

## **Engine Saver® 12 & 24 volt units with In-Line Coolant Sensor Installation Instructions.**

Before starting please read the safety warnings at the end of this document and if you have any doubts or queries please contact your supplier, or have the Engine Saver® installed professionally.

### **Contents:**

**Your Engine Saver® kit (ESS1242 or ESS2442) contains the following:**

- 1 x Module Unit
- 2 x Rubber Adaptors
- 1 x In-line Hose Sensor
- 2 x Stainless Steel Hose Clamps
- 1 x LED Sticker (Low Water)
- 1 x PK Screw (earth point for sensor)
- 6 x Black Cable Ties
- 1 x Instruction Sheet

### **In-line Hose Sensor Installation**

Having made sure that the cooling system has cooled sufficiently, and having read the safety warnings at the end of this document, remove the radiator cap as described in the vehicles handbook. This will depressurise the coolant system.

Check that the in-line sensor is the correct size for the radiator hose. Adaptors are available for the common sized hoses. Contact your supplier if unsure or a different adaptor is required.

If the adaptor supplied is suitable, cut the radiator hose to remove 17mm, from the hose no closer than 80 mm from the end nearest the radiator. The area you select should have a straight section of hose of about 80 mm in length.

Slide the 2 hose clamps onto the radiator hoses, joining these together with the in-line sensor.

Use liquid detergent or washing up liquid as a lubricant to assemble the hoses if adaptor is a tight fit.

Check that the probe screw (longest wire) is at the top, and perfectly vertical.

Ensure that the radiator hose is straight with no twisting and tighten the hose clamps.

Run the short wire to a body earth, drill a 2.5 mm hole, and attach the lug with the supplied PK screw.

Run the long wire from the probe screw back to the dash board area through the engine firewall.

Most people use an existing cable grommet in the firewall to run this cable through.

Avoid routing this cable close to heat sources (exhaust pipes, A/C pipes etc) and secure it with the supplied cable ties.

## **Module Fitting**

Before starting any electrical work disconnect the battery earth lead.

Locate a place inside the steering column cowling, or behind the lower dash fascia, where the module can be installed, and at the same time give easy access to wires from the ignition switch circuit. If in doubt consult an Auto Electrician or your vehicles workshop manual.

Secure the module with a cable tie.

The Positive wire (solid Red wire) must be connected to a fused supply that switches on and off with the ignition.

The Earth wire from the module (red wire with black stripe) must be connected to a good earth point, or vehicle earth wire.

Plug the sensor cables male bullet connector into the female connector on the module.

Select a suitable position for the LED warning light and drill a 6.5mm or ¼ inch hole.

Press the plastic bezel into this hole, and insert the LED into it from the back, taking care not to push the bezel out.

Fit the Low Water sticker around the Led bezel.

Check all wiring connections, and when satisfied that all are correctly fitted reconnect the batteries earth lead.

Turn the ignition on, but don't start the engine. The Engine Saver® alarm should sound, and the LED illuminate immediately as there is no coolant in the in-line sensor.

If the alarm and LED fail to work go back and check your installation.

Refill the vehicles coolant system, bleeding if required, as per the vehicles handbook.

Temporarily leave the pressure cap off.

Start the engine, and once any air bubbles are purged from the coolant system the Engine Saver® alarm and LED will stay off. If not then you may have an air lock in the system that needs bleeding.

Turn the heater on whilst bleeding the system.

Allow the engine to come up to its normal operating temperature, and after turning the engine off, check the hose clamps are securely tightened and confirm that you have no leaks in the system. Replace the pressure cap, turn the ignition on, and the buzzer should sound and the LED flash briefly as the module self tests. Start the engine and the alarm should remain silent.

Allow it to reach normal operating temperature and do a final check for coolant leaks.

## **Safety Warnings**

1. Do not commence this installation until the engine has cooled down.
2. The radiator cap or expansion tank cap will need to be removed to depressurise the coolant system. Do this as per your vehicles handbook.
3. Coolant is a mixture of water and various forms of polyethylene glycol. They should be handled as per the instructions and warnings given by their manufactures as they are potentially hazardous if not handled properly.
4. Disconnect the battery earth cable before starting any work on the vehicles electrical system.

5. Check that all wiring inside the engine compartment and inside the vehicle is properly and tidily secured at the completion of this installation.

Please note that the Engine Saver® alarm system is designed to warn the vehicles operator of a reduction in coolant volume and from this assist in the prevention of engine overheating. Fitting an Engine Saver® does not offer any guarantee that engine overheating will not occur.



Kits ESS1242 & ESS2442 (12 or 24 volts)

1. In-Line coolant sensor
2. Cable ties
3. Stainless steel hose clamps
4. Rubber hose adapt ors
5. LED sticker (Low water)
6. Cabin module with buzzer
7. PK screw (Earth point for sensor)

