auto-sleeper
instruction manual

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I N T R O D U C T I O N

CONGRATULATIONS ON YOUR PURCHASE OF AN AUTO-SLEEPER. WE ARE CONFIDENT THAT IT WILL GIVE YOU MANY YEARS OF SATISFACTION.

THIS HANDBOOK HAS BEEN COMPILED TO GIVE YOU MAXIMUM PLEASURE FROM YOUR VEHICLE. HOWEVER, SHOULD YOU HAVE ANY PROBLEMS WHATSOEVER, WE WOULD ASK THAT YOU CONTACT EITHER YOUR LOCAL AUTO-SLEEPER DEALER, OR OURSELVES AT THE ADDRESS BELOW, QUOTING THE CHASSIS NUMBER AND AUTO-SLEEPER PRODUCTION NUMBER THAT YOU WILL FIND INSIDE THE FACIA LOCKER

OUR COMMITMENT IS NOT ONLY TO PRODUCE QUALITY VEHICLES BUT ALSO TO ENSURE YOUR SAFETY AT ALL TIMES. THROUGHOUT THIS INSTRUCTION BOOK THERE ARE REFERENCES TO SAFETY ITEMS WITH WHICH YOU MUST BE FAMILIAR BEFORE USING YOUR AUTO-SLEEPER.

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SPECIFICATION

1. VEHICLE TYPE

Auto-Sleeper Trident based on Volkswagen Transporter Camping chassis.

2. EXTERIOR DIMENSIONS

Overall Length:	15' 0"
Overall Width (including mirrors)	6' 10"
Overall Height:	8' 3"

3. INTERNAL DIMENSIONS

Internal Height (Maximum)	6' 7"

4. WEIGHT

Gross Vehicle Weight	Petrol - 2360 kg	Diesel 2530 kg
Unladen Weight	Petrol - 1780 kg	Diesel 1950 kg
Load Capacity	Petrol - 580 kg	Diesel 580 kg

Unladen Weight. The weight of the vehicle with body fitted with all electrical equipment and auxiliary equipment necessary for normal operation of the vehicle plus the weight of the following elements

a) Coolants (oils and water)
b) At least 90% of fuel tank capacity
c) Spare wheel
d) Tool kit.

5. RECOMMENDED TYRE PRESSURES

For tyre pressures, refer to the base vehicle instruction booklet. Tyre pressures may need to be adjusted to a small degree from these figures according to the vehicle payload.

6. WATER SYSTEM

a. Water Tank. A 41 litre (9 gallon) fresh water tank is fitted. A triple diaphragm water pump provides cold running water to the sink. The water system is external filling using non-toxic semi-rigid hose. The triple diaphragm water pump is fitted with an over-ride switch in the electrical control panel, and the pump is protected with a 7.5 amp fuse. An optional 41 litre (9 gallon) waste water tank is available.

7. GAS SYSTEM

a. General. Storage for two 907 Camping Gas cylinders, is to be found in the vented floor cupboard forward of the refrigerator. Metric steel and copper pipe with brass fittings is used for all gas appliances each of which has its own isolator tap. Appliances are designed for use with Butane at 28 mb (11.2") water gauge or with Propane at 37 mb (14.8") water gauge.

8. ELECTRICAL SYSTEM

a. General. The 12 volt electrical system is fed through the vehicle battery: a second 12 volt 60 amp/hour battery may be fitted as an optional extra. A 240 volt mains hook-up is fitted for the refrigerator (mains operation) and the 13 amp plug.

b. Interior Lighting. Interior lighting consists of:

1. Two 16 watt fluourescent lights.
2. One spot light.
3. Two courtesy lights.

9. BED SIZES

a. Bed sizes are as follows:

1.	Double bed	6'2" Long 3'10" Wide
2.	Roof Bunk	5'10" Long 4'0" Wide

10. OPTIONS

Fly screens for opening roof windows.
Swivelling Driver's Seat
Opening roof windows
Waste Water Tank
Second Battery
Thermostatically Controlled Blown Air Heating System.

11. HISTORICAL

The Trident was introduced at the 1988 Caravan and Camping exhibition at Earls Court, London, as successor to the Volkswagen VHT.

MATERIALS

1. The following materials have been used in the manufacture of your Auto-Sleeper. Should any of these items be required we ask that you let us know the exact type together with the Auto-Sleeper Production number which is found in the glove compartment of your vehicle. This will enable the correct item to be sent to you as soon as possible.

2. Interior Materials and Colours

Cushions	Scilly
Curtains	Pink Diagonal
Carpets	Dalmation Rio Grande:
Lining Material	FBC 27/60 Wheat/Straw
Units	Light European Oak
Unit work surfaces	Light European Oak

3. Exterior Colours

Base Vehicle	Volkswagen Pastel White
Coach Line	Alfa Romeo Rosso Robinia Metallic AR 534
Adhesive Coach Stripe	¼" ⅛" Gold Line Tape ¼ White Tape.

4. Exterior Trim

Wheel Trims	Volkswagen Manufacture

NOTE: On certain special order vehicles, the above specification may vary to a small degree. If you are in any doubt as to the materials used in the construction of your Auto-Sleeper, please contact the factory.

INTERNAL LAYOUT

1) GENERAL

The versatile design of the Trident allows a large roomy living area together with all the amenities found in a luxurious motor caravan. A large floor space permits use as both a load carrier and passenger vehicle with easy access from the large sliding side door.

