

## Low Coolant Level Alarm Kit - Part No. 1035

### INSTALLATION INSTRUCTIONS

#### Introduction

Congratulations on your purchase of the Davies Craig Low Coolant Level Alarm Kit. This kit is designed to alert you when the engine coolant level drops significantly from its full capacity. The loss of coolant in the engine cooling system will result in excessive engine temperature which can lead to total engine seizure.

**Note:** This model is suitable for both 12 and 24 volt electrical systems.

The Low Coolant Alarm Kit contains the following components;

| Description                 | Quantity |
|-----------------------------|----------|
| Inline Sensor & Adaptor     | 1        |
| Mount Pad (Velcro®)         | 1        |
| Alarm Module                | 1        |
| Hose Clamps                 | 2        |
| Adaptor Sleeves 3 mm (1/8") | 2        |
| Wiring Looms                | 2        |



Fig.1 Low Coolant Level Alarm Components

#### INLINE SENSOR ADAPTOR FITTING

Commence fitting when the engine's cooling system is cold. Remove the top radiator hose and confirm the inside diameter (ID) of your top radiator hose is between 32 mm (1¼") to 42 mm (1½") ID.

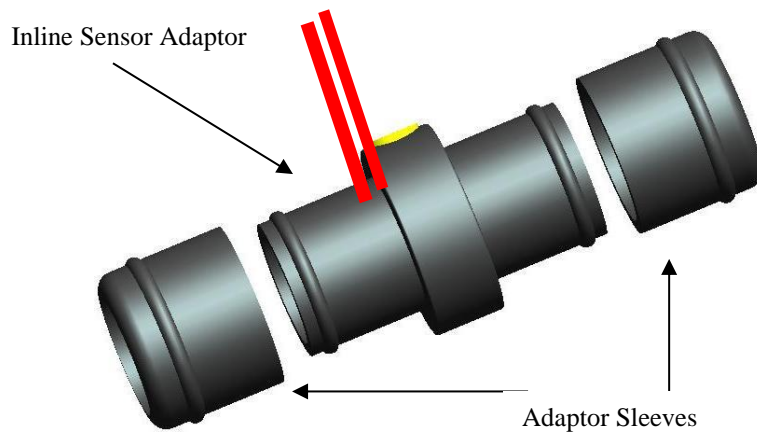
The Adaptor Sleeves, 2 x 3 mm (1¼") supplied will enable fitment to these radiator hose dimensions.

If the ID of your top radiator hose is larger, Davies Craig can supply additional Rubber Adaptor Sleeves, 6 mm (¼") (part # 8511).

**NOTE:** Select a straight, horizontal section of the top radiator hose. Cut and remove approx. 17 mm (2/3") at an appropriate location. Temporarily slide radiator hose clamps on each end of the hose. Fit both ends of the hose to the Inline Sensor Adaptor (with or without sleeves). If fitting is tight, use silicon base grease or petroleum jelly to assist fitment of adaptor to hose. (See Fig 2)

Ensure the Temperature Sensor is facing in the upward (12 o'clock) position. Tighten radiator hose clamps. Refit the top radiator hose ensuring there is no twisting of the hose and the Sensor is vertical.

**Note:** Avoid installing the inline adaptor near curves/bends in top radiator hose. This may create turbulence around the sensor and may result in false alarms.



**Fig.2 – Inline Sensor Adaptor Fitting**

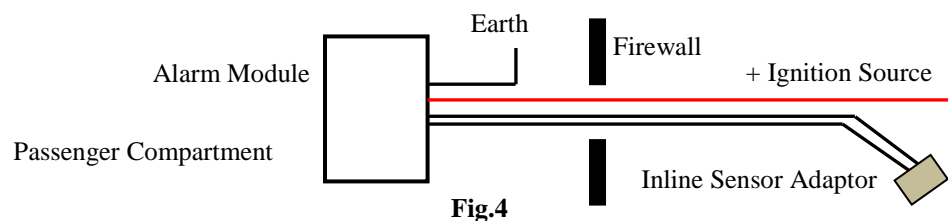


**Fig.3 – Inline Sensor Adaptor Fitting Positions**

**Top up radiator with coolant which may have been lost during fitment. Start engine to confirm there is no leakage at radiator hose and probe assembly joints.**

