XT16HR ISLAND

OFFROAD Travel Trailer

OWNER'S MANUAL

U.S.A. EDITION: 2023 - Version 1

www.mdcusa.com

* 2021 Model shown.

Phone: 833-632-8721

DISCLAIMER: This Owner's Manual is provided in good faith, and MDC may amend or update this Owner's Manual from time to time at MDC's discretion.

Use of Product

The intent and purpose of this Owner's Manual is to assist owners in the correct use and operation of camper trailers and caravans (the "Product") and outline the servicing schedule to be followed in order to ensure the correct maintenance of the Product.

Servicing

Servicing information contained in this Owner's Manual is provided for those who have appropriate technical skills in regard to maintenance and repairs. The servicing content of this Owner's Manual assumes a satisfactory technical knowledge,
as well as mechanical skills and experience, therefore, it is not suitable for people who are not trained or qualified in the subject matter with which it deals.
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 Product you are working on, including making it unsafe.

Users of this Owner's Manual must:

a. *Read all content thoroughly. It is especially important to have a good understanding of all of the contents shown in the INTRODUCTION and SAFETY Sections of this Owner's Manual.*
b. *Use only the correct tools and equipment for all repairs and servicing.*
c. *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. If you have any questions, please contact us at: 1-833-632-8721
d. *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 Product or render it unsafe.*
e. *Understand that the 'Cautions' and 'Notices' in this Owner's Manual 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 Owner's Manual.*
f. *You must carry out your own risk assessments as you work.*

MDC does not warrant against and does not accept any or all liability (whether for personal injury, death, illness, property damage or other losses or damages) which may arise because a user of this Owner's Manual failed to follow directions set forth in this Owner's Manual or to follow other safe work methods associated with use and maintenance of the Product. This Owner's Manual is subject to the MDC Limited Warranty found at: www.mdcusa.com
Those without the required skills, knowledge, tools, and experience to work on and maintain the Product should seek the services of a suitably qualified person or business.
This Owner's Manual is based on the latest Product information at the time of release. However, specifications and procedures are subject to change without notice. Any updates to this Owner's Manual may be found at: www.mdcusa.com
www.mdcusa.com
Ph: 1-833-632-8721

My XT16HR Island

NAME:	
ADDRESS 1:	
ADDRESS 2:	
MODEL:	
VIN:	
BUILD DATE:	
DRY WEIGHT:	
GVWR:	
TIRE SIZE:	
DEALER PH:	

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 Campers and Caravans Inc.*

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General Safety Information

Safety Alert Symbols and Signal Words

This owner manual provides general information only for the model depicted. You must read, follow, and understand the instructions of all third party fitments, appliances, and accessories as well as the manufacturers information contained in this manual.

MDC trailers are manufactured using many third party supplied products which have separate manuals. These manual must be read in conjunction with this document and all instructions followed. If your trailer does not have additional manuals included, contact Market Direct Group on 1-833-632-8721

Safety information in this manual is denoted by ⚠

Risk level is indicated by the following Signal Words.

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

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

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

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

INFORMATION- Helpful information and important points.

Reporting Safety Defects

If you believe that your vehicle has a defect that could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying MDC Caravans and Campers INC.
If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Market Direct Group.
To contact NHTSA, you may either call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-4249153), go to http://www.nhtsa.gov; or write to: Administrator, NHTSA, 400 Seventh Street. SE., Washington, DC 20590. You can also obtain other information about motor vehicle safety from http://www.nhtsa.gov. Call 1-833-632-8721 to reach MDC Caravans and Campers INC.

Tow vehicle and Trailer Compatibility

Your tow vehicle manufacturer has applied a maximum towing capacity to the vehicle which is the Gross Trailer Weight (GTW) and a maximum Gross Combined Weight Rating (GCWR). 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.

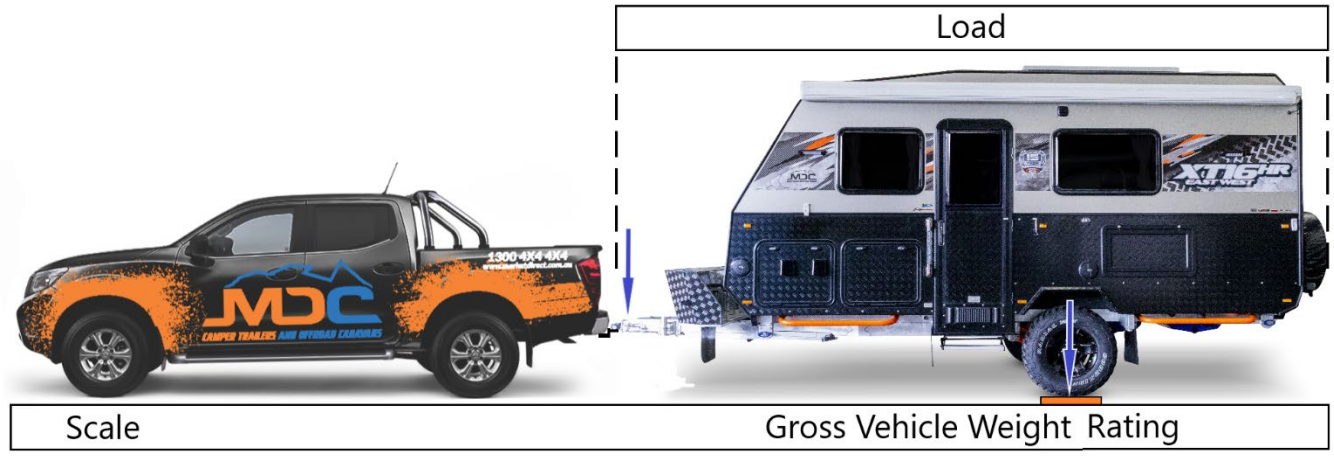
DANGER

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

Terminology & Abbreviations

Dry Weight: The total weight of the trailer (load on tires 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.

GVW (Gross Vehicle Weight) 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 GVW Rating must not be exceeded.



GCWR (Gross Combination Weight) Rating: The total permissible mass that can be supported by the wheels/ tires of the Tow Vehicle and Trailer Combination. This includes whatever you add as payload (e.g. water, gas, equipment, and luggage), and total weight of the tow vehicle. The GCW Rating must not be exceeded.

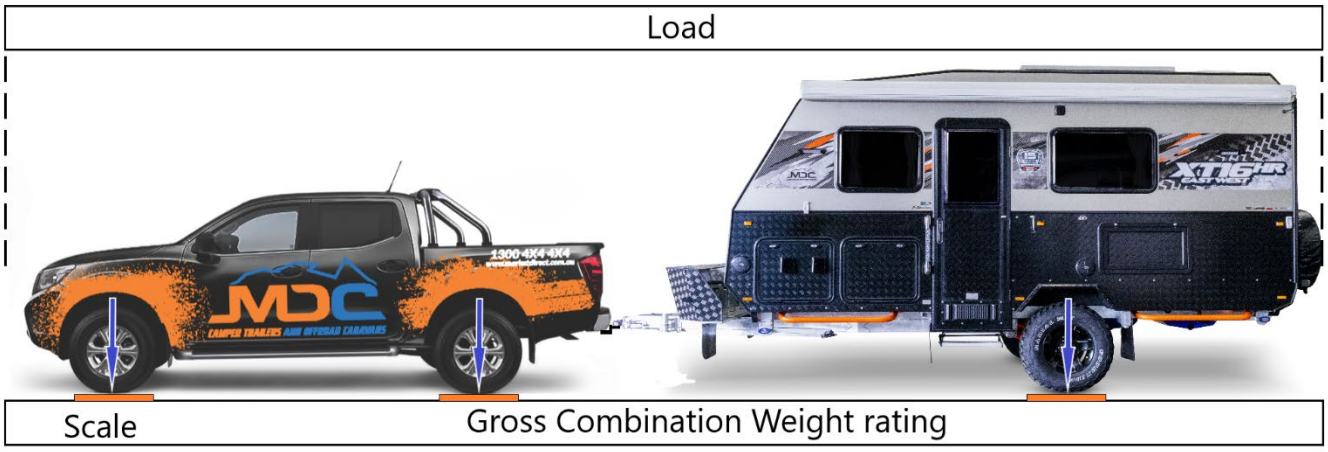


**Illustration Purposes Only*

Tongue Weight: The downward load exerted on the tow point of the vehicle by the trailer.
Dry Weight: The total weight of the trailer with no cargo, water, or propane.
GVW (Gross Vehicle Weight): The total mass of the trailer and cargo.
GVWR (Gross Vehicle Weight rating) Maximum rated total mass of trailer and cargo.
GCWR (Gross Combination Weight Rating): 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 tire begins to tilt inward towards the chassis rail.
Your MDC trailer should be 0-0.5 degrees negative camber.
Toe In/out: Negative toe, or toe out, is the front of the wheel pointing away from the centreline of the vehicle. Positive toe, or toe in, is the front of the wheel pointing towards the centreline of the vehicle. Toe can be measured in linear units, at the front or rear of the tire, or as an angular deflection. In the case of MDC products, the "toe in"
is measured in degrees or 64th's of an inch at the front of the tire from the chassis rail.
Your MDC trailer should have toe in set at 3/64" to 5/64" over the diameter of the tire.

Secondary Escape

The secondary escape in your trailer is marked as "**EXIT**" and has red release handles as shown in the photo below. This escape must be clear and unobstructed for emergency escape should the main entry/exit door becomes inaccessible.

To use this escape:

1. Retract blinds/screen.
2. Turn red handles to open.
3. Escape through open window hatch.

Fire

CAUTION

Ventilation

Do not obstruct any permanent ventilation in this camper/caravan including annex attachments.

Precautions

Do not leave children or pets alone in the camper/caravan.

Combustible Materials

Keep all combustible materials away from:

- Ovens and cooktops
- Hot water heater
- Diesel heater and outlet

Fire Extinguisher

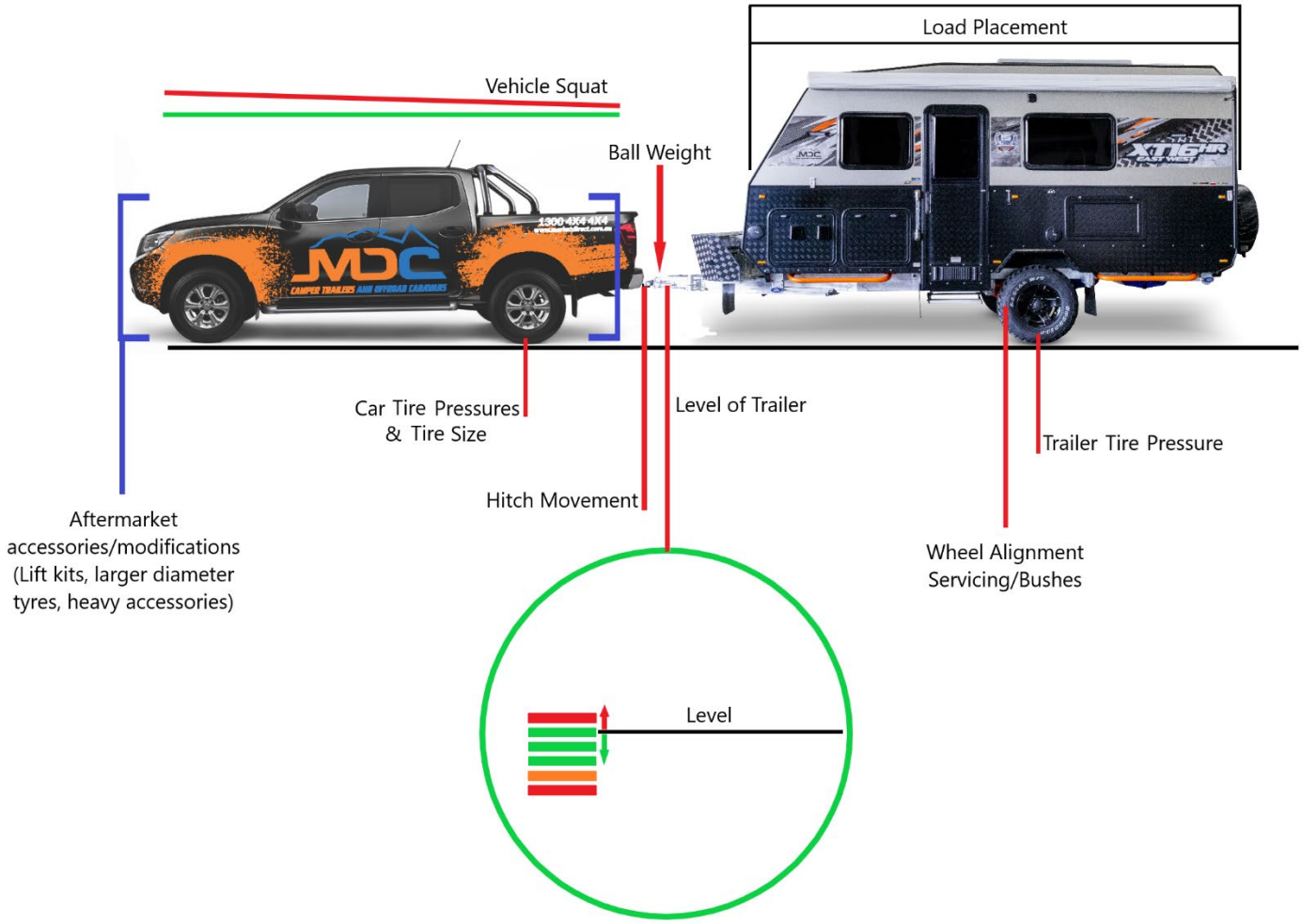
Ensure fire extinguisher is free of obstruction and in operable condition.
Ensure you are familiar with its location and operation.

In Case Of Fire

- Evacuate everyone from the trailer and clear the immediate area.
- Turn off gas valve at the gas cylinder.
- Disconnect mains power supply.
- Call fire brigade on 911
- Only try and extinguish the fire if safe to do so.

Achieving a Safe Towing Combination

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



Trailer Tire Pressures

Tire pressures have a large effect on the handling and performance of any vehicle, be it a towed vehicle or motorized. The tire pressure on your camper or caravan will indeed be a major contribution to how well it tows and resists instability. Due to how much a camper or caravan may vary in weight depending on the cargo (as much as 3,500lbs to 7,700lbs in the MDC range) it is important to have your tires at the pressure recommended by the trailer manufacturer, for the actual weight of the trailer when loaded. You should follow the tire pressure guide in this manual for on road/highway tire pressures.

Tow Vehicle Tire Pressures

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

Ball (Coupling) Weight

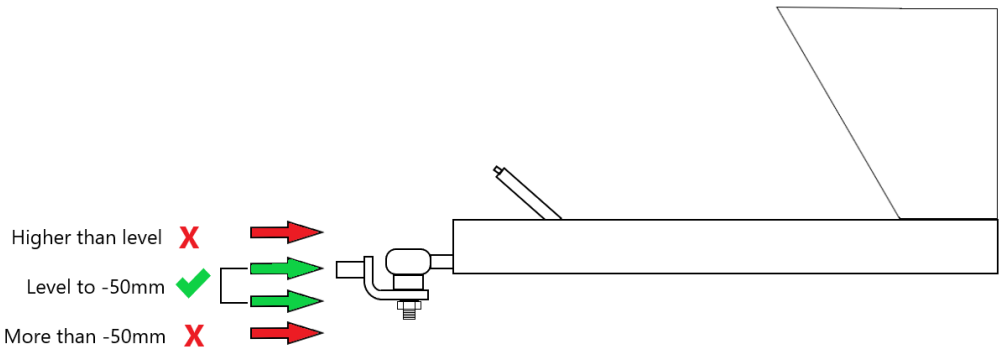
The ratio of overall weight of the trailer to the weight exhibited on the tow ball or coupling is an extremely important aspect of making a trailer handle correctly when towed. Generally, the ball or tongue weight allowed by most vehicle manufacturers is 10% of the maximum towing capacity. Given this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

Load Placement

Where you place the items in your trailer will affect how it behaves. Loading too much weight in the extremities of the trailer can have a very bad effect. MDC owner manuals have a loading guide to assist in this area. By following the guide and ball weight recommendations you'll achieve the best possible result. Use the load placement guide in this manual as a reference for packing your caravan.

Trailer Level

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



Hitch Movement

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

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

Vehicle Squat

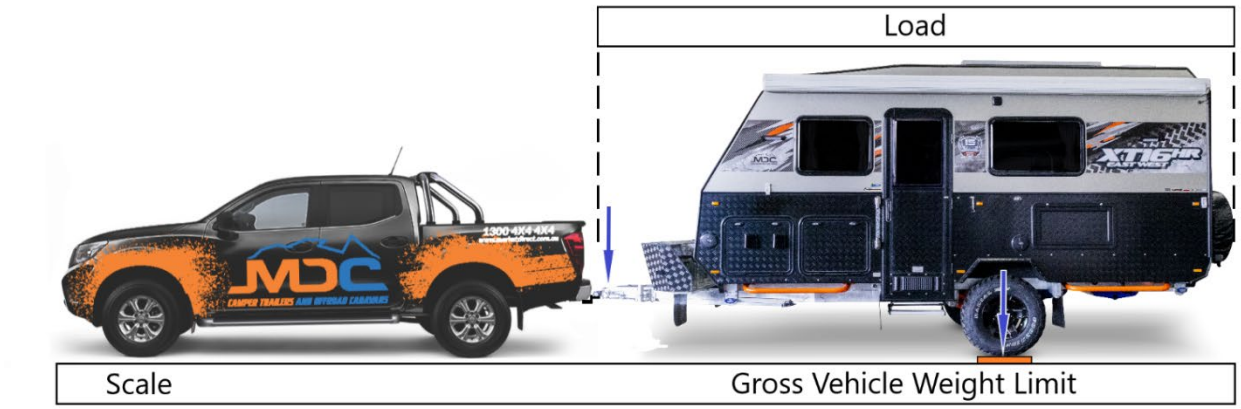
When the back of a vehicle squats due to cargo and/or ball weight of the trailer, the handling of the tow vehicle can be changed to its detriment. Vagueness in steering, poor toe, camber, and caster settings due to reduced front suspension load, reduced brake and tire grip are often the result. All this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

Maximum Weight Limits

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

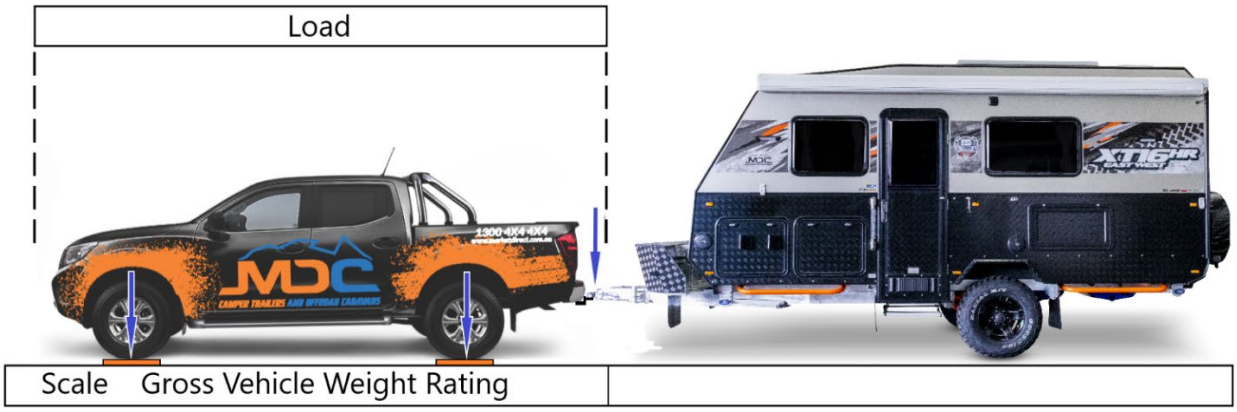
GVWR (Gross Vehicle Weight Rating)

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



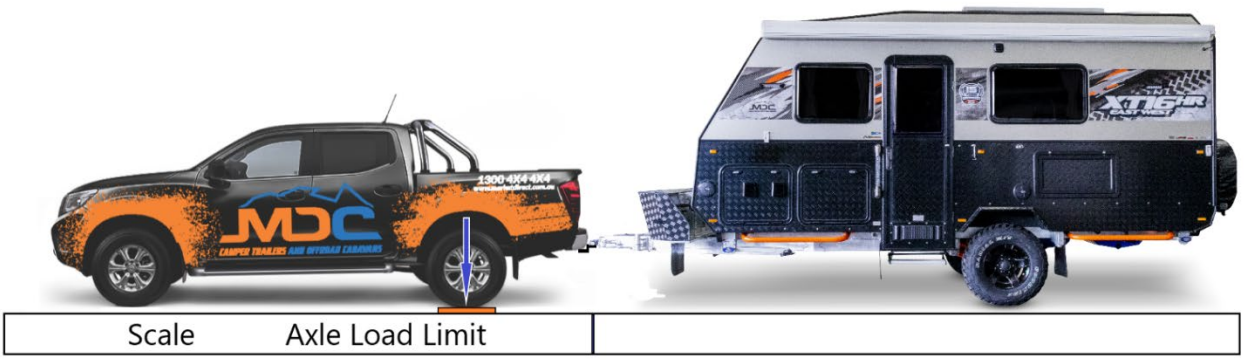
Vehicle GVW (Gross Vehicle Weight Rating)

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



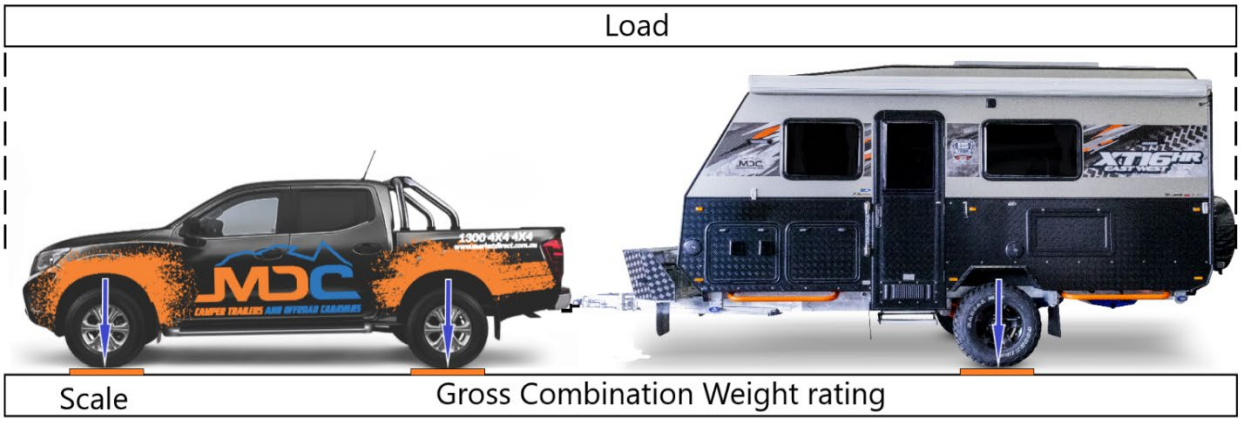
Axle Load

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



GCWR (Gross Combination Weight Rating)

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



Summary

The above will assist in tuning or trouble shooting handling problems with your towing combination but are not the sole influences. Other items for consideration are:

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

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

If you require assistance from MDC, call 833-632-8721 and speak to our customer service department.

Tire Safety Information

This section of the User Manual contains tire safety information as required by 49 CFR 575.6.

Steps for Determining Correct Load Limit – Trailer

Trailers 10,000 Pounds GVWR or Less

1. Locate the statement "The weight of cargo should never exceed XXX kg or XXX lbs" on your vehicles placard. See figure 1-1
2. This figure equals the available amount of cargo and luggage load capacity.

Tire and Loading Information Placard – Figure 1-1

3. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity.

The trailer's placard refers to the Tire Information Placard attached adjacent to or near the trailer's VIN (Certification) label at the left front of the trailer.

Note: The following calculations in Sections 2.1.2 and 2.2 are not required by the government. For the purpose of completeness, NATM has included these statements.

Steps for Determining Load Limit – TOW VEHICLE

1. Locate the statement, "The combined weight of occupants and cargo should never exceed XXX lbs.," on your vehicle's placard.
2. Determine the combined weight of the driver and passengers who will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kilograms or XXX pounds.
4. The resulting figure equals the available amount of cargo and luggage capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.).
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage capacity calculated in Step # 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult the tow vehicle's manual to determine how this weight transfer reduces the available cargo and luggage capacity of your vehicle.

Tire Safety – Everything Rides on it

The National Traffic Safety Administration (NHTSA) has published a brochure (DOT HS 809 361) that discusses all aspects of Tire Safety, as required by CFR 575.6. This brochure is reproduced in part below. It can be obtained and downloaded from NHTSA, free of charge, from the following web site: http://www.nhtsa.dot.gov/cars/rules/TireSafety/ridesonit/tires_index.html

Studies of tire safety show that maintaining proper tire pressure, observing tire and vehicle load limits (not carrying more weight in your vehicle than your tires or vehicle can safely handle), avoiding road hazards, and inspecting tires for cuts, slashes, and other irregularities are the most important things you can do to avoid tire failure, such as tread separation or blowout and flat tires. These actions, along with other care and maintenance activities, can also:

- Improve vehicle handling.
- Help protect you and others from avoidable breakdowns and accidents.
- Improve fuel economy.
- Increase the life of your tires.

This booklet presents a comprehensive overview of tire safety, including information on the following topics:

- Basic tire maintenance
- Uniform Tire Quality Grading System
- Fundamental characteristics of tires
- Tire safety tips.

Use this information to make tire safety a regular part of your vehicle maintenance routine. Recognize that the time you spend is minimal compared with the inconvenience and safety consequences of a flat tire or other tire failure.

Safety First – Basic Tire Maintenance

Properly maintained tires improve the steering, stopping, traction, and load-carrying capability of your vehicle. Underinflated tires and overloaded vehicles are a major cause of tire failure. Therefore, as mentioned above, to avoid flat tires and other types of tire failure, you should maintain proper tire pressure, observe tire and vehicle load limits, avoid road hazards, and regularly inspect your tires.

