricted or inconsistent water flow
- Uneven tank usage
- Loss of supply if a tank runs empty

Shower Operation

The external shower operates using the camper's **12 V pressurised water system**.

To use the shower:

- Connect the shower hose securely to the outlet
- Turn the water pump ON
- Adjust hot and cold controls as required (if hot water is available)
- Open the shower head control to initiate water flow

The system operates on demand, meaning:

- The pump activates when the shower is opened
- The pump stops when the shower is closed

Consistent water pressure depends on:

- Adequate tank level
- Proper pump operation

Correct system configuration

Operational Considerations

When using the external shower system:

- Monitor water consumption, particularly during off-grid use
- Be aware of grey water tank capacity, as all wastewater must be contained
- Avoid excessive run time where supply is limited

Because the system is externally located:

- Ensure hoses are not under tension or strain
- Prevent connections from being exposed to unnecessary impact or damage
- Avoid leaving the system pressurised when not in use

Routine Inspection and Maintenance

Regular inspection of the external shower system will help prevent faults and extend service life.

Owners should periodically check:

- Hose connections for leaks or damage
- Fittings and seals for wear or deterioration
- Tap controls for smooth operation
- Compartment condition (cleanliness and dryness)
- Changeover valve position and operation

After extended use or exposure to dirt, sand, or salt:

- Rinse the compartment and fittings with clean water
- Dry components before storage

If the system is not used for extended periods:

- Operate periodically to maintain seal condition

Flush with clean water to prevent stagnation

Environmental Considerations

The external shower system produces wastewater that must be managed responsibly.

Stockton caravans are fitted with a **grey water tank**, meaning:

- All wastewater from the shower is collected onboard
- Direct discharge to the ground is not standard operation

When using the system:

- Avoid excessive water use where disposal facilities are limited
- Use biodegradable soaps and cleaning products where possible
- Prevent contaminants (oils, chemicals, food waste) entering the system

Grey water should only be disposed of at **approved dump or disposal points**, in accordance with local regulations and campsite rules.

Failure to manage wastewater responsibly may result in:

- Environmental harm
- Odours or hygiene issues

Breach of campsite regulations

Troubleshooting

Issue	Possible Cause	Recommended Action
No water flow	Pump off or no power	Check pump switch and battery supply
	Empty water tank	Refill or change tank via valve
	Changeover valve incorrectly positioned	Re-select correct tank
Low or inconsistent pressure	Air in system or partial blockage	Run system to clear air, check hose
	Restricted flow in hose	Inspect for kinks or debris
Water not hot	Hot water system not operating	Check HWS status
	Temperature not set correctly	Adjust controls
Leaking connections	Loose fittings or worn seals	Tighten or inspect seals
Pump cycling rapidly	Leak or pressure loss	Inspect system for leaks
Grey water filling quickly	Excessive water use	Reduce usage and empty tank

After Use

After using the external shower:

- Turn off the pump or water supply
- Disconnect the hose if required
- Allow hoses to drain fully
- Store hoses neatly to prevent kinking
- Close and secure the compartment

Before storage:

- Ensure all components are dry

- Remove any residue or debris from the compartment

IMPORTANT NOTICE

- The external shower system relies on correct tank selection and a functioning pressurised water system
- The changeover valve must be fully engaged in the selected position
- All wastewater is collected in the grey water tank and must be disposed of appropriately
- Regular inspection and maintenance are required to maintain system reliability

Damage caused by misuse, poor maintenance, incorrect valve operation, or failure to manage wastewater responsibly may not be covered under warranty.

Hot Water System Ventilation

The Stockton range is equipped with a **built-in hot water system (HWS)**, typically utilising the WLF unit, designed to provide a reliable and on-demand supply of hot water for the external shower and associated outlets. The system is permanently installed within the caravan and integrates with the onboard water supply and LPG gas system to deliver consistent hot water during campsite use.

The hot water system draws water from the selected onboard tank, heats it via gas operation, and supplies it through the pressurised plumbing system. As a fixed installation, it requires correct operation, regular inspection, and appropriate maintenance to ensure safe performance, efficient heating, and reliable operation under varying conditions.

General Ventilation Requirements

Correct ventilation is critical for safe operation of the WLF hot water system. Ventilation is required to:

- Supply adequate combustion air
- Allow exhaust gases and heat to dissipate safely
- Prevent overheating of internal components

To ensure safe operation:

- Ventilation openings must **never be covered, blocked, or restricted**
- No items are to be stored against or inside ventilation areas
- Vent openings must be kept clear of dust, mud, leaves, insects, and debris

Operating the hot water system without proper ventilation is unsafe and may lead to system damage, faults, or hazardous conditions.

WLF Hot Water System Ventilation Design

The WLF hot water system uses a **built-in ventilation arrangement** that forms part of the appliance access door.

Key features include:

- A ventilation grille integrated into the hot water system access door
- A fixed grille that prevents ingress of debris or foreign objects
- No removable external vent cover

⚠️ **The WLF hot water system access door must remain CLOSED during operation.**

The door is designed to:

- Allow correct airflow through the integrated vent grille
- Provide appropriate exhaust and heat dissipation
- Protect internal components from weather and contamination

The door should only be opened for inspection, servicing, or maintenance and must be securely closed before operating the hot water system.

Inspection and Maintenance of Ventilation Areas

To ensure continued safe operation, ventilation areas should be inspected regularly.

Austrack recommends:

- Visually inspecting the ventilation grille for blockages

- Removing dust, insects, or debris carefully
- Ensuring the access door opens and closes freely
- Checking that seals and grilles remain intact and undamaged

If any of the following are observed, the hot water system should be inspected before further use:

- Excessive soot or heat discolouration
- Corrosion around the vent area
- Damaged or loose grilles
- Signs of overheating or restricted airflow

Travel and Storage Considerations

Before travelling or storing the camper:

- Ensure the WLF hot water system access door is **fully closed and latched**
- Confirm that no equipment, bags, or accessories are stored against the ventilation area
- Ensure the ventilation grille is unobstructed

Never travel with hot water system access doors open or unsecured

Relationship to the Hot Water System Section

This section covers **ventilation requirements only**.

For detailed information relating to:

- Hot water system operation
- Ignition and shutdown procedures
- Gas supply requirements
- Maintenance and servicing instructions
- Fault indication and troubleshooting

Refer to the **Hot Water System** section later in this Owners Manual.

IMPORTANT SAFETY NOTICE

Hot water systems operate at high temperatures and involve combustion processes. Restricting ventilation or operating the system with incorrect airflow presents serious safety risks.

Always ensure that ventilation requirements specific to the **WLF hot water system** is fully understood and complied with before operation.

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Interior

The interior of your Austrack camper is designed to provide a functional, comfortable, and efficient living space once the camper is set up at camp. Interior components are arranged to maximise usable space while supporting sleeping, climate control, and day-to-day activities during travel and extended stays.

Depending on model and configuration, the interior may include foam mattresses, climate control systems, heating appliances, removable or convertible furniture, and internal structural components used during setup and pack-down. Some interior features serve multiple purposes and may require reconfiguration between travel mode and camp mode.

Correct setup, operation, and care of all interior components are essential for comfort, safety, and long-term durability. Owners should familiarise themselves with interior layouts and understand how components interact during use, particularly where items fold, relocate, or support other interior features.

This section of the Owners Manual provides operating guidance, safety information, and owner-level care advice for interior components fitted to the camper. Each relevant subsection should be read carefully before use, especially when configuring sleeping arrangements, operating climate control systems, or handling internal support structures.

Mattress

All Stockton caravans are fitted with **foam mattresses**, selected specifically to suit the **slide-out bed design and compact storage requirements** of the Stockton range. Foam construction provides an effective balance between comfort, durability, and reduced storage volume, allowing mattresses to be stored efficiently within the camper without compromising sleeping performance.

Unlike folding camper designs, Stockton mattresses are not required to fold as part of the pack-down process. Instead, they remain in position on the slide-out bed bases, with overall system design allowing the sleeping areas to retract for travel.

Mattress layouts, sizes, and configurations will vary between models and sleeping areas. Owners should familiarise themselves with the mattress arrangement fitted to their specific model to ensure correct setup, use, and ongoing care.

This section outlines mattress construction, model-dependent configurations, proper usage, and cleaning and maintenance requirements.

Mattress Construction and Design

All mattresses fitted to Stockton caravans share the following design characteristics:

- Foam construction
- Designed for fixed positioning on sliding bed platforms
- Optimised for compact storage within the camper body

Foam mattresses are used due to their ability to maintain comfort while remaining lightweight and space-efficient. While they do not require folding during normal operation, they are not designed to be:

- Sharply bent
- Tightly rolled
- Compressed under heavy or uneven loads

Improper handling may affect the internal foam structure and reduce long-term comfort.

Mattress Retention and Positioning

Mattresses in the Stockton range are generally retained by the bed platform design and surrounding structure. Depending on configuration, retention straps may be present to assist with positioning during travel.

Where straps or securing features are fitted:

⚠️ Before sleeping, ensure any straps, clips, or securing components are not positioned beneath the mattress surface.

- Release or reposition straps where required
- Ensure no hard components remain between the mattress and sleeping surface

Failure to do so may result in:

- Pressure points
- Reduced comfort

- Uneven sleeping surfaces

Model Specific Mattress Configurations

Mattress configurations vary depending on the Stockton model and layout. These may include:

- Forward sleeping areas
- Rear slide-out beds
- Multi-bed arrangements with different sizing between zones

Some configurations may incorporate additional infill sections or cushions to complete the sleeping surface.

Owners should:

- Ensure all mattress components are correctly positioned
- Confirm all sections are laid flat and aligned
- Only use mattresses in their intended configuration

Mattress Setup and Use

When preparing sleeping areas:

- Ensure mattresses are fully supported by the bed base
- Check that all sections are laid flat and correctly aligned
- Install any infill pieces where applicable
- Confirm that no straps, hardware, or obstructions are beneath the mattress

Mattresses should never be:

- Forced into position
- Twisted or distorted
- Used outside of their intended layout

Correct setup ensures both comfort and long-term material durability.

Cleaning and Routine Care

Regular cleaning and maintenance will extend mattress life and maintain hygiene.

Basic Cleaning

Austrack recommends:

- Cleaning using mild detergent and fresh water
- Wiping with a damp cloth only
- Allowing the surface to dry completely before use or storage

Do not:

- Soak the mattress
- Use high-pressure cleaning equipment
- Use steam cleaners or harsh chemicals

These methods may damage the foam structure and internal adhesives.

Moisture Management and Condensation

Foam mattresses are sensitive to moisture and require proper ventilation.

To reduce moisture build-up:

- Allow mattresses to air regularly
- Lift or ventilate bedding during extended stays
- Dry bedding promptly after condensation or humid conditions
- Avoid enclosing damp materials within the sleeping area

If a mattress becomes wet:

- Allow it to dry completely before use or storage
- Increase airflow until all moisture is removed

Packing away damp materials may lead to:

- Mould or mildew
- Odour development

- Long-term material damage

Storage and Pack Down Considerations

During pack-down:

- Ensure mattresses remain correctly positioned on slide-out bases
- Confirm all bedding and surfaces are dry
- Avoid trapping or compressing the mattress with loose items
- Check for obstructions before retracting bed platforms

Because Stockton mattresses do not fold, care should be taken to ensure they sit correctly within the available storage space when the bed is retracted.

Mattress Protection

Austrack strongly recommends:

- Using mattress protectors
- Using fitted sheets that remain secure during movement
- Avoiding placing sharp objects or heavy loads on mattress surfaces

Protective covers assist with managing:

- Condensation
- Spills
- General wear over time

IMPORTANT NOTICE

Austrack foam mattresses fitted to Stockton caravans are designed specifically for slide-out bed configurations and compact storage systems.

Damage caused by:

- Improper storage
- Moisture exposure

- Excessive compression
- Incorrect use of securing components

may not be covered under warranty.

Always follow correct setup, ventilation, and storage practices to maintain mattress performance and longevity.

