Robson XTT

DUAL FOLD OFFROAD CAMPER

OWNER'S MANUAL

15yr Anniversary - Version 1

www.marketdirect.com.au

* 15 Year Anniversary AU Model shown.

Phone: 1300 494 494

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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 in regard to 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 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 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 Robson XTT Dual Fold Camper

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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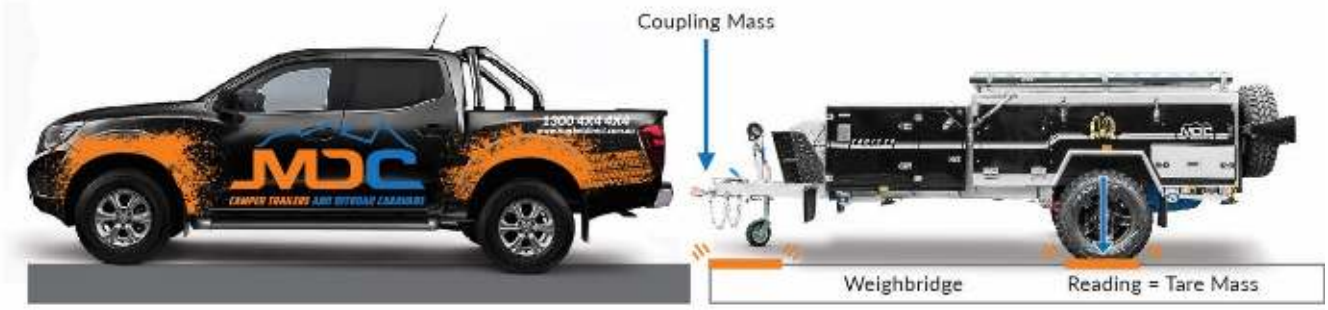
Introduction

WELCOME TO MDC

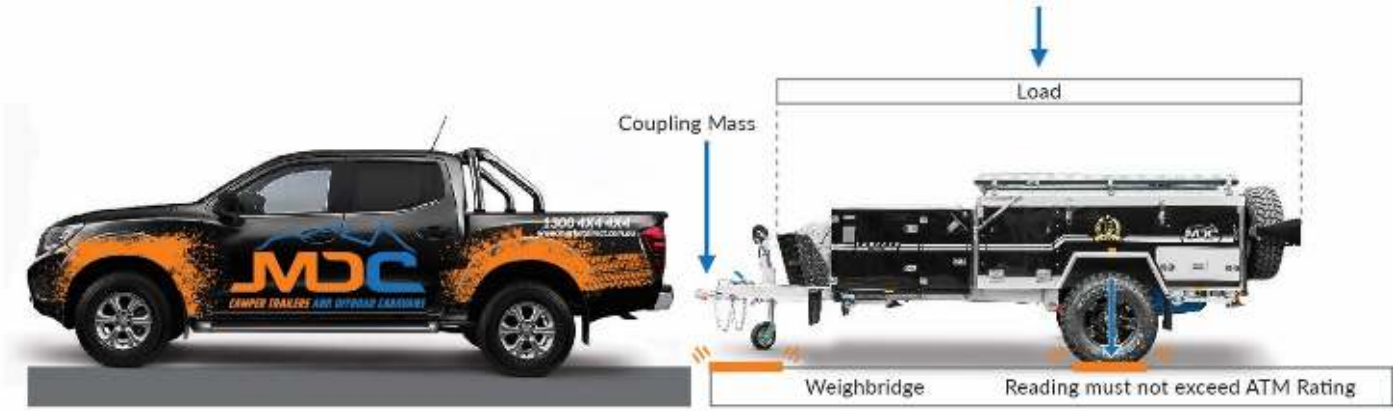
Off road caravanning is a rewarding way to travel and see our great country. Owning an MDC camper will afford you the opportunity to travel to remote places and stay in comfort. It is the intention of MDC for you to have the best possible owner experience and enjoy the great outdoors.

Terminology & Abbreviations

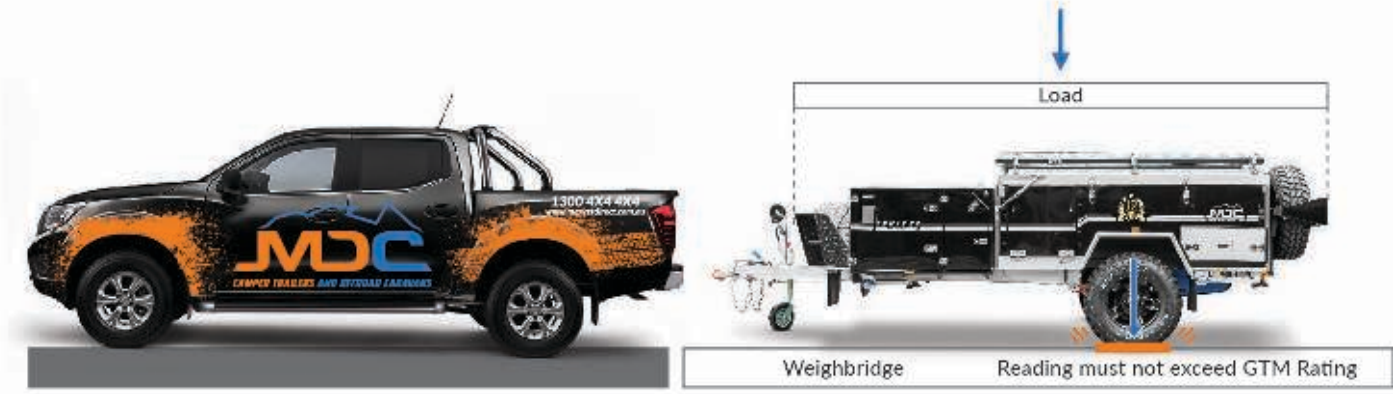
Tare Weight: The total weight of the trailer (load on tyres plus coupling load) with all options and fittings as supplied by the manufacturer, with empty water tanks, excluding fluids not essential for operation on public roads, and without luggage or personal effects.



ATM (Aggregate Trailer Mass) 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.



GTM (Gross Trailer Mass) 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.



Campers for illustration purposes only.

Terminology & Abbreviations

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

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

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 In/out: 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.

Tow vehicle and Trailer Compatibility
Your tow vehicle manufacturer has applied a maximum towing capacity to the vehicle which is the Aggregate Trailer Mass (ATM) and a maximum Gross Combination Mass (GCM). These specifications MUST NOT be exceeded. It is your responsibility to know, understand and follow these specifications. Vehicle manufacturers may also specify or recommend "Weight Distribution Bars" when towing under certain conditions. You MUST ensure this is compatible with the vehicle and trailer combination.

DANGER

DANGER – Exceeding manufacturer weight and combination limits can result in loss of control leading to death or serious injury. Your tow vehicle and hitchmust be rated for the Gross Vehicle Weight of the trailer.

Specifications

DECAL DESIGN	Special edition 15 year anniversary decal design
HITCH LOCK	MDC LOK - coupling lock
BATTERY	LiFePRO+™ 12V 200Ah Lithium Iron Phosphate battery
AC (240V) CHARGER	Projecta IC5000L - 12V automatic 50A 5-stage lithium battery charger
DC (12V) CHARGER	Projecta IDC2500L - 25A 5-stage Intelli-Charge 9-32V lithium DC/ solar battery charger
BATTERY MONITOR	Projecta BM500-BT - battery monitor with Bluetooth connectivity
STYLE	Dual Fold Hardfloor Camper Trailer
BERTH	6
BEDS	1x Queen + double size high-density foam mattress set and convertible lounge
MATTRESS SIZE(S)	Front - 1990mm L x 1540mm W x 100mm H Rear - 1990mm L x 1300mm W x 100mm H
FINISH	Galvanised chassis + aluminium composite panel throughout with automotive powder-coat finish
BODY CONSTRUCTION	Welded aluminium alloy frame + bonded composite panels
TARE WEIGHT	Approx. 1750kg
TOWBALL WEIGHT	Approx. 145kg
ATM RATING	2400kg
PAYLOAD	650Kg
SIZE CLOSED	5879mm L x 2373mm W x 1711mm H
TENT HEIGHT OPEN	3.4m
ANNEX SIZE	6.6m x 2.4m
ENSUITE TENT SIZE	0.8m x 1.2m
DRAWBAR	120mm x 50mm - Q345 Galvanised Steel RHS
HITCH / COUPLING	Cruisemaster™ DO35 hitch
JOCKEY WHEEL	10” swing up and lockable
WHEELS & TYRES	16X7.5 6/139.7 aluminium alloy wheels fitted with 265/75 R16 Goodride radial mud terrain + 2x spares
SUSPENSION	X-TRACK Independent coil spring suspension with 2x TOUGH TRAX Shock absorbers on each side
BRAKES	12" electromagnetic brakes with handbrake and drawbar mounted emergency breakaway system
STABILISER LEGS	4 x heavy duty lockable and adjustable drop down
JACK & JACKING POINTS	CASP 1500kg high-lift scissor jack & integrated jacking points
TENT	MDC integrated trailer tent with genuine SBS zippers, double stitching and reinforced, gusseted windows and protective seam tape on roof and awning + removable tropical roof. Offers up to 28sqm of living space between the main tent and fully enclosed annex
CANVAS	16oz Sherpa Close weave canvas
CANVAS COLOUR	Khaki walls and Sand roof, awning and tropical roof
WINDOWS	Tight weave PVC coated fibreglass mesh stops mosquitos and midges
AWNING	Velcro & zip-on removable canvas awning across full length of main tent
ANNEX	Full annex, enclosed roof, walls, floor and draft skirt
POLES	Galvanised steel tent frame and aluminium annexe poles, dia19/22/25mm
STORAGE RACK	Removable, side-mounted storage rack
GAS CYLINDER HOLDERS	2x 9kg gas cylinder holders with LCC27 pigtail connector
JERRY CAN STOWAGE	2x 20L jerry can holders

WATER TANK(S)	1x 80L + 1x 120L freshwater tank
WATER DELIVERY	12V electric marine diaphragm pump
KITCHEN CONSTRUCTION	Slide out stainless Steel body with gas hob cooktop & washboard sink with plumbed hot & cold water supply
STONE GUARD	Chequer plate stone guard & gas storage locker with forward-facing mud flap protection
FRIDGE SLIDE	800mm L x 510mm W x 580mm H (driver side) 920mm L x 510mm W x 580mm H (passenger side)
SHOWER & ENSUITE	20L portable toilet + annex attached PVC ensuite tent and external hot/cold external shower
COOKER	Stainless steel 3-burner gas hob cooktop with glass lid
HOT WATER SYSTEM	14L Truma UltraRapid (gas-operated)
DIESEL HEATER	2KW diesel air heater with variable control and 10L fuel tank
SOLAR	1x 135W fixed solar panel
INVERTER	Projecta IM1000 - 12V 1000W modified sine wave inverter
LIGHTING INTERNAL	3x portable 12V LED light strips
LIGHTING EXTERNAL	12V LED position markers, indicator & stop/taillights + internal toolbox lighting
POWER OUTLETS INTERNAL	7 x 12V accessory sockets 3 x 5V dual USB charging ports (1A & 2A split) 2 x 240V double pole GPOs
POWER OUTLETS EXTERNAL	4 x Anderson plugs 4 x 12V accessory sockets
SOUND SYSTEM	Stereo head unit with internal & external speakers

Store Locations

QUEENSLAND	
Brisbane 3/711 Beaudesert Rd Rocklea QLD 4107	Caboolture 4 Boeing Place Caboolture QLD 4510
NEW SOUTH WALES	
Sydney 1/12 Avalli Rd Prestons NSW 2170	Newcastle Unit 1, 2364 Pacific Hwy Heatherbrae NSW 2324
VICTORIA	
Melbourne 3/124 Canterbury Rd Kilsyth South VIC 3137	Campbellfield 1551 Sydney RD Campbellfield VIC 3061
WESTERN AUSTRALIA	
Welshpool 18 Bellows Rd Welshpool WA 6107	
SOUTH AUSTRALIA	
Adelaide Units 2,3 & 4/32-50 Weaver St Edwardstown SA 5042	

NATIONAL TOLL FREE	WARRANTY HOTLINE	SPARE PARTS
1300 4X4 4X4 1300 494 494	1300 MDC CARE 1300 632 2273	1300 MDC PARTS 1300 632 72787

Contact Details

NATIONAL TOLL FREE	WARRANTY HOTLINE	SPARE PARTS
1300 4X4 4X4 1300 494 494	1300 MDC CARE 1300 632 2273	1300 MDC PARTS 1300 632 72787

Safety Information

WARNING–

Before using this product, you should read this manual, and those manuals supplied by component manufacturers applicable to this product.
This manual is supplied as a reference to required maintenance of the product. Failure to use and maintain the product in accordance with what is outlined in this manual may affect your warranty.
Incorrect and/or insufficient maintenance may cause product failure resulting in property loss, damage or injury or death. Maintenance intervals are critical for normal use, extreme use may require shorter or additional maintenance intervals.
Manual content does not imply, express or other any warranty, the owner should read the limited warranty terms included in this booklet.
MDC does not cover damage due to unauthorised modifications, misuse, abuse, incorrect assembly, improper and irregular maintenance or accident or collision.
Before using this product, you should be certain your tow vehicle is suitably rated and equipped to tow the product safely and legally. The trailer and vehicle pairing must we within the safe "Maximum Towing Capacity", "Ball Weight Capacity" and "Gross Combination Mass" as stated by the vehicle manufacturer.
This camper is fitted with electric brakes and a "Breakaway System". Requirements for breakaway systems can vary from state to state. It is mandatory to supply a maintenance charge to the breakaway battery source while driving. You MUST ensure this capability is fitted to your vehicle. The maintenance charge is supplied to the camper via the Anderson plug on the drawbar.
WARNING: BALL LOADING (DOWNWARD LOAD ON TOW HITCH) MUST NOT EXCEED 350KG OR THE MAXIMUM ALLOWABLE LOAD BY THE VEHICLE MANUFACTURER OR TOW BAR RATING, WHICH EVER IS THE LOWEST. Exceeding these limits may result in an accident causing serious injury or death and/or property damage.
It is important to load your camper correctly to distribute weight evenly and achieve a suitable ball weight load andprevent loading in a manner that can cause a Camper to sway and/or roll excessively left and right. The industry optimum ball weight on a camper is between 9 and 11% of the total Camper weight. MDC Campers fit into this category and 10% should be used as the starting point.

Modifications to The Product

Gas Systems

The installed gas system on this product is an approved and certified installation. Any changes, modifications or adjustment may render the system non-compliant and dangerous. Market Direct Group Pty Ltd does not condone,recommend, or otherwise consent to any modifications, adjustment, addition or tampering in any way with the installed gas system on any and all products.