2) SEATING ARRANGEMENTS

In addition to the contoured cab seats, further seating for two is available at the rear of the vehicle. The passenger cab seat is fitted as standard with a swivel mechanism: this is also available on the drivers seat. Both the cab seats can be adjusted to provide a comfortable driving position by releasing the catches to the side of the seat which control the fore and aft movement and backrest rake.

3) SWIVEL MECHANISMS

In order to swivel the passenger seat and optional swivel driver's seat, lift the release lever on the side of the seat. The seat may then be swivelled to face any direction required.

IMPORTANT: WHEN THE VEHICLE IS IN MOTION WITH CHILDREN ON BOARD, THE CHILD PROOF SAFETY LOCK ON THE SLIDING DOOR SHOULD BE APPLIED.

IMPORTANT: SEAT RESTRAINT STRAPS ARE FITTED AS STANDARD EQUIPMENT TO ALL FRONT FACING SEATS. PASSENGERS ARE ADVISED TO WEAR THESE RESTRAINT STRAPS WHEN TRAVELLING IN THE VEHICLE.

IMPORTANT: ENSURE THAT THE SWIVEL MECHANISMS ARE LOCKED IN THE FORWARD FACING POSITION BEFORE MOVING OFF.

4) TABLES

Two tables are supplied as standard. A large table is stored, when not in use, behind the drivers seat. A smaller dinette table is stored in the overcab locker. When a table is required, the leg should first be placed in the appropriate floor mounting and the table placed upon it.

IMPORTANT: TABLES AND TABLE LEGS MUST BE STORED WHEN THE VEHICLE IS IN MOTION.

5) KITCHEN AREA

The kitchen area is found on the offside of the vehicle and consists of a two burner/grill cooker, a stainless steel sink/drainer and refrigerator unit. The cooker/grill and the sink, are when not in use, concealed by hinged lids which offer further working space if required. Beneath the cooker/grill and sink is the 2 cubic foot (gross) gas/12 volt/240 volt refrigerator which is fitted with electronic ignition, flame failure device and freezer compartment. Below the sink is a small hinged flap which gives access to the cutlery drawer as well as to a useful area for stores and utensils. To the right of the refrigerator is a further storage compartment, beneath which is found the chemical toilet. To the left of the refrigerator is a small storage cupboard below which is found the gas bottle storage compartment; in the event of a thermostatically controlled blown air heating system being fitted the heater vent is to be found in the base of the floor cupboard to the right of the refrigerator with an adjustable vent serving the interior of the vehicle. Between the sink and wardrobe is a further large storage area which incorporates detachable wire baskets suitable for additional kitchen or clothing items. Above the driving compartment is an over-cab roof locker with crockery for four people provided as standard. It is essential that this crockery is securely fastened whilst the vehicle is in motion. To the left of the crockery compartment is a further storage area suitable for bedding and items of camping equipment.

6) WARDROBE UNIT

The wardrobe unit is situated at the nearside rear of the vehicle. Access is through the hinged wardrobe door positioned in the top of the unit. The wardrobe incorporates a small hanging rail; its depth extends to the level of the engine deck. Access to the water resevoir for the rear window washer is through the rear of the wardrobe unit; the resevoir may be filled by unscrewing the small knurled knob and adding water as necessary.

7) UPSTAIRS DOUBLE BED

An upstairs double bed is located to the rear of the vehicle. This bed is made up by first removing the storage retaining guard from its transverse storage position across the front of the bed and then by withdrawing the upper roof matress board, pulling it forward until it keys into the locating pegs forward of the fixed matress board. For dismantling the bed for reversion to a storage area, this action should be reversed.

IMPORTANT: THE UPSTAIRS DOUBLE BED MUST NOT BE OCCUPIED WHEN THE VEHICLE IS IN MOTION.

IMPORTANT: WHEN THE UPSTAIRS DOUBLE BED AREA IS USED FOR STORAGE, THE ACCESS LADDER SHOULD BE IN THE STORED POSITION WITH THE CATCHES ENGAGED. THIS AREA MUST NOT BE USED FOR THE STORAGE OF HEAVY ITEMS WHICH COULD MOVE FORWARD UNDER HEAVY BRAKING.

IMPORTANT: THE STORAGE RESTRAINING GUARD IS NOT RECOMMENDED FOR USE AS A LADDER.

8) STORAGE

In addition to the areas already described, further storage space is available in the small locker immediately above the rear dinette seats. Further items may be stored under the rear dinette seat, on and below the rear parcel shelf and also in the glove compartment.

IMPORTANT: HEAVY ITEMS MUST NOT BE STORED IN ANY OVERHEAD LOCKER OR IN ANY STORAGE AREA FROM WHICH IT COULD COME FREE AND CAUSE INJURY TO THE OCCUPANTS OF THE VEHICLE. ENSURE ALL CUPBOARDS ARE SECURELY FASTENED BEFORE MOVING OFF.

9) SLEEPING ARRANGEMENTS

The Trident offers two sleeping arrangements as standard, either the lower double bed or the upstairs double bed.

Lower Double Bed. The lower double bed may be arranged as follows:

a) Fold out double bed extension boards to forward facing position.
b) Undo press studs from rear dinette backrest cushion.
c) Move rear cushion forward to give access to backrest catches.
d) Undo rear backrest catches.
e) Move base cushion assembly board forward to fully extended position allowing backrest board and cushion to hinge down to fill gap vacated by base cushion.

Upper Double Bed. The upper double bed may be arranged as follows:

a) Unclip and remove storage restraining guard from storage position.
b) Move upper matress board forward and engage lugs and locating pegs on underside of matress board in appropriate positions on upper pelmet rail.
c) The ladder may be used as access to this upper bed when required.