Finding Your Vehicles Recommended Tire Pressure and Load Limit

Tire information placards and vehicle certification labels contain information on tires and load limits. These labels indicate the vehicle manufacturer's information including:

- Recommended tire size
- Recommended tire inflation pressure
- Vehicle capacity weight (VCW–the maximum occupant and cargo weight a vehicle is designed to carry)
- Front and rear gross axle weight ratings (GAWR– the maximum weight the axle systems are designed to carry).

Both placards and certification labels are permanently attached to the trailer near the left front.

Understanding Tire Pressure and Load Limits

Tire inflation pressure is the level of air in the tire that provides it with load-carrying capacity and affects the overall performance of the vehicle. The tire inflation pressure is a number that indicates the amount of air pressure– measured in pounds per square inch (psi)–a tire requires to be properly inflated. (You will also find this number on the vehicle information placard expressed in kilopascals (kPa), which is the metric measure used internationally.) Manufacturers of passenger vehicles and light trucks determine this number based on the vehicle's design load limit, that is, the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. The proper tire pressure for your vehicle is referred to as the "recommended cold inflation pressure." (As you will read below, it is difficult to obtain the recommended tire pressure if your tires are not cold.) Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the "maximum permissible inflation pressure" on the tire sidewall. This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

Checking Tire Pressure

It is important to check your vehicle's tire pressure at least once a month for the following reasons:

- Most tires may naturally lose air over time.
- Tires can lose air suddenly if you drive over a pothole or other object or if you strike the curb when parking.
- With radial tires, it is usually not possible to determine underinflation by visual inspection.

For convenience, purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores, and other retail outlets.

The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when a tire is cold. The term cold does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold or compensate for the extra pressure in warm tires.

Steps for Maintaining Proper Tire Pressure

- Step 1: Locate the recommended tire pressure on the vehicle's tire information placard, certification label, or in the owner's manual.
- Step 2: Record the tire pressure of all tires.
- Step 3: If the tire pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure.
- Step 4: If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. These "missing" pounds of pressure are what you will need to add.
- Step 5: At a service station, add the missing pounds of air pressure to each tire that is underinflated.
- Step 6: Check all the tires to make sure they have the same air pressure (except in cases in which the front and rear tires are supposed to have different amounts of pressure).

If you have been driving your vehicle and think that a tire is underinflated, fill it to the recommended cold inflation pressure indicated on your vehicle's tire information placard or certification label. While your tire may still be slightly underinflated due to the extra pounds of pressure in the warm tire, it is safer to drive with air pressure that is slightly lower than the vehicle manufacturer's recommended cold inflation pressure than to drive with a significantly underinflated tire. Since this is a temporary fix, don't forget to recheck and adjust the tire's pressure when you can obtain a cold reading.

Tire Size

To maintain tire safety, purchase new tires that are the same size as the vehicle's original tires, or another size recommended by the manufacturer. Look at the tire information placard, the owner's manual, or the sidewall of the tire you are replacing to find this information. If you have any doubt about the correct size to choose, consult with the tire dealer.

Tire Tread

The tire tread provides the gripping action and traction that prevent your vehicle from slipping or sliding, especially when the road is wet or icy. In general, tires are not safe and should be replaced when the tread is worn down to 1/16 of an inch. Tires have built-in treadwear indicators that let you know when it is time to replace your tires. These indicators are raised sections spaced intermittently in the bottom of the tread grooves. When they appear "even" with the outside of the tread, it is time to replace your tires. Another method for checking tread depth is to place a penny in the tread with Lincoln's head upside down and facing you. If you can see the top of Lincoln's head, you are ready for new tires.

Tire balance and wheel alignment

To avoid vibration or shaking of the vehicle when a tire rotates, the tire must be properly balanced. This balance is achieved by positioning weights on the wheel to counterbalance heavy spots on the wheel-and-tire assembly. A wheel alignment adjusts the angles of the wheels so that they are positioned correctly relative to the vehicle's frame. This adjustment maximizes the life of your tires. These adjustments require special equipment and should be performed by a qualified technician.

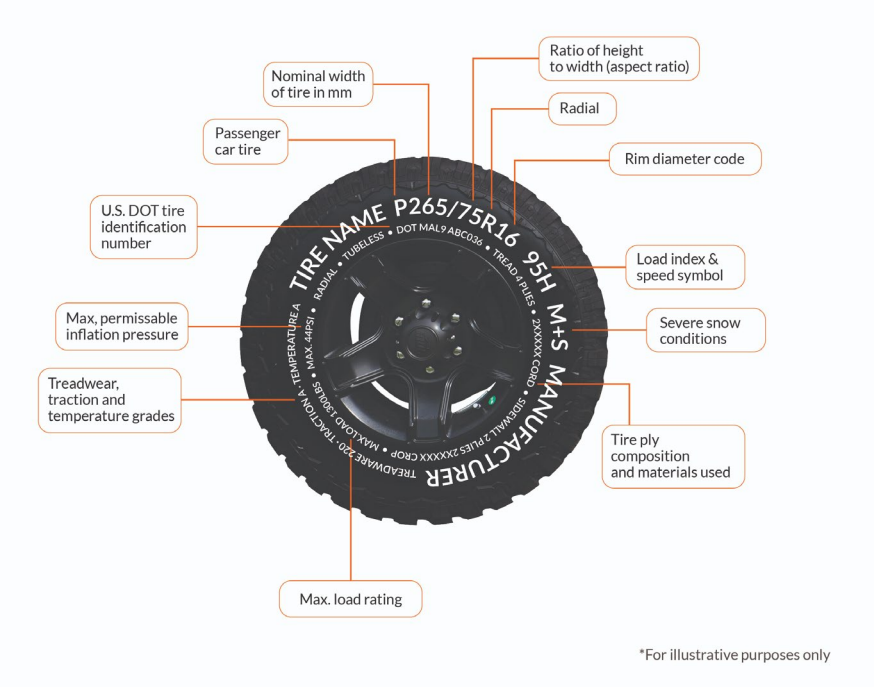
Tire repair

The proper repair of a punctured tire requires a plug for the hole and a patch for the area inside the tire that surrounds the puncture hole. Punctures through the tread can be repaired if they are not too large, but punctures to the sidewall should not be repaired. Tires must be removed from the rim to be properly inspected before being plugged and patched.

Tire fundamentals

Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a tire identification number for safety standard certification and in case of a recall.

Information on Passenger Vehicle Tires



P
The “P” indicates the tire is for passenger vehicles.

Next number
This three-digit number gives the width in millimetres of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

Next number
This two-digit number, known as the aspect ratio, gives the tire’s ratio of height to width. Numbers of 70 or lower indicate a short sidewall for improved steering response and better overall handling on dry pavement.

R
The “R” stands for radial. Radial ply construction of tires has been the industry standard for the past 20 years.

Next number
This two-digit number is the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

Next number
This two- or three-digit number is the tire’s load index. It is a measurement of how much weight each tire can support. You may find this information in your owner’s manual. If not, contact a local tire dealer. Note: You may not find this information on all tires because it is not required by law.

M+S
The "M+S" or "M/S" indicates that the tire has some mud and snow capability. Most radial tires have these markings; hence, they have some mud and snow capability.

U.S. DOT Tire Identification Number
This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built. For example, the numbers 3197 mean the 31st week of 1997. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact consumers if a tire defect requires a recall.

Tire Ply Composition and Materials Used
The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

Maximum Load Rating
This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

Maximum Permissible Inflation Pressure
This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

Treadwear Number UTQGS Information

This number indicates the tire's wear rate. The higher the treadwear number is, the longer it should take for the tread to wear down. For example, a tire graded 400 should last twice as long as a tire graded 200.

Traction Letter
This letter indicates a tire's ability to stop on wet pavement. A higher graded tire should allow you to stop your car on wet roads in a shorter distance than a tire with a lower grade. Traction is graded from highest to lowest as "AA", "A", "B", and "C".

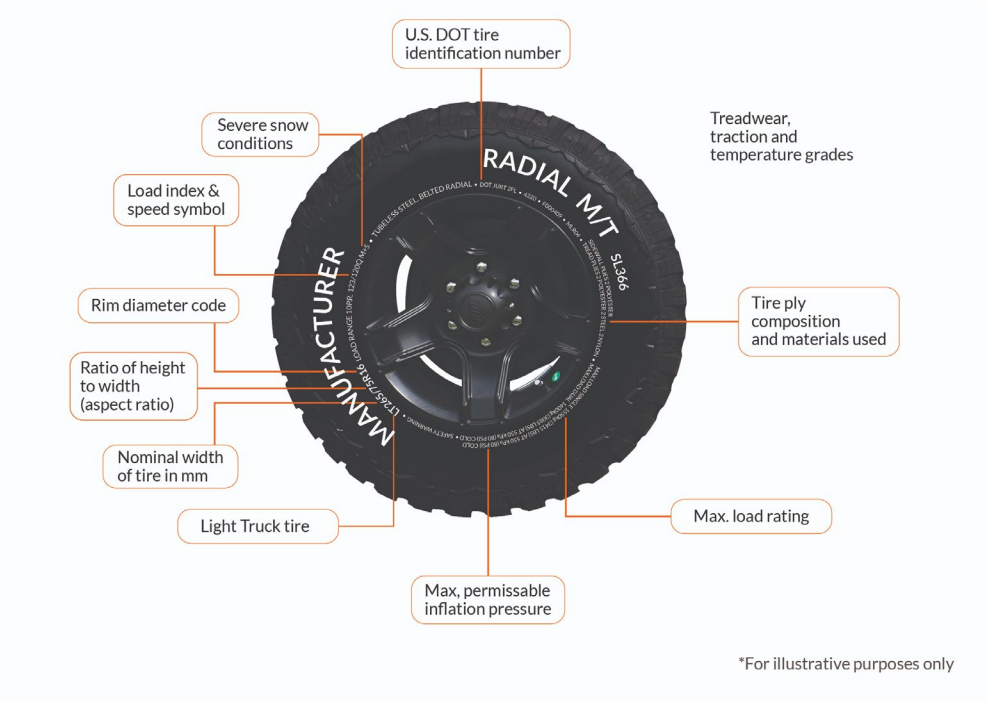
Temperature Letter
This letter indicates a tire's resistance to heat. The temperature grade is for a tire that is inflated properly and not overloaded. Excessive speed, underinflation or excessive loading, either separately or in combination, can cause heat build-up and possible tire failure. From highest to lowest, a tire's resistance to heat is graded as "A", "B", or "C".

Tire Pressures

Actual Weight	Pressure PSI Single Axle	Pressure Kpa Single Axle
5300 lb	55psi	379Kpa
5500 lb	58psi	400Kpa
5700 lb	60psi	414Kpa
5900 lb	63psi	434Kpa
6150 lb	65psi	448Kpa
6400 lb	68psi	469Kpa
6600 lb	70psi	483Kpa

Additional Information on Light Truck Tires

Please refer to the following diagram.



Tires for light trucks have other markings besides those found on the sidewalls of passenger tires.

LT
The "LT" indicates the tire is for light trucks or trailers.

ST
An "ST" is an indication the tire is for trailer use only.

Max. Load Dual kg (lbs) at kPa (psi) Cold
This information indicates the maximum load and tire pressure when the tire is used as a dual, that is, when four tires are put on each rear axle (a total of six or more tires on the vehicle).

Max. Load Single kg (lbs) at kPa (psi) Cold
This information indicates the maximum load and tire pressure when the tire is used as a single.

Load Range
This information identifies the tire's load-carrying capabilities and its inflation limits.

Tire Safety Tips

Preventing Tire Damage

- Slow down if you have to go over a pothole or other object in the road.
- Do not run over curbs or other foreign objects in the roadway and try not to strike the curb when parking. Tire Safety Checklist
- Check tire pressure regularly (at least once a month), including the spare.
- Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma.
- Remove bits of glass and foreign objects wedged in the tread.
- Make sure your tire valves have valve caps.
- Check tire pressure before going on a long trip.
- Do not overload your vehicle. Check the Tire Information and Loading Placard or User's Manual for the maximum recommended load for the vehicle.

Propane Safety

Appliances in your trailer are fuelled with propane. Propane is heavier than air which will allow it to pool in some areas creating an explosion risk. It is mandatory to follow all manufacturer guidelines in the use of propane appliances.

DANGER

- The propane system and appliances installed on the trailer are designed and installed to comply with all relevant statutes and laws.
- Modification or misuse may result in explosion resulting in death or serious injury.
- Follow manufacturer guidelines at all times.

IF YOU SMELL PROPANE

1. Extinguish any open flames and all smoking materials.
2. Shut off propane supply at the container(s) or propane supply connection.
3. DO NOT touch electrical switches.
4. Open doors and other ventilating openings.
5. Leave the area until odor clears.
6. Have the propane system checked and leakage source corrected before using again.

Ignition of flammable vapors could lead to a fire or explosion resulting in death or serious injury.

Gas Certification

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

General Safety

- Your Caravan may have a number of gas safety labels affixed throughout containing important information. Allinstructions 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 forleaks 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.*

- **DANGER NEVER** use a match or flame when checking leaks.
- **DANGER NEVER** use cooking appliances for comfort heating. This can lead to carbon monoxide poisoning that can lead to death or serious injury.
- In the event of a fire, immediately close cylinder valve if safe to do so.
- Appliances must not be altered without the authorization 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 Propane 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.

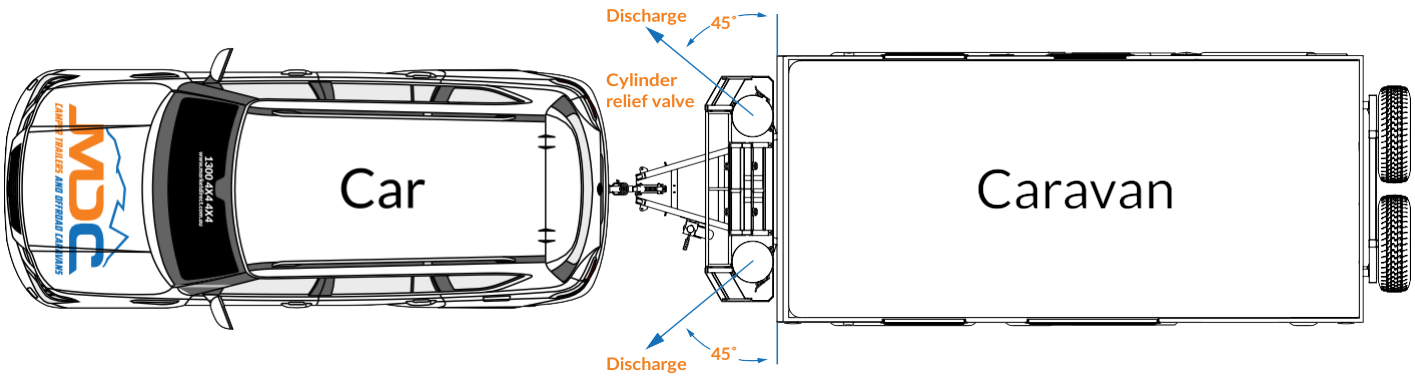
Propane Cylinder Safety

WARNING

DO NOT place propane cylinders inside the vehicle.

Propane cylinders are equipped with safety devices that relieve excessive pressure by discharging propane to the atmosphere. Propane gas is highly flammable and can lead to a fire or explosion and result in death or serious injury.

- Propane Gas cylinders have a 12-year lifespan between inspection and re-certification. Always use gas cylinders that are within their compliance date.
- **NOTICE** 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.
- Always remove the propane cylinder from the trailer to refill.
- **WARNING** Propane tanks may only be filled to 80% capacity. **DO NOT OVER FILL**. A properly filled propane tank contains approximately 80% of its volume as liquid propane. Overfilling a propane container can result in uncontrolled propane flow, which could lead to a fire or explosion resulting in death or serious injury.
- For gas cylinders stored in a dedicated Propane 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

DANGER

DO NOT use gas cooking appliances for comfort heating. This can lead to carbon monoxide poisoning, which can lead to death or serious injury.

WARNING

Gas cooking appliances need fresh air for safe operation.

Before operation:

Open vents or windows slightly or turn on exhaust fan prior to using cooking appliance. Gas flames consume oxygen, which should be replaced to ensure proper combustion. Improper use can result in death or serious injury.

- 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 affect the safety and operation of the gas appliance.
- Slide-out kitchens with cookers must only be used with a flexible connecting hose that is disconnected from the gas bayonet fitting when in its stored position. Under no circumstances permanently connect this appliance.
- Only approved and suitable gas appliances with flame safeguard systems shall be connected to the gas bayonet(if fitted).

Removing Door Vent Cover

WARNING The door vent must be uncovered at any time the caravan is occupied.

Isolating Appliances

WARNING Internal gas appliances have an isolation valve fitted to 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.

Electrical Safety

WARNING

Failure To Follow These Instructions May Result In Death Or Serious Injury!

- When working with electrical equipment or lead acid 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 120 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.

Shore Power

Show shore power connection.

When using power leads, never coil the lead when in use. Always lay the lead out in longer sections along the ground. Ensure leads are not a trip hazard and are in serviceable condition.

GFI Safety Switch

The Ground Fault Interrupter protects against leakage current. DO NOT BYPASS or interfere with this device. Test every 6 months.

Battery Compartment

Later model trailers have a sealed battery compartment. These will be identified with the sticker below, Instructions for this compartment MUST be followed.

WARNING

The battery area/compartment is designed for the use of non-ventilated batteries only.

Do NOT plate a battery that requires venting into this area/compartment.

Vented batteries can release poisonous and flammable gas that could lead to a fire or explosion causing serious injury or death.

Brake Controller

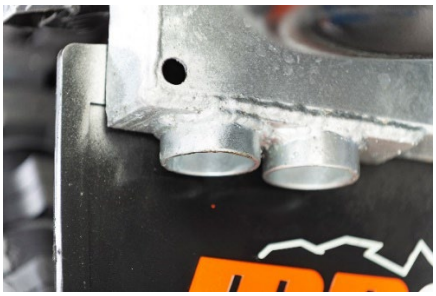
Your trailer is fitted with drum type electric brakes. The tow vehicle MUST be fitted with an appropriate brake controller for the trailer brakes to activate and brake. The company will not hand over a trailer to be towed by a vehicle without a suitable controller installed. Your trailer brakes are designed to work in synchronization 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 synchronization/adjustment procedure recommended by the brake controller supplier.

Jacking Your Trailer

Your trailer is fitted with purpose built jacking points and from January 2021. An appropriately rated bottle jack is acceptable or scissor/hydraulic jack, 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 tire 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:

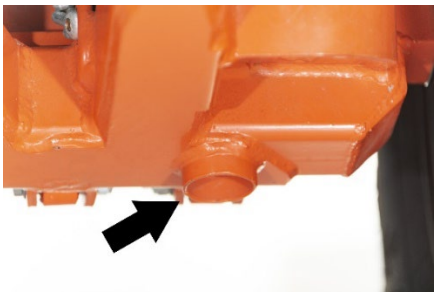
- The jack is to be used on level firm ground wherever possible.
- The wheels of the trailer should be chocked, and no person should remain inside the trailer whilst it is being jacked.
- No person should place any portion of their body under a trailer that is supported by a jack.
- The trailer should 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



Dangerous Gases

Gases such as Carbon Monoxide are dangerous. When occupying your trailer, the following must be followed.

- Door vent cover must be removed. The cover is for storage purposes only.
- Carbon monoxide alarm must be functional and turned on.
- Never cover permanent vents in the roof or pop top skirt or annex.
- When using a generator, the generator must be placed where carbon monoxide fumes cannot enter the trailer.

Carbon Monoxide Detector

MDC Contact Details and Stores

CALIFORNIA	
Los Angeles 8420 Kass Dr. Buena Park 90621 833-632-8721	
ARIZONA	
Phoenix 3908, Suite 100 East Broadway Rd Phoenix 85040 833-632-8721	
UTAH	
Salt Lake City 1920 N 2200 W, Suite 4 Salt Lake City 84116 833-632-8721	
COLORADO	
Colorado Springs 5706 S. Carefree Circle Colorado Springs 80917 833-632-8721	

Using Your Trailer

NOTICE

Instructions below are for your safety and the avoidance of accidental damage to the trailer through misuse. Follow all directions given in this manual and the manuals for third party products installed.

The manufacturer has produced product specific video content for tutorial purposes, to assist in the correct setup and use. It is important to view and understand the instructions to avoid accidental damage to the product to prevent damage.

Connecting to the Tow Vehicle

WARNING

WARNING – Your coupler MUST be rated for the Gross Vehicle Weight and be in serviceable condition.

- The hitch MUST be correctly load rated.
- Hitch and pin MUST be compatible.

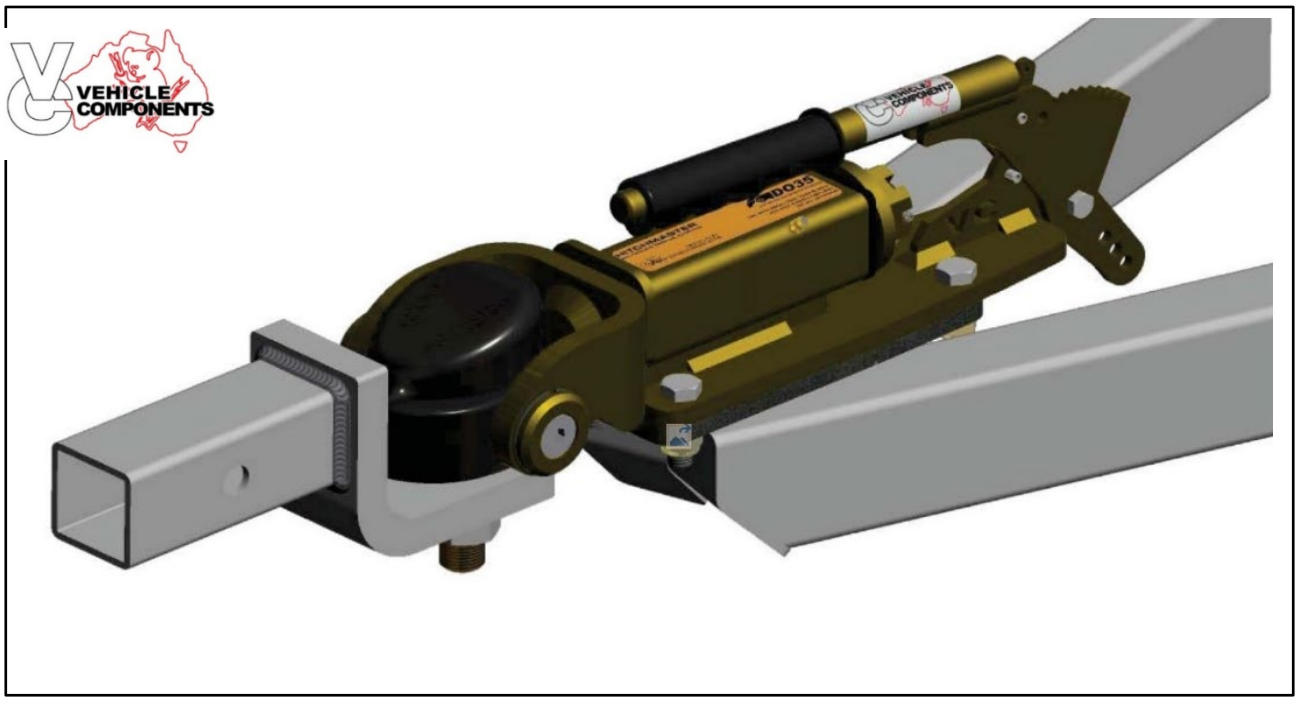
All bolts and fittings must be correctly tightened and serviceable condition.

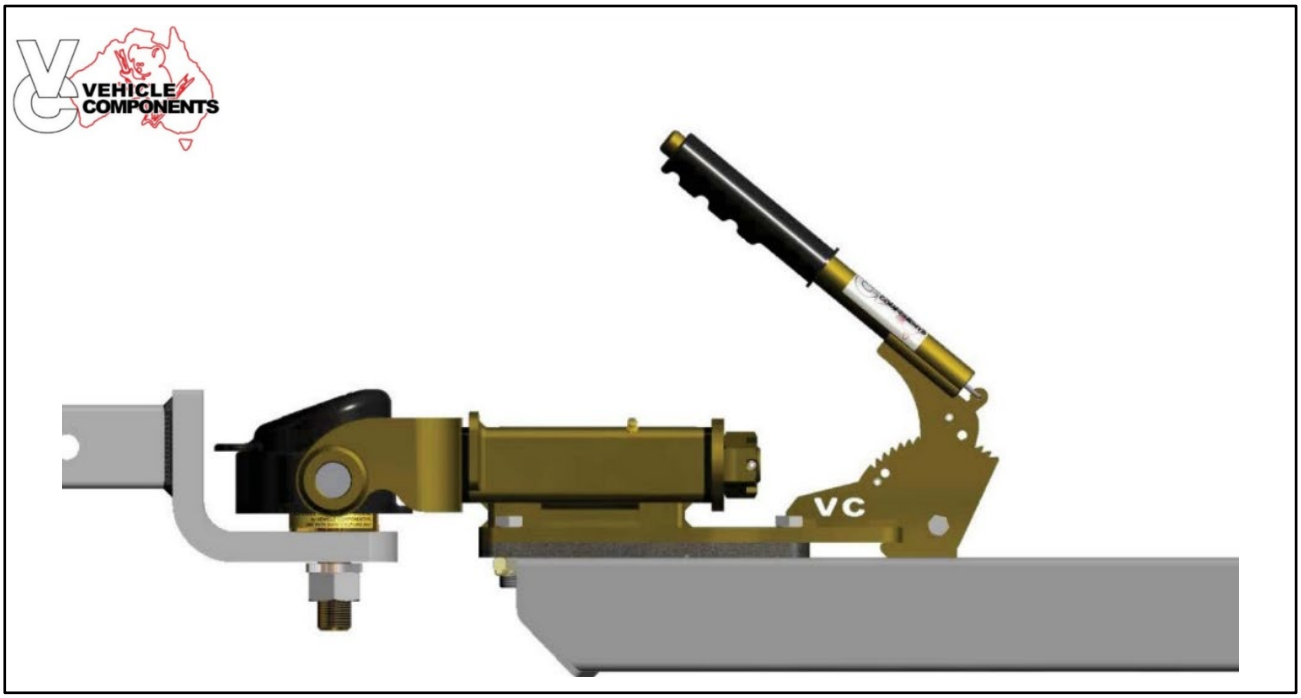
Towing with Trucks and Buses

If you intend to tow your trailer with a truck or heavy commercial vehicle you should fit a hitch system to minimize 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.

