



FORBES 11

OFFROAD HYBRID

OWNER'S MANUAL

2025 Model



www.marketdirect.com.au

*2025 Model Shown



Phone: 1300 494 494

About this Manual

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Use of Product

The intent and purpose of this manual is to assist owners in the correct use and operation of the product and outline the servicing schedule to be followed, ensuring the correct maintenance of the product.

Servicing

Servicing information contained in this owner manual is provided for those who have appropriate technical skills and relevant to the subject matter the publication deals with regarding maintenance and repairs. The servicing content of this manual assumes a satisfactory technical knowledge and mechanical skills and experience. It is not suitable for people who are not trained or qualified in the subject matter it deals with. If you do not have the appropriate skills and experience, or if you do not have access to appropriate tools and equipment, you may injure yourself or others around you and/or you may cause damage to the camper or caravan you are working on, including making it unsafe. Users of this owner manual must:

- Read all content thoroughly. It is especially important to have a good understanding of all the contents shown in the INTRODUCTION and SAFETY Sections of this publication.
- Use only the correct tools and equipment for all repairs and servicing.
- If part replacement is necessary, replace the part with the same part number or equivalent part. DO NOT replace it with a part of inferior quality.
- Observe all 'Cautions' and 'Notices' to reduce the risk of personal injury during service or repair, or improper service or repair that may damage the camper/caravan or render it unsafe.
- Understand that the 'Cautions' and 'Notices' in this publication are not exhaustive because it is impossible to warn of all possible hazardous consequences that might result from failure to follow the instructions in this publication. You must carry out your own risk assessments as you work.

Market Direct Group PTY LTD does not accept any and all liability which may arise because a user of this publication fails to follow directions in the publication or safe work methods associated with use and maintenance of the product.

Those without the required skills, knowledge, tools, and experience to work on and maintain this product should seek the services of a suitably qualified person or business.

This publication is based on the latest product information at the time of release. However, specifications and procedures are subject to change without notice.



My Forbes Hybrid Caravan

NAME:

ADDRESS 1:

ADDRESS 2:

MODEL:

VIN:

BUILD DATE:

TARE WEIGHT:

ATM:

TYRE SIZE:

DEALER:

DISCLAIMER: by receiving this handbook, you confirm there you have read and agree to all the terms and conditions and understood the use and maintenance care of MDC®

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Glossary of Terms

Weights

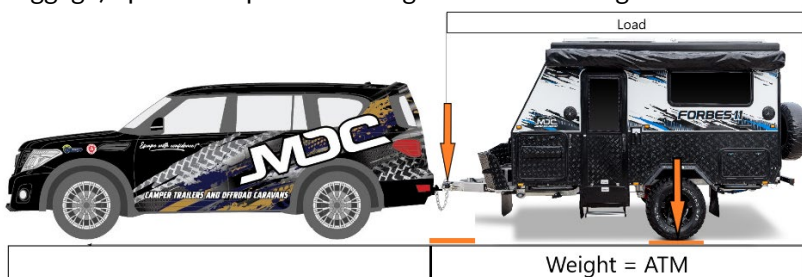
Tare Weight

The total weight of the trailer (load on tyres plus coupling load) with all options and fittings as supplied by the manufacturer, with empty water tanks, excluding fluids not essential for operation on public roads, and without luggage or personal effects.



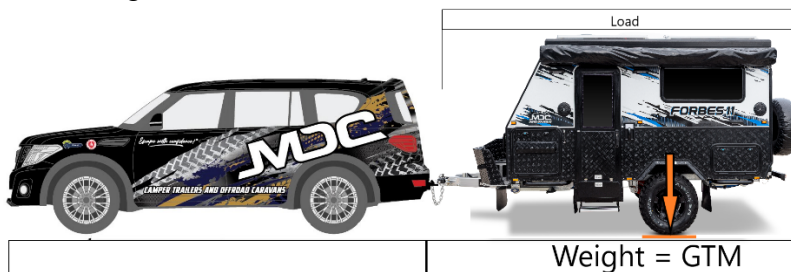
Aggregate Trailer Mass

(ATM) Rating: The total permissible mass of the Trailer. This includes the coupling mass and whatever you add as payload (e.g., water, gas, luggage) up to the specified rating. The ATM Rating must not be exceeded.



Gross Trailer Mass

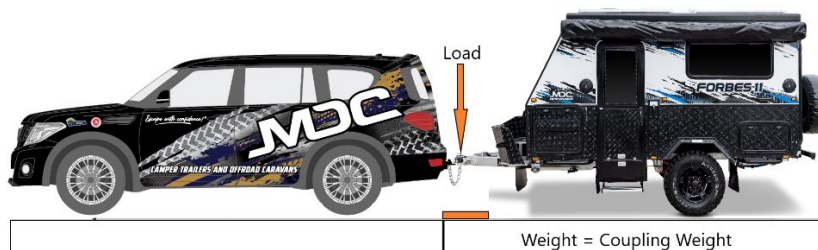
(GTM) Rating: The total permissible mass that can be supported by the wheels/ tyres of the Trailer. This includes whatever you add as payload (e.g., water, gas, equipment, and luggage), but does not include the mass supported by the tow vehicle. The GTM Rating must not be exceeded.



Caravans for illustration purposes only.

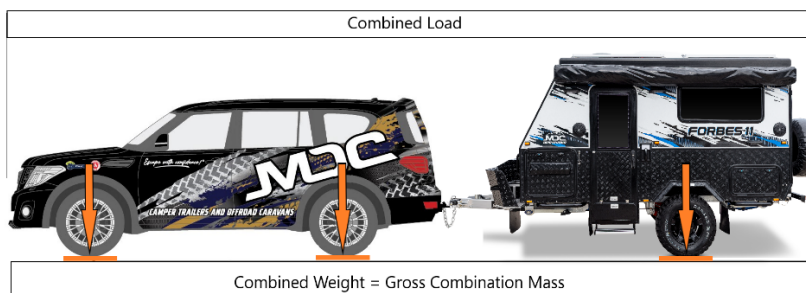
Coupling Weight

The downward load exerted on the tow point of the vehicle by the trailer.



Gross Combination Weight

(GTM): This is the total allowable combined mass of tow vehicle and trailer as determined by the tow vehicle manufacturer.



Wheels, Tyres & Suspension

Camber

Camber angle is the measure in degrees of the difference between the wheel's vertical alignment perpendicular to the surface. If a wheel is perfectly perpendicular to the surface, its camber would be 0 degrees. Camber is described as negative when the top of the tyre begins to tilt inward towards the chassis rail.

Toe Alignment

Negative toe, or toe out, is the front of the wheel pointing away from the centerline of the vehicle. Positive toe, or toe in, is the front of the wheel pointing towards the centerline of the vehicle.

Toe can be measured in linear units, at the front or rear of the tyre, or as an angular deflection. In the case of MDC products, the "toe in" is measured in millimeters at the front of the tyre from the chassis rail.

Trailing Arm

This is the "A shaped" suspension assembly that connects to the chassis and carries the hubs and wheels.

Hubs

These are the assemblies that include the brake drum which contains the wheel bearings and wheel studs that the wheel attaches to.

Electrical, Gas & Appliances

DC to DC Charger

This item processes power to the caravan from the solar panels and Anderson plug connection to the vehicle.

Battery Charger

This is the electronic unit that converts 240v shore power to 12v power to charge the battery in the trailer.

Circuit Breaker

An electrical protection device to protect against short circuits and high current.

RCD/RCBO

These are 240v protections against short circuit and electric shock INSIDE the caravan 240v electrical system.

Inverter

This device converts 12v battery power into limited 240v AC. These are limited by their output rating.

Gas Regulator

This is the gas flow regulation device fixed behind the gas cylinders in the front storage area. It ensures correct flow and pressure to the gas appliances.

Gas Isolation Valve

This is a ball cock type valve near fixed gas appliances to isolate the appliance from gas flow for safety and servicing.

Safety

Safety Definitions

DANGER

Immediate hazards which WILL result in severe personal injury or death if the warning is ignored.

WARNING

Hazards or unsafe practices which COULD result in severe personal injury or death if the warning is ignored

CAUTION

Hazards or unsafe practices which could result in minor or moderate injury if the warning is ignored

NOTICE

Practices that could result in damage to the trailer or other property

INFORMATION

Helpful information and important points.

Poison Hazards

DANGER

Button Battery Warning

Some MDC models are fitted with remote wireless switches for lighting. These switches contain “Button Batteries” that are harmful or fatal when swallowed. DO NOT allow children to play with these switches or leave unattended in the vicinity of these switches. These switches will be marked with the warning label below.



Electrical Hazard

WARNING

Failure To Follow These Instructions May Result in Death or Serious Injury!

-  When working with electrical equipment or lithium batteries, have someone nearby in case of an emergency.
-  Study and follow all the manufacturer's specific precautions when using and servicing the battery and connected appliances.
-  Wear eye protection and gloves.
-  Keep the unit away from moist or damp areas.
-  Avoid dropping any metal tool or object on the battery. Doing so could create a spark or short circuit which goes through the battery or another electrical tool that may create an explosion.

WARNING

Shock Hazard! Keep Away from Children

-  Avoid moisture. Never expose the unit to snow, water, etc.
-  Inverter Unit provides 230 VAC, treat the AC output socket the same as regular wall AC sockets at home.
-  Read and understand the information in the appliance manuals before operating this equipment.

The 240v electrical system in your caravan has been certified by a trade qualified person. Under no circumstances should an unqualified person interfere with, modify, or repair this system. An RCD safety device is fitted to this caravan.

for your safety.

- Always use a 15amp lead to connect to mains power.
- Do not modify the earth pin to accommodate a lesser lead.
- When connecting to 10amp mains, always use an approved adapter.
- Never coil power leads when in use. Lay the lead out in lengths in a safe manner that prevents creating a trip hazard.

Lithium Battery System

WARNING

A CONNECTABLE ELECTRICAL INSTALLATION BATTERY SHALL ONLY BE REPLACED BY ONE OF THE SAME TYPE AND SPECIFICATION AS THAT ORIGINALLY FITTED. UPGRADES TO THE BATTERY OR SYSTEM SHALL ONLY BE PERFORMED BY A COMPETENT PERSON.

Gas & Appliance Safety

Gas Certification

Your Caravan has been supplied gas tested and certified. Any additions or alterations to the gas system must be performed by an authorized person and will require re-certification and testing. Also note any alterations may affect your warranty on both the system and appliances.

General Safety

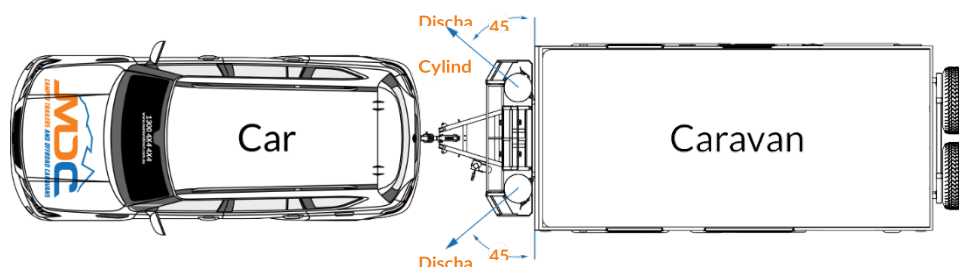
- Your Caravan may have several gas safety labels affixed throughout containing important information. All instructions are to be followed and the labels shall not be removed for any reason.
- Make sure to close appliance valves before opening the cylinder valves.
- Where readily accessible, check connections at the appliances, regulator, hoses, and cylinders periodically for leaks with soapy water (or an equivalent) – this should be done every time a cylinder is changed or at least annually.

CAUTION – the ammonia present in some soaps and detergents can react with brass fittings and cause such fittings to crack after a short period of time. Therefore, caution should be exercised when using soap solutions on brass fittings and all connections should be rinsed thoroughly with fresh water as soon as possible after the application of the soap solution.

- Never use a match or flame when checking leaks.
- Never use cooking appliances for comfort heating.
- In the event of a fire, immediately close the cylinder valve if safe to do so.
- Appliances must not be altered without the authorisation of the manufacturer.
- In the event of an accidental gas leak, close cylinder valve and ventilate the area using a safe method until the air is clear.
- Flexible hoses are used between the LP Gas Cylinder and regulator as well as between your slide-out kitchen cooker (if fitted) and the gas bayonet. These flexible hoses are easily accessible and should be inspected regularly by a competent person.

Gas Cylinder Safety

- LP Gas cylinders have a 10-year lifespan between inspection and re-certification. Always use gas cylinders that are within their compliance date.
- For drawbar mounted cylinders (if applicable), orient the cylinder relief valves of both cylinders discharge away from both the trailer and towing vehicle as shown.
- For gas cylinders stored in a dedicated LP Gas Locker ensure the locker is kept closed at all times unless changing or operating the cylinders.
- Close cylinder valves when appliances are not in use or while refueling is in progress.
- Ensure cylinder valves are closed to prevent the unintended release of gas from a cylinder.



Gas Appliance Safety

- Gas appliances are certified and have a flame safeguard feature to stop gas flow in the event of the flame going out. Never interfere with this function or replace appliances with a non-certified type.
- Slide-out kitchens with cookers should only be operated with an annex fully erected. Failing to do so may affect the safety and operation of the gas appliance.
- Slide-out kitchens with cookers must only be used with a flexible connecting hose that is disconnected from the gas bayonet fitting when in its stored position. Under no circumstances permanently connect this appliance.
- Only approved and suitable gas appliances with flame safeguard systems shall be connected to the gas bayonet (if fitted).

Operational Safety

Jacking, Hitching & Unhitching



CAUTION

When hitching and unhitching the caravan, ALWAYS have the caravan handbrake engaged and the wheels chocked to prevent the caravan moving and crushing/injuring the operator during the process. When unhitching, disconnect the safety chains LAST to ensure the caravan cannot roll away from the vehicle.

NEVER place any part of your body beneath any part of the caravan supported by a jack or jockey wheel. Always use suitably rated jack stands to work beneath a trailer.



CAUTION

When hitching, you MUST keep hands clear of the jockey wheel and hitch when moving the vehicle or trailer to engage the hitch.



CAUTION

When hitching, unhitching, or moving the trailer while supported by the jockey wheel, keep hands and feet clear and NEVER allow any part of your body under the hitch or drawbar.

Jacking Your Caravan or Camper

Your trailer is fitted with purpose built jacking points and from January 2021 supplied with a suitable jack. An appropriately rated bottle jack is an acceptable alternative, however when using the jacking point beneath the trailing arm ensure the jack is of a retracted height that will fit under the jacking point when the tyre is deflated. A suitably rated "High Lift" jack may be used on the jacking points on the side of the body behind the wheels provided it has the correct positive engagement fitting to match the trailer. To ensure safe usage the following must be followed:

- The jack is to be used on level firm ground wherever possible.
- The wheels of the trailer should be chocked, and no person should remain inside the trailer whilst it is being jacked.
- No person should place any portion of their body under a trailer that is supported by a jack.
- The trailer should be attached to the towing vehicle whilst being jacked.
- When performing maintenance ensure suitably rated jack stands are used – do not rely on the trailer being supported by the jack.

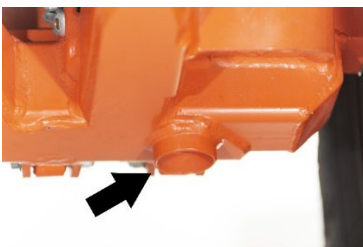
Behind the wheels



Under the chassis



Under the trailing arm



Towing Safety

Vehicle Electrical Requirements

Brake Controller

All MDC caravans require an electric brake controller to be fitted to the tow vehicle by law. There is a wide range of controllers available that are suitable. Ensure you understand how to use and adjust the controller for various towing conditions. When driving in slippery conditions, it may be advisable to use automatic calibrating brake controllers in "MANUAL MODE" to ensure trailer brakes engage in the event the tow vehicle brakes lock and ABS fails.



Trailer Lights

All lights on a vehicle or trailer must operate correctly. You **MUST** have your tow vehicle trailer socket correctly wired to operate all trailer lights and provide power to the trigger wire for the DC-to-DC charger. The trigger wire when powered, instructs the DC-to-DC charger to accept power from the Anderson plug and not default to solar charge. Additionally, the DC-to-DC charger will also start forcing the tow vehicles alternator to supply sufficient voltage and current to fully charge the trailer battery.

Plug Type – 12 Pin Flat



12 Pin Flat Socket

1. Left Indicator
2. Reverse lights
3. Earth
4. Right Indicator
5. Electric Brakes
6. Stop Lights
7. Taillights, clearance lights, side lights
8. N/A
9. N/A
10. N/A
11. N/A
12. Accessory power for DC to DC trigger wire

Ensure Pins Have
Even Gaps



Battery Maintenance Charge

To comply with national laws on breakaway systems, you must supply a maintenance charge to the battery that powers the breakaway system should it be activated. In all MDC products, the breakaway is powered by the house batteries in the caravan. For this purpose an Anderson plug connection is fitted to all MDC caravans on the drawbar. Your vehicle will need to be fitted with a power supply to a 50-amp Anderson plug near the towbar so the trailer can be connected. The vehicle only needs to supply power while it is running so a relay or switching device may be used to protect the start battery when the car engine is stopped however, the DC-to-DC charger will detect a drop in battery voltage and disconnect from taking power.

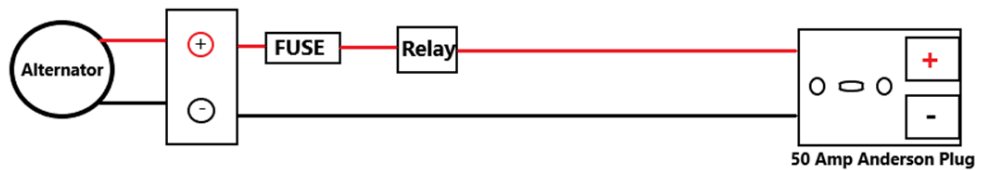


Trailer Battery Charging

Anderson Plug Type (50 Amp)

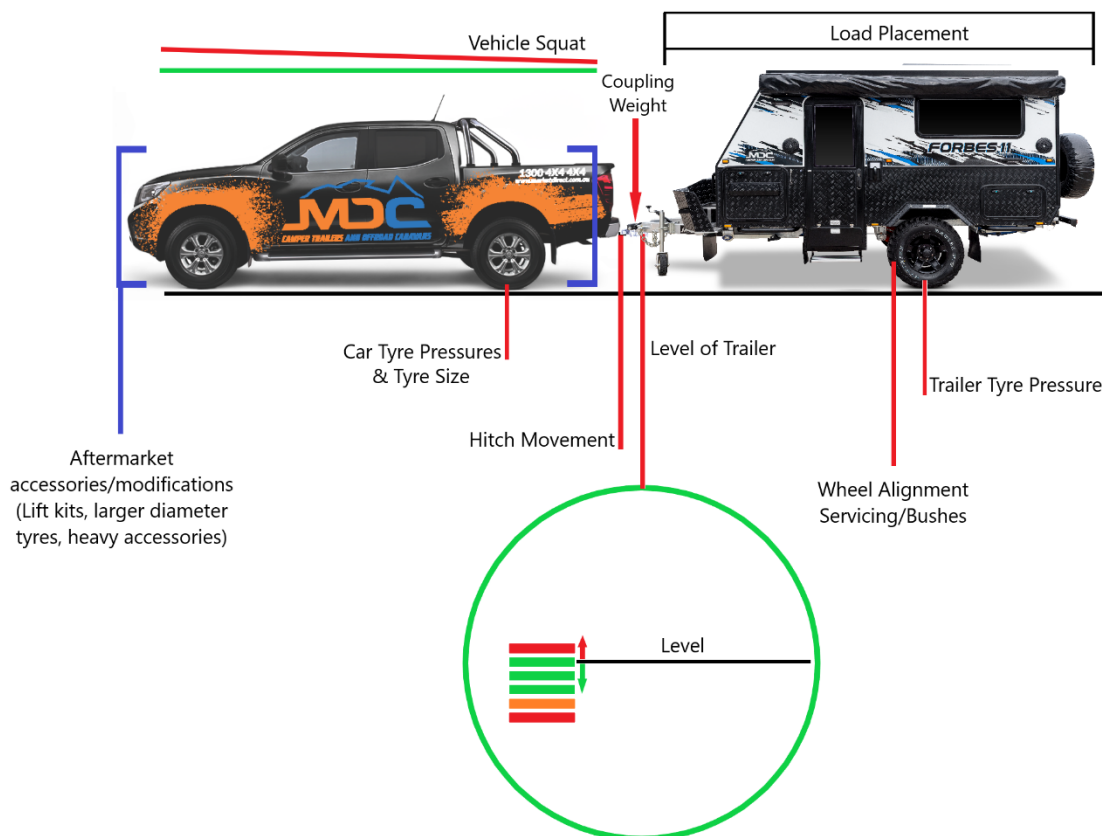
Fuse and relay should be 50amp rating

Wire gauge should be 8B&S or 50amp minimum. Longer distances a gauge of 6B&S should be considered.



Achieving a Safe Towing Combination

Ensuring a camper or caravan is safe and easy to tow is generally an easy thing to achieve, this doesn't mean it's always the case and sometimes, a vehicle and trailer combination may need some tweaking to make it ideal. There are a number of aspects that need to be correct in order to maximise towing safety and handling. It is important to use this information in conjunction with the maximum weight limits applied by your tow vehicle's manufacturer as well as ensuring you stay within the maximum specified ratings of your caravan or camper. These can be found in the vehicle's owner manual. This summary will address the main aspects, these aspects include, but may not be limited to the items listed in the following diagram:



Trailer Tyre Pressures

Tyre pressures have a large effect on the handling and performance of any vehicle, be it a towed vehicle or motorized. The tyre pressure on your camper or caravan will indeed be a major contribution to how well it tows and resists instability. Due to how much the caravan may vary in weight depending on the cargo (as much as 600kg) it is important to have your tyres at the pressure recommended by the trailer manufacturer, for the actual weight of the trailer when loaded. You should follow the tyre pressure guide below for on road/highway tyre pressures.

Actual Weight	Pressure PSI Single Axle	Pressure Kpa Single Axle
Tare	49psi	338Kpa
2100kg	54psi	372Kpa
2200kg	57psi	393Kpa
2300kg	60psi	414Kpa
2400kg	62psi	427Kpa
2500kg	65psi	445Kpa

Tow Vehicle Tyre Pressures

Equally as important as trailer tyre pressure is the tyre pressures in your tow vehicle. The added weight of the trailer coupling weight should be factored into calculating the tyre pressures in the rear of the car. What should also be factored in is the effect the distance of the hitch from the axles plays in leverage. A load on the tow bar of 250kg may well have the effect of 300kg or more on the vehicles rear tyres meaning additional air pressure must be applied. This will help resist sidewall flex and sideways movement of the rear of the vehicle, limiting unwanted movement that can cause instability in the trailer.

Ball (Coupling) Weight

The ratio of overall weight of the trailer to the weight exhibited on the tow ball or coupling is an extremely important aspect of making a trailer handle correctly when towed. Generally, the ball or tongue weight allowed by most vehicle manufacturers is 10% of the maximum towing capacity. Given this ratio, the caravan industry builds campers and caravans with this in mind. When loading your MDC caravan, you should have a target ball or coupling weight of 10% or slightly higher to ensure the weight balance is at an ideal starting point. This figure should not be a guess, you should weigh your caravan with its normal load when travelling and use a ball weight scale to achieve the desired ball weight. These are an inexpensive item that will help you get the weight balance right when you load up for your trip.



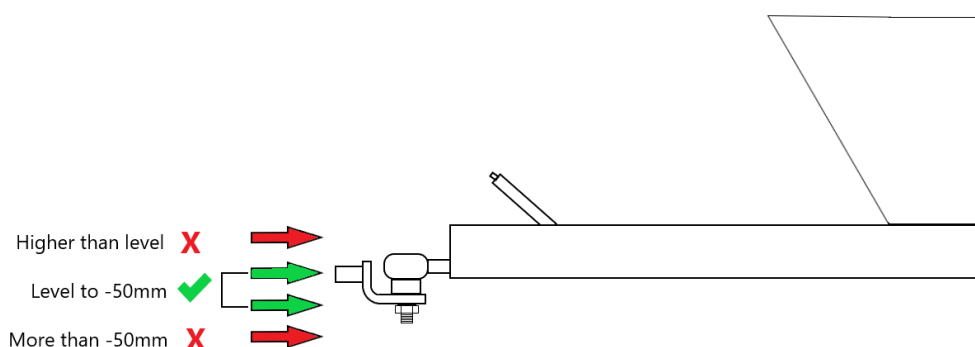
Load Placement

Where you place the items in your trailer will affect how it behaves. Loading too much weight in the extremities of the trailer can have a very bad effect. By following the guide and ball weight recommendations you will achieve the best possible result. Use the load placement guide below as a reference for packing your caravan.