Internal Table and Bed Conversion

Austrack Hard Floor camper trailers are fitted with a **multi-purpose internal table system** designed to serve three functions:

- As a **table** for dining or general use
- As a **base component** of an additional sleeping configuration
- As a **central stacking platform** during transport and pack-down

An important point to understand is that **bed mode and transport mode are essentially the same configuration**. The difference lies only in what is packed **on and under the table** during transport. Correct handling of the table, supports, and adjustable arms is critical for safety, comfort, and reliable pack-down.

Internal Table Construction and Mounting

The internal table is normally:

- Mounted to a **vertical internal panel beneath the seating area**
- Supported by a **detachable, adjustable table arm**
- Able to pivot when configured for table use

The adjustable arm:

- Is required **only when the table is being used as a table**
- Must be **fully removed** for bed mode and transport mode

- Is not designed to support body weight or side loads

The table must **never remain attached to the arm** when converting to a bed or packing the camper down.

Detaching the Table and Adjustable Arms

Before converting to **bed mode or transport mode**, the adjustable arms must be removed completely.

To detach the arms correctly:

1. Locate the **tightening handle** on the adjustable arm
2. Rotate the handle **anti-clockwise** to loosen
3. Once loosened, the arm sections will **slide apart easily**
4. Remove the arm fully and store it securely

The arm must be:

- Completely removed
- Stored so it cannot move or rattle during travel

⚠️ The adjustable arm **must be installed** when using the table as a table, and **must be removed** for bed or transport configurations.

Transport Mode vs Bed Mode (Important Concept)

It is important to understand the relationship between transport and bed configurations:

- **Transport mode and bed mode use the same base configuration**
- The table sits on its support points in both cases
- The difference is only what is stacked above and below it

In bed mode:

- The table sits on its supports
- An infill cushion is placed on top
- The area is used as a sleeping surface

In transport mode:

- The table remains in the same position
- Cushions, mattresses, and loose items are **packed underneath and on top**
- Everything is stacked deliberately to allow correct camper closure

This process requires careful placement and is best described as **methodical and very much a game of Tetris**.

Bed Base Setup Using the Table

Once the arms have been removed, the table is used as part of the **bed base**.

The interior includes:

- **Two fixed slats** positioned just forward of the couch cushions

To set up the bed:

- Place the table flat onto the two slats
- Ensure it sits evenly and securely
- Position the **supplied infill cushion** on top of the table
- Align the infill cushion flush with the couch cushions

Load Sharing and Weight Limits (Critical)

⚠ **The internal table is NOT a load-bearing structure in any configuration.**

When used as a bed base:

- Body weight is distributed between:
    - The table surface
    - The support slats
    - The couch structure behind
- The table alone does **not** support sleeping weight

Important restrictions:

- Do **not** jump on the table
- Do **not** sit, stand, or lean on the table in table mode
- No physical or high-movement activities when in bed mode
- **Only one person is recommended** to sleep on this bed configuration

Exceeding these limits may lead to damage or structural failure.

Returning to Table Configuration

When converting back to table use:

1. Remove the infill cushion
2. Lift the table off the support slats
3. Reassemble the adjustable arm sections
4. Tighten the arm using the handle (clockwise)
5. Reattach the table to the arm and confirm secure pivoting

The table must **never be used without the arm installed** in table mode.

Pack Down and Transport Considerations

During pack-down:

- The table remains in bed-base position
- Cushions, mattresses, and gear are stacked around it
- Everything must be placed **in a precise order**

Austrack strongly recommends:

- Packing the same way every time
- Taking photos during the first pack-down
- Using these photos as a reference to avoid setup issues later

Incorrect packing may prevent the camper from closing properly.

Inspection and Maintenance

Regular inspection is recommended for:

- Table surface condition
- Support slats
- Adjustable arm threads and handles
- Mounting locations on the vertical panel

If the table does not sit flat, feels unstable, or shows damage, it should not be used until inspected.

IMPORTANT NOTICES

- The adjustable arm **must be removed** for bed and transport mode

- The adjustable arm **must be installed** for table use
- The table itself is **not load-bearing**
- One person sleeping on the table bed is recommended
- Incorrect use may result in damage not covered under warranty

Following the correct procedures ensures safe use, proper pack-down, and a comfortable interior setup.

Internal Poles – Setup and Pack Down

Stockton campers utilise a **reduced internal pole system** compared to traditional Hard Floor campers, however these poles remain critical to maintaining canvas tension, structural support, and overall tent shape during use.

The system is designed around a **primary U-shaped frame structure**, with additional internal support provided by a **locking centre pole assembly**. Correct installation and removal of these components is essential for proper setup, safe operation, and smooth pack-down of the camper.

Structural U-Shaped Poles

Stockton campers are fitted with large **U-shaped structural poles**, which form the primary support structure for the sleeping and canvas area.

Configuration varies by model:

- **Stockton X7 / XE:**
    - Two U-shaped poles (one at each slide-out bed)
- **Stockton X3:**
    - One U-shaped pole (single slide-out bed configuration)

Function and Operation

The U-shaped poles:

- Form the main structural frame for the canvas
- Support the tent roof and sleeping area
- Provide the base structure for additional pole installation

During setup:

- The bed platform is slid outward
- The U-shaped pole is positioned
- The canvas is pulled over the top of the pole structure

This creates the primary shape of the tent and establishes the structure required for the remaining support system.

Centre Support Pole (Dogleg Assembly)

In addition to the U-shaped poles, Stockton campers utilise a **central support pole**, which provides additional tension and stabilisation to the structure.

This pole has the following characteristics:

- **Dogleg (angled) design**
- Mechanical locking interface at the roof
- Clamp-style connection to the U-shaped pole

Mounting System

The centre pole connects at two points:

1. **Lower Connection (U-Pole Clamp)**
    - One end clamps securely onto the U-shaped pole
    - This provides a fixed base point
2. **Upper Connection (Roof Track System)**
    - The opposite end features a **bolt-style fitting**

- This fitting slides into a **track within the roof structure**
- The bolt is then moved into a **locking position**, preventing movement

Once engaged:

- The pole is locked in place
- Movement or dislodging is prevented
- Structural tension is stabilised across the canvas

Critical Installation Sequence

Correct installation order is essential for proper operation.

During Setup

Before installing the centre pole:

1. Fully deploy the slide-out bed
2. Position the U-shaped pole correctly
3. Pull the canvas over the pole structure
4. Ensure all canvas panels are aligned and zipped

Only then should the centre support pole be installed.

Installing the Centre Pole

- Position the clamp end onto the U-shaped pole
- Align the bolt fitting with the roof track
- Insert the bolt into the track
- Slide into the locking position
- Ensure the pole is fully engaged and secure

⚠️ Do not attempt to tension or force the pole into position if alignment is incorrect.

Canvas Alignment Requirements

As with all canvas systems:

- All doors, windows, and zips must be **fully closed before tensioning poles**

This ensures:

- Proper canvas alignment
- Smooth zip operation
- Even tension distribution

Incorrect alignment may result in:

- Misaligned zips
- Uneven tension
- Difficulty closing panels

Pack Down Procedure for Internal Poles

Before closing the camper:

1. Ensure all canvas openings are fully zipped closed
2. Remove the centre support pole completely
3. Carefully remove the bolt from the roof track
4. Unclamp the pole from the U-shaped frame
5. Store the pole securely
6. Lower and reposition the U-shaped poles as required
7. Proceed with normal pack-down sequence

Critical Requirement

⚠️ The centre support pole must be removed before pack-down.

Failure to remove it may:

- Prevent camper closure
- Damage the roof or track system
- Bend or deform the pole
- Cause canvas damage

Pole Handling and Damage Prevention

Internal poles must be handled carefully due to their structural role.

Improper handling may result in:

- Bent poles
- Damage to clamp mechanisms
- Faults in the roof track system
- Loss of structural integrity

Poles should:

- Be installed gradually without force
- Be aligned before locking
- Never be forced into the track or clamp system

Inspection and Care

Regular inspection is recommended.

Check for:

- Smooth operation of the roof track
- Secure locking of the bolt fitting
- Proper function of clamp connections

- Straightness and condition of poles
- Signs of wear or deformation

After use in wet or dusty conditions:

- Wipe poles clean
- Dry all components
- Ensure the roof track is free of debris

IMPORTANT NOTICES

- U-shaped poles form the primary structure and must be installed correctly
- The centre support pole must be installed and removed in the correct sequence
- The bolt fitting must be fully seated and locked in the roof track
- The centre pole must be removed before pack-down
- Canvas must be aligned before pole installation

⚠️ Forcing poles, incorrect sequencing, or failing to remove components before closing may result in damage not covered under warranty.

Stockton Slide Out Beds

The Stockton range is fitted with **slide-out bed systems**, designed to expand the sleeping area during setup and retract compactly for travel. These bed platforms operate on a guided slide mechanism and are secured in place using a **spring-loaded locking pin system**.

Correct operation of the slide-out beds is essential to ensure smooth movement, proper alignment, and to prevent interference with the roof and internal components of the camper.

Slide Mechanism and Locking System

Each slide-out bed is secured in the travel position using a **spring-loaded retaining pin**, located within the slide rail mechanism.

This pin:

- Locks the bed in place during travel

- Prevents unintended movement of the slide assembly
- Must be manually disengaged before the bed can be extended

Extending the Bed

Operating Requirements

Before extending any slide-out bed:

- The **roof must be fully raised**
- Internal components must be clear of the slide path

⚠️ The beds cannot be operated with the roof in a partially raised or closed position.

To Extend the Bed

- Locate the **spring-loaded locking pin** on the slide mechanism
- Pull the pin upward to release the lock
- While holding the pin disengaged, begin sliding the bed outward
- Release the pin once the bed begins moving
- Continue extending until the bed reaches its full position

Ensure the bed is:

- Fully extended
- Properly seated in its end position

Retracting the Bed

Operating Requirements

Before retracting the beds:

- All bedding and loose items must be cleared
- Internal fixtures must be correctly positioned

Critical Internal Requirement

⚠️ Internal countertops must be in the **lowered position** before the bed can be retracted.

Failure to do so may result in:

- Interference with the slide mechanism
- Damage to internal components
- Obstruction preventing full closure

To Retract the Bed

- Ensure the slide path is clear
- Push the bed inward along the slide rails
- Continue until the bed is fully seated in the travel position
- Confirm the **locking pin re-engages automatically**

Roof and Bed Interaction

The slide-out beds are directly linked to roof position, and must be operated in the correct sequence.

Key Requirements

- Beds **must not be extended** unless the roof is fully raised
- Beds **must be fully retracted** before the roof is lowered

⚠️ Attempting to lower the roof with beds extended may result in:

- Structural interference
- Damage to roof or bed components
- Misalignment of the camper structure

General Operating Behaviour

The following characteristics are considered normal:

- Moderate resistance when sliding the beds due to structural seals and alignment

- Automatic engagement of the locking pin when fully retracted
- Requirement for controlled, straight movement during operation

Beds should always be moved:

- Smoothly
- Without twisting or uneven force

Troubleshooting

Issue	Possible Cause	Recommended Action
Bed will not slide out	Roof not fully raised	Raise roof completely
	Locking pin not disengaged	Pull pin fully before sliding
Bed difficult to move	Misalignment or resistance	Reposition and slide evenly
Bed will not retract fully	Countertops not lowered	Lower all internal countertops
	Obstruction in slide path	Remove obstruction
Bed does not lock	Pin not engaging	Confirm full retraction

IMPORTANT NOTICE

- The roof must be fully raised before extending beds
- Beds must be fully retracted before lowering the roof
- Locking pins must be used correctly to secure beds during travel
- Internal components must be correctly positioned before retraction

⚠️ Do not force the slide-out beds if resistance is encountered. Incorrect operation may result in damage not covered under warranty.