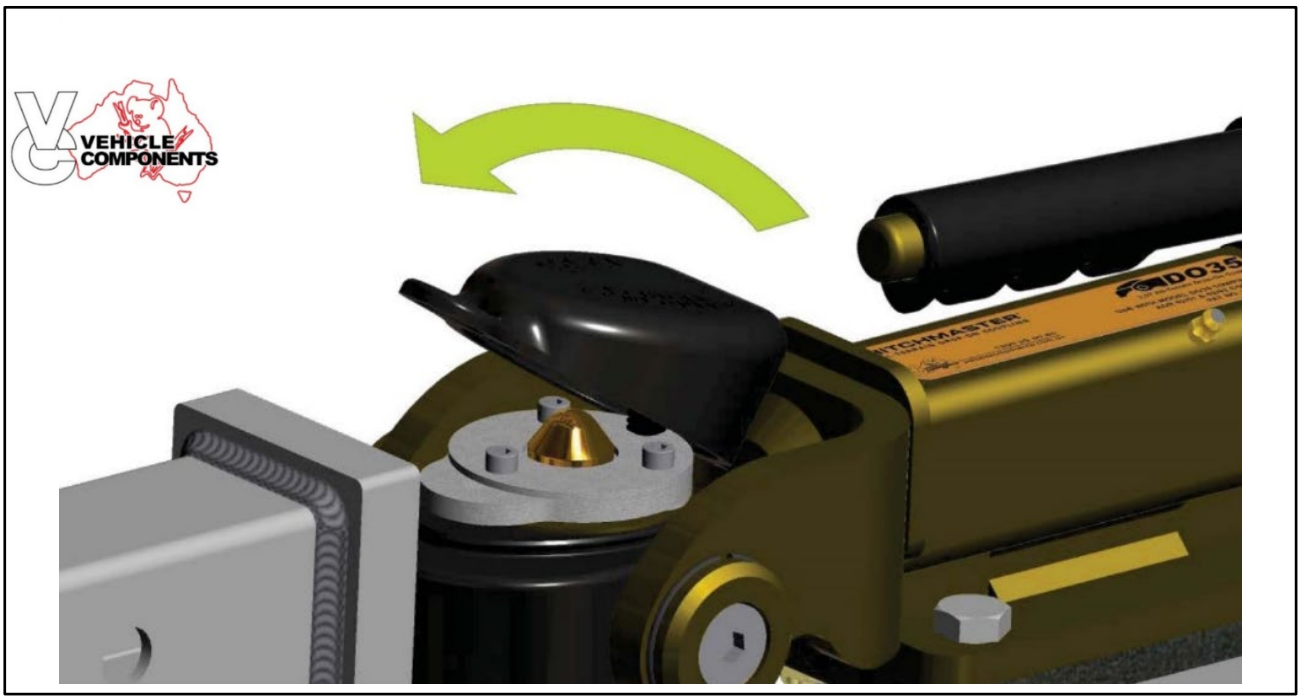
Connecting the Hitch

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





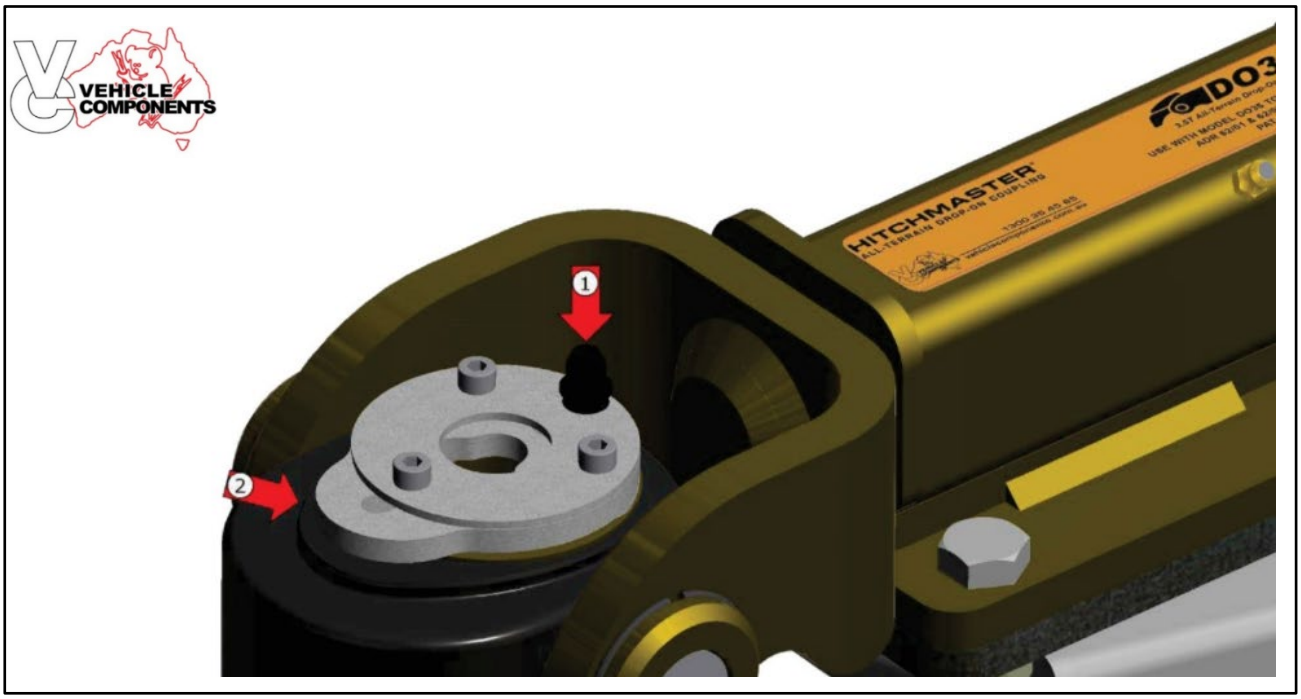
Make sure the handbrake is applied prior to coupling and uncoupling.



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

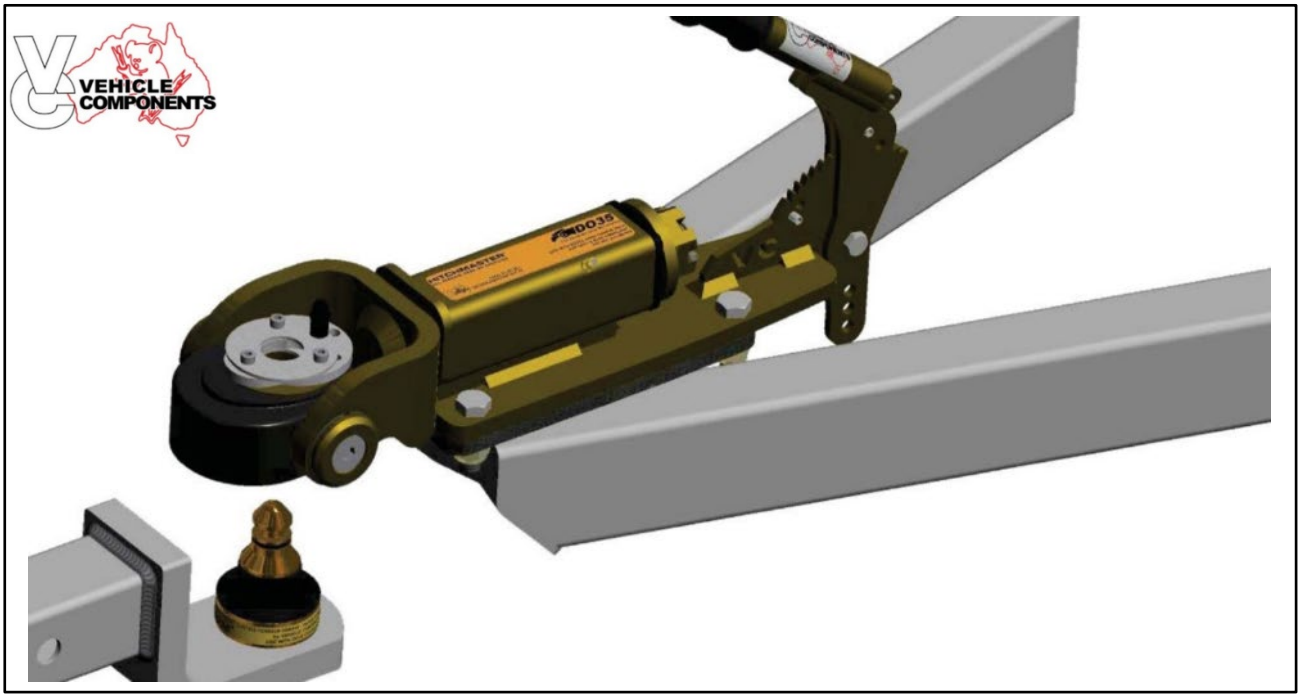
Coupling

STEP 1



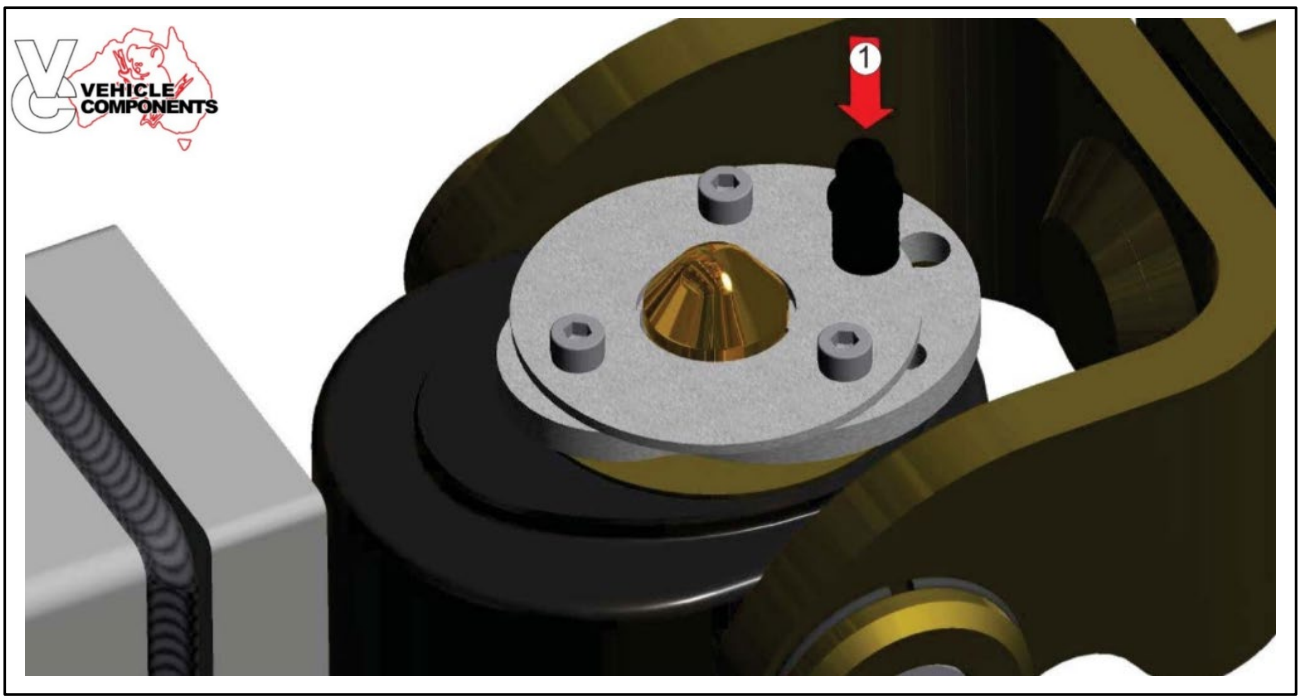
Push down the button (1) and push the locking mechanism back (2). When the locking mechanism (2) is all the way back, release the button (1) locking the plate in place

STEP 2

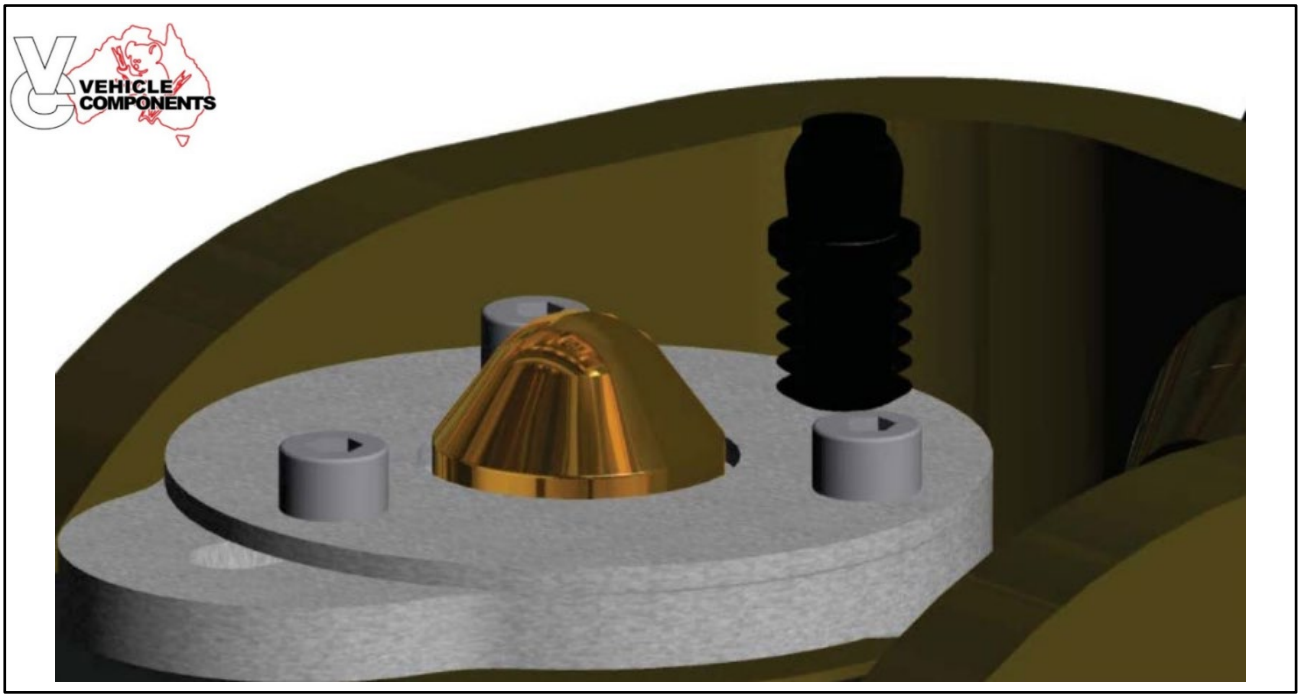


Offer up the tow pin to the coupling making sure the tow pin cover is removed and there is no visible debris on it. Locking plate should be in unlocked position as shown. Lower the coupling onto the tow pin.

STEP 3



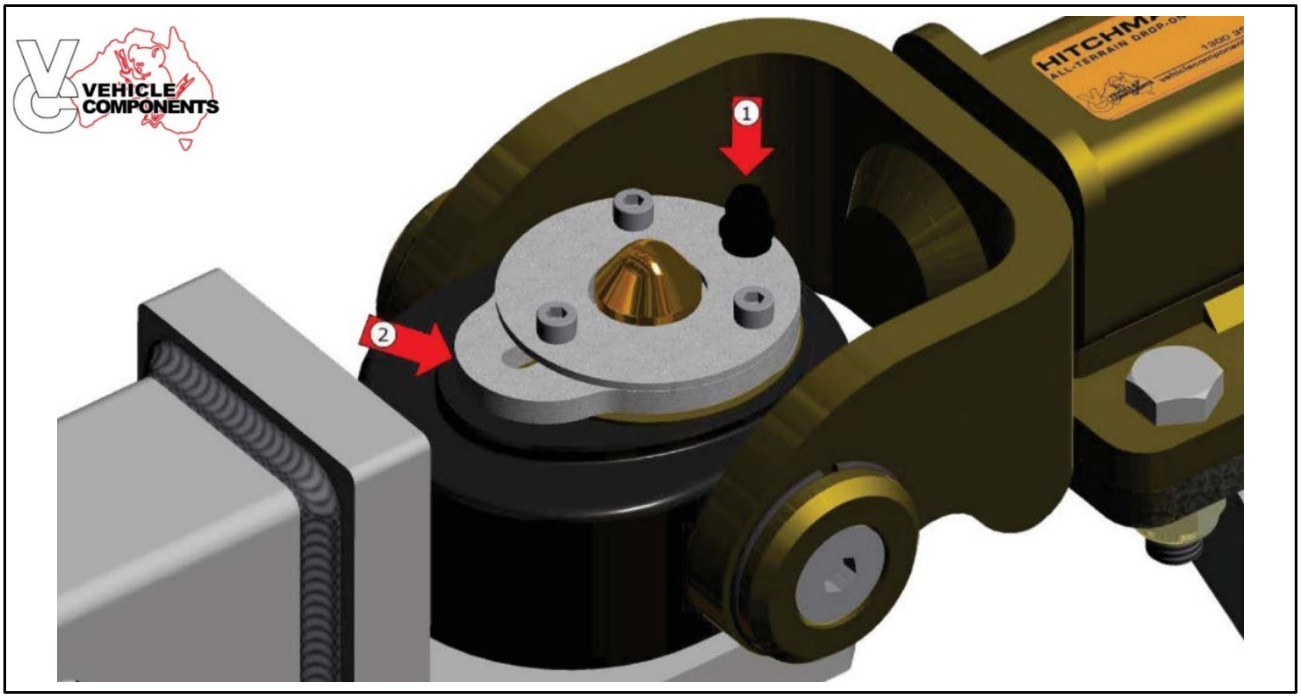
Make sure the tow pin is seated inside the universal and the tow pin top is sticking out of the locking mechanism (see below). Press the button (1) to release the locking mechanism there will be an audible locking noise at which point the mechanism will return to the initial position as shown in step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



Detail view of pin through locking mechanism.

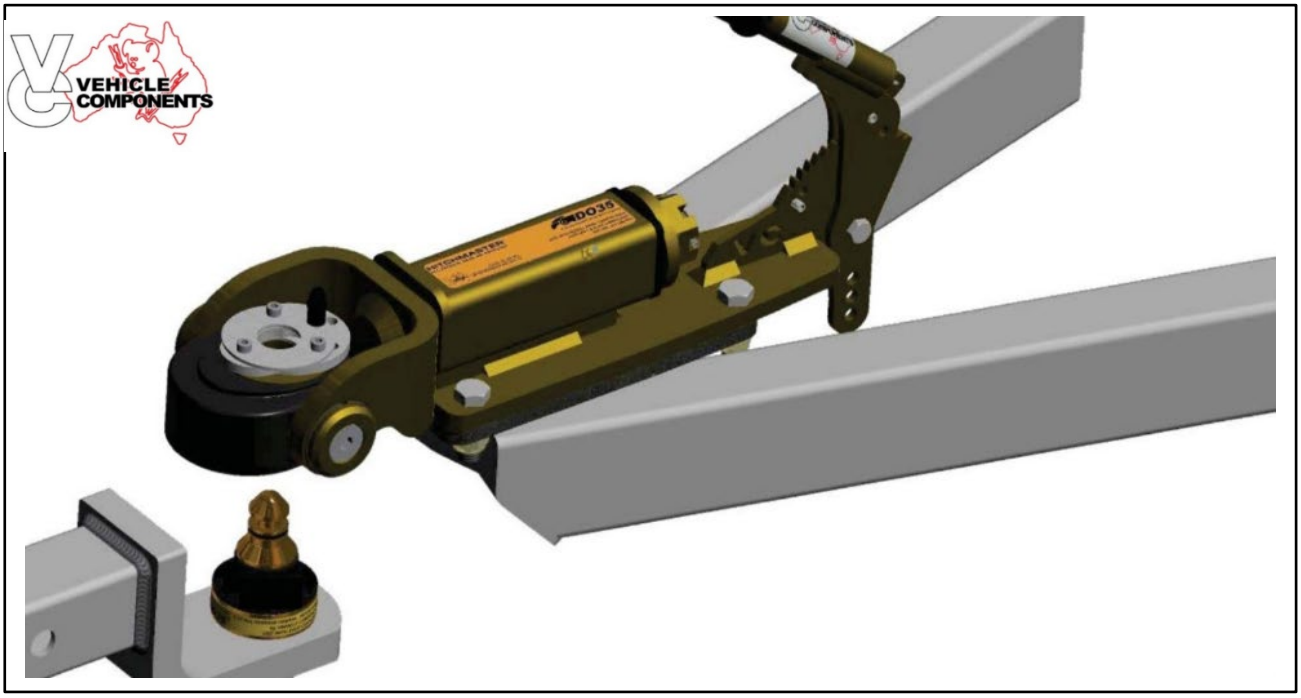
Uncoupling

STEP 1



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

STEP 2



Lift the coupling up off the tow pin.

Connecting Wiring

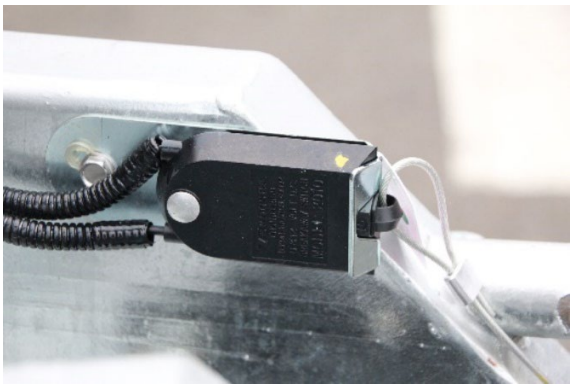
When connecting ensure the electric cables to your tow vehicle cannot drag on the road or foul the coupling. If necessary, use zip ties or like, to keep them neat and safe from damage.

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 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

WARNING

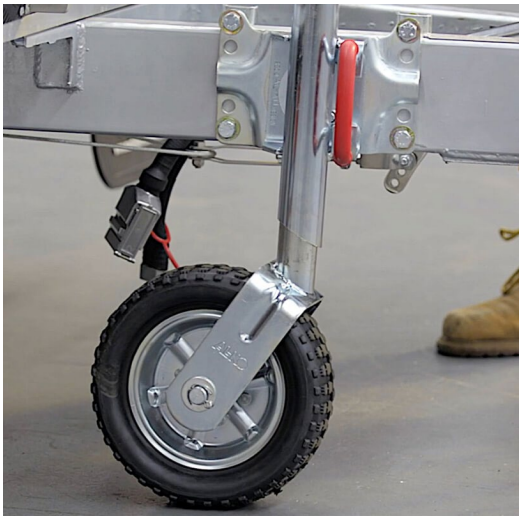
WARNING – Where fitted, the breakaway system lanyard must be connected to a secure part of the tow vehicle.

- Do not connect to the safety chain shackle. Connect only to a fixed structural part of the tow vehicle.
- Ensure the battery system has adequate charge to power the electric breakaway system in the event of the trailer separating from the tow vehicle.
- The tow vehicle should supply a maintenance charge to the trailer batteries while towing to ensure peak battery capacity for the breakaway system.

Operating the Jockey Wheel

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

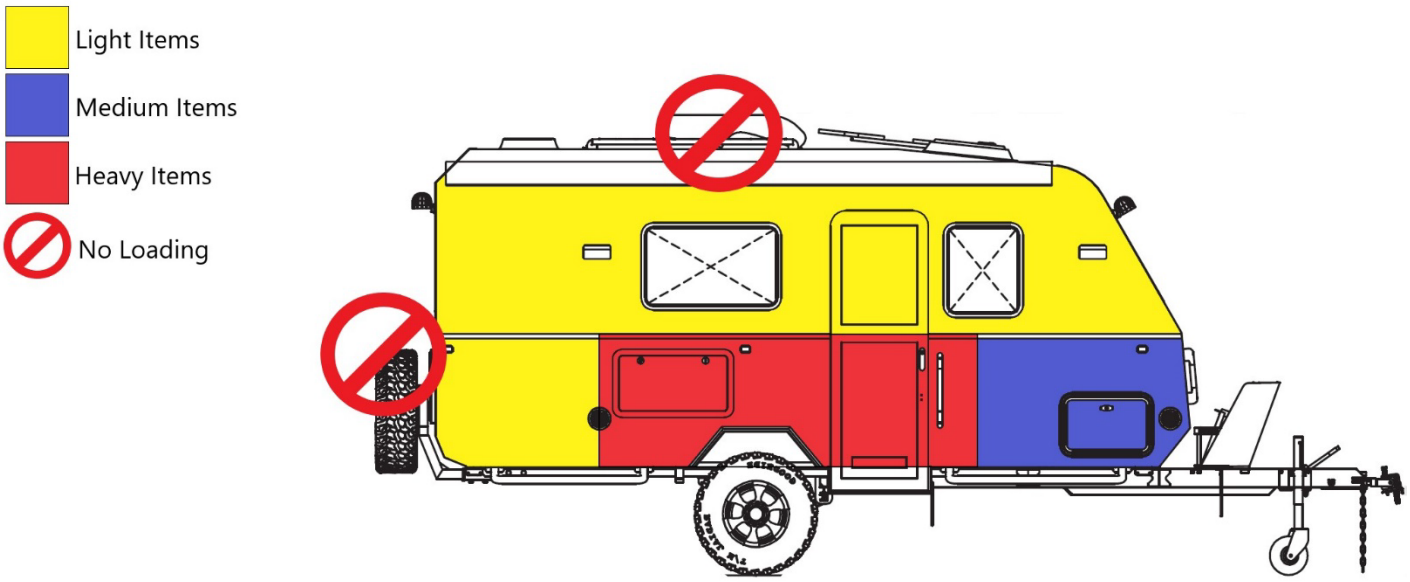
When moving the trailer on the jockey wheel, always lower it as far as possible but still allowing the wheel to swivel as you steer the trailer.



Loading Your Trailer

Loading your trailer can have an effect on the overall handling of the trailer and tow vehicle combination. Loading affects tongue weight and balance which must be taken into consideration.