Both these beds may be stored by reversing the sequence described above.

10) WINDOWS AND VENTILATION

Windows. Both the nearside forward caravan window and the hi-top windows have sliding sections to give generous ventilation as required. To open the windows:

a) Lift locking catch.
b) Slide window to the required positon.

All windows are fitted with safety glass. Windows should be locked when not in use.

NOTE: THE DESIGN OF THE SLIDING WINDOWS IS SUCH THAT IN CERTAIN CONDITIONS WATER MAY LIE IN THE CHANNEL. THIS IS PART OF THE DESIGN AND DOES NOT CONSTITUTE A PROBLEM.

Ventilation. The Trident is fitted with a handle operated roof ventilator which is situated above the upstairs double bed. This is operated by turning the handle the required amount to give the degree of ventilation required. A fitted flyscreen provides protection against insects. The ventilator should be in a closed position whilst the vehicle is in motion.

11) INSULATION

All body panels except the front doors are fully insulated using fibreglass insulation material. The Hi-top is also fully insulated giving protection against extremes of hot and cold and at the same time minimising condensation.

OPERATING INSTRUCTIONS

1) GENERAL. All appliances fitted to the Trident have been throughly assessed by our Development Department, in conjunction with the appropriate manufacturer. Before using them you should refer to the appropriate section in this Instruction Book as well as to any appropriate accompanying manufacturer's literature. All warranty certificates should be completed and returned to the relevant manufacturer.

2) GAS SYSTEM. The ventilated gas cylinder compartment is in the floor cupboard immediately below the sink/drainer. Access to this compartment is through a hinged door. The gas cylinder and regulator are not supplied with the vehicle; the system will run on both Propane and Butane.

Regulators should be of the type appropriate to the gas being used.

IMPORTANT: HOSE CLIPS ARE TO BE USED ON ALL FLEXIBLE HOSE CONNECTIONS

IMPORTANT: WHEN FITTED, THE GAS BOTTLE MUST BE SECURED BY USE OF THE RESTRAINING STRAP.

Isolating Taps. Gas isolating taps are to be found in the cupboard immediately above the chemical toilet storage compartment. The position of taps is as follows:

Standard Vehicle	Vehicle fitted with Blown Air Heating System.
Top ..... Cooker	Top ..... Hot Box
Bottom .... Refrigerator	Centre ..... Cooker
	Bottom... ... Refrigerator

NOTE: EACH APPLIANCE TAP IS IN THE "ON" POSITION WHEN THE TAP LIES HORIZONTALLY.

IMPORTANT: ALL GAS APPLIANCES SHOULD BE EXTINGUISHED, AND RELEVANT GA TAPS SWITCHED TO THE "OFF" POSITION WHEN THE VEHICLE IS BEING REFUELLED.

3) COOKER.

a) General. The Trident is fitted with a stainless steel two burner cooker/grill.

b) Layout. The control knobs are found at the front of the unit and operate the following appliances:

Lefthand Knob ..... Lefthand Burner
Centre Knob ..... Grill
Righthand Knob ..... Righthand Burner

c) Operation

1. To light appropriate burner:
   a) Ensure matches/taper are available.
   b) Press in knob.
   c) Turn anti-clockwise to vertical position.
   d) Light burner.
2. To simmer:
   a) Push in knob and turn fully anti-clockwise.
3. To switch off:
   a) Push in knob and turn fully clockwise.
4. To light grill:
   a) To light the grill the same action as that described above should be carried out.

IMPORTANT:
1) ONLY USE COOKER AND GRILL WITH LIDS OPEN AND SPLASH PLATES IN THE RAISED POSITION.
2) AFTER USING COOKER ALLOW TO COOL BEFORE CLOSING LID AND GRILL FLAP.
3) THE TOP BURNERS SHOULD NEVER BE USED AS A SPACE HEATER.
4) ALWAYS ENSURE THERE IS AMPLE VENTILATION WHEN USING THESE APPLIANCES

4) OPTIONAL THERMOSTATICALLY CONTROLLED BLOWN AIR HEATING SYSTEM.

1) General. The Trident may be fitted with the optional Propex 1600W LPG fan assisted heater which is situated in the floor compartment at the base of the cupboard below the cooker. The heater is of the room sealed combustion type, exhausting all products of combustion to the outside of the vehicle. This feature along with electronic ignition and flame failure protection system ensures complete safety of operation. The gas tap is situated in the cupboard above the toilet compartment.

(2) Instructions for Use. Turn the thermostat to the desired temperature and switch the unit on by use of the switch adjacent to the temperature selection knob. If it is the first time the unit has been operated, or a gas cylinder has been changed, more than one start cycle may be necessary to purge air from the pipework. To recycle heater, simply turn heater off then on again. The heater will then continue to operate automatically on the thermostat: The control unit is provided with two indicator lights so that the following conditions can be recognized.

Burner On - That the unit is switched on and operating correctly.

Lock Out - That a fault has occured and the unit will not attempt to restart until action is taken to check system and switch recycled.

(3) Fresh Air Operation. The unit may be operated on a cold air cycle by switching the rocker switch on the unit control panel, found on the offside pelmet, to the fresh air mode (marked with fan symbol).