Chassis

All MDC chassis are fully engineered and verified using Finite Element Analysis (FEA) software. This ensures that the chassis for each model passes the relevant regulations and design rules as originally provided to the customer. Any modification to the chassis or drawbar whatsoever (no matter how minor) will inevitably change this – whetherit impacts the towing dynamics, expected loads and stress points, safety chain attachment points, overall trailer length etc.
Market Direct Group Pty Ltd does not condone, recommend, or otherwise consent to any modifications, adjustment, addition or tampering in any way with the drawbar, safety chains or safety chain attachment points.

Jacking Your Camper

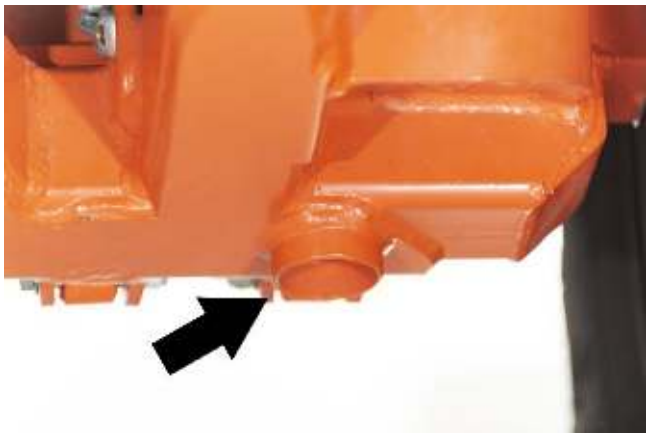
Your trailer is fitted with purpose built jacking points and from January 2021 supplied with a suitable jack. An appropriately rated bottle jack is an acceptable alternative, however when using the jacking point beneath the trailing arm ensure the jack is of a retracted height that will fit under the 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



Electrical Safety

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 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 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 camper 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 camper
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.

Vehicle Electrical Requirements

Brake Controller

All MDC campers and 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.

Correct Vehicle Wiring for MDC Campers and Caravans

To comply with national laws on breakaway systems, you must supply a maintenance charge to the battery/batteries that power the system should it be activated. In all MDC products, the breakaway is powered by the house batteries in the camper. For this purpose and Anderson plug connection is fitted to all MDC campers 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 voltage sensitive relay or switching device may be used to protect the start battery when the car engine is stopped.

Trailer Lights

Plug Type – 12 Pin Flat (Not Negotiable)

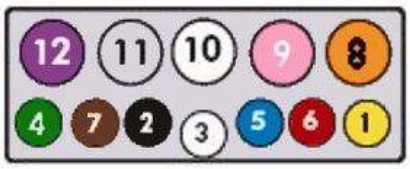
Charging Camper/Caravan While Driving

Plug Type – 50 amp Anderson Plug.

Vehicle with or without smart alternator:

The Anderson plug can be connected to the start battery on the vehicle and should include the following to protect the start battery.

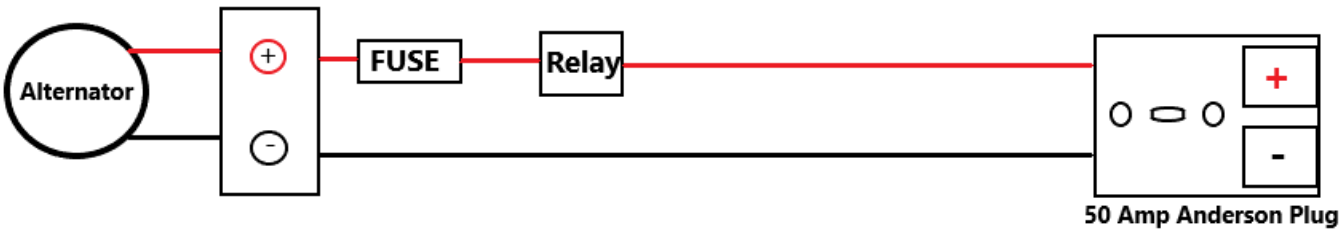
1. 50-amp relay to stop power supply when vehicle is not running.
2. 50-amp fuse or circuit breaker at the battery



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

Notes: The Projecta IDC25L DC to DC controller fitted in your MDC trailer is programmed to favour the solar panel input exclusively until it drops below a threshold voltage input. By providing accessory power to the number 12 pin, the trigger for the IDC25L will be set off to take power from both the Anderson plug and the solar panels. It will also trigger the IDC25L to activate the vehicle's ECU to make the alternator provide power to fully charge the multiple batteries in your Camper.



50 Amp Anderson Plug

Gas & Appliance Safety

Gas Certification

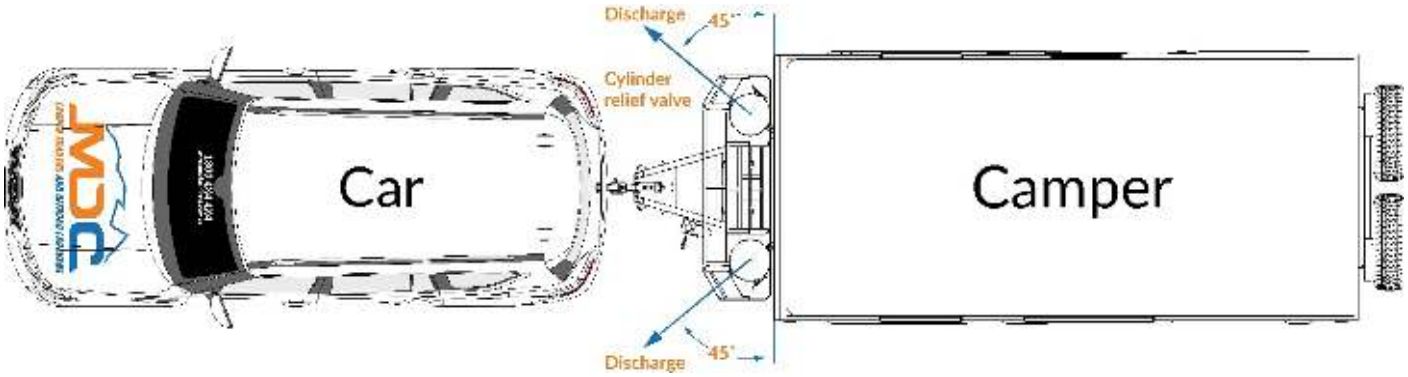
Your Camper has been supplied gas tested and certified. Any additions or alterations to the gas system must be performed by an authorised person and will require re-certification and testing. Also note any alterations may affect your warranty on both the system and appliances.

General Safety

• Your Camper may have a number of 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 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 shall 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 refuelling 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 goingout. 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 affectthe 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 thegas 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).
-

Removing the Flue Cover

Caution! To use your inbuilt Truma hot water system, the external flue covers must be removed prior to starting the unit.

First, open the flue dust cover shown.

Remove lockable cover

Remove plastic cover

Ready for use

Caution

To use your inbuilt Truma hot water system, the external flue covers must be removed prior to starting the unit.

Ventilation and Flues

- Check all permanent ventilators, flues (if applicable) and vents to ensure they are clear, open and unrestricted.
- Any supplied or 3rd party vent cover(s) (e.g., low level door vent) should only be used for covering the vents during storage between use with all LP gas system valves closed. All vents (e.g., low level door vent) shall be uncovered at all times the Camper is in use.

Isolating Appliances

Internal gas appliances have an isolation valve fitted in the gas line. During travel these should be turned to the off position where practical and always turn the valve on the active gas bottle off when towing or refueling.

Diesel Heater Safety

Important information before operating the diesel heater.

- The diesel heater is designed for use in your camper.
- The heater is designed to heat the main living area of your 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 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.

Danger!

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 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.

Using the Camper

Weights and Payload Capacities

The information plate attached to the drawbar of your camper displays the relevant weights and weight capacities of the van.

How to Load Your Camper

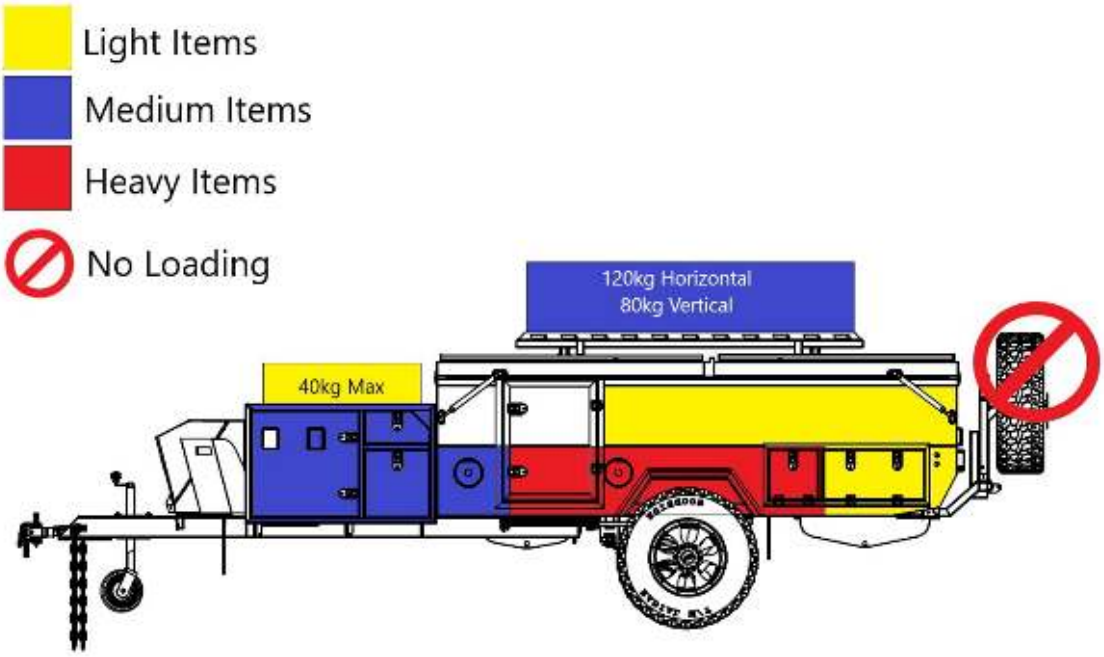
It is important to load your camper correctly to distribute weight evenly and achieve a suitable ball weight load and prevent loading in a manner that can cause a Camper to sway and/or roll excessively left and right. The industry optimum ball weight on a camper is between 9 and 11% of the total Camper weight. MDC Campers fit into this category and 10% should be used as the starting point.

WARNING: BALL LOADING (DOWNWARD LOAD ON TOW HITCH) MUST NOT EXCEED 350KG OR THE MAXIMUM ALLOWABLE LOAD BY THE VEHICLE MANUFACTURER OR TOW BAR RATING, WHICH EVER IS THE LOWEST. Exceeding these limits may result in an accident causing serious injury or death and/or property damage.

- Always load evenly to both sides of the camper
- Load heavy weight over or as close to over the axle as possible and as low as possible
- Heavy cooking equipment should be stored in lower cupboards.
- Tinned food, bottled goods for cooking etc should be stored in the pantry drawer.
- Never load in a manner that causes the ball weight to exceed the limit of the tow vehicle.
- Ensure no items can move during travel. Secure all items to prevent damage to the camper.
- Consider water tank levels and how they may affect the balance front and back and the percentage of ball weight.

Load Distribution Guide

The diagram below illustrates best placements of items based on weight.



Ball Weight

When loading your camper, the generally accepted tow ball weight once loaded is around 10% of the total weight of the camper. Use a ball weight scale to identify the ball weight and load the camper in a manner that achieves the desired weight. Ideally, once loaded the first time, take the camper to a weigh bridge, and measure the total weight loaded including the weight on the jockey wheel. When the total weight is known, adjust the load locations to meet the desired balance considering 10% is the generally accepted benchmark.

Effects of Weight Distribution

The distribution of weight in a camper can influence the handling and performance. Overloading the front or rear may cause adverse handling and sway. Additionally, overloading the front or back can induce a pendulum effect that can cause dangerous sway and cause an accident.

Tyre Pressures

Tyre pressures have a large effect on the handling of your camper. Tyres that are under the recommended pressure for the campers' actual weight can cause a dangerous sway. It is important to follow the correct pressure guide.The guide below indicates pressure for the ATM which includes ball weight of 10%. Pressures are cold inflation applicable to the standard Goodride 265/75R16 tyres fitted.

Actual Weight	Pressure PSI Single Axle	Pressure Kpa Single Axle
1800kg	41psi	283Kpa
1900kg	44psi	303Kpa
2000kg	47psi	324Kpa
2100kg	50psi	345Kpa
2200kg	52psi	358Kpa
2300kg	55psi	379Kpa

Fridge Fitting Chart

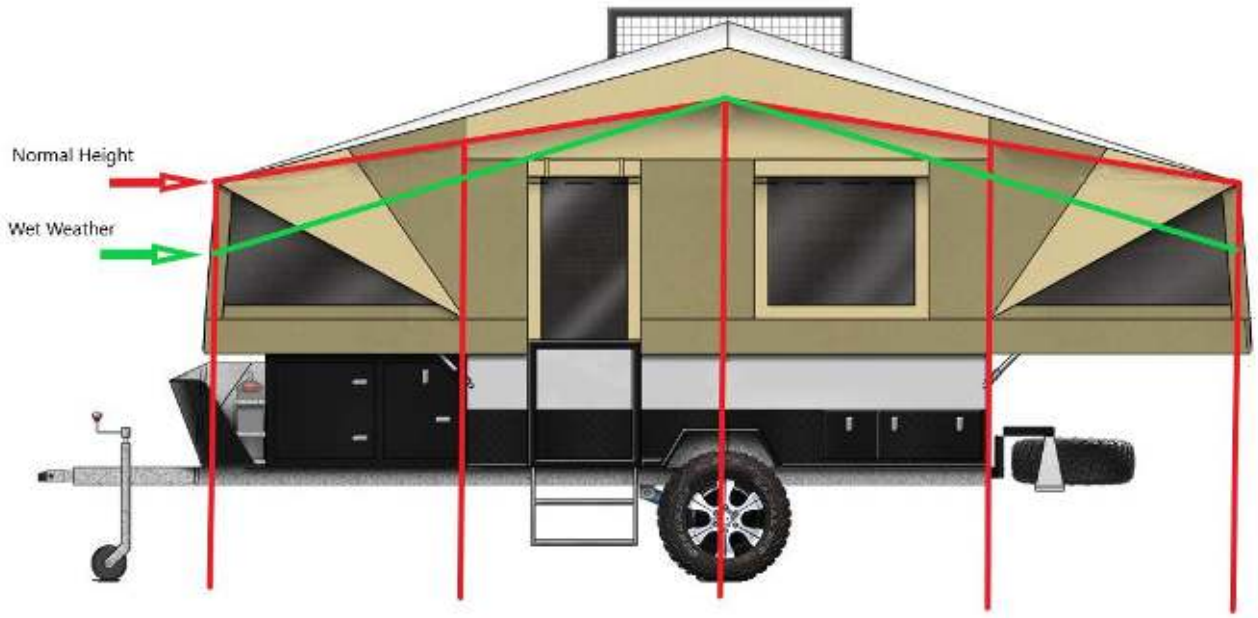
Dometic/Waeco	Engel	Evakool	Bushman	Ironman	ARB	Kickass
CFX 50	MT35FP	RF40	35L	30L	Elements 60L	KA45
CFX 65	MT45FP	RF47	45L	40L	35L	KA61
CFX 65DZ	MT60FP	TMX35	42L	65L	47L	KA80
CFX75DZW*	MT60FCP	GLACIER 30	52L	74L		KA75
CF-110ACVERB	MT80FP	GFM55				
CFX95DZ*	MT80FCP	TMX45				
		GLACIER 45				
		TMX55				
		ED45				
		GLACIER 80				
		GLACIER 74				
		TMX50				
		GLACIER 55				
		TMX65				

Preparing for Bad Weather

Modern camper tents are designed with a roof height to accommodate taller people. The trade off with this kind of design is the pitch of the roof is not always steep enough for water to run off effectively in heavy rain. To better prepare for wet conditions it is advisable in most cases to increase the pitch of the awning/annex roof by lowering the corners furthest away from the main tent. This should be done to the degree that water cannot pool on the roof. Additionally, in soft floor campers it is advisable to lower the back corner pole opposite the bed and furthest from the annex to ensure water can't pool on the main tent.