Internal Kitchen and Appliances

Austrack caravans and hybrid campers are equipped with a range of internal kitchen appliances designed to provide safe, practical, and reliable cooking and food storage while travelling. Depending on model and layout, this may include a refrigerator, internal gas stove top, built-in cooker, microwave, or other fixed appliances intended for use inside the caravan.

All internal appliances fitted by Austrack are selected specifically for recreational vehicle use and are installed to comply with relevant Australian gas, electrical, and safety standards. While these appliances are designed to operate in mobile environments, their correct use relies on proper ventilation, electrical supply, and adherence to safety guidelines.

Because appliance types, brands, and control layouts may vary between models, owners must familiarise themselves with the specific appliances fitted to their vehicle. This section of the Owners Manual provides **appliance-specific operating instructions, safety information, electrical and gas considerations, and owner-safe troubleshooting guidance** for all internal kitchen appliances fitted by Austrack.

Where appliances are not fitted to a particular model, the corresponding subsection does not apply.

Internal Fridges

Austrack Stocktons are fitted with high-quality **12-volt compressor refrigerators**, selected for reliability, efficiency, and suitability for Australian touring conditions. These refrigerators are designed to operate from the vehicle's onboard electrical system and provide consistent cooling performance during both on-road and off-road travel.

This section of the Owners Manual provides **operating guidance, safety information, troubleshooting assistance, and fault explanations** for all internal fridge models currently used by Austrack.

General Fridge Safety

All internal refrigerators fitted by Austrack are designed **solely for the storage of food and beverages**. They must not be used for any other purpose.

Safe operation of any fridge relies on adequate ventilation, correct electrical supply, and proper use. Owners must not attempt to modify or repair refrigerator components outside of basic cleaning and inspection.

Safety Guidelines

The following rules apply to **all internal fridge models**, regardless of brand:

- Do not store flammable, explosive, or corrosive materials
- Do not store aerosol cans, fuels, solvents, or electrical appliances
- Do not store live animals inside the refrigerator
- Children must not play with fridge doors or controls
- Cleaning and maintenance must only be carried out by adults

All refrigerators contain a **sealed refrigerant system under pressure**. This system must never be opened or interfered with. Refrigerant and electrical repairs must only be performed by authorised service technicians.

ICECO YCD SERIES Refrigerators

ICECO YCD Series refrigerators are 12/24-volt compressor fridge-freezers featuring digital temperature control and built-in battery protection. These fridges are designed for off-grid use and automatically protect the vehicle battery from excessive discharge.

The digital control panel allows precise temperature adjustment and provides clear error codes should a fault occur.

Normal Operation

The refrigerator is switched on using the **POWER** button on the control panel. Temperature is adjusted using the ▲ and ▼ buttons. Changes are shown directly on the digital display.

ICECO fridges may include Night Mode, which reduces operating noise but can slow cooling performance.

Battery Protection System

ICECO refrigerators continuously monitor input voltage. If voltage drops below the selected protection threshold, the fridge will shut down automatically. Once voltage recovers, normal operation can resume.

Battery protection levels are user-selectable and designed to balance cooling performance with battery longevity.

ICECO Error Codes

If a fault occurs, the ICECO control panel will display an error code.

ICECO – Error Code Table

Error Code	Description	Likely Cause
E1	Low Voltage	Battery voltage too low
E2	Fan Fault	Fan not operating correctly
E3	Compressor Start Failure	Compressor unable to start
E4	Compressor Overload	Excessive load or high ambient temperature
E5	Temperature Sensor Fault	Faulty or disconnected sensor
E6	Controller Over-Temperature	Poor ventilation or sustained high temperatures

Troubleshooting

If the refrigerator is not cooling correctly:

- Confirm the fridge is switched on
- Check battery voltage and charge level

- Increase the temperature setting and allow time to stabilise
- Ensure ventilation paths are not obstructed

If error codes persist, professional servicing is required.

When To Seek Professional Service

Stop using the refrigerator and contact an authorised service technician if:

- The refrigerator repeatedly shuts down
- Fault codes persist after basic checks
- The refrigerator does not cool at all
- Unusual smells, excessive heat, or abnormal noises are detected

IMPORTANT NOTICE

This Owners Manual provides **operational guidance and owner-safe troubleshooting only**. All refrigerator electrical repairs and refrigerant servicing must be carried out by **qualified and authorised technicians.**

Internal Built In Gas Cooker

Some Austrack caravan models are fitted with a **built-in internal gas cooker**, comprising a stove top (hotplate), oven, and grill in a single integrated unit. This appliance is designed specifically for use in recreational vehicles and operates using a combination of **LPG gas and low-voltage or mains electrical power**, depending on configuration.

Because internal gas cooking introduces additional safety considerations, this appliance is fitted only to select models and must be used strictly in accordance with the instructions contained in this manual. Correct ventilation, supervision, and safe operation are essential at all times.

This section provides **complete operating guidance, safety information, electrical function descriptions, and owner-safe troubleshooting** for the MC101 and MC102 cooker units.

Intended Use and Safety Overview

This appliance is designed **only for cooking food**. It must not be used for heating the interior of the caravan or for any purpose other than its intended use.

The cooker generates heat, moisture, and combustion gases. Improper use may result in fire, injury, or unsafe air quality.

The following safety requirements **must always be observed**:

- Do not use or store flammable materials near the appliance
- Do not spray aerosols in the vicinity while the appliance is operating
- Do not modify the appliance in any way
- Do not leave cooking unattended, particularly when using oils or fats
- Accessible surfaces may become hot during use
- Young children must be kept well clear during operation

If the caravan is left unused for an extended period, Austrack recommends turning off the gas supply at the main gas cylinder.

Ventilation Requirements

This appliance must only be used in a **well-ventilated environment**.

Before operating the cooker:

- Ensure all fixed vents are unobstructed

- Open windows, roof hatches, or doors as required
- Use any fitted rangehood or extraction fan if available

Extended or intensive cooking may require **additional ventilation**, particularly when using the oven or grill.

Glass Lid (Where Fitted)

Some stove tops are fitted with a glass lid. The lid is designed to protect the cooking surface when not in use and is interlocked with the appliance for safety.

- Always fully raise the glass lid before igniting any burner
- Never operate the stove, oven, or grill with the lid closed
- Ensure burners are fully extinguished and cooled before closing the lid
- Remove all spills from the lid before opening

Glass lids may shatter if exposed to heat or if liquids are trapped on the surface while hot.

Control Knobs and Appliance Functions

The cooker control panel uses rotary knobs to control the various functions:

- Stove top (hotplate) burners
- Oven burner
- Grill burner
- Electric hotplate (where fitted)
- Electrical switches (ignition, oven light, fan where fitted)

Symbols printed on the control panel identify which function each knob controls. Flame intensity and temperature are adjusted by rotating the knob between high and low positions.

Stove Top (Hotplate) Operation

Cookware Selection

Correct cookware size ensures safe and efficient operation:

- Small burner: minimum 10 cm, maximum 20 cm
- Large burner: minimum 12 cm, maximum 20 cm

The flame must never extend beyond the edge of the pan. Pans must sit centrally and stably on the pan supports.

Igniting a Stove Top Burner

Electronic Ignition (Where Fitted)

1. Ensure the glass lid is fully open
2. Confirm there are no pans or objects on the burner
3. Turn the burner control knob to the ignition position
4. Press the ignition button while holding the knob in
5. Once lit, continue holding the knob briefly to stabilise the flame

Manual Ignition

If electronic ignition is unavailable:

1. Turn the knob to **high flame**
2. Hold the knob in and apply a match or gas lighter
3. Keep the knob pressed briefly once the flame is established

If ignition fails, check gas supply and cylinder level. If still unsuccessful, turn off the gas and contact an authorised service agent.

Flame Regulation

Once lit, the flame can be adjusted between high and low settings to suit the cooking task. Never leave the stove unattended during use.

Oven Operation

Safety Notes for Oven Use

- The oven must only be ignited **with the oven door fully open**
- Shelves and trays must be correctly positioned to avoid contact with the flame
- If the flame goes out, wait at least one minute before re-igniting

Electronic Ignition Oven

1. Open the oven door fully
2. Turn the oven control knob to the highest temperature setting
3. While holding the knob in, press the ignition button
4. Once lit, keep the knob pressed briefly to stabilise the flame

Manual Ignition Oven

If electronic ignition fails:

1. Open the oven door fully
2. Turn the control knob to maximum temperature
3. While holding the knob in, light the burner manually
4. Hold the knob briefly once ignition is achieved

Allow the oven to preheat before placing food inside.

Grill Operation

Important Grill Safety

- The grill must only be operated **with the door fully open**
- The grill heat shield must be pulled out during use
- Never operate the grill for longer than 25 minutes
- The grill is not designed to be used as an oven

Accessible parts become extremely hot during grill operation. Children must be kept well away.

Electronic Ignition Grill

1. Open the grill door fully
2. Turn the grill control knob to **high flame**
3. While holding the knob in, press the ignition button
4. Hold the knob briefly once lit to stabilise the flame

Manual Ignition Grill

If electronic ignition is unavailable:

1. Open the grill door fully
2. Turn the control knob to high flame
3. Hold the knob in and light the burner manually

Electrical Functions of the Cooker

Electrical Power Supply

Depending on configuration, the cooker may use:

- **12-volt DC power** (for ignition, lights, fan)
- **230–240 V AC power** (for electric hotplate or internal electrical components)

Electrical power does **not** provide heating for gas burners. It supports ignition, lighting, indicators, and auxiliary functions only.

Electronic Ignition System

Electronic ignition uses electricity to generate a spark at the burner. If electrical power is unavailable, **manual ignition remains possible** for all gas burners.

Oven Light (Where Fitted)

Some models include an oven interior light powered by electricity. The light is controlled via a dedicated switch on the control panel.

Always ensure the appliance is switched off before replacing the lamp.

Fan Function (Where Fitted)

Where fitted, an electric fan assists air circulation in the oven for more even cooking. The fan is powered electrically and does not operate independently of the oven flame.

Electric Hotplate (Where Fitted)

Some models include a single **electric hotplate**.

- Controlled by a numbered rotary dial (0–6)
- Position 0 = off
- Higher numbers increase temperature
- Indicator light illuminates when hotplate is on

Before first use or after long periods of inactivity, run the hotplate for 30 minutes on a low setting to remove moisture.

Only flat-bottom cookware should be used.

After Use

After cooking:

- Turn all control knobs to **OFF**
- Allow burners and surfaces to cool
- Turn off the gas supply if the appliance will not be used again that day

Cleaning and Maintenance

The cooker requires no routine maintenance beyond cleaning, but cleanliness is essential for safety.

Before cleaning:

- Turn off all burners
- Disconnect electrical power
- Allow appliance to cool fully

Cleaning guidelines:

- Use warm water and mild detergent only
- Do not use abrasive cleaners, steel wool, or harsh chemicals
- Do not use steam cleaners
- Avoid cold water on hot surfaces
- Remove pan supports carefully for cleaning

Annual servicing by authorised personnel is recommended.

Troubleshooting

Abnormal Operation

The appliance may require service if:

- Gas valves become difficult to turn
- Burners fail to ignite or stay lit
- Flames are unstable or irregular
- Gas smell is detected

If abnormal operation occurs:

1. Turn all controls off
2. Turn off the gas supply
3. Ventilate the area
4. Contact an authorised service agent

Servicing and Repairs

All servicing must be carried out by **authorised and licensed personnel only**.

Owners must not attempt to dismantle, adjust, or repair any part of the appliance. Unauthorised work may create serious safety risks and void warranties.

IMPORTANT NOTICE

This Owners Manual section provides **operating guidance and owner-safe information only**. Installation, gas work, and electrical servicing must be completed in accordance with Australian standards by qualified professionals.

Microwaves

The microwave oven fitted to the unit is a **compact, flush-mounted appliance designed specifically for RV and mobile environments**. It provides a convenient method of heating and cooking food using microwave energy while operating on standard **230–240V AC power**.

The unit is typically installed within cabinetry and secured for travel. It utilises either a **rotating turntable or flat plate system** (depending on model) to distribute heat more evenly during operation.