- DO NOT exceed the Gross Vehicle Weight Rating (GVWR) or the stated cargo capacity which can be found on the trailers tire placard or load carrying capacity label.
- Always load cargo and luggage to keep weight even on both sides of the trailer.
- Always load to achieve around 10% of total load as Tongue weight. This is a generally recommended standard to achieve a safe balance for handling.



Pre-Trip Inspection

Before any trip check the following

Tires

- Correct tire pressures
- Tires are in good condition free from damage and uneven wear.
- Tread is of legal and acceptable depth.

Wheel Nuts

- Ensure wheel nuts are tensioned to the correct torque using a torque wrench.
- All wheel nuts are in place.

Hitch and Chains

- Ensure hitch and chains are free of damage.
- Hitch locking mechanism functions correctly.
- Hitch is properly lubricated.
- Hitch articulates correctly.

Fire Extinguisher

- Extinguisher is properly mounted and within date.
- Extinguisher charge gauge is in green.

Brakes & Breakaway System

- Brakes operate correctly when both operated by manual control and via pedal.

Lights

- Ensure all trailer lights are functioning.

Operating Trailer Features

This section covers details on using the common features on your trailer correctly.

Stabilizer Legs

The Stabilizer legs are fitted to make the trailer stable when occupied. Important things to note are:

- Always try to set the Stabilizers up in a vertical position, 90 degrees to the chassis as shown in figure below.
- Do not try and lift the full trailer weight when winding out the Stabilizer. There are small bevel gears and roll pins that may shear when overloaded.
- When setting down or stowing Stabilizer legs, ensure the pins on the release handle correctly engage to stop the leg collapsing under load or lowering during transit.
- Disassemble and maintain according to the maintenance schedule.

Connecting Shore Power

You can connect your trailer to shore power via the external input socket pictured below. Always ensure the following:

- Only use this connection for 110-120 volt AC, 60 hz 50 ampere supply.
- Do not exceed circuit rating.
- Site power is protected with an RCD device.
- Power leads are not coiled but laid out alongside the trailer without causing a trip hazard.

Using the Slide Out Kitchen

To extend the kitchen from the caravan, release pad bolt (fig1) and press down the blue slide tab (fig 2) and pull kitchen out. The kitchen will lock into place when extended. To put kitchen away, again press down the blue tabs and push back into place. Connect the flexible hose bayonet to the fitting Fig 3.

Fig 1

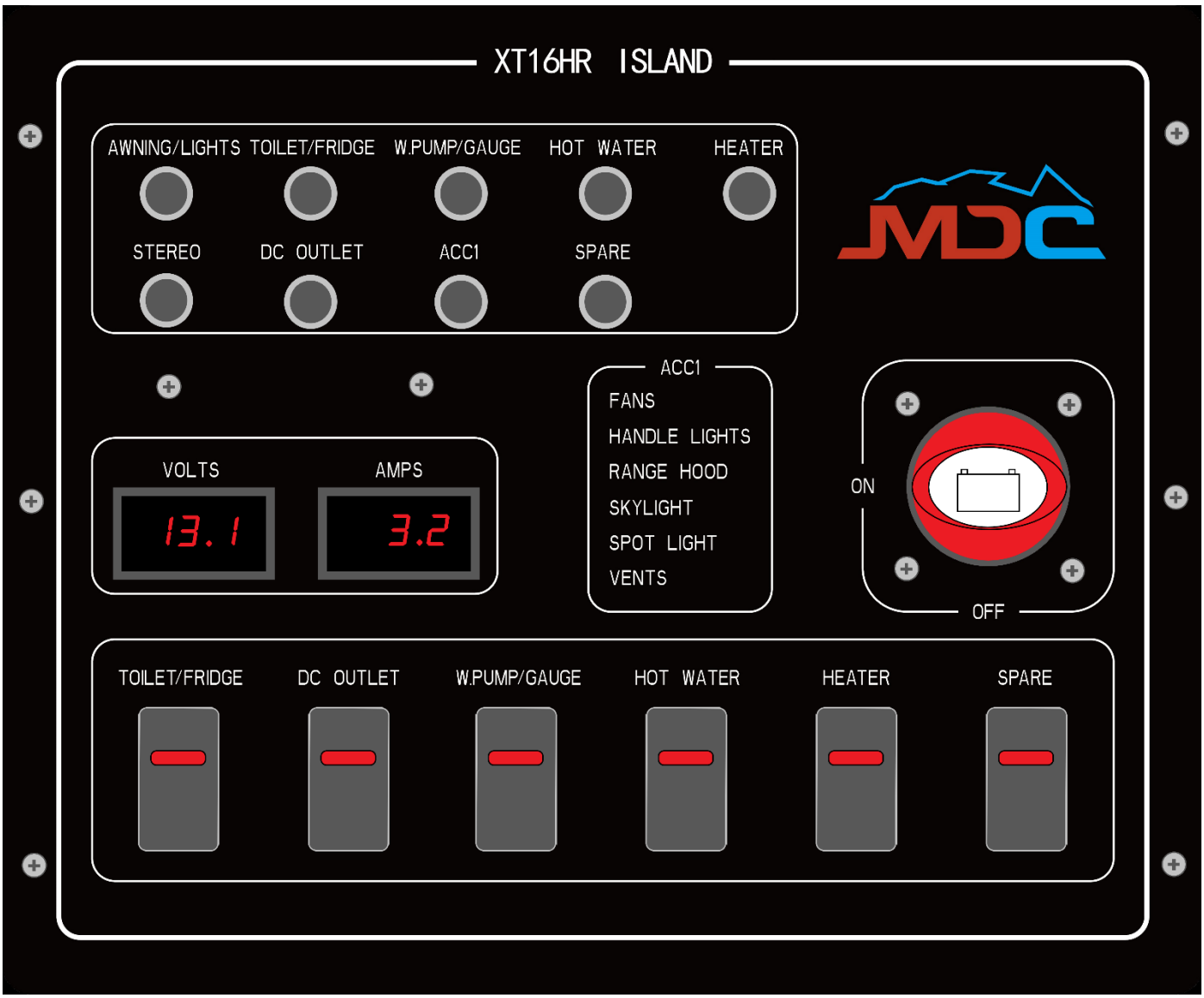
Fig 2

Fig 3

Always use the support leg when the kitchen is extended

12 Volt Electrical System

Control Panel



Control Panel Use

Main Rotary Switch: This is used to switch on or isolate the entire 12 volt system.

Circuit Breakers: The round rubber capped Circuit breakers are resettable. To reset the circuit push in the rubber cap. Each circuit breaker is marked with the applicable circuit.

Circuit Switches: Each circuit is individually switched so it may be isolated when not in use.

Voltmeter: This meter will show battery voltage/state when not being charged and charge voltage when the charger is activated. Resting voltage of a fully charged AGM battery bank will be 13-13.1 Volts.

Amp Meter: This meter will show current being drawn from the battery.

Internal Lights: The LED lights inside your trailer are individually switched at each light, with wall switches for groups of lights. To use internal lights, ensure both wall switch and individual fitting switch are both on, as is the main rotary switch.

External LED Lights: These lights are switched via the panel inside the main entry and on some models, the passenger side lights may be switched from inside the side storage area nearest the light.

Towing Your Trailer

Driving dynamics change considerably when towing a trailer. Many facets of driving need to be modified when towing for your safety and that of other road users.

Important points you must know, understand, and adhere to are:

- Do not exceed the manufacturer maximum capacities for the tow vehicle or trailer.
- Do not exceed the manufacturer capacity on hitch (770lbs for Cruisemaster DO35)
- Do not exceed the maximum Tongue weight allowance of the tow vehicle or trailer (whichever is lowest)

Speed and Road Conditions

- Never exceed the recommended or allowed towing speed in the state you're travelling. Recommended and maximum speeds may vary from state to state.
- Greater speed can lead to instability when towing. Always tow at a safe speed for the conditions you're driving.
- When towing, always allow greater safe distance for braking.
- Windy conditions and wind buffeting from other vehicles may affect the behavior of your vehicle and trailer possibly causing sway. Always keep this in consideration and modify your driving accordingly.
- Testing road and environments may cause fatigue. Ensure adequate rest and regular breaks when towing.

WARNING – Excessive speed, sudden steering input, bad road conditions and fatigue may lead to a loss of control causing death or serious injury. Ensure driving behavior is modified to suit conditions and take regular breaks.

Trailer Sway

Incorrect loading, incorrect tire pressures and setup can affect how a trailer responds when towed. If you encounter trailer sway, you should do the following.

- Reduce speed using only the trailer brakes via the manual control on your brake controller.
- Find a safe place to pull over.
- Check hitch connection.
- Check tire pressures.
- Check wheel nuts
- Move heavier cargo towards the front of the trailer.

Once checked and rectified proceed with caution while testing the outcome.

Fatigue

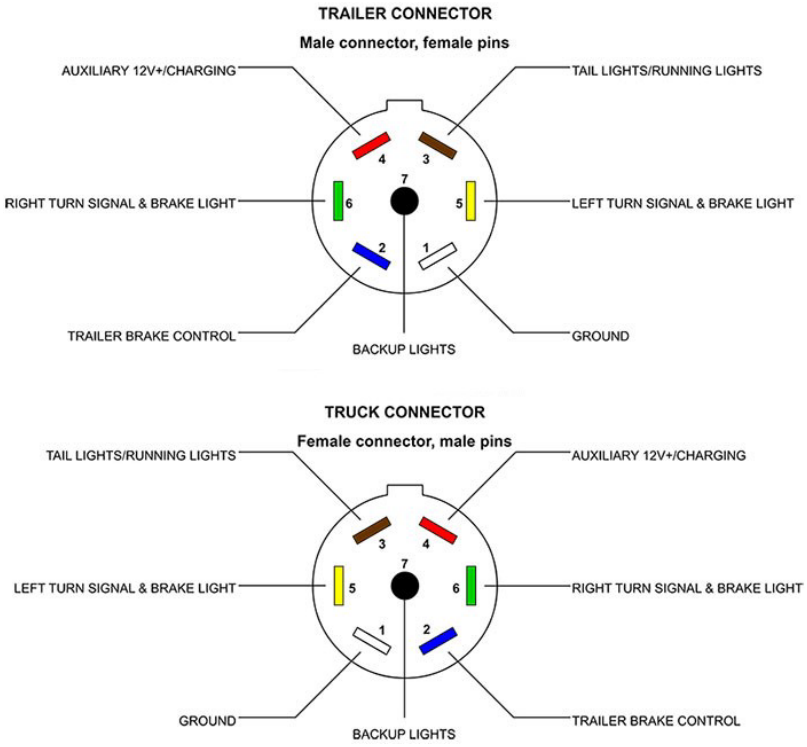
Towing a trailer can be tiring and regular breaks should be taken. Overlanding with a trailer can be even more tiring and requires more frequent breaks when driving off road. When taking regular breaks, use the opportunity to check your vehicle and trailer hitch and take general look over the trailer, to ensure everything is as per normal.

Daily Checks

On extended travel over a period of days or longer, some regular checks should be done to ensure reliable and safe towing. The below list identifies common items that should be done each day before travelling.

- Check wheel nut torque using a torque wrench to correct torque setting.
- Check hitch connection and operation.
- Inspect tires for damage and inflation.

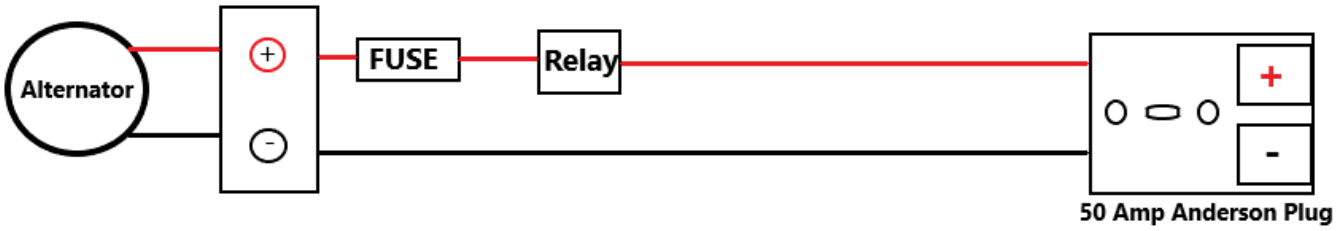
Correct Wiring of Tow Vehicle



Vehicle with or without smart alternator:

The Anderson plug can be connected to the tow vehicle 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



Trail-Assure™Electronic Stability Control System

Locked to the Road

FITTED WITH

TRAIL-ASSURE™

ASYMMETRIC SWAY CONTROL

AUS PAT.NO.2014204434 | US PAT.NO.9,026,311

As an added safety feature, caravan is fitted with a Trail-Assure™ BG-5000 electronic stability control system. This is an asymmetric braking system that uses onboard measuring instruments to determine which wheel brakes to apply, and how often, to increase the stability of your caravan while driving.
The BG-5000 has been factory fitted precisely with the controller module mounted in the front underneath section of your caravan so that it can make reliable and precise measurements during a trip. It also features a factory pre-set algorithm to sense off-road conditions and automatically disables the stability braking to avoid nuisance brake applications in off-road conditions, minimizing unnecessary brake wear. The system will automatically re-engage once you are back on the road.

There is a status light indicator used to determine the functionality and modes of the unit. It is located on the drawbar for ease of access.
When inactive the system will enter sleep mode to conserve power. To wake the system and check operation, connect the tow plug to your vehicle and turn on your vehicle.
After a moment, the status light indicator will light up solid green to indicate normal operation.

WARNING

NEVER spray high pressured water directly at the Trail-Assure™ BG5000. Although the product is weather sealed and water resistant, high pressure water from items such as pressure washers are outside of the design limitations of the trailer stability control unit.

The BG-5000 is self-diagnosing and in the unlikely event that you need to troubleshoot your unit, identify this module, and determine the series of lights displayed. Refer to the below table to identify the status of the unit.

LIGHT ACTION	CONDITION	CORRECTIVE ACTION
Solid GREEN pulsing	Normal operation - no system faults	No action - system OK
GREEN flash 2 times per second	Sway control braking is active	No action - system OK
1 GREEN flash every 2 seconds	Firmware checksum error. Keep The trailer sits still for a minimum of 60seconds, then drive normally.	If the module does not return to normal solid GREEN pulsing light, have the unit checked at a service centre.
1 GREEN flash every 4 seconds	Module reset to mfg. default values. Keep the trailer sitting still for a minimum of 60 seconds, then drive normally.	If the module does not return to normal solid GREEN pulsing light after 3 system restarts, have the unit checked at a service centre.
RED, GREEN, RED, GREEN, continuing…	Sway control automatically disabled due to rough terrain	The unit will return to normal green light when not on rough terrain
No light	Unit in "sleep" mode	Activate manual override on the brake controller to "wake up" unit
	No power after "wake up" from brake controller	Verify the unit has good quality power, ground, and brake controller wire connections. Check for any blown fuses on the truck and trailer.
	Overvoltage - over +20 volts	Check that the power source is not exceeding 20 volts – correct voltage to 12-15 volts
	Low voltage - under 3 volts	Check that the power source is 12-15 volts. Verify good power and ground connections
5 RED flashes	Ground wire intermittent or disconnected	Check ground wire connections to the trailer battery and tow vehicle
4 RED flashes	Brake short (right side)	Correct the short on the right-side brake wiring
3 RED flashes	Brake short (left side)	Correct the short on the left side brake wiring
2 RED flashes	Sensor malfunction - no sway control	Service centre repair required
1 RED flash	Blue Wire Short – System malfunction	Correct the blue wire short, Service centre repair may be required.
Fast RED flashing	Low voltage - between 3 to 6 volts	Check the power and ground connections

For more information on how the system works, wiring information and support, please refer to the Trail-Assure™ BG-5000 user manual provided.

The control module has been strenuously evaluated against the various amount of integrated and aftermarket trailer brake controllers in use today. Compatible controllers include but are not limited to:

Integrated Vehicle Brake Controllers
Fiat/Chrysler: 2014, 2015, 2016, 2017 Dodge RAM 2500
Ford Motor Company: 2013 F-150
Ford Motor Company: 2017 F-250
General Motors: 2016 Chevy Tahoe
Toyota: 2017, 2018 Tundra

Aftermarket in-vehicle Brake Controllers
Redarc
Tekonsha
Curt
Draw-Tite
Hayes
Hopkins
DirecLink

If for any reason you become aware of a compatibility issue with a particular trailer brake controller, please refer to the provided manual for contact details.

Disclaimer: Electronic stability control systems are NOT substitutes for safe driving or towing practices. In no event shall MDC be liable for loss or damage caused by misuse, modifications, or unsafe driving/towing practices.

Product Registration

Please register your Trail-Assure™ BG 5000 Asymmetric Sway Control Unit within 30 days of receiving your Caravan to activate your warranty.

*The serial number is located on the front cover of the Trail Assure ™installation manual.

Trail-Assure ™by Tuson product registration is quick, easy, and secure.

To Register, visit the online website below or fill out the provided warranty card.

Need Help Registering or Support?

USA Please call us at 1 800 968 8766 OR inforvbrakes@tuson.com

For online USA Registrations, go to www.tusonrvbrakes.com/pages/register

Choosing a Camp Site

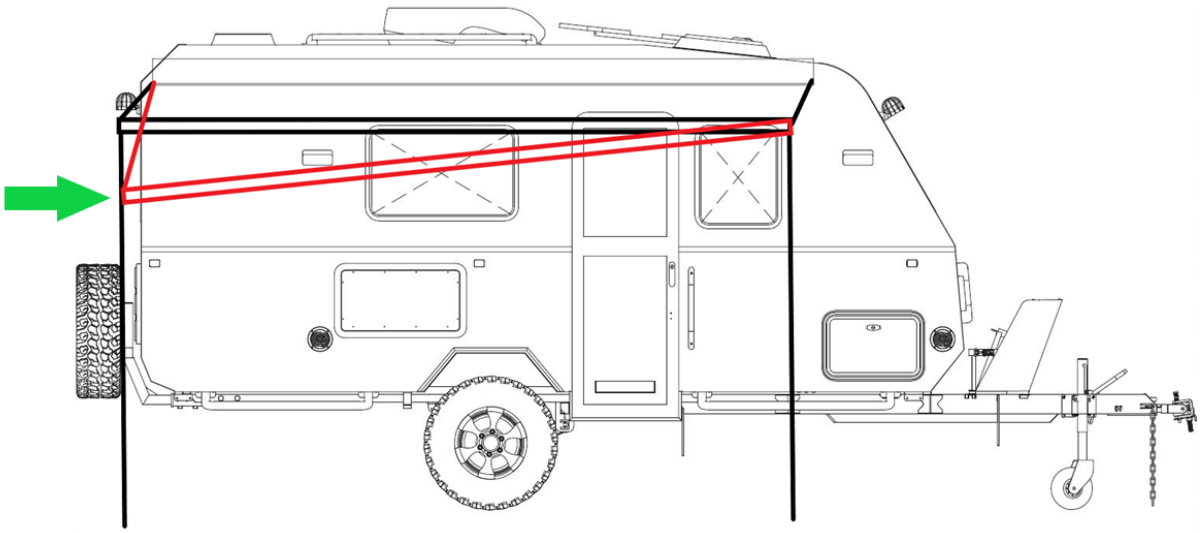
When choosing a campsite always consider the following:

- Choose a flat, even area when possible.
- Never camp under trees where there is a risk of branches falling.
- Camping in shade will reduce the performance of solar power charging.
- Always know the predicted weather conditions and plan accordingly. Avoid extreme weather conditions for your safety.
- Avoid areas prone to flooding. Do not camp in riverbeds or flood basins.

Inclement Weather

Extreme weather and storms can damage fixtures on your trailer such as awnings, annexes and in extreme cases the internal poles on tent top trailers. Users of the product must make reasonable choices to pack up to protect the product based on weather predictions and actual events.

During periods of rain the awning on trailers must be set to ensure water cannot collect on top. The water must always evacuate the awning to prevent damage. The illustration below sets out correct set up for rain on travel trailers indicated by green arrow.



Care and Maintenance of the Trailer

Protection of Finishes

Paint

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

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

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

Acrylic Windows

Windows should be cleaned with a clean, soft, nonabrasive cloth to avoid scratches and soapy water.
**Do not use any cleaners that contain ammonia or solvents. **

Internal Finishes

Laminates and internal wall surfaces should be cleaned with a damp soft cloth. For stubborn marks use a mild detergent based cleaner.
Do not use cleaners that contain ammonia or caustics

Ensuite Finishes

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

Mirrors

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

Galvanized Finishes

Your galvanized chassis will need maintenance when used off road. The zinc coating. although being tough. is still susceptible to damage from stone chips. the coating should be maintained.

High Tensile Bolt and Fittings

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

Stainless Steel

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

Fabrics

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

Corrosion Protection

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

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

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

Trailer Body Maintenance
Locks and Latches

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

Rubber Seals

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

Winterizing the Trailer
Winterising your trailer is an important part of storage during the winter months to avoid damage to water lines, pumps, and appliances such as hot water systems.

For appliances such as hot water systems, consult the product user manual for winterizing the appliance.

To winterize your trailer, follow the steps outlined below.

Water Heater Bypass Installed
1. Activate water heater bypass.
2. Follow steps in water heater user manual for draining unit.
3. Open all taps including outside shower and tap fittings and hot water system pressure relief valve.
4. Remove drain plug from all water tanks, including grey water and allow to drain fully.
5. Connect airline adapter to town water connection.
6. Connect compressor at a maximum of 30psi to the airline adapter and allow to force water from all water lines until all water is expelled.
7. Pour half a pint of anti-freeze into internal sink and shower drain to remove water from traps.
8. Reinsert water tank drain plugs.
9. Turn off all taps.

Water Heater Bypass Not Installed
1. Fully drain all water in system, including hot water appliance and storage tanks.
2. Pour 6 gallons of drinking water safe, non-toxic antifreeze into the water tank.
3. Run each tap, both hot and cold until antifreeze is through. This includes all shower and sink outlets.
4. Pour 1 pint of antifreeze in each sink and shower drain.

Post Winter
1. Drain all antifreeze from tanks and lines.
2. Flush system thoroughly to remove all residue of antifreeze.

Winter Storage
Storing your trailer unused through winter requires maintenance, particularly the batteries. Ensure the batteries are regularly charged and conditioned during storage, at least monthly.

Mechanical Maintenance

WARNING

WARNING – Failing to maintain your trailer adequately COULD result in severe personal injury or death if the warning is ignored. Maintain according to the maintenance schedule as a minimum requirement.

Wheels and Tires

Tires 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 trailer. check the wheel nut torque at 25, 50, 100 and 300 miles. 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 trailer 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 maximum interval for checking adjustment is 3000 miles.

Brake Adjustment

Brakes should be adjusted (1) after the first 150 miles of operation when the brake shoes and drums have "seated," (2) at 3000 mile intervals, (3) or as use and performance requires.

CAUTION

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 3000 miles 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

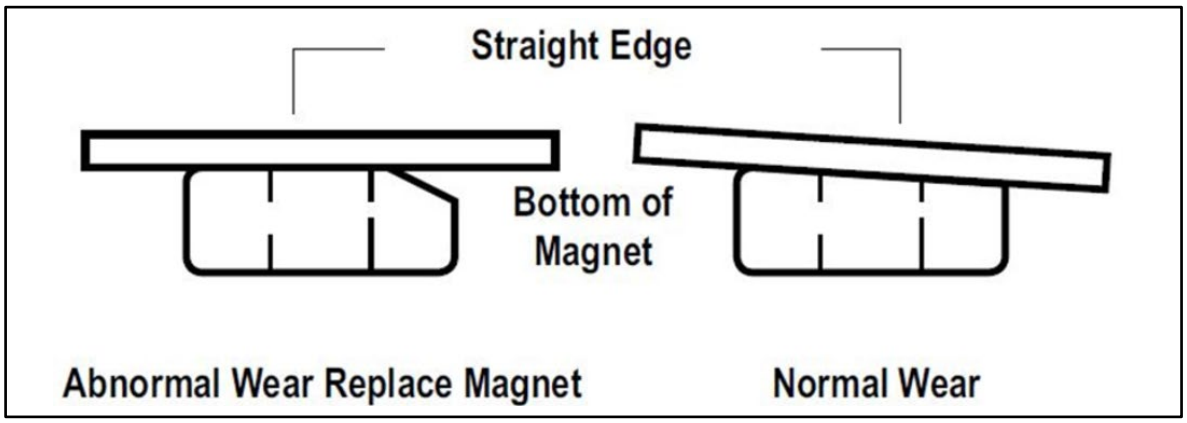
This should only be done by qualified persons.

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 1/16" 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.

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.

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

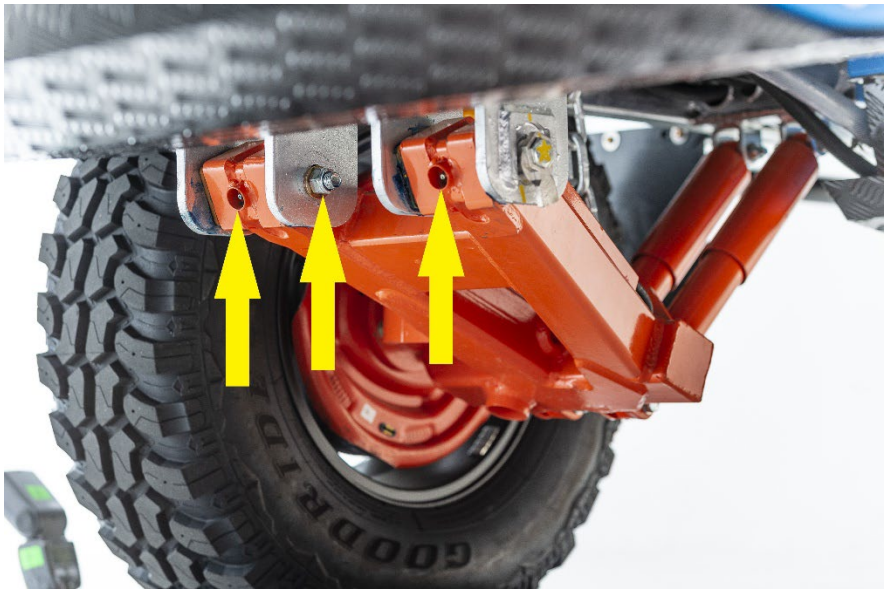
Bearings and Seals

The Timken bearings in your trailer are protected with a rubber seal on the rear of the drum and a friction fit bearing cap on the front. Under normal use without encountering water crossings these should be services every 3000 miles.