3) REFRIGERATOR

a) General. The refrigerator can be operated by any one of three power sources:

(1) Electrical 12 volt; available only when engine is running.
(2) Electrical 220/240 volt; available when on site.
(3) LP Gas.

b) Level. When the refrigerator is operating, refrigerant trickles through the cooling unit under the influence of gravity. To enable a satisfactory flow to take place, the unit must be level in both directions, otherwise refrigerant can accumulate in pockets and the cooling process impaired. When your Auto-Sleeper is stationary for more than half an hour, with the refrigerator in use, it must be levelled in both directions so that the ice tray shelf inside the frozen food storage compartment is level.

c) Starting the Refrigerator. Before using the refrigerator for the first time, it is advisable to wash the interior and accessories as described later under 'Cleaning'.

d) Bottled Gas Operation - Lighting the Burner.

(1) See that the voltage selection switch (right hand rocker switch on panel) is set at '0', ie. in its centre position.
(2) Turn on gas tap (Topmost tap) in floor cupboard below sink unit.
(3) Turn the gas control knob so that the figure '3' is opposite the indicator mark.
(4) Switch on red electronic ignition switch which will begin to flash.
(5) Press in gas control knob.
(6) When gas is lit, electronic ignition switch will stop flashing.
(7) Leave electronic ignition switch in ON position, to enable fridge to relight in case of gas flame becoming extinguished.

e) Electrical Operation.

1. Ensure gas is switched off.
2. Turn rocker switch to position marked with a battery symbol.
3. Turn on switch on electrical control panel.
4. Switch on vehicle ignition and start engine, the refrigerator will now be working on 12 volts.

240 Volt Operation

1. Ensure gas is turned off.
2. Turn rocker switch to position marked with site lead symbol
3. Ensure mains hook-up is connected.
4. Turn on 240 volt RCCB (which is in the 'UP' position)
5. Turn on 6 amp MCB (which is in the 'UP' position)
6. Turn temperature control knob to required setting.

f) Useful Tips

(1) It is important to note that the 12 volt operation is only intended to be used whilst the engine is running and the vehicle battery is being charged, and thus for 12 volt operation the refrigerator is wired through the vehicle ignition switch.

(2) When at rest for more than a short period the vehicle should be levelled and the refrigerator switched either to gas or mains voltage.

(3) When operating on mains voltage, the temperature in the refrigerator is thermostatically controlled and can be adjusted by means of thermostat knob. The 12 volt circuit is not thermostatically controlled and the cooling unit will operate all the time the refrigerator is connected to 12 volt source and switched on.

(4) 12 volt operation is, therefore only intended to be used for relatively short periods, ie; when the vehicle is in motion. It is not intended for extended periods of use from a 12 volt supply, otherwise the fresh food compartment may become too cold for satisfactory storage of frozen foods and drinks.

f) Temperature Regulation

(1) After starting up the refrigerator, it will take about one hour before there are signs of cooling. When operating on mains voltage electricity, the refrigerator is thermostatically controlled and the thermostat knob should be turned to No 3 or 4 setting. This will maintain a suitable temperature in the refrigerator and frozen food compartment for general use but in hot weather, or if more cooling is required, the knob should be turned to a higher number. Alternatively, if less cooling is required, the knob should be turned to a lower number. (Note: This does not apply to 12 volt operation which is not thermostatically controlled).

(2) For operation on gas, the refrigerator should be started off with the gas control set at '3'. This will be a suitable temperature in the refrigerator in warm weather but if the fresh food compartment becomes too cold, especially in cooler weather, turn the gas control knob to '2' or '1'.

g) Travel Catch

(1) The travel catch is to keep the refrigerator door securely closed when the vehicle is on the move. Remember always to push the catch down so that its lower end fully engages the plastic bush in the top of the door before moving off.

h) Defrosting

(1) Frost will gradually form on and in the frozen food storage compartment and on the fins at the side of this compartment. The refrigerator, therefore should be defrosted regularly, about once every week or ten days depending on the conditions of use.

(2) To defrost, turn the gas control knob or the voltage selector switch to '0', depending on which operation is being used. Remove the ice tray and content of the refrigerator, wrap frozen food in several layers of clean newspaper and place the package in a cool place.

(3) To defrost as quickly as possible, a small dish of hot (not boiling) water may be placed on the ice tray shelf and a bowl of hot water on the cabinet shelf, changing the hot water as necessary until the frost has melted.

(4) Note: Do not place dishes of hot water on the bottom of the frozen food storage compartment and do not attempt to defrost more quickly with an electric fire or other forms of heat as this may damage the plastic surface.

(5) Defrosted water will run via a tube at the back of the refrigerator into the drip collector fixed to the rear of the refrigerator where it will evaporate into the circulating air. When all the frost has melted, wipe dry the frozen food storage compartment and cabinet interior, then restart the refrigerator setting the gas control knob or voltage selector switch and thermostat knob to their respective positions.

(6) Replace the fresh and frozen food but wait until the cabinet has cooled down before making ice. Remember that if the temperature of the frozen food is allowed to rise unduly during defrosting, its storage life may be shortened.

i) Cleaning the Refrigerator

(1) Clean the refrigerator thoroughly at intervals when necessary. Turn off the gas or disconnect from the electricity supply depending on which is being used, empty the cabinet and defrost.

(2) The refrigerator and its accessories may then be cleaned with soft cloth soaked in a weak solution of bicarbonate of soda. Finally wipe over with a clean cloth. Do not wash any plastic parts in water that is more than hand hot and do not expose them to dry heat. Never use strong chemicals or abrasive cleaning materials on any part of the refrigerator.

j) When Not In Use

(1) Whenever the refrigerator is to be out of use for a period, turn off the gas, or disconnect from the electricity supply as applicable. Empty the cabinet and defrost. Clean and thoroughly dry all accesories and leave the door open. Empty and dry the ice tray.

k) Maintenance. For details of maintenance see manufacturers instructions

ELECTRICAL SYSTEM

12 Volt

The electrical supply for the internal lighting, water pump and the 12 volt circuit for the refrigerator is taken from the vehicle battery with the refrigerator wired separately and controlled via a relay through the ignition switch. A second battery may be fitted as an optional extra in which case a split charge relay is wired between the batteries to prevent the vehicle battery from becoming discharged.