This appliance is intended for **general food heating and cooking only**. It must be operated correctly and safely to prevent damage, overheating, or user injury.

Key Specifications

The microwave installed may vary slightly by model; however, general specifications are as follows:

- Operating voltage: **230–240V AC / 50Hz**
- Output power: **approximately 700W–900W**
- Capacity: **20L–25L**
- Control system: **manual or digital touch controls**
- Turntable size: approx. **255–270mm (model dependent)**

These specifications make the unit suitable for reheating meals, defrosting food, and light cooking tasks.

Operating the Microwave

The microwave is designed for simple everyday use; however, correct operation is essential to ensure safe and effective performance.

Before using the appliance, it is important to ensure:

- The unit is connected to a suitable **240V AC power supply**
- The interior is clean and free of loose objects
- The door closes fully and securely

To operate the microwave:

- Place food in a suitable microwave-safe container

- Position the container centrally on the turntable (if fitted)
- Select the desired power level or cooking mode
- Set the cooking time
- Start the cooking cycle

Once complete, allow food to sit briefly before removing, as heat can continue to distribute internally.

Opening and Closing the Door

The microwave door is a safety-critical component and must always be used correctly.

When using the door:

- Open using the handle or release mechanism only
- Do not force the door open or closed
- Ensure the door fully seals before operation

The unit will not operate if the door is not securely closed.

Power Levels and Heating

The microwave may provide multiple power levels depending on the model.

When selecting a power level, the following should be considered:

- Higher power settings heat food more quickly
- Lower settings are suitable for defrosting or gentle heating
- Uneven heating may occur if food is not positioned correctly

To improve results:

- Stir or rotate food halfway through heating
- Use appropriately sized containers
- Avoid overfilling containers

Safe Use Guidelines

Approved Use

The microwave is designed specifically for heating and cooking food.

For safe operation:

- Use only microwave-safe containers
- Ensure food is evenly distributed within the container
- Allow steam to escape from covered items

Prohibited Use

Certain actions can cause damage or create safety risks.

The following must **not** be done:

- Do not operate the microwave empty
- Do not use metal containers or utensils
- Do not place sealed containers inside
- Do not heat flammable or volatile substances
- Do not attempt to dry items such as clothing

Failure to follow these restrictions may cause:

- Internal arcing or sparking
- Damage to the magnetron or internal components

Fire hazard or failure of the appliance

Ventilation and Operation Environment

The microwave generates heat during operation and requires adequate airflow.

To ensure proper performance:

- Do not block ventilation openings

- Do not operate in confined spaces without airflow
- Ensure surrounding cabinetry allows heat dissipation

Restricted airflow may result in:

- Overheating
- Reduced performance
- Premature component failure

Cleaning and Maintenance

Regular cleaning is required to maintain hygiene and proper operation.

Before cleaning:

- Turn off and disconnect the power supply
- Allow the microwave to cool

To clean:

- Wipe internal surfaces with a soft, damp cloth
- Use mild detergent if required
- Clean spills immediately

Do not:

- Use abrasive cleaners
- Use excessive water
- Allow moisture to enter electrical components

General Maintenance

The microwave is a sealed appliance and requires minimal maintenance.

To maintain performance:

- Keep the interior clean
- Ensure the door seal remains undamaged

- Check for debris around the turntable

If the appliance shows signs of damage or malfunction, it must not be used.

Troubleshooting

The microwave is designed for reliable operation; however, issues may occur due to incorrect use, power supply problems, or environmental factors.

Before assuming a fault, basic checks should always be performed.

Common Issues and Checks

If the microwave is not operating correctly, check the following:

- Confirm power supply is active
- Ensure the door is fully closed
- Check that the control settings are correct
- Ensure no incompatible items are inside

If the unit appears to run but not heat:

- Confirm a valid cooking program is selected
- Ensure appropriate power level is used
- Check that container material is suitable

When to Seek Service

The microwave must not be used if any of the following occur:

- The door does not close properly
- The unit produces sparks or abnormal smells
- There is no heating during operation
- The control panel is unresponsive

Only qualified technicians should perform repairs.

IMPORTANT NOTICE

The microwave is a **high-voltage appliance** and must always be used safely.

To ensure safe use:

- Never attempt to open or repair the unit
- Always use appropriate cookware
- Ensure proper ventilation at all times
- Disconnect power before cleaning

Failure to follow correct usage procedures may result in **damage, malfunction, or personal injury**.

Internal Ensuite – XE Models Only

Austrack Stockton XE models are fitted with a fully equipped **internal ensuite**, designed to provide a comfortable and self-contained hygiene space when travelling or set up at camp. The ensuite allows for showering, hand washing, and toilet use, all within a purpose-built, water-resistant environment.

This section covers the entire internal ensuite, including **shower operation, ventilation, drainage, toilet use, and general care**.

Shower Operation

The internal shower operates from the caravan's **pressurised fresh water system** and, when enabled, the onboard hot water system.

Before shower use:

- Ensure the caravan is parked on level ground
- Confirm the water pump is switched on (unless using mains water)
- Ensure sufficient water is available in the selected tank
- If hot water is required, confirm the hot water system is operating

⚠️ Water temperature may vary depending on other water usage within the caravan. Always test temperature before full use.

Shower Head and Hose Management

The internal shower is fitted with a flexible hose and handheld shower head, commonly mounted **high on the wall or ceiling** during use.

During use:

- Ensure the shower head is securely positioned
- Avoid allowing the hose to kink or catch on fittings

Stowing the Shower Head Before Travel

Before towing, and especially **before lowering the roof**:

- Remove the shower head from any overhead mount
- Lower it to its designated holder
- Ensure the hose is relaxed and not under tension

Failure to stow the shower head correctly can result in hose damage, roof interference, or internal damage.

Bathroom Ventilation – Roof Hatch and Light

Austrack internal ensuites are fitted with a **roof hatch vent**, typically incorporating a **built-in light**.

During shower use:

- Opening the roof hatch is strongly recommended
- Ventilation reduces condensation and moisture build-up

After showering:

- Leave the hatch open briefly to clear humidity

- Wipe down surfaces if required

Before travel:

- Ensure the roof hatch is fully closed and locked
- Ensure the light is switched off

Drainage and Water Management

In combined ensuite models:

- Shower water drains via the molded floor
- Some water overspray is normal

Do not obstruct floor drains or use excessive force cleaning drain areas.

Thetford Toilet System

Austrack Hybrid caravans are fitted with a **Thetford cassette toilet system**, designed to provide a hygienic, self-contained toilet solution while travelling or set up at camp. Depending on model specification and build year, your caravan will be equipped with either a **Thetford C200 Series** or a **Thetford C402 Series** toilet.

While there are minor differences in appearance and layout between these models, their overall operation, maintenance requirements, and day-to-day use are fundamentally the same. Both systems utilise:

- A removable external waste cassette
- A sealed slide-valve mechanism
- A dedicated flush water supply
- Chemical treatment to control odours and hygiene

This section provides **complete, practical operating guidance** for normal use, cleaning, storage, and waste handling. Manufacturer manuals are available for further technical reference, but **all essential operating information is contained here**.

Understanding the Cassette Toilet System

The cassette toilet system is designed so that waste is collected in a **removable tank (cassette)** located beneath the toilet bowl. This cassette is accessed from the outside of the caravan and can be wheeled to an authorised dump point for hygienic emptying.

Key system features include:

- A **flush system** that draws water from the caravan's water tanks
- A **slide valve** that seals the bowl from the waste tank
- A **level indicator** that alerts when the waste cassette is nearing capacity

The toilet is designed for use **only when the caravan is stationary and level**.

Filling the Flush Water Tank

The toilet flush system uses a dedicated flush water reservoir, which must be filled before use.

To fill the flush water tank:

- Rotate the flush tank filling spout **90 degrees**
- Remove the **water filling extension**, normally stored beneath the handle nearest the emptying spout
- Remove the cap and place the extension onto the fill funnel
- Add the recommended amount of **Thetford fresh water additive**
- Fill the flush tank with **clean water**, taking care not to exceed the funnel height
- Remove the extension and return it to its original storage position

Using the correct flush additive helps keep the flush water fresh, improves rinsing performance, and reduces mineral build-up within the system.

Preparing the Waste Tank for Use

Before first use—or after emptying—the waste cassette must be prepared correctly.

To prepare the waste cassette:

- Open the external cassette access door
- Release the safety catch by pulling it upward
- Pull the waste tank outward until it stops
- Tilt slightly and remove the cassette fully
- Stand the cassette upright
- Rotate the emptying spout upward
- Remove the cap (which includes a measuring cup)
- Add the recommended amount of **Thetford toilet fluid**
- Add approximately **2 litres of clean water**, enough to cover the bottom of the tank
- Refit the cap securely
- Return the spout to its original position
- Slide the cassette back into place carefully
- Ensure the safety catch engages fully
- Close and lock the external access door

⚠️ **Important:**
Never add toilet fluid through the toilet bowl or via the slide valve. Doing so can cause seal damage and system malfunction.

Using the Toilet

Before using the toilet:

- Ensure the slide valve is fully closed
- Briefly press the flush button to add water to the bowl

To use the toilet:

- Open the slide valve by turning the handle **anti-clockwise**
- Use the toilet as normal

After use:

- Ensure the slide valve is fully open
- Flush the toilet by pressing the flush button for several seconds
  (Pulsing the flush button several times improves bowl rinsing)
- Close the slide valve fully after flushing

⚠️ Do not leave water standing in the bowl when the toilet is not in use. Standing water does not reduce odour and may cause spillage during travel.

Austrack recommends the use of **quick-dissolving toilet paper**, such as Thetford Aqua Soft, to minimise the risk of blockages and build-up.

Waste Tank Level Indicator

The waste cassette has a capacity of approximately **19 litres**.

When the **red indicator light** illuminates:

- Approximately **2 litres of capacity remain**
- This equates to around **2–3 toilet uses**
- Emptying should be planned as soon as practical

Do not allow the waste cassette to become over-full, as this can cause leaks or difficulty removing the cassette.

Emptying the Waste Tank

Waste cassettes must only be emptied at **authorised dump points**.

To empty the cassette:

- Ensure the slide valve is **fully closed**
- Open the external access door
- Release the safety catch and remove the cassette
- Remove the water filling extension and store securely
- Stand the cassette upright (handle at top, wheels at bottom)
- Release the handle and extend it fully
- Wheel the cassette to the dump point
- Rotate the emptying spout upward and remove the cap
- Hold the upper handle firmly
- Position your other hand to operate the **vent plunger**
- Point the spout downward and **press the vent plunger while emptying**

⚠️ The vent plunger must only be pressed once the spout is pointing downward to avoid splashing.

After emptying:

- Rinse the cassette thoroughly with clean water
- Rinse the slide valve area
- Re-prepare the cassette for use if required
- Reinsert the cassette and secure it

- Close and lock the access door

Preparing the Toilet for Long-Term Storage

If the toilet will not be used for an extended period, proper storage preparation is essential.

To prepare the toilet for storage:

- Completely drain the flush water tank using the drain tube
- Remove the tube from its clamp and pull it down carefully
- Allow all water to drain
- Return the tube to the clamp and reseat it in the upper plug
- Open the slide valve
- Flush until no water remains
- Close the valve blade
- Remove and empty the waste cassette
- Clean the cassette thoroughly
- Reinsert the empty cassette
- Leave the slide valve **open** during storage

Leaving the valve open prevents seal compression and helps maintain longevity.

Reference Information

Your caravan may be fitted with:

- **Thetford C200 Series**, or
- **Thetford C402 Series** toilet

Manufacturer manuals are available for additional technical reference; however, **all essential operating information has been provided above**.

IMPORTANT NOTICE

The toilet system is a hygiene-critical appliance. Incorrect use, poor maintenance, or improper disposal of waste may result in odour issues, component damage, or regulatory non-compliance.

Always use authorised dump points and follow the procedures outlined in this section.