### **INSTALLING THE ALARM MODULE (Refer Fig 4)**

1. The alarm module must be fitted inside the passenger compartment. Locate a suitable hole in the firewall, where the wiring harnesses can be passed through.
2. Pass the wiring looms through the firewall into the engine bay and connect to the Inline Sensor Adaptor assembly
3. Mount the alarm module using the mount pad supplied in a suitable, visible location. Avoid mounting the alarm module where it may be exposed to direct sunlight.
4. Connect the red wire (Battery +) from the alarm module to any ignition source and black wire (Earth) to ground.
5. Connect the Alarm Module (Female) black connector to the inline sensor adaptor (Male) black connector.
6. Place the LED in the 6-Pin Wiring Loom in a convenient location, visible to the driver.



**Fig.4**

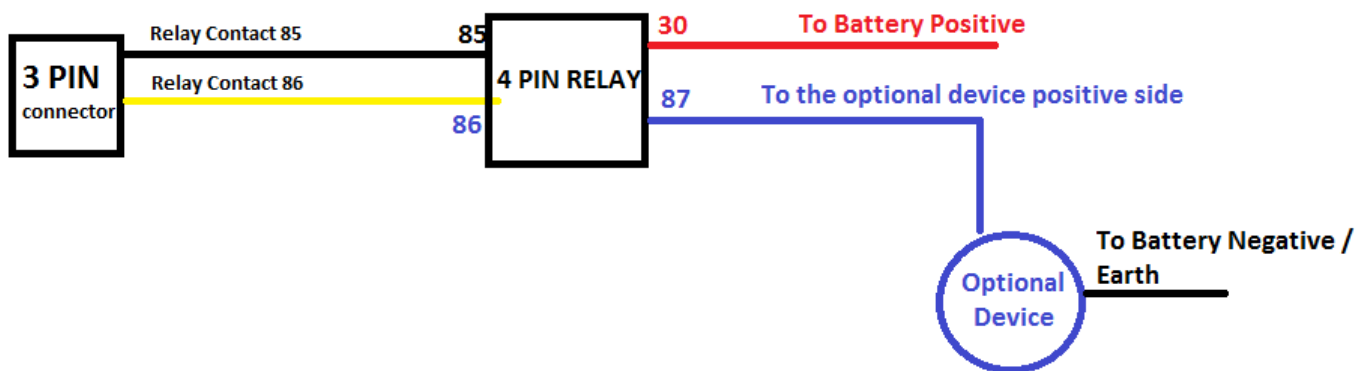
**Note:**

The additional 3-pin wire loom is an optional fitting. If you prefer to use the additional functions mentioned below, please proceed to the following wiring instructions, Item 7.

**Additional functions**

- Will trigger the car horn, an Electric Water Pump, an Electric Booster Pump, a Thematic Fan etc. when the engine coolant level drops.
  - The additional function can monitor radiator/condenser fan, ON/OFF status.
7. Use an automotive normally open 4-pin relay (Not provided), connect the Black (Relay contact 85) & Yellow (Relay contact 86) from the 3 pin wire loom to the 4 pin relay (Not provided) No. 85 & No. 86 correspondingly. Then connect the No.30 from relay to Battery + & No. 87 to the device's (you wish to activate when the engine coolant is below the average level) positive side and then earth the device separately.