Canvas is not designed to store water. Water pooling can stretch and damage canvas and in extreme cases bend the supporting poles of the camper. This is considered storm damage and is not covered by your camper manufacturer under warranty.

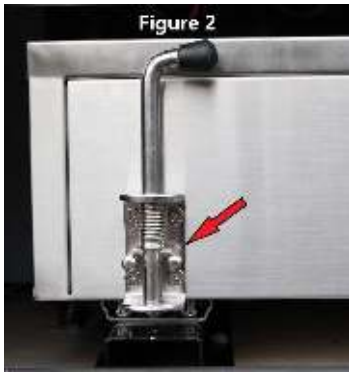
Lower the annex corner poles as seen in the diagram to increase the fall and evacuate water quickly. Ensure guide ropes are adjusted accordingly



Kitchen

Before sliding out kitchen, raise the pad bolt and turn to lock in the up position (Fig: 2)

Push down blue latch on the slide mechanism and pull kitchen out. (Fig: 2a)

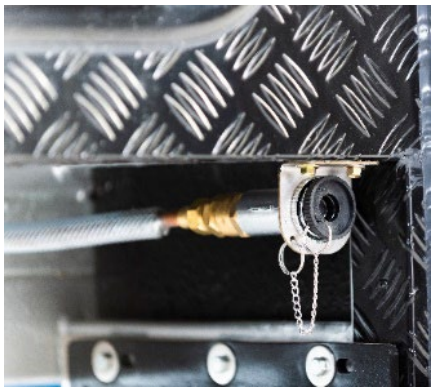


When kitchen is extended fit the support leg into its receiver (Fig: 3)

Extend support leg and secure locking screw (Fig: 3a)

Fig: 3 Fig: 3a

To connect the gas, plug the gas bayonet into the outlet pictured below.



Caution

CAUTION – Use of the slide out kitchen cooktop without the annex or awning may adversely affect the safety and operation of the appliance.

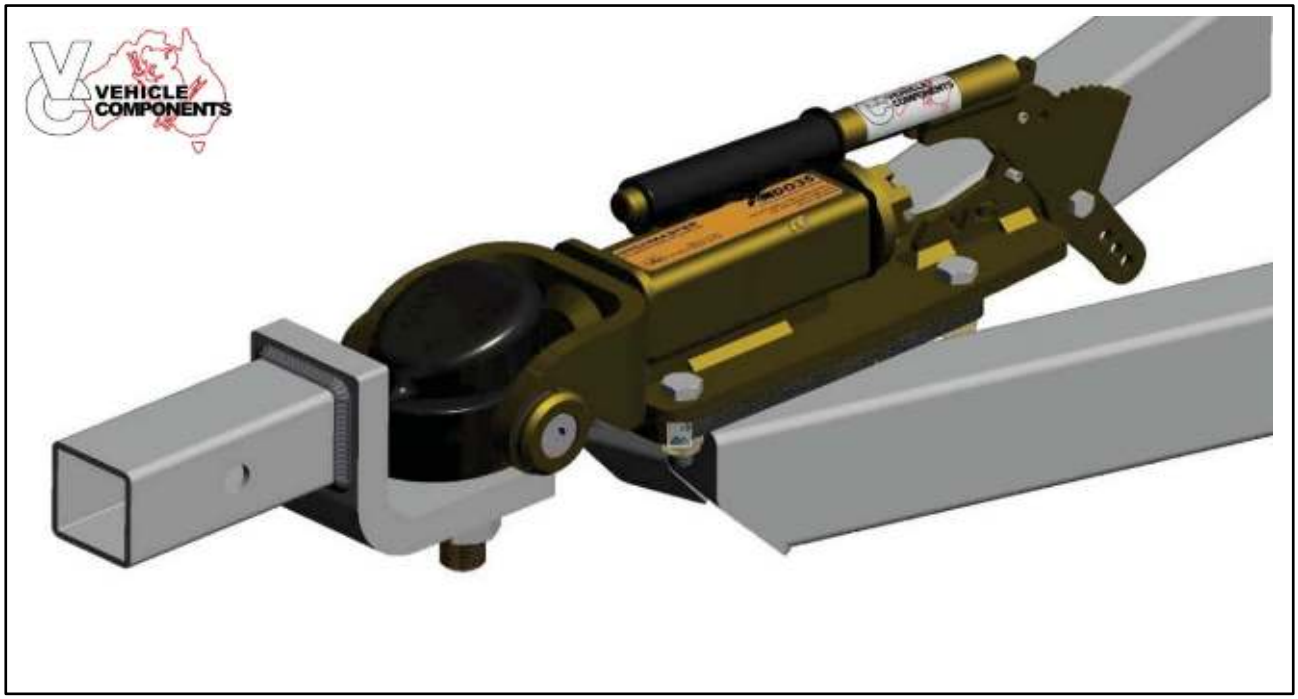
Towing The Camper

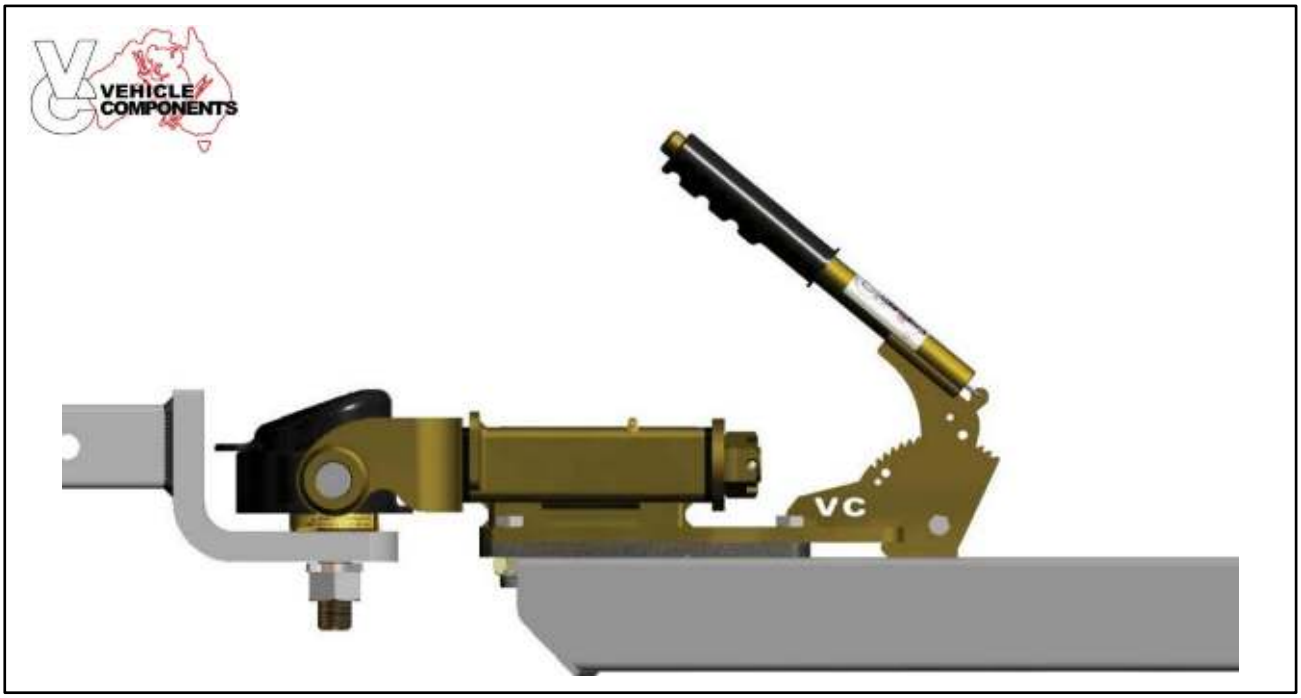
Towing with Trucks

If you intend to tow your camper with a truck or heavy commercial vehicle you should fit a hitch system to minimise the lash effect of the commercial suspension and distance from the rear axle to the tow point. Truck suspension can be harsh, particularly in off road conditions. The long distance between the axle centre and the point of attachment can be quite long further exacerbating the effect putting stress on components.
Using a shock absorbing hitch will reduce the effect considerably.

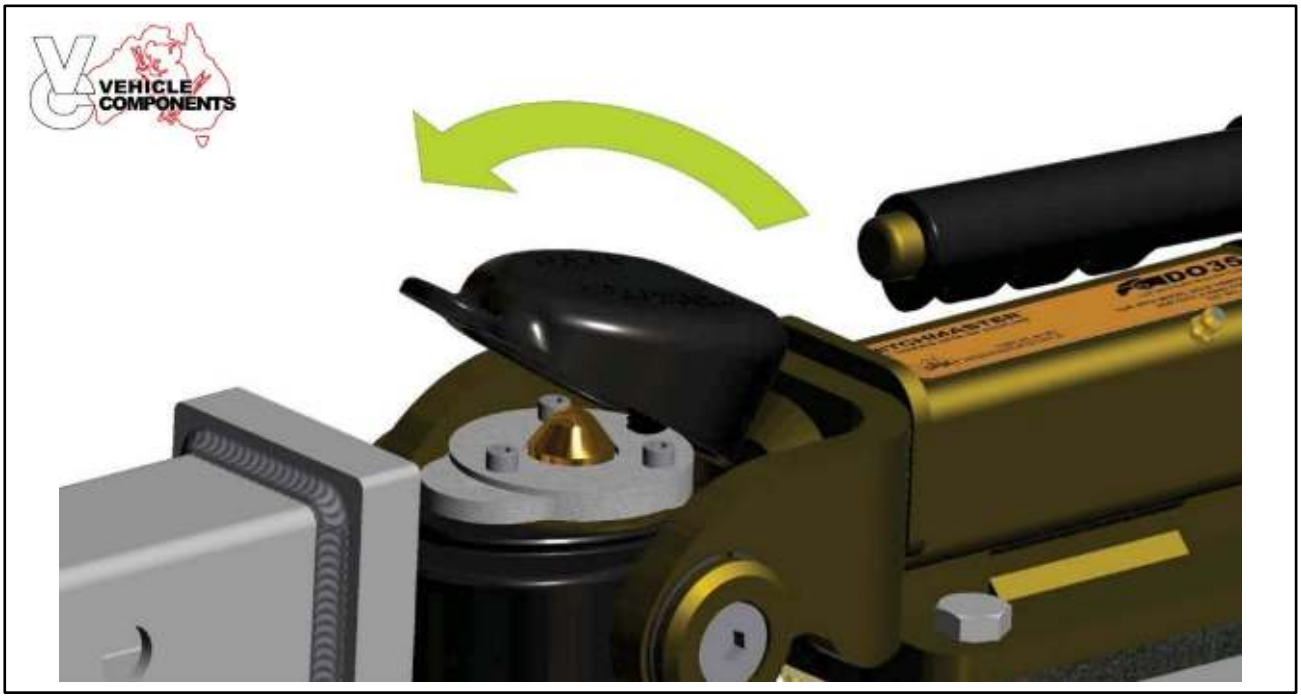
How to Hitch your coupling

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



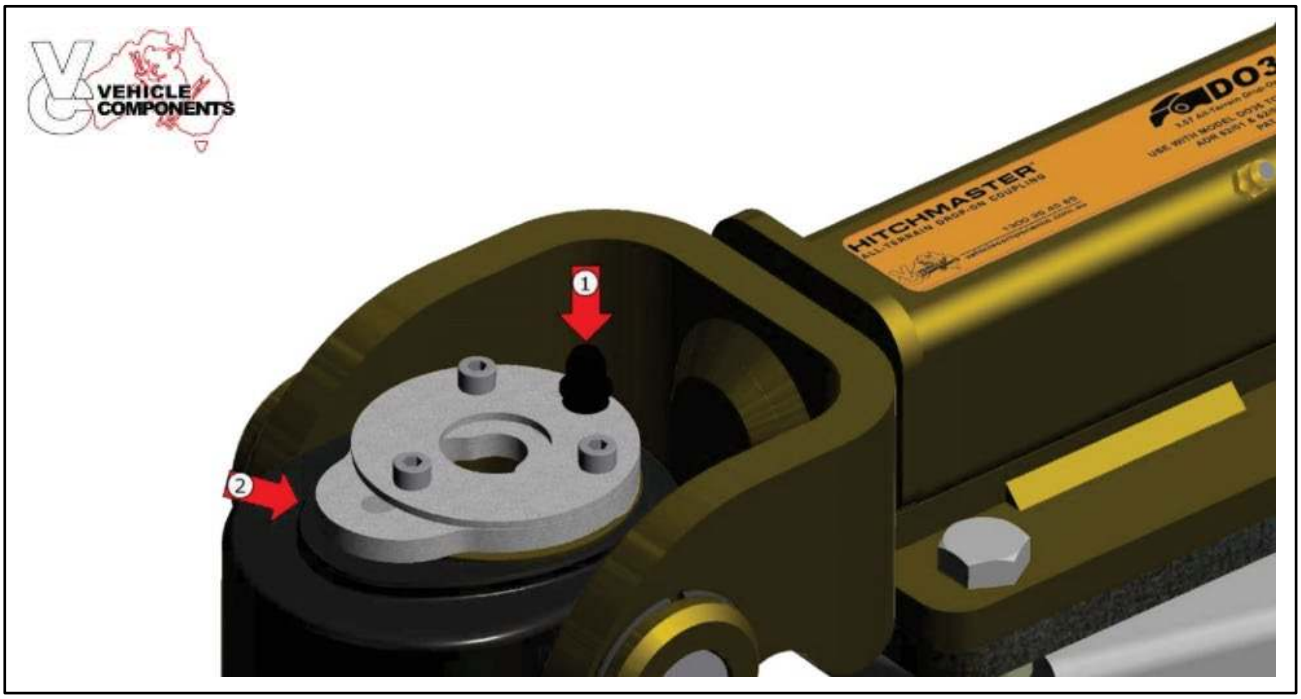


Make sure the handbrake is applied prior to coupling and uncoupling.



