



# Operating Procedures

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## Understanding Vehicle & Caravans Weights - Kerb / GVM / GCM / ATM / Tare

It's extremely important that you understand the weight and limitations of your tow vehicle and the caravan you are towing.

### Vehicle GVM = Gross Vehicle Mass

This is the maximum your vehicle can weigh when fully loaded as specified by the manufacturer. You will usually find this GVM figure on the vehicle's weight placard (generally found in the driver's door opening) or in the owner's manual. So GVM is the Kerb Mass plus all accessories (bull bars, roof racks, winches etc) and payload.

### Vehicle GCM = Gross Combination Mass

This is the maximum weight allowed for your vehicle and trailer combined, as specified by the tow vehicle's manufacturer. This is where you have to pay close attention to your vehicle's GVM and your trailer's ATM, because those two figures determine the GCM and one directly affects the other.

For example, say your vehicle has a Kerb Mass of 2500 kg, a GVM of 3500 kg and a GCM of 5000 kg.

At its Kerb Mass of 2500 kg the manufacturer says it can legally tow another 2500 kg, but that towing weight decreases in direct proportion to how much the tow vehicle's weight increases. So if you loaded up the towing vehicle to its GVM of 3500 kg (or a payload of 1000 kg), that would only leave a towing capacity of 1500 kg to meet the GCM of 5000 kg. If the tow vehicle's GVM dropped to 3000 kg (or a payload of 500 kg), its towing capacity would increase to 2000 kg and so on.

### Caravan Tare Weight

This is the empty weight of the caravan.

### Caravan Towball Weight

This is the weight on the towball of the caravan which is dead weight sitting on the back of your tow vehicle. This weight needs to be included in your tow vehicle's GVM. Each caravan will show the towball weight on the VIN plate located on the caravan. Keep in mind this weight may increase based on additional load items placed within the caravan.

### Caravan ATM – Aggregate Trailer Mass

This is the total mass of the trailer when carrying the maximum load recommended by the manufacturer.

### Caravan Load Capacity

To work out how much weight you can place in your caravan which includes everything such as Gas bottles, water in water tanks, food & clothes. Simply Take your ATM minus the Tare. For example of your caravans ATM is 3450kg and the Tare is 2800kg. Your maximum load capacity is 650kg. You must also keep in mind that this is the maximum for the caravan, but if your tow vehicle is rated lower than 3450kg then you can only load the caravan to your vehicle's maximum allowance. See example below.

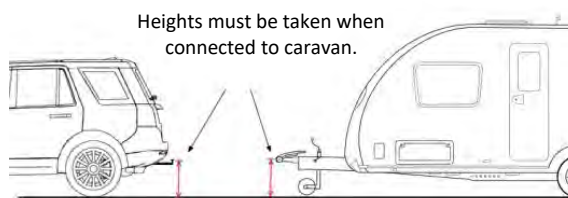
### Example:

2020 Toyota Hilux automatic has a maximum towing capacity of 3200kg. The kerb weight of a standard Hilux without any accessories, a driver or fuel is 2055kg. The GVM of the Hilux is 3050kg and the GCM is 5850kg. So if you wish to tow 3200kg with an automatic Hilux,  $5850\text{kg} - 3200\text{kg towing} = 2650\text{kg}$  being the max weight the Hilux can be. Now take  $2650 - 2055\text{kg kerb weight} = 595\text{kg}$  of load in the Hilux. Now if the caravan has a towball weight of 320kg this comes off the 595kg leaving you with only 275kg for a driver, fuel, passengers, luggage & any accessories fitted to in the vehicle. It's always best to check your vehicle's weight limitations before loading your vehicle, and if you have loads of accessories fitted such as bullbar, canopy and other items it may be best you get your vehicle weighed so you are 100% sure of your vehicle's weight.

## Connecting to Vehicle

The height of the towbar directly affects the vehicle while towing and the height from the ground to the center of the tow ball should not exceed 460mm or be less than 350 mm. You'll have to measure the distance from the ground to the center of the tow ball as each vehicle varies based on make, model & modifications. Keep in mind that once you load the weight of the caravan on to your vehicles hitch it will drop in height. Below is a quick reference guide which relates to each car:

Jayco Touring Models = 355mm  
Jayco Outback Models = 460mm  
Supreme Touring = 450mm



## Weight Distribution / Anti Sway Bars

Not all caravans require weight distribution / anti sway bar hitches but if you have been supplied a kit with your caravan it is highly recommended that you use it. It is not a legal requirement, but it increases the handling and stability while towing for your safety.



## D-Shackles

All D-Shackles are stamped with a load rating as shown below. You must ensure the pair of D-Shackles on your vehicle are rated to suit the weight you are towing.

WLL = Working Load Limit  
1T = 1 tonne each x 2 = 2 tonne towing capacity  
1.5T = 1.5 tonne each x 2 = 3 tonne towing capacity  
2T = 2 tonne each x 2 = 4 tonne towing capacity



## Step by Step Guide

- Connect to tow hitch and if fitted use the supplied load level / anti swaybars
- Attach both safety chains crossing them over from left to right using correctly rated D shackles
- Remove jockey wheel
- Ensure split pin is inserted into caravans trigger lock
- Attach 7 pin trailer connector to tow vehicle – use adapter if required
- Attach 50amp Anderson socket to vehicle if fitted  
(used to power fridge, charge batteries & operate ESC)
- Attach brake away safety cable (requirement for all trailers over 2000kg)
- Release handbrake
- Attach tow mirrors to tow vehicle
- Check all lights on caravan match tow vehicle operation
- Ensure electric brake controller in vehicle is working and adjust setting to a safe working level suitable for the caravan you are towing. Refer to electric brake controller section for further information



## Arrival

- Find a level site
- Chock rear wheels using the supplied wheel chocks
- Apply hand brake
- If fitted remove weight distribution / antisway bars
- Attach jockey wheel
- Disconnect from vehicle leaving safety chains connected until the hitch is separated from the tow vehicle
- Remove safety chains once caravan is separated from vehicle and held stable by hand brake & wheel chocks
- Level caravan front to back using the jockey wheel to wind up or down as required
- Lower each of 4 stabilizer legs so they are planted firm on the ground
- If you require gas, turn on gas bottle and remember the blue switch selects the gas bottle you will draw from
- If 240v power is available connect to caravan using the supplied 15amp lead
- If water is available connect the water hose to the tap first and turn it on to clear out any dirt which may have gathered in the hose. Once clear water is coming out turn off tap, connect to caravan and turn tap on.
- Attach drain hoses if required using the supplied drainage hose
- If no mains water is available ensure your water tanks are full & turn the water pump on
- Switch fridge to appropriate operation.  
*(refer to Fridge operation section for further information)*

