

1 ELECTRICAL SYSTEM USING PSU 2006

1.1 INTRODUCTION

For the safe operation of all electrical equipment within your Caravan / Motorhome / Trailer Tent / Folding Camper it is important that you read and fully understand these instructions. If you are unsure of any point please contact your dealer / distributor for advice before use.

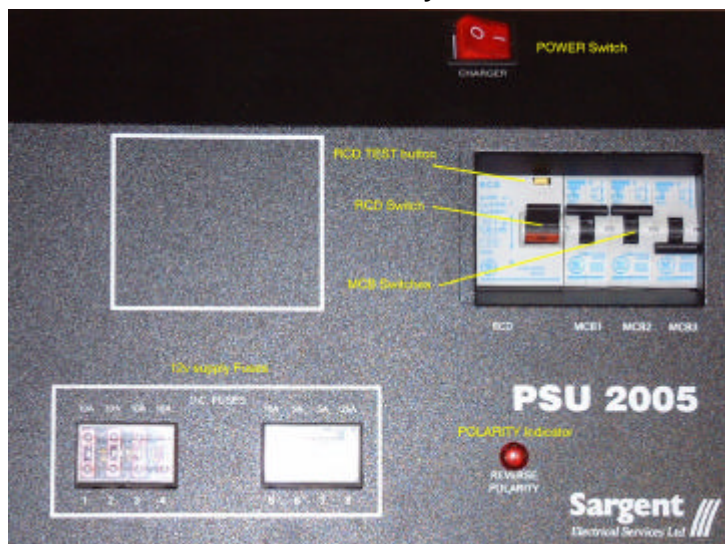
Your Caravan / Motorhome / Trailer Tent / Folding Camper has been fitted with an electrical system from Sargent Electrical Services Ltd. and incorporates the new PSU2006 power supply. This unit provides protection for the 240v (mains) and 12v equipment, supplies 12v power and charges the internal leisure battery. The electrical system complies with EN 1648-1 & -2 and BS7671.

1.2 MAINS CONNECTION

For your safety it is **IMPORTANT** that you follow these connections instructions each time your Caravan / Motorhome / Trailer Tent / Folding Camper is connected to a mains supply.

- A) **Ensure suitability of the Mains Supply.** Your Caravan / Motorhome / Trailer Tent / Folding Camper should only be connected to an approved supply that meets the requirements of BS7671. In most cases the site warden will hold information regarding suitability of supply. If using a generator you also need to comply with the requirements / instructions supplied with the generator.
- B) **Switch the PSU2006 unit OFF.** Locate the red power switch on the PSU2006 and ensure the switch is in the OFF (0) position before connection to the mains supply.
- C) **Connect the Hook-up Lead.** Firstly connect the supplied hook-up lead (orange cable with blue connectors) to the Caravan / Motorhome / Trailer Tent / Folding Camper and then connect to the mains supply.
- D) **Check Residual Current Device operation.** Locate the RCD within the PSU2006 and ensure the RCD is switched on (lever in up position). Press the 'TEST' button and confirm that the RCD is turned off (lever in down position). Switch the RCD back to the on position (lever in up position). If the test button failed to operate the RCD see section 1.4.
- E) **Check correct Polarity.** Locate the 'Reverse Polarity' indicator on the PSU2006 and ensure that the indicator is NOT illuminated. If the indicator is illuminated see section 1.4.
- F) **Check Miniature Circuit Breakers.** Locate the MCB's within the PSU2006 (adjacent to the RCD) and ensure they are all in the ON (up) position.
- G) **Turn the PSU2006 ON.** Locate the red power switch on the PSU2006 and turn to the ON (I) position. The switch will illuminate when turned on.
- H) **Check operation of equipment.** It is now safe to check the operation of the 12v and 240v equipment.

PSU 2006 Layout



PSU 2006 Specification

*Mains Input 230 Volts AC +/- 10%
Frequency 50 Hz
Output Voltage 13.5 Volts nominal
Output Current 12 Amps nominal
(150 Watts)*

1.3 BATTERY

A) Type / Selection

For optimum performance and safety it is essential that only a proprietary brand LEISURE battery is used with a typical capacity of 75 to 120 Ah. A normal car battery is NOT suitable.

It is recommended that the leisure battery is always 'in circuit' when the system is in use.

The battery feed is fitted with an inline fuse between the battery and the electrical harness, and is usually located immediately outside the battery compartment. The maximum rating of this fuse is 20A.

B) Installation & Removal

Always disconnect the 240v mains supply and turn the PSU 2006 charger switch to the OFF (0) position before removing or installing the battery.

When connecting the battery, ensure that the correct polarity is observed (black is negative [-] and red is positive [+]) and that the terminals are securely fastened. Crocodile clips must not be used.

WARNING

Explosive gases may be present at the battery. Take care to prevent flames and sparks in the vicinity of the battery and do not smoke.

C) Servicing

Under normal circumstances it should not be necessary to remove the battery other than for routine inspection of the terminals and "topping up" of the battery fluid. Please see instructions supplied with the battery.

Note: Do not over-discharge the battery. One of the most common causes of battery failure is when the battery is discharged below the recommended level of approximately 10.5v. Discharging a battery below this figure can cause permanent damage to one or more of the cells within the battery.

1.4 FAULT TABLE

| Fault | Possible Cause | Proposed Fix |
|--------------------|--|---|
| No 240 volt output | Connecting lead between the site and Caravan / Motorhome / Trailer Tent / Folding Camper not connected | Check and connect lead as per 1.2.C Check also input connector at the base of the PSU 2006 |
| | RCD switched off | Reset RCD as per 1.2.D |
| | RCD not operating correctly | Check supply polarity |
| | MCB switched off | Reset MCB by switching OFF (down position) then back ON (up position) |
| | No or deficient supply from site | Contact site Warden for assistance |
| | Other fault | Contact your Dealer |
| No 12 volt output | No 240v supply | Check all above |
| | Charger not switched on | Switch charger switch on (I) position, switch will illuminate |
| | Battery not connected and / or charged | Install charged battery as per 1.3.B |
| | Power selector switch on control panel not switched to 'van' (where fitted) | Select 'van' on control panel |
| | Fuse blown | Check all fuses are intact and the correct value fuse is installed as per fuse table shown in 1.5 |
| | Equipment switched off / unplugged | Check equipment switched is on and connected to the 12v supply |
| | Other fault | Contact your Dealer |

1.5 FUSE / MCB TABLE

| Fuse | Rating | Fuse Colour | Wire Colour | Description |
|---------|---------|-------------|----------------|------------------------------------|
| 1 | 10 Amps | Red | Slate | Front roof lights |
| 2 | 10 Amps | Red | Pink | Rear roof lights |
| 3 | 5 Amps | Tan | Yellow / Green | Water Heater Ignition (if fitted) |
| 4 | 10 Amps | Red | Purple | Water pump / Toilet pump |
| 5 | 10 Amps | Red | Yellow / White | 12v Sockets |
| 6 | 15 Amps | Blue | Red | Fridge |
| 7 | 20 Amps | Yellow | Green | Supply from Car |
| 8 | 15 Amps | Blue | * | Charger (internally connected) |
| Battery | 20 Amps | Yellow | Brown / Blue | Fuse remotely located near battery |

| MCB | Rating | Wire Colour | Description |
|-----|---------|---------------------------------|-------------------------------------|
| 1 | 10 Amps | White | 240v Sockets |
| 2 | 10 Amps | White | 240v Sockets / Fridge |
| 3 | 6 Amps | Orange - Lights / Blue - Heater | Lights / Water Heater / 12v Charger |