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.



Handbrake

Adjuster Automotive Type

Adjusting the automotive style handbrake on later models is done as follows.

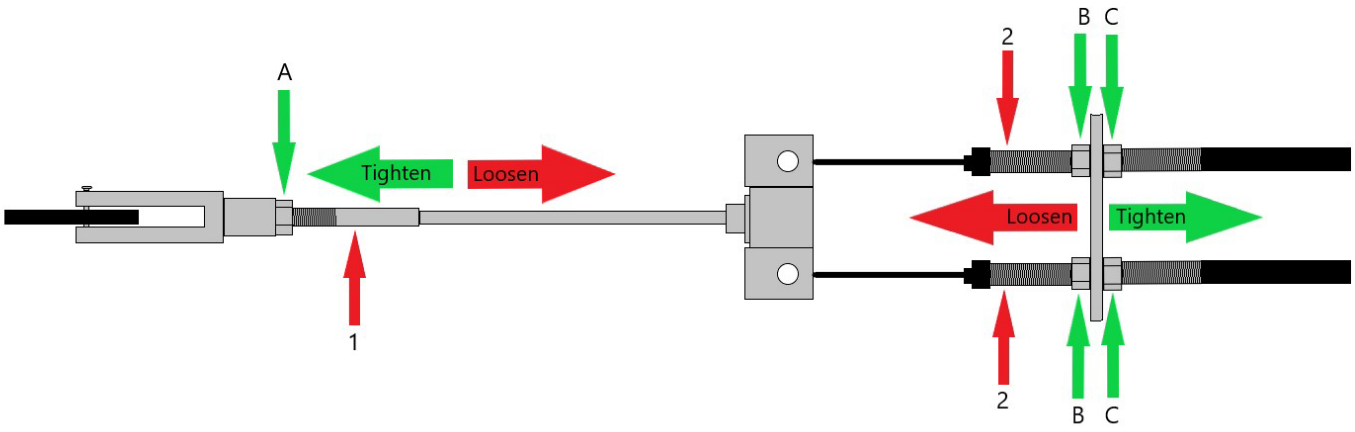
To adjust the left and right side simultaneously:

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 if coupling head loosens excessively and should be done by 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.

Plumbing and Toilet

Grey Water Tank

To keep the grey water tank fresh and remove smells it should be emptied and flushed regularly. Tank fresheners are available in various brands and are highly recommended. The grey water tank is emptied via the valve on the near to curb side of the trailer.

Fresh Water Tanks

When used for drinking water regular tank maintenance is vital. By regularly using a proprietary Tank Cleaner you will reduce or eliminate bacteria and after taste. Always fill your tanks using a potable water grade hose. Fitting a filter that removes smell, taste and bacteria is highly recommended.

Selecting the Supply tank

Valves to select the supply tank on trailer models with multiple freshwater tanks are beneath the trailer on the near to curb side beneath the water pump location.

Connecting to City Water

The city water connection is located behind the filler cap panel shown below.

Toilet Care and Maintenance

Chemicals

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

Thetford

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

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

Thetford recommend “Aqua Rinse” ***Do not add to main water tanks! ***

Grey Water Tank: Tank Freshener

Truma AquaGo Hot Water System

The manufacturers Operation Manual States:

Safety symbols and signal words

This is the safety alert symbol. This symbol alerts you to potential hazards that can kill or hurt you and others.

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE is used to address practices not related to physical injury.

Other important information or tips

Safety behavior and practices

Ensuring a safe operating environment

- **DANGER** Suffocation through exhaust gases. To ensure dissipation of exhaust gases, operate the appliance outdoors only.
- Never use in enclosed spaces or tents or breathe in the exhaust gases.
- If installing an awning, make sure that the exhaust system terminates outdoors.
- If you park the RV in an enclosed space, such as a garage or repair shop:
- You must block the fuel supply.
- You must switch the appliance off at the control panel.

- Use the appliance only with a functioning LP gas and carbon monoxide detector installed in the RV. For installation, operation and function test follow the manufacturer's guidelines.
- Keep the air inlet and exhaust outlet free of obstructions in order to ensure clean combustion.
- Do not place articles on or against the appliance. Do not lean any objects against the water heater's access door or place any foreign objects within 2 feet (61 cm) of the access door.
- Do not use or store flammable materials near the appliance.
- Do not spray aerosols in the vicinity of the appliance while it is in operation.
- Do not modify the appliance.

Responsibilities of the operator

- Avoid possible serious health issues caused by electromagnetic radiation. All persons with a pacemaker are prohibited from opening the access door and maintaining the appliance during operation.
- The operator is responsible for the water filled into the appliance and its quality.
- 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 this would result in damage to the gas system.
- 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.

Safe operation

- Use with LP gas (propane) only. Butane or any mixtures containing more than 10% butane must not be used.
- LP tanks must be filled by a qualified gas supplier only.

- The nominal gas system pressure must be 10.5 in. wc.

- Hot water can be dangerous, especially for infants, children, the elderly, or infirm. It can cause severe burns. Therefore:
- Never actuate the pressure relief valve (Fig. 1 – 4) as long as the appliance is still hot.
- Never actuate the Easy Drain Lever (Fig. 1 – 11) as long as the appliance is under water pressure and/or still hot.
- Always check the water temperature before entering a shower or bath.

- How long before hot water causes skin damage?

Temperature °F (°C)	Time before skin becomes scalded
155 (68)	1 second
148 (64)	2 seconds
140 (60)	5 seconds
133 (56)	15 seconds
127 (52)	1 minute
124 (51)	3 minutes
120 (48)	5 minutes
100 (37)	Safe bathing temperature

Source: Moritz, A.R. / Herriques, F.C.: Studies of thermal injuries: the relative importance of time and surface temperature in causation of cutaneous burns A. J. Pathol 1947; 23: 695 – 720

- The water pressure on the inlet side must be limited to 65 psi (4.5 bar), otherwise internal components of the appliance will be damaged. On (city) water connections with a pressure higher than 65 psi (4.5 bar) a pressure regulator is strongly recommended.

While driving

- To avoid damage, make sure the access door (Fig. 1 – 20) to the appliance is closed before moving the RV, as follows:
- Turn lock is engaged.
- Access door is flush with the cover plate.

- Shut OFF gas and the LP tank when moving the RV. This disables all gas appliances and pilot lights. Gas appliances must never be operated while the vehicle is in motion.

- Shut OFF the appliance when refueling or pumping gas, in multi-storey car parks, in garages or on ferries.

- To avoid damage, make sure no spray water enters the appliance when cleaning the RV, e.g., do not spray directly into the openings/ ventilation grille.

Safe handling of malfunctions

- Switch OFF the gas supply and the appliance:
  - if anything seems to be out of the ordinary.
  - if you smell gas.

- **DANGER** Fire / explosion if you attempt to use an appliance that has been damaged by flooding or if the vehicle has been involved in an accident. A damaged appliance must be repaired by an expert or be replaced.
- Only carry out repairs yourself if the solution is described in the troubleshooting guide of this manual.

- A damaged appliance may have to be replaced with a new one.

Safe maintenance and repair

- Repairs may only be carried out by an expert.

- Children must not carry out maintenance, repair, or cleaning work.

- Before accessing terminals, please secure all supply circuits (i.e. 12 V) and ensure that the gas supply is securely turned off.

- Any work involving connection or interconnecting wiring must be carried out by a licensed electrician.

- Only use AquaGo decalcification tablets to decalcify the appliance to avoid damage and the voiding of your warranty. Never use vinegar. Call your local AquaGo dealer or service provider or see www.truma.net for more information.
  - The use of non-Truma-approved substances for decalcification can cause chemical reactions and produce hazardous substances that could enter the drinking water.

- Any alteration to the appliance or its controls can cause unforeseen serious hazards and will void the warranty.
- After a long period of winterization: Flush all hot/cold water hoses and the appliance thoroughly with drinking water before using it.

- Keep the appliance free of foreign objects, e.g., leaves, animals, spiderwebs, and keep the area around free of snow and ice. The appliance will not function properly if the intake air or exhaust terminal is obstructed.

Safety features

The appliance is equipped with the following safety devices:

Flame monitoring
If the flame goes out, the gas supply to the burner is switched off (after 3 failed restarts).

Low-voltage (over-voltage) shutdown
If the voltage drops below 10 VDC (or rises above 16.4 VDC), the appliance shuts off.

Overcurrent protection
If there is a short circuit in the appliance (>10 A), a fuse on the control unit is activated and the appliance is switched off.

Monitoring of the flue fan
If there is a failure of the flue fan, the gas supply to the burner is switched off.

Overcurrent protection
If there is a short circuit in the appliance (>10 A), a fuse on the control unit is activated and the appliance is switched off.

Monitoring of the flue fan
If there is a failure of the flue fan, the gas supply to the burner is switched off.

Monitoring of hot water temperature
A water over temperature switch avoids excessively high water temperatures in case of a fault.

Operating Instructions

Read and follow the "Consumer Safety Information" before operating the appliance.

WARNING
Scalding injuries caused by hot water!

Water temperatures over 127°F (52°C) can cause severe burns or scalding and in extreme cases even death.

- Before using the hot water faucet or using the shower, allow the hot water to run until the water temperature no longer increases.
- Test the temperature of the water before placing a child in the bath or shower.
- Do not leave a child or an infirm person in the bath unsupervised.

How the appliance works

The appliance was developed exclusively for use in recreational vehicles (RVs).

The appliance is connected between the vehicle's fresh water supply and its hot water plumbing system.

It is powered by propane and a 12 V power supply. The ventilation grille on the access door allows combustion air to flow into the appliance and exhaust gas to flow out.

When the appliance is switched on, the water will be heated on demand:

- A volume-flow sensor in the appliance detects when the hot water faucet has been opened and the volume flow is greater than approximately 0.4 gallons/min (1.5 liter/min). The burner then starts automatically.
- The burner control continuously adjusts the heater output based on volume flow and inlet water temperature, so that the temperature at the hot water outlet is approximately 120 °F (49 °C). A temperature stabilizer is also installed in the appliance to minimize fluctuations of the outlet temperature.
- After some time the maximum temperature at the faucet or in the shower is reached. The length of time will depend on the model (AquaGo basic, AquaGo comfort and AquaGo comfort plus) and variations in the water plumbing (length of pipes, insulation, circulation line, etc.). Like in a home shower, a comfortable water temperature at the shower head is reached by mixing in cold water.
- When the volume flow is less than approximately 0.4 gallons/min (1.5 liter/min) and the faucet is closed, the burner is automatically switched off.

The AquaGo comfort and AquaGo comfort plus models are equipped with a circulation pump. The circulation pump as well as the burner are switched on automatically by the control unit in order to keep the water temperature above 102 °F (39 °C) in "COMFORT" mode and 41 °F (5 °C) in "ECO" mode.

NOTICE
Risk of damage in frost conditions. Refer to "Operation in frost conditions".

Pressure relief valve

WARNING

Scalding injury from hot water and/or tampering with the pressure relief valve!

- Never actuate the pressure relief valve as long as the appliance is still hot.
- Do not place a plug or reducing coupling on the outlet part of the valve.

- The pressure relief valve is a safety component and must not be removed for any reason other than replacement.
- The pressure relief valve is not serviceable; if defective, it must be replaced.
- It must be replaced by a Truma pressure relief valve rated for 100 psi (6.9 bar) that is CSA-certified and registered.
- It must be replaced by a Truma certified service technician.
- Tampering with the pressure relief valve will void the warranty.

The appliance is equipped with a pressure relief valve (Fig. 3) that complies with the standard for Relief Valves for Hot Water Supply Systems, ANSI Z21.22

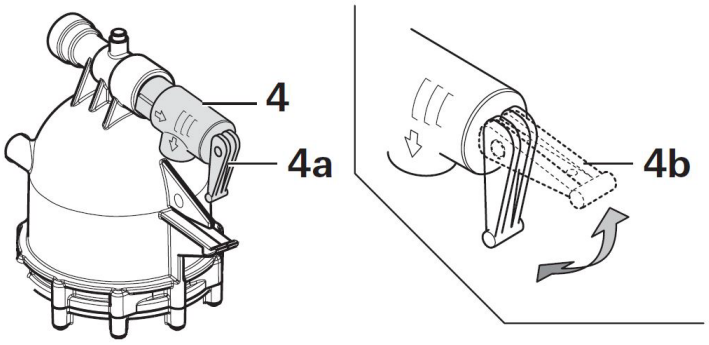


Fig. 3

4 Pressure relief valve
4a Lever in “valve closed during operation” position
4b Lever in “open” position

Opening the access door

1. Turn the turn lock counterclockwise into the vertical position.

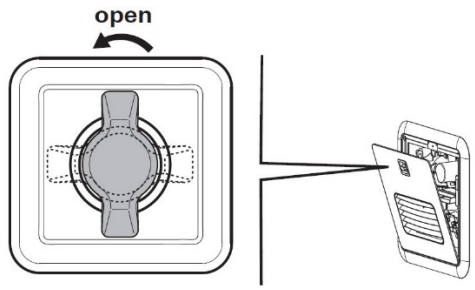


Fig. 4

- The access door can be opened in two different positions:
- Position ❶ is the maximum opening width for switching the appliance on or off.
- Position ❷ is the starting position for removing the access door.

NOTICE
Damage to the hinge!
- Do not try to remove the access door in Position ①. Position ① is the maximum opening width of the access door.
- Only remove the access door in Position ②.

2. Open the access door to Position ①.

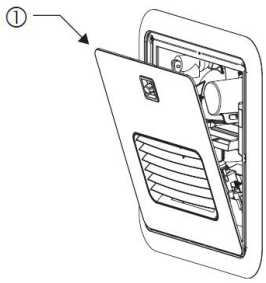


Fig. 5

Removing the access door

1. Open the access door to Position ②.
2. Move the access door upwards to remove it.

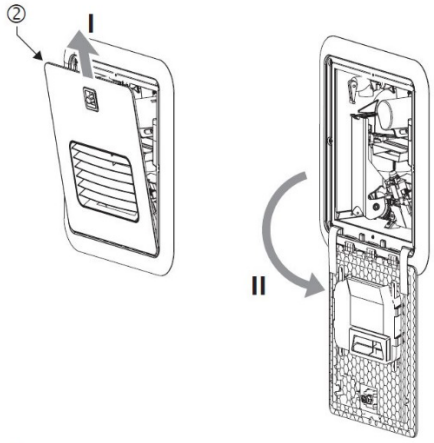


Fig. 6

Closing the access door

NOTICE

Damage to the access door and the RV if the access door is not closed properly!

- Make sure that the access door is flush with the cover plate when closed.

1. If removed, insert the access door into the cover plate.
2. Make sure that the webbing is not pinched between the access door and the cover plate.
3. Press the access door against the cover plate.
4. Turn the turn lock clockwise into the horizontal position.

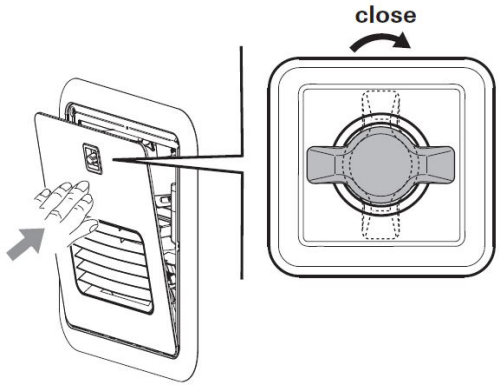


Fig. 7

Starting The Appliance

WARNING
Danger of over-temperature and toxic exhaust gases!

- Use with LP gas (propane) only. Butane or any mixtures containing more than 10 % butane must not be used.
- Keep the air inlet and exhaust gas outlet free of obstructions. Do not lean any objects against the water heater's access door or place any foreign objects within 2 feet (61 cm) of the access door.

WARNING
Danger of over-temperature and toxic exhaust gases!
Danger of combustion, personal injury, and damage to RV!

- Keep the area around the appliance free from combustible materials, gasoline, and other flammable vapors or liquids.
- Switch the gas supply and the appliance off:
- if anything seems to be out of the ordinary.
- if you smell gas.
- if you move the RV.
- before entering a gas station.
- before entering a tunnel.

Inspections before each use

Check the appliance for the following points before each use. In case of damage, contact an authorized Truma service provider and do not operate the appliance.

1. Check for visible damage, e.g., on the cover plate or access door.
2. Provide adequate quantities of propane gas and fresh water.
3. Switch ON and check 12 V power supply of your RV.
4. Check that the access door of the appliance is closed.
5. Keep the appliance free of foreign objects, e.g., leaves, animals, spiderwebs, and keep the area around free of snow and ice. The appliance will not function properly if the intake air or exhaust terminal is obstructed.

Operating Procedures

NOTICE

Risk of damage in frost conditions.

In frost conditions, ambient temperatures below 39 °F (4 °C), there is a risk that water in pipes, faucets and appliances could freeze. This can cause considerable damage.

- Before you fill water into appliances and parts that transport water, you must heat the installation area sufficiently so that the water cannot freeze.

Proceed as follows to fill the appliance with water:

1. Close open bypass lines (if present). Insert the water inlet filter or heating cartridge – if removed. 2, 7, 9 – 11.
2. Turn on fresh water supply or switch on water pump.
3. Fill the plumbing system.
   - Open all water-release points, e.g., cold, and hot water faucets, showers, toilets.

It is important that you bleed the water system before starting the appliance.
Once water flows, the plumbing system is vented. Close the water-release points.

4. Start the appliance as follows:
   Make sure that the LP gas supply is turned on.
   Switch on the 12 V power supply (RV).
   Open the access door (refer to “Opening the access door” on page 52).
   Switch on the appliance at the POWER switch. Refer to “Switching ON the appliance” **on page 56.**

5. **AquaGo comfort / AquaGo comfort plus:**
Select the desired operating mode (refer to “Operating modes (control panel)” on page 56.
Close the access door (refer to “Opening the access door” **on page 52**).

WARNING

Scalding injuries caused by hot water!

Water temperatures over 127ºF (52ºC) can cause severe burns or scalding and in extreme cases even death.

- Before using the hot water faucet or using the shower, allow the hot water to run until the water temperature no longer increases.
- Test the temperature of the water before placing a child in the bath or shower.
- Do not leave a child or an infirm person in the bath unsupervised.

- There may be a variation between the temperature delivered from the appliance and the temperature at the faucet due to water conditions or the length of pipe from the appliance.
- The presence of a flow restrictor in the hot water line may limit the water flow.

How to use hot water:

- To obtain the desired water temperature at the faucet or in the shower, mix cold and hot water.
- Particularly when showering, wait until the water temperature has stabilized before entering or allowing other people or animals to enter the shower.

Switching ON the appliance

1. Open the access door (refer to “Opening the access door” **on page 52**).
2. To switch on the appliance, switch the POWER switch (Fig. 8 – 8) to one of the two “ON” positions.

Both ON positions on the POWER switch have the same function. Choose your preferred position.
When the green power ON LED 1 (Fig. 8 – LED 1) is lit, the appliance is switched on.
If the red error code LED 2 (Fig. 8 – LED 2) is lit / flashes, there is a fault or warning (refer to “APPENDIX A – Error Codes” on page 69).

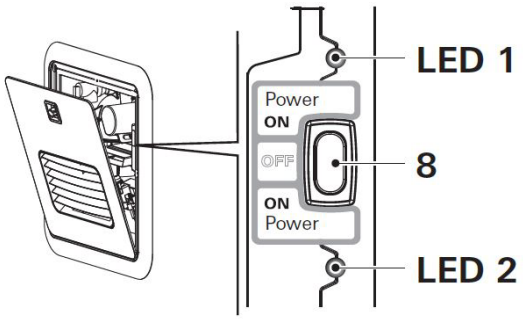


Fig. 8

AquaGo basic

- The operating mode is set automatically to “BASIC”.
- The appliance is now ready for use.
- Water temperature at the outlet is approximately 120 °F (49 °C).

AquaGo comfort / AquaGo comfort plus

- The appliance is now ready for using the control panel inside your vehicle. Refer to “Operating modes (control panel)” on page 57.

Operating modes (control panel)

AquaGo comfort / AquaGo comfort plus

A control panel to select the operating mode (included with the delivery from serial number DLE60X(X)27100000).

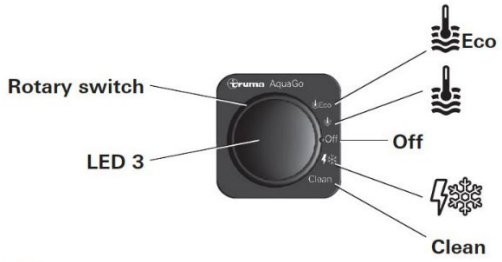


Fig. 9

With the rotary switch (Fig. 9) you can choose between the following operating modes:

Sign	Operating mode / Description
Eco	ECO
	The appliance is now running in energy-saving mode. • Water temperature at the outlet is approximately 120 °F (49 °C). • Prevention of freezing by using propane gas. The temperature in the appliance is automatically kept above 41 °F (5 °C) . • During operation, the yellow status LED 3 is lit.
	COMFORT
	The appliance is now running in a mode that provides rapid availability of hot water. • Water temperature at the outlet is approximately 120 °F (49 °C). • Stand-by heat.The temperature in the appliance is automatically kept above 102 °F (39 °C). • During operation, the yellow status LED 3 is lit.
Off	Stand-by. The appliance is not running in any operating mode. • The yellow status LED 3 is off. To switch off the POWER and gas supply refer to “Switching OFF the appliance” on **page 57.**
	ANTIFREEZE
	Prevention of freezing using 12 VDC electricity: Operating mode with installed electric antifreeze kit (available as an accessory) and appliance switched on. The temperature in the appliance is automatically kept above 41 °F (5 °C). • During operation, the yellow status LED 3 is lit.
Clean	DECALCIFICATION
	Only AquaGo comfort / AquaGo comfort plus. See “Decalcification” on **page 62.** For safety reasons, after 30 seconds the decalcification process cannot be stopped until the system has been rinsed in accordance with the instructions. See “Interrupting decalcification” on page 21.

Switching OFF the appliance

1. AquaGo comfort / AquaGo comfort plus

Set the control panel to “Off”.

2. Open the access door (refer to “Opening the access door” on **page 52**).

3. Switch off the appliance at the POWER switch (Fig. 8).

- The green Power-ON LED 1 (Fig. 8) extinguishes.

4. Close the access door (refer to “Closing the access door” on **page 53**).

5. If the appliance is not needed, turn off the gas supply to the appliance.

If you intend to put the RV into storage or turn off the appliance during freezing temperatures, refer to “Winterizing” on page **14.**

Operation in frost conditions

(Ambient temperatures below 39 °F (4 °C))

NOTICE

Risk of damage in frost conditions.

In frost conditions, ambient temperatures below 39 °F (4 °C), there is a risk that water in pipes, faucets and appliances could freeze. This can cause considerable damage.

- If the appliance is not to be used in frost conditions, you must winterize the appliance. Refer to “Winterizing” on page 14.
- Winter operation will not protect the RV’s entire water system. Water lines, faucets, water tanks and the external water valves and the vehicle must be heated separately.
- The RV must be designed for winter use/freezing conditions.
- The water pipes in the RV must be ice-free to operate the AquaGo comfort / AquaGo comfort plus in winter. Otherwise, there is no water flow, and the appliance does not start.

Only AquaGo basic

- **NOTICE Never operate the AquaGo basic in frost conditions, this model must be winterized (refer to “Winterizing” on page 59).**

Only AquaGo comfort / AquaGo comfort plus

When the vehicle is standing, to -4 °F (-20 °C)

- The appliance has a built-in thermostat that will start the burner and the circulation pump whenever the temperature in the appliance falls below 41 °F (+5 °C). The burner will automatically shut off when it senses a temperature above 111 °F (44 °C).
- **NOTICE** For the appliance to operate properly, you must ensure a constant supply of power (12 V), propane gas, sufficient water in the system. You must leave the appliance powered “ON”. The operating mode must be “ECO” or “COMFORT”. The water system must be bled so that the circulation pump works.

While driving (or if there is no gas supply), to -4 °F (-20 °C)

- **NOTICE** Gas must not be used for heating while the vehicle is in motion. Ask your dealer / vehicle manufacturer about options for heating your RV while driving.
- An electric antifreeze kit is available as an accessory (ask your dealer). With this kit, the appliance can be kept frost-free while you are driving or if there is no gas supply (to ambient temperatures of -4 °F (-20 °C)). The electric antifreeze kit includes detailed instructions.

- **NOTICE** While the vehicle is in motion and at ambient temperatures below -4 °F (-20 °C) the appliance must not be operated and must be winterized. To winterize the appliance refer to "Winterizing" on **page 58**.

Winterizing

NOTICE

Severe damage to the water system components and the appliance!
Any damage caused by freezing or an unsuitable winterizing fluid will not be covered by warranty.

- Follow the recommendations below if the appliance will be stored under freezing conditions or for an extended period of time.
- Winterize the appliance at the start of the winter season or before traveling to a location where freezing conditions are likely.

If your RV is equipped with a bypass around the appliance, separate the appliance from the water system with the bypass.

Winterizing the appliance

To winterize the appliance, you must drain all water from the appliance. To do this we advise the following steps:

- Remove the water inlet filter or heating cartridge. See "Draining the water and cleaning the water inlet filter" on page 15, steps 1 to 8.
- Let water completely drain from the appliance. This can take several minutes.
- Do not insert the water inlet filter or heating cartridge into the appliance during winter – if the appliance is not used.

  CAUTION **Danger of crushing/pinching of fingers when the Easy Drain Lever is closed!** Never put fingers between the Easy Drain Lever and latch.

- Close the Easy Drain Lever and the access door.

Once the water has been drained, the appliance is protected against freezing conditions.

Winterizing the RV with a winterizing fluid

- Winterizing the RV with a winterizing fluid is only possible with an installed bypass kit (not in scope of delivery)
- Refer to “Connection diagrams” in manufacturers booklet for all letters referred to in the following description.

Winterizing AquaGo basic / AquaGo comfort

1. Close valves A and B.
2. Open valve C.
3. Drain the appliance (“Draining the water and cleaning the water inlet filter” on **page 60**).
4. Flush the RV’s water system with a suitable winterizing fluid according to the supplier’s or RV manufacturer’s guidelines.