Trailer Level

The height of your hitch in respect to the level of the trailer will change the handling while being towed. The best practice with your MDC trailer is when loaded and hitched to the vehicle, the drawbar is NO higher than level. Ideally you should look to have the drawbar slightly lower than level between 0 and 50mm. Higher than level or too low will have an adverse effect on how the trailer tows. Level will also affect coupling weight on your vehicle.



Hitch Movement

Most modern tow bars have an adjustable screw fitted to the hitch receiver that can be used to stop the hitch insert from rattling. Unfortunately, this is not a sure-fire way to limit sideways movement that can affect how well your trailer tows. Hitch movement from side to side can cause sway and when combined with a tow vehicle that has a greater distance between the rear axle centre and the hitch point, this affect can cause serious sway issues. Combine this with poor tyre pressures on the tow vehicle and you have a recipe for disaster.

If there is excess play in the hitch and hitch receiver, you may need to place shims either side of the insert to limit the movement. Hitch receiver shims are commercially available.



Vehicle Squat

When the back of a vehicle squats due to cargo and/or ball weight of the trailer, the handling of the tow vehicle can be changed to its detriment. Vagueness in steering, poor toe, camber, and caster settings due to reduced front suspension load, reduced brake and tyre grip are often the result. All this in turn can result in a poorly handling towing combination. The best way to rectify this is upgrading the tow vehicle suspension to be suitable for the weights being experienced. Some vehicle manufacturers recommend Weight Distribution Hitches (WDH), this will be outlined in the vehicle owner manual and should be considered. You should also consult with the trailer manufacturer if this is an appropriate fitment to the trailer. The WDH should NOT be used in off road operation as it will NOT meet the required articulation that will be experienced. To better setup your tow vehicle suspension, it's best to consult a suspension expert experienced with towing requirements.

Maximum Weight Limits

The following is an outline of the ratings that will be specified by the manufacturer of your vehicle and the camper/caravan manufacturer. These MUST be followed in conjunction with previously mentioned criteria for safe handling. None of the maximum ratings may be exceeded.

ATM (Aggregate Trailer Mass)

This limit is specified by the trailer manufacturer and must NOT be exceeded under any circumstances. The ATM is the full weight of the loaded trailer including ball (coupling) mass.

Vehicle GVM (Gross Vehicle Mass)

This is the loaded weight including fuel, passengers, cargo, and ball (coupling) mass of the attached trailer on the tow vehicle.

Axle Load

This is the maximum load on an axle specified by the tow vehicle manufacturer. It is possible to have your vehicle and trailer within ATM, GVM and GCM load limits but above the axle load limit specified. Be sure that this is not exceeded.

GCM (Gross Combination Mass)

GCM is the maximum combined load of the tow vehicle and trailer, as specified by the tow vehicle manufacturer. Never exceed this maximum weight limit.

Other items for consideration are:

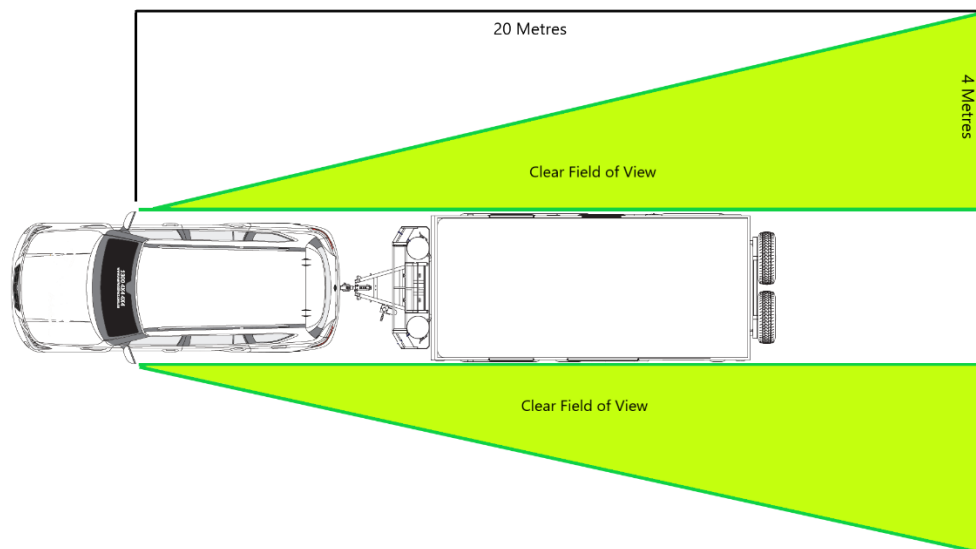
- Wheel alignment on both vehicle and trailer.
- Wear and tear on:
 - Suspension bushes
 - Shock absorbers
 - Springs
 - Tyres
- Tow vehicle tyre size (Oversize tyres)
- Extended hitches
- Distance between axle centre and hitch point
- Tow vehicle accessories (Weight distribution)
- Real life tow vehicle capability (Not all vehicles are created equal)

The purpose of this information is to help you to do a self-assessment and achieve a sound towing combination. If you are not confident you can achieve this, you should consult an expert to assist.

If you require assistance from MDC, call 1300 494494 option 3 and speak to our customer service department.

Towing Mirrors

Depending on the width of your car mirrors versus the overall width of your camper or caravan, you may be required to fit extended mirrors to your vehicle when towing. The illustration below shows the minimum required field of vision through your vehicle's mirrors.



Note: Mirror extension attachments must be removed when not towing, fitted mirrors that extend must also be retracted when not towing.

Getting Started

Before You Leave

Filling The Water Tank

Open the lockable filler box (circled) and remove the screw cap (circled) to fill the water tank

NOTE: Use of a food grade hose is recommended.



Check Wheels & Tyres

- Check tyre pressures in accordance with the tyre inflation chart in this manual.
- Check tyres for damage or uneven wear
- Using a torque wrench, check wheel nuts are torqued to 140nm and check daily while travelling.

Caravan

- Ensure all windows are closed, locked and blinds and screens in the open position.
- Ensure all doors and cabinets are locked and dust cover attached to the door.
- Ensure gas bottles and jerry cans are secured.
- Ensure all trailer lights are operating normally (Clearance lights, brake lights, indicators, taillights and number plate light)

Setting Up the Caravan

Choosing a Campsite

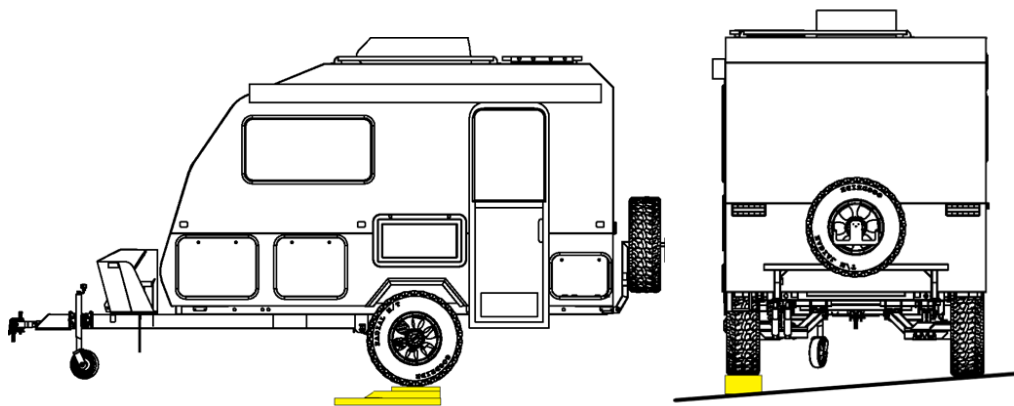


Where possible, choose a flat and level campsite with firm ground. Avoid overhanging branches that may pose a danger and inhibit irradiation to the solar panels during daylight hours.

Levelling The Caravan

When levelling the caravan from left to right, use a ramp or sole boards to get it level and use the jockey wheel to level from front to back.

NOTE: to prevent rain or air conditioner condensation from running down the living/awning/annex side of the trailer, allow for a small decline to the opposite side of the caravan.



Stabiliser Legs



It is important to note that these are to stabilise and steady the caravan when in use. DO NOT attempt to lift the caravan's full weight when winding these legs into position as they have small internal gears and roll pins that may break. NEVER use an impact wrench to raise or lower the stabilisers as this will damage the gears.

Raising the Roof

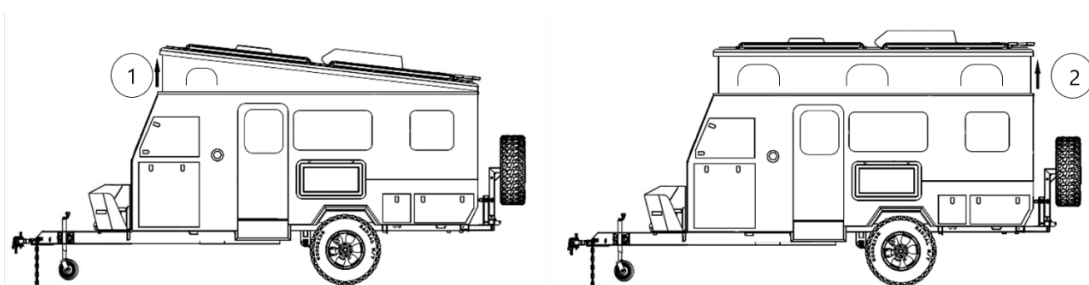
Step 1. Unlatch all 4 over centre latches on the roof. (1 at each corner)



Step 2. Raise the front section using the lifting bar inside the caravan.



Step 3. Raise the rear section.

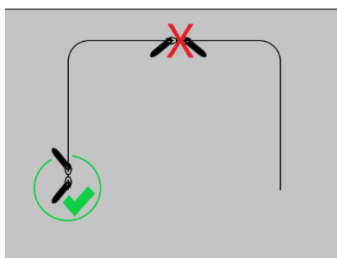


Closing The Roof

NOTE: Before closing the roof, ensure there is no debris on the roof seal or along the contact surface around the van that can interfere with the seal.

Step 1. Ensure nothing is placed on cupboards or any surface that may interfere with the roof

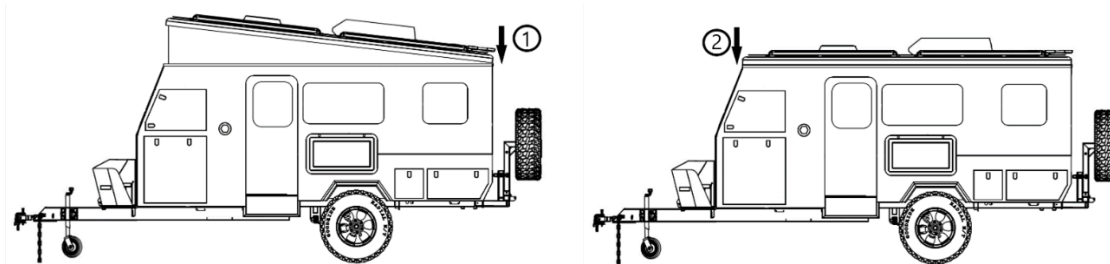
Step 2. Ensure all vent panel zippers are in correct position.



Step 3. Lower the rear section with the bar.

Step 4. Lower the front section

Step 5. Reattach all over centre latches.



Opening the Bed Fold Out

Step 1. Unlatch and lower the spare wheel to the ground.

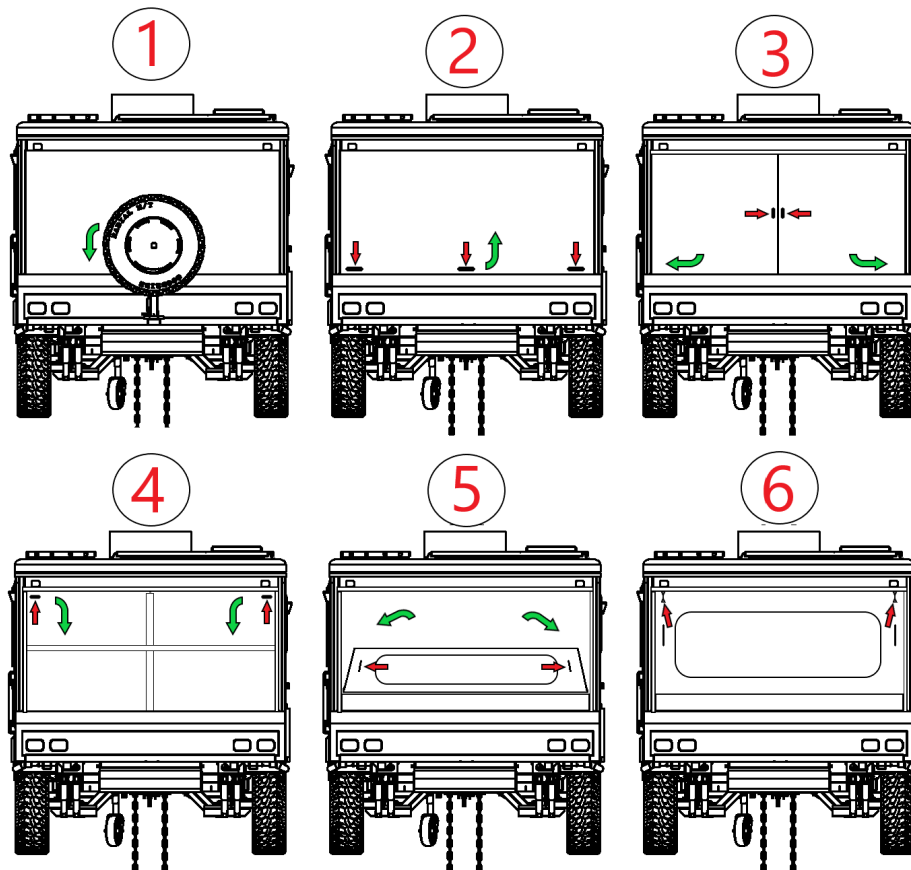
Step 2. Unlatch the 3 locks indicated by red arrows Fig 2 and raise the rear panel to form the fold out top.

Step 3. Unlatch the two locks indicated by red arrows fig 3 and swing the wing panels out to each side.

Step 4. Unlatch two locks at top indicated by red arrows fig 4 and lower bed base so it rests on bottom lip of wing panels.

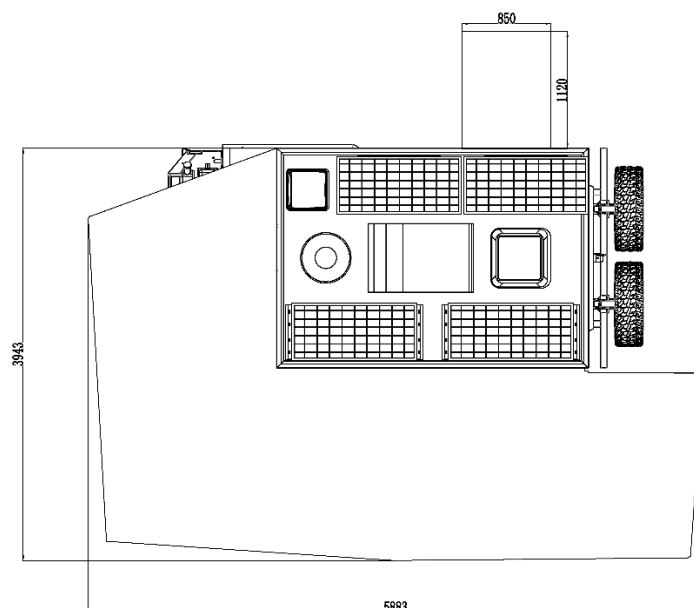
Step 5. Using the handles provided, raise the back window panel up fully until it rests against the lip of the wing panels in a vertical position.

Step 6. Attach the over center latches to secure the window panel. Padlocks may be used to add further security in these latches.



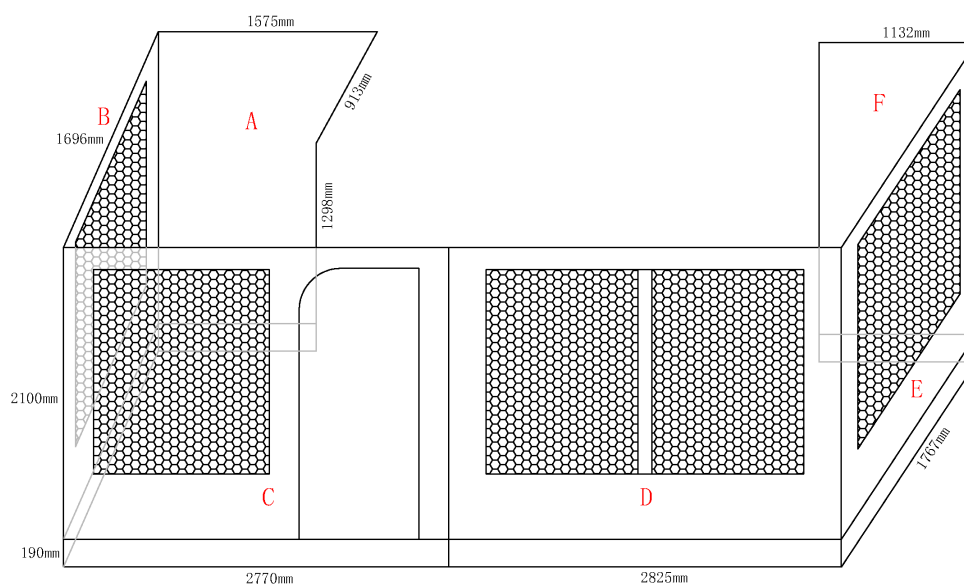
270° Awning

FORBES 11



Annex

FORBES 11



Preparing for Bad Weather

NOTICE

During inclement weather, the following should be done:

- Close all roof vents and hatches to prevent water entering.
- Protect the awning from high winds by retracting or securing with guy ropes and pegs.
- Ensure your caravan is not parked in ground that will become boggy and prevent exiting the camp area
- Lower annex corner poles to create a pitch steep enough to allow all water on roof to run freely off the canvas.
Do not allow water to pool.
- Close all external doors and hatches to prevent water ingress and wind damage

Packing Down Your Caravan

NOTICE

When packing down your caravan ensure the following:

- All gas and electric appliances are turned off.
- Gas is turned off at the gas bottle.
- All loose items are secured and unable to move and damage themselves or the caravan.
- All cabinet doors are secured and locked along with all drawers closed.
- Site power lead is removed and stowed.
- The doorstep is raised and secured.
- All roof hatches lowered and secure.
- All windows closed and locked.
- Main door is closed and locked.
- All dust covers in place and secure.
- Secure Ensuite doors and close toilet

Grey Water Tank

The grey water tank collects wastewater from the shower and basins/sinks inside the caravan. To use sullage facilities in a campsite, a hose may be connected to the grey water tank outlet valve on the driver's side of the caravan. When using the grey water tank as a waste storage tank, it is highly recommended to use a tank freshener such as Thetford Tank Fresh.

Draining The Grey Water Tank

To drain the grey water tank, release the drain hose from the rubber securing strap and turn valve. To extend dump location, use a 25mm sullage hose connected to the hose tail of the valve.



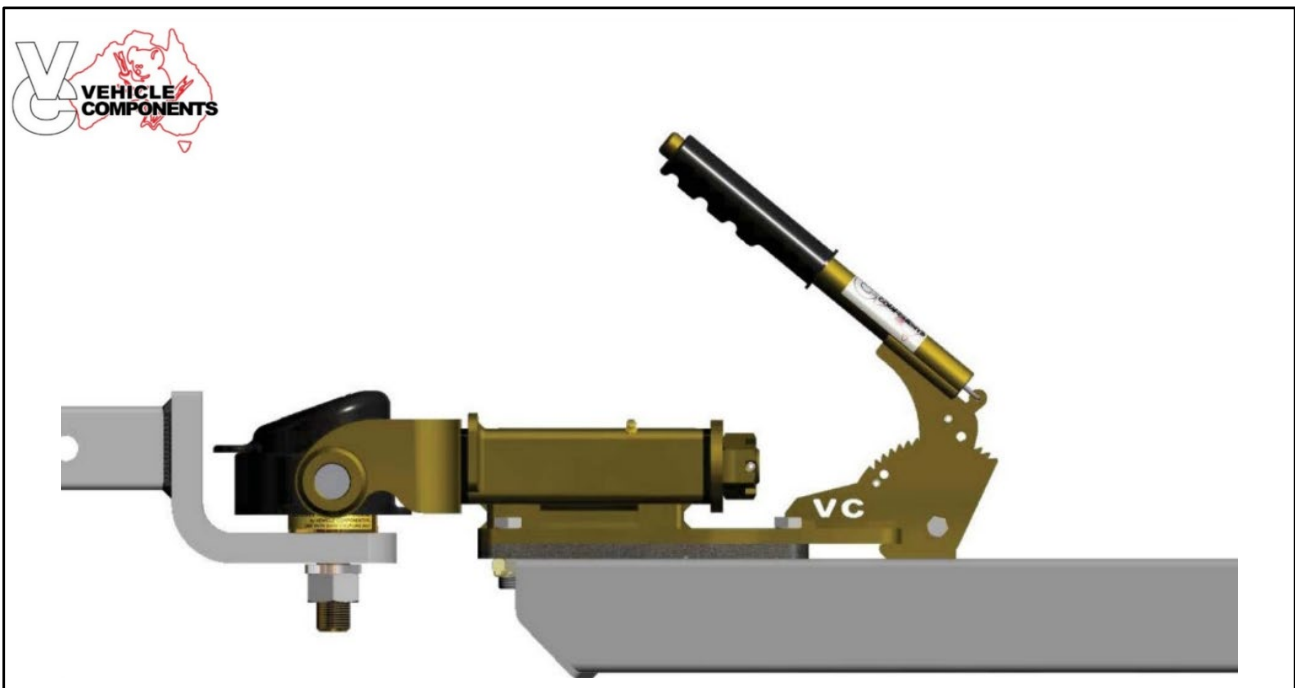
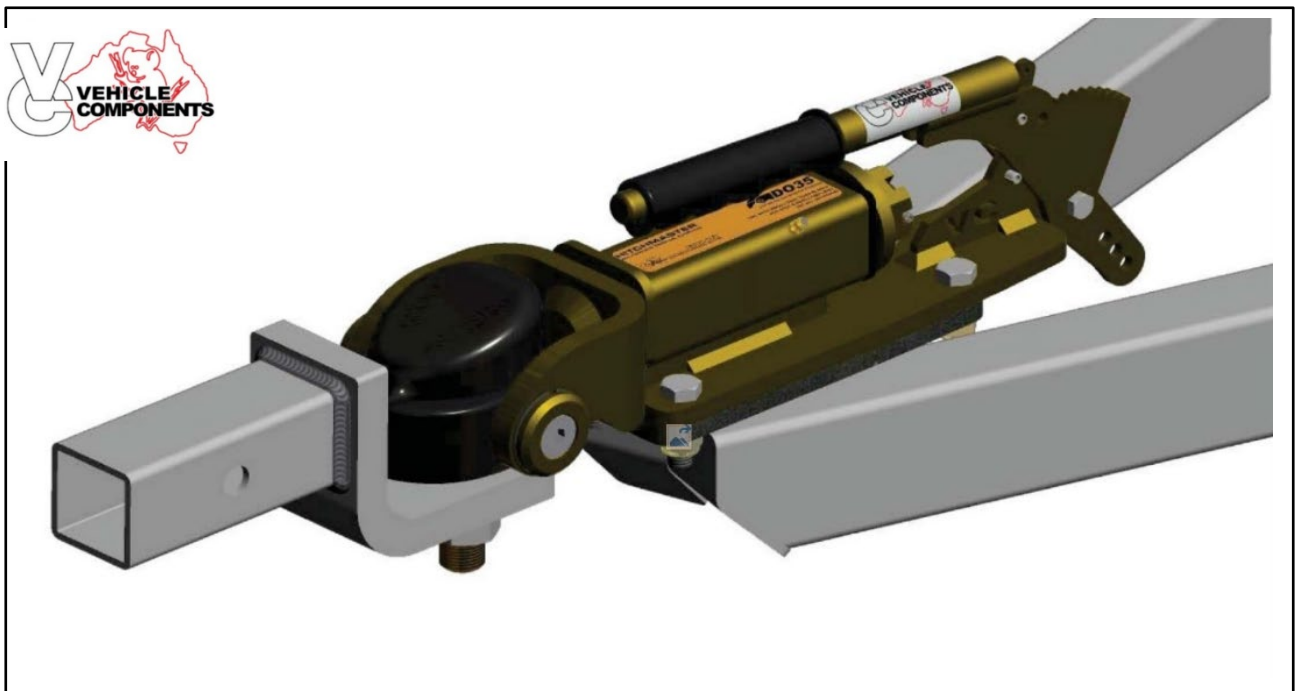
To flush the grey water tank when empty, use the filler point marked Grey Water Tank on the rear while the discharge valve is open.