*Refer to Jayco Camper Setup section for further information.*

## Departing

- Disconnect power, water and drain hoses ensuring no water is left in the pipes prior to storing in caravan. Remember to always ensure the air con / heater is turned off before disconnecting power.
- Ensure water pump is turned off
- Switch fridge to 12v DC power if you have an Anderson plug connected to your vehicle
- Ensure gas is turned off *(THIS IS A LEGAL REQUIREMENT)*
- Ensure all windows are closed and locked with blinds & fly screens in the open position
- Close all roof skylights
- Ensure all roof latches on campers & pop tops are securely in the locked position
- Wind down antenna (Pointers must line up with each other before lowering)
- Wind up all 4 stabilizer legs
- Ensure awning is rolled up and in the lock position with the black knob tightened on each arm and the locking device in place.
- Connect to vehicle as previously explained and remove jockey wheel  
*(Do not travel with jockey wheel attached to drawbar, store in vehicle or caravan front boot)*
- Ensure tow mirrors are fitted to your tow vehicle where supplied and required

## Battery & Power System

### 12v Battery

All our caravans are fitted with either single or dual batteries which operate all 12v devices and lighting throughout the caravan. Always leave the battery switch in the ON position otherwise it will isolate the batteries and everything including the fridge, charging the batteries and solar system may not operate.

### Solar Power

If your caravan is fitted with solar panels the system will automatically turn on and off according to the sunlight available and the power requirements of the battery. This is a completely self-sufficient system which you do not need to adjust or alter in anyway.

### Charging from Tow Vehicle

The caravan is fitted with a device that will charge the batteries while driving only if you have accessory power fitted to your vehicle via a 50amp Anderson socket or 12 pin trailer socket. If your vehicle has a 12 pin trailer plug with power connected via pin 9 & 10 then we can supply an adaptor to connect from your 12 pin plug to the caravans 7 pin & Anderson socket.



***ANY POWER SOURCE FROM YOUR VEHICLE MUST BE AN APPROPRIATELY FUSED POWER SUPPLY***

### 240v Power

Once connected to 240v power using the 15amp cable provided, the caravan will have 240v power just like you have at home. You can run the microwave, heater, air conditioner and use all the 240v power sockets located within the caravan. Before disconnecting the 240v power ensure the air conditioner/heater has already been turned off.

***DO NOT SWITCH OFF THE 240V POWER WHILE THE AIR CONDITIONER OR HEATER IS RUNNING***

### Generator

If provided the generator is best placed around 10m from the caravan to reduce noise levels during operation. Once the generator is running connect the supplied 240v cable from generator to the caravan. The generator will also automatically start charging the battery when running. When it is time to leave please ensure you pack the generator in a safe place and tie it down to prevent any movement while driving and remember the generator cannot be stored inside the caravans while driving. It must be stored either in one of the caravans tool boxes or inside the tow vehicle.

***THE GENERATOR OR ITS FUEL MUST NOT BE STORED INSIDE THE CARAVAN***

#### Notes:

- In general caravan batteries DO NOT run the fridge. The fridge should always be run on gas when free camping or 240v AC when connected to mains power. The exception to this is our Supreme caravans which have been designed to operate from batteries and solar.
- Battery power will shut down when battery voltage drops too low. If this occurs, you will hear an alarm and will need to charge the battery using one of the methods above.

## Television

If a TV is supplied within your caravan DO NOT travel with the TV mounted, always repack the TV into the box provided and store in a safe place.

## Fridge

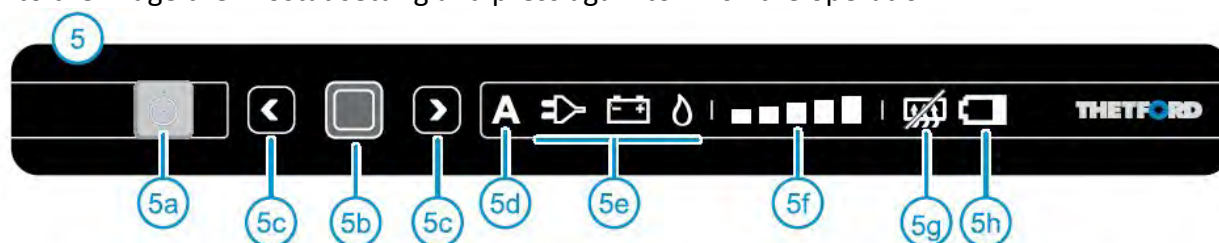
There are two types of fridges fitted to our caravans, either a 3-way or a compressor fridge. If your caravan is fitted with a 3-way fridge this means it can operate on either Gas, 12v DC or 240v AC whereas a compressor fridge operates on 12v DC or 240v AC only.

3-Way Fridges work best on 240v or Gas and can take up to 12 hours to cool 100% particularly in extreme heat and are completely silent when running. The caravan batteries DO NOT run a 3-way fridge, the 12v power source is only used when driving with the 12v supply coming directly from the tow vehicles power supply via an Anderson socket or 12 pin trailer plug.

Compressor fridges cool in about 45mins and are a much superior fridge but draw a lot of battery power so its important to keep your batteries topped up especially in non-sunny areas as the solar will not be as effective. Generators are great to use while free camping to top up batteries too.

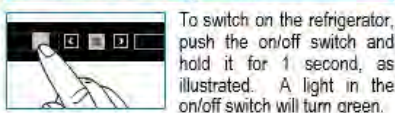
### Thetford 3-Way Fridge (Gas / 240v / 12v)

For simple operation the fridge can be set to "A" for automatic mode where the fridge will automatically switch to the best source available. Hold down the square button to select the source and press it again to switch to the fridge thermostat setting and press again to finish the operation.



- **5** Control panel LED
- **5a** On/off switch
- **5b** Confirmation button
- **5c** Arrow buttons
- **5d** Automatic function (not present on all refrigerators)
- **5e** Sources
- **5f** Cooling level indicators
- **5g** 'Anti-condensation' (only for model B)
- **5h** 'Batteries empty' (optional extra)

#### 1 Switch on refrigerator



After 10 seconds the settings will dim. The green light indicates the refrigerator is still in function.

To check the settings push the on/off switch. The last selected settings will light up.