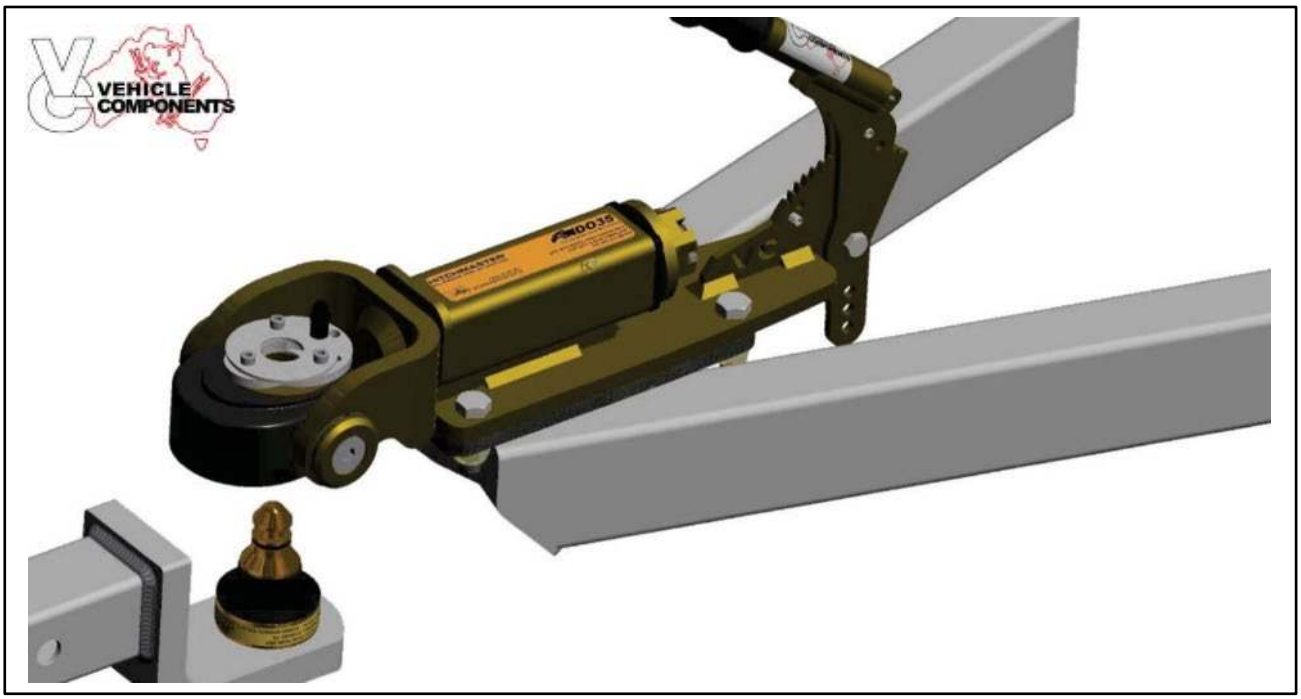
Make sure the dust cap is securely connected to the bump cover. This is done by locating the rear lip on the dust cap onto the groove of the bump cover and then pushing it in a downward motion until the dust cover is secure (there should be a slight click when it has been assembled correctly) Test if 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.

STEP 1



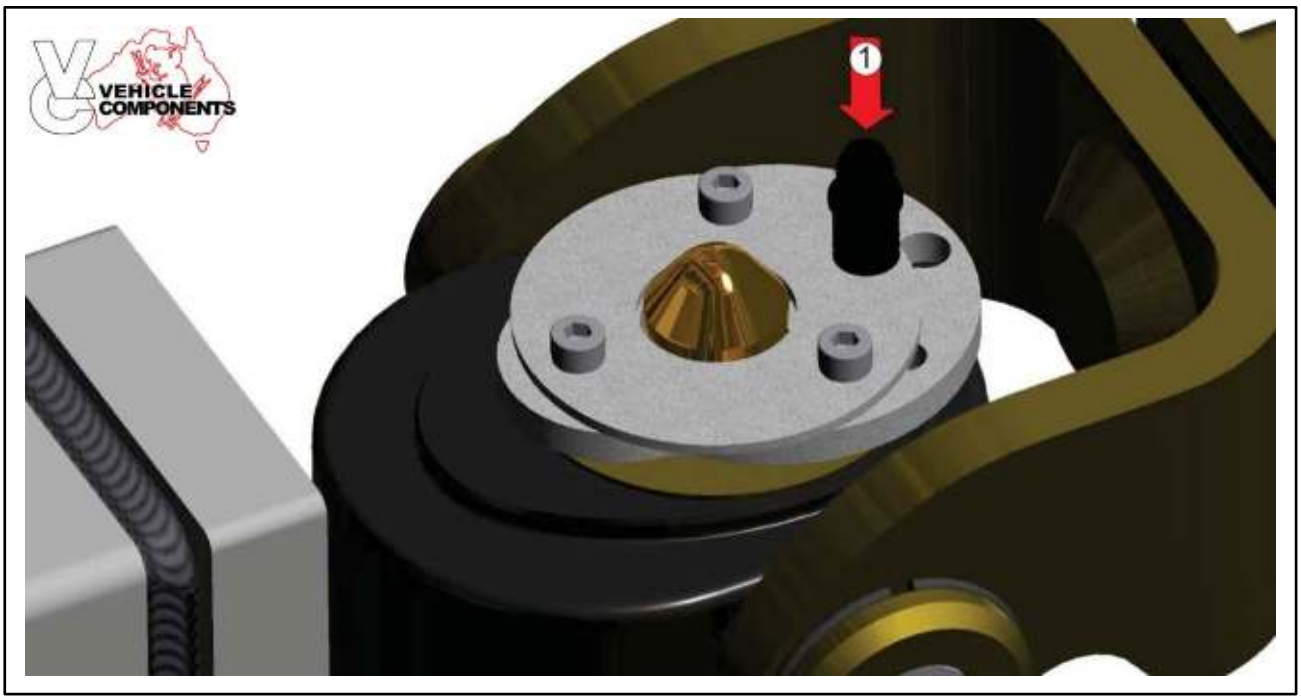
Push down the button (1) and push the locking mechanism back (2). When the locking mechanism (2) is all the way back, release the button (1) locking the plate in place

STEP 2

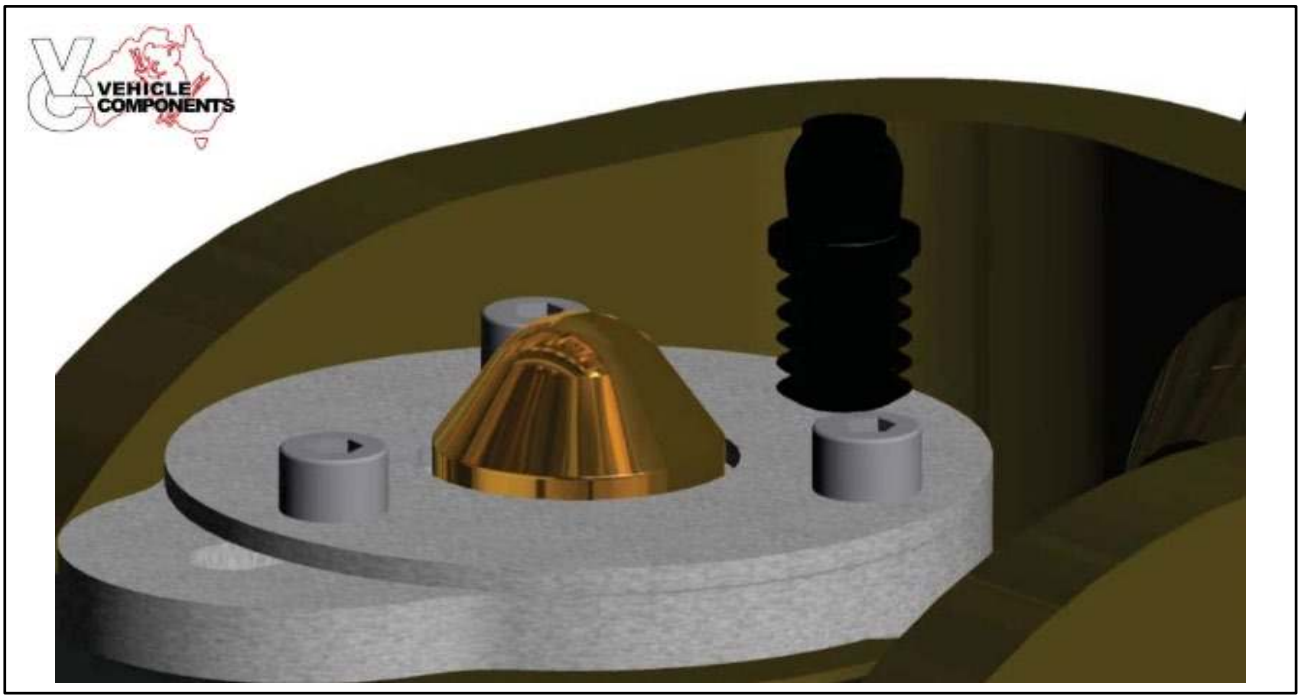


Offer up the tow pin to the coupling making sure the tow pin cover is removed and there is no visible debris on it. Locking plate should be in unlocked position as shown. Lower the coupling onto the tow pin.

STEP 3



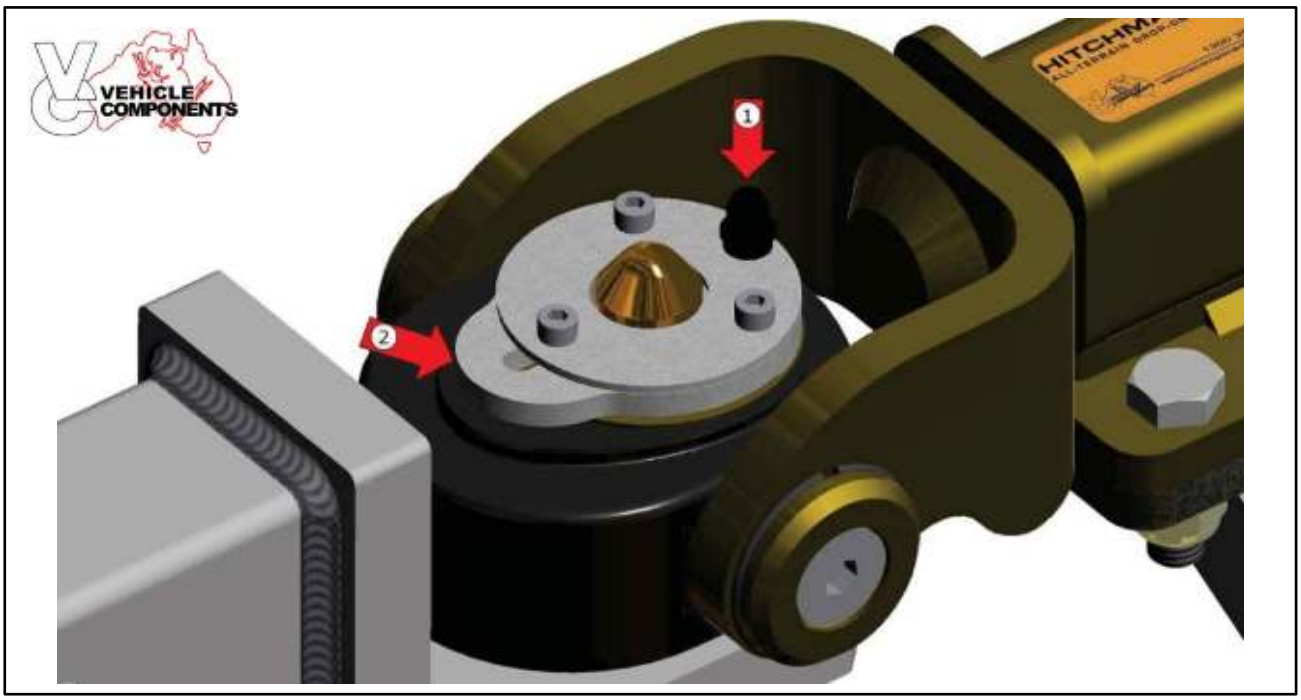
Make sure the tow pin is seated inside the universal and the tow pin top is sticking out of the locking mechanism (see below). Press the button (1) to release the locking mechanism there will be an audible locking noise at which point the mechanism will return to the initial position as shown in step 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.

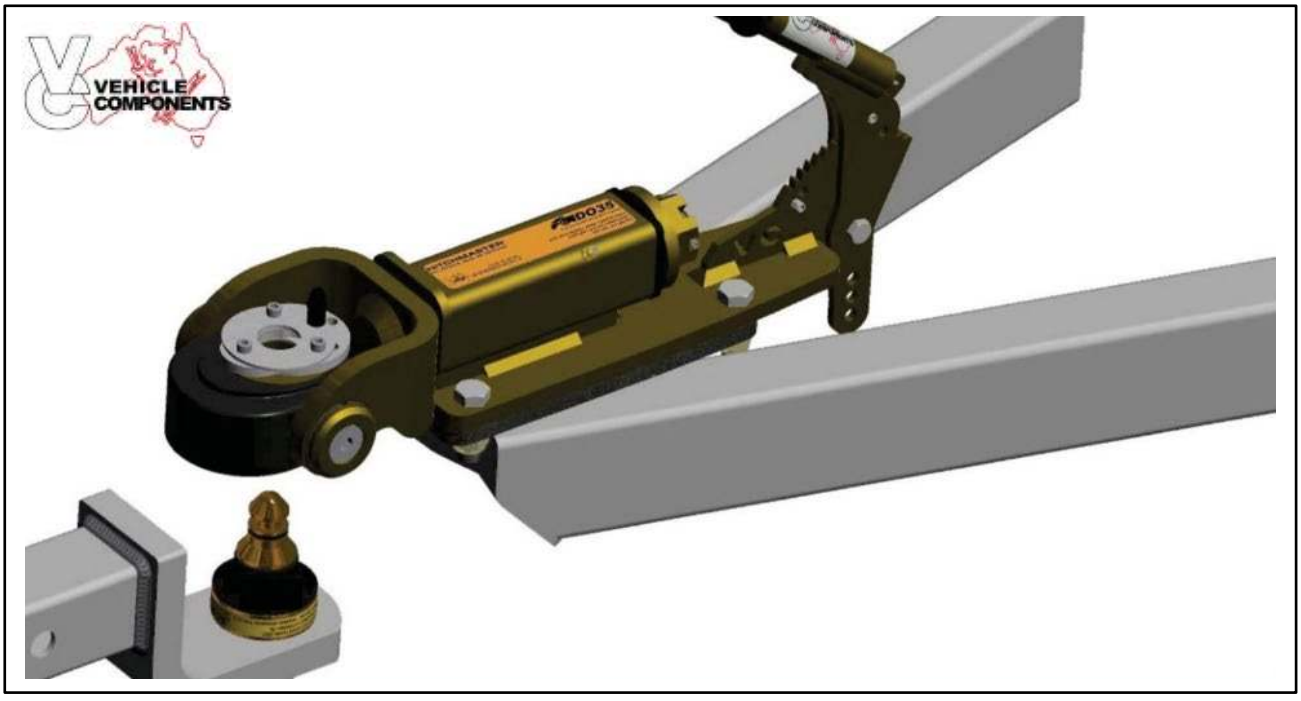
Uncoupling

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.