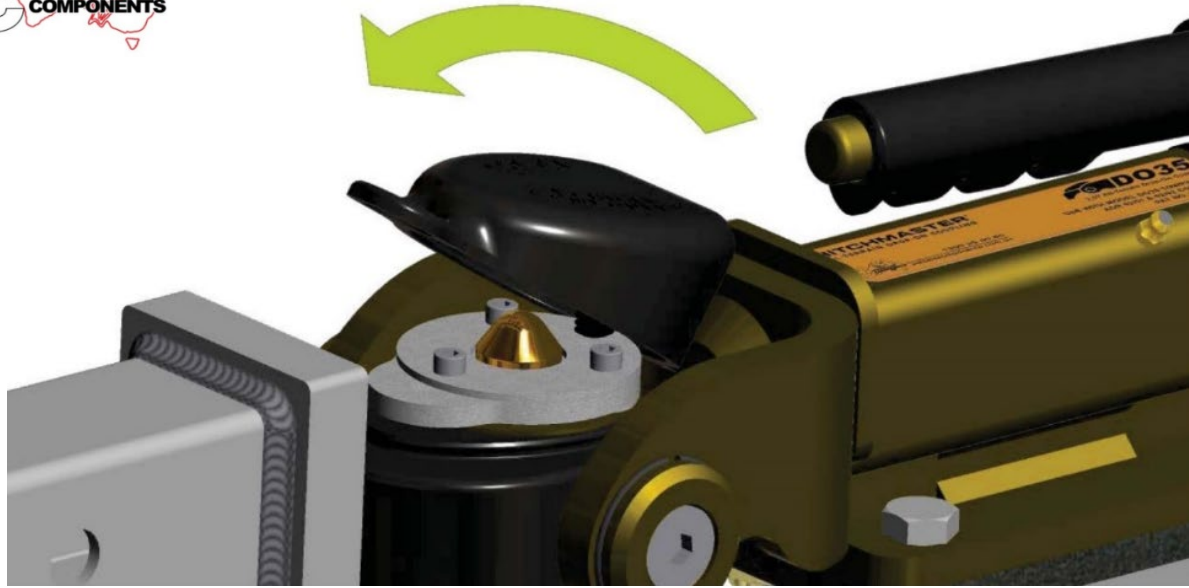
Hitching The Caravan

How to Hitch your coupling

Here is a short guide on how to safely use your coupling to couple and uncouple the trailer from the towing vehicle.



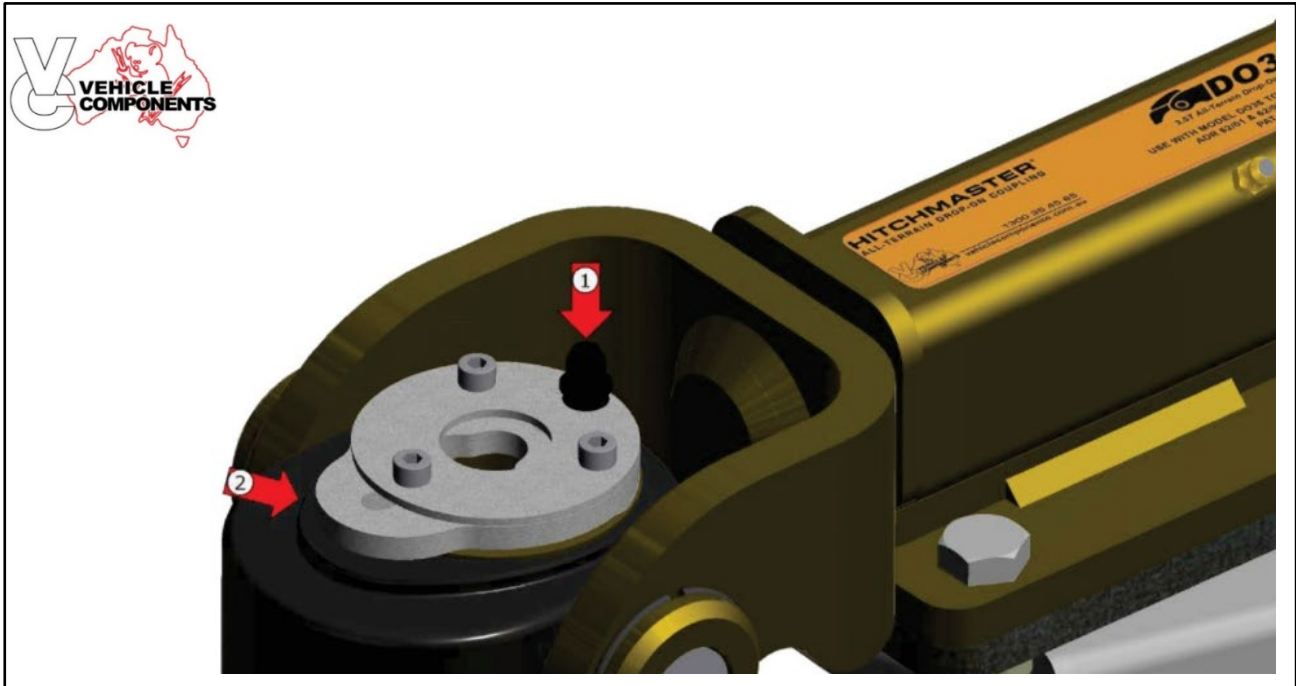
Make sure the handbrake is applied prior to coupling and uncoupling.



Make sure the dust cap is securely connected to the bump cover. This is done by locating the rear lip on the dust cap onto the groove of the bump cover and then pushing it in a downward motion until the dust cover is secure (there should be a slight click when it has been assembled correctly) Test if the dust cover is connected to the bump cover by applying a slight upward force to the dust cover, it shouldn't separate. This procedure should be applied if you are uncoupling or coupling up.

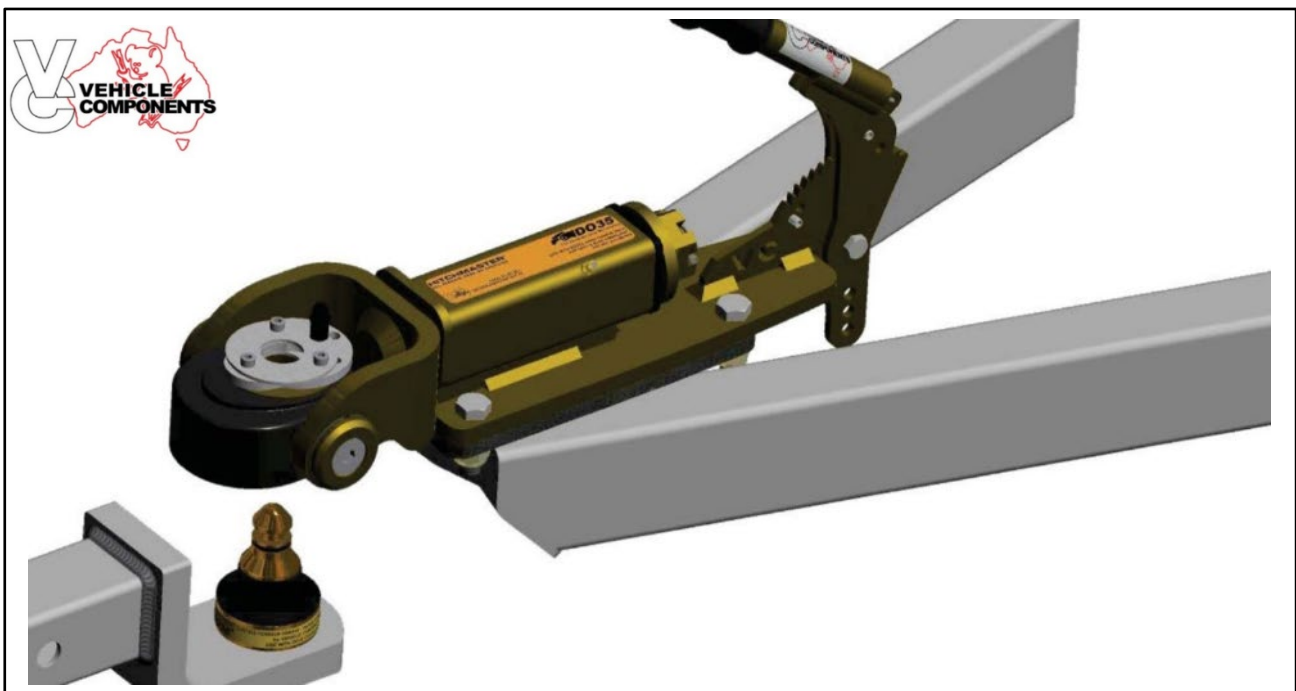
Coupling

STEP 1



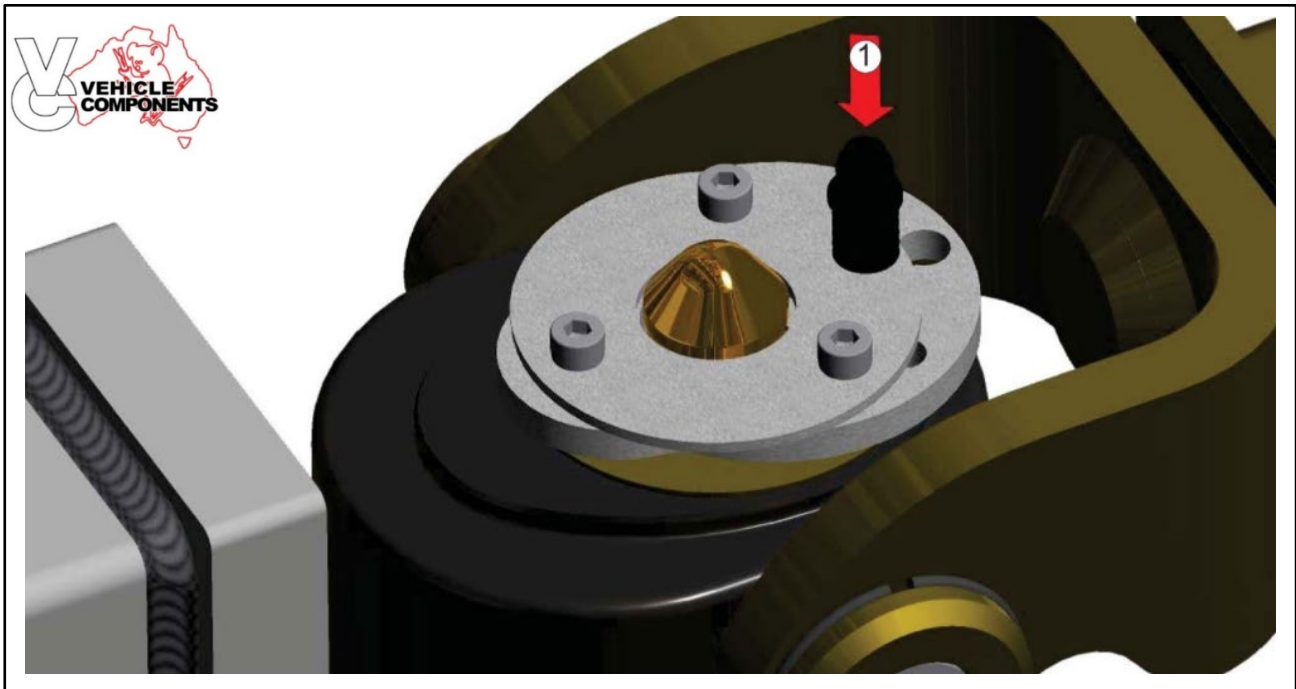
Push down the button (1) and push the locking mechanism back (2). When the locking mechanism (2) is all the way back, release the button (1) locking the plate in place.

STEP 2

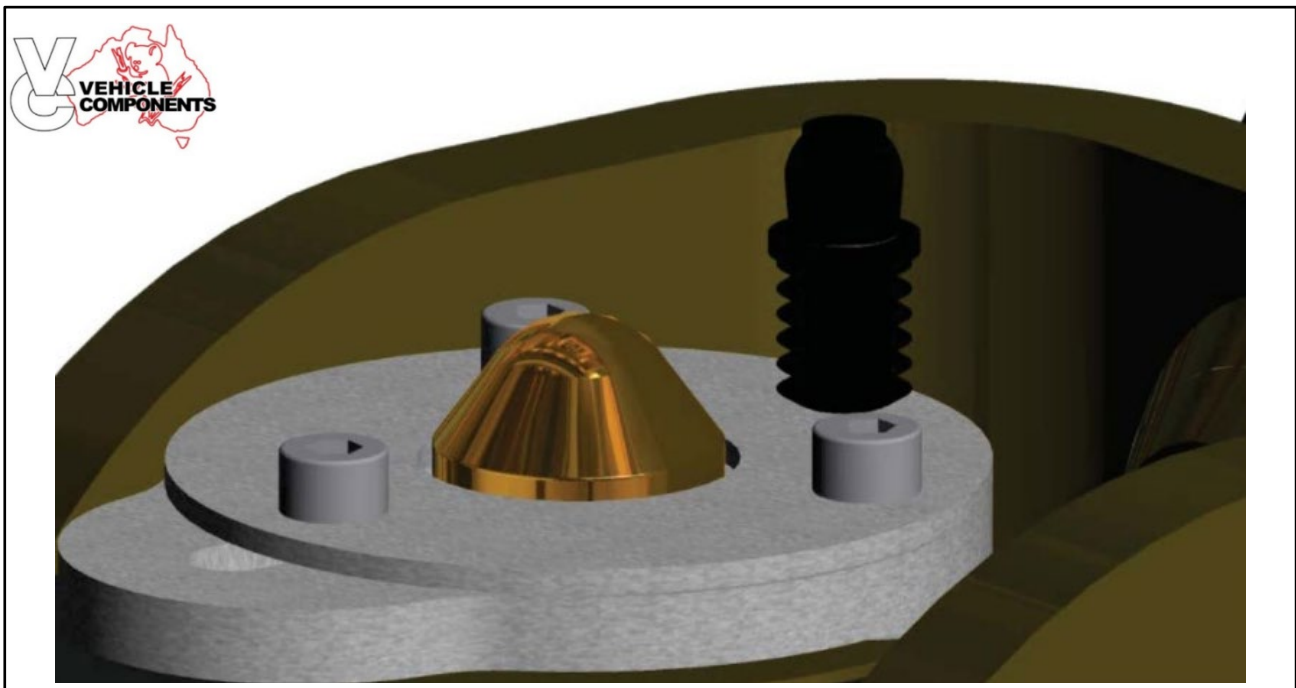


Offer up the tow pin to the coupling making sure the tow pin cover is removed and there is no visible debris on it. Locking plate should be in unlocked position as shown. Lower the coupling onto the tow pin.

STEP 3



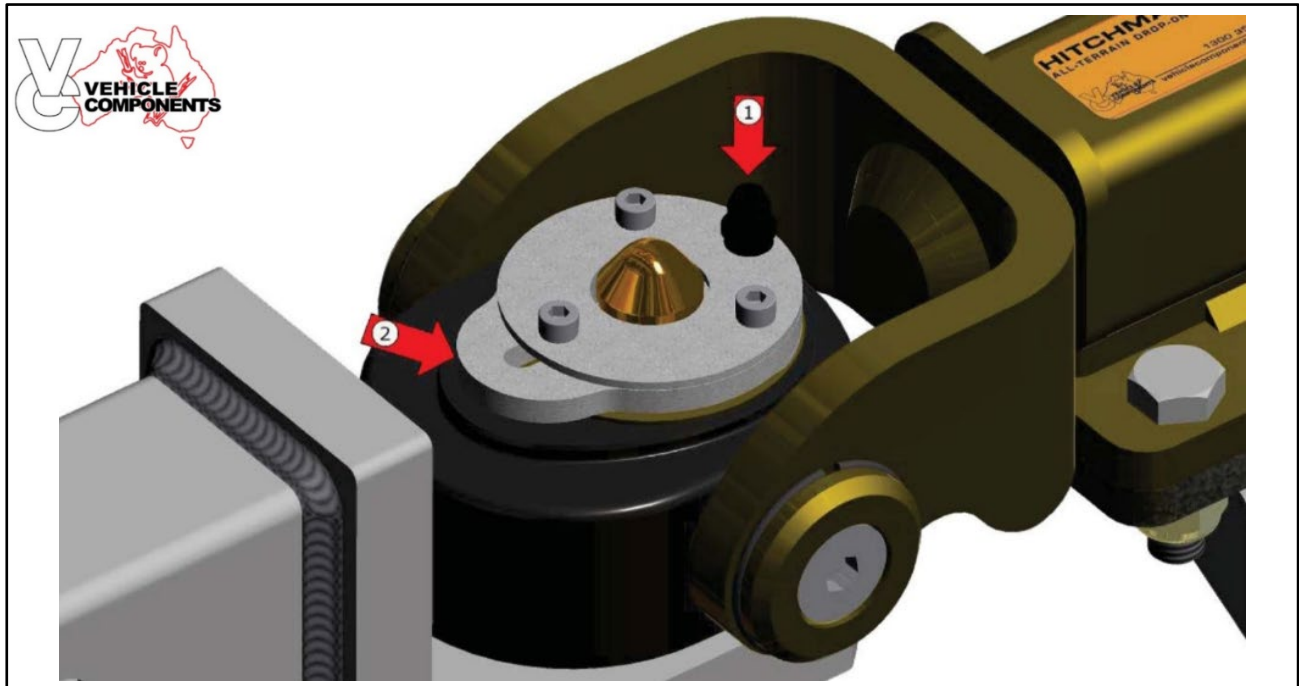
Make sure the tow pin is seated inside the universal and the tow pin top is sticking out of the locking mechanism (see below). Press the button (1) to release the locking mechanism there will be an audible locking noise at which point the mechanism will return to the initial position as shown in step 1. Verify the pin is correctly through the mechanism and assemble the cap. If the cap will not fit check the locking mechanism is in the correct locked orientation.



Detail view of pin through locking mechanism.

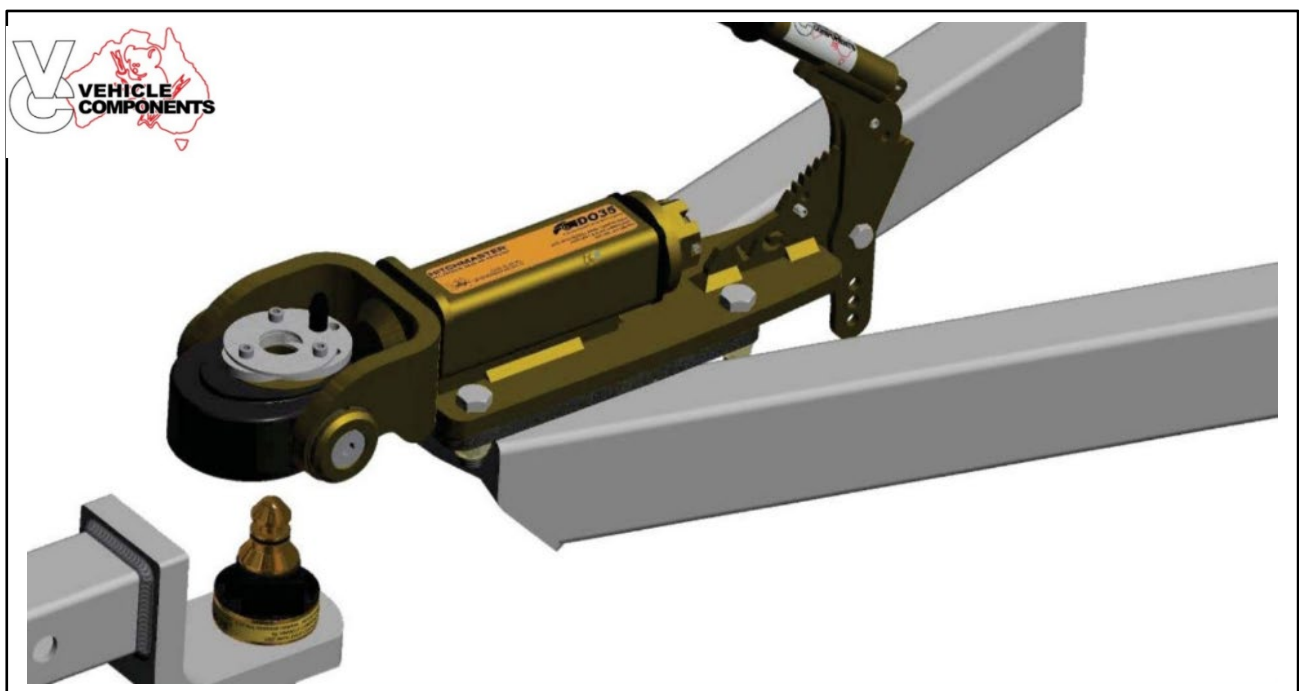
Uncoupling

STEP 1



Push down the button 1 and push the locking mechanism back 2. When the locking mechanism is all the way back release the button while holding the mechanism to ensure it does not spring back to the locked position.

STEP 2



Lift the coupling up off the tow pin.

Connecting the Breakaway

The breakaway lanyard is connected to a simple switch on the drawbar. When connecting the lanyard to the tow vehicle it should be connected to a solid part of the vehicle. Do not incorporate its connection with the safety chains.



Breakaway Switch



Lanyard Connection

- DO NOT CONNECT THE BREAKAWAY LANYARD TO THE SAME POINT AS THE SAFETY CHAIN SHACKLES.
- DO NOT USE THE BREAKAWAY AS AN ALTERNATIVE TO THE HANDBRAKE AND DO NOT REMOVE THE PIN AS AN ALTERNATIVE SECURITY MEASURE. REMOVING THE PIN WILL RAPIDLY DISCHARGE THE BATTERIES.
- IT IS A MANDATORY REQUIREMENT THAT THE BREAKAWAY BATTERY SOURCE BE CHARGED DURING TOWING.

Connecting the Safety Chains

Chains should be crossed over and connected with suitable rated shackles. Ensure they are connected in a way to prevent them dragging on the road but not too tight as to restrict the articulation of the vehicle and trailer combination.

Connecting the Electrics

When connecting ensure the electric cables to your tow vehicle cannot drag on the road or foul the coupling. If necessary, use zip ties or like keep them neat and safe from damage.

Ensure the Electronic Stability Control System is awake and in normal mode.



Wireless Rear View Camera

A wireless rear view camera has been factory fitted on the rear of your caravan. The unit is connected to your caravan's parking light circuit, allowing the camera to not just be limited to reversing scenarios but assist in always monitoring your surroundings by turning your vehicle lights on.



To use the system:

1. Plug in the screen to any available 12V accessory socket in your vehicle.
2. Turn on your parking lights whilst connected via your caravan's trailer plug and the system will start up immediately on power.
3. The screen and camera will synchronise automatically within 5-10 seconds.

The system can be used not only for additional assistance with reversing your caravan but can also assist in monitoring traffic behind your caravan and assistance in manoeuvring such as lane changes.

Troubleshooting

Symptom	Corrective Action
No Signal	Check whether the car charger (12V accessory socket) is plugged in and has power Make sure only original car charger (12V accessory socket) that was supplied with the monitor is being used Check the camera and monitor are paired
No Picture	1. Check there is power going to the camera by making sure the caravan tail/ parking lights are ON 2. Check the monitor is paired to the camera. a. Power on the monitor and camera. b. Press the Menu button to enter the menu interface. c. Press ▼/+ then  to select and enter PAIRING. d. Press ▲/- or ▼/+ buttons to select a channel (CH1, CH2, CH3, CH4) to pair the camera to. e. Press  to confirm the channel and the pairing function will run for 10-seconds. f. The picture will be displayed on screen once completed. Note: If no picture displays after pairing, please re-try the pairing process but removing power to the camera entering pairing mode and re-powering the camera within the 10-second pairing window.
No Sound	Check whether the sound is turned off in the monitor settings Sound will only work when the screen is in single Channel mode
Dark picture	Check brightness/contrast settings are adjusted correctly
No Colour	Turn off the power to the camera and monitor and re-power the system (Restart system)
Unable to record	Check an SD card is inserted and in the correct orientation Make sure the SD card being used as been formatted before use SD card storage may be full

Screen has excessive glare	The monitor comes supplied an Anti-glare screen and a screen protector. Make sure the screen protector has been removed before use.
Connectivity issues such as image lag, dropping out, excessive pixelization	1. Make sure the caravan tail/parking lights are ON 2. Make sure the monitor is plugged into a live 12V socket 3. Check camera is paired with the monitor (see above) 4. Make sure supplied antenna is screwed firmly into the monitor screen 5. Uncoil the power cable of the monitor – this may cause electromagnetic interference 6. If still unsatisfactory contact MDC (warranty team to escalate to MDC compliance team internally)

For more information, refer to the camera system instruction manual provided.



Disclaimer: External impacts such as interference, power lines and weather may affect the range, responsiveness, and visibility of the device. As such never use the camera solely and always actively observe your surroundings. This product has been added as an ADDITIONAL safety product and should never be used as a substitution for active supervision. MDC shall not be liable for any loss or damage from not following this and the details within the products instruction manual.

Electrical Systems

Connecting Shore (Mains) Power

MDC Caravans are built with an integrated 240V Alternating Current (240Vac) power supply system for charging the battery system and running fixed appliances, such as the Air Conditioner, and domestic appliances, such as laptop chargers, television sets, toasters etc. Primary supply for this system is by connecting to an external power supply, such as the national grid or a local site supply. Your caravan connects to these supplies via an external 15A socket inlet located on the offside wall of the caravan.