- To secure optimal performance, level your vehicle before operating the refrigerator.
- For optimal performance, switch on the refrigerator 8 hours before placing food. We advise to clean the inside of the refrigerator properly, before using your refrigerator.

#### 2 Selecting source



After switching on the refrigerator, push the confirmation button and hold it for 2 seconds. The symbols for the sources light up and start to blink.



Choose the desired source by pushing the arrow buttons.



Confirm your choice with the confirmation button.

##### Sources



**Auto** The refrigerator automatically selects the best source available (in order: mains, battery, gas)

Automatic function is not present on all refrigerator types



**230V** The refrigerator is powered from the mains.



**12V** The refrigerator is powered from the battery of your vehicle.



**Gas** The refrigerator is powered from the gas connection of a gas bottle.

If you set the refrigerator on the automatic selection, the control panel will show two source symbols, the A and the best source available.

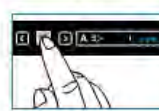
Always use the gas connection or mains voltage to start and cool. Operating on 12V is only effective while the engine of the vehicle is running.

When selecting gas, the flame should be ignited within 30 seconds. If the system fails, restart the refrigerator and select the gas source again.

#### 3 Selecting cooling level



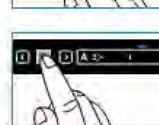
After switching on the refrigerator, push the confirmation button and hold it for 2 seconds.



The symbols for the sources start to blink. Push the confirmation button again.



The cooling level indicators start to blink. Use the arrow button to choose the desired cooling level.



Confirm your choice with the confirmation button.

Lowest cooling level Highest cooling level

150L Dometic 3-Way (Gas / 240v / 12v)

240v Power

Ensure the caravan is plugged into a 240v power source, rotate dial 1 to “AC” and set thermostat (dial 5) to the desired setting. The higher the number on the thermostat the colder the fridge will be, generally setting 4 is ideal but when the ambient temperature is above 30d you may need to select a higher setting.

12v Power

This is only used while the caravan in being towed and is powered from the tow vehicles battery. Rotate dial 1 to “DC” and set the thermostat to the desired setting.



Gas

Gas is the most effective source and can only be used when the caravan is stationery and on level ground. Rotate dial 1 to “GAS”, set the thermostat to setting 4, hold down button 4 and click button 3 a few times while still holding down button 4. Continue to hold button 4 until the red line moves from the white area into green area and once this occurs you can release button 4. This can take a few goes before it activates so patience is sometimes required.



90L Dometic 3-Way (Gas / 240v / 12v)

These are fitted in the smaller caravans and campers and operate the same as the above 3 way fridges.

Selector switch ..... 207

AC thermostat ..... 293

Flame meter ..... 217

Piezo lighter ..... 216

Cooling system fan switch (fan models only) ..... 252

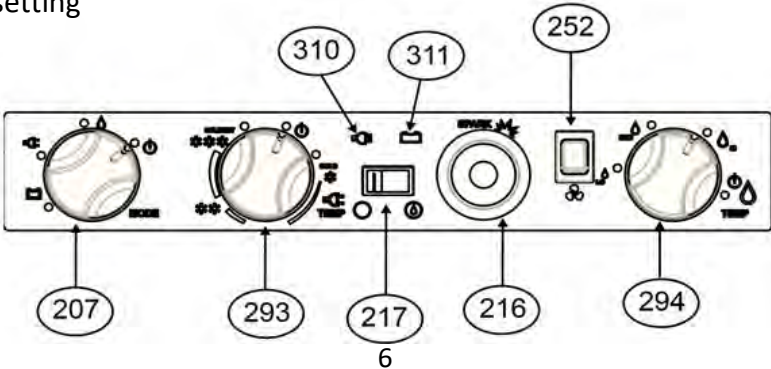
Gas control..... 294

AC power indicator ..... 310

DC power indicator ..... 311



The AC thermostat [293] controls the temperature setting when operating in AC electric mode:  
The AC power indicator [310] shows that the refrigerator is operating in AC mode.  
The DC power indicator [311] shows that the refrigerator is operating in DC mode.  
The piezo igniter [216] makes a spark which ignites the flame in the burner.  
The flame meter [217] shows if a flame is present in the burner.  
The gas control [294] sets the temperature setting of the refrigerator when operating in the GAS mode. To change the temperature setting, push and turn the gas control to either the HI, MED, or the LO position. HI is the coldest temperature setting





## Dometic Compressor Fridge

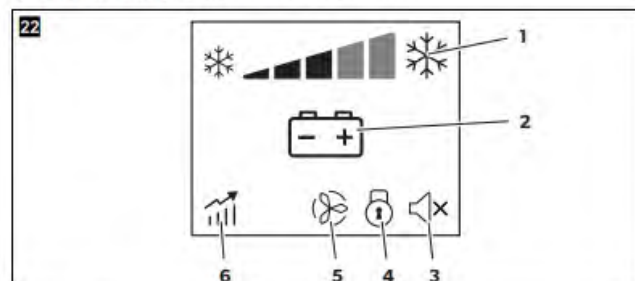
These fridges operate off the caravans 12v battery source or 240v power. They require little to no adjustment and automatically switch between 12v & 240v so no user interaction is required except if you wish to alter the temperature.

To switch on press and hold the silver knob for 3 seconds, same applies to turn it off.

To adjust the temperature press the knob and turn the dial to adjust the temperature up or down.

We suggest you do not alter any other setting.

By default the display shows the following main menu:



No. in fig. 22	Description
1	The temperature bars show the set temperature: Lowest bar: lowest cooling function (warmest inner temperature) Highest bar: highest cooling function (coldest inner temperature) Blue snowflake: compressor is on. White snowflake: compressor is off.
2	Displays the currently used energy source. If the refrigerator is connected to AC and DC power supply at the same time, the AC power supply is preferred.
3	Beep off: No sound indication for extended door openings or error conditions.  Beep on: Sound indication for extended door openings or cooling function error conditions.

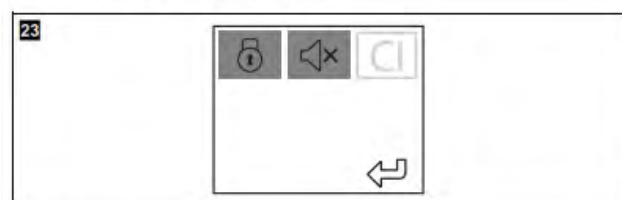
No. in fig. 22	Description
6	Turbo mode: The coldest setting (level 5) is activated. The outer fan and compressor operate at high speed and the defrost function is disabled. Turbo mode is active for 12 hours or until the refrigerator reaches a temperature of -2 °C. After that, the control switches to performance mode automatically. After switching to performance mode, the temperature setting remains at level 5. At this point the temperature can be set to levels 1-5 to suit ongoing requirement.