Setting up your Camper

Choosing a Spot to Set Up

When choosing a spot to set up your camper, start with a flat area with no overhanging trees. Birds and bats occupying trees can defecate leaving droppings on your camper that can damage paint and canvas and leaves and sap can also taint the canvas. Ensure you are not camping in an area prone to flooding or with bad drainage in the event of rain. Even the slightest hollow in the ground can put you in a mini lake. In hot weather if possible, set your camper up so the sun's arc goes from front to back or back to front with the annex/awning in the general direction the sun is arcing across. Doing this will keep the bulk of the camper in shade and the inside cooler as it will be protected by the tropical roof and shaded by the awning.

Levelling Your Camper

The stabiliser legs on your camper are not designed for supporting the full weight of the trailer, they are there to stabilise it once it is level. Using your stabilisers as a lifting mechanism will void your warranty as will extending them with a "rattle gun" or "impact wrench". Levelling front to back can be done by raising and lowering the jockey wheel prior to adjusting the stabiliser legs. Getting the trailer level from left to right should be done with drive on stepped ramps as illustrated below. Once levelled the legs can be lowered to keep the trailer stable. On soft ground you may want to use timber sole boards under the stabiliser feet.

Site Power

The Projecta charger in your camper is connected via the 15A exterior socket. To use site power, you will require a 15A power lead connected to a 15A outlet (figure 1). In the event a 15A outlet is unavailable you will need a conversion box that will step up from 10A to 15A with a safety switch. Never leave power leads coiled when in use, lay the lead out back and forward in a manner that won't be a trip hazard or risk damage to the lead.

Operating the Jockey Wheel

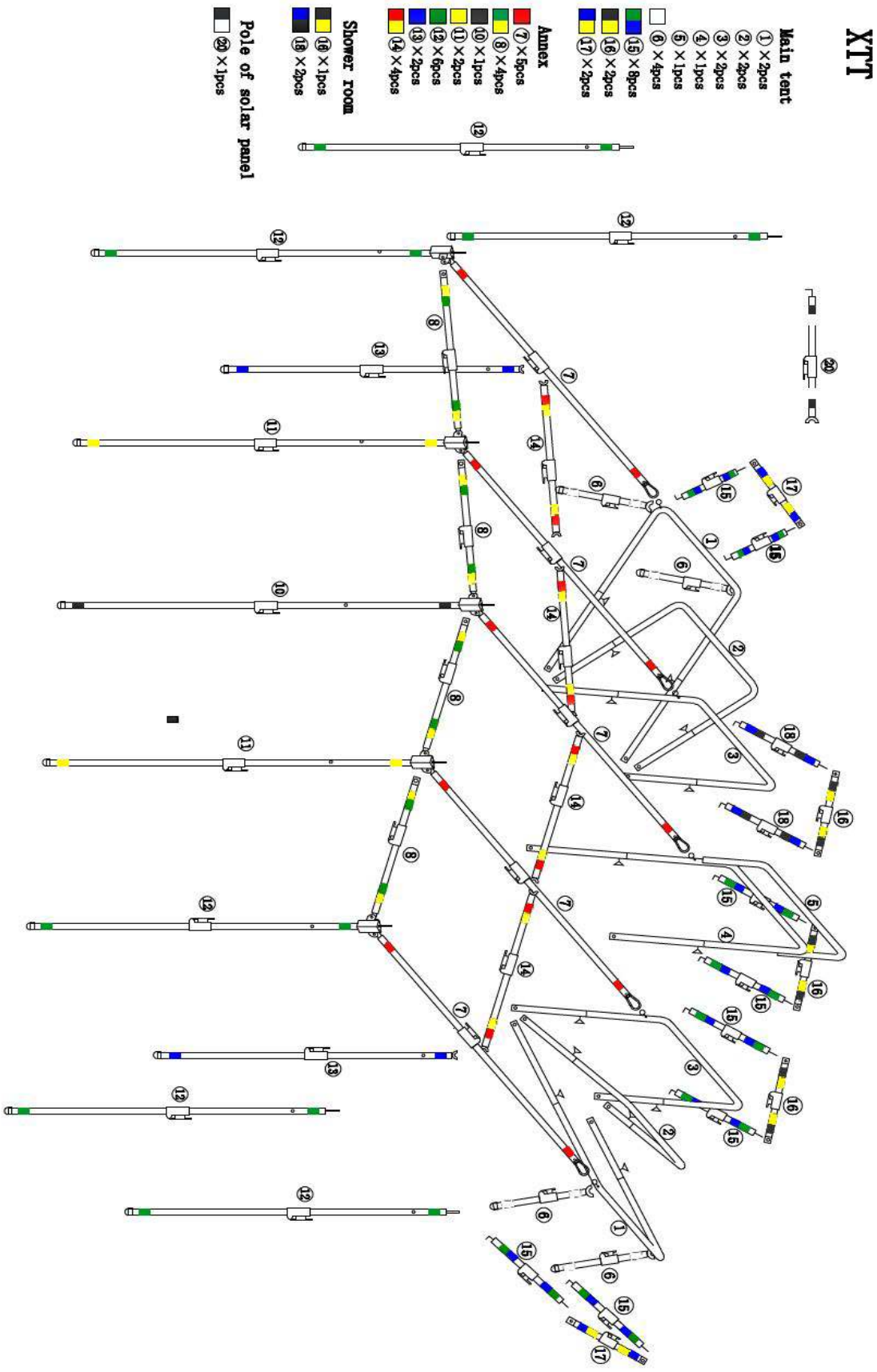
The rated load capacity of a jockey wheel is achieved when the jockey wheel is retracted to its lowest position.

When moving the trailer on the jockey wheel, always lower it as far as possible but still allowing the wheel to swivel as you steer the trailer.

Stabiliser Legs

Stabiliser legs are installed to stabilise the camper or camper when setup. Stabiliser legs should never be used to jack a trailer as they are comprised of small bevel gears held in place by small roll pins that will break if overloaded. Stabilisers are best set vertical or 90 degrees to the chassis where possible. When set and an angle the user must be careful not to overload them causing locking pins or the leg itself to bend. Never use impact wrenches to wind the legs, the impact may damage the gears. When using a power tool, use an electric drill with a safety clutch set low to medium to avoid injury or damage to the stabilisers.

Pole Diagram



Storage & Care

Long Term Storage

To maximise the life of your camper 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 camper to draw away any residual water vapour.
- If packing up with damp canvas, open and dry out the camper at the first opportunity when returning home. Dry all canvas thoroughly and follow point 2.

Exterior

Soft floor: The vinyl cover on the tent of your soft floor camper is designed as a travel cover not a storage cover. For storage at home it is recommended that you use a camper cover or tarpaulin to protect from UV and the elements.

Hard floor: Ensure all seals on the camper have proper compression at 30-50%, are free of dirt and have no canvas protruding past the seals. UV light and the elements can over time cause seals and fitting to perish and become brittle. The use of a camper cover or tarpaulin will extend the life of components and keep your investment looking better for longer.

Care of Paint and Surfaces

Paintwork

The paint coatings on your camper are no different to that of your car in that they need regular care and maintenance.

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

Polishing: New campers 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 oxidisation. The paint on your camper should be waxed annually regardless of being kept under cover to protect the surfaces from oxidisation.

Internal Surfaces

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 solvents, ammonia or caustics

Security

The 15-year anniversary models are supplied with an MDC engineered coupling lock device. This device is designed and manufactured to deter the theft of your new camper.

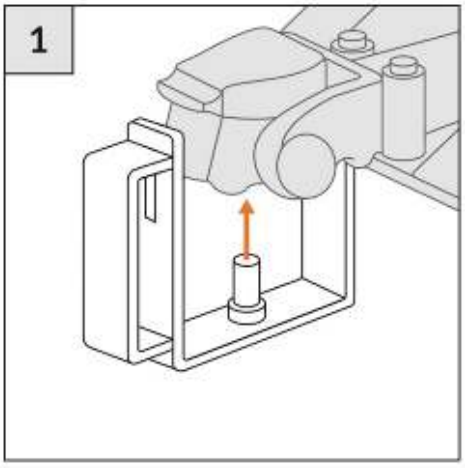
How to attach your lock to your Coupling:

1.

Cruisemaster DO-35 coupling

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.

Slot the pin into the centre of the coupling, aligning the back tab to run in-between the gap at the rear of the coupling.



Canvas Care

Seasoning the Canvas

The process of seasoning your canvas before use is an important one but fortunately an easy process. This process is best done on a warm sunny day with no rain expected.

- Set up your camper and annex with all doors and windows zipped up and closed
- Using your garden hose apply a light spray of water over all the external canvas areas. Wet out the canvas without allowing water to pool in any section then allow to dry thoroughly.
- Repeat the process of wetting and allowing to try another 2 times.
- On the third wetting check for any leaks in the canvas particularly along the seams. If a seam is weeping water through, allow the canvas to thoroughly dry then apply a wax stick along the area of the seam. This is done by lightly rubbing the wax stick over the area. Once applied wet the canvas and check again. NOTE: It is not unusual for seams that aren't able to be seam sealed with tape to weep after seasoning. This is not a reflection of canvas or workmanship but simply a characteristic of canvas tents. If the leak persists, contact your MDC customer representative.

Protecting Seams and Screens

Seams: When erecting any canvas tent, it is vitally important that you don't stress the canvas by overtightening when adjusting the poles. The most common cause of damage to canvas is over tensioning. Adjusting the tent should give the canvas good shape but the material should be relaxed. If you can see the stitching exposed in a seam, then the canvas is under strain and the pole should be backed off.
Screens: Fly mesh screens are vulnerable to damage by poles rubbing against it. When packing up your camper it is important to close windows with both inner and outer canvas zipped up thus protecting the mesh. Never leave door screens rolled up when packing your camper as this can cause harsh creases and damage the screen. Mesh damage by owner misuse is not a warranty issue.

Zipper Care

Few parts of your camper work as hard as zippers particularly if you have young children. To get the maximum service life from zippers there are precautions and maintenance you can do.
Never force a zipper. If it jams or becomes difficult back it up and start again ensuring the two rows are feeding evenly into the slide without one row having much greater weight of canvas than the other. Avoid having doors half zipped when the tent is in use. Leaving the slide in a poor position while the door canvas flaps around or people access the door pushing the canvas out of the way can loosen and damage the teeth. Always fully open or close the entry doors on your tent.
Dry lubricant spray is a great way to make zipping up your tent easier. Apply a light coating of dry lubricant along the length of the zipper as needed.

Protecting from Mould

Mould is very difficult to clean once a tent is affected. There are several ways you can prevent the occurrence of mould on your canvas.
Never leave your camper packed away wet. If you must leave a campsite with wet canvas, 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 even a dry tent 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 camper is stored. Bird droppings can damage your canvas due to the Ph level. Always clean off any animal dropping as soon as possible.
When storing your camper between camping trips it is recommended you pack a couple of moisture absorber packs into your camper. On soft floor campers these are best placed beside the mattress, on hard floor camper they should be packed inside the main body. Using these packs is critical in tropic regions due to the humidity as when the inside temperature of the camper drops overnight, the moist air can turn into condensation which in turn will cause mould.

Maintenance

Maintenance is essential to keep your camper in a safe and usable condition. Campers 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.

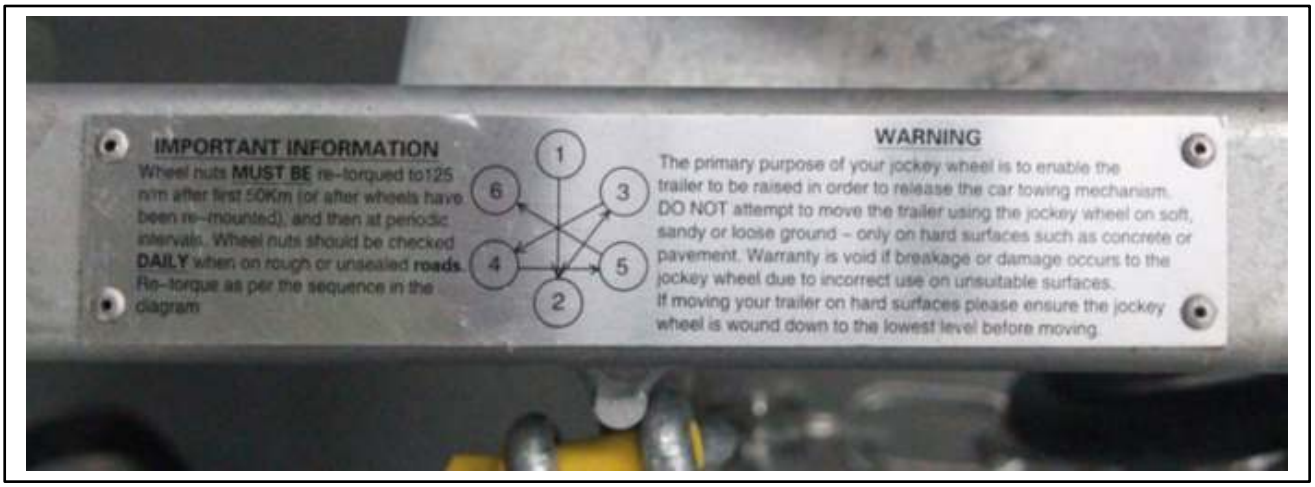
WARNING:

- Never work beneath the camper 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

Torque Settings

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 and 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

Brakes and Handbrake - Electric

Features

Your trailer is fitted with electric brakes that require a brake controller that can be operated from the driver's seat.

1. Manual adjusted to provide the correct braking capability for varying road, off-road and load conditions.
2. They can be modulated to provide more or less braking force, thus easing the brake load on the towing vehicle.
3. There is very little lag time between the moment the tow vehicle's brakes are actuated and the moment the trailer brakes are actuated.
4. They can provide some braking independent of the tow vehicle in the event of an emergency.