15A supply leads are physically different from standard 10A leads found in most homes. 15A plugs have a larger earth pin which prevents them from being used in incompatible sockets. See Fig.4.



Fig.3

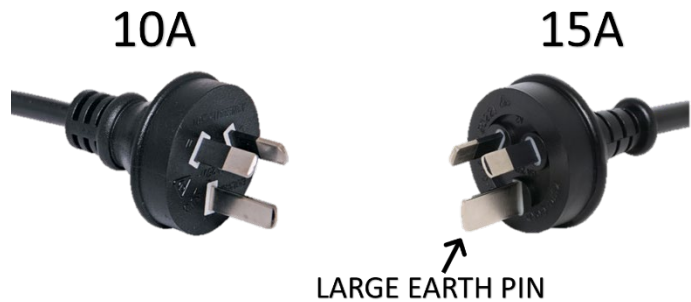


Fig. 4



NOTICE

When charging at home, most domestic dwellings are not built with 15A outlets. Where a 15A outlet is unavailable you will need a conversion box that will step up from 10A to 15A with a safety switch. See Fig 5. Never leave power leads coiled when in use, lay the lead out back and forward in a manner that will not be a trip hazard or risk damage to the lead.

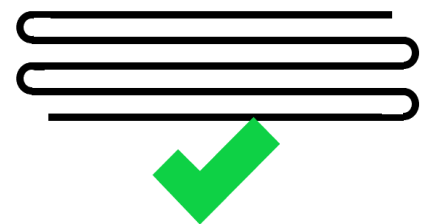
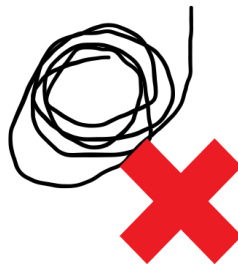


Fig 5

Lithium Battery System



WARNING

A CONNECTABLE ELECTRICAL INSTALLATION BATTERY SHALL ONLY BE REPLACED BY ONE OF THE SAME TYPE AND SPECIFICATION AS THAT ORIGINALLY FITTED. UPGRADES TO THE BATTERY OR SYSTEM SHALL ONLY BE PERFORMED BY A COMPETENT PERSON.

Your new RV is fitted with a 200Ah Lithium Iron Phosphate (LiFePO₄) battery system, replacing the traditional AGM type battery systems.



The factory-fitted charging systems are specifically designed to allow efficient charging, suited to the extreme power demands of the larger battery, and an internal Battery Management System (BMS), built right into the battery itself, constantly monitors the battery health including:

- Over & Under Voltage
- Over & Under Current
- Over & Under Temperature
- Resistance
- Short Circuit

Also fitted, is an external battery monitor display and smart shunt from Projecta, with Bluetooth connectivity, which allows you to manage and monitor your power usage.



For more detailed information and user instructions, please refer to the appliance manuals provided.

Battery Care

Storage type batteries require periodical maintenance to perform at their peak and extend their service life. The following is an outline of how to gain the best performance and lifecycle from the battery fitted in your RV:

Always use a quality charger that caters to the voltage requirements of a LiFePO₄ battery.

Never leave your battery stored at low voltage. Before storing your RV ensure that the battery is fully charged, or at least 50% charge, and all power is disconnected/switched off.

Always ensure that, when in storage, the voltage does not drop below 50% charge.

When possible, leave the battery connected to a smart charger that will cycle and maintain the battery during storage. Such as the factory fitted, 7-stage charger. If this isn't possible check and charge at regular intervals to prevent excessive discharge.

Never connect unregulated solar power directly to your batteries.

For further information regarding your lithium battery, refer to the LiFePRO+ website (www.lifeprolithium.com.au)

Lithium (LiFePO₄) Battery Reset

The battery installed in this Caravan or Camper Trailer is equipped with an internal battery management system (BMS) to protect the battery from conditions such as overcharge, over-discharge, and short circuits.

In the event, the internal BMS is triggered (e.g., the battery goes flat), the 12V system will shut down for a short period and the PROJECTA display may show no voltage. To reset and recharge the battery, follow these steps:

(A) VOLTAGE DISPLAYED ON PROJECTA SCREEN:

1. Turn off all loads.
2. Connect your Caravan or Camper Trailer to 240V (AC) mains power and switch it on – this will start the Battery Charger.
3. Confirm BULK CHARGE light is displayed on the screen; and
4. Charge battery for at least one hour before turning DC loads back on.

(B) 0.0V OR NO VOLTAGE DISPLAYED ON PROJECTA SCREEN*:

1. Turn off all loads.
2. Connect your Caravan or Camper Trailer to 240V (AC) mains power and switch it on – this will start the Battery Charger.
3. Press the POWER SUPPLY button on the PROJECTA display.
4. Once a voltage reading (e.g., 11.4 V) is present, press the CHARGE button on the PROJECTA display.
5. Confirm BULK CHARGE light is displayed on the screen; and
6. Charge battery for at least one hour before turning DC loads back on.

(C) 0.0V NO MAINS POWER AVAILABLE

1. Connect the trailer plug and Anderson plug to the running tow vehicle
2. Change the mode on the IDC25L DC to DC controller to power supply
3. When the battery wakes up, change back to lithium mode

**After 10 – 15 minutes with no DC loads applied, the BMS inside the battery may disengage, and a voltage reading will appear on the PROJECTA display. In this case, follow the steps outlined in the procedure (A)*

Allowable Appliances

The types of appliances you can use when connected to the 240VAC and 12V systems may be limited by the output rating of the power source.

Mains Power 240VAC Double Pole Power Points:



Always check the input requirements for any appliance before use!

- All normal household appliances operable from a 10-amp socket may be used when connected to mains power. This includes portable induction cookers, jugs for boiling water, electric fry pans and coffee making appliances.
- Sensitive electronics such as chargers, laptops, C-Pap machines are permissible.

Projecta PW1600 – 12V 1600W pure sine wave inverter:

Mobile Phone Charger 5-30W	✓	Laptop 60-250W	✓
Digital Camera 4-19W	✓	Video Game Console	✓
Camcorder 10-30W	✓	TV	✓
Portable Stereo 4-50W	✓	Printer 100-160W	✓
Hand-Held Game Console 20W	✓	PC 200-400W	✓
Fan 30-60W	✓	Small Fridge 250-300W	✓
Small Power Tools 300-500W	✓	Halogen Light 500W	✓
Jigsaw 300-500W	✓	Coffee Machine 1600w	✓
Electric Blanket	✓	Food Processer to 1600w	✓

12V DC Outlets:

12v Kettle 150W	✓	12V cooker 10-15 Amps	✓
Small fridge 150W	✓	12V Portable Oven 130W	✓
12V sandwich/Jaffle Maker	✗	Portable Diesel Heater	✗
12V Washing Machine	✗		

USB Outlets:

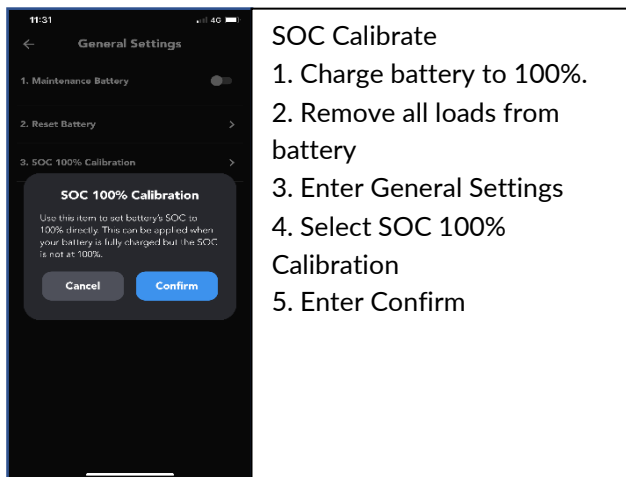
- Phone and tablet charging only.

Configuring The BM500-BT



1. Download the App from Apple Store or Google play depending on your type of smart phone.
2. Open the App and pair with your BM500. The display will show the connection code to enter on the App.

3. Open app and go to settings	4. Select Battery Settings	5. Select Battery Type	6. Select LFP and confirm	7. Select Battery Capacity
8. Enter 200.0 Amps and confirm	9. Return to menu and select Alarm Settings	10. Enter the above values for Voltage low and voltage high	11. Enter the above values for Over Current Charge and Over Current Discharge	12. Enter the above values Temperature Low and Temperature High



BM500-BT Warning codes

Warning Code	Description
E01	Low battery Voltage for Aux Battery
E02	High battery voltage for Aux battery
E03	Low state of charge for Aux battery
E04	Low time remaining for Aux battery
E05	High charge current for Aux battery
E06	High discharge current for Aux battery
E07	Low battery temperature for Aux battery
E08	High battery temperature for Aux battery
E10	Low Battery voltage for starter battery
E11	High battery voltage for starter battery
E12	Low battery voltage for 2 nd starter battery
E13	High battery voltage for second starter battery
UPF	Firmware Update Failed

FAQ's

Q. How do I know if the battery is charged?

A. The charger's FULLY CHARGED LED will illuminate (solid) and the remote's bi-colour LED will illuminate green (solid).

Q. My battery is flat and in sleep mode and won't charge, how do I charge it?

A. Change the battery type on the charger to "Power Supply" and leave for an hour. Once the battery wakes up, change the battery type back to LFP (Lithium).

Reading the IDC25L

HOW TO READ LED DISPLAY



LED Charge Indicators

Charging LED	Operating Mode LED	Charging Stage
GREEN Flashing	Solid BLUE	Soft Start/Bulk Charge
GREEN Flashing	BLUE Flashing	Adsorption Charge
Solid GREEN	Solid BLUE	Float Charge

Fault LED Indicators

Charging LED	Solar LED	Alternator LED	Operating Mode LED	Fault	Remedy
Solid RED				The unit is faulty	Check if there is any output current from the unit
Amber Flashing				Bulking charging time out	Auxiliary battery may be faulty or heavy load is connected to the battery for long time
Solid RED			BLUE Flashing	Output battery is reversely Connected	Check output cable connection
RED Flashing			BLUE Flashing	Overvoltage is detected at output	Check auxiliary battery voltage
Solid AMBER			BLUE Flashing	Output open circuit or dead Battery	Check auxiliary battery voltage & cable connections
	Solid RED			Solar Input is reversly connected	Check Solar input connection
	RED Flashing			Overvoltage is detected at Solar Input	Check solar panel open circuit voltage
		Solid RED		Alternator Input is reversly connected	Check Alternator input connection
		RED Flashing		Overvoltage is detected at Alternator	Check vehicle battery voltage

NOTE: During “Float Charge” the AMP rate of charging will be small (as little as less than 1 amp). This is NOT a reflection of your solar charging performance; it is a function of maximising the battery’s capacity.

Restarting the Battery with the IDC25L

To change mode to POWER SUPPLY to wake up your lithium battery, press and hold the “MODE” button until the LITHIUM light flashes then press again to change to POWER SUPPLY.

Inverter (Projecta PW1600)

The inverter is a 1600-watt output. NEVER use an appliance of a higher wattage rating.

Operating Instructions

To operate the inverter press the power button for 3 seconds.

To turn off, press the power button again for 3 seconds.

To help prevent the inverter being overloaded:

1. Allow the inverter to complete its start-up process when switched 'ON'.
2. Ensure appliances are turned off before turning the inverter on and;
3. If multiple appliances are being run, turn on one at a time.

Understanding Your Inverter

These inverters are equipped with two status LED's and audible alarm. During normal operation, the blue LED will illuminate solid blue. In the event of a fault or error, the alarm will sound and the red LED will illuminate.

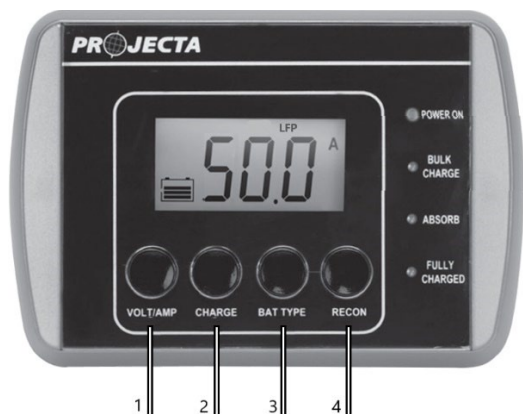
STATUS	LED Signal	Alarm
Normal	Blue On, Red Off	-----
Low Battery Voltage	Blue On, Red Off	ON
Low Battery Voltage Shutdown	Blue On, Red On	ON
Over Temperature Shutdown and Output Short Circuit	Blue On, Red On	ON
Overload Shutdown	Blue On, Red On	ON
High Battery Voltage Shutdown	Blue On, Red On	ON

Projecta IC50 Battery Charger

Controls

The battery charger and remote control* interfaces are synchronised and identical in operation allowing you to monitor the battery charger's performance and customise the charge settings to best suit your battery. The function of each button is explained below:

1. **VOLT/AMP:** Change LCD screen display from battery voltage to input current
2. **CHARGE RATE:** Set the charge rate to suit the size of the battery
3. **BATTERY TYPE:** Set the charging profile to suit the battery's chemistry type
4. **RECONDITION:** Initiate recondition mode



Restarting Battery with IC50 Charger

- Connect van to shore power
- Press BATTERY TYPE button, the LCD screen will flash the present setting.
- Press the BATTERY TYPE button repeatedly until the LCD screen displays POWER SUPPLY
- Wait for LCD screen to stop flashing
- Wait 10 minutes and return the battery type to LFP then charge for at least 1 hour.

NOTE: BM500-BT app may need an SOC calibration when battery is fully charged. (Fully Charge Light illuminated)

Setting Charge Rate

The maximum charge rate of 50 amps is suitable for the 200amp OEM battery.

- a. Press the CHARGE RATE button. The LCD screen will flash the present setting.
- b. Press the CHARGE RATE button repeatedly until desired setting is displayed.
- c. Wait for the LCD screen to stop flashing.

Note:

- Failure to wait for the screen to stop flashing will cause the charge rate to default to previous setting.
- Charging at low rates may not raise the battery level while appliances such as refrigerator are running. Charging should be done at the highest charge rate available.
- Low charge rates may cause the charger to "Timeout" before reaching a 100% state of charge. This will result in a timeout alarm (F01)

IC50 Fault Codes & Remedies

LCD	Power On LED	Fault	Remedy
Err	Slow Flashing	Short Circuit or reverse connection at battery	Check connections at battery
F01	Fast Flashing	Bulk charge has timed out and stopped after 22 hours	Increase charge rate as above.
-	Slow Flashing	IC50 entered recondition mode 3 times & timed out	Possible battery fault. Check for unusual loads.
OTP	Fast Flashing	IC50 has overheated and switched off	Ensure ventilation and reduce charge rate
OLC	Fast Flashing	Sensor wires not connected to battery terminal	Check connections and damaged wires
OCP	Fast Flashing	Charger has encountered an error.	Contact Brown & Watson

Appliances

Air Conditioner

Air Conditioner Safety instructions



Repairs may only be carried out by an expert!

The device fuses and connection cables must only be replaced by experts.

The 230 V, T 6.3 A H (slow) device fuse can be found on the electronic control unit in the device and must always be replaced with an identical fuse.

The air conditioning system is designed for a power consumption of up to 4.2 A. You should still check whether the camp site has adequate fuse protection (min. 6 A) before starting the equipment up.

Park the vehicle in the shade if possible.

Darkening with blinds reduces the amount of heat insolation. Clean your roof at regular intervals (dirty roofs heat up more than clean roofs).

Ventilate your vehicle well before starting the equipment in order to remove accumulated warm air from the vehicle.

In order to obtain a healthy room climate, the difference between the inside and outside temperatures should not be too great. The recirculated air is cleaned and dried during operation. A pleasant room climate is produced by drying the moist air, even with small temperature differences.

Keep all doors and windows closed when in cooling mode so that no condensation builds up occurs at the air distributor.

For faster cooling or heating:

- Set fan level to high,
- Set front / rear air distribution to centre position,
- Set floor / ceiling air distribution to ceiling.

Prior to Starting Aircon

Caravan **MUST** be connected to shore power

Start-up

Before switching on, be sure to check that the camp site power supply fusing is sufficient (230 V).



To prevent the power cable of the recreational vehicle from overheating (minimum cross-section 3 x 2.5 mm²) the cable drum must be fully unwound when used or cable laid out side by side. Do NOT coil the power lead.

The remote control must always be pointed at the infra-red receiver in order to perform the individual switching commands.

Before switching on for the first time, the remote control must be tuned to the IR receiver.

- Insert batteries (pay attention to polarity)
- Setup symbol flashes (if symbol does not flash, perform Reset)
- Point remote control at IR receiver
- Press Setup button and hold down
- When the red LED on the IR receiver starts to flash, release Setup button.

The remote control is tuned to the IR receiver, the setup symbol goes out and the air conditioning system starts in circulated air mode on the lowest fan level, with no timer set.

Switching on

Switch on the air conditioning system using the “On/Off switch” of the remote control. The previous settings are taken over.



The circulated air fan runs after switching on. The compressor activates itself after no more than 3 minutes and the blue (cooling) / yellow (heating) LED flashes.

Temperature

If necessary, use the “Temperature selection buttons” to set the required room temperature with “+” and “-”.

Mode

Select the required operating mode by pressing the “MODE” button one or more times.

- Cooling
- Heating
- Automatic (cooling or heating mode, depending on the room temperature selected)
- Circulated air

When the room temperature that was selected using the remote control is reached in **cooling mode**, the compressor switches off and the blue LED in the IR receiver goes off. The circulated air fan continues to run in order to provide ventilation. If the room temperature setting is exceeded, the device automatically reverts to cooling mode.



The air is dehumidified during cooling. If the air humidity in the vehicle is extremely high at the beginning of the cooling procedure, moisture can build up on the underside of the air distributor. The doors and windows should therefore be kept closed and the highest fan level selected.

When the room temperature selected using the remote control is reached in heating mode, the compressor switches off and the yellow LED lamp in the IR receiver goes off. The circulated air fan continues to run in order to provide ventilation. If the room temperature falls below the temperature selected, the device automatically reverts to heating mode.



Heating at an outside temperature of less than 4°C is not possible because heating performance falls considerably. Between 4°C and 7°C the device switches briefly to defrosting processes. At above 7°C there are no restrictions on heating mode.

In **automatic mode**, cooling or heating mode and fan level are selected automatically according to the room temperature.

In **circulated air mode** the interior air is recirculated and cleaned by the filter. No LED's illuminate in the IR receiver.

Fan

Select the required fan level by pressing the “Fan level” button one or more times.

Fan level (not functional in automatic mode):

- low
- medium (not in heating mode)
- high

Sleep function

In “**sleep function**” (cooling mode only), the internal and external fans operate at slow speed and are therefore extremely quiet.

Switching off

To switch off, press the “**On/Off switch**” on the remote control. The remote control and the device are switched off. The light can still be switched on and off using the “**Ambient lighting**” button.



If the air conditioning system is switched on again, the blue / yellow LED flashes. The air circulation fan runs, and the compressor activates itself after no more than 3 minutes.

Time

Press “**Time selection button**” and set current time using the “Time setting” buttons.

The time is always shown on the display (exception with ON / OFF timer).

The time must be reset after changing the batteries or after a daylight-saving time change.

Timer ON / OFF

With the integrated timer the On/Off time of the air conditioning system can be set in advance for a minimum of 15 minutes to a maximum of 24 hours, starting from the current time.

The device must be switched on using the remote control in order to program it.

Set required operating mode and room temperature. Then select TIMER ON or TIMER OFF using the “**TIMER selection buttons**”. Set the required On/Off time using the “**Time setting**” buttons (15 minutes to 24 hours) and **confirm** with TIMER ON and TIMER OFF.

Pressing the relevant timer button again deactivates the timer function.

Ambient lighting

Irrespective of whether the air conditioning system is operating, the lighting in the air distributor can be switched on or off by pressing the “Ambient lighting” button. The lighting is dimmed by pressing and holding down the “Ambient lighting” button. The previous setting is activated when it is switched on again.

Remote Control

 The symbols in the display are visible depending on the settings.

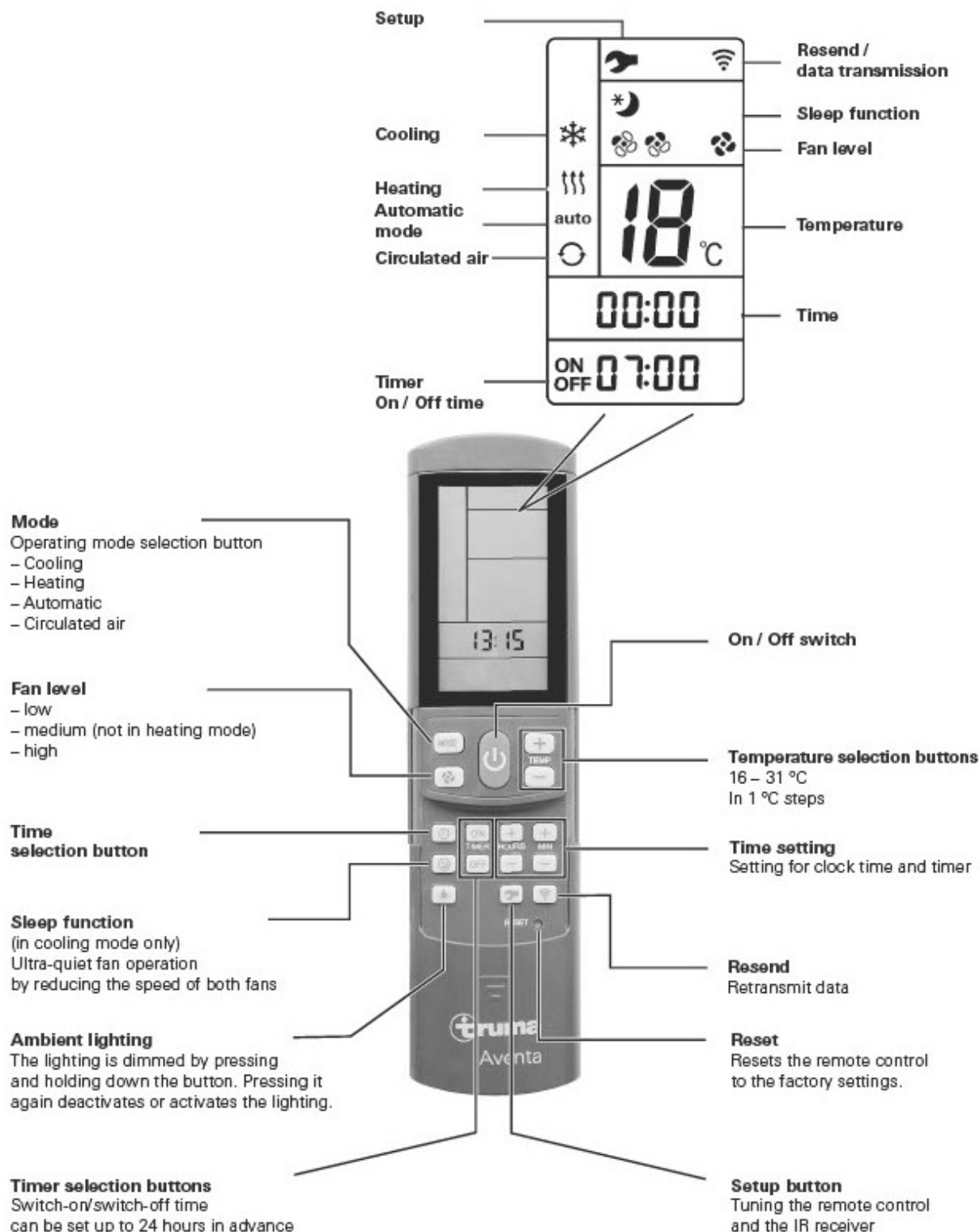


Fig. 1

Cooktop

Slide Out Kitchen

- Before sliding out kitchen, raise the pad bolt and turn to lock in the up position shown.
- Push down blue latch on the slide mechanism and pull kitchen out. (Fig: 2a)
- When kitchen is extended fit the support leg into its receiver (Fig: 3)
- Extend support leg and secure locking screw (Fig: 3a)

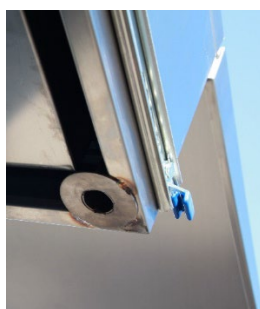
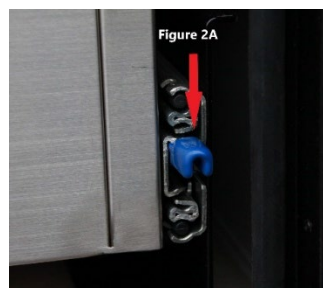
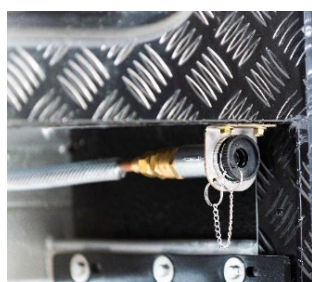


Fig: 3

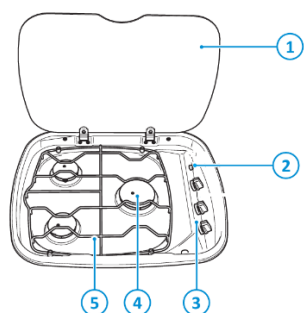


Fig: 3a

Once you connect your gas bottle you can connect the kitchen gas hose to the bayonet connection provided.