### NOTE - inner fan

- All cooling modes: the inner fan switches off when the refrigerator door is opened.
- Performance/Silent/Turbo modes: the inner fan cycles on/off with the compressor.
- Eco mode: the inner fan remains on during compressor off cycles.

## 9.6 Settings screen (fig. 23)



Symbol	Description
	Child lock
	Beep off
	CI-Bus: Not applicable on this model

No. in fig. 22	Description
4	The child lock is selectable by user to prevent accidental adjustments or children from using the controls. The lock activates approx. 10 seconds after the last control knob touch and the display dims. Temporary override: Push the control knob 3 times within 1.5 seconds to unlock the controls temporarily. After 10 seconds without touching the control knob, the child lock is reactivated. Permanent deactivation: First temporarily override, then turn the child lock off in the settings menu.
5	These symbols show the speed level of the outer fan: 1 = low speed 2 = high speed
6	These symbols show the active user mode of the refrigerator:  Performance mode (factory default mode): Uses all functionalities of the refrigerator automatically for optimised performance. The temperature can be set to levels 1-5.  Silent mode: The outer fan operates at low speed and the compressor speed is limited. The temperature setting is limited to levels 1-3. <b>Note:</b> In high ambient conditions the silent mode cooling performance may not suit some users.  Eco mode: The temperature setting is fixed at level 3 and defrost function is disabled.

using the refrigerator

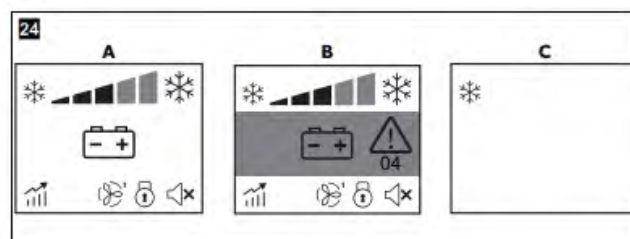
KUC04U0A, KUC04U0A

## 9.7 User modes

The following table shows the user modes and their settings:

User mode	Symbol	Compressor speed	Outer fan	Defrost	Temperature setting	Duration
Performance		Auto	Auto	Auto	Levels 1 - 5	ongoing
Silent		Limited	Low	Auto	Levels 1 - 3	ongoing
Eco		Auto	Auto	Off	Level 3	ongoing
Turbo		High	High	Off	Coldest level (5)	max. 12 hours

## 9.8 Display dimming functions (fig. 24)



If there is no operation on control knob within 10 seconds, the backlight will be dimmed and the display will return to idle screen (A). After another 3 minutes without operation, the screen will enter standby (C) on which a snowflake appears in the top left corner to indicate that the refrigerator is on.

If there is an active error indication, the backlight and screen will not turn off. The display enters error screen (B). In the error screen, the middle section is highlighted in red and shows the relevant error code (see chapter "Troubleshooting" on page 47).

## Awning

All awnings should never be used during high winds or heavy rain conditions. Wind can rip the awning and damage the arms in the process while enough rain can pool up and the weight may rip the PVC or possibly bend the main awning beam. Please follow the instructions below and if unsure watch the tutorial video clip found at [www.outbackcaravanhire.com.au](http://www.outbackcaravanhire.com.au)

### Rollout Awnings (*Expandas / Poptops / Full Size Caravans*)

These style awnings roll out from the side of the caravan and are supported by 2 end arms and on larger caravans a centre support arm. These are simple to operate but also easy to damage if setup incorrectly or used in unsuitable weather conditions.



#### Step-by-Step Guide

1. Unlock the awning at the top right side by setting it to “open”
  2. Loosen the black knobs behind the left and right arms, do not remove this knob, simply just loosen them.
  3. Roll the awning out using the black cord located at the top of the awning
  4. Slide the arms spreader bars upwards and lock into place
  5. Position each arm to the height you require and tension the black knobs on the spreader bars.
- If your caravan is fitted with a centre support arm continue to step 6.*
6. Move the centre support arm, lock into the hole in the awning and tension the black knob.



Ensure you have a slope set for water to run off and angle the awning to one side to assist with water run off. If the rain gets too heavy retract the awning in completely to prevent water pooling and damage occurring. Always have the awning on a slope, never have the awning at a 90 degree angle to the caravan.

### Disconnecting The Arms

Each arm can be disconnected from the caravan and positioned on the ground with 2 pegs in each arm base to prevent movement. If this option is used, awning tie down tube clamps and guy ropes will be required for additional stability.

Continuing from step 6 above:

1. Press release lever at base of arm
2. Lift arm away from van to vertical position (*see image below*)
3. Place 2 pegs in each leg base
4. Place tube tie down clamps (*where supplied*), ensuring rear of clamp is fitted into awning tube channel
5. Fit guy rope/tie down and tension





If you wish to disconnect the arms on an awning with a centre support arm you **MUST** remove this centre arm first. The centre support arm sits in the hole located in the centre of the awning beam and the awning rotates when the legs are moved to the ground position. Trying to remove the arms while the centre support arm is connected will result in damage to the support locating pin or tear the support hole in the awning beam.

**WARNING:** If leaving the caravan unattended for the day, or if expecting weather conditions to worsen, retract the awning completely to minimize risk of damage.

### Fiamma Awning (Campers)

These style awnings wind out from the side of the caravan and are supported by 2 poles which are built into the awning itself. These awnings require a winder which will be supplied with the camper and below is a step by step guide.

1. Locate awning winder in caravan toolbox
2. Place the hook into the end of the awning and turn COUNTER CLOCKWISE to open
2. Wind the awning out leaving a bend in the legs (*see image below*)
3. Pull out each of the support poles, undo the tension screw & drop pole foot to the ground.
4. Re-tension the pole screw & peg to ground
5. Using the supplied ropes tie at least 1 rope to each end of the awning



## Water

### Filling Tanks

Your caravan or camper will be fitted with either 1, 2 or 3 water tanks each with an 80L capacity. To fill the water tanks you will need to do so via the filler valves located on the right hand side of the caravan. There are different styles of water fillers between different model caravans.