**Optional wiring diagram to activate a secondary devices.**



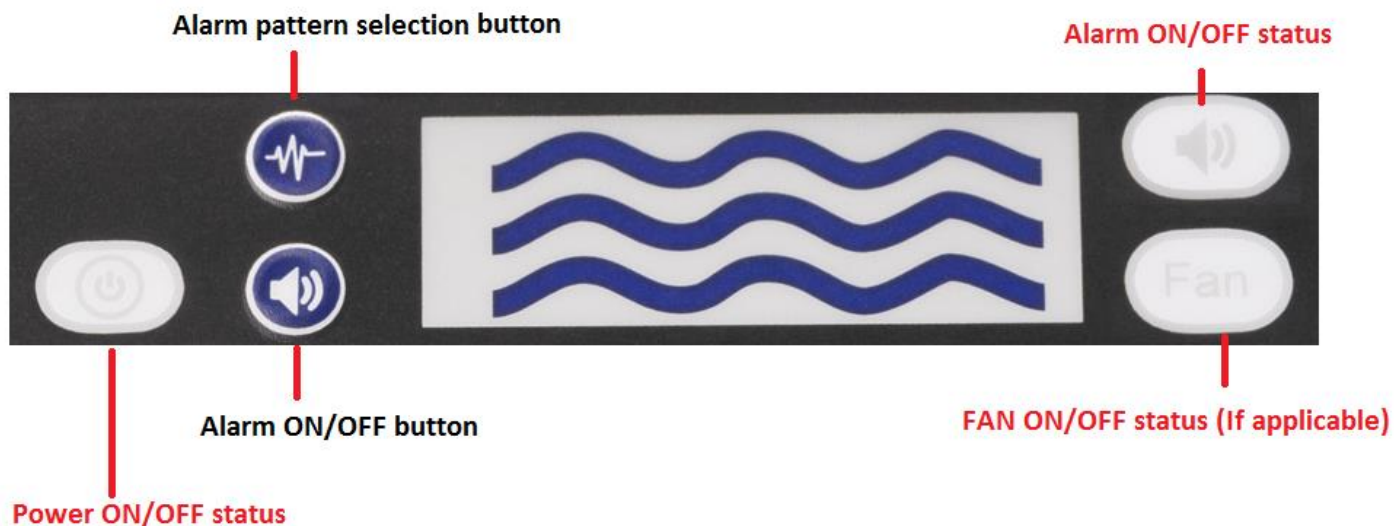
By connecting the signal input wire from the 3-pin connector to the positive side of your radiator/condenser fan, you will be able to monitor the fan ON/OFF status from the alarm controller module.

**TO COMPLETE AND TEST THE INSTALLATION**

1. Top up radiator with coolant.
2. With ignition ON, drain some coolant from the radiator to drop the float switch in the probe assembly. This should activate the alarm and the red LED will turn ON after 20 to 30 seconds delay.
3. Tighten the hose clamps and refill the radiator with coolant, the alarm and red LED will turn off when the float rises with the increase in coolant level.
4. Bleed the cooling system by starting the engine and operating the vehicle's cabin heating system at full speed/temp with radiator cap off. As the excess air escapes, the coolant level will drop. Continue topping up the coolant until the radiator is completely full.
5. If you experience false alarms, reposition Inline Sensor Adaptor at 10 or 2 o'clock. (See Fig 3)

**Warning**

It is important to repeat items 2 & 3 listed above periodically as the different additives and water quality used in radiators may build-up residue on the Sensor that may cause a malfunction. Clean the Sensor periodically to ensure there is no residual build up.



**Alarm Module**

**Diagnostic Chart**

| Function                | Diagnostic  |
|-------------------------|---|
| Power LED ON            | Normal  |
| Power LED OFF           | Check the interruptions for Red & Black wires in the 6 pin connector.   |
| System start up beep    | Normal  |
| No system start up beep | Check the Alarm On/Off status LED. <ul style="list-style-type: none"> <li>• IF – OFF; press the alarm On/Off button once &amp; restart the system.</li> </ul> |
| Alarm pattern selection | 3 built in alarm patterns. Simply press & release the alarm pattern selection button to select the preferred one.   |
| Fan LED                 | Will indicate the Thermatic® FAN ON/OFF status. Follow the step No.8 of additional functions.   |

**WARRANTY STATEMENT**

Davies, Craig Pty Ltd hereby warrants this product for a period of two (2) years or 2000 hours of continuous running (whichever is the lesser) from the date of purchase. Davies, Craig Pty Ltd shall carry out any repairs/replacement to this product free of cost provided that such fault is directly attributable to a defect in the workmanship or materials used in the manufacture of the Davies, Craig product supplied. Labour and consequential costs excluded.

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