Thetford 3 Burner Hob



1. Lid
2. Control Panel
3. Spark Ignition
4. Gas Burners
5. Pan Supports

Burner Operation

The burners on this appliance have fixed aeration and no adjustment is required. The burners should flame as follows:

- Universal LPG - Normally on lighting the flames may have yellow tips and this increases slightly as the burner heats up.

NOTICE

- Although each burner will support pans from 10 to 22cm, care should be taken not to overload the appliance as reduced performance may result.
- When using small pans, the flames should not spread beyond the base of the pan as this will reduce the efficiency of the burner.
- Avoid old or misshapen pans as these may cause instability.
- The lid must be opened fully prior to using the hotplate burners.

1. **Using the Hob Burners**

Ensure gas cylinder/supply is connected and turned on. In the event of a gas smell turn off at gas cylinder/mains and contact the supplier.

2. **Flame supervision:** Each burner is controlled individually and is monitored by a thermocouple probe. In the event of the burner flames being accidentally extinguished, turn off the burner control and do not attempt to re-ignite the burner for at least one minute.
 3. **To light:** Push in the control knob and turn to full rate – large flame (). Hold a lighted match or taper to the burner and push the control knob in and hold. It is necessary to hold the knob depressed after the burner has ignited for approximately 10 - 15 seconds, to allow the thermocouple probe to reach temperature, before releasing the knob. Should the flame go out when the knob is released, the procedure should be repeated holding the knob depressed for slightly longer.
 4. For models fitted with Spark Ignition the procedure is similar except that the burner can be ignited by depressing the ignition button, which is located on the fascia. If the burner has not lit within 15 seconds the control knob should be released and the burner left for at least 1 minute before a further attempt to ignite the burner.
 5. For simmering, turn the knob further anti-clockwise to the low-rate position.
 6. To turn off: Turn the control knob until the line on the control knob is aligned with the dot on the control panel. Always make sure the control knob is in the off position when you have finished using the hotplate burners.
- Glass lids may shatter when heated. Turn off the hotplate and allow it to cool before closing the glass lid.
 - Remove all spillage from the surface of the glass lid before opening.

Truma Rapid Hot Water System

Operating Instructions

General Safety

***Read the included Truma operation manual supplied with you trailer**

The use of upright gas cylinders from which gas is taken in the gas phase is mandatory for the operation of gas regulators, gas equipment and gas systems. Gas cylinders from which gas is taken in the liquid phase (e. g. for forklifts) must not be used, since they would result in damage to the gas system. In the event of leaks in the gas system or if there is a smell of gas:

- extinguish all naked flames
- do not smoke
- switch off all appliances
- shut off the gas cylinder
- open the windows and doors
- do not actuate any electrical switches
- have the entire system checked by an expert!
- Repairs may only be carried out by an expert.
 - This device may be used by children aged 8 years or above and by persons with reduced physical, sensory, or mental capabilities or lack of experience and / or knowledge, only if they are supervised or have been given instruction with regard to the safe use of the device and have understood the potential risks. Children must not use the device as a toy.
 - To avoid the risk of accidental resetting of the over-temperature guard, the device may not be supplied with power via an external contactor, such as a timer, nor may it be connected to a power circuit that is regularly switched on or off via a device.



DANGER

Failure to operate the P&T safety valve (Fig. 1 - 4) at least once every six months may result in the water heater splitting. Continuous leakage of water from the valve may indicate a problem with the water heater!

- Water may drip from the discharge pipe of the P&T safety valve and this pipe must be left open to the atmosphere.
- The P&T safety valve is to be operated regularly to remove lime deposits and to ensure that it is not blocked.
- Any discharge pipe connected to the P&T safety valve is to be installed in a continuously downward direction and in a frost free ambient.
- Always remove the cowl cover prior to operating the water heater.
- Do not place articles on or against this appliance.
- Do not use or store flammable materials near this appliance.
- Do not spray aerosols in the vicinity of this appliance while it is in operation.
- Do not modify this appliance.
- Any modifications to the unit, including accessories and cowl, or the use of spare parts and accessories that are important to the operation of the system that are not original Truma parts and failure to follow the installation and operating instructions will void the warranty and release Truma from any liability claims. It also becomes illegal to use the appliance, and in some countries, this even makes it illegal to use the vehicle.
- Any work involving connection or interconnecting wiring must be carried out by a licensed electrician. If the mains cable (supply cord) is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Before accessing terminals, please ensure all supply circuits are disconnected (i.e., 230 V – 240 V and 12 V) and that the gas supply is securely turned off.
- The operating pressure for the gas supply is 2.75 kPa (AUS – Propane) and must correspond to the operating pressure of the appliance (see data plate).
- LPG systems and pressure regulators must comply with the technical and administrative regulations of the country in which the appliance is used. For your own safety it is absolutely necessary to have the complete gas

installation regularly checked by an expert (at least every 2 years). The vehicle owner is always responsible for arranging the gas inspection.

- Do not operate when travelling.
- Do not operate the water heater when refueling the vehicle and when it is in the garage.
- Items sensitive to heat (e. g. spray cans) must not be stored in the installation area, since excess temperatures may occur there under certain circumstances.
- During the initial operation of a brand-new appliance (or after it has not been used for some time), an amount of fumes and a slight smell may be noticed for a short while.

Always observe the operating instructions prior to starting! The vehicle owner is responsible for correct operation of the appliance.

⚠ Before using the product for the first time, it is essential to flush the entire water supply through with clean warm water. Always mount the cowl cap when the water heater is not being operated! Drain the water heater if there is a risk of frost! Warranty claims will not be accepted for frost damage.

⚠ Always remove the cowl cover prior to operating the water heater.

If connecting to a central water supply (rural or city connection) or when using more powerful pumps, a pressure reducer must be used which prevents pressures of greater than 400 kPa occurring in the Truma UltraRapid.

Filling the Truma UltraRapid with Water

Check that the drain valve (3) and the P&T safety valve (Fig.2a - 4) in the cold-water intake are closed.

- Close drain valve (Fig. 2 - 3). Lever in the “e” position (close).
- Test lever (Fig. 2a - 4a) of the pressure relief valve (4) must be in the “close” position.

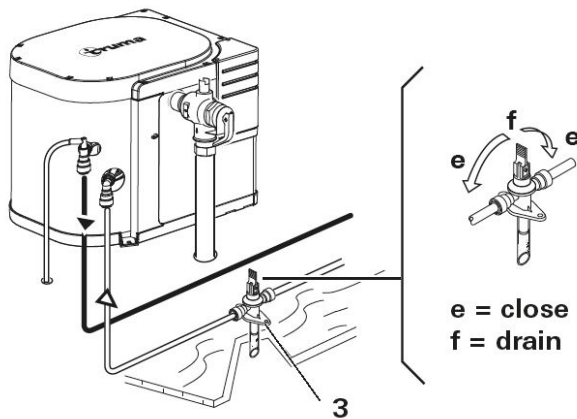


Fig. 2

- Open hot tap in bathroom or kitchen, with pre-selecting mixing taps or single-lever fittings set to “hot”.
- Switch on power for water pump (main switch or pump switch).
- Leave the tap open to let air escape while the water heater is filling. The heater is filled when water flows out of the tap.

Residues of frozen water can prevent filling if there is a frost. The water heater can be defrosted by switching on the heater for a short period (max. 2 minutes). Frozen pipes can be defrosted by heating the room.

- If just the cold-water system is being used, without water heater, the heater tank is also filled up with water. To avoid damage through frost, water must be drained by means of the drain valve, even if the heater has not been used. As an alternative, two shut-off valves, resistant to hot water, can be fitted in front of the cold and hot water connection.

Pressure Relief Valve

- Risk of scalding injury from hot water and/or tampering with the P&T safety valve!
- Do not actuate the P&T safety valve as long as the appliance is still hot.
- Do not place a plug or reducing coupling in the discharge pipe (Fig. 2a - 4b) of the P&T safety valve.
- Do not operate the water heater without a functioning P&T safety valve - this could cause an explosion.

The P&T safety valve (4) is a safety component and must not be removed for any reason other than replacement.

The P&T safety valve is not serviceable; if defective it must be replaced (failure to reuse an old P&T safety valve). It must be replaced by a certified service technician.

Tampering with the P&T safety valve will void the warranty.

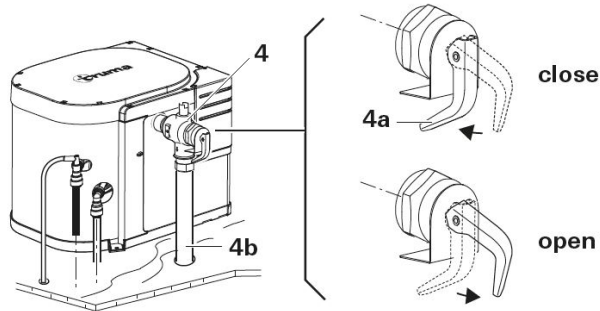


Fig. 2a

4 P&T safety valve

4a Test lever

4b Discharge pipe

Draining the Water Heater

- If the vehicle is not used during periods of frost, it is essential that the Truma UltraRapid be emptied.
- Disconnect power for water pump (main switch or pump switch).
- Allow the appliance to cool down.
- Open hot water taps in bathroom and kitchen.
- Open drain valve (Fig.2 - 3). Lever in the "f" position (drain). The water heater is now drained directly to the outside via the drain valve (3).
- Check that the water has been completely drained (14 litres).

Switching On Gas Operation

- ⚠ Never operate the heater without water in it!
- ⚠ If the wall cowl is positioned close to an opening window (or hatch) – in particular directly under it – the window must remain closed when the water heater is in use (see warning plate).

Removing The Cowl Cover

- Grab the handle of the cowl cover.
- Press the palm against the lid (Fig.3a - 1) while pulling the lid off the cowl (Fig.3a - 2).

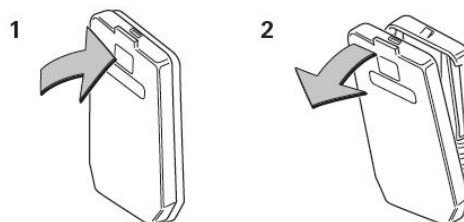


Fig. 3a

Select Water Heater Mode

Use the control panel to select the water heater mode



Fig. 3b

a = Red indicator lamp "Fault"

b = Water heater "On" 60 °C or 70 °C

c = Water heater "Off"

If there is air in the gas supply line, it may take up to a minute before the gas is available for combustion. If the appliance switches to "Fault" during this time, switch off the appliance – wait 10 minutes – and switch on again! When using the vehicle switches

Refer to operating instructions of the vehicle manufacturer or see switch labels.

Switching Off Gas Operation

– Switch off the water heater to position (Fig. 3b - c).

If the water heater is not to be used for a longer period, mount cowl cover (non-observance of this point can lead to the function of the appliance being impaired through water, dirt or insects), close stop cock valve in the gas supply line and close the gas cylinder.

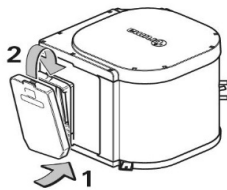


Fig. 4

Before setting off on any journey, fit cowl cap with the Truma UltraRapid switched off. Please ensure that it is secure and has locked into place (risk of accident). Defective cowl caps must not be used. Drain the water heater if there is a risk of frost! Warranty claims will not be accepted if this is ignored.

Red Indicator Lamp "Fault"

The red indicator lamp (a) lights up if there is a fault. For possible causes please refer to "Fault finding" on page 6 of the Truma manual. To unlock, switch off the appliance, wait 10 minutes, and switch on again.

Maintenance

Do not modify this appliance

Servicing should only be carried out by authorised personnel.

Only original Truma parts may be used for maintenance and repair work!

Please contact the Service Australia for service and repairs.

Decalcification

The Truma UltraRapid must be descaled on a regular basis (at least twice a year).

We recommend the use of suitable normal commercial products for the cleaning, disinfection and care of the Truma UltraRapid. Products containing chlorine are unsuitable.

- In order to avoid the colonization of micro-organisms, heat up the Truma UltraRapid to 70 °C at regular intervals.
- The drain valve (Fig. 2 - 3) and the P&T safety valve (Fig. 2 - 4) are to be operated regularly to remove lime deposits and to ensure that they are not blocked. Frequency: every 6 months.

Fuses

The water heater 12 V fuse is on the PCB on the water heater.

Important note

Only replace the miniature fuse on the PCB with a fuse of the same type: 1.6 A (slow action).

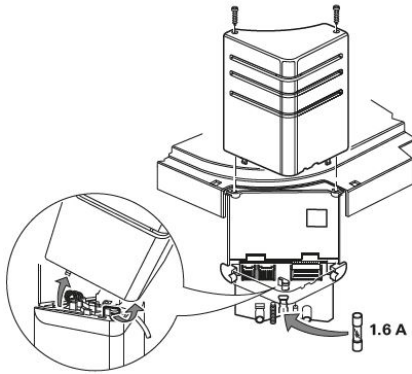


Fig. 6

Circuit Breaker

There is a circuit breaker allocated to the water heater circuit switch on the main electrical panel. To reset this breaker, push in.

Diesel Heater

Important information before operating the diesel heater.

- The diesel heater is designed for use in an RV, caravan, or camper.
- The heater is designed to heat the main living area of your caravan or camper. Attempting to warm the additional annex area may be beyond the performance of the diesel heater unit.

The diesel heater is not to be used for the following.

- Directing air onto people or animals
- Long term use in large areas
- Drying clothes and other items



CAUTION

Safety!

- Never pack items around the diesel heater unit. Always ensure all items are clear of the heater unit and all hoses and exhaust.
- Ensure intake and output vents are always clear and free of obstruction.
- Always allow the heater unit to cool under ventilation mode before turning off the unit.
- Never use the diesel heater in a confined area e.g., Garage, shed, workshop, non-ventilated area
- Consider the comfort of nearby campers and the effect of exhaust fumes.



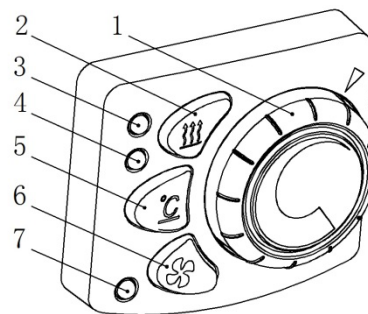
CAUTION

Risks of injury and burns.

- The motor unit and exhaust operate at high temperatures. Do not attempt to work on the unit while hot.
- Do not allow children to operate the heater.
- ****Allow the heater to fully cool, turn off power before refueling.
- Do not smoke near the diesel fuel tank.
- Do not modify the diesel heater unit in any way.
- Do not inhale exhaust fumes.
- The heater exhaust is very hot. Do not use the diesel heater where contact with long grass and vegetation is possible. Always use in a cleared area.
- Never use the heater while the trailer is in motion.

Operation

- 1-Control Knob
- 2- Heating (power on) mode button
- 3-Heating (power on) indication light
- 4-Constant temperature indication light
- 5- Constant temperature mode button
- 6-Ventilation mode button
- 7 -Ventilation indicating light



Heater Control Switch

Power on

Press the heating (2 power on) button, the heating (constant power) will flash for 0.3S. The heater will begin the start stage. The controller will run heating the program according to the temperature control target set by the control knob. In the start stage, the time delay from switch-on to fuel supply to the fuel pump is around 65 seconds.

Temperature Control

When the combustor is ignited and running, you can turn the control knob according to the arc mark around the control switch (1) to control the temperature.

Ventilation mode

You can only enter the ventilation mode when you press the ventilation mode key to start the heater. The ventilation indicating light turns green after pressing ventilation button. Heater can only circulate air without any heating. The fan speed can be continuously regulated with the control knob.

Shutdown

To shut down the unit, press the button indicative of the current mode of operation. If the fuel pump is at work before the heater is turned off, the pump will shut down immediately, but the fan will continue to run for 180 seconds.

***DO NOT TURN OFF MAIN SWITCH ON PANEL UNTIL THE UNIT HAS COMPLETED ITS SHUTDOWN PROCESS.**

Trouble Shooting

When entering fault mode, the display will flash the LED lights to indicate the fault code. This will be indicated by:

2 long flashes of 2 seconds followed by a sequence of flashes with a 0.5 second interval. The number of quick flashes indicates the fault code on the table below.

LED Flashes	Cause of trouble
1	Failure of second start
2	Termination of the third time of combustion
3	Power voltage out of specified range
4	Combustion chamber temperature too high during self-check period
6	Broken circuit or short-circuit of temperature sensor
7	Broken circuit or short-circuit of fuel pump
8	Broken circuit, short-circuit, or rotation clogging of fan motor
9	Broken circuit or short-circuit of glow plug
10	Ambient temperature over high before starting or furnace body temperature over high during heating process
11	Broken circuit or short-circuit of overheating sensor
12	Broken circuit or short-circuit of control switch
13	Maintenance reminder: More than 800 hours of work time
14	Failure of controller

Toilet Care and Maintenance

Thetford C400 Toilet

Using the Toilet



The toilet can withstand a maximum load of 120kg. Make sure you do not overload the toilet.

See the images in the fold-out cover for a visual reference.

Opening the blade:

- Open the blade by turning the control knob counter-clockwise (07).
- Close the blade completely by turning the control knob clockwise until you hear a click (07).
- Always close the blade completely after use.



The toilet can be used with the blade open or closed.

Flushing the toilet:

- Make sure the blade is open.
- Press the flush button and hold it for several seconds to flush the toilet (08).



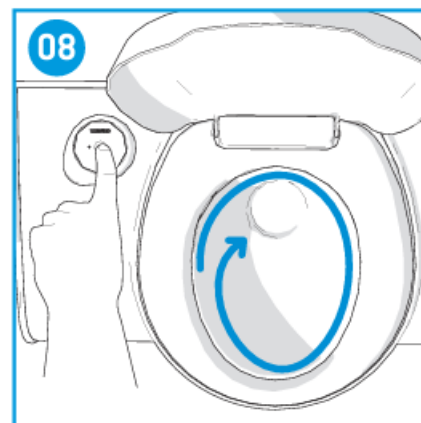
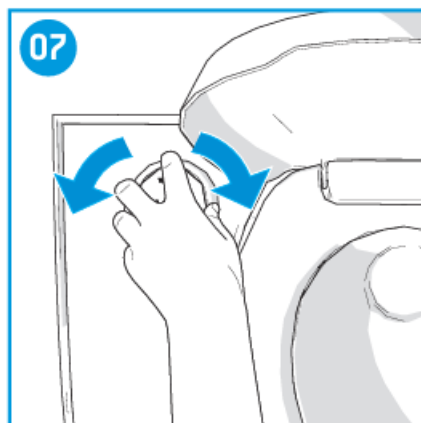
Ordinary toilet paper can cause clogging. Use Thetford Aqua Soft toilet paper for your toilet. This toilet paper is super-soft, dissolves quickly, prevents clogging and makes it easier to empty the waste-holding tank.



To prevent water damage to your caravan or motor home, do not travel with water in the toilet bowl.



Do not leave water in the toilet bowl if the toilet is not being used. This does not help to reduce unpleasant smells and only leads to flooding.



Chemicals:

Always use water treatment and conditioning products recommended by the manufacturer.

Thetford

Waste Holding Tank: The recommended product for the waste holding tank on Thetford toilet systems is Aqua Kem Blue or Aqua Kem Green for better environmental performance.

Cleaning Cassette Tank: "Cassette Tank Cleaner" is the recommended product for this application.

Flush Water Tank: Only suitable for AUSRV models that have a toilet flush tank.



***Do not add to main water tanks! ***

Thetford recommend "Aqua Rinse."

Grey Water Tank: Tank Freshener

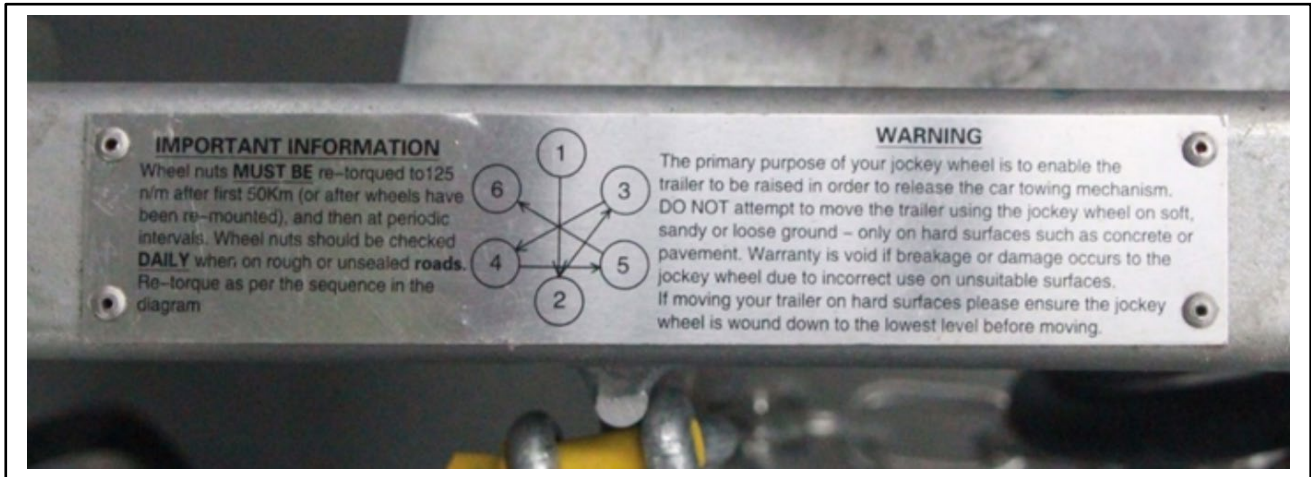


Mechanical

Daily/Frequent Maintenance

Wheel Nuts

Wheel nuts should be tightened to correct torque using a torque wrench. Never trust a “rattle gun” as these may over or under tighten. A quality torque wrench will ensure nuts are tightened correctly. It's important to remember to check your wheel nuts at 50km, 500km and 1000km and periodically thereafter. The correct torque setting of 125Nm for 12mm studs, 140nm for 14mm studs with alloy wheels and 200nm for 14mm studs with steel rims. Refer to the plate on your drawbar.



Hitch

The high tensile bolts securing your hitch should be tightened to 90Nm. These should be checked at 5000km intervals or 2500km in harsh off-road conditions.

Trailing Arm Pivot Bolts

The pivot bolts are a high tensile steel. The service interval for these bolts is 5000km under normal use and 2500km for harsh off-road conditions. During travel they should be inspected daily to ensure they have not rotated or become damaged. Correct torque is 190Nm

Hand Brake

Parking brakes are mechanically operated by cable means. The cable attachment occurs outside of the brake backing plate. Cable force applied to the parking lever creates a torque through the pivot pin and cam assembly. Torque transferred to the parking cam results in a spreading force between the primary and secondary shoes. The shoes in turn, move towards the drum until contact is made. Friction generated between the drum and lining contact surface results in parking brake capability.

Use the cable adjuster to give enough tension to be able to set the handbrake lever on the last two notches of the coupling or handbrake is 1/3 raised when unladen. This needs to be checked again when the trailer or caravan is loaded. If the cable is too tight, the brakes will be applied as the axle moves backward under spring deflection.

Electric Brakes

Correct Use

Your trailer brakes are designed to work in synchronisation with your tow vehicle brakes. Never use your tow vehicle or trailer brakes alone to stop the combined load. Your trailer and tow vehicle will seldom have the correct amperage flow to the brake magnets to give you comfortable, safe braking unless you make proper brake system adjustments. Changing trailer load and driving conditions, as well as uneven alternator and battery output, can mean unstable current flow to your brake magnets. It is therefore imperative that you maintain and adjust your brakes as set forth in the controller manual, use a properly modulated brake controller and perform the synchronisation/adjustment procedure recommended by the brake controller supplier.

NOTICE

Proven and in some cases approved service methods and correct repair procedures are essential for the safe, reliable operation of the brakes, suspension and axles as well as the personal safety of the individual doing the work. This manual intends to provide general directions for performing service and repair work with tested, effective techniques. By following these guidelines, it will help assure

reliability. The numerous variations in procedures, techniques, tools and parts for servicing axles, as well as in the skill of the individual doing the work will determine outcomes. This manual cannot possibly anticipate all such variations nor provide advice or cautions as to each. Accordingly, anyone who departs from the instructions provided in this manual must first establish that they neither compromise their personal safety nor the vehicle integrity by their choice of methods, tools or parts.