This concludes the toilet segment of this Owners Manual.

Ensuite Cleaning and Care

To maintain hygiene and longevity of the ensuite:

- Use mild, non-abrasive cleaners only
- Avoid harsh chemicals that may damage surfaces
- Rinse surfaces after use where required
- Dry fittings and corners periodically

Avoid directing high-pressure spray at seals, fixtures, or joins.

Moisture Control and Best Practice

Bathrooms naturally generate humidity. To minimise moisture-related issues:

- Use ventilation during and after showering

- Avoid storing wet towels or mats long-term
- Dry the space before travel where practical

Good moisture management helps prevent odours, mould, and premature wear.

IMPORTANT NOTICE

The internal ensuite is designed for use **only when the caravan is stationary and level**. Improper use, inadequate ventilation, or failure to stow components correctly before travel may result in damage not covered by warranty.

Air Conditioning

Your Austrack camper may be fitted with a **Truma under-floor reverse-cycle air conditioning system**, purpose-built for use in caravans, campers, and hybrid campers where internal space efficiency, balanced weight distribution, and exterior durability are critical design requirements.

Unlike roof-mounted air conditioners, this system is mounted **beneath the camper floor** and distributes conditioned air internally via ducting. This design allows the camper roof to remain clear for other equipment, reduces overall vehicle height, and positions the air-conditioning mass low in the chassis for improved handling and stability.

The system is designed exclusively for **stationary operation while camping** and is intended to provide controlled interior comfort rather than rapid or extreme temperature correction.

System Type and Identification

The air conditioning system fitted to Austrack campers is the **Truma Saphir Comfort RC**, a **ducted, under-bunk / under-floor reverse-cycle air conditioning unit** designed specifically for mobile recreational vehicles.

This system provides:

- Active refrigeration-based cooling
- Reverse-cycle heat-pump heating

- Automatic dehumidification during cooling operation
- Internally ducted air delivery

The Saphir Comfort RC is a fully integrated climate control system engineered to operate reliably in compact living spaces under variable power and environmental conditions.

Technical Specifications

Electrical and Performance Specifications

Specification	Value
Nominal Supply Voltage	230–240 V AC
Cooling Capacity	2.4 kW
Heating Capacity (Heat Pump)	1.7 kW
Typical Operating Current	Approximately 4–6 A
Compressor Start Load	Higher momentary draw (normal operation)
Operating Modes	Cooling, Heating, Automatic, Fan Only

Physical Characteristics

Specification	Value
System Type	Under-floor / under-bunk
Weight	Approx. 23.5 kg
Air Distribution	Ducted internal outlets
External Airflow	Intake and exhaust beneath camper
Recommended Camper Length	Up to approx. 6.5 m (dependent on insulation and layout)

Reverse Cycle Heating Function

The Truma system incorporates a **reverse-cycle heat pump**, allowing it to provide both cooling and heating from the same unit. In heating mode, the system extracts thermal energy from the outside air and transfers it into the camper interior.

Reverse-cycle heating characteristics should be clearly understood:

- Heating output is strongest in **mild to cool conditions**
- Performance reduces as ambient temperatures drop
- The system is intended to supplement comfort, not replace dedicated heaters in extreme cold

Heating operation is ideal for early mornings, evenings, and seasonal transitions where moderate warmth is required.

Normal Operating Conditions

For correct and reliable operation, the air conditioner must be used under the following conditions:

- The camper is **fully set up**

- The camper is connected to a **stable 240 V mains power supply**
- Canvas doors, windows, and openings are **fully zipped closed**
- Internal air outlets and return paths are unobstructed
- External under-floor vents are clear of obstructions

The system is **not designed to operate**:

- While driving or in transit
- While the camper is closed for transport
- Without adequate mains power
- With restricted airflow or ventilation

Attempting to operate the system outside of these conditions will result in reduced performance or protective shutdown.

Power Supply Behaviour and Limitations

The Truma under-floor air conditioner is sensitive to supply quality, as expected of a high-efficiency compressor-based system.

Normal Behaviour Under Limited Power

When connected to lower-capacity or shared campground power supplies:

- Cooling or heating performance may be reduced
- Compressor cycling may increase
- Start-up delays may occur

These behaviours are **intentional protective functions** designed to prevent damage to internal components.

Automatic Protection Logic

The system is equipped with internal safeguards that may:

- Prevent immediate restart after shutdown
- Interrupt operation during voltage instability
- Reduce output to protect the compressor

These actions indicate correct system protection, not a fault.

Airflow and Ventilation Requirements

External (Under-Floor) Airflow

Because the system exchanges heat externally:

- All external vents beneath the camper must remain clear
- Mud, dust, sand, grass, or debris must not block airflow
- No storage items, accessories, or protective covers may obstruct the unit

Restricted external airflow can cause overheating, reduced efficiency, or automatic shutdown.

Internal Airflow

Internally:

- Duct outlets must not be covered by bedding, cushions, or gear
- Return air paths must remain open
- Outlet airflow must be free to circulate through the living space

Obstructed airflow is one of the most common causes of poor performance.

Temperature Control and Performance Expectations

Air conditioning performance is influenced by:

- Ambient outdoor temperature
- Solar exposure

- Camper insulation
- Frequency of door and window opening
- Internal layout and airflow

Cooling Mode Expectations

- Cooling is **progressive rather than instantaneous**
- Dehumidification occurs automatically
- Best results are achieved with minimal door opening and good shading

Heating Mode Expectations

- Heating output increases gradually
- Most effective in moderate conditions
- Not intended for extended operation in severe cold

Condensation and Drainage

During cooling operation, moisture is removed from the internal air as part of the dehumidification process.

Important points:

- Condensate water drains **externally beneath the camper**
- Water dripping under the camper during cooling is **normal**
- No internal water discharge should occur

Owners must ensure external drain paths remain clear and unobstructed.

Controls and User Interaction

The system is typically operated using:

- A **Truma infrared remote control**, or
- A **Truma CP Plus digital control panel** (if fitted)

Control functions generally include:

- Mode selection (cool, heat, auto, fan)
- Temperature adjustment in 1 °C increments
- Fan speed selection
- Timer and quiet/night modes

Noise and Vibration Characteristics

The under-floor mounting position results in:

- Reduced interior noise compared to roof-mounted units
- Compressor noise primarily external
- Minimal vibration felt inside the living area

Fan noise levels vary depending on operating mode and airflow demand.

Normal System Behaviour

The following behaviours are normal and expected:

- Delayed compressor start after power-up
- Variations in fan speed during operation
- Intermittent shutdowns due to protection logic
- External condensate discharge

These do not indicate malfunction.

Troubleshooting – Owner Level Observations Only

System Will Not Start

- Confirm mains power is connected
- Check circuit protection
- Allow several minutes between restart attempts

Reduced Cooling or Heating

- Confirm camper is sealed
- Check airflow internally and beneath the camper
- Allow adequate stabilisation time

Unexpected Shutdown

- Check for power fluctuations
- Inspect ventilation
- Restart after a short delay

Error Codes Displayed

- Isolate power
- Wait 10 minutes
- Restore power and retry

Persistent errors require professional service.

Maintenance and Owner Responsibility

Owner responsibilities are limited to:

- Keeping airflow paths clear
- Inspecting under-floor areas after off-road travel

- Avoiding physical obstruction or impact
- Monitoring for abnormal noise or behaviour

No owner-performed internal servicing is permitted.

Storage and Non-Use Periods

During periods of non-use:

- Leave the system switched off
- Keep ventilation areas clear
- Do not cover the unit

Periodic inspection is recommended during long-term storage.

Relationship to Truma Documentation

This section provides **Austrack-specific guidance only**.

For full details covering:

- Fault codes
- Advanced control functions
- Servicing schedules
- Electrical protections

Refer to **official Truma Saphir Comfort RC documentation**.

IMPORTANT NOTICES

- Stationary use only
- Maintain all ventilation paths
- Do not operate while closed or in transit

- Use only with suitable mains power
- Do not obstruct airflow
- Servicing by qualified personnel only
- Misuse may not be covered under warranty

AUfocus Diesel Heater

The Austrack Stockton range is fitted with an **AUFOCUS diesel heater**, designed to provide efficient, dry, and reliable space heating for cool to cold conditions. Diesel heaters are well suited to off-grid touring due to their low electrical demand, high thermal output, and ability to operate independently of LPG systems.

The AUFOCUS diesel heater draws fuel from a dedicated diesel supply and uses a controlled combustion process to heat air, which is then circulated into the caravan interior. Combustion gases are exhausted externally, meaning that only clean, heated air enters the living space when the system is operating correctly.

This section provides **complete operating instructions**, **setup guidance**, **error explanations**, and **maintenance requirements**, written specifically for Austrack owners. While the AUFOCUS heater itself is a manufacturer product, correct use and understanding of the control interface is critical to safe and effective operation.

General operating Principles

Before using the diesel heater, it is important to understand how the system behaves.

The AUFOCUS heater:

- Uses diesel fuel to generate heat
- Requires a stable electrical supply for startup and control
- Automatically runs a startup ignition cycle

- Automatically runs a cooldown cycle after shutdown
- Must never be force-powered off during combustion

Diesel heaters operate differently from LPG heaters. They are **not instant-on** devices, and they rely on correct startup, controlled burn, and proper shutdown to prevent carbon build-up, smoke, or component damage.

Powering the Heater On and Off

To turn the heater **on** or **off**, perform a **short press of the Power button** on the LCD control panel.

When powering on:

- The heater will begin a startup sequence
- The glow plug will ignite fuel in the combustion chamber
- Fan speed will gradually increase
- Warm air will begin to flow after ignition stabilises

When powering off:

- The heater will not shut down immediately
- The system will enter a **cool-down cycle**
- Fuel combustion stops
- The fan continues to run to cool internal components

⚠️ **Important:**
Never disconnect power during shutdown. Interrupting the cooling cycle can cause carbon build-up and excessive exhaust smoke.

Heating Modes – Manual Heat Mode vs Temperature Mode

The AUFOCUS heater features two operating modes. Understanding the difference between these modes is critical to using the system effectively.

To change between modes:

- Short-press the **round dial**
- Observe the display switching between **ROOM** and **SET**

Manual Heat Mode (ROOM)

Manual Heat Mode allows the heater to operate at a **constant output level**, independent of room temperature. This mode is best suited to:

- Very cold conditions
- Drying moisture inside the caravan
- Situations where constant heat is preferred

In this mode:

- Turning the dial increases or decreases output
- Levels range from **Level 1 to Level 10**
- The heater maintains a consistent fan speed and burn rate

This mode does not attempt to regulate temperature automatically.

Temperature Mode (SET)

Temperature Mode allows the heater to automatically regulate its output based on a **target room temperature**.

To use this mode:

- Turn the dial to set a temperature between **8 °C and 36 °C**
- Once selected, the set temperature flashes, then returns to current room temperature
- The heater will automatically adjust output

When the set temperature is reached:

- The heater steps down
- Fuel combustion stops
- The fan continues circulating air

When the temperature drops:

- The heater automatically reignites
- The cycle repeats

This mode is ideal for overnight use and maintaining comfort efficiently.

Accessing General Settings (F-Series)

To enter the general settings menu:

- Press and hold the **Settings** button
- Use the dial to scroll between options

F0 – Clock Settings

Displays the current time. The clock resets to **12:00** if power is disconnected.

To adjust:

- Press the dial to switch between hours and minutes
- Rotate the dial to change values

F1 / F2 / F3 – Timer Functions

These functions allow the heater to:

- Start automatically at a preset time
- Run for a preset duration

- Enable or disable timer control

These functions are useful for:

- Pre-warming the caravan
- Conserving fuel overnight

F4 – Language and Voice Settings

Allows selection of:

- English (E)
- Chinese (C)
- Russian (R)
- Voice prompts on or off

F5 – Room Temperature Calibration

The controller senses temperature locally, which may vary slightly from actual room temperature.