### Jayco Fillers

Use the white plastic key to open the flap to access the filler valves plus a mains water connection. Take care and gently operate the lock. The locking mechanism is plastic and easily damaged. The left and right ports fill the tanks and the middle adapter is for mains water connection such as when you are at a caravan park. Simply place the hose in each filler port and turn the tap on gently to fill.



- |   |                         |
|---|-------------------------|
| 1 | Rear water tank filler  |
| 2 | Front water tank filler |
| 3 | Tank breather           |
| 4 | Tank breather           |
| 5 | Mains water inlet       |

To switch between water tanks on a Jayco look under the right (*driver*) side just under where the draw bar finishes and you will notice a black knob with a white arrow. This is the water tank selection valve. When the arrow is pointed to the front of the caravan then the water will pump from the front tanks, when the arrow is pointed to the rear then the water will pump from the rear water tank. When pointed downwards it will pump from both tanks simultaneously.



## Supreme Fillers

Push in and twist to open, once open insert the water hose and gently turn the tap on.



To switch between water tanks on a Supreme look under the right (*driver*) side just near the battery compartment and you will notice a series of black/green valves. These are the water tank selection valves. When the valve is vertical it is in the open position, when the valve is horizontal it is in the closed position. Simply open the tank you wish to draw from and keep the others closed until you need to use them. They are positioned in order from front to rear, so the left valve is the rear tank, middle valve is the middle tank and the right valve is the front water tank.



## Clearing Breather Lines

It is quite common for the water tank breather lines to fill with water while travelling which may make it difficult to fill the water tanks. You will notice this has happened when you attempt to fill the tanks and water starts coming back out the filler port. When filling the tanks the breather lines need to be clear to ensure the air inside the tank exits during the filling process. A couple of tips below explain how you can clear the breather lines if you are having trouble filling the tanks.

- 1 Using a short piece of hose around 20-30cm, place it over the breather vent just above the filling port. Blow through the pipe as hard as you can to push any water back into the water tank.
- 2 On each water tank locate the breather pipe at the top of each tank and remove the pipe gently. Drain any water from the breather pipe & reconnect.

## Mains Connections

Before connecting the mains water we suggest connecting the hose to the tap first and turn it on to clear out any dirt which may have gathered in the hose. Once clear water is coming out turn off tap, connect to caravan and turn tap on via the mains inlet.

Jayco caravans have the mains water connection inside the water filler box whereas Supreme caravans have the mains water inlet located either on the drawbar, at the rear right (*driver*) side behind wheel arch or both.

## Water Pump

To use the water from the tanks you will need to switch the water pump to ON inside the caravan. You do not need to turn the water pump on while connected to main water pressure. The water pump may take some time to prime initially, often opening a tap to remove air from the line can assist this priming process. If the pump does not switch off / finish its priming process there may be an air leak. If this occurs switch the pump off to avoid damage and check for leaks but ensure water tanks are full prior to doing this.



## Hot Water System

### Operation on LPG

While free camping, the hot water unit will run off the gas bottles located on the front of the caravan. To turn the unit on, firstly ensure you have the gas & water pump on with plenty of water on board, then simply turn the gas water switch to ON located inside the caravan. You will hear the gas unit light up in about 10-15 seconds and the red light will turn off once its running, if not the red light will stay on. If this occurs, turn off then back on again until the red light finally turns off signifying the gas unit is working.

Supreme Caravans Control Switches



Jayco Caravans LPG On Switch



### Operation on 240v Mains

When connected to mains power the hot water unit can operate via its 240v element. With Supreme caravans the 240v Electric switch is located in the control box as shown above. With Jayco caravans the switch for 240v heating is located on the outside of the van within the hot water unit. Open the hot water unit side panel and you will see a black switch at the bottom left, switch this to on for 240v heating. The hot water service unit must never be set to run on LPG and 240v at the same time and must always have water in the unit when operating on 240v, without water the heating element will burn out. It operates much like a giant kettle, so if there is no water the electric element will burn out. If you are unsure whether there is water in the unit pull the relief valve until water flows out onto the ground beneath the caravan.



### Operation of Instant Hot Water systems

Some of our caravans are now equipped with instant hot water systems. These units automatically turn on once the battery isolator switch is turned on. They can be manually switched "on/off" by using the power button on the display. When either on 240V mains or gas, the system will automatically heat water on demand once the hot water tap is turned on. Please note, it takes 1.5 to 2 litres of water flowing through the tap before the heated water flows. The temperature is default set to 50 degrees Celsius to prevent scalds/burns.

## Poptop & Expanda Setup

### Roof Setup

1. Ensure you have a level site with all 4 stabilizer legs positioned firm on the ground.
2. Unlock the 4 latches on the roof, one on each corner. **VERY IMPORTANT\***
3. Set the awning to the open position. **VERY IMPORTANT\***
4. Enter the caravan and push the front end up first & lock in the support latch.
5. Push the rear end up second & lock in the support latch.  
(you must raise the front section first followed by the rear)

**\*Expanda model caravans require the awning and arms to be opened a short distance off the van sidewall to enable the unclipping of roof clips (see section on awning use).**

To pack-up and lower the roof follow this procedure in reverse and remember you **MUST** lock in the roof latches prior to towing the caravan.



*locked*



*unlocked*



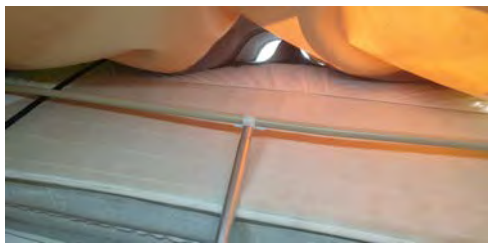
**Lift upwards**



*lock in the support latch*

## Expanda Bed Setup

1. Unlock and lift the bed end hard lid covers
2. Release the bed base locking clip
3. Fold the bed down, it is self supporting
4. Go inside the caravan and locate the centre support arm
5. Install the centre support arm and use the tensioning clamp to hold it in place
6. Unstrap the two mattress straps and fold the mattress over
7. Setup your linen and you're done





### Roof & Bed Setup

1. Ensure you have a level site with all 4 stabilizer legs positioned firm on the ground
2. Unlock the 4 latches on the roof, one on each corner & attach guy ropes to eyelets at each roof corner. These must be used to stabilize the roof.
3. Use winding handle located in toolbox and insert into rear of camper and wind up slowly. (there is a green limiting cable in the rear left corner which will prevent over-lifting)  
*If you wish to use the bed fly ends unzip them prior to raising the roof*
4. Place the two support poles into opposite corners of the roof
5. Before sliding the beds out ensure no canvas is going to get caught as you slide the beds out and don't slide the beds out all the way, pull the canvas over the bed then slide it further out.
6. Insert the support poles to each bed located under the mattress
7. Once both beds and base supports are in position enter the camper and insert the internal support poles located under the mattress into the upper position.