Operation

When electrical current is fed into the system by the controller, it activates the electromagnets in the brakes. These electromagnets are energized and are attracted to the rotating surface of the drums which moves the actuating levers in the direction that the drums are turning thus applying pressure from the brake linings to the drum surface

Handbrake

Adjuster Automotive Type

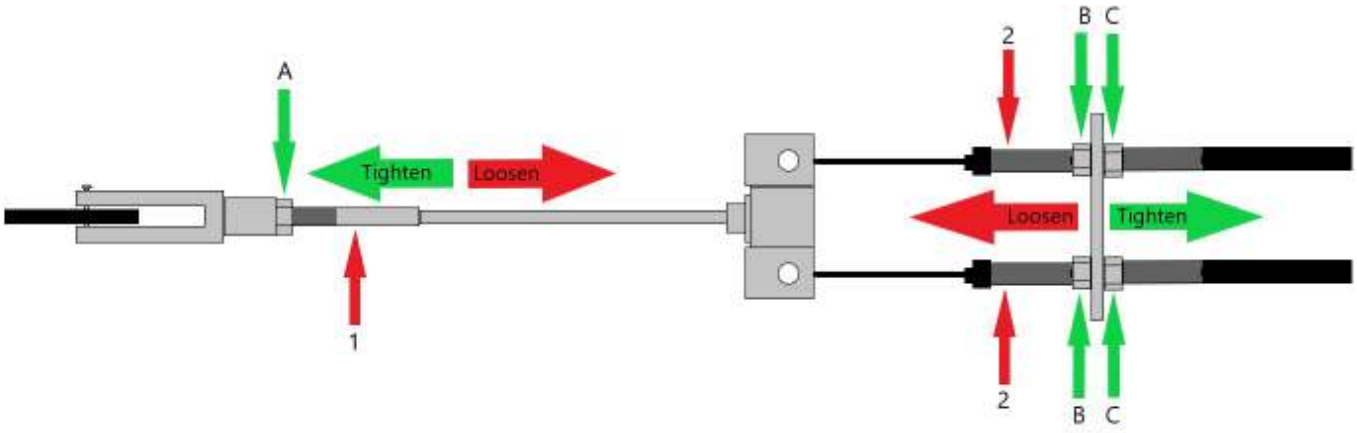
Adjusting the automotive style handbrake on later models is done as follows.
To adjust the left and right side simultaneously:

1. Loosen locknut A
2. Turn shaft 1 clockwise, shortening the length exposed until desired adjustment achieved.
3. Re-tighten locknut A

For extended adjustment or to balance left and right cables:

1. Choose the side you want to adjust and undo locknut B.
2. Turn locknut C behind mounting bracket clockwise in the direction of the handbrake lever while loosening locknut B to tighten the cable and apply more handbrake.
3. Turn locknut B clockwise towards the backing plate while loosening locknut C to reduce handbrake.
4. When finished, tighten locknuts to prevent further movement.

Fig: H1



Hitch

Cruisemaster DO35

To ensure a long service life we recommend the following periodic maintenance procedures.

1. Always keep Tow Pin and Universal mating surfaces clean and lightly lubricated.
2. Check condition of Tow Pin O-Ring and replace if necessary (Part No. 18D-DO35-101).
3. Regularly lubricate grease points with multi-purpose grease.
4. Periodic adjustment of Slotted Nut & Pin may be required of coupling head loosens excessively and should be a competent person.
5. Flush with clean water if locking mechanism does not open fully due to dirt ingress.

Ball Bearing Slides

To lubricate and protect from corrosion the ball bearing slides should be lubricated with a small amount of general purpose grease every 6 months.

Correct Use of Your Electric Brakes

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.

Important Safety 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 Campers accepts no liability for personal injury, loss or damage resulting from incorrect applications, methods, and failure to perform maintenance safely and correctly.

Brake Adjustment

Brakes should be adjusted (1) after the first 300 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. The brakes should be adjusted in the following manner:

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.

Brake Lubrication

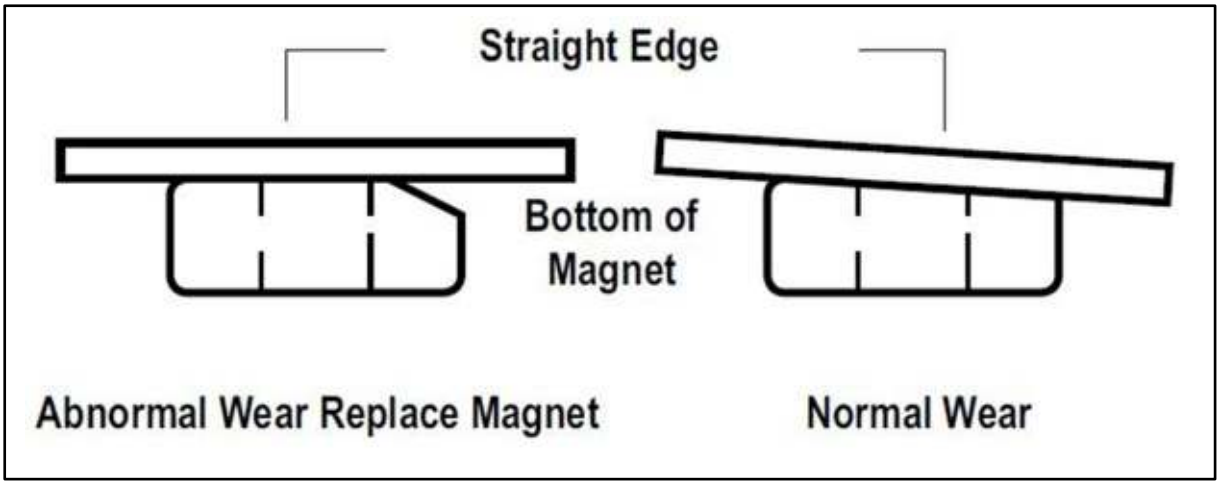
This should only be done by qualified persons.

Caution

Do not get grease or oil on the brake linings, drums or magnets.

Magnets

Your electric brakes are equipped with high quality electromagnets that are designed to provide the proper input force and friction characteristics. Your magnets should be inspected and replaced if worn unevenly or abnormally.



Even if wear is normal as indicated by your straightedge, the magnets should be replaced if any part of the magnet coil has become visible through the friction material facing of the magnet. It is also recommended that the drum armature surface be refaced when replacing magnets.

Magnets should also be replaced in pairs - both sides of the axle. Always use genuine MDC OEM parts.

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.

Corrosion Prevention

It's important to take steps to prevent corrosion of parts on your trailer to extend the service life. Many fittings are high tensile and therefor zinc plated. Fittings such as this can benefit from additional protection. Some helpful products to prevent corrosion are "Lanotec", "WD40", "Inox" and similar products. These can be spray applied and do a very good job of protecting metal surfaces, particularly in corrosive and aggressive environments near the ocean and inland waterways.

Often, we take our campers to saltwater environments. Driving through salt water is never recommended as the residual chloride ions accelerate corrosion greatly. If you are camping near or driving through these kinds of environments, we highly recommend that your trailer be thoroughly cleaned after use. Flushing the chassis and washing and rinsing your trailer is important.

Wheels and Tyres

Highway

Your camper 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 camper is 62psi

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 camper 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 camper.

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.

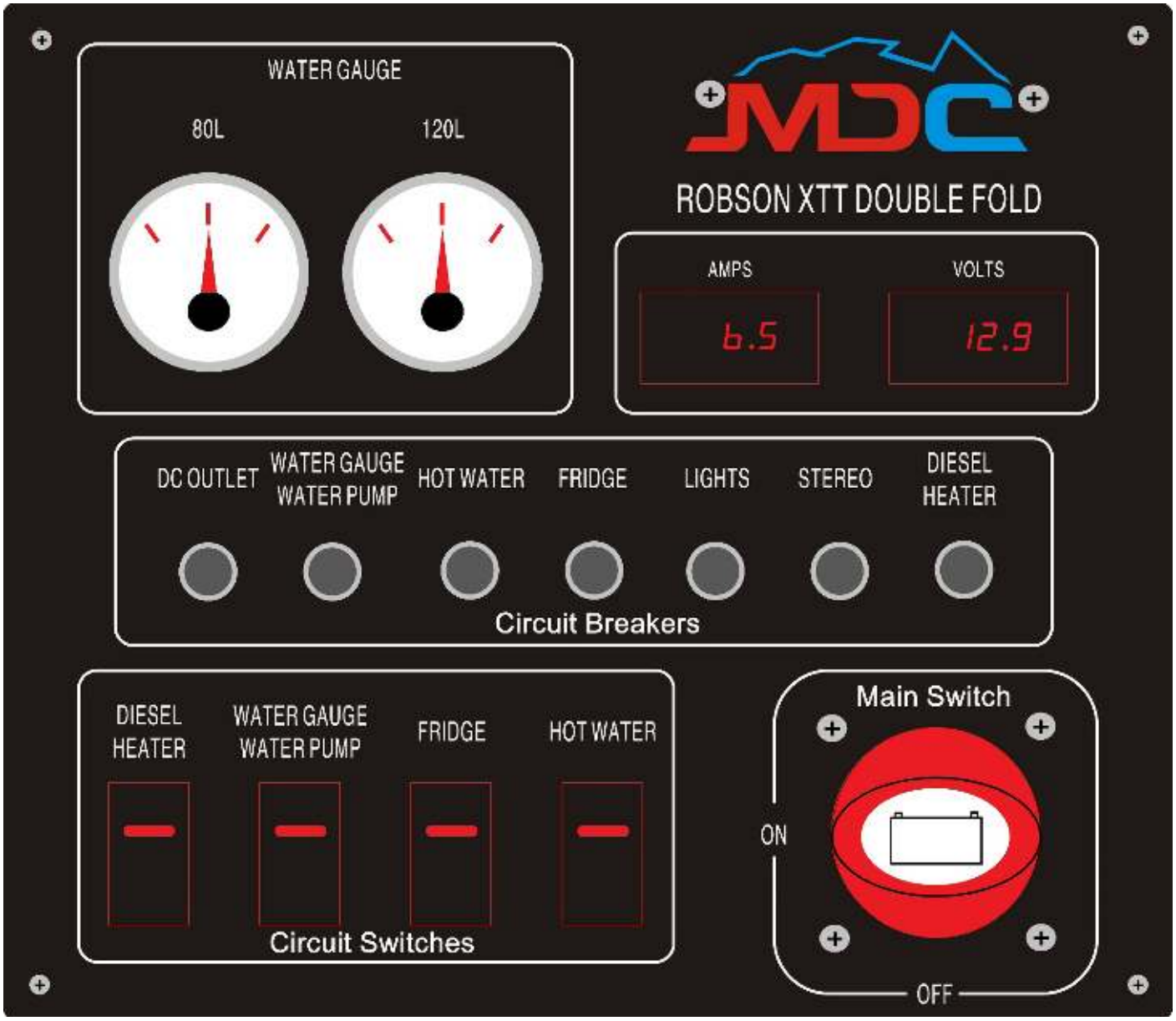
Electrical Systems

RCD Protection

If your trailer is fitted with 240v input from mains power it will have an RCD safety device fitted between the mains power inlet and your electrical system. If your trailer is fitted with a 240v inverter it will also include an output RCD safety device. These units are fitted with a test switch to check they are working correctly. Suggested test interval is monthly and/or prior to each trip.

Control Panel

Control panel with functions indicated.



*Voltmeter will indicate battery voltage when idle or charge voltage when charging

* Amp meter will show current being used not charge current

Charging from your Vehicle

A 12-pin trailer plug is also required. In addition to the standard wiring to pins 1 to 7, power must be supplied to the number 12 pin for the trigger wire for the DC-DC charger while the engine is running.

- The IDC25L is programmed to favour the solar power supply until the supply falls below the minimum threshold for the controller. By supplying power to the trigger wire through the #12 pin, the unit will switch mode to favour the supply via the Anderson plug when the tow vehicle engine is running.

Vehicles that have a "smart alternator" require the IDC25L to be activated via the trigger wire for the ECU to detect the charge requirement of the RV battery.

Lithium Battery System

Your 15 Year Anniversary Edition 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 Camper 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:

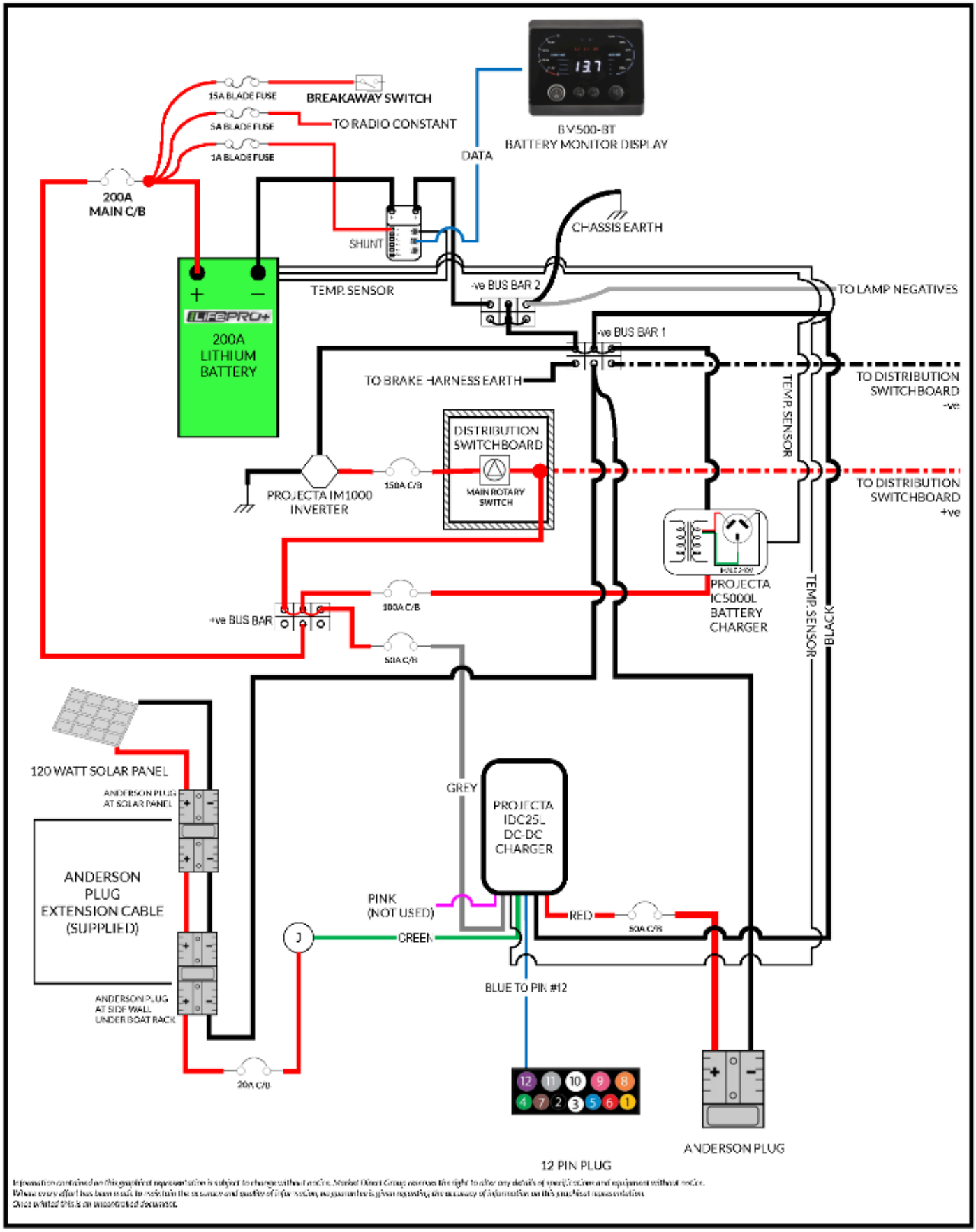
1. Turn off all loads.
2. Connect your Caravan or Camper Trailer to 240V (AC) mains power and switch it on – this will start the Battery Charger.
3. Confirm BULK CHARGE light is displayed on the screen; and
4. Charge battery for at least one hour before turning DC loads back on.