240 Volt

240 volt mains supply is available for the operation of the refrigerator and 13 amp plug only. An external socket is located at the rear offside of the vehicle for use with mains hook-up.

Electrical Components

(1) Battery. The vehicle battery is located under the bonnet of the vehicle. When a second battery is fitted, this is placed under the passenger seat. In the case of the Diesel and Turbo Diesel model the vehicle battery is to be found in the offside of the engine compartment. With these models the second battery is position under the drivers seat.

(2) Internal Lighting.

- a) Double filament 16w flourescent lights are fitted in the following positions:
  - 1) On the pelmet above the sink.
  - 2) On the pelmet on the centre nearside of the vehicle.
- b) One spot light, of 12 volt 6w capacity is fitted on the offside of the front roof bulkhead.
- c) To replace the tubes of the flourescent lights, the light mounting must first be removed and then the four screws on the rear side of the light body removed to give access to the tubes.
- d) For details of the Volkswagen lights, refer to the Volkswagen instruction manual.

(3) Water Pump. The water pump fitted to the Trident is to be found in the rear of the cupboard immediately beneath the sink/drainer. Access to the pump is through an easily removeable panel at the rear of the cupboard. The water system may be operated by switching on the over riding switch found in the electrical panel, and thereafter controlling the flow of water, and the operation of the water pump, by means of the tap. The water pump, which is of the triple diaphram type, is protected by the 7.5 amp fuse found in the control panel.

(4) 12 Volt Plug and Socket. The 12 volt jack plug will be found fitted in the socket on the electrical control panel. This plug is suitable for 12 volt items such as black and white televisions and radios, etc. When wiring this plug it should be noted that, on taking apart, the terminal that extends furthest to the rear is the positive terminal, the shorter terminal being negative. The 12 volt socket outlet is protected by fuse number 3 in the control panel.

(6) Electrical Control Panel. The electrical control panel is situated in a panel above the refrigerator. It should be noted that the following fuses protect the circuits below;

Fuse No 1	Lighting Circuit
Fuse No 2	Fridge Ignition Circuit
Fuse No 3	12 Volt socket, water gauge and battery state indicator.
Fuse No 4	Propex Heater (if fitted).

The refrigerator 12 volt circuit is fused with a 10 amp blow fuse which is found immediately below the refrigerator master switch. The water pump circuit is protected by a 7.5 amp fuse which also is situated directly below the master switch.

Fuses numbers 1 to 4 above are all protected by a 7.5 amp fuse. Should a replacement not readily be available an 8 amp fuse may be used.

(7) Battery/Second Battery. Both the vehicle battery and second battery when fitted are fused with a 20 amp blade fuse. It should be noted that this fuse protects the 12 volt circuit to the control panel and caravan electrics only. This fuse is fitted adjacent to the positive terminal of the vehicle battery/second battery. When a second battery is fitted, a 30 amp blade fuse is fitted between the vehicle battery and the second battery in order to protect against overloading of the second battery charging system.

IMPORTANT: THESE FUSE RATINGS MUST BE ADHERED TO WHEN REPLACEMENTS ARE NEEDED.

(8) 240 Volt AC Mains Hook-Up. The mains circuit is protected by an RCCB (Residual Current Circuit Breaker) and two MCB's (Minature Circuit Breakers) These units are co-located and are found on the nearside wall above the refrigerator.

Operation of RCCB. With mains hook-up connected the following actions must take place:

1. Switch the main RCCB ON,(which is in the UP position)
2. Press the test button (located adjacent to RCCB switch) This should cause main switch to trip.
3. Return main switch to ON position
4. Switch the 10 amp MCB to the UP position, (ON). This circuit controls the 13 amp socket.
5. Switch the 6 amp MCB to the UP position, (ON). This circuit controls the refrigerator 240 volt circuit.

(9) Battery State Indicator. A battery state indicator is found in the electrical control panel. To operate, the following should be carried out:

1. Press water gauge test button.
2. The battery state indicator lights will then illuminate depending upon condition of battery. Colours should be interpreted as follows:
   a) Green. Fully charged battery.
   b) Yellow. Normal charge.
   c) Red. Low charge. Voltage has fallen below 12 volts.
   d) No lights. Battery has fully discharged, or fuse has blown adjacent to battery
   e) NOTE: On occasions the green and yellow light may illuminate together. This means that the charging sequence is between two voltage levels and this should not cause concern.

(10) OPERATION AND MAINTENANCE OF SECOND BATTERY

1) General. The second battery is charged via the main vehicle battery by the engine alternator. Wired between the batteries is a 70 amp relay which, when the engine is running, allows a charging current to pass to the second battery. When the ignition is turned off, the relay cuts off this isolating the second battery from the main vehicle battery. When the second battery is fitted, all auxillary equipment fitted by Auto-Sleepers is wired through it thus ensuring the main battery remains charged.

2) Maintenance. Terminals should be periodically cleaned and greased. The anchorage of the second battery should be regularly checked for security as well as when the base vehicle is serviced.

NOTE.

Auxillary electrical equipment such as radios and courtesy lights are wired through the main vehicle battery.

(11) Operation of Mains Hook-up.