*If at all in doubt please refer all repairs and maintenance to a suitably qualified or experienced mechanical repairer.

*Market Direct Group Pty Ltd accepts no liability for personal injury, loss or damage resulting from incorrect applications, methods, and failure to perform maintenance safely and correctly.

Brake Adjustment

NOTICE

Brakes should be adjusted

- (1) after the first 500 km's of operation when the brake shoes and drums have "seated,"
- (2) at 5000 km's intervals,
- (3) or as use and performance requires.

Never crawl under your trailer unless it is resting on properly placed jack stands. Do not place supports on any part of the suspension system and use the designated jack point or under the spring base plate to jack trailer.

Brake Cleaning and Inspection

Your trailer brakes must be inspected and serviced at 5000km or more often as required by use and performance. Magnets and shoes must be changed when they become worn or scored to avoid inefficient vehicle braking.

Shoes and Linings

A simple visual inspection of your brake linings will tell if they are useable.

Replacement is necessary if the lining is worn (to within 1.5mm or less), contaminated with grease or oil or abnormally scored or gouged. It is important to replace both shoes on each brake and both brakes of the same axle. This is necessary to retain the "balance" of your brakes. Be sure to replace your shoes only with genuine MDC parts available from our outlets.

Wheels and Tyres

Wheels

CAUTION

The wheels on your caravan are rated to 1,550kg maximum load. On single axle MDC/AUSRV caravans with an ATM of 3,000kg, it is important when loaded close to or at the ATM rating that you check the individual load on each tyre to ensure you do not exceed the maximum wheel load. **DO NOT** exceed the maximum load rating as it may cause the wheel to fail causing an accident resulting in injury or death.

Tyres

CAUTION

The maximum load rating on the OEM 265/75 R16 Goodride tyres is 1550kg at 80psi. On single axle MDC/AUSRV caravans with an ATM of 3,000kg, it is important when loaded close to or at the ATM rating that you check the individual load on each tyre to ensure you do not exceed the maximum tyre load. **DO NOT** exceed the maximum load rating as it may cause the tyre to fail causing an accident resulting in injury or death.

The published tyre pressures in this manual are recommended pressures for highway use. Deviation from these pressures according to road conditions is considered normal and in some cases such as corrugations and soft sandy terrains, would be considered best practice. When lowering tyre pressures to suit harsh or soft terrain, consideration must be given to reduction in speed to ensure control of the vehicle and trailer in all conditions. When returning to paved roads, pressures must be reinstated to recommended pressures before driving at highway speeds. Failure to ensure proper pressures at highway speeds may result in loss of control causing an accident, injury or death.

Highway

Your caravan is fitted with 16" wheels and 265/75 R16 Goodride Tyres. The tyres are a "Light Truck" tyre with a mud terrain tread and a maximum load rating on single axle of 1550kg at 80psi.

Recommended highway pressure at tare weight of the caravan is 39psi

Recommended highway pressure at ATM of 3000kg is 77psi

Off Road

Off road driving requires lower tyre pressures and lower speeds. When driving on rough and corrugated road, a reduction of speed and controlled deflation of tyres is required to protect the caravan and its suspension from damage. In extreme circumstances tyre pressures may be reduced significantly. When lowering from highway pressure, a rule of thumb is to reduce your speed by the same percentage as the lowering of tyre pressure.

Because off road conditions can vary greatly, you must lower your pressures and reduce speed until vibration and shock through the suspension is at a moderate level to suit the conditions you are experiencing, and the loaded weight of your caravan.

WARNING

When returning to the highway or when increasing speed, you must reinflate the tyres to correct highway pressures. Failure to reinflate can cause severe handling problems resulting in injury or death.

Suspension

Your camper is fitted with quality independent trailing arm suspension with dual shock absorbers. This design is ideal for the full range of use on and off road however, there are limitations in prolonged use of corrugated and rough road.

Shock Absorbers & Bushes

The function of shock absorbers is to turn kinetic energy into heat and dampen the rebound in the suspension to keep the tyre in contact with the road. During prolonged periods on corrugated and rough roads it is possible to overheat shock absorbers to the point of failure (shock fade). Best practice is to take regular breaks and allow both the shock absorbers and suspension bushes to cool. Overheating the bushes through prolonged driving on corrugations can soften the thermoplastic and cause premature wear and/or deformation of the bush. On severely rough roads stop regularly up to every hour to allow components to cool.

NOTICE

Reversing over high, sharp gutters and obstacles may cause premature wheel misalignment, always create a ramp.

Care & Maintenance

Long Term Storage

To maximise the life of your caravan you should consider additional protection from the elements. UV light and moisture can have an adverse effect on materials when left unprotected outside. This section outlines some of the things you can do as an owner to protect your investment.

Interior

Moisture in the smallest amounts can cause mould. High humidity and cooling temperatures can create condensation, additionally condensation can form under mattresses due to temperature differences between warm bodies on top and the bed base being cold from outside temperatures. As a precaution you can do the following:

- Check under mattress for moisture before packing up. If moisture is found allow to thoroughly dry before closing your camper.
- Store 1 or 2 moisture absorbing packs/dehumidifier packs in the caravan to draw away any residual water vapour.
- If packing up with damp or humid conditions, open and dry out the caravan at the first opportunity when returning home.

Exterior

Ensure all seals on the caravan have proper compression at 30-50%, are free of dirt and have nothing protruding past the seals. UV light and the elements can over time cause seals and fittings to perish and become brittle. The use of a caravan cover will extend the life of components and keep your investment looking better for longer.

Batteries

When storing your RV, ensure all power is turned off to ensure the battery isn't drained. It is recommended that it remains at 50% charge and recharged every 3 months when stored.

For further information regarding your lithium battery, refer to the LiFePRO+ website (www.lifeprolithium.com.au)

Protection of Finishes

Paint

The paint coatings on your caravan are no different to that of your car in that they need regular care and maintenance. Rubber seals and applied sealants on caravans can shed polymers and pigments that can stain paint finishes if your caravan isn't washed regularly.

Washing: Only use mild detergents free of ammonia when washing your caravan. Always check the label to ensure the washing solution is nonabrasive, contains no ammonia or caustics.

Polishing: New caravans should only be polished with wax-based polishes that are nonabrasive. When removing scratches from paintwork use a fine finishing compound. Cutting pastes are too abrasive and will expose the base material.

Protection: Carnauba wax is an excellent protection against oxidation. The paint on your caravan should be waxed annually regardless of being kept under cover to protect the surfaces from oxidation.

Acrylic Windows

Windows should be cleaned with a clean, soft, nonabrasive cloth to avoid scratches and soapy water.

****Do not use any cleaners that contain ammonia or solvents. ****

Internal Finishes

Laminates and internal wall surfaces should be cleaned with a damp soft cloth. For stubborn marks use a mild detergent based cleaner.

****Do not use cleaners that contain ammonia or caustics****

Ensuite Finishes

Never use harsh detergents or bleach-based products on the toilet or sealants in the ensuite. Use of such products will damage the seals and sealants.

Mirrors

Do not use solvents or chemicals when cleaning mirrors. Warm water and a soft, clean cloth are the best method. Cleaners and solvents may affect the reflective backing causing what's known as "creep" where the edges of the mirror discolour.

Galvanised Finishes

Your galvanised chassis will need maintenance when used off road. The zinc coating although being tough is still susceptible to damage from stones chips to the coating should be maintained using a zinc rich coating.

High Tensile Bolt and Fittings

Zinc plated bolts and fittings should be coated with a protectant such as a lanolin-based spray. The proprietary item "Lanotec" is recommended.

Stainless Steel

Do not use abrasive cleaners on stainless steel. Purpose made stainless steel cleaners are recommended as are solutions such as 10% white vinegar in water.

Fabrics

Fabrics may not be colourfast and should be washed gently by hand on their own or dry cleaned.

Shade and screen care

- Do not close blinds while window is open. Air pressure can dislodge the blind material from its guide damaging it.
- Always open and close blinds and screens carefully and evenly with two hands ensuring screens and blind material feeds evenly through the guides.

Corrosion Protection

Reasonable steps should be made by the customer to protect the product from corrosion. Seaside areas, areas with high salt contents in soil and roads that are salted during snow conditions can greatly accelerate corrosion. When used in these areas the product should be thoroughly washed after use and unpainted metal surfaces should be coated in a suitable protectant. Lanotec lanolin spray, Inox or similar are recommended.

Roof Maintenance

Sealants

Roof sealants should be inspected every 6 months for condition. If the sealant has perished or adhesion has failed it should be repaired immediately.

Solar Panels

Accumulated dirt and soiling can affect the performance of the solar panels. Panels should be cleaned as necessary to prevent this. Sealants around solar panel mounts should be checked annually to ensure they are in good condition.

Caravan Body Maintenance

Locks and Latches

Locks need regular maintenance to ensure they operate correctly and stay free from corrosion. Diligent use of WD40 or Inox will help in this regard. Both locks and latches need to be checked for adjustment to ensure correct seal compression.

Rubber Seals

Rubber seals are critical in reducing or eliminating dust and water ingress. Damaged or worn seals should be replaced immediately. Seals that are overly compressed will stay flattened and be less effective. (See maintenance schedule)

Sealants

Regular checking of sealants will help avoid any likelihood of water ingress on your caravan. Off road use can cause mechanical damage to seals from vegetation and stones striking the caravan body. 6 monthly inspections should be undertaken, and any necessary repairs made.

Protecting from Mould

Mould is very difficult to clean once a porous surface is affected. There are several ways you can prevent the occurrence of mould on your caravan.

Never leave your camper packed away wet. If you must leave a campsite with wet canvas or a damp interior, be sure to open and dry out your tent thoroughly at the very first opportunity when you get home. Mould can develop in just a couple of days so don't take the risk.

When packing up dry, it is important to check under the mattress that there is no build-up of condensation overnight. Body heat on a mattress can create enough temperature difference with the exterior for moisture to form under it. If left unchecked this can cause mould when your caravan is stored.



Protecting Your Investment

Stone Protection

This style of product will dampen stones and keep them low to avoid damaging your trailer when driving off road. The Stone Stomper will also greatly protect the rear window on wagon style 4WD's and SUVs as rocks may ricochet off the trailer stone guard and strike the rear window or the back of the vehicle.



Mechanical Maintenance

Wheels and Tyres

Tyres should be checked for damage prior to each trip. Inspect for adequate tread depth and any damage particularly to sidewalls. Wheel nuts must be checked with a torque wrench. When picking up your new caravan check the wheel nut torque at 50, 100, 200 and 500km. Check before each trip and daily when travelling for longer periods. Do not over tighten, always use a torque wrench to ensure accuracy.

Brakes

The electric brakes on your caravan are a drum type. Drum brakes require regular adjustment to ensure even pad wear and proper performance. This is an important safety item. The recommended interval for checking adjustment is 5000km.

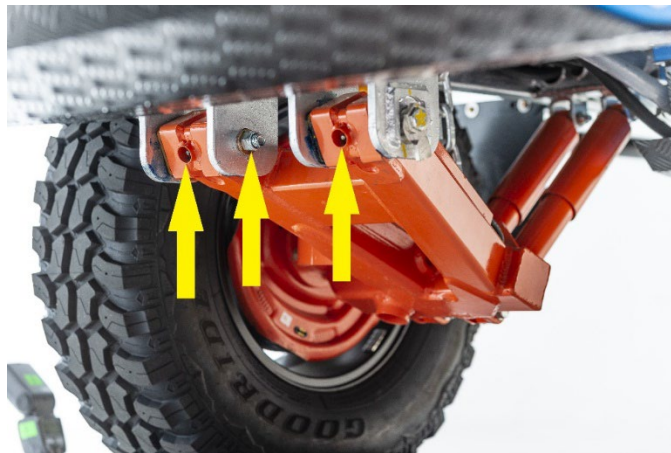
Bearings and Seals

The Timken bearings in your caravan are protected with a rubber seal on the rear of the drum and a friction fit bearing cap on the front. Normal use without encountering water crossings these should be serviced every 5000km.

Suspension

Suspension maintenance should be done as per the schedule contained in this booklet. Regular lubrication and inspection are critical, and the grease points are indicated below. Regular checks of the torque on the trailing arm bolts indicated will prolong correct wheel alignment.

Trailing arm suspension should not be reversed up gutters and obstructions in a heavy matter. Always use a ramp or similar if you are backing over high gutters and obstacles.



Trouble Shooting

12 Volt Electrical

PROBLEM	POSSIBLE CAUSE	REMEDY
No power	Main switch turned off	Turn on main rotary switch
	Tripped main circuit breaker	Reset CB1 circuit breaker located with batteries (See diagram 1)
	Flat Battery	Battery needs reset: Charge battery on mains power and set charger to "Supply Mode" until voltage reaches greater than 5 volts then return to "Lithium" mode. Battery needs reset: If no mains power available jump start using another 12v battery to waken DC to DC controller and start solar panels charging.
Not charging from mains power.	RCD has tripped	Reset RCD protection on wall.
	Charger not turned on	Ensure charger is plugged in and power point is turned on
Not charging from solar	Tripped solar panel circuit breaker/s	Check CB6 & CB7 near batteries, if black pin is protruding from end of breaker push back in to reset. (Diagram 1)
	Tripped DC to DC breaker	Check CB4. (Diagram 1)
Not charging from vehicle	DC to DC trigger wire not connected	See trailer plug wiring in this manual
	Tripped circuit breaker	Check CB5 and CB4 near the batteries and reset if necessary (Diagram 1)
Circuit not working	Tripped circuit breaker	Check and reset the individual circuit breaker on the control panel

240 Volt Electrical

PROBLEM	POSSIBLE CAUSE	REMEDY
No power	Not connected to mains	Connect to mains power
	RCD unit has tripped	Reset the RCD unit switch to up position
	Site power supply tripped	Check RCD on site power
	10-amp converter tripped	Check your 10-amp converter
	Generator RCD tripped	Check and reset RCD on generator

Solar Charging

Symptom	Possible Cause	Remedy
No solar power DC to DC solar light not showing	Tripped circuit breaker	Reset circuit breaker CB6 in Fig. 1 & Fig. 3
	DC to DC overloaded	Reset DC to DC by disconnecting from battery and solar input. See Projector user guide.
No solar power Dc to DC solar light showing	Tripped circuit breaker	Reset circuit breaker CB4 in Fig. 1 & Fig. 3
Weak solar charging (low voltage output)	Weak solar input due to shade	Move to sunnier area
	Weak solar due to dirty panels	Clean panels
	Incorrect setting	Ensure DC to DC is set to correct battery type
Solar charging not meeting demands	Power demands exceeding designed solar output	Add additional solar panels
		Reduce load

NOTES*

Expectations of a 300-watt solar charging system need to be reasonable. Running two fridges without adding additional solar and following best practice with pre-cooling and packing will greatly reduce battery life and the ability of the solar panels to keep up with power needs.

Using inverters will very quickly diminish battery capacity.

Charger Error Codes

Charger Error Codes			
LCD	Power On LED	Fault	Remedy
Err	Slow Flashing	Short circuit or reverse connection of terminals	Check connections aren't touching, or check terminals are correctly connected
F01	Fast flashing	Bulk charging has timed out and stopped after 10 hours	Battery may be faulty Charge rate may be too low Load on battery may be too high
F02	Fast flashing	Soft Start has timed out as battery has not reached 10v after 2 hours	Battery may be faulty, check the battery or try and charge again
F03	Fast flashing	Absorption has been charging for more than 20 hours and is now in float mode	Battery may be faulty or there is a load on the battery
CLd		Battery temp is less than 0°C. Charging at reduced current to protect the battery	Warm the battery up
HtC		Battery temp is greater than 45°C, the charger voltage is reducing to protect the battery	Cool the battery down
OTP	Fast flashing	The charger HAS OVERHEATED (>70°C) and has switched off	Ensure adequate ventilation around charger
HT		The charger has overheated (>55°C) derating the output of the charger	Ensure adequate ventilation around charger
OLC	Fast Flashing	Sensor wires are not connected to the positive/negative terminals	If DC leads have been cut for hard wiring, check the sensor wires are included in both positive and negative connections.
OCP	Fast flashing	The charger has encountered an error	Contact Brown & Watson International
OUP		Over Voltage Protection	Check battery settings in the app and recalibrate when fully charged.

Charging From Tow Vehicle

Charging from Tow Vehicle		
Symptom	Possible Cause	Remedy
No charge Alternator light not showing on DC to DC	Tripped breaker	Reset circuit breaker CB5 in Fig. 1 & Fig. 3
	Tripped breaker in car circuit	Check car circuit breaker/fuse Fig. 6
No charge, alternator, and solar light both on	Trigger wire for DC to DC unit not activated	Connect trigger wire for DC to DC to accessory power from car via trailer plug. Fig. 5
No charge DC to DC alternator lit	Tripped breaker	Reset circuit breaker CB4 Fig. 1 & Fig. 3
	Trigger wire for DC to DC unit not activated for smart alternator	Connect trigger wire for DC to DC to accessory power from car via trailer plug. Fig. 5
Charging from Mains Power		
Symptom	Possible Cause	Remedy
No power to charger	Mains power not connected	Connect mains power
	Charger not plugged in	Plug in mains charger
	Charger not turned on	Turn on charger
	RCD tripped	Reset RCD Fig 1
No charge with charger on	Tripped circuit breaker	Reset circuit breaker CB3 Fig.1 & Fig. 3
	Incorrect charger setting	Set charger to correct battery type and power setting (AGM for standard batteries)
	Battery voltage too low (less than 6 volts)	Change charger setting to "Supply" until battery voltage reads minimum of 6 volts then choose setting "recondition" if this function is available. Choose "AGM" if not available.
If error code appears on the charger display refer to the Projecta user manual.		

Resetting Breakers

There are primarily 3 types of breakers in MDC caravans and campers. The most obvious are the push to reset breakers on the control panel. These you simply push and if it resets you will hear a click.

High Load Breakers

These are for higher current loads such as CB1 and CB2 fig 1. To reset the small lever protruding from the side needs to be pushed back into the breaker body.



Fig. 2

Breaker in normal state

Tripped Breaker

Medium Load Breakers

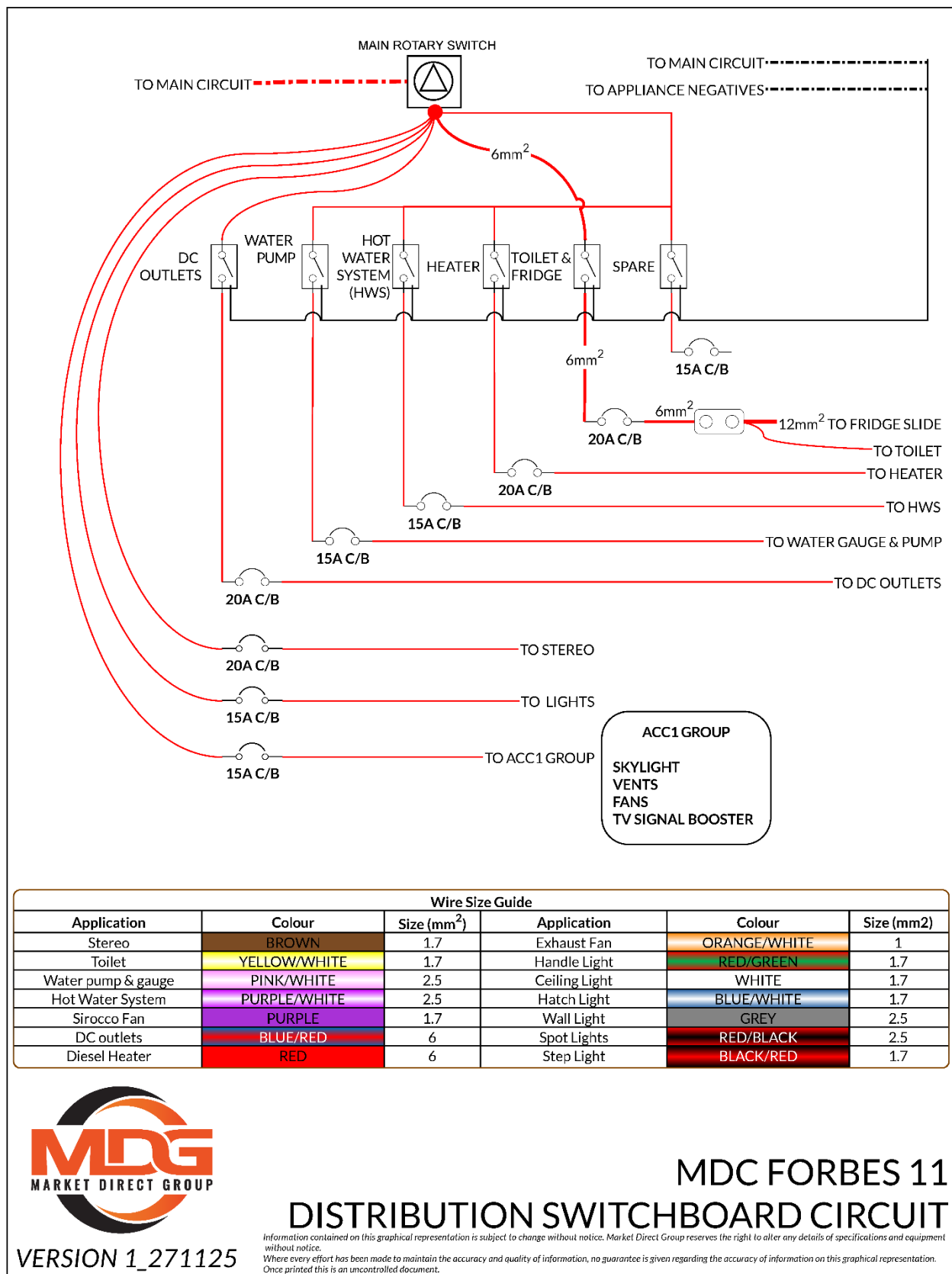
When tripped, the small black pin on the end of the breaker will protrude. To reset, push the black pin back into the body of the breaker.

