1 Introduction

The VLM6 is an electronic module that can be fitted to Swift Group caravans to fix road lighting incompatibility issues with some tow vehicle and caravan combinations.

The unit is directly compatible with 2019 model year caravans and 2018 model years caravans fitted with the larger format C44+ fuse box, which was introduced in October 2017.

The unit can also be fitted to 2016 and 2017 model year caravans (which originally would have used the now obsolete VLM4) with a little extra installation effort by following the guidance further below.

2 Overview

In 2018 and newer caravans, the VLM6 is a plug and play replacement for the C44+ road lighting fuse box which is located at the front of the caravan. The installation process is described below, but in simple terms the C44+ fuse box is removed and replaced by the VLM6, no extra connections or wires are needed.

In 2016 and 2017 caravans, the VLM6 can still be used, but the mounting hole for the C44 will need to be enlarged to accommodate the larger VLM6 unit, and any tungsten filament lamps (bulbs) fitted to marker lights will need to be replaced with LED equivalents.

The VLM6 has a cooling fan fitted to the unit which operates when the tow car is connected to the caravan and is used to keep the unit cool during normal operation. It is IMPORTANT that this fan is not blocked or covered by items placed in the bed box area.

The VLM6 is powered by the vehicle battery supply via the 13-pin connector and cable (pin 9 positive and pin 13 negative) so it is IMPORTANT that the tow vehicle is wired accordingly.

3 Installation – 2018 caravans onward (C44+ fuse box)

This section covers the fitting of the VLM6 in 2018 or newer caravans (those with the larger C44+ fuse box). For older caravans see section 4.

Firstly, ensure the caravan is fitted with C44+ fuse box (the C44+ is a black rectangular shaped unit as shown in the photo below, which is significantly larger than the earlier square C44 model).

Make sure the car is disconnected from the caravan.

Remove the 4 screws holding the C44+ fuse box in place. Retain these screws as you will be reusing them.

Pull the fuse box forward and then unplug all the connectors at the rear. Note that the connectors use retaining clips to lock them in place, so you will need to squeeze or press the appropriate clips to release the connectors.

Remove the fuse box and retain for possible future use (dealers please pass the unit to the customer).

Unpack the VLM6 and orientate it near to the mounting aperture in the caravan. Plug the connectors (removed above) into the appropriate sockets on the rear of the VLM6. The connectors are colour coded and different sizes to prevent them being plugged in incorrectly. Ensure the retaining clips click into place after inserting each connector.

Carefully pass the rear of the VLM6 into the mounting aperture and fix the unit in place with the 4 retaining screws removed earlier.

4 Installation – 2016 or 2017 caravans (smaller C44 fuse box)

This section covers the fitting of the VLM6 in 2016 or 2017 (those with the smaller C44 fuse box). For newer caravans see section 3 above.

Firstly, ensure the caravan is fitted with C44 fuse box (the C44 is a black square shaped unit as shown in the photo below, which is smaller than the newer C44+model).

Make sure the car is disconnected from the caravan.

Remove the 4 screws holding the C44 fuse box in place. Retain these screws as you will be reusing them.

Pull the fuse box forward and then unplug all the connectors at the rear. Note that the connectors use retaining clips to lock them in place, so you will need to squeeze or press the appropriate clips to release the connectors.

Remove the fuse box and retain for possible future use (dealers please pass the unit to the customer).

Unpack the VLM6 ready for the next step.

Remove the wooden panel which is held in place by a further four screws. Enlarge the hole in the wooden panel so that the circuit board on the rear of the VLM6 will pass through the hole. Use the photos below as a guide. If required, the VLM6 can be fitted in a horizontal position.

Refit the wooden panel to the caravan using the original fixings.

Plug the connectors (removed above) into the appropriate sockets on the rear of the VLM6. The connectors are colour coded and different sizes to prevent them being plugged in incorrectly. Ensure the retaining clips click into place after inserting each connector.

Carefully pass the rear of the VLM6 into the mounting aperture and fix the unit in place with the 4 retaining screws removed earlier.

Now check the front, side and rear high level marker lights, and if any are fitted with tungsten lamps (bulbs) these should be replaced with LED equivalents. Failure to do this may overload the tow car and cause a fuse to blow or a failure to be shown on the vehicle dashboard.

5 Testing

After installation the unit should be tested for correct operation as follows:

Connect the 13-pin plug to the socket on the car.

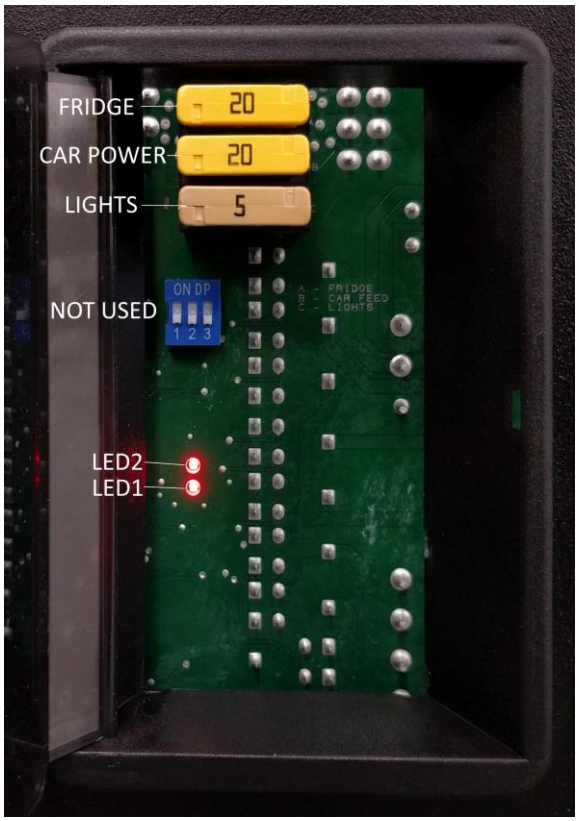
Check that the fan on the VLM6 turns on. If the fan does not operate check the supply on the orange (+) and white/red (-) at the 4-way red connector.

With the driver's door shut, car ignition on, operate each light in sequence and confirm that they operate correctly and no warnings are shown in the vehicle.

Now again with the driver's door shut, with the engine running, operate each light in sequence and confirm that they operate correctly and no warnings are shown in the vehicle.

Finally, check a combination of lights at the same time, like an indicator, side lights and pressing of the brake all together. Confirm that all lights work correctly.

If a fault or problem is shown in the vehicle, view the fuse area on the VLM6 and look of a red LED indicator. There are 2 red LED's on the unit, one indicates a fault on the left indicator and the other a fault with the right indicator. If either LED is illuminated or flashing check the indicator lamp units and associated wiring in the caravan. The following photo and table show the LED position and status.



Right Indicator (top LED, nearest to the fuses)

LED2 – off – operation OK

LED2 – steady on – under current / open circuit

LED2 – flashing – over current / short circuit

Left Indicator (bottom LED)

LED1 – off – operation OK

LED1 – steady on – under current / open circuit

LED1 – flashing – over current / short circuit

6 Help & Assistance

If you do experience any problems with the installation or operation of the VLM6 please contact the Sargent Support team on 01482 678981 or email them at support@sargentltd.co.uk