This setting allows calibration from **-9 °C to +9 °C** so displayed temperature more accurately matches perceived room conditions.

F6 – Fuel Tank Size and Level Display

Allows you to set tank capacity (5 L, 10 L, 15 L, etc.), enabling the system to estimate remaining fuel.

⚠ **Important:**
This function requires a reset **every time the tank is refilled**.

To reset fuel level:

- With the heater ON
- Press and hold **Fuel Level Reset** for 7 seconds

F7 – Pump Rate

Controls fuel delivery rate:

- AUFOCUS heaters are preset to **22U**
- This equates to 22 ml per 1,000 pump pulses
- This value **should not be adjusted** under normal operation

Advanced Settings and Diagnostic Information (EN-Series)

To access diagnostic information:

- With heater ON
- Press and hold **Settings**, then **Power**
- Release when display changes to **EN00**

This menu provides live system readings.

Key entries include:

- Software version
- Last recorded error
- Heater body temperature
- Supply voltage
- Current heat level
- Altitude reading
- Fuel priming

- Remote pairing
- Bluetooth password

Fuel Priming (EN07)

This function is critical after:

- First installation
- Running the heater dry
- Fuel line maintenance

When activated:

- The pump runs for 90 seconds
- Diesel is delivered to the heater
- Glow plug remains active
- The unit automatically ignites once fuel arrives

This process is safe and will not over-prime.

Error Codes and Fault Handling

AUFOCUS heaters will display error codes when faults are detected. These are safety systems designed to protect the heater and the caravan.

Common errors include:

- **E01 / E02 – Fuel delivery issues**
  Check fuel level, filter, lines, clamps, and pump operation.
- **E03 – Voltage fault**
  Ensure supply voltage is within:
  - 9–16 V (12V system)
  - 18–30 V (24V system)

- **E07 – Fan fault**
  Check fan rotation and wiring.
- **E08 – Ignition fault**
  Inspect glow plug seating and connection.
- **E09 / E010 – Overheat faults**
  Inspect air inlet, outlet, and exhaust clearance.

Maintenance and Monthly Operation

AUFOCUS diesel heaters require minimal maintenance but **regular operation**.

Austrack recommends:

- Running the heater on **high output for 15 minutes each month**
- Inspecting ducts for tight fittings
- Inspecting exhaust and muffler after road travel

Diesel heaters that sit unused for long periods may suffer from fuel degradation or carbon build-up.

Safety Warnings and Exhaust Considerations

⚠️ Diesel heater exhaust is **extremely hot**.

Critical safety rules:

- No flammable materials within **100 mm** of exhaust
- Exhaust must vent fully outside
- Heater must never operate without proper exhaust routing
- Allow full cooldown cycle on shutdown

Never modify the heater or replace components with non-AUFOCUS parts.

IMPORTANT NOTICE

Diesel heaters are combustion devices. Incorrect installation, interrupted shutdown cycles, voltage instability, or improper fuel use can result in faults, smoke, or component damage.

Austrack and AUFOCUS accept no responsibility for damage caused by misuse, modification, or operation outside the guidance provided in this manual.

Electrical System

Your Stockton caravan is equipped with an integrated **12 V and 240 V electrical system**, utilising a **RENOGY power management system** to provide reliable power for lighting, appliances, charging, and off-grid operation. The system is designed to support both powered campsite use and independent camping, with a focus on efficient energy management, battery protection, and consistent performance.

The RENOGY system provides a **centralised platform for power distribution, battery charging, and system monitoring**, allowing multiple input sources—such as mains power, vehicle charging, and solar—to be managed in a coordinated manner. This ensures that energy is supplied safely and efficiently across all connected systems.

Because all Stockton models are fitted with a RENOGY-based system, system behaviour, controls, and monitoring functions are consistent across the range. However, specific features and capacity may vary depending on model specification and installed equipment.

This section outlines the electrical components and functionality fitted to your caravan, including **battery systems, charging inputs, solar integration, and 240 V supply**, with each subsection applying where relevant equipment is installed.

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.

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.

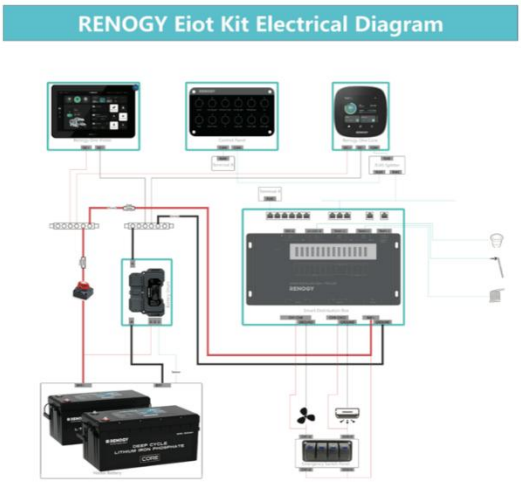
This design approach offers flexibility and configurability, but also introduces multiple dependencies. System accuracy and stability depend on:

- 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

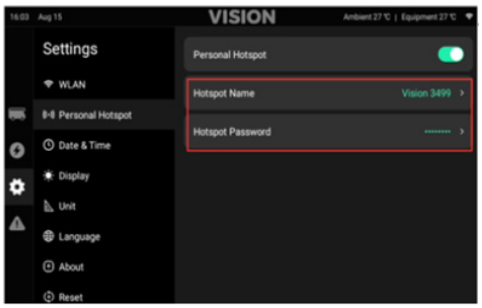
Because the application operates through wireless communication, its responsiveness and accuracy may vary depending on connectivity and software state.

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)

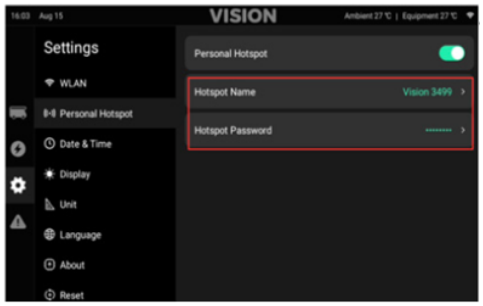
Step 1 – Enable Personal Hotspot on the RENOGY ONE Vision

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.

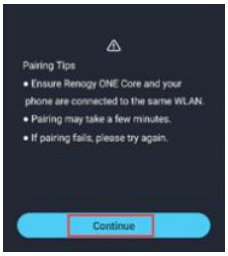
Step 5 – Display the QR Code on the RENOGY ONE Vision

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).

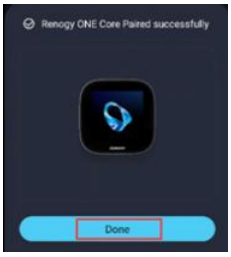
The Vision screen will now display a QR code.

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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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

Austrack caravans are fitted with **roof-mounted solar panels** designed to provide ongoing battery charging during daylight hours. The solar system serves as a primary charging source when the caravan is stationary and is an essential component of off-grid operation.

Depending on the electrical system fitted, the solar panels are connected with:

- The **solar regulation input within the RENOGY system**

In all configurations, solar charging is fully automatic. When the panels are exposed to sufficient sunlight, the system will begin charging the batteries without any action required from the owner.

⚠ *Solar panel number, layout, and total output vary between caravan models and production periods. Solar specifications may be updated or changed at the factory without notice. This section applies generically to all Austrack-fitted solar systems.*

How Solar Charging Works

When sunlight strikes the solar panels, electrical energy is generated and passed through an MPPT (Maximum Power Point Tracking) solar regulator. This regulator optimises the incoming solar energy and delivers appropriate charging current to the battery system based on battery state and demand.

The solar regulator:

- Automatically adjusts charging output
- Prioritises battery safety and longevity
- Reduces charge rate as batteries approach full capacity

No switches or manual selectors are required for normal operation.

Normal Solar Performance Expectations

Under typical conditions, the rooftop solar system is **sufficient to maintain battery charge for normal daily usage**, including lighting, water pumps, refrigeration, and general 12 V appliances.

However, solar performance is influenced by multiple factors, including:

- Sun angle and time of year
- Cloud cover and weather conditions
- Shade from trees, buildings, or nearby vehicles
- Panel cleanliness
- Daily electrical consumption

Even partial shading on a single panel can significantly reduce overall output.

Situations Where Solar Alone May Not Be Sufficient

While the solar system is designed to support off-grid operation, there are circumstances where solar input may not be able to replace the energy being used each day.

These situations may include:

- Prolonged overcast or rainy conditions
- Camping in heavily shaded areas
- High inverter usage
- Operating additional fridges or freezers
- Extended stays without vehicle movement or external power

In these cases, **supplementary charging** may be required to maintain battery voltage and capacity.

Use of External Solar Panels

Austrack caravans are equipped to allow connection of **external portable solar panels** when additional charging capacity is required. This is commonly done via the rear Anderson plug, which provides a convenient method for supplementing rooftop solar.

External panels are typically used to:

- Improve charging in shaded campsites
- Increase total daily solar input
- Offset higher-than-normal power usage

Owners should ensure portable panels are:

- Correctly regulated (depending on connection method)
- Positioned for optimal sun exposure
- Monitored periodically to confirm charging is occurring

Solar and Battery Monitoring

Battery charge status and charging activity can be monitored via:

- The main electrical display
- Associated system interfaces

Displayed values represent real-time conditions and may fluctuate throughout the day as sunlight intensity and electrical loads change. It is normal for charging rates to increase and decrease as clouds pass or loads are switched on and off.

Owner Best Practice Guidelines

To maximise solar performance, Austrack recommends:

- Parking with panels exposed to direct sunlight where possible
- Avoiding shade over any part of the roof when relying on solar
- Cleaning panels periodically to remove dust or debris

- Being mindful of inverter and high-draw appliance use
- Monitoring battery state during extended off-grid stays

Solar is most effective when energy consumption is balanced with available sunlight rather than relying on solar recovery after heavy use.

Service and Support

Solar systems generally require minimal maintenance. If solar charging does not appear to be occurring under suitable conditions, or if system readings appear inconsistent, **Austrack recommends contacting AOE RV Service Centre as the primary point of contact** for assessment.

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.

IMPORTANT NOTICE

Solar performance varies based on environmental conditions and usage patterns. Solar systems are intended to **supplement and maintain battery charge**, not guarantee unlimited power availability under all circumstances.

Understanding the limitations of solar charging is key to reliable off-grid operation.

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 on the **driver's 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:

- **Internally**, at the **outside end of the internal seating area**

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 caravan**.

PROJECTA Equipped Caravans

In campers fitted with a **PROJECTA electrical system**, mains power 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.

RENOGY systems **do not incorporate an automatic 240 V change-over relay**. As a result, connecting mains power alone does not automatically energise all 240 V circuits.

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

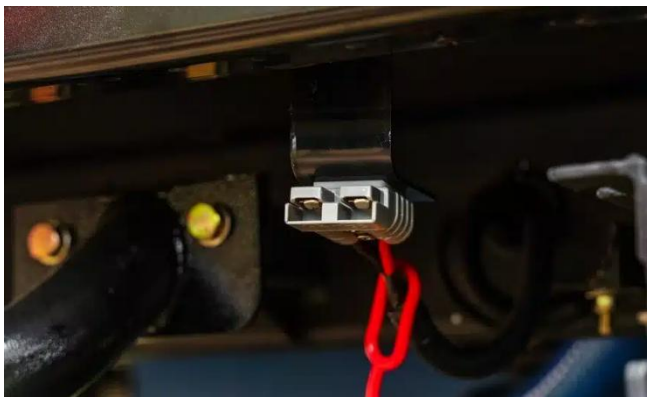
If there are any concerns regarding:

- 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 Stockton models 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.

New-Body Plenty X – Specific Considerations

The **new-body Plenty X** includes a fixed solar panel mounted to the **boat rack assembly**, which is fitted with its **own dedicated MPPT solar regulator**. This regulator manages charging from the boat-rack-mounted panel independently and delivers regulated input into the RENOGY charging architecture.