Fig. 3



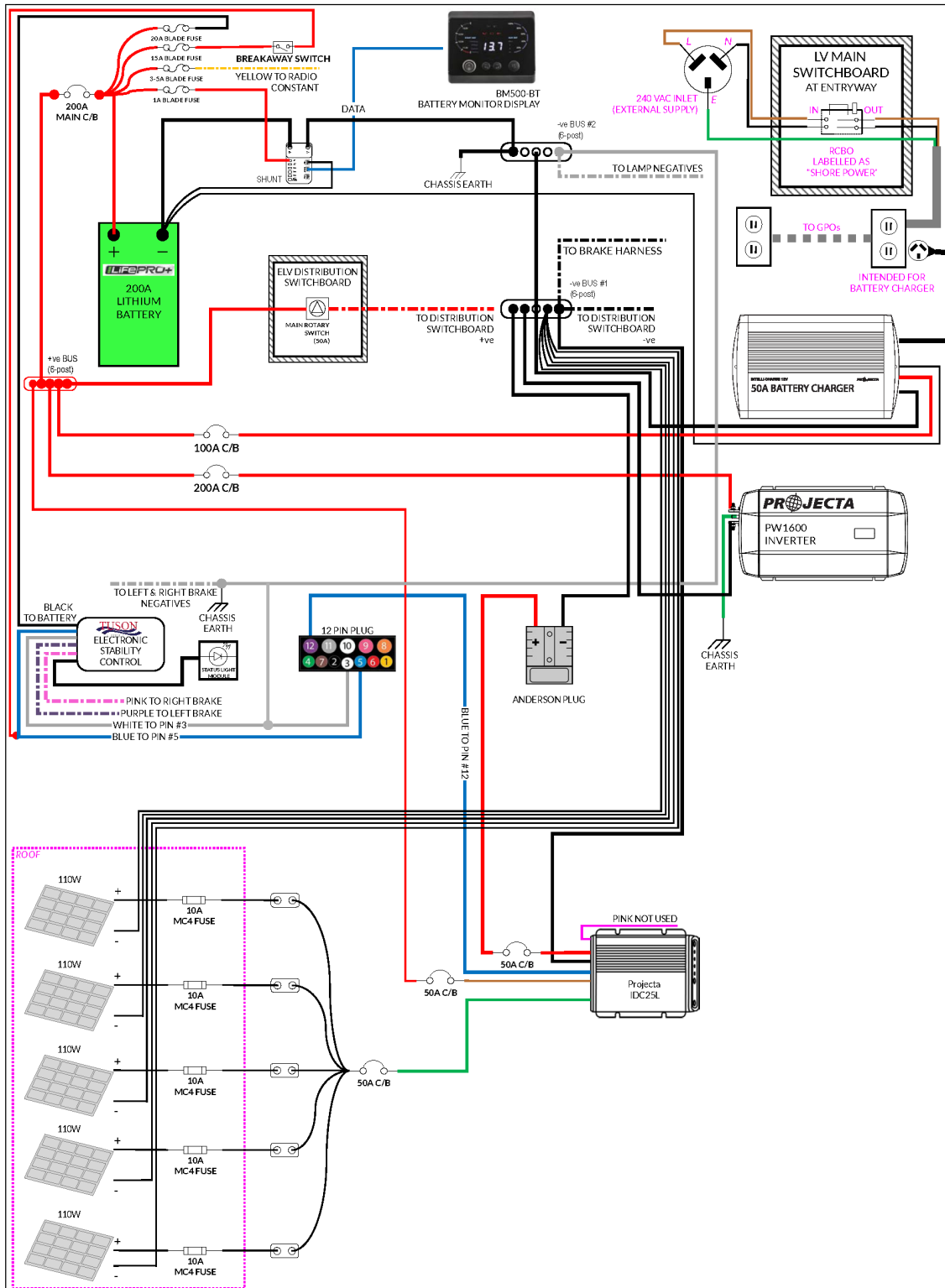
Electrical Diagrams

Distribution Circuit



VERSION 1_271125

Main Circuit



VERSION 1_271125

MDC FORBES 11
AC + DC SYSTEM MAIN CIRCUIT

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Water

Problem	Possible Cause	Remedy
Pump not working (no noise)	No power from control panel	Check circuit breaker
	Flat Battery	Charge battery
	Faulty pressure switch	Replace pump, Contact dealer for replacement
	Bad electrical connection	Check connections with multimeter or test light
Pump working but no water flow	Airlock in water lines	Turn on tap and hold finger over nozzle for 5 seconds and release. Repeat several times. If this fails, fill water tank and use mains pressure to pressurize tank
	Water tank is empty	Fill water tank
	Kinked hose	Check hoses ensuring none are fouled
	Damaged / worn pump diaphragm	Repair or replace pump

Gas

Problem	Possible Cause	Remedy
Cooker not igniting	Gas bottle empty	Fill gas bottle
	Gas bottle not turned on	Turn on valve on gas bottle
	Gas hose on cooker not connected	Check bayonet is securely connected into receiver
	Regulator blocked	Check regulator is not blocked with dirt, wasp nests etc
	Kinked hose	Check hose is not twisted and kinked
Remember that first use after connecting gas will take a little while for the gas to purge the line to the cooktop. Hold the control knob down for up to 4 minutes		

Brakes

Problem	Possible Cause	Remedy
No Brakes	Open Circuits	Find and correct
	Severe under adjustments	Adjust brakes
	Faulty controller	Test and correct/replace
	Short circuits	Find and correct
Weak Brakes	Great or oil on linings or magnets	Clean or replace
	Corroded connection	Clean or replace connectors
	Worn lining or magnets	Replace
	Scored or grooved brake drums	Machine or replace
	Poor Synchronisation	Correct Controller setting
	Poor Brake adjustment	Adjust Brakes
	Glazed brake Linings	Re-burnish or replace linings
	Overloaded trailer	Correct loading. Check at weighbridge
Brakes Locking	Poor Synchronising with controller	Adjust controller
	Poor Adjustment	Adjust brakes as per instructions
	Faulty controller	Test and rectify or replace
	Loose, bent, or broken components	Inspect and replace components
	Out-of-round brake drums	Machine or replace
	Insufficient wheel load (dual Axle)	Correct trailer level to even load
Intermittent brakes	Faulty controller	Test and Correct
	Broken Wires	Repair or replace
	Loose connections	Find and repair
	Faulty ground	Find and repair

Plumbing

Water Heater Trouble Shooting

Gas Operation

Symptom	Cause	Remedy
When switching on, the heater does not operate.	No 12 V DC supply voltage.	Check the power supply (operation voltage min. 10.5 V). Check the Truma UltraRapid fuse (refer to maintenance "Fuses").
When switching on, the heater does not operate, and the red lamp lights up after approx. 30 secs.	- Cowl cover fitted. - Air in the gas supply. - No gas supply. - Incorrect gas pressure.	Remove cowl cover and / or clear any obstruction. Check gas valves and gas cylinder. To unlock (and purge air), switch off the appliance, wait 5 minutes, and switch on again.
Heater operates for a prolonged time and then the red lamp lights up.	Excess temperature thermostat has responded.	Check water level, refill if required (close drain valve). To unlock, switch off the appliance, wait 5 minutes, and switch on again.

Water Supply

Symptom	Cause	Remedy
Water drips from the P&T safety valve.	- Water pressure to high. - Lime or dirt under the P&T safety valve seat.	Check water pressure (max. 400 kPa), use a pressure reducer when connected to central water supply. Allow the appliance to cool and then slowly raise the test lever (Fig. 2a - 4a) to flush the water system and attempt to force dirt or foreign matter out of the P&T safety valve seat. Replace P&T safety valve. This must be performed only by a certified service technician.
When opening the cold-water tap, hot water comes out.	- Hot water flows back through the cold-water supply.	-Fit a non-return valve in the cold-water supply (refer to installation instructions "Water connection"). -Non return valve faulty

Water Pump

Problem	Possible Cause	Remedy
Not running (no sound)	• Power off at control panel. • Switch beside kitchen turned off	• Switch on power. • Turn on switch at kitchen
Air and water spitting from tap	• Water tank empty • Split hose	• Fill tanks. • Repair hose
Running but poor pressure	• Gauze filter at pump blocked	• Clear filter of debris

Driving Off Road

Towing your caravan off road adds many dimensions to the driver's responsibilities and factors to be considered. When travelling remote always carry enough spare parts and supplies to cater for a "worst case scenario."

Always perform preventative maintenance and daily checks. Minimum trailer spares would consist of:

- Wheel Bearings
- Seals
- Wheel studs and nuts

These are available from Market Direct Campers

Wildlife

Australian outback roads are notorious for wandering stock and native wildlife which can be a serious danger to motorists. Due care must always be taken, and the possibility of an animal strike considered in regard to speed and time of day you are driving. Most animals in the outback are more active at night which greatly increases the likelihood of an animal strike between dusk and dawn. Towing a camper or caravan increases braking distance and has inherent risk associated with aggressive and defensive manoeuvring to avoid a collision.

Corrugations & rough road

Corrugations are arguably the most taxing and damaging road conditions to vehicles. Constant vibration can loosen vehicle components and as a stress dynamic to vehicles and drivers well in excess of normal road driving. In these conditions take regular breaks to reduce driver fatigue and fatigue to vehicles. Shock absorbers can become extremely hot on corrugated roads which can cause damage to seals resulting in shock absorber fade (reduction in damping effect) and in extreme cases failure of the seal completely. On rough and corrugated roads, it's important to adjust tyre pressures on your car and trailer to soften the effect and extend the contact patch of the tyre on the road.

Bulldust

This phenomenon is common on outback roads. Fine dust can settle in large holes obscuring them from unsuspecting drivers. It is important to reduce speed in these conditions and drive carefully to avoid the possibility of damage or an accident.

Sand

When driving on sand it is important to lower tyre pressures on both the vehicle and trailer. By lowering the pressure you will effectively create a larger footprint for the tyre which will reduce how far it sinks in sand. Sand shape and compaction will vary around the country so necessary reduction in tyre pressure will vary. Always keep in mind the lower the pressure the lower the speed you should travel. When lowering pressures to 20psi or less you also increase the chance of rolling the bead of the tyre off the rim so sharp turns should be avoided. When driving these conditions, it is strongly advised you carry a tyre pressure gauge/deflator and a portable compressor to reinflate when back on the highway.

Causeways

Outback roads often have causeways to control water runoff and prevent erosion of the road. When travelling at speed these causeways can be a danger to motorists and vehicles so due care should be taken to reduce speed when approaching them. In very remote areas these often won't have signposts so special care should be taken in these areas.

Creek and River Crossings

These crossings can be extremely dangerous even in low water levels and should never be attempted in times of even mild flooding. Towing a camper or caravan greatly elevates the risk in this situation and should never be attempted unless you are completely assured it is safe to do so. If there is any doubt about access in flood prone areas, you should contact the local authorities to find out conditions and dangers before you proceed.

Protecting the environment

Remote areas and National Parks are sensitive areas, and all precautions should be taken not to damage tracks, interfere with flora and fauna and not to contaminate the area. In sensitive areas it is advisable to use grey water tanks and contained toilets. If your camper or caravan isn't fitted with such, both toilets and grey water tanks are available as portable self-contained units. Always store food, food scraps and rubbish in secure containers, native animals can be quite resourceful in scavenging for scraps. Dingos have been known to open locked eskies to get to food so don't chance it, always secure these items when travelling.

Trip Planning

* When planning remote trips always consider where you will resupply for fuel, food and water. Some remote fuel stations may run out of fuel during busy periods or times when large fuel trucks are unable to access the area due to road conditions and closures or simply close outside of the season. Always check conditions and availability of fuel before setting out to remote areas.

Shire Councils

There are many resources available for planning your trip away. Every state has a tourism website as so regional councils which will give you extensive information on camping sites, things to do and see, events happening in the area and contact information for booking sites or activities.

National Parks

Each state's national parks organisation has a website to assist in finding campsites and provide specific information about each park's unique qualities. As a planning resource these are extremely good. All contact information will be available.

Wikicamps

This smartphone app is an excellent resource for finding all kinds of camping across Australia. If you are looking for free camping you won't find a better resource. There is an app add on that even assists in finding fuel stops with user updates on fuel prices.

Facebook

These days there are numerous Facebook groups dedicated to travelling with campers and caravans and also groups dedicated to travel in specific areas. The area specific groups have many locals as members and are a great way to find out local track closures, conditions and research the area in general.

Recommended Recovery Products

Recovery points

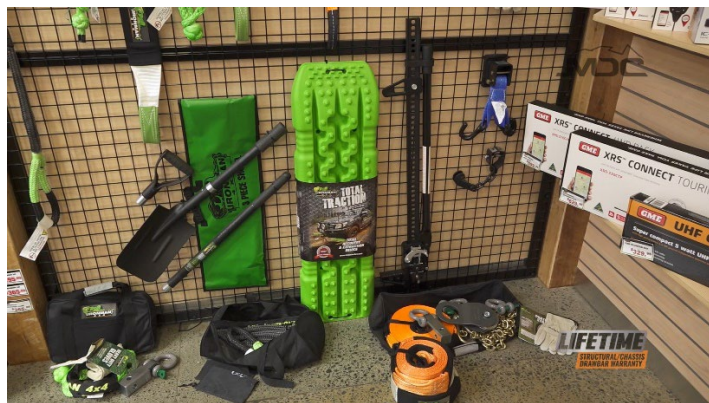
Do not attempt to recover via points that aren't designated recovery point. Your vehicle must be fitted with rated points that exceed the safe load of any recovery straps or tow straps being used.

Hardware

Shackles are an integral part of any recovery kit. Soft shackles pictured below add a great deal of safety to any recovery situation as they are lightweight and a soft material reducing dangers of impact in the event of equipment failure.



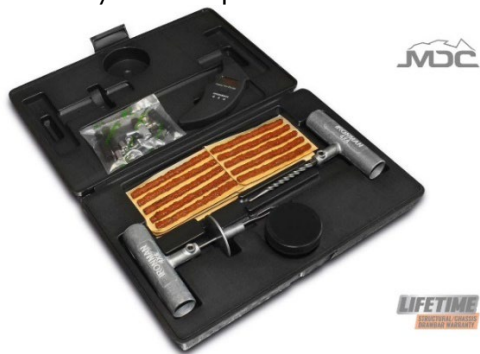
Traction boards, shovel and high lift jack are extremely handy to have for recoveries.



Snatch straps should be rated for the entire load you are recovering.



Tyre repair kits are an excellent investment when travelling remote in the event you are unlucky enough to damage more tyres than you have spare.



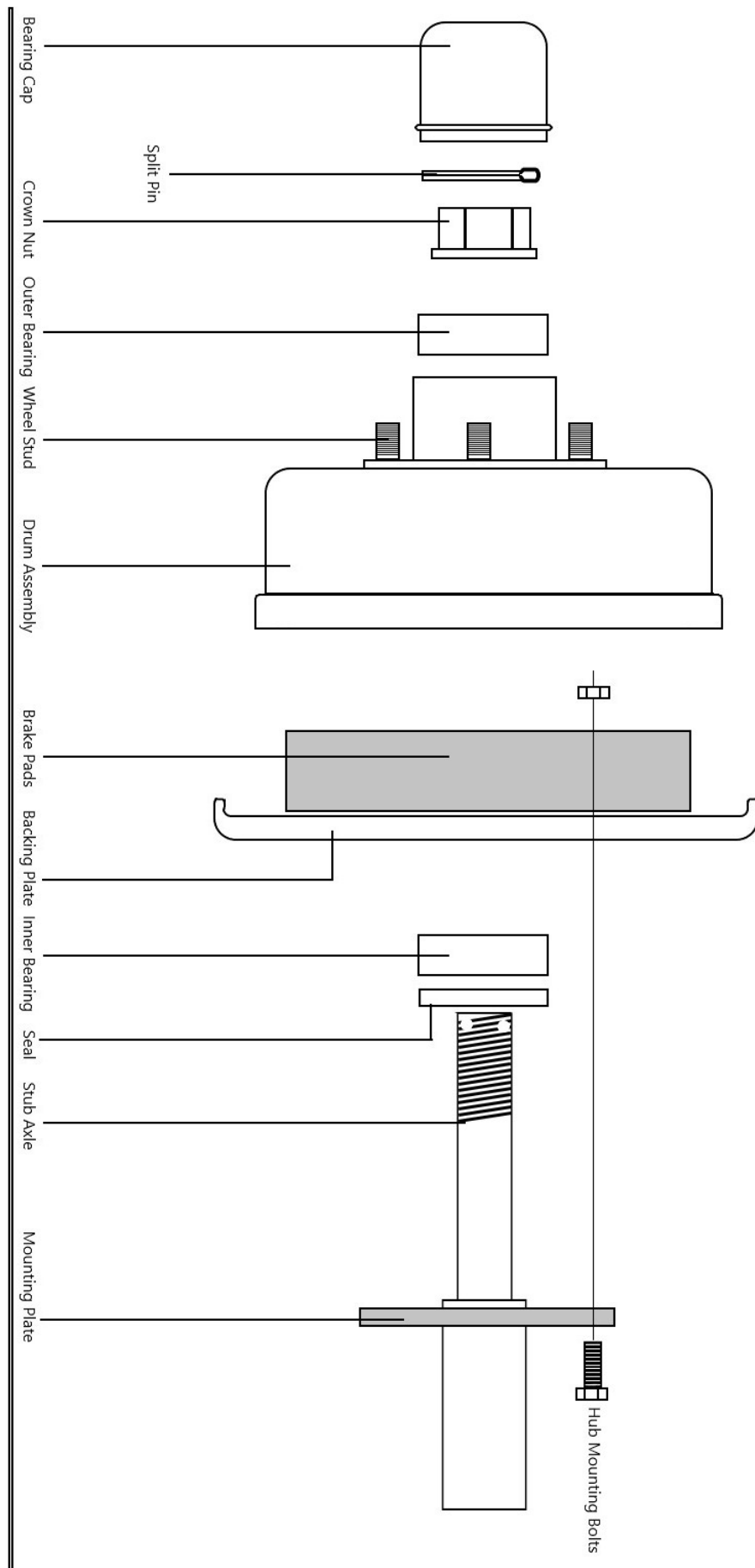
A compressor is a must have to reinflate your tyres after deflating for rough and corrugated roads.



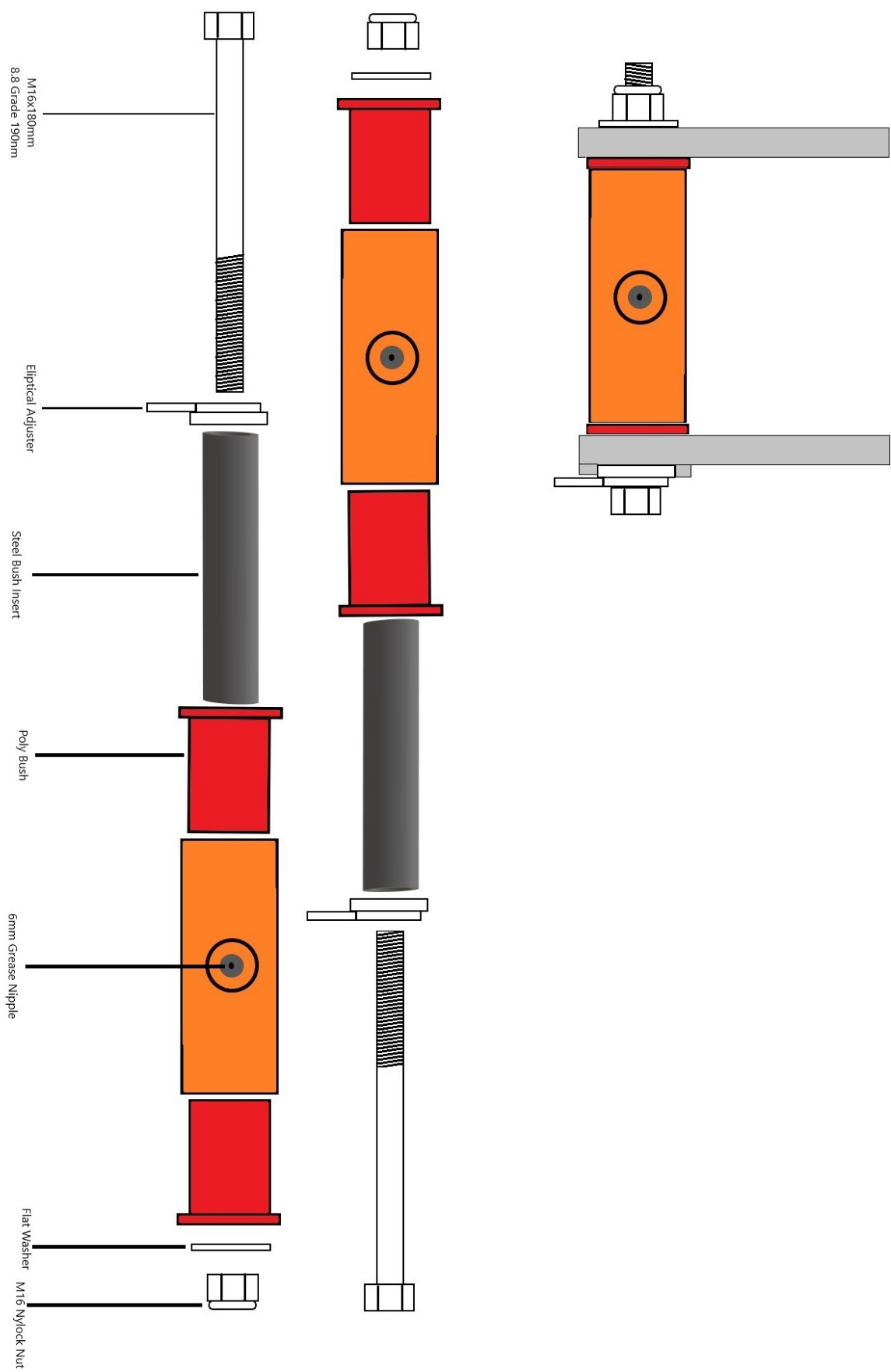
A tyre gauge is a must have to deflate your tyres to the correct pressure when travelling off road. Uneven inflation of tyres on the same axle can cause dangerous handling in the car or trailer.



Hub Assembly



Trailing Arm Bushes



Warranty Statement

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

These terms and conditions apply to MY25 plated (2025 Build) models onward sold in Australia only. These terms and conditions do not impact a customer's rights under Australian Consumer Law. Warranty terms and conditions applicable to pre 2025 models remain unchanged. To obtain a copy of the previous published terms and conditions please contact Market Direct Group Pty Ltd on 1300 494494 option 3.

VALIDITY OF CLAIMS

- Claims under this Warranty may only be made by the original purchaser of the item in question. This Warranty commences on the original date of purchase and expires 24 months after that date, except with regard to the structural integrity of the drawbar and chassis, for which this Warranty shall continue for the entire operational life of the Camper or Caravan.
- This Warranty only applies to items sold as "new" and does not extend to any items sold via auction, or labelled "factory seconds", "ex-demonstration" or "damaged", unless specifically stated otherwise by us in writing. (Please see further on this page for more information).
- This Warranty is an agreement between us and you personally and is not transferable under any circumstances. If an item is sold to a third party by the original purchaser, then this Warranty is terminated immediately for that item, and the original purchaser shall make no claims or be eligible for any claims on behalf of the new owner.
- This Warranty does not apply to new products purchased from us and then used in hire schemes or as rentals. Hiring or renting your products to third parties may negatively affect your ability to make claims for those products under any other warranties as may apply.
- This Warranty does not cover damage due to unauthorised modifications, misuse, abuse, incorrect assembly, improper or irregular maintenance, or accident or collision. Without limiting the generality of this clause, some examples of circumstances that may cause damage not covered by warranty include:
 - Failing to have your caravan or camper serviced at the frequency indicated in the manual for that product, or to perform regular basic maintenance as indicated in the manual;
 - Taking your caravan or camper through any environment or over any surface which the manual for that product indicates the product was not designed for. As an example, if you partially submerge the caravan, you will not be able to claim for resulting water damage;
 - The expected operational lifespan of your caravan assumes use as a holiday home, not as a primary residence. If you use your caravan as a primary residence, you will not be able to claim for the increased rate of wear and tear; and
 - Exceeding the load limits for your caravan or camper will cause strain on parts of the vehicle. The advertised load limits are for a load distributed roughly evenly across the caravan, and you may overload the caravan at lesser weights if the weight is disproportionately placed in one part of the caravan. You may not be able to claim for any failure or resulting damage caused or contributed to by such overloading.
- If we approve a warranty claim, then the work performed to remedy that claim must be performed either by us or by a person whom we approve in writing to do that work. If you have rectification works performed by an unapproved third party, whether under an approved warranty claim or otherwise, then we may not be responsible for the costs of those works, and this Warranty shall not cover those works or any damage or loss of value arising from those works.
- Any affiliates, representatives, associates, agents, suppliers, resellers or similar of ours have no authority to approve or deny warranty claims on behalf of us.
- We shall not be liable, (in part or whole) for any warranties, either express or implied, made by agents or resellers unless we give an express written agreement to be bound by such a warranty, and such liability shall be strictly limited to the extent of that written agreement. Such unauthorised claims shall be the responsibility of the agent or reseller only.

REMEDIES AND LIMITATION OF LIABILITY

- We will not be liable under this warranty for, except as otherwise required by law, your remedy, if we accept a warranty claim it will be limited to our choice between repair, works with our chosen repairer,



replacement goods, or a refund, as we reasonably consider appropriate to rectify the basis of the claim, as these are not defects.

- If we accept a warranty claim arising from a major failure, or for which we cannot provide a remedy in a reasonable time, then you may be entitled to a refund for that product. You will not be entitled to a refund or a replacement if the product has become damaged while within your care unless that damage is limited to fair wear and tear and damage caused by a defect and not contributed to by your actions or neglect.
- You agree that, to the greatest extent permitted by law, we shall not be liable for consequential or special damages of any kind, including aggravated, punitive, or exemplary damages. Without limiting the generality of this clause, you agree that our liability shall be limited in all cases to the amount you paid for the products underlying a claim.

ITEMS NOT COVERED UNDER THIS WARRANTY

- Dust ingress due to limitations of proprietary third-party products and mandatory venting, required under Australian Standards and compliance under State and Federal statutes (and hence not being defects).
- This Warranty does not cover damage of the following kinds or to the following products or parts of products:
 - Rust
 - Wheels and Tyres
 - Paint
 - Travel Covers and Straps
 - General consumables (e.g. bearings, light bulbs etc)
 - Zips and mesh or screens.

While these items are not covered under this Warranty, they may be covered by other warranties you have in respect of the product.

This Warranty expressly applies to Tents for the general 12 Month term, including our canvas components, poles and fittings. The Warranty for tents is subject to the same limitations as other parts of the caravan.

FACTORY SECONDS, EX-DEMONSTRATION AND DAMAGED GOODS

- From time to time, we may offer for sale items marked as "factory seconds", "ex-demonstration", or "damaged". This Warranty does not apply to any goods sold under these markings.
- If other warranties apply to goods sold while marked as "factory seconds", "ex-demonstration", or "damaged", then those warranties will apply the standard for a product with those markings, which will be a lower standard than that for a product sold as new. If you purchase a product with these markings, you acknowledge that the reduced price for the product reflects that some claims will not be available which would have been for a product marked as new.
- Any items sold as "factory seconds", "ex-demonstration" or "damaged" items are sold on an "as is" basis. Due to the nature of such items, i.e. being "ex-demonstration", "factory seconds" or "damaged", it is reasonable to expect that some imperfections or flaws may exist even where it is not initially apparent. While we will notify you of any defects or damage to such goods of which we are aware, you purchase the goods on notice that we may not be aware of all such defects and damage, and that the price you pay for the goods includes a discount to allow for the risk of you discovering further defects or damage.
- We do not make any representations as to the quality or fitness of any goods sold on these bases, and it is a term of the contract for the purchase of any such goods that the customer has made their own enquiries and inspections and relies exclusively upon those enquiries and inspections in deciding to make that purchase.