In order to connect the Mains Hook-Up the following should take place:

1) Ensure vehicle RCCB is in the "OFF" position.
2) Ensure all appliances are in the "OFF" position and no appliance is connected to the 13 amp socket.
3) Connect mains hook-up connector to the caravan inlet.
4) Connect plug to site supply socket outlet.
5) Switch site supply "ON". (If switch fitted).

With the mains hook-up connected, the following should then be carried out:

1) Switch main RCCB to "ON" position (ie UP position).
2) Press test button (located adjacent to RCCB switch). This should cause the main switch ti trip off.
3) Return main switch to "ON" position.
4) Switch 10 amp MCB to "UP" position (ON position). This current protects and controls the refrigerator on 240 volt operation.

IMPORTANT: THE MAINS HOOK-UP LEAD SHOULD BE PERIODICALLY CHECKED FOR DAMAGE.

IMPORTANT: DO NOT ATTEMPT TO ALTER OR TAMPER WITH ANY ELECTRICAL EQUIPMENT CONTACT YOUR AUTO-SLEEPER DEALER FIRST.

WATER SYSTEM

(1)a. General. A 41 litre (9 gallons) fresh water tank is fitted. As an optional extra a 41 litre (9 gallon) waste water tank is available. The water system is fed by a triple diaphram water pump and non-toxic hosing is used throughout. The water tank filler is found above the nearside front wheel arch.

b. Water Level Indicator. The water level indicator is fitted in the electrical control panel and is operated by the press button adjacent to the gauge.

c. Water Pump. The water pump is self priming and incorporates its own pressure switch. It is recommended that the water pump master switch be switched off when the vehicle is travelling or unattended.

d. Water Filter. The water filter is fitted to the top of the water pump. The should be checked periodically and cleaned as necessary.

e. Water Tank. The water tank is fitted with two breathers; when the tank is full water will escape through these breathers and this hould give no cause for concern. The drain tap for the water tank is found adjacent to the water tank outlet pipe.

f. Waste Tank (Optional). The optional waste tank is fitted to the offside centre of the vehicle. This tank should always be drained before driving away from a site, or as soon as practicable to avoid carrying unnecessar weight. The drain tap is found adjacent to the waste tank outlet pipe.

f. Winter Storage. If the vehicle is to remain unused during the winter months the water system should be fully drained

MAINTENANCE

(1) WORK SURFACES. Laminated work surfaces are fitted to all funiture units. Whilst these are hard wearing hot pans should not be placed directly on these surfaces since damage could result.

(2) FURNITURE. Furniture should be cleaned with a proprietary furniture polish periodically. Any water marks that may occur on the hard wood edging of the furniture units should be removed by use of fine grade wire wool and furniture wax. Heavy stains may need to be sanded out and the edging re-polished first with a shellac sealer followed by a coat of polyurethene varnish and finally buffed up with wire wool and wax.

(3) SOFT FURNISHINGS. Seats, cushions and other soft furnishings should be cleaned with a proprietary fabric cleaner. It is important that liquid cleaning solvents do not come in contact with cushion piping since damage to the material will result.

(4) EXTERIOR PAINTWORK AND FIBREGLASS. Exterior paintwork and fibreglass should be regularly washed and polished with a non-abrasive car wax.

(5) GAS VENTS. All gas vents and flue pipes should be periodically checked for damage and should be kept free from dirt. IMPORTANT: BLOCKING OF VENTS AND FLUES IS EXTERMELY HAZZARDOUS AND SHOULD BE AVOIDED AT ALL TIMES.

(6) GAS FLEXIBLE RUBBER HOSES. All gas flexible rubber hoses should be changed annually and must be secured at each end with jubilee clips.

IMPORTANT: ALL FLEXIBLE HOSES MUST BE REPLACED ANNUALLY WITH NEW HOSE TO BRITISH STANDARD 3212/1.

(7) GAS INSTALLATION. IMPORTANT: GAS INSTALLATIONS MUST BE INSPECTED ANNUALLY BY QUALIFIED PERSONNEL. IF IN DOUBT CONTACT YOUR LOCAL AUTO-SLEEPER DEALER.

(8) SEAT RESTRAINTS. IMPORTANT: SEAT RESTRAINT MOUNTINGS SHOULD BE CHECKED FOR TIGHTNESS ANNUALLY AND RETIGHTENED IF NECESSARY TO A TORQUE SETTING OF 24 NEWTON METRES. IN THE EVENT OF ANY IMPACT OF 25 MPH OR OVER IN WHICH SEAT BELTS HAVE BEEN WORN, THEY MUST BE REPLACED BEFORE THE VEHICLE IS USED AGAIN.

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IMPORTANT NOTICE

MAINTENANCE AND SERVICING IS THE RESPONSIBILITY OF YOUR LOCAL FRANCHISED AUTO-SLEEPER DEALER TO WHOM ALL MATTERS SHOULD BE REFERRED IN THE CASE OF ANY QUERIES.

SAFETY PRECAUTIONS
GAS APPLIANCES
AND FITTINGS

OPERATING INSTRUCTIONS

Please read the instructions and labels provided with your appliance carefully and keep them handy for future reference. If there is anything that you are not quite sure about - ask you Auto-Sleeper dealer for advice. Make sure you have means of lighting the gas before turning on the supply.

PERSONNEL

Ensure that you know how to operate the equipment - and never allow anyone other than a competent person to connect or disconnect appliances and regulators.

CYLINDERS

Cylinders must be sited away from any heat source in a well ventilated place and must stand in a stable upright position. Cylinders should only be stored in the gas locker: the cover should always be clipped firmly into position and the rubber seals in the gas compartment should be inspected at least once a year.