In addition to this fixed solar system, new-body Plenty X models may also be fitted with a rear Anderson plug for external DC input.

At the time of publication, the rear Anderson plug on RENOGY-equipped Hard Floor models **may be wired either**:

- Directly to the battery system, or
- Into the RENOGY MPPT charging input

For this reason, owners of new-body Plenty X models **must confirm** the routing of the rear Anderson plug before connecting solar equipment, particularly regulated solar blankets.

Where uncertainty exists, Austrack strongly recommends confirming configuration with **AOE RV Service Centre** before use.

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 Hybrid 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 hybrids 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 holders are 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.

Hot Water System Gas Isolation

The hot water system is supplied from the main LPG gas system and is fitted with a manual isolation valve located underneath the hybrid. This valve allows the hot water system to be isolated when required.

For the hot water system to operate correctly, the isolation valve must be positioned correctly. Incorrect alignment will prevent gas flow.

Before operating the hot water system, ensure:

- The isolation valve is positioned in line with the gas hose
- The gas cylinder valve is open
- No gas smell is present

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 Austrack water system is a fully integrated, pressurised supply system designed to support **self-contained camping** as well as connection to **external mains water sources**, depending on campsite facilities and model configuration. The system is engineered to deliver potable water reliably to all water outlets, including the kitchen, shower, and hot water system, while maintaining appropriate operating pressure and safeguarding components from over-pressure or back-flow.

Across the Austrack range, the water system consists of **onboard water storage tanks**, an **electrically driven pressure pump**, provisions for **external mains water connection**, and a **dedicated hot water system** matched to the specific model. While component placement and hot water system specification vary between models—particularly on the Plenty X—the fundamental operating principles remain consistent. This section explains the layout, operation, and interaction of all water system components, and outlines how water is supplied, pumped, heated, and distributed throughout the camper under both off-grid and mains-connected conditions.

Water Tanks

Austrack campers are fitted with dedicated **fresh water tanks** and a **grey water tank** designed to support extended travel. Tank capacities and layouts vary by model, however all systems follow the same operating principles, including independent fresh water tanks and controlled tank selection. Understanding the configuration and correct operation of these tanks is essential for reliable water supply, accurate monitoring, and responsible waste management during both on-grid and off-grid use.

Water Tank Capacities by Model

The table below outlines the standard fresh and grey water tank capacities fitted to each Austrack model. Tank configurations are fixed per model at the time of manufacture.

Model	Front Fresh Water Tank	Rear Fresh Water Tank	Grey Water Tank
X Model Range			
Stockton X3	120 L	120 L	80 L
Stockton X5	120 L	120 L	80 L
Stockton X7	120 L	120 L	80 L
Stockton XE	120 L	120 L	80 L

Fresh Water Tank Operation

Where two fresh water tanks are fitted, **the tanks are not interconnected**. Only one fresh water tank can be used at any given time, with tank selection controlled via a **manual tank-selector valve**.

Depending on model and layout, the tank-selector handle is located:

- Inside the driver side maintenance compartment, **or**
- Inside the external shower compartment (For New Body Plenty X Models)

The **blue selector handle** is designed to clearly indicate which tank is currently in use. The handle points in the direction of the selected tank:

- Handle pointing **forward** = front tank in use
- Handle pointing **rearward** = rear tank in use

For consistent water supply and accurate monitoring, Austrack recommends **fully emptying one fresh water tank before switching to the other**, rather than drawing from both tanks intermittently.

Filling Fresh Water Tanks

Each fresh water tank must be **filled independently** using its designated filler inlet. Water does not transfer between tanks.

Each filler is equipped with a **breather hole**, which allows air to escape as the tank fills. If this breather becomes blocked:

- Water may back up at the inlet
- The tank will not fill correctly

A fresh water tank is considered **full when water begins to exit the breather hole**.

Grey Water System

The grey water tank collects waste water from:

- The internal ensuite basin, and
- The internal ensuite shower
- The Internal Kitchen Sink

- The External Kitchen Sink (When connected)

Grey water is **not suitable for drinking** and must be disposed of responsibly.

To empty the grey water tank:

1. Connect an appropriate hose to the grey water outlet
2. Open the **red drain valve**
3. Allow the tank to drain fully
4. Close the valve securely before travel

Grey water must only be discharged:

- At approved dump points
- In caravan parks as directed by management
- In accordance with National Parks or local authority regulations

IMPORTANT NOTICE

The fresh water system is designed for controlled use. Incorrect tank selection, blocked breathers, or improper sullage water disposal from the kitchen may result in system faults or environmental penalties.

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

Austrack campers are fitted with a **SeaFlo 12 V pressure water pump**, rated at **11.3 litres per minute**, which supplies pressurised fresh water throughout the caravan. The pump draws water from the selected fresh water tank and delivers it to taps, the shower, and the hot water system as required.

The pump is designed specifically for caravan and RV use and operates automatically based on water demand. It is powered by the caravan's 12 V electrical system and does not require mains power to operate.

Water Pump On/Off Switch – Purpose and Use

The water pump is fitted with a **dedicated on/off switch**, typically located on the main internal control panel. This switch gives the user direct control over pump operation and plays an important role in protecting the water system.

The pump switch should be used to:

- Prevent the pump from running constantly if a fresh water tank runs empty
- Stop the pump in the event of a plumbing leak
- Allow controlled troubleshooting if an airlock occurs
- Disable the pump when the camper is not in use or unattended

Austrack strongly recommends switching the water pump **off**:

- When travelling on rough or corrugated roads
- When the camper is not occupied
- If abnormal pump behaviour is observed

Leaving the pump switched on in these situations can result in unnecessary pump wear or damage.

How the Water Pump Operates

The SeaFlo pump is a **pressure-activated system**. When water pressure in the plumbing drops, the pump turns on automatically. When pressure is restored, the pump stops.

Normal operation sequence:

- Open a tap or shower → pressure drops → pump turns on
- Close the tap → pressure builds → pump pressurises and stops

If all taps are closed and the system is working correctly, the pump **should pressurise and then switch off**.

If the pump continues running with all taps closed, this indicates an issue that must be addressed.

Tank Selection and Pump Operation

The pump draws water only from the **currently selected fresh water tank**.

Where multiple fresh water tanks are fitted:

- Only one tank may be used at a time
- The pump does not automatically switch between tanks

If the selected tank runs out of water:

- Water flow will stop
- The pump may continue to run as it attempts to build pressure

If this occurs, turn the pump **off immediately**, select the next tank, and then turn the pump on again once water is available.

Airlocks – Identification and Correction

An **airlock** may occur after:

- Switching fresh water tanks
- Running a tank dry
- Draining the water system
- First use after storage

When an airlock is present, the pump may:

- Run continuously
- Sound louder than normal
- Fail to shut off even when taps are closed
- Deliver uneven or spluttering water flow

Clearing an Airlock

To clear an airlock:

1. Ensure a fresh water tank containing water is selected

2. Turn the **water pump ON**
3. Open any tap fully
4. Allow water and air to **spatter and surge** from the tap
5. Keep the tap open until a **smooth, continuous flow** of water is achieved
6. Close the tap

Once the tap is closed, the pump should:

- Re-pressurise the system
- Automatically switch off

If the pump fails to stop after this process, turn the pump off and repeat the procedure.

Dry-Running and Pump Protection

The SeaFlo water pump is not designed to operate without water for extended periods.

Allowing the pump to run dry or against an airlock may:

- Increase wear on internal components
- Cause overheating
- Lead to premature pump failure

The on/off switch is provided specifically to prevent this and should be used whenever abnormal operation is observed.

Noise, Vibration, and Normal Behaviour

Some pump noise or vibration is normal, particularly:

- During initial priming
- When clearing air from the system
- When water demand changes rapidly

Excessive or continuous noise may indicate:

- An airlock
- Low tank level
- A loose plumbing connection
- A leak in the system

These conditions should be investigated promptly.

Service and Support

If the water pump:

- Fails to pressurise
- Runs continuously with no taps open
- Cannot be cleared of airlocks
- Stops delivering water

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 fresh water system. Damage caused by dry-running, unresolved airlocks, leaks, freezing, or incorrect operation may not be covered under warranty.

Always use the pump on/off switch as intended and address abnormal pump behaviour immediately.

Mains Water

Austrack campers are equipped with a **mains water inlet**, allowing the camper's internal plumbing system to be supplied directly from an external pressurised water source, such as a caravan park tap. This provides convenient, on-demand water supply without drawing from the onboard fresh water tanks.

The mains water system operates independently of the fresh water tanks and water pump and is intended for use primarily when connected to permanent or semi-permanent water supplies.

Mains Water Inlet

The mains water inlet fitted to Austrack campers is a **SeaFlo mains water inlet**, designed specifically for caravan and RV applications. The inlet includes an integrated pressure regulation and non-return functionality suitable for connection to standard water taps when used correctly.

The inlet is externally mounted on the camper for easy access and connection using a potable water hose.

Critical Requirement – Water Pump Must Be Turned OFF

When using mains water, the **12 V water pump must be switched OFF** at the control panel.

This is essential because:

- Mains water supplies pressurised water to the plumbing system
- The onboard pump is not required and must not operate simultaneously
- Leaving the pump on may cause unnecessary cycling or damage

⚠️ **Important:**
Failure to turn off the water pump while connected to mains water can lead to water system faults, pump damage, or abnormal operation. Always switch the pump off before connecting mains water.

How Mains Water Works

When mains water is connected:

- Pressurised water is supplied directly to the camper's plumbing
- Taps, shower, and appliances operate from the external supply
- The onboard water pump remains inactive (when correctly switched off)

Mains water **bypasses the fresh water tanks entirely**.

Mains Water Does NOT Fill Fresh Water Tanks

It is important to understand that **mains water does not fill the onboard fresh water tanks**.

Key points:

- Fresh water tanks must still be filled manually via their dedicated tank fillers
- Connecting mains water only supplies the internal plumbing system
- Tank levels will not increase while connected to mains water

This is normal system behaviour and is not a fault.

Tank Selection When Using Mains Water

While mains water is in use:

- Fresh water tank selection position does not matter
- Water is not being drawn from the tanks
- Tank levels remain unchanged

Once mains water is disconnected and the pump is switched back on, the system will resume drawing water from the selected fresh water tank.

Connecting Mains Water

Connecting Mains Water

To connect mains water:

1. Ensure the **water pump is switched OFF**
2. Connect a **drinking-water-grade hose** to the mains water tap
3. Connect the hose to the caravan's mains water inlet
4. Slowly turn on the tap
5. Check all fittings for leaks
6. Open a tap inside the caravan to confirm water flow

Austrack recommends using a **pressure-regulated hose or in-line pressure reducer** where water pressure is unknown or high.

Disconnecting Mains Water

To disconnect mains water:

1. Turn off the water supply at the tap
2. Open a tap inside the camper to release pressure
3. Disconnect the hose from the camper inlet
4. Store hoses clean and dry
5. Switch the **water pump back ON** only if reverting to tank water use

Failing to repressurise correctly may result in air entering the system, which can be cleared using the airlock procedure outlined in the Water Pump section.

Common Issues and Owner Awareness

Common mistakes when using mains water include:

- Forgetting to turn off the water pump
- Expecting mains water to fill fresh water tanks
- Using non-potable or damaged hoses
- Exposing the system to excessive pressure

Understanding the difference between **mains water supply** and **tank-based water supply** is essential for correct system operation.

Service and Support

If issues arise such as:

- Water hammering or pulsing
- Leaks when connected to mains water
- No water flow despite correct connection
- Pump cycling unexpectedly on mains water

Austrack recommends contacting AOE RV Service Centre as the primary point of support. AOE RV Service Centre is familiar with Austrack plumbing layouts and SeaFlo inlet systems.

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

Mains water systems operate under pressure. Incorrect connection, leaving the pump switched on, or exposing the plumbing system to excessive pressure may result in damage not covered under warranty.

Always turn the water pump off when using mains water and follow correct connection procedures.