(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.

**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)*

12 Volt Wiring Diagram Main Circuit



Information contained on this graphical representation is subject to change without notice. Market Direct Group reserves the right to alter any details of specifications and equipment without notice.
While every effort has been made to maintain the accuracy and quality of information, no guarantee is given regarding the accuracy of information on this graphical representation.
Once printed this is an uncontrolled document.

Wiring Diagram Switch Panel

COMING SOON

Gas & Water Systems

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.

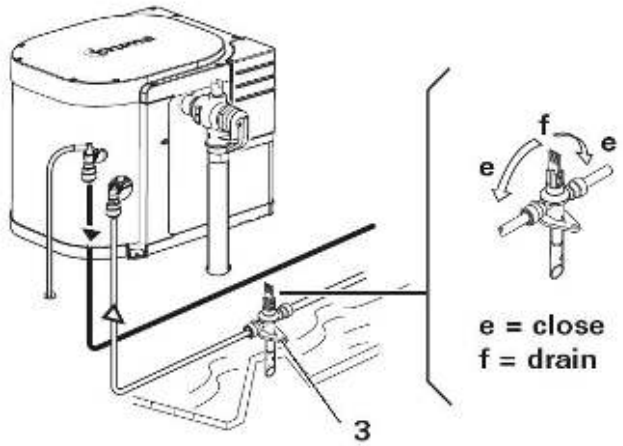


Fig. 2

– 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 and Temperature Relief Valve (P&T safety 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.

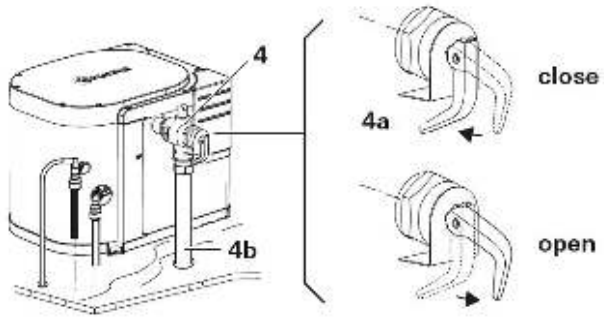


Fig. 2a

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).

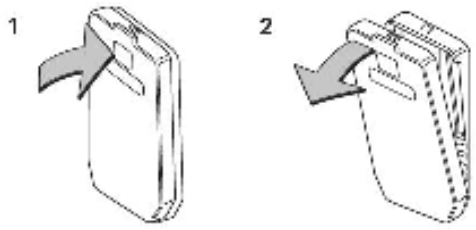


Fig. 3a

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.

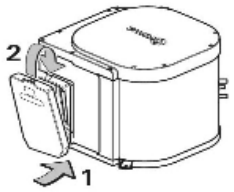


Fig. 4

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 indictor lamp (a) lights up if there is a fault. For possible causes please refer to “Fault finding” on page 6. 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).

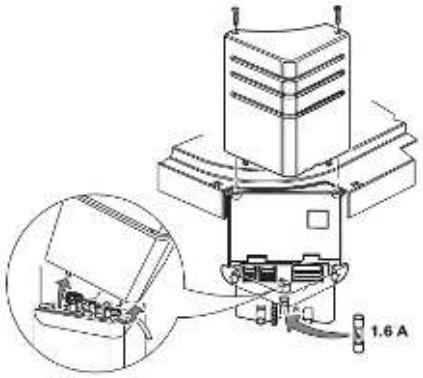


Fig. 6

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.

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

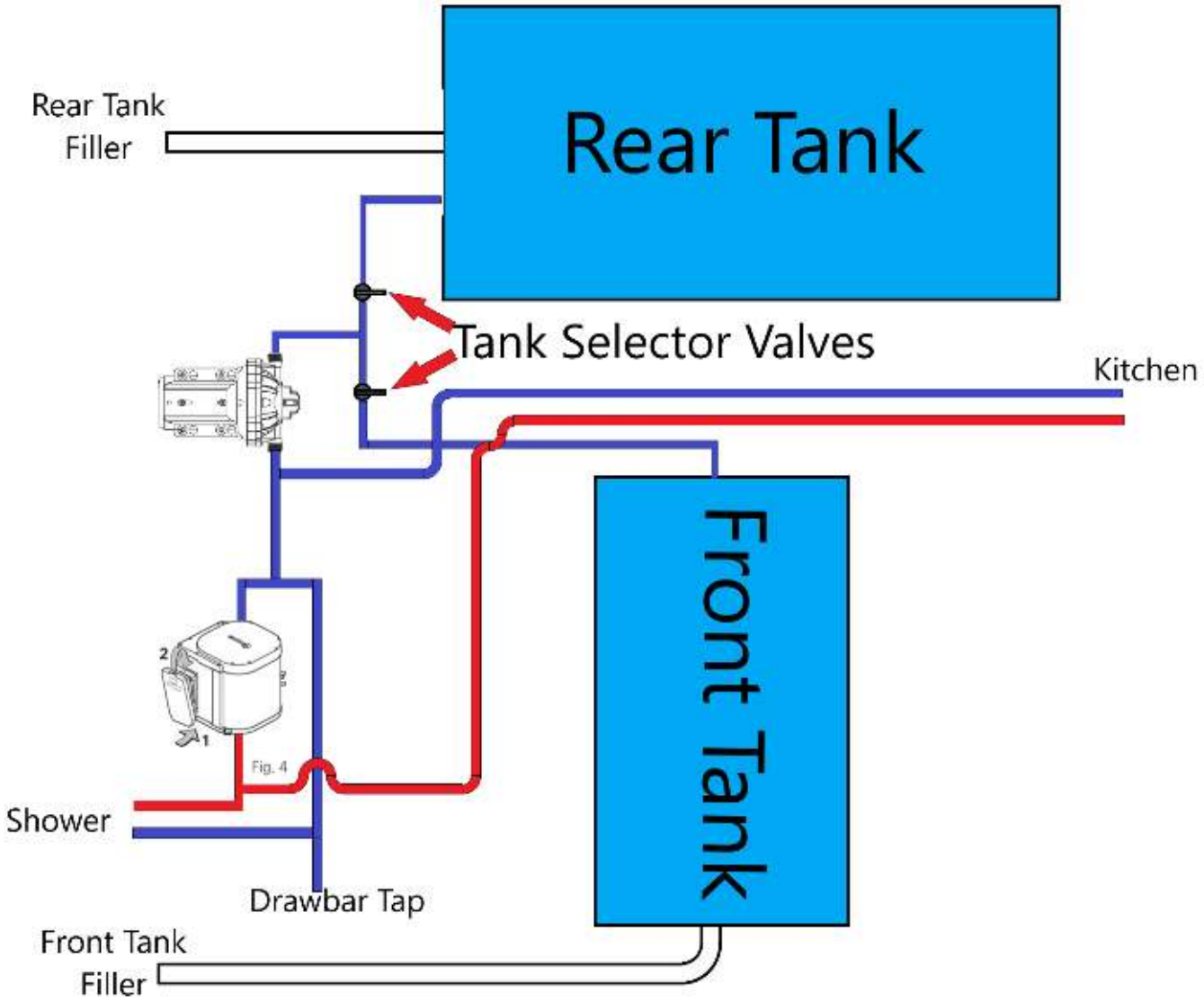
Symptom	Cause	Remedy
Water drips from the P&T safety valve.	– Water pressure to high. – Lime or dirt under the P&T safety valve seat.	Check water pressure (max. 400 kPa), use a pressure reducer when connected to central water supply. Allow the appliance to cool and then slowly raise the test lever (Fig. 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 Pumps

The water pump in your Robson XTT are located under the seat on the driver's side of your camper behind the wheel arch. The pumps when switched on are activated by the release of pressure at the tap and will pump water continuously until the tap is turned off and pressure restored. Should the pumps activate while the taps is turned off this could indicate a leak and require investigation and rectification.

Switching Water Supply Tanks

To switch between the supply tanks, locate the valved beneath the camper underneath the driver's side near the hot water system.



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 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.

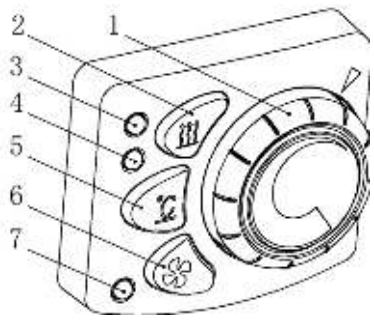
Danger!

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 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.

MkII Diesel Heater

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.

Times of flashes of LED	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

Electrical 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
Other	DC to DC Charger Fault	Check DC to DC charger fault codes
Other	240v Charger Fault	See 140v ChaRGER Fault Codes

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

12v Charge Inputs (Car & Solar)

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
	Tripped breaker in car circuit	Check car circuit breaker/fuse
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.
No charge DC to DC alternator lit	Tripped breaker	Reset circuit breaker CB4 Fig. 1
	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.
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
	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
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.

IDC25L DC to DC Trouble Shooting

LED Charge Indicators

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

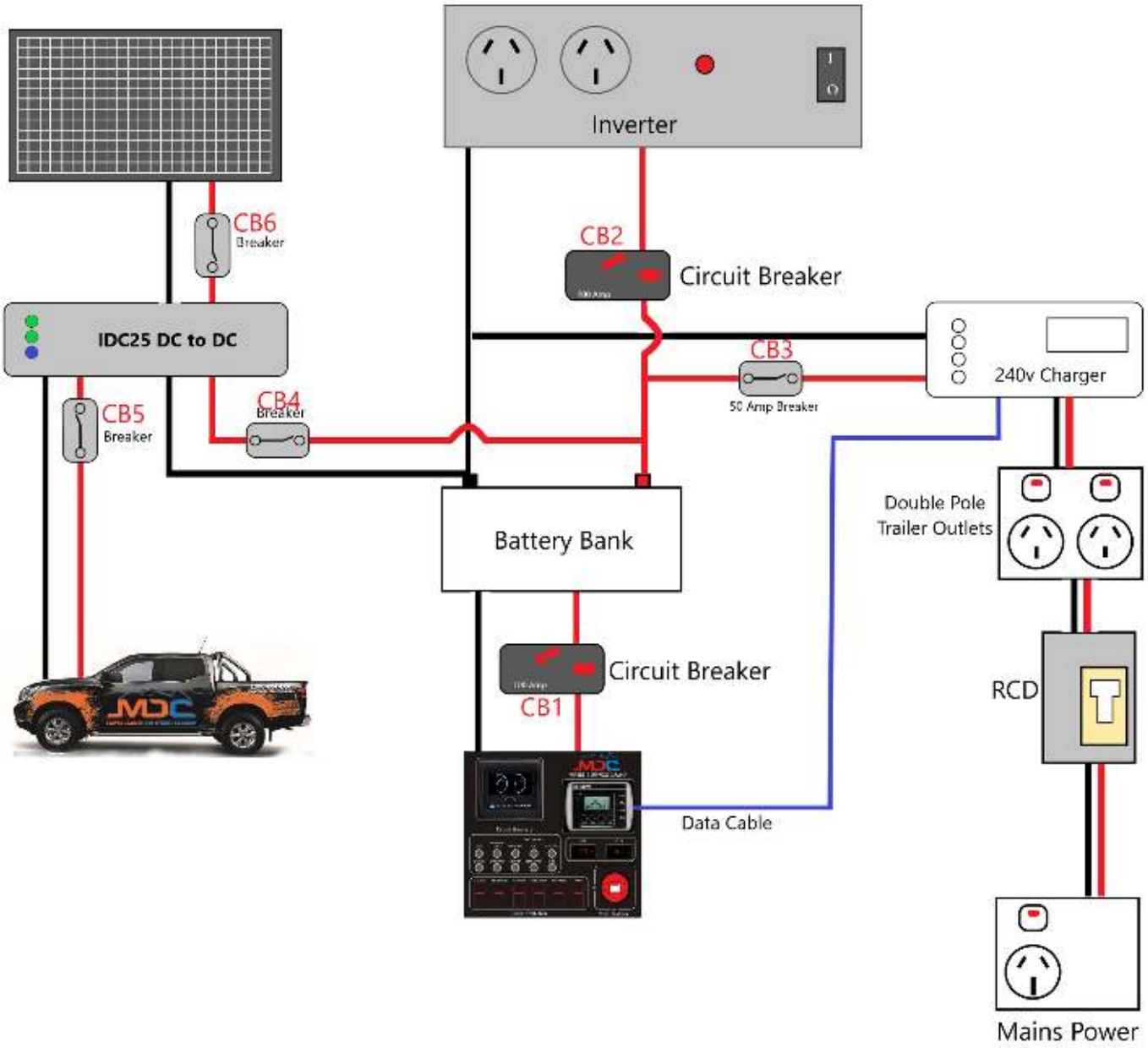
Fault LED Indicators

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				Bulk 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 and
	Solid RED			Solar input is reversely connected	Check solar input connection
	RED Flashing			Overvoltage is detected at Solar Input	Check solar panel open circuit voltage
		Solid RED		Alternator input is reversely connected	Check alternator Input Connection
		RED Flashing		Overvoltage is detected at alternator	Check vehicle battery voltage

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
	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.

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

Control Panel & Accessories		
Symptom	**Possible Cause**	**Remedy**
Control panel won't switch on	Flat batteries	Charge batteries
	Tripped circuit breaker	Reset circuit breaker CB1 Fig.1
Accessory circuit not working	Tripped circuit breaker	Reset circuit breaker above circuit switch by pushing in. Listen for click.
RV Electronics tank gauge not working	Flat battery in face panel	Remove face cover and replace battery (see RV electronics manual)
Inverter not switching on	Tripped circuit breaker	Reset circuit breaker CB2 Fig. 1



*Note: *This is a simplified diagram for trouble shooting purposes only*

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

Mechanical Trouble Shooting

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
Brakes pulsing at low speed	Brake controller setting too high	Lower brake controller setting

Useful Accessories

Levelling Blocks

These are excellent for levelling your trailer on set up. Stabiliser legs are not meant for correcting the trailer angle, they are there to keep it stable when people are in it. Using levelling blocks will extend the service life of the stabiliser legs and make set up much safer and faster. See below images.