REGULATORS

It is important to enusre that the correct type of gas regulator is fitted.

For propane cylinders and for butane cylinders having screwed connectors always, before connecting a regulator to a cylinder, ensure that the mating parts are clean, free from dirt and undamaged, and, in the case of butane regulators, check that the washer is in place on the spigot of the connector and is in good condition. The connecting nut of the regulator must be spanner tightened to the cylinder valve. (Note: The thread is left-handed).

For butane cylinders with 'switch-on' or 'clip-on' connectors consult your dealer on the type of adaptor or regulator you require and fit in accordance with the manufacturer's instructions.

SCREWED CONNECTIONS

All screwed connections should be firmly tightened with a spanner. Note that all nuts with notches on the hexagon have a left handed thread.

HOSE AND CLIPS

British standard hose only must be used for passing these gases and it must be securely attached with hose clips to the ends provided.

LEAKS

After connecting appliances/regulators, etc, check that there is no leak of gas before using. Propane and butane have a distinctive smell and a leak can usually be detected immediately by this fact. If a leak is suspected, extinguish all naked lights and close the cylinder valve. NEVER look for a leak with a naked flame, but trace it by smell and confirm by brushing leak-detecting fluid (or soapy water) over the suspected joint. Equipment must not be used until any leak is eliminated.

MAINTENANCE

Like any other piece of equipment, the appliances will need regular servicing and cleaning, as directed in the manufacturers handbook.

TURNING OFF

After using an appliance it is of the UTMOST IMPORTANCE:

a) That any valve fitted to the appliance is then closed to ensure that when the appliance is again used the turning on of the cylinder valve does not allow gas to escape from the appliance before being ignited.

FIRE

If a fire develops, try to turn off the cylinder valve, remove the cylinder from the fire and extinguish the fire with a dry compound extinguisher. (DO NOT USE A WATER JET ON A FIRE OF LIQUID LPG) If this is too dangerous call the fire brigade and move all people from the area.

PROBLEMS

If you are in any doubt about the operation of the appliance please consult your Auto-Sleeper dealer.

IMPORTANT: ALL GAS APPLIANCES MUST BE EXTINGUISHED AND THE RELEVANT GAS TAPS TURNED TO THE "OFF" POSITION WHEN YOUR VEHICLE IS BEING REFUELLED.

SAFETY PRECAUTIONS

ELECTRICAL SYSTEMS

BATTERIES

Battery terminals and connectors should be firmly connected. Battery surfaces should be free of moisture and dirt. Cell tops must be fully tightened if appropriate. When removing a battery always remove the negative wire first. On re-connection the negative should be connected last.

FUSES

Always replace blown fuses with a correct rating equivalent. Fuses rated at 7.5 amp may be replaced with an 8 amp fuse in case of difficulty in purchasing a 7.5 amp fuse.

OVERLOAD

Never overload any electrical circuit especially the 12 volt socket outlet. The rating of equipment should be checked before connection.

240 VOLT MAINS OPERATION

Before connecting supply, ensure that the contacts in both the plug and the socket are clean and dry and ensure also that the hook-up plug is firmly located and locked into the socket. Ensure the RCCB is easily accessible at all times.

WIRING DIAGRAM

A wiring diagram is to be found in the rear of this instruction booklet. If in doubt refer to this diagram and if necessary contact your local Auto-Sleeper dealer who will be pleased to answer any of your queries. An electrical fault diagnosis table is also found adjacent to the electrical wiring diagram. This table should be referred to in the event of any electrical problem.

SAFETY PRECAUTIONS FIRE

IN CASE OF FIRE: GET EVERYBODY OUT, then

1. Switch off engine
2. Switch off fuel/gas/electricity
3. Raise the alarm and call the fire brigade
4. Tackle the fire if it is safe do to so