Winterizing AquaGo comfort plus

1. Close valves A, B and E.
2. Make sure that valve D remains in the closed position.
3. Open valve C.
4. Drain the appliance (“Draining the water and cleaning the water inlet filter” on **page 60**).
5. Flush the RV’s water system with a suitable winterizing fluid according to the supplier’s or RV manufacturer’s guidelines.
6. Close all faucets (if open).
7. Open valve D.
8. Wait until winterizing fluid has drained. Collect escaping fluid in a suitable vessel.
9. Close valve D.

Maintenance

Repairs must be performed by a certified service technician. Truma recommends that the appliance be serviced annually by a certified service technician. Verify proper operation after servicing.

⚠ WARNING

High temperatures or repair attempts while the gas supply is turned on may result in scalding injuries!

- Turn OFF the electrical power supply and the LP gas supply before starting maintenance and repair work.
- Allow the appliance to cool down.
- Never actuate the pressure relief valve as long as the appliance is still hot.

⚠ CAUTION

Injuries caused by the Easy Drain Lever!

- Never actuate the Easy Drain Lever as long as the appliance is under water pressure and/or is still hot.

⚠ CAUTION

Sharp edges can cause cuts and injury!

- Always wear protective gloves to avoid injuries from sharp edges during maintenance work.

Draining the water and cleaning the water inlet filter

To keep the appliance fully functional, clean the water inlet filter at least once a year.

1. **AquaGo comfort / AquaGo comfort plus**
   Set the control panel to “Off”.
2. Remove the access door (refer to “Removing the access door” on **page 53**).
3. Switch OFF the appliance at the POWER switch.
4. Open all hot water faucets and wait for cold water. This will ensure that hot water is removed from the appliance before draining.
5. Turn OFF the water supply or switch OFF the water pump.

6. Leave the hot water faucets open in order to depressurize and vent the water system.

⚠ CAUTION
Injuries caused by the Easy Drain Lever!
When the Easy Drain Lever is folded out, it protrudes beyond the side wall of the vehicle.
- When walking past or stooping down, make sure that you and others have sufficient distance.

7. Open the latch with your thumb while pulling the Easy Drain Lever down as far as it will go.
8. Remove the water inlet filter (or heating cartridge) as shown in Fig. 10 and rinse it with clean water.
9. Inspect the O-rings on the water inlet filter (or heating cartridge) for cracks. Change the filter assembly (spare part, refer to "APPENDIX C – Spare Parts (all models)" in manufacturers booklet) if there are cracks.

⚠ CAUTION
Danger of crushing/pinching of fingers when the Easy Drain Lever is closed!
- Never put fingers between the Easy Drain Lever and water inlet filter or latch.

If, during installation, it is difficult to install the filter cartridge, use a small amount of soap on the O-rings. Never use grease because the O-rings are not resistant to grease.

10. Install the water inlet filter as shown in Fig. 10. Observe the correct installation position and close the Easy Drain Lever until it is locked by the latch.

You can hear a "clicking" sound as the Easy Drain Lever engages.

11. Insert and close the access door (refer to "Closing the access door" on **page 52**).

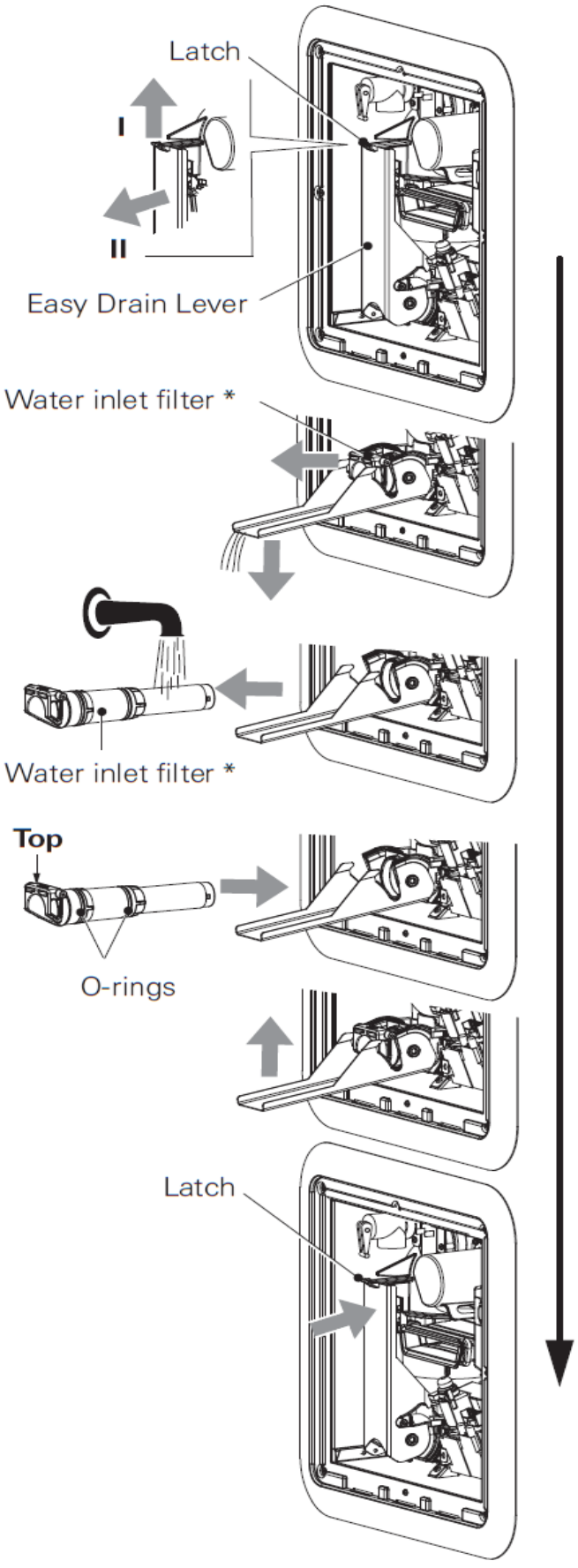


FIG. 10

*Or heating cartridge

Decalcification

NOTICE
Risk of damage in frost conditions.
In frost conditions, ambient temperatures below 39 °F (4 °C), there is a risk that water in pipes, faucets and appliances could freeze. This can cause considerable damage.

- Do not decalcify the appliance in frost conditions.

Decalcification frequency

Lime scale occurs especially as a result of precipitation from “hard” water. The appliance must be decalcified regularly depending on water hardness and hot water consumption.
Recommended decalcification frequency per year

Water Hardness Mg/l $CaCO_3$				
	Very Hard >180	**1**	**2**	**4**
	Hard 121-180	**1**	**1**	**3**
	Moderately Hard 61-120	**1**	**1**	**2**
	Soft 0-60	**1**	**1**	**1**
	Use*	**Low**	**Normal**	**High**

* Hot water consumption (approximately)

low	635 gallons/year	2400 l/year
normal	1585 gallons/year	6000 l/year
high	6350 gallons/year	24000 l/year

Decalcification (models **without** control panel)

Models AquaGo basic without control panel:
You can have these models decalcified by a Truma service partner. Please contact the following address:
Truma Corp.
825 East Jackson Blvd.
Elkhart, IN 46516
USA
Toll Free 1-855-558-7862
Fax 1-574-538-2426
info@trumacorp.com
www.truma.net

Decalcification (models **with** control panel)

AquaGo comfort / AquaGo comfort plus with control panel (included with delivery).

An integrated water consumption meter recognizes (after hot water consumption of approx. 1585 gallons / 6000 l) that decalcification is necessary. The assumed water hardness is “hard” and cannot be changed. The yellow status LED 3 (Fig. 9) indicates that decalcification is necessary (goes off briefly about every 7 seconds).

⚠WARNING

The use of non-original AquaGo decalcification tablets (e.g. vinegar) for decalcification can cause chemical reactions and produce hazardous substances that could enter the drinking water supply.

- **Do not** mix AquaGo decalcification tablets with other substances to avoid chemical reactions and production of hazardous substances.

- Use only AquaGo decalcification tablets to decalcify the appliance to avoid:
  - chemical reactions and production of hazardous substances,
  - damage to your appliance,
  - and the voiding of your warranty.
  - Call your local AquaGo dealer or service provider or see www.truma.com for more information on how to obtain AquaGo decalcification tablets.

Irritation of skin and eyes in case of contact with decalcification agent

Wear protective gloves, eye protection and face protection to avoid contact.

- Never use the water supply in the RV during decalcification
- In case of skin contact with the decalcification agent, immediately rinse the affected area with plenty of water.
- In case of eye contact, hold eyelid open and rinse with running water for 10 – 15 min. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist.
- If you swallow the decalcification agent, immediately rinse your mouth and drink plenty of water in small sips. Do not vomit. Consult a doctor.

During decalcification, you must also observe the following

- Damage to the appliance if decalcification is interrupted.
  - You must complete the decalcification process and then rinse thoroughly with clean water.
  - Allow about 3 hours for decalcification. The appliance works on its own for most of this time.

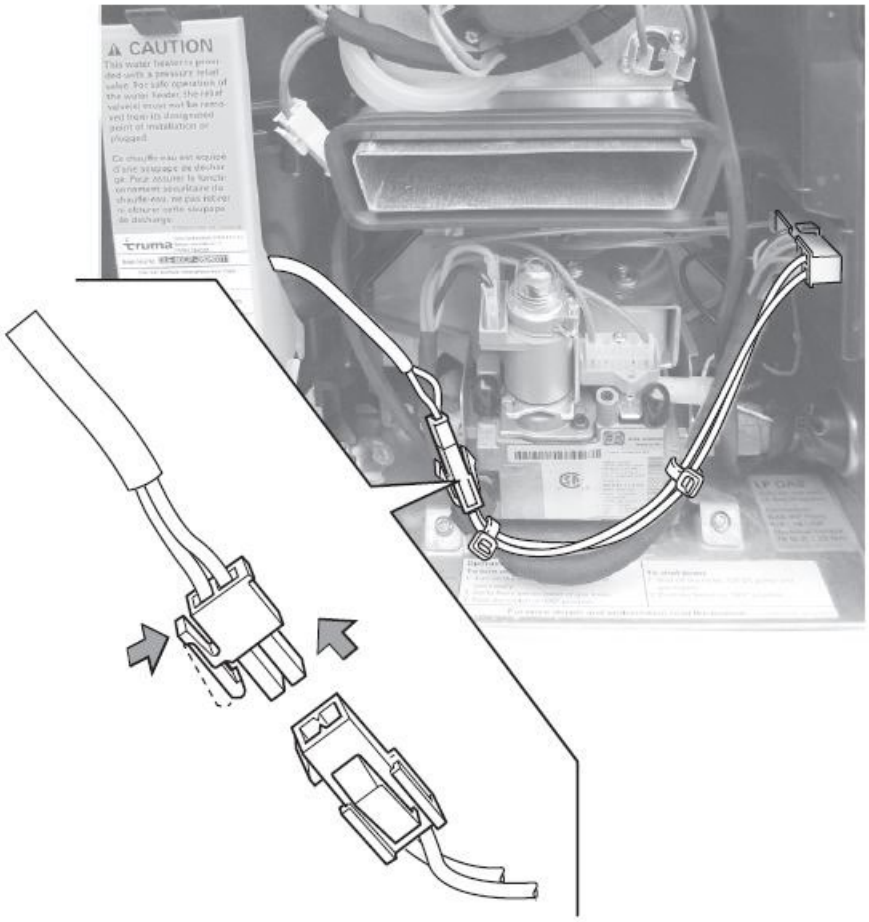
- Sensitive surfaces (e. g. marble) may be damaged through contact with the decalcification agent.
  - Immediately remove splashes of decalcification

a) Preparing for decalcification

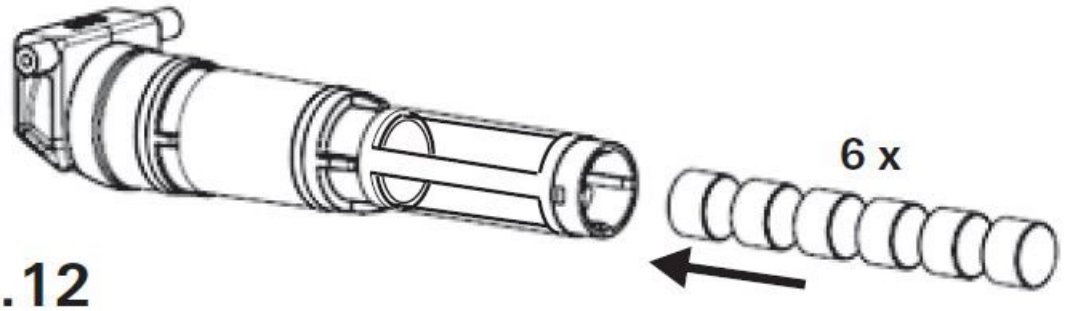
NOTICE For safety reasons, once the decalcification process has started it must not be stopped until the system has been rinsed (see process f). All operating modes of the appliance are blocked until decalcification has been completed.

Tasks within the RV
• Set the control panel to “Off”. • Turn OFF the water supply or switch OFF the water pump. • Open a hot water faucet to relieve pressure in the system. • On all water faucets attach the warning sign “Caution decalcification in progress” in a clearly visible position. Warning signs are enclosed with the decalcification tablets.

b) Draining the water system

Tasks outside the RV
• Remove the access door (refer to “Removing the access door” on page 52). • Switch OFF the appliance at the POWER switch. • Drain the water system and remove the water inlet filter. To do this, refer to “Draining the water and cleaning the water inlet filter” on page 60, Steps 4 to 8. ⚠ **CAUTION** You must use the water inlet filter for decalcification (included with the delivery Fig. 1 – 11a). If you are using an electric antifreeze kit, it must be removed and be unplugged from the power supply before decalcification (see Fig. 11).      Fig. 11

c) Introducing the decalcification agent

Tasks outside the RV
• **WARNING** Irritation of skin and eyes in case of contact with decalcification agent. Wear protective gloves, eye protection and face protection to avoid contact. • Fill the water inlet filter with 6 AquaGo decalcification tablets (content of one blister pack).    Fig.12 • Re-insert the water inlet filter. See Step 9 in “Draining the water and cleaning the water inlet filter” on page 15. • Switch ON the appliance at the POWER switch.

d) Filling the water system

Tasks within the RV
• Turn on fresh water supply or switch on water pump The decalcification tablets dissolve in water quickly (approx. 10 minutes). So that the decalcification agent is not rinsed out, when filling, run the water only as long as necessary. The decalcification tablets color the water slightly red. • Fill the water system. - Open all water-release points, e.g., hot water faucets, showers, toilets. - Once water flows uniformly, the water system is vented. - Close the water-release points.

You must bleed the water system thoroughly otherwise the circulation pump cannot circulate the decalcification solution.

e) Starting decalcification

Tasks within the RV
• Set the control panel to “Clean”. - If decalcification does not start, switch the appliance on at the POWER switch.

- Decalcification takes about 3 hours (during this time, you do not have to do anything).
- Decalcification is indicated by a slow flashing (1 s on, 1 s off) of the status LED 3 (Fig. 9) on the control panel.
- During decalcification, the control panel must remain set to “Clean”.
- Decalcification is complete when the status LED 3 (Fig. 9) flashes quickly on the control panel.

f) Rinsing the water system

- You will need about 8 gallons (30 liters) of water to rinse the water system.
- Dispose of (used) decalcification solution in accordance with local laws and regulations.

Tasks within the RV
• Open all water-release points, e.g., hot water faucets, showers, toilets. • Run the water until the status LED 3 (Fig. 9) on the control panel goes out. • Set the control panel to “Off”. • Close all water-release points. • Turn OFF the water supply or switch OFF the water pump. • Open a hot water faucet to relieve pressure in the system. To make sure that the appliance and the water pipes contain no decalcification agent, empty the water system again and refill it.

Tasks outside the RV
• Switch the appliance OFF at the POWER switch (red error code LED 2 (Fig 8) flashes before it switches off). • Drain the water system (refer to “Draining the water and cleaning the water inlet filter” on **page 60**, steps 4. to 8.). • Install the water inlet filter* referring to step 9. *or antifreeze cartridge if electric antifreeze kit is installed. • Switch ON the appliance at the POWER switch. • Insert and close the access door (refer to “Closing the access door” on **page 52**).

You have to switch the appliance off and on to unblock decalcification and enable further operation.

g) Filling the water system

Tasks within the RV

• Turn on fresh water supply or switch on water pump.
  ○ Fill the water system.
  ○ Open all water-release points, e.g., hot water faucets, showers, toilets .
  ○ Once water flows evenly, the water system is vented.
  ○ Close the water-release points.
• Before you use the water system and the appliance, check the color of the water at all faucets:
  ○ Slightly red –> rinse again.
  ○ Clear –> decalcification is finished.
• Remove the warning signs “Caution decalcification in progress”

Interrupting decalcification

Decalcification is indicated through slow flashing (1 s on, 1 s off) of the status LED 3 (Fig. 9) on the control panel.

- Decalcification can be interrupted by switching the control panel to “Off”.
  - Decalcification is interrupted after about 2 s.
  - The status LED 3 (Fig. 9) on the control panel flashes quickly.

- **WARNING** Irritation of skin and eyes in case of contact with decalcification agent. Wear protective gloves, eye protection and face protection to avoid contact.

  - First you must take out the water inlet filter and remove any AquaGo decalcification tablets that it may contain.
  - To take out the water inlet filter, see “Draining the water and cleaning the water inlet filter” on page 15.
  - Dispose of AquaGo decalcification tablets in accordance with local laws and regulations.

- Before you use the water system again, you must rinse it (see step f) “Rinsing the water system” on **page 66**) and fill it with water (see step g) “Filling the water system” on **page 65**).

Accessories

Electric antifreeze kit *
Truma offers an electric antifreeze kit (part no. 77400-01) that keeps the appliance frost-free to -4 °F (-20 °C) while you are driving or if there is no gas supply. To operate the kit, you need a 12 VDC (120 W) power supply from the vehicle’s on-board system. Ask your dealer.

* For AquaGo comfort / AquaGo comfort plus.

AquaGo decalcification tablets
Truma offers decalcification tablets (part no. 77300-01) to decalcify AquaGo comfort / AquaGo comfort plus.

Truma rear installation gas connection kit

Truma offers a rear installation gas connection kit (part no. 77000-37500) if installation from the back of the appliance is required.

AquaGo comfort upgrade kit

Truma offers a kit (part. no. 77000-00005) to upgrade from AquaGo basic to AquaGo comfort.

Appendix A – Error Codes

If the appliance malfunctions, LED 2 (refer to "Overview / Designation of parts" on page 2) will flash to indicate the malfunction. There are short and long intervals of flashing. The flashing will repeat every 3 seconds.

1. Note the flashing intervals and check the list below.
2. Reset the appliance:
   - Switch off the appliance. / – Wait 5 seconds / –Switch the appliance on again.
3. If an error code is still displayed, contact an authorized Truma service center.

Error Code	Flash Code s = short = 0 l = long = 1	Error	Description
1	s,s,s,s,s,s,s,l	Flame not detected	There is a flame-detection error at the burner because the flame was not detected after release of gas and ignition. **Important:** The system indicates this error only after three attempts at intervals of approximately 30 seconds.
2	s,s,s,s,s,s,l,s	Error at over temperature switches (EOS, BOS)	The exhaust over temperature switch (EOS) or burner over temperature switch (BOS) is open/unplugged.
3	s,s,s,s,s,s,l,l	Error at exhaust pressure switch (EPS)	The EPS did not close when the flue fan was actuated because the fan did not push enough air through the exhaust channel. A cause could be, e.g., blocking of the exhaust channel or a faulty switch. OR The EPS is closed even though the flue fan is not running. Cause is a defective EPS or flue fan.
4	s,s,s,s,s,l,s,s	Error at water over tem-perature switch (WOS)	The WOS opened at a water temperature of over 185 °F (85 °C).
5	s,s,s,s,s,l,s,l	Flame detected at incorrect time	There is an error in flame detection of the burner because the flame was detected – before ignition or – before the release of gas or – after the gas was switched off.
6	s,s,s,s,s,l,l,s	Error in the safety circuit for gas valve	There is a heating request but gas cannot be released. One of the switches WOS, EOS, BOS, EPS is open/unplugged.
7	s,s,s,s,s,l,l,l	Error of burner MCU internal RAM	Error detected in the burner MCU's internal safety monitoring feature (safety variables are no longer correct or RAM/STACK was overwritten by mistake).
9	s,s,s,s,l,s,s,l	Malfunction of water outlet temperature sensor WOT	Water outlet temperature sensor WOT – has a short circuit or – is open/unplugged.
10	s,s,s,s,l,s,l,s	Error in the safety circuit	There is a heating request but gas is not released because a valve-actuation signal was not activated.
11	s,s,s,s,l,s,l,l	Error of MCU watchdog gas release	There is a heating request but the MCU watchdog does not release the gas path.
12	s,s,s,s,l,l,s,s	Internal error	
13	s,s,s,s,l,l,s,l	Short circuit shut-off valve	Short circuit detection in the gas valve (shut-off part) detected a current > 1000 mA and shut off.
16	s,s,s,l,s,s,s,s	Malfunction of the MCU	Internal error of the control unit.
20	s,s,s,l,s,l,s,s	Malfunction of water inlet temperature sensor WIT	Water inlet temperature sensor WIT – has a short circuit or– is open/unplugged or – the temperature of the sensor is colder than 14 °F (-10 °C).
21	s,s,s,l,s,l,s,l	Malfunction of circulation line temperature sensor WCT	Circulation line temperature sensor WCT – has a short circuit or– is open/unplugged or

			– the temperature of the sensor is colder than 14 °F (-10 °C).
22	s,s,s,l,s,l,l,s	Malfunction of gas valve, modulation section	Error at gas valve, modulation level, because - the modulator has a short circuit or - is open/unplugged.
23	s,s,s,l,s,l,l,l	Voltage is too high	The main power supply's voltage detector measured a voltage level of >16.4 V.
24	s,s,s,l,l,s,s,s	Voltage is too high	The main power supply's voltage detector measured a voltage level of <10 V.
25	s,s,s,l,l,s,s,l	Flue fan current consumption error	The current detector for the flue fan has measured a current outside the permitted limits.
26	s,s,s,l,l,s,l,s	Circulation pump current consumption error	The current detector at the circulation pump has measured a current outside the permitted limits.
27	s,s,s,l,l,s,l,l	Water circulation pump is running dry.	The circulation pump does not generate water flow. The water system may not be filled or not sufficiently vented.The circulation pump tries (20 times) to generate a water flow every 30 s (if successful, the error is reset).
28	s,s,s,l,l,l,s,s	Too low gas pressure.	Gas supply (in vehicle) to the appliance insufficient.
29	s,s,s,l,l,l,s,l	Too high heat power required.	You are trying to use more hot water than the appliance can supply.
30	s,s,s,l,l,l,l,s	Risk of freezing.	Temperature in the appliance below 27 °F (3 °C).
31	s,s,s,l,l,l,l,l	Decalcification finished.	
32	s,s,l,s,s,s,s	Current too low.	Current in the antifreeze kit too low (e.g. cable break).
33	s,s,l,s,s,s,s,l	Current too high.	Current in the antifreeze kit too high (e.g. short circuit).

Troubleshooting

Problem	Potential Cause	Resolution
No hot water at the faucet	Gas supply is turned off or interrupted.	Check and/or turn on gas supply.
	Gas tank is empty.	Refill/replace the gas tank.
	The appliance is switched off.	Switch on the appliance according to instructions (refer to "Operating procedures" on **page 55**).
	Fresh water supply is turned off.	Open the fresh water supply.
	Power supply to the appliance is switched off.	Switch on power supply to the appliance.
	Defect in the appliance.	LED 2 flashes red (refer to "APPENDIX A – Error Codes" on **page 68**) and contact a certified service technician if necessary.
Boiling noises	Too much lime scale in the AquaGo instant water heater.	The appliance must be decalcified (refer to "Decalcification" on **page 62**).
Hot water temperature too low.	Gas flow to the appliance is too low (gas inlet pressure < 10.5 in. wc).	Consult vehicle documentation to determine if the gas supply is capable of providing the necessary volume of gas for the appliance. Contact a service technician to verify that the gas installation is suitable.
	Volume flow of hot water is too high and/or the temperature of cold water reaching the appliance is too low.	Turn down hot water at the faucet or in the shower in order to reduce flow rate. Potentially retrofit a flow rate throttle in the water system. This must be performed by a certified service technician.
	Too much lime scale in the appliance.	The appliance must be decalcified (refer to "Decalcification" on **page 62**).
	Water pressure in water system too high.	Adjust the water pump pressure to a maximum of 65 psi (4.5 bar).

Water escaping at pressure relief valve.		If the water system is connected to a central water supply higher than 65 psi (4.5 bar) (rural or urban connection), a pressure reducer must be used. Install a pressure reducer (e.g. Truma pressure reducer) at the fresh water supply.
	Water cannot expand in the water system.	Contact the vehicle manufacturer about retrofitting a pressure compensation element.
	Lime or dirt under the pressure relief valve seat.	Allow the appliance to cool and then slowly raise the test lever (Fig. 3 – 4a) to flush the water system and attempt to force dirt or foreign matter out of the pressure relief valve seat. Replace pressure relief valve. This must be performed by a Truma certified service technician.
Water escaping at water inlet filter	Lime or dirt under the O-ring seats.	Clean the O-rings and their corresponding sealing surfaces with clean water.

AquaGo comfort / AquaGo comfort plus		
Problem	**Potential Cause**	**Resolution**
The yellow status LED 3 is off although an operating mode was selected.	Power switch is OFF.	Switch ON the appliance at the POWER switch.
	Power supply to the appliance is switched off.	Switch on the power supply to the appliance.
	Power supply was interrupted.	Reset by switching OFF at the control panel, waiting 2 seconds and then switching on again.