GOODS BOUGHT AT AUCTION

From time to time, we may, at our discretion, offer items for auction, either independently or via a third party. Whilst every effort will be made to provide all relevant information regarding the item on auction, as per Australian law, goods bought at auction are not covered by this Warranty and are not covered by the majority of consumer guarantees under the Australian Consumer Law. You may not have any right to make a warranty claim for products purchased at auction.

LODGING A CLAIM

If you purchased a caravan or camper which you believe is covered by warranty, and you become aware of something you believe to be a defect or damage resulting from a defect, then you should follow the process set out below to obtain the fastest response and greatest chance of having your claim approved:

- As soon as reasonably possible after becoming aware of what you believe to be a defect or damage caused by a defect, lodge a warranty claim through our website using our online Warranty Claim Form.
- Once we receive a warranty claim form, we will respond in one of three ways. We will either accept the claim, reject the claim, or ask for further information to allow us to decide whether to accept or reject the claim. If a claim consists of multiple parts, we may give different responses to different parts.
 - If we accept a claim, we will notify you of the acceptance, and discuss with you how to remedy the claim. While we endeavour to accommodate your preferences in this process, we will generally provide our choice between repair works with our chosen repairer to the standard we deem reasonably remedies the accepted claim, replacement goods, or a refund, unless we accept that the claim is for a major failure.
 - If we reject a claim, we will notify you of the rejection and explain the reasons for the rejection. You may provide us with further information or explanations to appeal the rejection, but providing us with further material may not change the result; or
 - If we have insufficient information to either accept or reject a claim, we will ask you to provide us with more information to allow us to make that decision. We may require any kind of information which we consider to be relevant to the decision, which may involve questions about the use of the products, photographs of the products, or about the maintenance history of the products. If you fail, neglect, or refuse to provide us with information which we reasonably require to process your claim, we may reject the claim on the basis of that lack of information.
- If you act or fail to act in a way which either prevents us from determining the true cause and extent of the subject of a claim, or which substantially constrains or limits our capacity to provide a remedy, this will adversely affect the handling of your claim. As examples of such conduct:
 - If you arrange for repair works before we can assess a product, we may not be able to determine whether the repair works were covered by a warranty, or may not be able to provide the appropriate remedy after those works.
 - If you do not notify us of a claimable matter without delay, we will not be liable for damage caused by the delay, and we may not be able to determine the initial cause of the damage once time has aggravated it; and
 - If you refuse to allow us to access the product for the purposes of assessing a claim, we may reject the claim on the basis that we have insufficient information.

CONTACT

If you have any further questions relating to warranties or are unsure about any aspect of this section, then please contact us. Phone: 1300 494 494 (Option 3).

Travel Record

Your caravan service record booklet and logbook will help you keep track of kilometres travels and service records.

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Maintenance

Maintenance is essential to keep your caravan in a safe and usable condition. Caravans are no different to any other motor vehicle and require servicing at regular intervals which may vary according to use and the environment in which it is used. The service schedule outlines the service intervals for safe travelling and your owner obligations under our warranty policy. Servicing should always be carried out by a competent person with relevant experience.

WARNING:

- ⚠ Never work beneath the caravan while suspended on a jack. Always use “Jack Stands” with an adequate SWL.
- ⚠ Always use dedicated jacking points
- ⚠ 240volt appliances and wiring must only be serviced and repaired by a qualified tradesperson.
- ⚠ Gas plumbing must only be serviced and repaired by a qualified gas fitter

Maintenance Schedule & Service Record

500KM FIRST SERVICE		CHECKED
Hitch	• Check hitch bolts to 90Nm. • Lubricate with high temp bearing grease	
Handbrake	• Inspect and adjust handbrake	
Brakes & Bearings	• Inspect and adjust brakes. Check bearings are well greased and crown nut is correctly tightened.	
Wheel nuts	• Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims) (200Nm 14mm studs steel rims)	
Tyres	• Inspect for abnormal wear, damage, and pressure	
General fixings	• Ensure no loose fittings	
Seals & Latches	• Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	• Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight.	
Service Centre:	Notes: ----- ----- ----- ----- ----- -----	

Every 6 MONTHS / 5,000KM SERVICE		CHECKED
Hitch	Check hitch bolts to 90Nm	
Handbrake	Check cable and adjust if necessary	
Hand winch	Check brake function and webbing	
Suspension	- Lubricate and check bushes for excess movement. - Torque bolts to 190Nm	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Remove, clean and re-lubricate. Inspect for wear and replace if necessary	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims), (200Nm 14mm studs steel rims)	
Tyres	Inspect for abnormal wear, damage, and pressure	
Lights	Check all lights are functioning	
Battery	Check terminals and voltage at full charge	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	Check all structural fixing are secure.	
Seals & Latches	Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	- Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight.	
Service Centre:	Notes: 	

12 MONTHS / 10,000KM SERVICE		CHECKED
Chassis and Suspension		
Hitch	Inspect for damage and lubricate. Check bolt Torque to 90Nm	
Jockey Wheel	Inspect for condition and operation	
Breakaway	- Check for correct operation. - Inspect lanyard and clip	
Drawbar	Inspect wiring grommets and general condition	
Suspension	- Torque bolts to 190Nm - Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight. - Inspect shock absorber for condition. - Inspect shock absorber bushes	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims) (200Nm 14mm studs steel rims)	
Tyres	- Inspect for abnormal wear, damage, and pressure. - Check manufacturing date less than 5 years. - Check sidewalls for perishing and damage.	
12 volt electrical		
Lights	- Check all trailer lights are functioning. - Check plug pins have gap. - Check for corrosion	
Battery	- Check terminals and voltage at full charge. - Check batteries are secure in cradles	
Charging	- Check battery charger settings are correct. - Check DC to DC charger settings are correct	
Solar Panels	- Check panels are free of damage. - Inspect sealants on cable penetrations and junction boxes	
Cables	- Inspect cables under body for damage to conduits. - Inspect cable glands and sealants on penetrations through floor	
240 volt Electrical		
RCD Unit	Check operation of RCD via test button	
Mains Input	Inspect mains input plug and cover are free of damage	
Earthing	Carry out resistance check	
Caravan Body		
Hatches & Doors	Check and lubricate locks	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	- Inspect joint sealants inside and out. - Ensure joints checked for damage and adhesion. - Inspect for soft spots on floor	
General fixings	Check all structural fixing are secure.	
Ventilation	Inspect for obstruction and vents operating correctly	
Fire Extinguisher	Inspect extinguisher is charged and within service date	

Smoke Alarm	• Test and inspect. • Replace battery	
Window Blinds	• Inspect and adjust tension where necessary	
Damp Check	• Inspect caravan for any dampness.	
Plumbing		
Hot Water System	• De-scale hot water service	
Water Tanks	• Treat tanks and entire system with bacteria killing tank cleaner and flush.	
Grey Water Tank	• Treat with tank cleaner and flush.	
Drain Fittings	• Check all metal drain fittings for corrosion	
Water System	• Inspect for leaks. Turn on pump and ensure it doesn't start due to loss of pressure.	
Service Centre:	Notes:	

18 MONTHS / 15,000KM SERVICE		CHECKED
Hitch	Check hitch bolts to 90Nm	
Handbrake	Check cable and adjust if necessary	
Hand winch	Check brake function and webbing	
Suspension	- Lubricate and check bushes for excess movement. - Torque bolts to 190Nm	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Remove, clean and re-lubricate. Inspect for wear and replace if necessary	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims), (200Nm 14mm studs steel rims)	
Tyres	Inspect for abnormal wear, damage, and pressure	
Lights	Check all lights are functioning	
Battery	Check terminals and voltage at full charge	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	Check all structural fixing are secure.	
Seals & Latches	Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	- Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight.	
Service Centre:	Notes: 	

24 MONTHS / 20,000KM SERVICE		CHECKED
Chassis and Suspension		
Hitch	Inspect for damage and lubricate. Check bolt Torque to 90Nm	
Jockey Wheel	Inspect for condition and operation	
Breakaway	- Check for correct operation. - Inspect lanyard and clip	
Drawbar	Inspect wiring grommets and general condition	
Suspension	- Torque bolts to 190Nm - Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight. - Inspect shock absorber for condition. - Inspect shock absorber bushes	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims) (200Nm 14mm studs steel rims)	
Tyres	- Inspect for abnormal wear, damage, and pressure. - Check manufacturing date less than 5 years. - Check sidewalls for perishing and damage	
12 volt electrical		
Lights	- Check all trailer lights are functioning. - Check plug pins have gap. - Check for corrosion	
Battery	- Check terminals and voltage at full charge. - Check batteries are secure in cradles	
Charging	- Check battery charger settings are correct. - Check DC to DC charger settings are correct	
Solar Panels	- Check panels are free of damage. - Inspect sealants on cable penetrations and junction boxes	
Cables	- Inspect cables under body for damage to conduits. - Inspect cable glands and sealants on penetrations through floor	
240 volt Electrical		
RCD Unit	Check operation of RCD via test button	
Mains Input	Inspect mains input plug and cover are free of damage	
Earthing	Carry out resistance check	
Caravan Body		
Hatches & Doors	Check and lubricate locks	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	- Inspect joint sealants inside and out - Ensure joints checked for damage and adhesion - Inspect for soft spots on floor	
General fixings	Check all structural fixing are secure.	
Ventilation	Inspect for obstruction and vents operating correctly	
Fire Extinguisher	Inspect extinguisher is charged and within service date	

Smoke Alarm	• Test and inspect. • Replace battery	
Window Blinds	• Inspect and adjust tension where necessary	
Damp Check	• Inspect caravan for any dampness.	
Plumbing		
Hot Water System	• De-scale hot water service	
Water Tanks	• Treat tanks and entire system with bacteria killing tank cleaner and flush.	
Grey Water Tank	• Treat with tank cleaner and flush.	
Drain Fittings	• Check all metal drain fittings for corrosion	
Water System	• Inspect for leaks. Turn on pump and ensure it doesn't start due to loss of pressure.	
Service Centre:	Notes: 	

30 MONTHS / 25,000KM SERVICE		CHECKED
Hitch	Check hitch bolts to 90Nm	
Handbrake	Check cable and adjust if necessary	
Hand winch	Check brake function and webbing	
Suspension	- Lubricate and check bushes for excess movement. - Torque bolts to 190Nm	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Remove, clean and re-lubricate. Inspect for wear and replace if necessary	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims), (200Nm 14mm studs steel rims)	
Tyres	Inspect for abnormal wear, damage, and pressure	
Lights	Check all lights are functioning	
Battery	Check terminals and voltage at full charge	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	Check all structural fixing are secure.	
Seals & Latches	Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	- Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight.	
Service Centre:	Notes: 	

36 MONTHS / 30,000KM SERVICE		CHECKED
Chassis and Suspension		
Hitch	Inspect for damage and lubricate. Check bolt Torque to 90Nm	
Jockey Wheel	Inspect for condition and operation	
Breakaway	- Check for correct operation. - Inspect lanyard and clip	
Drawbar	Inspect wiring grommets and general condition	
Suspension	- Torque bolts to 190Nm - Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight. - Inspect shock absorber for condition. - Inspect shock absorber bushes	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims) (200Nm 14mm studs steel rims)	
Tyres	- Inspect for abnormal wear, damage, and pressure. - Check manufacturing date less than 5 years. - Check sidewalls for perishing and damage	
12 volt electrical		
Lights	- Check all trailer lights are functioning. - Check plug pins have gap. - Check for corrosion	
Battery	- Check terminals and voltage at full charge. - Check batteries are secure in cradles	
Charging	- Check battery charger settings are correct. - Check DC to DC charger settings are correct	
Solar Panels	- Check panels are free of damage. - Inspect sealants on cable penetrations and junction boxes	
Cables	- Inspect cables under body for damage to conduits. - Inspect cable glands and sealants on penetrations through floor	
240 volt Electrical		
RCD Unit	Check operation of RCD via test button	
Mains Input	Inspect mains input plug and cover are free of damage	
Earthing	Carry out resistance check	
Caravan Body		
Hatches & Doors	Check and lubricate locks	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	- Inspect joint sealants inside and out. - Ensuite joints checked for damage and adhesion. - Inspect for soft spots on floor	
General fixings	Check all structural fixing are secure.	
Ventilation	Inspect for obstruction and vents operating correctly	
Fire Extinguisher	Inspect extinguisher is charged and within service date	

Smoke Alarm	• Test and inspect. • Replace battery	
Window Blinds	• Inspect and adjust tension where necessary	
Damp Check	• Inspect caravan for any dampness.	
Plumbing		
Hot Water System	• De-scale hot water service	
Water Tanks	• Treat tanks and entire system with bacteria killing tank cleaner and flush.	
Grey Water Tank	• Treat with tank cleaner and flush.	
Drain Fittings	• Check all metal drain fittings for corrosion	
Water System	• Inspect for leaks. Turn on pump and ensure it doesn't start due to loss of pressure.	
Service Centre:	Notes:	

42 MONTHS / 35,000KM SERVICE		CHECKED
Hitch	Check hitch bolts to 90Nm	
Handbrake	Check cable and adjust if necessary	
Hand winch	Check brake function and webbing	
Suspension	- Lubricate and check bushes for excess movement. - Torque bolts to 190Nm	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Remove, clean and re-lubricate. Inspect for wear and replace if necessary	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims), (200Nm 14mm studs steel rims)	
Tyres	Inspect for abnormal wear, damage, and pressure	
Lights	Check all lights are functioning	
Battery	Check terminals and voltage at full charge	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	Check all structural fixing are secure.	
Seals & Latches	Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	- Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight.	
Service Centre:	Notes: 	

48 MONTHS / 40,000KM SERVICE		CHECKED
Chassis and Suspension		
Hitch	Inspect for damage and lubricate. Check bolt Torque to 90Nm	
Jockey Wheel	Inspect for condition and operation	
Breakaway	- Check for correct operation. - Inspect lanyard and clip	
Drawbar	Inspect wiring grommets and general condition	
Suspension	- Torque bolts to 190Nm - Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight. - Inspect shock absorber for condition. - Inspect shock absorber bushes	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims) (200Nm 14mm studs steel rims)	
Tyres	- Inspect for abnormal wear, damage, and pressure. - Check manufacturing date less than 5 years. - Check sidewalls for perishing and damage	
12 volt electrical		
Lights	- Check all trailer lights are functioning. - Check plug pins have gap. - Check for corrosion	
Battery	- Check terminals and voltage at full charge. - Check batteries are secure in cradles	
Charging	- Check battery charger settings are correct. - Check DC to DC charger settings are correct	
Solar Panels	- Check panels are free of damage. - Inspect sealants on cable penetrations and junction boxes	
Cables	- Inspect cables under body for damage to conduits. - Inspect cable glands and sealants on penetrations through floor	
240 volt Electrical		
RCD Unit	Check operation of RCD via test button	
Mains Input	Inspect mains input plug and cover are free of damage	
Earthing	Carry out resistance check	
Caravan Body		
Hatches & Doors	Check and lubricate locks	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	- Inspect joint sealants inside and out. - Ensure joints checked for damage and adhesion. - Inspect for soft spots on floor	
General fixings	Check all structural fixing are secure.	
Ventilation	Inspect for obstruction and vents operating correctly	
Fire Extinguisher	Inspect extinguisher is charged and within service date	

Smoke Alarm	• Test and inspect. • Replace battery	
Window Blinds	• Inspect and adjust tension where necessary	
Damp Check	• Inspect caravan for any dampness.	
Plumbing		
Hot Water System	• De-scale hot water service	
Water Tanks	• Treat tanks and entire system with bacteria killing tank cleaner and flush.	
Grey Water Tank	• Treat with tank cleaner and flush.	
Drain Fittings	• Check all metal drain fittings for corrosion	
Water System	• Inspect for leaks. Turn on pump and ensure it doesn't start due to loss of pressure.	
Service Centre:	Notes:	

54 MONTHS / 45,000KM SERVICE		CHECKED
Hitch	Check hitch bolts to 90Nm	
Handbrake	Check cable and adjust if necessary	
Hand winch	Check brake function and webbing	
Suspension	- Lubricate and check bushes for excess movement. - Torque bolts to 190Nm	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Remove, clean and re-lubricate. Inspect for wear and replace if necessary	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims), (200Nm 14mm studs steel rims)	
Tyres	Inspect for abnormal wear, damage, and pressure	
Lights	Check all lights are functioning	
Battery	Check terminals and voltage at full charge	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	Check all structural fixing are secure.	
Seals & Latches	Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	- Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight.	
Service Centre:	Notes: 	

60 MONTHS / 50,000KM SERVICE		CHECKED
Chassis and Suspension		
Hitch	Inspect for damage and lubricate. Check bolt Torque to 90Nm	
Jockey Wheel	Inspect for condition and operation	
Breakaway	- Check for correct operation. - Inspect lanyard and clip	
Drawbar	Inspect wiring grommets and general condition	
Suspension	- Torque bolts to 190Nm - Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight. - Inspect shock absorber for condition. - Inspect shock absorber bushes	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims) (200Nm 14mm studs steel rims)	
Tyres	- Inspect for abnormal wear, damage, and pressure. - Check manufacturing date less than 5 years. - Check sidewalls for perishing and damage	
12 volt electrical		
Lights	- Check all trailer lights are functioning. - Check plug pins have gap. - Check for corrosion	
Battery	- Check terminals and voltage at full charge. - Check batteries are secure in cradles	
Charging	- Check battery charger settings are correct. - Check DC to DC charger settings are correct	
Solar Panels	- Check panels are free of damage. - Inspect sealants on cable penetrations and junction boxes	
Cables	- Inspect cables under body for damage to conduits. - Inspect cable glands and sealants on penetrations through floor	
240 volt Electrical		
RCD Unit	Check operation of RCD via test button	
Mains Input	Inspect mains input plug and cover are free of damage	
Earthing	Carry out resistance check	
Caravan Body		
Hatches & Doors	Check and lubricate locks	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	- Inspect joint sealants inside and out. - Ensure joints checked for damage and adhesion. - Inspect for soft spots on floor	
General fixings	Check all structural fixing are secure.	
Ventilation	Inspect for obstruction and vents operating correctly	
Fire Extinguisher	Inspect extinguisher is charged and within service date	

Smoke Alarm	• Test and inspect. • Replace battery	
Window Blinds	• Inspect and adjust tension where necessary	
Damp Check	• Inspect caravan for any dampness.	
Plumbing		
Hot Water System	• De-scale hot water service	
Water Tanks	• Treat tanks and entire system with bacteria killing tank cleaner and flush.	
Grey Water Tank	• Treat with tank cleaner and flush.	
Drain Fittings	• Check all metal drain fittings for corrosion	
Water System	• Inspect for leaks. Turn on pump and ensure it doesn't start due to loss of pressure.	
Service Centre:	Notes:	

66 MONTHS / 55,000KM SERVICE		CHECKED
Hitch	Check hitch bolts to 90Nm	
Handbrake	Check cable and adjust if necessary	
Hand winch	Check brake function and webbing	
Suspension	- Lubricate and check bushes for excess movement. - Torque bolts to 190Nm	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Remove, clean and re-lubricate. Inspect for wear and replace if necessary	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims), (200Nm 14mm studs steel rims)	
Tyres	Inspect for abnormal wear, damage and pressure	
Lights	Check all lights are functioning	
Battery	Check terminals and voltage at full charge	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	Check all structural fixing are secure.	
Seals & Latches	Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	- Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight.	
Service Centre:	Notes: 	

72 MONTHS / 60,000KM SERVICE		CHECKED
Chassis and Suspension		
Hitch	Inspect for damage and lubricate. Check bolt Torque to 90Nm	
Jockey Wheel	Inspect for condition and operation	
Breakaway	- Check for correct operation. - Inspect lanyard and clip	
Drawbar	Inspect wiring grommets and general condition	
Suspension	- Torque bolts to 190Nm - Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight. - Inspect shock absorber for condition. - Inspect shock absorber bushes	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims) (200Nm 14mm studs steel rims)	
Tyres	- Inspect for abnormal wear, damage, and pressure. - Check manufacturing date less than 5 years. - Check sidewalls for perishing and damage	
12 volt electrical		
Lights	- Check all trailer lights are functioning. - Check plug pins have gap. - Check for corrosion	
Battery	- Check terminals and voltage at full charge. - Check batteries are secure in cradles	
Charging	- Check battery charger settings are correct. - Check DC to DC charger settings are correct	
Solar Panels	- Check panels are free of damage. - Inspect sealants on cable penetrations and junction boxes	
Cables	- Inspect cables under body for damage to conduits. - Inspect cable glands and sealants on penetrations through floor	
240 volt Electrical		
RCD Unit	Check operation of RCD via test button	
Mains Input	Inspect mains input plug and cover are free of damage	
Earthing	Carry out resistance check	
Caravan Body		
Hatches & Doors	Check and lubricate locks	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	- Inspect joint sealants inside and out. - Ensuite joints checked for damage and adhesion. - Inspect for soft spots on floor	
General fixings	Check all structural fixing are secure.	
Ventilation	Inspect for obstruction and vents operating correctly	
Fire Extinguisher	Inspect extinguisher is charged and within service date	

Smoke Alarm	• Test and inspect. • Replace battery	
Window Blinds	• Inspect and adjust tension where necessary	
Damp Check	• Inspect caravan for any dampness.	
Plumbing		
Hot Water System	• De-scale hot water service	
Water Tanks	• Treat tanks and entire system with bacteria killing tank cleaner and flush.	
Grey Water Tank	• Treat with tank cleaner and flush.	
Drain Fittings	• Check all metal drain fittings for corrosion	
Water System	• Inspect for leaks. Turn on pump and ensure it doesn't start due to loss of pressure.	
Service Centre:	Notes:	

78 MONTHS / 65,000KM SERVICE		CHECKED
Hitch	Check hitch bolts to 90Nm	
Handbrake	Check cable and adjust if necessary	
Hand winch	Check brake function and webbing	
Suspension	- Lubricate and check bushes for excess movement. - Torque bolts to 190Nm	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Remove, clean and re-lubricate. Inspect for wear and replace if necessary	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims), (200Nm 14mm studs steel rims)	
Tyres	Inspect for abnormal wear, damage, and pressure	
Lights	Check all lights are functioning	
Battery	Check terminals and voltage at full charge	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	Check all structural fixing are secure.	
Seals & Latches	Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	- Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight.	
Service Centre:	Notes: 	

84 MONTHS / 70,000KM SERVICE		CHECKED
Chassis and Suspension		
Hitch	Inspect for damage and lubricate. Check bolt Torque to 90Nm	
Jockey Wheel	Inspect for condition and operation	
Breakaway	- Check for correct operation. - Inspect lanyard and clip	
Drawbar	Inspect wiring grommets and general condition	
Suspension	- Torque bolts to 190Nm - Grease bushes and check for play. - Check torque on suspension hanger bolts (190nm) - Check retaining chain shackles tight. - Inspect shock absorber for condition. - Inspect shock absorber bushes	
Brakes	Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	Inspect condition and torque to 125Nm (12mm studs) (140Nm 14mm studs alloy rims) (200Nm 14mm studs steel rims)	
Tyres	- Inspect for abnormal wear, damage, and pressure. - Check manufacturing date less than 5 years. - Check sidewalls for perishing and damage	
12 volt electrical		
Lights	- Check all trailer lights are functioning. - Check plug pins have gap. - Check for corrosion	
Battery	- Check terminals and voltage at full charge. - Check batteries are secure in cradles	
Charging	- Check battery charger settings are correct. - Check DC to DC charger settings are correct	
Solar Panels	- Check panels are free of damage. - Inspect sealants on cable penetrations and junction boxes	
Cables	- Inspect cables under body for damage to conduits. - Inspect cable glands and sealants on penetrations through floor	
240 volt Electrical		
RCD Unit	Check operation of RCD via test button	
Mains Input	Inspect mains input plug and cover are free of damage	
Earthing	Carry out resistance check	
Caravan Body		
Hatches & Doors	Check and lubricate locks	
Seals	Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	- Inspect joint sealants inside and out. - Ensure joints checked for damage and adhesion. - Inspect for soft spots on floor	
General fixings	Check all structural fixing are secure.	
Ventilation	Inspect for obstruction and vents operating correctly	
Fire Extinguisher	Inspect extinguisher is charged and within service date	

Smoke Alarm	• Test and inspect. • Replace battery	
Window Blinds	• Inspect and adjust tension where necessary	
Damp Check	• Inspect caravan for any dampness.	
Plumbing		
Hot Water System	• De-scale hot water service	
Water Tanks	• Treat tanks and entire system with bacteria killing tank cleaner and flush.	
Grey Water Tank	• Treat with tank cleaner and flush.	
Drain Fittings	• Check all metal drain fittings for corrosion	
Water System	• Inspect for leaks. Turn on pump and ensure it doesn't start due to loss of pressure.	
Service Centre:	Notes:	

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