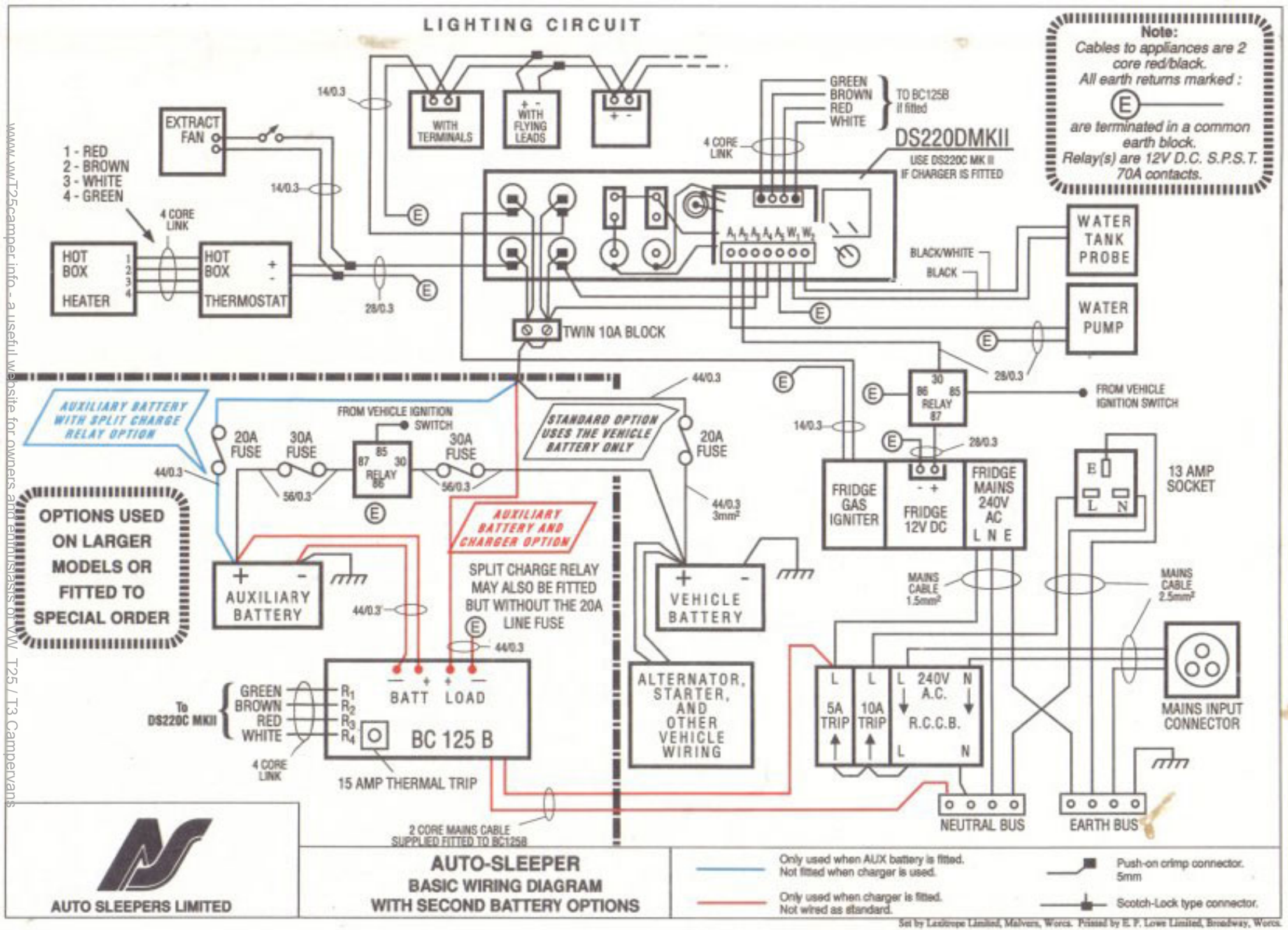
FIRE PRECAUTIONS

1. Children should not be left alone
2. Keep combustible materials clear of all heating and cooking appliances.
3. Provide at least one 2 kg halon fire extinguisher to ISO 7156 near the main exit door and a fire blanket next to the cooker. Know how to use them.
4. Check fire precautions on site.

AUTO-SLEEPER ELECTRICAL FAULT DIAGNOSIS

FAULT	CAUSE	REMEDY
No power on any 12v circuits	Battery fuse 20A blown	Check fuse. Replace
	Battery connection off Wire off at fuse	Check for secure connections
	Battery flat/very low charge	Check condition of battery Recharge/Replace
Battery not charging	Alternator fault	Replace /Test for charging
Second (Aux) battery not charging or holding charge	Fuse blown between van/aux battery	Check fuses/connections
	Relay not functioning	Test relay for operation
	Second battery not earthed	Check for good earth to vehicle Chassis
	Aux battery AH rating incompatable	Use equal AH rating Aux battery
Battery fuse constantly blowing	Short circuit	Test for short to earth
	Incorrect fuse fitted - (less than 15 amp)	Check fuse rating must be be 20-30 amp blow rated
	Reverse polarity on battery	Check for correct polarity
Fuse 3 on panel blowing when appliance is plugged into 12 v socket	Overload - due to appliance consumption greater than 7.5 amp	Check rating of appliance fit fuse to suit - do not use fuse greater than 12 amp
	Wiring inside plug shorting	Check plug wiring
Water gauge giving full reading constantly	Short at terminal block on gauge wire at water tank	Check wiring on block connector
	Moisture across terminal block terminals causing short to occur	Clean and insulate completely Replace is necessary
Propex heater not switching on via thermostat	Insufficient voltage at heater unit - battery voltage lower than 8 volts	Check voltage - state of battery
Heater turns off automatically but will not switch back on	Calibration not correctly set up in the thermostat	Adjust calibration to correct levels (internally adjusted

FAULT	CAUSE	REMEDY
Fridge not operating on 12 v	Fridge fuse on panel blown	Check fuse
	Relay at rear of panel not operating	Test relay for operation
	Heater element on firdge faulty	
Fridge ignition not operating	Fuse No 2 on panel blown	Check fuse
	Spark unit on fridge faulty	Replace spark unit
	Switch faulty	Test switch for operation
RCCB not operating	Faulty RCCB unit	Test - change RCCB if necessary
	No 240 VAC supply present	Test - check plugs are fully located in sockets
RCCVB constantly tripping unable to reset	Supply fault	
	Incorrect wiring	Check input lead wiring
10 amp MCB tripping	Appliance fault	
	Overload due to incorrect appliance being used	Check for suitability of appliance eg current consumption rating should not exceed 13 amp
5 amp MCB tripping	Fault on fridge unit	Check fridge
Charger system		
No power on 12 v dc circuits	Overload trip on charger out	Reset trip
Overload trip tripping out	Overload on circuits more than 15 amp being drawn	Test current consumption
	Short on a 12 v circuit	Test for short
Red indicator (Batt on charge) off on panel	Battery fully charged	Check condition of battery
	Fault on charger unit	Check charger unit, replace if necessary
	Wiring at charger incorrect	Check wiring
	4 Core cable incorrectly wired at charger panel	Check polarity of 4 core at both points



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