Wheel Chocks

Wheel chocks are an important safety device when leaving your trailer parked on even the slightest incline. On level ground it is recommended to chock both sides of the wheel. On a hill you should chock the wheels on the downhill side ensuring the chocks

Covers

Hard floor campers will benefit greatly from a storage cover. Perishable fittings such as rubber seals and plastic will be protected from UV radiation. Paint and gelcoat finishes will oxidise less and this will extend the service life of these finishes.

Stone Protection

There are proprietary devices available that assist in protecting your trailer from stones thrown up by the tow vehicle. Rock Tamer and Stone Stomper are two of the most commonly used.

Handy Tips

Driving Off Road

Towing your camper 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 have 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.

Warranty Statement

These Warranty Terms form part of the contract between you and Market Direct Group Pty Ltd (ACN 115 038 483) ("we" or "us") for the purchase of your new Off-road Caravan or Camper Trailer. Please read these Warranty Terms carefully. Should you have any questions relating to this Warranty, then please contact us.

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.

1. VALIDITY OF CLAIMS

a) 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 12 months after that date, except with regard to the structural integrity of the draw-bar and chassis, for which this Warranty shall continue for the entire operational life of the Camper or Caravan.

b) 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).

c) 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.

d) 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.

e) 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.

f) 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.

2. REMEDIES AND LIMITATION OF LIABILITY

a) Except as otherwise required by law, your remedy if we accept a warranty claim 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.
b) 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.
c) 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.

3. ITEMS NOT COVERED UNDER THIS WARRANTY

This Warranty does not cover damage of the following kinds or to the following products or parts of products:

a) Rust
b) Wheels and Tyres
c) Paint
d) Travel Covers and Straps
e) General consumables (e.g. bearings, light bulbs etc)
f) 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.

4. FACTORY SECONDS, EX-DEMONSTRATION AND DAMAGED GOODS

a) 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.
b) 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.
c) 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.
d) 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.

5. 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 rights to make a warranty claim for products purchased at auction.

6. 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:

a) 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.

b) 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. that basis, even if you subsequently correct the information. If you are unsure whether information is relevant, include it in your application and we will assess its relevance.

c) 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.

d) If you provide us with false, misleading, or selectively incomplete information, we may reject that application on that basis, even if you subsequently correct the information. If you are unsure whether information is relevant, include it in your application and we will assess its relevance.

7. 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 camper service record booklet and logbook will help you keep track of kilometres travels and service records.

Trip Name	Date	Km Start	Km Finish	Cumulative Km

Trip Name	Date	Km Start	Km Finish	Cumulative Km

Mechanical Maintenance

Maintenance is essential to keep your camper in a safe and usable condition. Campers 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 camper 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

Hitch

Cruisemaster DO35

To ensure a long service life we recommend the following periodic maintenance procedures.

6. Always keep Tow Pin and Universal mating surfaces clean and lightly lubricated.
7. Check condition of Tow Pin O-Ring and replace if necessary (Part No. 18D-DO35-101).
8. Regularly lubricate grease points with multi-purpose grease.
9. Periodic adjustment of Slotted Nut & Pin may be required of coupling head loosens excessively and should be a competent person.
10. Flush with clean water if locking mechanism does not open fully due to dirt ingress.

Ball Bearing Slides

To lubricate and protect from corrosion the ball bearing slides should be lubricated with a small amount of general purpose grease every 6 months.

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 camper 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 camper 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 camper 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 services 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.

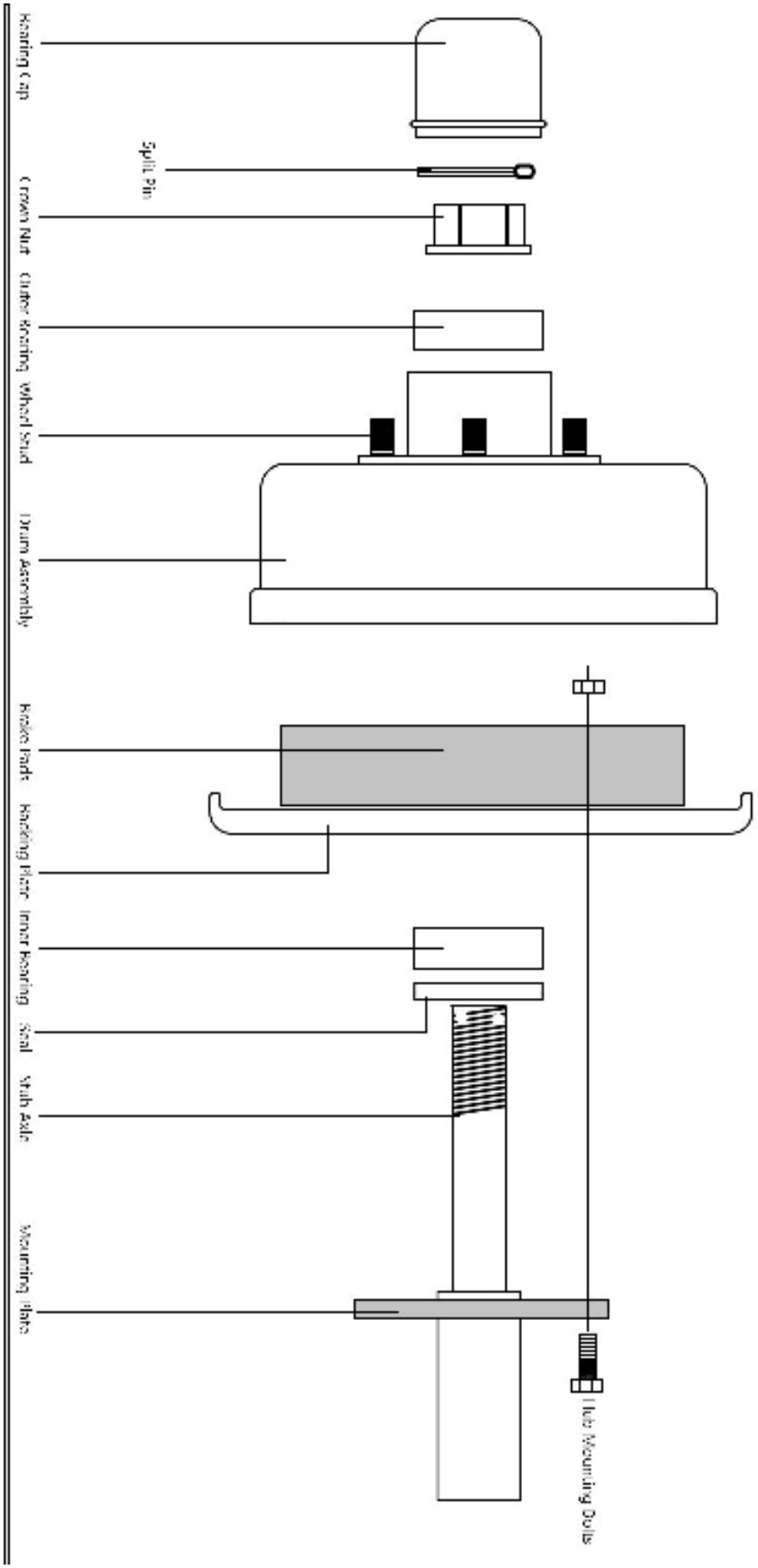
NOTE: Wheel alignment should be checked and adjusted periodically to prolong tyre life.

Spare Part Numbers

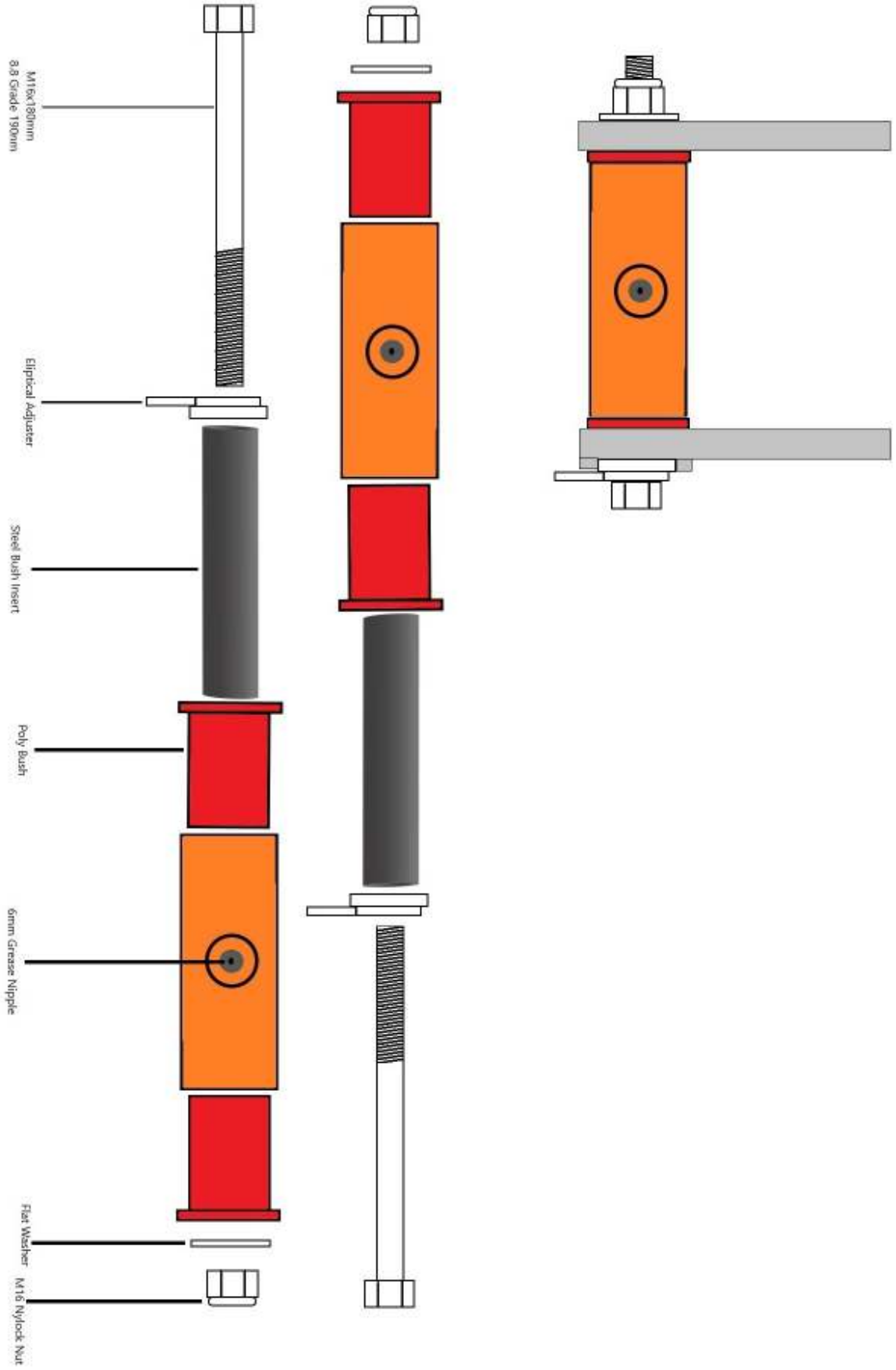
Hub & Suspension Components

Timken Bearing (inner & outer bearings)	25590
Bearing Cone (Inner and outer bearings)	25520
Bearing Seal	55 x 85 x 12mm
50 x 50mm square Poly Orange Bush	YJJJ016
Steel Bush Insert 30 x 114mm	YZCN002
Adjuster Cam	YDS030
LHS Backing plate Assemble (with pads)	DM00025
RHS Backing Plate Assembly (With Pads)	MJFCX003
Crown Nut M38	LGPJ002
14mm Wheel Stud	YHJL110
14mm Wheel Nut	YZCQ029
½" UNF Wheel Stud	YZCQ009
1/2" UNF Wheel Nut	YZCQ007
Grease Nipple	6mm

Hub Assembly



Trailing Arm Bushes



Recommended Recovery Products

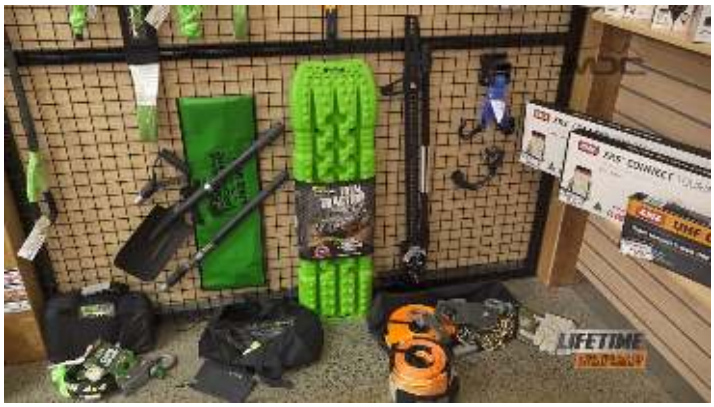
Recovery points

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.

Maintenance Schedule

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. Replace if necessary. • 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. Replace if necessary. • 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. Replace if necessary. • 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	
Camper 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. • 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 camper 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. Replace if necessary. • 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. Replace if necessary. • 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	
Camper 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 • 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 camper 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. Replace if necessary. • 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. Replace if necessary. • 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	
Camper 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. • 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 camper 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. Replace if necessary. • 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. Replace if necessary. • 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	
Camper 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. • 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 camper 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. Replace if necessary. • 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. Replace if necessary. • 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	
Camper 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. • 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 camper 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. Replace if necessary. • 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. Replace if necessary. • 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	
Camper 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. • 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 camper 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. Replace if necessary. • 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. Replace if necessary. • 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	
Camper 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. • 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 camper 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: _____ _____ _____ _____ _____ _____

Supplier Contact Details

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Statewide Bearings	
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Handover Video Tutorial

This video demonstrates the general features and appliances to operate the camper

Scan the code or go to https://youtu.be/fhAOvfZ9SNQ

Setup Video Tutorial

This video demonstrates erecting the main tent and trailer set up

Scan the code or go to https://youtu.be/O5JzARZLBpM

Kitchen & Electrical Video Tutorial

This video demonstrates using the kitchen and electrical system

Scan the code or go to https://youtu.be/wJ00NuHgKKc

Annex Roof Set Up 2020 onwards model Video Tutorial

This video demonstrates setting up the annex roof

Scan the code or go to https://youtu.be/EkdionfWq50

Annex Walls and floor Setup Video Tutorial

This video demonstrates setting up the annex walls and floor

Scan the code or go to https://youtu.be/jZmJuFc5oj8

Shower Tent Setup Tutorial

This video demonstrates setting up the ensuite shower tent

Scan the code or go to https://youtu.be/pTGPa2L0G4w

Pack Down Video Tutorial

This video demonstrates how to pack down your camper

Scan the code or go to https://youtu.be/bZmYhJeqyAw

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