To pack-up and lower the roof follow this procedure in reverse and remember you MUST lock in the roof latches prior to towing the caravan.

### Door Setup

1. Carefully fold down the upper door and position the base on to the top locating lugs (refer to picture A)  
*Do not allow the door to fall, always keep it supported with your hands while lowering.*
2. At the top of the door lock in the two swivel locks on the hinge (refer to picture B)
3. Attach the locking mechanism between the lower & upper door sections (refer to picture C)
4. Release the upper door left hand side swivel locks (refer to picture D & E)
5. Attach velcro on both the inner & outer to both sides of the upper door



Picture A



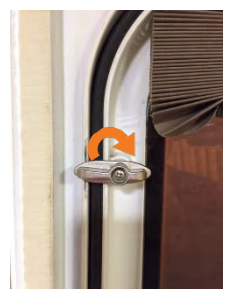
Picture B



Picture C



Picture D



Picture E



## Door Pack-up

It is extremely important that the upper door section is installed in the correct position to avoid damage to the door in transit. The large hinge on the top of the door must be parallel with the roof line, refer to the images to ensure you pack-up the door in the correct manner.



**CORRECT**



**INCORRECT**

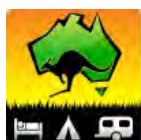
## Toilet Cassette

There are different styles of toilet cartridges depending on which caravan you are hiring. The orange & yellow cartridges use water from the caravans main water tanks for flushing & the green cartridges have their own water supply. All units require the use of chemicals to be placed inside the unit every time the cassette has been emptied.

To remove ensure you have flushing flap closed inside the caravan then simply lift the locking mechanism at the base of the cartridge and slide the unit out. To empty fold out the release pipe, unscrew the end cap and tip into waste site. Continue to rinse with water to remove all waste until clear water is coming out. Once complete screw cap back on and insert into caravan and ensure the locking mechanism is in place and the cartridge is secure.



Once emptied and thoroughly rinsed, add a small amount of water (around 1-2 litres) and insert one of the toilet chemical tablets / sachet provided. You MUST ensure you empty and clean the toilet cassette before returning the caravan. We recommend downloading the Wiki Camps app on your smart phone which will provide you with a detailed list including a map view of all the dumping points throughout Australia.



WikiCamps Australia

The ultimate travel app for your smart phone



## TV Antenna

If your caravan is fitted with a TV antenna you will see a direction winding handle located inside the caravan on the roof, refer to picture (a). Simply turn the dial clockwise to wind the antenna up and anticlockwise to wind it down. Once raised you can pull down on the outer edge and rotate the antenna until you receive a signal but before you wind the antenna down you must again line up the two arrows. This aligns the antenna with the support cradle located on the roof for safe travel.



### Antenna Boost

To boost your antenna frequency signal, push the small black button located on the side of the 12v power socket.

## Cooking Inside Caravan

DO NOT deep or pan fry food inside the caravan, the food scent will embed itself into the caravan and will be unpleasant throughout your journey and for others hiring the caravan after you return it. This includes actions such as cooking bacon, steak and even curry dishes. We offer portable BBQ's for hire which can be used outside the caravan for these purposes.

## Tyre's

### Pressures

Keep all tyre pressures at 40 psi while traveling on sealed roads. Reduce pressure to 25 psi when travelling on approved unsealed roads. Remember, you MUST have approval from Outback Caravan Hire prior to travelling on any unsealed roads and we recommend travelling with a portable air compressor when doing so. If you do not own a portable air compressor Outback Caravan Hire have these available to hire.

### Flats

Each caravan is fitted with a spare tyre along with jack and wheel brace located in the toolbox.

### Punctures

If you incur a tyre puncture we suggest getting it repaired at your closest repair centre to ensure you have a working spare tyre for the rest of your trip. We do not recommend travelling without an inflated spare tyre. Where punctures are repaired using temporary roadside repair kits the tyre must be taken to an approved tyre dealer to be professionally repaired prior to its return.

Wiring Diagrams

7 Pin Plug

Pin 1	Left hand signal	Yellow
Pin 2	Unused/Aux power	Black
Pin 3	Earth	White
Pin 4	Right hand signal	Green
Pin 5	Service Brakes	Blue
Pin 6	Stop Lamps	Red
Pin 7	Tail/Side marker Lights	Brown



An Anderson plug is used to power the fridge, operate the ESC and to charge the batteries while driving.

12 Pin Plug

Pin 1	Left hand signal	Yellow
Pin 2	Unused/Aux power	Black
Pin 3	Earth	White
Pin 4	Right hand signal	Green
Pin 5	Service Brakes	Blue
Pin 6	Stop Lamps	Red
Pin 7	Tail/Side marker Lights	Brown
Pin 8	Unused	
Pin 9	12v Aux Power	Red or Pink
Pin 10	Earth	White
Pin 11	Unused	
Pin 12	Unused	



## Portable Electric Brake Controllers

### WARNING

ENSURE THAT YOUR TRAILER BRAKES ARE INSTALLED AND OPERATING CORRECTLY. IMPROPERLY INSTALLED OR FAULTY TRAILER BRAKES CAN CAUSE ERRATIC VEHICLE OR TRAILER BEHAVIOR WITH POTENTIAL TO CAUSE A ROAD ACCIDENT. ALWAYS CHECK BRAKES AT LOW SPEED EACH TIME A TRAILER IS CONNECTED TO YOUR VEHICLE.

### Type 1 - ElecBrakes Unit

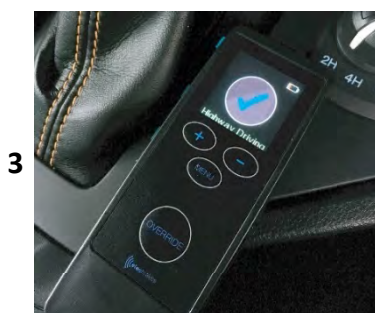
#### Remote Control

1. Battery Indicator
2. Display Screen
3. Increase Button
4. Decrease Button
5. Menu Button
6. Manual Override



#### Functions

1. When powered up the screen displays the Elecbrakes logo
2. Once completing its start up the remote will automatically start to search for a device. The screen will display as searching.
3. When connected the screen will display a tick and the active program will be displayed
4. When braking in the vehicle the remote will indicate red that the caravan is performing a brake response



#### Charging the Remote

The remote comes with a USB charging cable & a 12v socket plug for in-car charging.