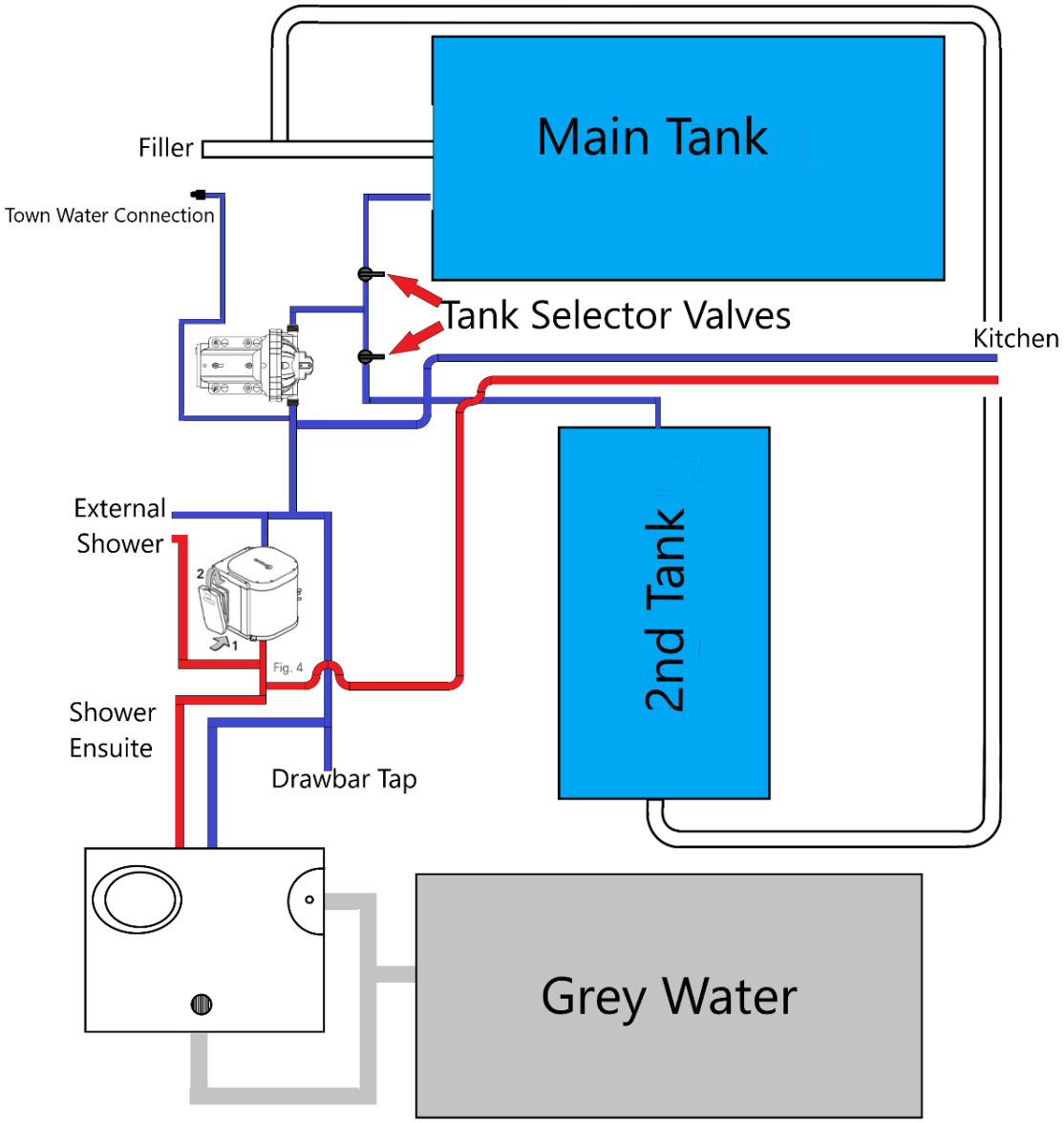
If none of the measures in the troubleshooting chart proves successful, please contact your dealer, the Truma Service Center at 1-855-558-7862 or one of our authorized service partners.

Water Pump

The pump when switched on is 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.

Selecting Fresh Water Tank

Beneath the water pump location on the outside of the caravan you will find the selector valves to choose which water tank feeds the water pump.



Furnace

Dometic DFSD 12111 Furnace

Introduction:

The following instructions are an extract from the Operation Manual published by the manufacturer Dometic Corporation. These instructions are a guide to operation of the furnace only.

The manufacturers Operation Manual included with the product MUST be read in its entirety before operating this appliance.

Should you require further information, contact Dometic https://www.dometic.com/en-us/outdoor/support

General Safety

The manufacturer states the following:

WARNING

FIRE OR EXPLOSION HAZARD

Failure to obey the following warnings could result in property damage, serious injury or death.

- Do **NOT** store gasoline, oil- or gasoline-soaked rags, or other flammable vapors and liquids inside storage compartment(s)
- **BEFORE** refueling or parking near a gasoline pump, make sure ALL liquid propane (LP) gas appliances (vented to the outside of the RV) are shut OFF. Otherwise, fumes from gasoline pumps could come into contact with an LP gas appliance burner flame and ignite.
- Turn OFF LP gas supply at the tank. • Keep the Furnace area free and clear of insulating material, as insulating materials may be combustible. Examine the Furnace area after installation or when insulation is added.
- Use only with the type of gas approved for the Furnace. Refer to the Furnace rating plate.
    - All DFSA, DFS, DFM, and DFLD models: LP ONLY
- Do **NOT** overfill LP gas tanks. LP tanks must be filled by a qualified gas supplier only. Follow the tank manufacturer's operating instructions located on the tank.
- Immediately shut down the Furnace and call a service agency if the Furnace cycles erratically or delays on ignition.
- Shut OFF the gas valve to the Furnace before shutting off the electrical supply if the gas supply fails to shut off, or if overheating occurs.

WARNING

CARBON MONOXIDE HAZARD

Failure to obey the following warnings could result in property damage, serious injury, or death:

- This Furnace can produce carbon monoxide, which has no odor and can be life-threatening. The burner and vent assembly system **MUST** be kept clean.
- Do **NOT** operate the Furnace if venting into a room enclosure with the privacy panels closed. At least one panel **MUST** be open for ventilation when using the Furnace.
- Doors **MUST** be properly sealed, and the draft cap and assemblies **MUST** be adjusted and sealed correctly to prevent carbon monoxide from entering the RV.
- Do **NOT** allow snow or any objects to block the exhaust system of the Furnace.
- Combustion products **MUST** be properly vented to the atmosphere, so that all combustion air supplied to the burner is drawn from the outside atmosphere.

WARNING

ELECTRICAL SHOCK HAZARD

Failure to obey the following warnings could result in property damage, serious injury, or death:

- Furnaces with 12 VDC connection are for low-voltage battery or direct current only. Do **NOT** connect to 120 or 240 VAC.
- This Furnace is designed for negative ground 12 VDC only. Do **NOT** attempt to alter the Furnace for a positive ground system or connect the Furnace directly to 120 or 240 VAC.
- Do **NOT** use battery charger to supply power to DC model Furnaces even when testing.

WARNING

CRITICAL INSTALLATION WARNINGS

Failure to obey the following warnings could result in property damage, serious injury, or death:

- This Furnace **MUST** be installed, repaired, and serviced by a qualified service technician.
- Do **NOT** modify this Furnace in any way. Modification can be extremely hazardous.
- Do **NOT** use the Furnace cabinet area as a storage compartment.
- Do **NOT** keep insulating material, clothing, or flammable material on or near the Furnace.
- Do **NOT** use for temporary heating of buildings or structures under construction,
- Do **NOT** use the Furnace if any part has been under water.
- Do **NOT** use petroleum or citrus-type cleaner on plastic parts, as damage may occur.
- Do **NOT** restrict the ducting or block Furnace outlet registers and return-air grills.
- Do **NOT** install screens over the intake air or exhaust vents for any reason.
- Do **NOT** install air boosters in the duct system.
- Do **NOT** touch exterior exhaust grills when the Furnace is operating.
- Supervise young children who are in the same room as the Furnace.
- All sheet metal edges are sharp; take care when handling or touching edges.
- Protect Furnace electrical components from water.
- Protect building materials from degrading from vent assembly gas exhaust.
- Compartment must be closed when operating the Furnace.
- Use only Dometic replacement parts and components, which are specifically approved for use with the Furnace.

WARNING

FIRE OR EXPLOSIVE HAZARD

Failure to obey the following warnings could result in property damage, serious injury, or death:

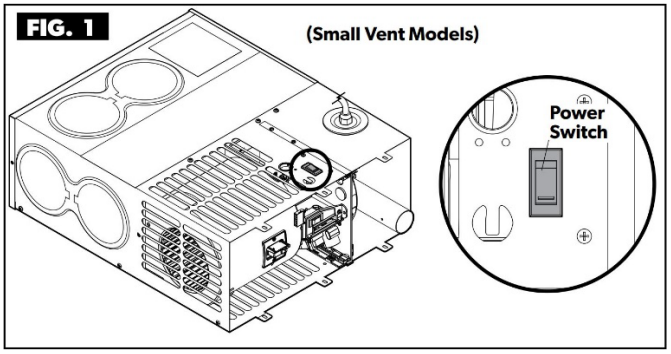
- This Furnace does not have a pilot. It is equipped with an ignition device that automatically lights the burner. Do **NOT** try to light the burner by hand.
- **BEFORE OPERATING THE FURNACE**, check around the Furnace area and floor for the smell of gas and check the fitting with a leak test solution. Do **NOT** proceed if a gas odor exists around the Furnace or floor area. Follow the instructions in the warning box on the cover page.
- Turn the gas control valve by hand **ONLY**. **NEVER** use tools. If the valve does not turn by hand, do **NOT** attempt to repair it. Call a qualified service technician.

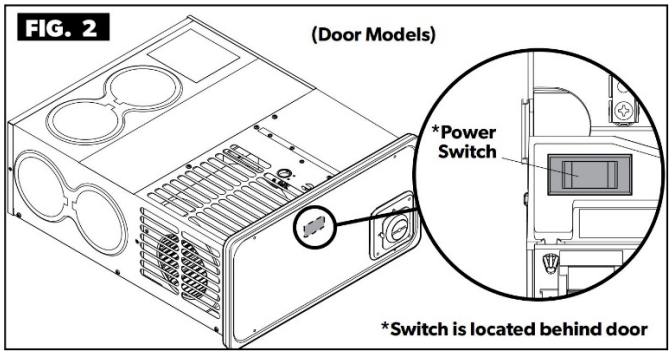
NOTICE

Read the following **BEFORE** proceeding.

- During the initial firing of the Furnace, a burn-off of excess paint and oils remaining from the manufacturing process may cause "smoking" for 5 – 10 minutes.
- The Furnace is equipped with a power switch. Gas will not flow to the burner and the Furnace will not operate with the switch in the OFF position.
    - Door models have a power switch located inside of the door.
    - Non-door models (LD or Small Vent) have a power switch on the outside of the Furnace.

A. Turning On The Furnace

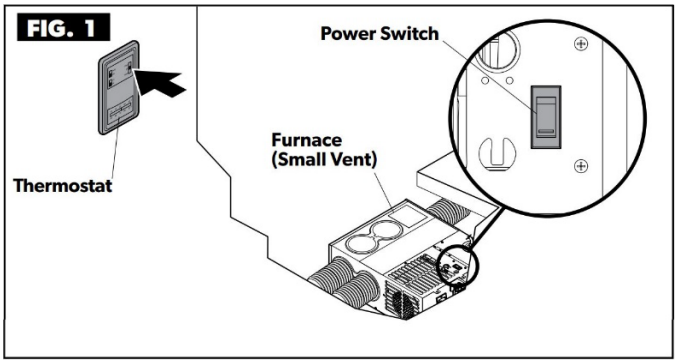


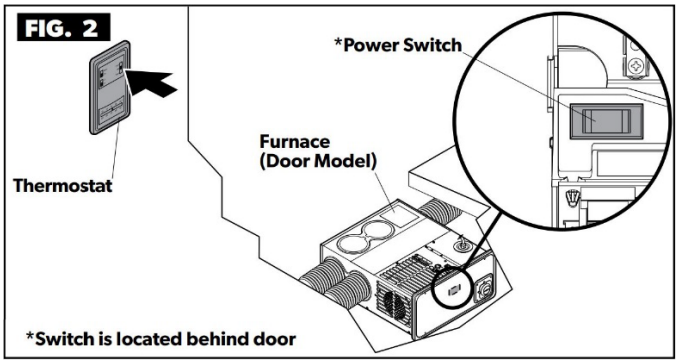


- Turn the thermostat to the lowest setting.
- Turn OFF all power to the Furnace at the main power supply.
- At the exterior access panel, turn the switch on the Furnace to the OFF position.
- Wait five minutes, then check for a gas odor.
- If a gas odor exists around the Furnace or floor area, follow the instructions in the warning box on the cover page.
- If no gas odor is present, proceed to the next step.
- At the exterior access panel, turn the switch on the Furnace to the ON position.
- Turn ON the main power supply.
- Set the thermostat to the desired temperature.

CAUTION If the Furnace will not operate, follow the instructions for “B. Turning Off The Furnace” and call a qualified service technician.

B. Turning Off The Furnace





- Set the thermostat to the lowest setting, then turn to the OFF position.
- Turn the manual shut-off valve at the LP tank (if equipped) to the OFF position. Do **NOT** force the valve.
- At the exterior access panel, turn the switch on the Furnace to the OFF position.

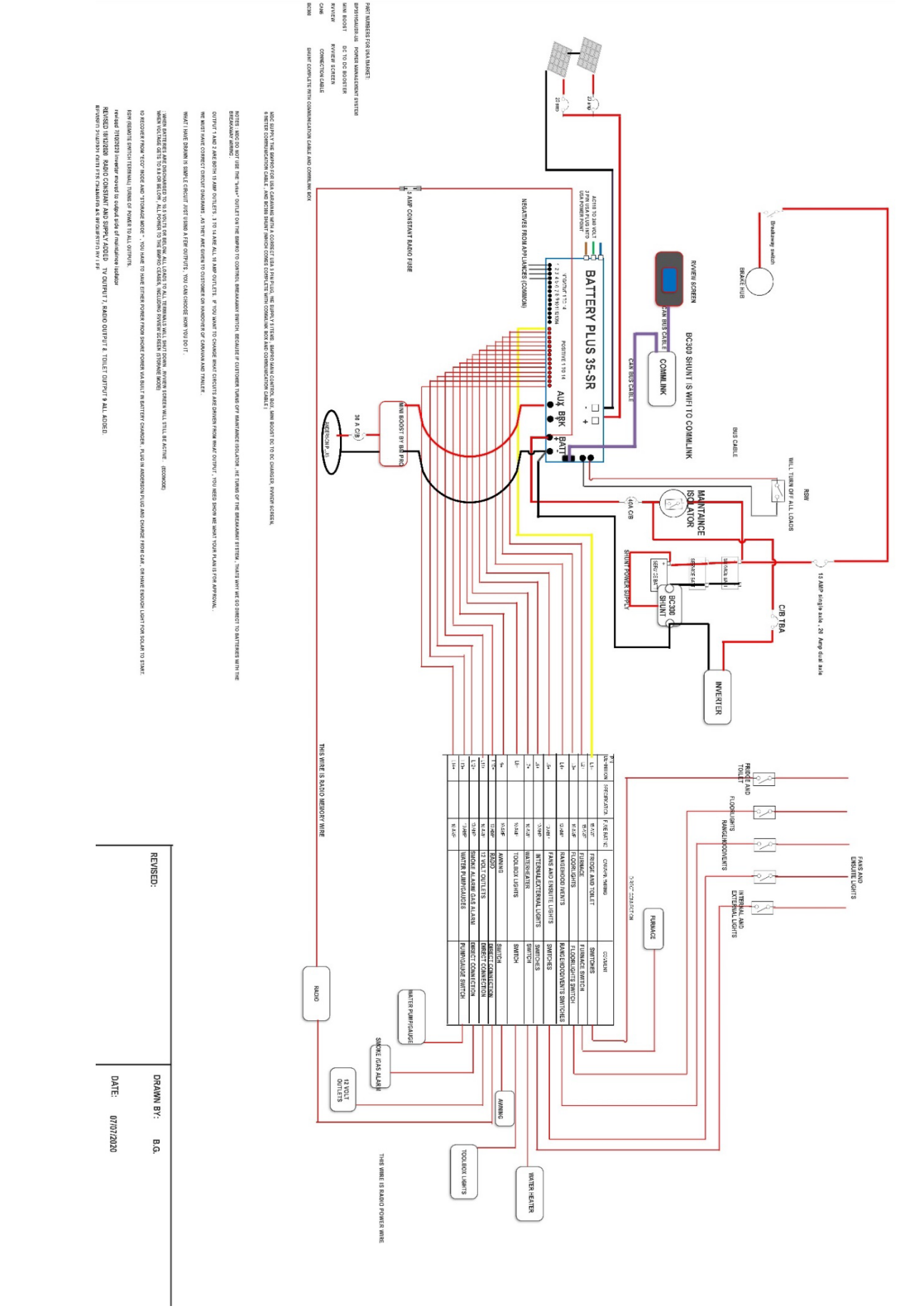
Inspection And Monthly Maintenance

The manufacturer requires the user to perform regular inspections and have periodic maintenance undertaken to ensure reliable and safe operation of the appliance. The user must ensure the periodic maintenance is done as per the manufacturers Operation Manual.

Spare Part Numbers

Part Numbers	
Description	**Part Number**
Offset Cam Adjuster (Camber & Toe Adjuster)	YDZS030
Poly Bush	YJJJ016
Steel Bush Insert	YZCN002
Grease Nipple	6mm Metric
12” Megahub RHS complete (Backing plate, linings & drum with 14mm studs and nuts)	YZCQ032
12” Megahub LHS complete (Backing plate, linings & drum with 14mm studs and nuts)	YZCQ031
12” Megahub Drum Only 14mm Studs	YZCQ033
12” LHS Backing Plate Only (With linings)	DM00025
12” RHS Backing Plate Only (With linings)	MJFCX003
14mm Wheels Stud	YHJL110
14mm Wheel Nut	YZCQ029
M38 Castle Nut M38 Metric	LGPJ002
90mm Bearing Dust Cap (3 $^{35}/_{64}$”) MDC Specific	CSWH001
Wheel Bearing (Timken)	25590
Bearing Race	25590
Bearing Seal Metric 55 x 85 x 12mm	2 $^{11}/_{64}$” x 3 $^{11}/_{32}$” x $^{15}/_{32}$”

Electrical Diagram



REVISED:

DRAWN BY: B.G.

DATE: 07/07/2020

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

Battery Care

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

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

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

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

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

Never connect unregulated solar power directly to your batteries.

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

Lithium (LiFePO4) Battery Reset

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

Charging System – BM Pro

Your trailer is fitted with a BM PRO Battery Plus 35SR management unit. This unit controls all power input to the trailer. The unit is a multi-stage charger for solar, vehicle and shore power input.

- ⚠ Batteries are electrically live and must be treated with extreme caution. They can supply high short circuit currents, even if they appear damaged or undamaged.
- ⚠ Do not allow water or other liquids to enter the power supply area.
- ⚠ Contact with water will cause the device to short-circuit or corrode.
- ⚠ Do not use this product in environments that are excessively hot, cold, dusty, or humid or where it will be exposed to magnetic fields or long periods of sunshine. Such exposure may cause the product or your battery to fail, catch fire or explode.
- ⚠ Clean the housing of this product lightly with a dry or moist cotton cloth. Do not use alcohol, thinners, benzene, or any other chemical cleaner.
- ⚠ The MiniBoost is a high precision electronic product. It contains no user-serviceable parts inside. Do not try to dismantle, modify, or repair it yourself. Disassembly, service, or repair by an unauthorized person will void the warranty.

Important!

- Never store items in the area of the BM PRO unit.
- Never block vents associated with the BM PRO unit storage.
- Do not modify or attempt own repairs on the BM PRO unit.
- Maintenance and repairs should only be carried out by a suitably qualified and accredited person.

Battery Health Preservation

The BatteryPlus35-II preserves battery health by preventing the battery from excessive discharge. The BatteryPlus35-II will start a two-stage shutdown or Low Voltage Disconnect (LVD), powering down the BatteryPlus35-II outputs. This is to conserve remaining battery capacity until the battery can be charged.

LVD MODE	LEAD ACID	LIFEPO4 (HA ONLY)
ECO	10.8V	12.0V
Storage	10.5V	11.5V
Recovery	12.8V	13.8V

Table 7: LVD Mode voltage thresholds

The BatteryPlus35-II will enter the two stages of LVD, ECO Mode and Storage Mode, when the caravan's battery voltage falls below the LVD thresholds.

Note: BRK+ Battery Output (40A rated) is not controlled by the LVD mode.

ECO MODE

In ECO Mode, the BatteryPlus35-II will continue to provide power to your battery monitor, however power to the load terminal block will be turned off (except for terminal 1).

To exit ECO Mode, start battery charging. The BatteryPlus35-II will exit ECO Mode when the battery charges to the Recovery voltage. Upon exiting ECO Mode, the BatteryPlus35-II will automatically return to its previous state of operation.

When in ECO Mode you may temporarily turn on caravan loads for a short time by cycling the switch connected the BatteryPlus35-II's RSW input or the battery button on the Trek, Odyssey or Mobile Apps. This feature allows you to retract slide-outs or electric steps.

STORAGE MODE

In Storage Mode, power to all loads and the accessories including battery monitors and remote controls will be turned off.

To exit Storage Mode, start battery charging. The BatteryPlus35-II will exit Storage Mode when the battery charges to the Recovery voltage.

When in Storage Mode you may temporarily turn on caravan loads for a short time by cycling the switch connected the BatteryPlus35-II's RSW input.

RECOVERY MODE

If a charging source is present and the battery voltage rises above 12.8V (lead acid) or 13.8V (LiFePO4), and the shutdown was due to an LVD event, the BatteryPlus35-II will enter Recovery Mode and will resume normal operation.

The BatteryPlus35-II-HA cannot recover and charge a heavily discharged LiFePO4 battery if it is only connected to a solar input. It must be connected to a mains or AUX input to recover and charge a heavily discharged LiFePO4 battery.

FOR MORE INFORMATION REFER TO THE BMPRO PRODUCT MANUAL.

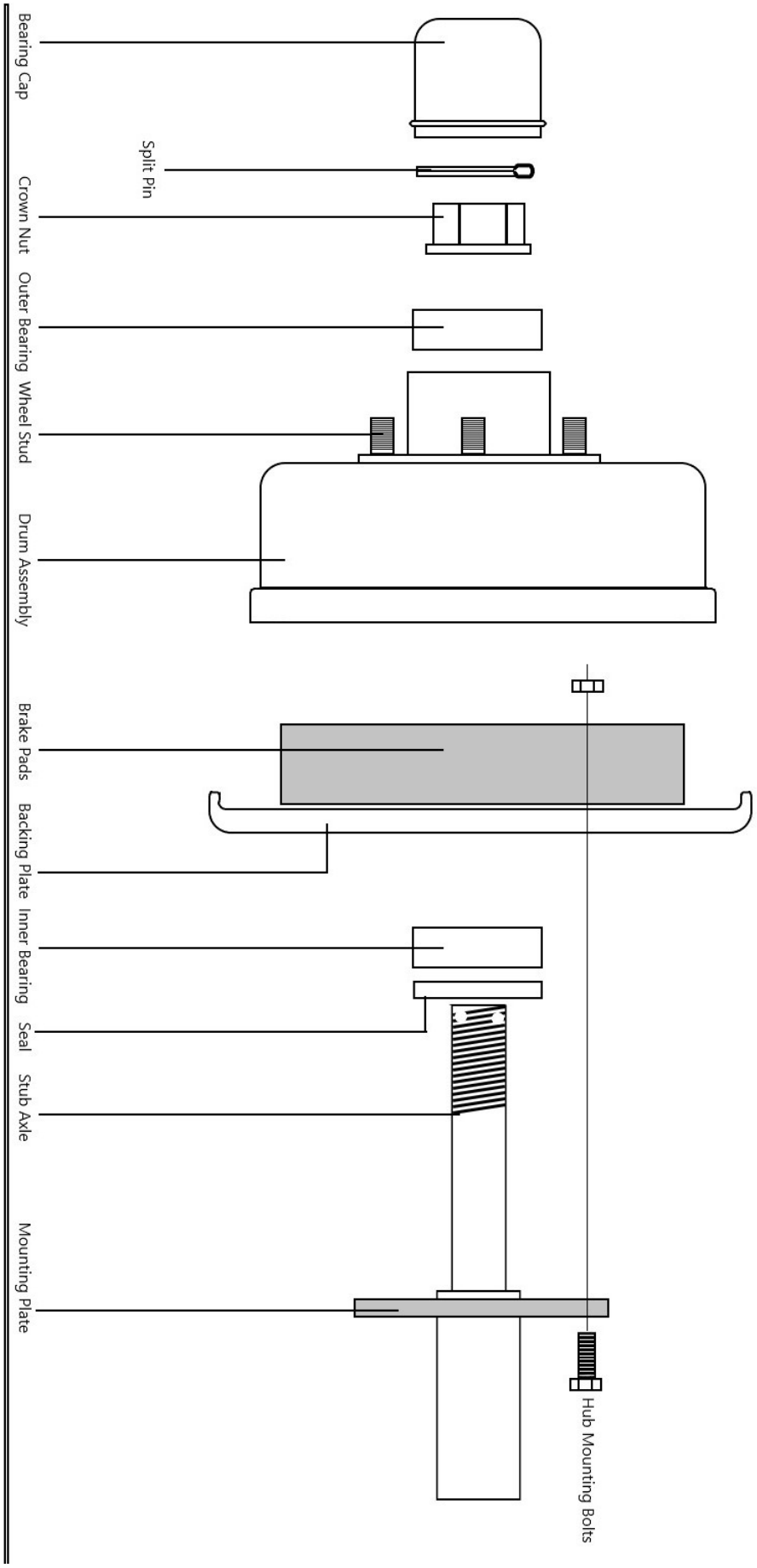
Batteryplus Trouble Shooting

BATTERYPLUS35-II OPERATIONAL STATUS INDICATOR

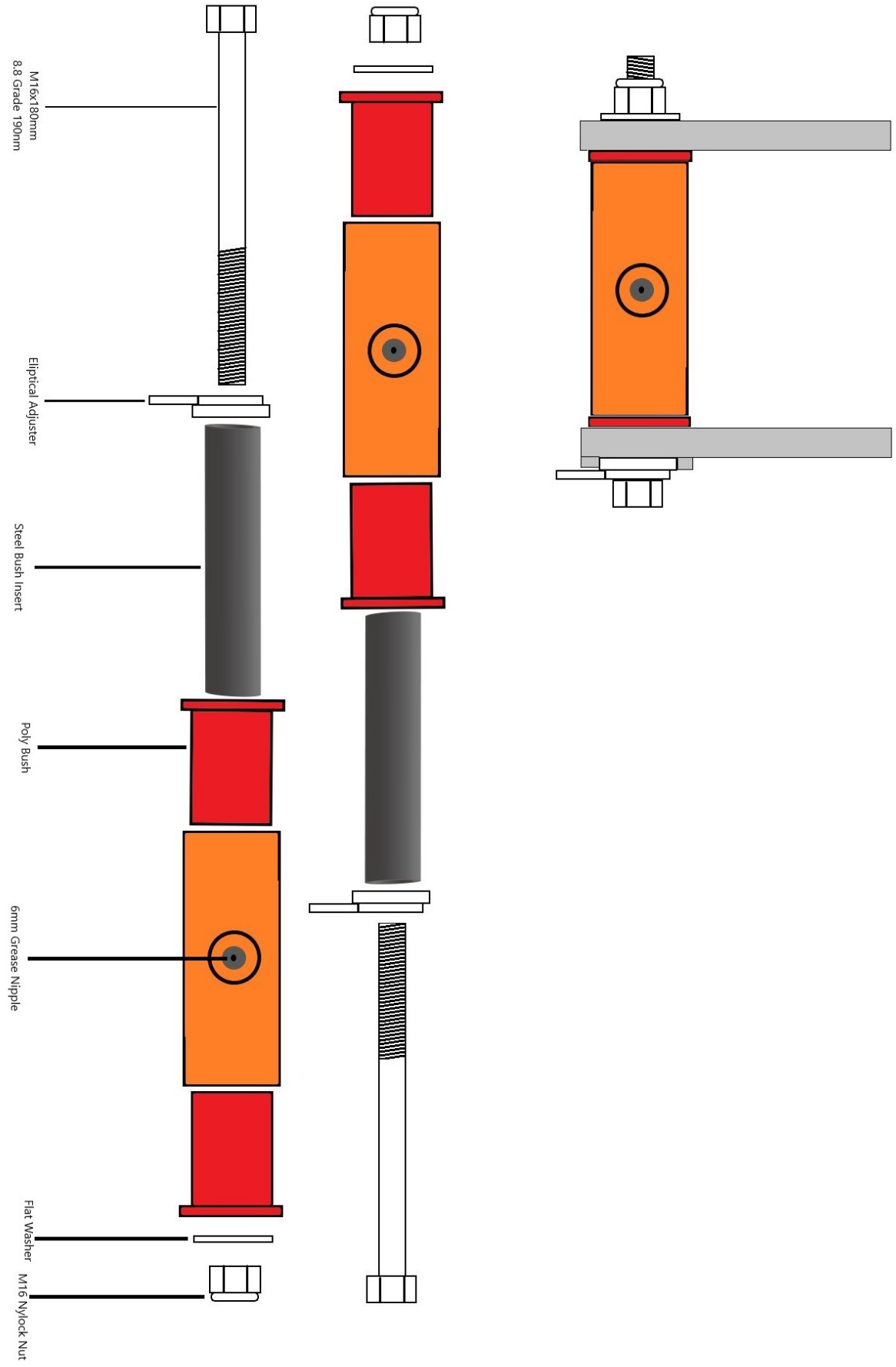
Table displays the operational status of the BatteryPlus35-II, as shown by the colored flash of the LED Status Indicator on the BatteryPlus35-II