Hot Water System

The Stockton range is fitted with a **permanently installed hot water system (HWS)**, typically utilising a WLF unit, designed to provide a reliable and consistent supply of hot water during campsite operation. The system is integrated into the caravan's plumbing and LPG gas system, allowing water to be heated on demand and delivered through the pressurised water network to outlets such as the external shower.

As a fixed installation, the hot water system operates automatically once correctly supplied with water and gas, however it requires proper setup, ventilation, and routine inspection to ensure safe operation, efficient heating performance, and consistent water delivery under varying conditions.

WLF Instantaneous Hot Water System

Austrack Stocktons are fitted with a **WLF Instantaneous Hot Water System**. This system heats water **on demand**, meaning hot water is produced only when a tap is opened, rather than being stored in

a tank. As a result, hot water supply is continuous (within system limits) and does not rely on stored volume.

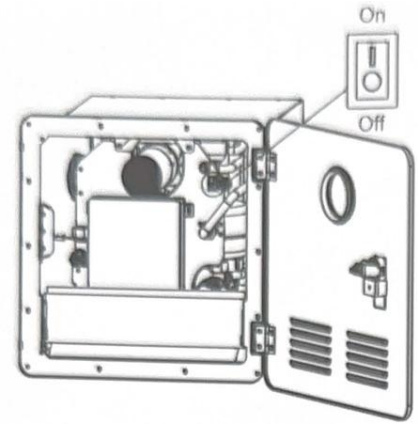
Because this system operates differently from storage-type heaters, it is important that owners understand the correct startup procedure, control operation, and temperature-setting methods before use.

System Power and Safety Isolation

The WLF hot water system includes **two separate power control points**:

1. A **master on/off switch located on the hot water unit itself**
2. A **wall-mounted control screen** used for everyday operation and temperature control

Appliance Master Switch (Kill Switch)



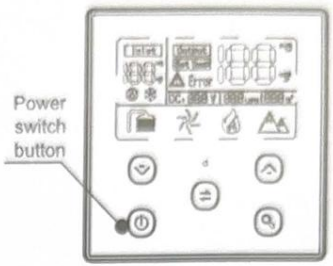
The on/off switch located in the hot water appliance acts as a **master isolation (kill) switch**. This switch:

- Supplies or isolates power to the hot water system entirely
- Should be switched **off** when the system is not required
- Should be switched **off** during long-term storage or servicing

This switch must be **turned on** before the wall controller will operate the system

Wall Mounted Control Screen

The wall-mounted control screen is used for:



- Turning the system on and off for normal use
- Setting the desired hot water temperature
- Selecting temperature display units (°C or °F)

The system must pass a basic functional check each time the caravan and water system are set up for use.

Operating the WLF Hot Water System

Powering the System On

1. Ensure the **master on/off switch on the hot water unit** is turned **ON**
2. On the wall controller, touch the **Power button**
3. The display will illuminate and show the **current temperature setting**

When powered on, the system is ready to heat water when a hot tap is opened.

Temperature Display Selection (°C / °F)

- Touch the **°C / °F button** to toggle between temperature units
- The corresponding indicator on the display will confirm the selected unit

Austrack recommends using **°C** for consistency with other systems in the caravan.

Adjusting Water Temperature

- Use the **"+" and "–" buttons** on the control screen to set the desired water temperature
- Adjustable temperature range:
    - **35 °C (95 °F) minimum**
    - **51 °C (124 °F) maximum**

The selected temperature will be maintained automatically by the system while hot water is in use.

Turning the System Off

- Touch the **Power button** on the wall controller to place the system into shutdown mode
- If the hot water system will not be used for an extended period, also switch the **master on/off switch on the unit itself to OFF**

This ensures the system is fully isolated.

Methods of Using the WLF Hot Water System

The WLF Instantaneous Hot Water System may be used in **two different operating methods**, depending on user preference.

Method 1 – Point-of-Use Mixing (Recommended)

This method involves setting the heater to a higher output temperature and mixing hot and cold water at the tap.

Procedure:

1. Set the controller temperature to approximately **46 °C (115 °F)**
2. Open the hot water tap
3. Once hot water is flowing steadily, add **cold water at the tap** to achieve a comfortable temperature

Benefits:

- More flexible temperature control
- Familiar operation for most users
- Better control at the shower or basin

Method 2 – Single-Point Use (No Mixing)

This method involves setting the heater to the exact temperature required at the tap, without mixing cold water.

Procedure:

1. Set the controller temperature to the desired bathing or washing temperature

2. Open the hot water tap only
3. The system will maintain the set temperature automatically

Important Note:
This method requires accurate temperature selection and may be more sensitive to flow rate changes.

Normal Operating Characteristics

During use, it is normal for the system to:

- Require water flow to activate heating
- Temporarily stop heating if water flow is interrupted
- Adjust heating output based on flow rate and inlet water temperature

Hot water will only be produced **when a hot tap is opened**.

Service and Support

If the WLF hot water system:

- Fails to power on
- Does not maintain temperature
- Shuts down unexpectedly
- Displays abnormal behaviour

Austrack recommends contacting AOE RV Service Centre as the primary point of support. AOE RV Service Centre is familiar with Austrack plumbing and hot water 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 WLF Instantaneous Hot Water System is designed for controlled operation with clean water and appropriate power supply. Incorrect use, failure to isolate the system when not in use, or operation without water flow may result in damage not covered under warranty.

Always ensure the system is switched off when not required.

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

Austrack campers are fitted with **four stabiliser legs**:

- **Two stabiliser legs at the front**, and
- **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 **front stabiliser legs** until they firmly contact the ground
2. Lower the **rear stabiliser legs** until they firmly contact the ground
3. 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 four 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.

Electric Roof

The Stockton range is equipped with an **electric roof lifting system**, designed to raise and lower the main roof structure during setup and pack-down. This system provides convenient operation via a **remote control unit** and is supported by an integrated control module.

The roof system must be operated under specific conditions and sequences to ensure correct function and to prevent interference with other components of the camper structure.

Operating Requirements

Before operating the electric roof, the following conditions must be met:

- All **slide-out sections must be fully retracted**
- The **upper door assembly must be secured in the travel (ceiling) position**
- The camper must be stationary and level

A safety interlock system is fitted to prevent roof operation if the upper door is not correctly stowed. If the door is not secured:

The roof system will not activate

Roof Operation

The electric roof is operated using the **supplied remote control**.

To operate the roof:

- Ensure all operating requirements are met
- Use the remote to select the desired direction (raise or lower)
- Monitor roof movement during operation
- Release the control once the roof reaches its full position

⚠️ The roof must be observed at all times during movement. Do not leave the system operating unattended.

System Reset

The roof control module is fitted with a **manual reset button**, which may be used if the system does not respond as expected.

Reset Procedure

- Locate the control module
- Identify the recessed reset button
- Using a **paperclip, pin, or similar object**, press the reset button

- Hold briefly, then release
- Allow the system to reset before attempting operation again

The reset function is intended to restore normal system operation in the event of a fault or interruption.

Manual Override

In the event that the electric system cannot be operated, the roof can be raised or lowered using the **manual override system**.

- The manual override is located **behind the rear spare tyre assembly**
- The spare carrier must be removed to access this system

Refer to the **Roof Manual Override section** for full instructions on mechanical operation.

Operational Considerations

- The roof system is designed for controlled, sequential operation only
- All related components (slides, door) must be correctly positioned before use
- Do not attempt to operate the roof if any obstruction or resistance is present
- Movement may stop automatically if conditions are not met

If the system does not respond:

- Check all prerequisites (slides, door position)
- Perform a reset if required
- Use manual override if necessary

Troubleshooting

Issue	Possible Cause	Recommended Action
Roof will not operate	Slides not fully retracted	Retract all slides
	Upper door not secured	Fold and secure door to ceiling
	System requires reset	Use reset button on module
Remote not responding	Battery or signal issue	Check remote and retry
Roof stops during movement	Obstruction or misalignment	Stop and inspect system
No response after reset	Unknown condition	Use manual override and seek service

IMPORTANT NOTICE

- All slides must be fully retracted before roof operation
- The upper door must be securely stowed in the ceiling position
- The roof must be observed during movement at all times
- The reset function should only be used when required
- The manual override is to be used if electric operation is unavailable

⚠️ Do not force the roof system or attempt to override safety conditions. Incorrect operation may result in damage not covered under warranty.

Roof Racks

The Stockton range is fitted with **removable roof rack cross bars**, designed to provide additional load-carrying capability across the roof structure. These racks run laterally across the width of the camper and can be used to support lightweight cargo where required.

The racks are mounted directly to the roof structure and are secured in place using bolted connections.

Construction and Mounting

The roof racks consist of:

- Cross bars spanning the width of the camper
- Fixed mounting points integrated into the roof structure
- Bolted connections securing each rack in position

The racks are designed to remain securely mounted during travel, provided all fasteners are correctly tightened.

Removal and Reinstallation

The roof racks are fully removable and can be taken off when not required.

To remove the roof racks:

- Locate the mounting bolts at each end of the rack
- Loosen and remove the securing bolts
- Carefully lift the rack clear of the mounting points

When reinstalling:

- Position the rack correctly on the mounting points
- Refit all bolts
- Tighten securely before travel

Solar Panel Considerations

The roof racks are positioned over the roof area where **solar panels are installed**, and as a result, portions of the racks may cast shadows across the panels.

This can:

- Reduce the amount of direct sunlight reaching the solar panels
- Lower overall solar charging efficiency
- Impact charging performance, particularly during low-light conditions

Performance Recommendation

Austrack recommends:

- Removing roof racks **upon arrival at camp**
- Removing racks when they are **not required for load carrying**

This ensures:

- Maximum solar exposure
- Improved charging performance
- More consistent battery recovery during off-grid use

Operational Considerations

- Do not exceed the load limits specified for the roof system
- Ensure all mounted loads are securely fastened
- Check bolt tension regularly, particularly after travel on rough terrain
- Avoid leaving unnecessary weight on the roof when not in use

Inspection and Maintenance

Regular inspection of roof racks is recommended.

Check for:

- Loose or missing mounting bolts
- Signs of wear, corrosion, or damage
- Secure attachment to roof mounting points

After exposure to:

- Dust
- Rain
- Coastal or salty environments

Racks should be cleaned and dried to maintain condition and prevent corrosion.

IMPORTANT NOTICE

- Roof racks must be securely fastened before travel
- Loose racks or fasteners may result in movement or damage
- Roof racks may reduce solar panel performance when installed
- Removal when not in use is strongly recommended to maintain optimal solar efficiency

Failure to correctly secure or maintain the roof rack system may result in damage not covered under warranty.

1800 797 797
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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.

1800 797 797
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Troubleshooting

Category	Issue	Troubleshooting Steps
Electrical – Air Conditioning	A/C not turning on	• Check 240 V mains power is connected • Check RCD not tripped on incoming power supply • Check RCD not tripped inside the caravan • Replace A/C remote control batteries • Contact AOE RV Service Centre or Dometic service
Electrical – Air Conditioning	A/C not cooling or heating	• Confirm correct mode is selected (❄ Cooling / ☀ Heating) • Check temperature setpoint • Ensure doors and windows are closed • Contact AOE RV Service Centre or Dometic service
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
Mains Water	No water on mains water	• Ensure water pump is switched OFF • Confirm water tap is turned on • Check hose and inlet for blockages

Hot Water – WLF	No hot water	• Ensure master switch at heater is ON • Check wall controller power and temperature setting • Ensure sufficient water flow
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
Diesel Heater	Will not start	• Ensure sufficient diesel fuel • Check battery voltage • Prime fuel line if system ran dry
Diesel Heater	Shuts down or faults	• Check air inlet and exhaust for blockage • Review fault code on controller • Contact AOE RV Service Centre
Windows & Skylights	Blinds or screens damaged	• Ensure blinds and screens are OPEN during travel • Do not force damaged mechanisms

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.

1800 797 797
sales@austrackcampers.com.au
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.

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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.

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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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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.