#### Shutdown Mode

The remote can be shut down by depressing the increase & decrease buttons simultaneously. To turn the device back on simply push any button.

The unit is also fitted with a sleep mode designed to preserve battery life. Sleep mode will activate when the electric brake device is not being used for 1 minute and the screen will turn off. This will not occur while connected to the device, it is designed for sleep mode when you turn your vehicle off and you are not using the braking system.

#### Display Forward Brake Response

- Push menu button twice
- Forward response displayed
- Use + / - buttons to change brake response

*Note: forward response should be fine tuned when travelling at 50kph or less.*





### Display Reverse Brake Response

- Push menu button 3 times
- Reverse response displayed
- Use + / - buttons to change brake response



### Manual Override Button

Manual override allows the driver to apply the brake response on the caravan brakes only. The remote has a pressure sensitive button, the harder you press the stronger the brakes will apply. When you take your finger off the manual override button the brakes will release.



### Programs

Outback Caravan hire have pre-installed programs on the device, please do not alter these.

### Type 2 - Redarc Unit



MAX ALLOWABLE POWER SETTING		
Cig Lighter Socket Rating	Single Axle	Tandem Axle
15A / 180w	MAX	MAX
10A / 120w	MAX	80%

1. Ensure that your electric brake controller is mounted in a secure fixed location as per the manufacturer's instructions provided. Failure to mount securely will result in inaccurate braking force measurements and incorrect braking of the trailer.
2. If towing a tandem axle trailer it is recommended that you use a 12v 15amp cigarette socket as your power source if 100% braking force is required. If a 15amp power source is not available you can operate the unit from a 10amp socket under limitations as noted in the chart above.  
This is to prevent the possibility of the vehicles cigarette lighter socket fuse blowing upon 100% braking force being applied if the unit is set too high while being powered from a 10amp socket.
3. It is recommended that while using your portable electric brake unit that you do not operate or charge any other devices from another power source in your vehicle unless that power source is isolated from the cigarette lighter socket which is providing power to your brake unit.
4. The control module will calibrate after loss & resupply of its 12v power source. If your vehicles 12v cigarette lighter socket is not a permanent power source it will calibrate each time the vehicle is restarted.

### Fitting the Redarc Control Module

The unit is fitted with motion sensors and it is extremely important that control module is positioned in a secure place where it cannot move while travelling. The unit is supplied with a velcro strip on the base which is ideal for positioning under one of the front seats adhering to the carpet lining. Refer to diagram A. If using this method you must ensure that the unit is adhered correctly and not able to move around and no other loose objects in the vehicle must interfere with the control unit at any time. The facing direction is not important as the unit is self-calibrating.

If the unit cannot be securely mounted you will need to switch the control module to user controlled mode. Once the user control mode is activated the unit does not need to be secured in the vehicle as it will operate as a non-proportional brake operation. This can be achieved by following the below steps while the vehicle is on and the trailer / caravan is connected.

1. Set the knob to 0
2. Apply vehicle brakes
3. Double click the knob (i.e. two pushes within 1 sec)
4. Release vehicle brakes

Repeat the process to switch back to automatic proportional mode.

### Fitting the Redarc Remote Head

Position the remote head in the vehicle cup holder or alternative position which is reachable by the driver and connect the lead to the control module. Refer to diagram B & C.

### Redarc Fitment Instructions

- 1 Securely mount the brake control unit & remote head as described above.
- 2 Connect the 4 wire plug to the back of the Redarc unit.
- 3 Connect the cigarette power plug to the vehicles 12v socket.
- 4 Run the 5m length of cable with the 2 pin connector from the brake unit to the rear of the vehicle feeding the cable through a safe path.
- 5 Drop the lead out of the boot lid and connect the 2 pin connector plug to the supplied adapter.  
(Diagram E) **Caution, Do not pinch or damage the cable during this process.**
- 6 Connect the supplied trailer adapter to the vehicle & connect the trailer. (Diagram D)
- 7 Turn on vehicles ignition and set the adjustment control knob to setting 5.
- 8 Test brakes at a stand still position by applying the manual override (press control knob down) while a secondary person listens to the trailer wheels to ensure the electronic brake magnets are operating. You should hear a buzzing noise coming from the trailer wheel hubs as brake power is applied.

The control module will enter the self-calibrating mode when the power is first connected or when the power source is lost and activated again. For example if you vehicles 12v cig socket turns off when you turn your car off then the Redarc unit will calibrate each and every time you start the vehicle. Self-calibration is automatic and is completed while the vehicles brakes are applied. No user interaction is required during this process.

To test braking level is suitable for your towing weight drive the tow vehicle and caravan on a dry level & solid surface at roughly 40kph and fully apply the manual override.

- If the brakes lock up, turn the adjustment control to a lower setting
- If the braking was not sufficient, turn the adjustment control to a higher setting

Repeat the tow brake test until the adjustment control is set at a point just below caravan wheel lock up.



Diagram A



Diagram B



Diagram C

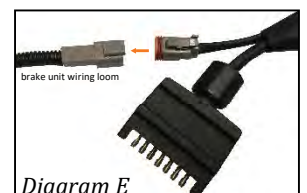


Diagram E

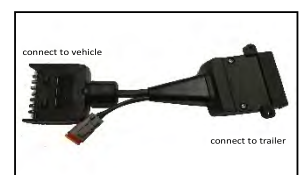


Diagram D

### Type 3 - Tekonsha Unit

- 1 Ensure that your electric brake controller is mounted in a secure fixed location as per the manufacturer's instructions provided. Failure to mount securely will result in inaccurate braking force measurements and incorrect braking of the caravan.
- 2 If towing a tandem axle caravan it is recommended that you use a 12v 15amp cigarette socket as your power source if 100% braking force is required. If a 15amp power source is not available, you can operate the unit from a 10amp socket under limitations as noted in *Diagram A*.  
This is to prevent the possibility of the vehicles cigarette lighter socket fuse blowing upon 100% braking force being applied if the unit is set too high while being powered from a 10amp socket.
- 3 It is recommended that while using this wiring loom you do not operate or charge any other devices from another power source in your vehicle unless that power source is isolated from the cigarette lighter

#### Fitment Instructions

- 1 Ensure you brake unit is securely mounted as suggested by the manufacturer.
- 2 Connect a compatible adaptor to the vehicle and also connect to the caravan (*Diagram C*)
- 3 Connect the 4 wire plug to the back of the Tekonsha brake unit.
- 4 Connect the cigarette power plug to the vehicles 12v socket.
- 5 Run the 5m length of cable with the 2 pin connector from the brake unit to the rear of the vehicle feeding the cable through a safe path.
- 6 Drop the lead out of the boot lid and connect the 2 pin connector plug to the caravan adaptor. (*Diagram B*) **Caution, Do not pinch or damage the cable during this process.**
- 7 Refer to Tekonsha operation manual for correct operating instructions of the brake unit.