	AC Charging
1x	Low Battery Voltage LFP Mode No Battery
2x	**SI** Solar Charging **SR & HA** Solar or Aux/Solar Charging
3x	Aux Charging **SI** Solar/Aux Charging
	Battery OK, AC available
1x	Battery OK, no sources available
2x	**SI** Battery OK, solar available **SR & HA** Battery OK, solar or Aux/Solar available
3x	Battery OK, Aux available
	Fault on One or More Output Loads
1x	High Temperature Fault
2x	Battery Fault
3x	Solar Fault
4x	Other Fault
	Power Off

Hub Assembly



Trailing Arms and Bushes



Service Record and Schedule

300 miles FIRST SERVICE		CHECKED
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
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/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• Inspect for abnormal wear, damage, and pressure	
General fixings	• Ensure no loose fittings	
Seals & Latches	• Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	• Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight.	

Service Centre:	Notes: _____ _____ _____ _____ _____ _____

Every 6 MONTHS / 3000 mile SERVICE		CHECKED
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
Handbrake	• Check cable and adjust if necessary	
Hand winch	• Check brake function and webbing	
Suspension	• Torque bolts to 190Nm/140ft lb • Grease bushes and check for play. • 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	• Remove, clean and re-lubricate. Inspect for wear and replace if necessary	
Wheel Nuts	• Inspect condition and torque to (125Nm/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• Inspect for abnormal wear, damage, and pressure	
Lights	• Check all lights are functioning	
Battery	• Check terminals and voltage at full charge	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	• Check all structural fixing are secure.	
Seals & Latches	• Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	• Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight.	

Service Centre:	Notes: _____ _____ _____ _____ _____ _____

12 MONTHS / 6000 mile SERVICE		CHECKED
Chassis and Suspension		
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
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/140ft lb • Grease bushes and check for play. • 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/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• 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	
110 volt Electrical		
RCD Unit	• Check operation of RCD via test button	
Shore power input	• Inspect shore power input plug and cover are free of damage	
Earthing	• Carry out resistance check	
Caravan Body		
Hatches & Doors	• Check and lubricate locks	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	• Inspect joint sealants inside and out. • Ensuite joints checked for damage and adhesion. • Inspect for soft spots on floor	
General fixings	• Check all structural fixing are secure.	
Ventilation	• Inspect for obstruction and vents operating correctly	

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

Service Centre:	Notes: _____ _____ _____ _____ _____ _____

18 MONTHS / 9000 mile SERVICE		CHECKED
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
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/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• Inspect for abnormal wear, damage, and pressure	
Lights	• Check all lights are functioning	
Battery	• Check terminals and voltage at full charge	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	• Check all structural fixing are secure.	
Seals & Latches	• Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	• Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight.	

Service Centre:	Notes: _____ _____ _____ _____ _____ _____

24 MONTHS / 12,000 mile SERVICE		CHECKED
Chassis and Suspension		
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
Jockey Wheel	• Inspect for condition and operation	
Breakaway	• Check for correct operation. • Inspect lanyard and clip	
Drawbar	• Inspect wiring grommets and general condition	
Suspension	• Torque bolts to 190Nm • Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight. • Inspect shock absorber for condition. • Inspect shock absorber bushes	
Brakes	• Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	• Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	• Inspect condition and torque to (125Nm/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims))	
Tires	• 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	
110 volt Electrical		
RCD Unit	• Check operation of RCD via test button	
Shore power input	• Inspect shore power input plug and cover are free of damage	
Earthing	• Carry out resistance check	
Caravan Body		
Hatches & Doors	• Check and lubricate locks	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	• Inspect joint sealants inside and out • Ensuite joints checked for damage and adhesion • Inspect for soft spots on floor	
General fixings	• Check all structural fixing are secure.	

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

30 MONTHS / 15,000 mile SERVICE		CHECKED
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
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/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• Inspect for abnormal wear, damage, and pressure	
Lights	• Check all lights are functioning	
Battery	• Check terminals and voltage at full charge	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	• Check all structural fixing are secure.	
Seals & Latches	• Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	• Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight.	

Service Centre:	Notes: _____ _____ _____ _____ _____ _____

36 MONTHS / 18,000 mile SERVICE		CHECKED
Chassis and Suspension		
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
Jockey Wheel	• Inspect for condition and operation	
Breakaway	• Check for correct operation. • Inspect lanyard and clip	
Drawbar	• Inspect wiring grommets and general condition	
Suspension	• Torque bolts to 190Nm • Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight. • Inspect shock absorber for condition. • Inspect shock absorber bushes	
Brakes	• Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	• Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	• Inspect condition and torque to (125Nm/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• 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	
110 volt Electrical		
RCD Unit	• Check operation of RCD via test button	
Shore power input	• Inspect shore power input plug and cover are free of damage	
Earthing	• Carry out resistance check	
Caravan Body		
Hatches & Doors	• Check and lubricate locks	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	• Inspect joint sealants inside and out. • Ensuite joints checked for damage and adhesion. • Inspect for soft spots on floor	
General fixings	• Check all structural fixing are secure.	

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

42 MONTHS / 21,000 mile SERVICE		CHECKED
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
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/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• Inspect for abnormal wear, damage, and pressure	
Lights	• Check all lights are functioning	
Battery	• Check terminals and voltage at full charge	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	• Check all structural fixing are secure.	
Seals & Latches	• Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	• Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight.	

Service Centre:	Notes: _____ _____ _____ _____ _____ _____

48 MONTHS / 24,000 mile SERVICE		CHECKED
Chassis and Suspension		
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
Jockey Wheel	• Inspect for condition and operation	
Breakaway	• Check for correct operation. • Inspect lanyard and clip	
Drawbar	• Inspect wiring grommets and general condition	
Suspension	• Torque bolts to 190Nm • Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight. • Inspect shock absorber for condition. • Inspect shock absorber bushes	
Brakes	• Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	• Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	• Inspect condition and torque to (125Nm/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• 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	
110 volt Electrical		
RCD Unit	• Check operation of RCD via test button	
Shore power input	• Inspect shore power input plug and cover are free of damage	
Earthing	• Carry out resistance check	
Caravan Body		
Hatches & Doors	• Check and lubricate locks	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	• Inspect joint sealants inside and out. • Ensuite joints checked for damage and adhesion. • Inspect for soft spots on floor	
General fixings	• Check all structural fixing are secure.	

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

54 MONTHS / 27,000 mile SERVICE		CHECKED
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
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/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• Inspect for abnormal wear, damage, and pressure	
Lights	• Check all lights are functioning	
Battery	• Check terminals and voltage at full charge	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	• Check all structural fixing are secure.	
Seals & Latches	• Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	• Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight.	

Service Centre:	Notes: _____ _____ _____ _____ _____ _____

60 MONTHS / 30,000 mile SERVICE		CHECKED
Chassis and Suspension		
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
Jockey Wheel	• Inspect for condition and operation	
Breakaway	• Check for correct operation. • Inspect lanyard and clip	
Drawbar	• Inspect wiring grommets and general condition	
Suspension	• Torque bolts to 190Nm • Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight. • Inspect shock absorber for condition. • Inspect shock absorber bushes	
Brakes	• Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	• Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	• Inspect condition and torque to (125Nm/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• 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	
110 volt Electrical		
RCD Unit	• Check operation of RCD via test button	
Shore power input	• Inspect shore power input plug and cover are free of damage	
Earthing	• Carry out resistance check	
Caravan Body		
Hatches & Doors	• Check and lubricate locks	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	• Inspect joint sealants inside and out. • Ensuite joints checked for damage and adhesion. • Inspect for soft spots on floor	
General fixings	• Check all structural fixing are secure.	

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

66 MONTHS / 33,000 mile SERVICE		CHECKED
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
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/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• Inspect for abnormal wear, damage and pressure	
Lights	• Check all lights are functioning	
Battery	• Check terminals and voltage at full charge	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	• Check all structural fixing are secure.	
Seals & Latches	• Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	• Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight.	

Service Centre:	Notes: _____ _____ _____ _____ _____ _____

72 MONTHS / 36,000 mile SERVICE		CHECKED
Chassis and Suspension		
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
Jockey Wheel	• Inspect for condition and operation	
Breakaway	• Check for correct operation. • Inspect lanyard and clip	
Drawbar	• Inspect wiring grommets and general condition	
Suspension	• Torque bolts to 190Nm • Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight. • Inspect shock absorber for condition. • Inspect shock absorber bushes	
Brakes	• Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	• Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	• Inspect condition and torque to (125Nm/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• 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	
110 volt Electrical		
RCD Unit	• Check operation of RCD via test button	
Shore power input	• Inspect shore power input plug and cover are free of damage	
Earthing	• Carry out resistance check	
Caravan Body		
Hatches & Doors	• Check and lubricate locks	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	• Inspect joint sealants inside and out. • Ensuite joints checked for damage and adhesion. • Inspect for soft spots on floor	
General fixings	• Check all structural fixing are secure.	

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

78 MONTHS / 39,000 mile SERVICE		CHECKED
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
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/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• Inspect for abnormal wear, damage, and pressure	
Lights	• Check all lights are functioning	
Battery	• Check terminals and voltage at full charge	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
General fixings	• Check all structural fixing are secure.	
Seals & Latches	• Check all seals on doors and hatches compress 30-50%. All seals in serviceable condition and free of damage.	
Suspension	• Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight.	

Service Centre:	Notes: _____ _____ _____ _____ _____ _____

84 MONTHS / 42,000 mile SERVICE		CHECKED
Chassis and Suspension		
Hitch	• Check hitch bolts to 90Nm/66ft lb • Lubricate	
Jockey Wheel	• Inspect for condition and operation	
Breakaway	• Check for correct operation. • Inspect lanyard and clip	
Drawbar	• Inspect wiring grommets and general condition	
Suspension	• Torque bolts to 190Nm • Grease bushes and check for play. • Check torque on suspension hanger bolts (190nm) • Check retaining chain shackles tight. • Inspect shock absorber for condition. • Inspect shock absorber bushes	
Brakes	• Inspect and adjust. Check lining thickness and drum wear	
Wheel bearings	• Replace bearings, seals and lubricate. Check stub axle condition and wear. Replace split pin.	
Wheel Nuts	• Inspect condition and torque to (125Nm/92ft lb ½" studs) (140Nm/103ft lb 14mm studs alloy rims) (200Nm/148ft lb 14mm studs steel rims)	
Tires	• 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	
110 volt Electrical		
RCD Unit	• Check operation of RCD via test button	
Shore power input	• Inspect shore power input plug and cover are free of damage	
Earthing	• Carry out resistance check	
Caravan Body		
Hatches & Doors	• Check and lubricate locks	
Seals	• Check condition and correct latch/lock adjustment for correct 30-50% compression	
Body	• Inspect joint sealants inside and out. • Ensuite joints checked for damage and adhesion. • Inspect for soft spots on floor	
General fixings	• Check all structural fixing are secure.	

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

Travel Record

Your caravan service record booklet and logbook will help you keep track of miles travelled and service records.

Trip Name	Date	Miles Start	Miles Finish	Cumulative Miles

Trip Name	Date	Miles Start	Miles Finish	Cumulative Miles

MDC Campers and Caravans Inc.

USA Limited Warranties for Camper Trailers, Caravans and Tent Sections ("Products")

1. LIMITED PRODUCT WARRANTIES IN GENERAL

g. The only warranties applicable to the products is the written, limited warranties provided herein by MDC Campers and Caravans Inc. ("MDC") to the original Customer ("you") (these "Limited Warranties" or the "Limited Warranty", as applicable).

h. The following information relates to the Limited Warranties offered by MDC to you with respect to the Products. Please read all the information carefully. Should you have any questions relating to any aspect of these Limited Warranties, please contact MDC as set forth below. By purchasing any Product from MDC, you hereby agree to all terms and conditions of these Limited Warranties as set out herein.

i. Notwithstanding the foregoing or anything herein to the contrary, you are advised that certain states may provide you with different or additional rights OR REMEDIES with respect to your purchase of any Product from MDC. As such, these Limited Warranties, and any disclaimer or limitation stated herein, are subject to ANY APPLICABLE STATE OR FEDERAL LAW AND SHALL APPLY ONLY TO the maximum extent permitted by applicable law.

2. VALIDITY OF CLAIMS UNDER LIMITED WARRANTIES

a. The Limited Warranties are only valid to the original purchaser of the particular Product in question and do not cover use by any other third party. These Limited Warranties are valid from the original date of purchase only. MDC may require you to provide proof of purchase in connection with any warranty claim you make.

b. The Limited Warranties apply only to Products sold to you as "new" and do not extend to any items sold via auction, or any Products that are used or deemed to be "factory seconds", "ex-demonstration" or "damaged" unless specifically stated otherwise by MDC in writing. (Please see further on this page for more information).

c. The Limited Warranties are not transferable or assignable by you under any circumstances. Similarly, if any Product is sold or transferred to a third party by you, the original purchaser, then all Limited Warranties which may apply become null and void immediately upon such sale or transfer; and you forfeit your right to make any claims or be eligible for any claims on behalf of the new owner.

d. The Limited Warranties do not apply to Products purchased from MDC which are subsequently rented or hired out as a business (or for financial gain).

e. The Limited Warranties shall under no circumstances cover any damage due to unauthorized modifications, repairs, or maintenance services, or due to any misuse, abuse, incorrect assembly, improper or irregular maintenance, operation or storage, or accident or collision.

f. Any work performed under an authorized warranty claim approved by MDC must be performed by MDC, or an authorized representative of MDC and only with the express written permission of MDC.

g. Any affiliates, representatives, associates, agents, suppliers, resellers or similar of MDC shall have no authority to authorize or deny warranty claims on behalf of MDC.

h. MDC shall not be liable, (in part or whole) for any warranties, either express or implied, made by agents or resellers on behalf of MDC without the knowledge or express written permission of MDC. Such unauthorized claims shall be the responsibility of the agent or reseller only.

3. LIMITED WARRANTY FOR CARAVANS AND CAMPER TRAILERS

a. Caravans and Camper trailers are guaranteed by MDC to be in new condition and without flaws or defects at the time of original purchase by you, general wear and tear excepted and excluding any other Limited Warranty exclusion set forth herein.
b. Unless stated otherwise in this Limited Warranty, Caravans and Camper trailers are covered by a 12-month limited manufacturer's warranty from your original date of purchase (with general wear and tear excepted).

c. During the applicable Limited Warranty period, MDC will remedy substantial defects in materials and workmanship that are caused by MDC and not otherwise excluded by this Limited Warranty. MDC shall elect to remedy the defect from among the following: repair or replacement. Warranty work to repair any defects shall only be carried out by MDC or its authorized representative(s). All costs incurred in transporting the Caravan or Camper Trailer for warranty service to the location designated by us shall be borne by you. If MDC elects to replace the defective Caravan or Camper trailer, then the replacement shall be with a Caravan or Camper trailer (as applicable) which, in MDC's discretion, is of like kind and quality as the defective Caravan or Camper trailer. MDC shall repair or replace the defective Caravan or Camper trailer within a reasonable amount of time after you deliver the defective item to us.
No action to enforce this Limited Warranty may be commenced without prior written notice to MDC of the alleged defect. MDC shall have the opportunity to remedy any failed repair attempts by its authorized representative(s).

4. LIMITED WARRANTY FOR TENTS

a. Tents are guaranteed by MDC to be in new condition and without flaws or defects at the time of purchase by you, general wear and tear excepted and excluding any other Limited Warranty exclusion as set forth herein.

b. Unless otherwise stated in this Limited Warranty, a limited manufacturers' warranty period of 12 months from your date of purchase applies to canvas, canvas components, poles and fittings.

c. During the applicable Limited Warranty period, MDC will remedy substantial defects in materials and workmanship that are caused by MDC and not otherwise excluded by this Limited Warranty.
MDC shall elect to remedy the defect from among the following: repair or replacement. Warranty work to repair any defects shall only be carried out by MDC or its authorized representative(s). All costs incurred in transporting the Caravan, Camper Trailer or Tent Section for warranty service to the location designated by us shall be borne by you. If MDC elects to replace the defective Caravan, Camper
trailer or Tent Section, then the replacement shall be with a Caravan, Camper trailer, or Tent Section (as applicable) which, in MDC's discretion, is of like kind and quality as the defective Caravan, Camper
trailer or Tent Section. MDC shall repair or replace the defective Caravan, Camper trailer, or Tent Section within a reasonable amount of time after you deliver the defective item to us. No action to enforce this Limited Warranty may be commenced without prior written notice to MDC of the alleged defect.
MDC shall have the opportunity to remedy any failed repair attempts by its authorized representative(s).

5. ITEMS NOT COVERED UNDER THESE LIMITED WARRANTIES INCLUDE:

- Rust
- Wheels and Tires
- Paint
- Travel Covers, straps, handles, stuff sacks or pull strings
- General consumables (e.g. bearings, light bulbs, tent stakes, etc)
- Zippers and mesh or screens
- Rip or tears in fabric
- MDC DO NOT WARRANT PRODUCTS AGAINST NORMAL WEAR AND TEAR, UNAUTHORIZED MODIFICATIONS OR ALTERATIONS, IMPROPER OR UNFORESEEABLE USE, IMPROPER MAINTENANCE, ACCIDENT, MISUSE, NEGLIGENCE, DAMAGE, OR IF THE PRODUCT IS USED FOR A PURPOSE FOR WHICH IT WAS NOT DESIGNED. YOU REPRESENT THAT YOU HAVE NOT RELIED ON ANY REPRESENTATION OR WARRANTY OTHER THAN THOSE EXPRESSLY SET FORTH HEREIN. IT IS YOUR RESPONSIBILITY TO (A) USE THE PRODUCTS IN A SAFE MANNER AS IS APPROPRIATE FOR THE INTENDED USE OF THE PRODUCT; (B) DEVELOP AND IMPLEMENT APPROPRIATE

SAFEGUARDS FOR USE, HANDLING OR OPERATING OF THE PRODUCT; AND (C) COMPLY WITH ALL APPLICABLE SAFETY AND OTHER LAWS IN CONNECTION WITH THE PRODUCT'S USE, HANDLING AND OPERATION. THE LIMITED WARRANTY SET FORTH HEREIN GIVES YOU SPECIFIC RIGHTS, BUT YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. THIS LIMITED WARRANTY IS OFFERED ONLY TO YOU AS THE DIRECT PURCHASER OF THE PRODUCT AND NOT TO ANY SUBSEQUENT PURCHASER, ASSIGNEE, TRANSFEREE OR USER AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USAGE OF TRADE OR COURSE OF DEALING.

6. FACTORY SECONDS, EX-DEMONSTRATION AND DAMAGED GOODS

i. From time to time, MDC may offer for sale items deemed to be "factory seconds", "ex-demonstration", "used" or "damaged". Products sold as "factory seconds", "ex-demonstration" or "damaged" items are sold on an "as is" basis without any warranty of any kind.

j. There are no warranties, refunds, credits, exchanges, or similar remedies associated with Products sold as "factory seconds", "ex-demonstration" or "damaged". In the sale of such Products, MDC will attempt to provide all relevant information regarding the Product, including any known faults, imperfections, or defects; however, there may be instances where minor faults, imperfections, flaw, or defects have been overlooked, or where other latent faults, imperfections, flaws or defects existed which were not detected by MDC, in each case after using reasonable commercial efforts. You understand and agree that the foregoing incidences, should they occur, are PURELY UNINTENTIONAL and shall in no way alter the nature of the sale or the warranty disclaimer herein.

k. Due to the nature of such Products 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. By purchasing such a Product, you agree to this statement in full and accept that there are no warranties implied or expressed no matter what the flaw, defect, imperfection, or fault may be.

7. PRODUCTS BOUGHT AT AUCTION

d. From time to time, MDC, may, at their sole discretion, offer Products for auction, either independently or via a third party.

e. While MDC will make every commercially reasonable effort to provide all relevant information regarding the Product on auction, to the maximum extent permitted by applicable law, any and all Products bought at auction do not carry any statutory or other warranty.

f. To the maximum extent permitted by applicable law and unless specifically stated in writing at the time of auction, any Products sold at auction by or on behalf of MDC shall carry no warranty, whether express, implied or statutory, and shall be sold "as is."

8. LODGING A CLAIM

All claims under these Limited Warranties MUST BE LODGED through our website during the applicable warranty period using our online Warranty Claim Form found at www.mdcusa.com.

9. LIMITATION OF LIABILITY

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW AND EXCEPT AS EXPRESSLY STATED IN THIS LIMITED WARRANTY:

A) UNDER NO CIRCUMSTANCES SHALL EITHER MDC, THEIR AFFILIATES OR THEIR RESPECTIVE OFFICERS, DIRECTORS, EQUITY HOLDERS, AGENTS, VENDORS, LICENSORS, EMPLOYEES OR REPRESENTATIVES ("MDC PARTIES") BE LIABLE TO YOU OR ANY OTHER PARTY FOR ANY FOR SPECIAL, ECONOMIC, EXEMPLARY, DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHER TYPES OF DAMAGES ARISING OUT OF, OR RESULTING FROM THE PURCHASE OR USE OF ANY PRODUCT, INCLUDING LOSS OF USE, PROFITS, REVENUE, INCOME, SAVINGS, EARNING POTENTIAL, PRODUCTIVITY OR CONSORTIUM, AND INCLUDING COSTS OF COVER AND COSTS ASSOCIATED WITH PAIN AND SUFFERING, REGARDLESS OF THE NATURE OF THE CLAIM AND REGARDLESS OF WHETHER OR NOT ALL OTHER REMEDIES HAVE FAILED OF THEIR ESSENTIAL PURPOSE.

B) UNDER NO CIRCUMSTANCES SHALL MDC PARTIES BE LIABLE TO YOU OR ANY OTHER PARTY IN CONNECTION WITH ANY PRODUCT FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE PAID FOR THE PRODUCT WITH RESPECT TO WHICH THE CLAIM RELATES.

C) NOTE: SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ALLOW LIMITATIONS ON THE DURATION OF AN IMPLIED WARRANTY, SO THE ABOVE EXCLUSIONS MAY NOT APPLY TO YOU.

10. CONTACT

If you have any further questions relating to the Limited Warranties set forth herein, or are unsure about any aspect of these Limited Warranties document, please contact us.

Phone: **833-632-8721**
Email: **warranty@mdcusa.com**

Guide to Video Tutorials

Handover Video

View this video for an overall instruction on operating the product

Scan the code or go to https://youtu.be/Mx5s15fPC4E

Setup Tutorial

View this video for correct setup procedure

Scan the code or go to https://youtu.be/-L93Z0LDNNg

External Ensuite Setup Tutorial

View this video to set up external ensuite tent

Scan the code or go to https://youtu.be/aYTs6_sd08M

Annex Setup Tutorial

View this video to setup the under awning annex

Scan the code or go to https://youtu.be/Zd4-ob3hdko

Pack Down Video Tutorial

View this video to pack down your caravan

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

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