*This product is supplied to allow ease of fitment in vehicles that require a non-permanent installation. All mounting orientation and operational requirements in the Brake Controller manufacturers product manual still apply and must be followed to ensure safe operation.*

*Road rules relating to towing vary between Australian State jurisdictions. It is advisable to check the trailer brake requirements in your state to ensure that you are fully compliant with local regulations.*

MAX ALLOWABLE POWER SETTING		
Cig Lighter Socket Rating	Single Axle	Tandem Axle
15A / 180w	MAX	MAX
10A / 120w	MAX	80%

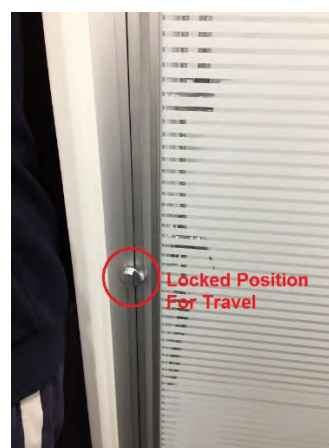
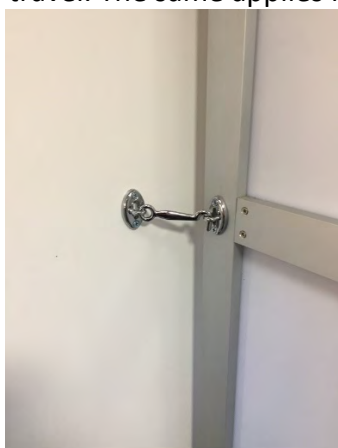
## Returning the Caravan

Before returning the caravan, please ensure the interior and exterior is cleaned. Below is a rough guide to remind you of a few things.

- Ensure you have removed all your belongings including clothes, linen & food
- Clean fridge thoroughly, do not just remove your food
- Empty toilet cassette and rinse with water
- Clean toilet seat and bowl
- Clean shower unit thoroughly, do not just rinse the shower walls with water
- Clean the stove top and the oven
- Either vacuum or sweep the floor, use a mop if required
- Wash exterior keeping in mind that you **MUST** not spray water over any of the vents or seals located on the outside of the caravan. It is okay to pressure wash the caravan.
- Ensure you advise Outback Caravan Hire of your expected arrival time in advance, particularly if you intend on altering the allocated return times from your initial agreement.

## Warnings, Tips & Tricks

- Do not store solid objects inside the caravan such as suitcases, esky, BBQ, generator, bicycles, camp chairs etc.
- Do not leave the awning out during high winds & heavy rain.
- Do not open the roof hatches during high winds as they may snap off.
- Do not travel with the TV mounted.
- Do not travel with the toilet cartridge full.
- Do not use a hose to wash out the area where the toilet cassette is located, this area is not watertight and will leak inside the caravan causing water damage. If your toilet cassette leaks you must clean the area by hand.
- Do not travel with the water pump left on, if a hose becomes loose or splits it will pump all the water out which could end up inside the caravan causing damage along with losing all your water supply. In general, only turn on the water pump when you require it.
- We recommend you have roadside assistance coverage on your tow vehicle that also covers a caravan being towed by your vehicle.
- Remember ALL unsealed road use requires pre-approval by Outback Caravan Hire. Failure to do so will result in excess hire fees and loss of any bond paid.
- All caravans are fitted with GPS tracking systems which record live location and speed data. These units are for both safety, compliance and insurance purposes.
- With the supreme ensuite sliding doors you must ensure they are in the locked position during travel. The same applies for the shower door





## FAQ

### **Water tanks don't appear to be filling, the water comes straight back out but the tank is not full.**

Each tank has a breather hose connected from the top of the tank to the breather port located near the filler. It's common for breather pipe to get water in the line causing an air blockage and you need to clear the water in the pipe to resolve the issue.

#### Method 1:

Using a short piece of hose, place it over the breather port and blow the water in the breather line back into the tank.

#### Method 2:

Pull the breather hose off the top of the tank and blow the water out.

### **When I connect to mains water, water pours out the tank fillers.**

First thing to check is that you have the water pump off. The water pumps contain a one way valve and if left on water can travel through this if the pump is left on while connected to mains water pressure. If this does not solve the issue then its likely to be an issue with the one way valve either in the water pump and requires repair or replacement.

### **The kitchen tap water flow is extremely slow.**

Most likely cause is dirt or small particles built up in the tap outlet. Simply remove using a spanner, clean & refit. Other causes could be the water pressure switch has failed which will require replacement by Outback Caravan Hire. Please call us if you believe this has occurred.

### **The kitchen sink drains very slow.**

This will happen when there is a blocked in the drain somewhere. Best option for instant fix is get under the van and disconnect the drain hoses leading the kitchen sink and flush the lines using a water hose.

### **I cannot get the weight distribution bars off the van.**

Make sure the car & caravan are straight and level with each other. If the vehicle is not straight or level additional pressure is placed on the bars which makes it very difficult to remove.

### **My fridge doesn't appear to be working on gas.**

Firstly, make sure the gas bottle is on and there is in fact gas in the bottle. The easiest way to confirm this is to turn the stove top on. Low gas supply will affect the fridges performance. Secondly make sure the caravan is level, 3 Way fridges require level ground (*no greater than +/- 5 degree slope in any direction*) to work efficiently.

### **Van levelling.**

If you are having difficulty determining whether your van is level. We recommend downloading a free Clinometer app on your smartphone. Open app and place phone on caravan A-Frame. The level bubble will provide an exact level of the chassis whilst you adjust jockey wheel.

### **My Air conditioner and other 240v appliances are not working.**

Ensure you are connected to a 240v power source such as the power pole at a caravan park or via a generator. Make sure any circuit breakers at the caravan parks power pole are also on as these are commonly left in the off position.



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