

MODIFICATIONS TO REPLACE 064-40953 CONTROLLER

These controllers were fitted to early Alpha LPWS Marine engines and were specially produced for Lister-Petter to incorporate the following:

- 1 Glowplug controller & relay to provide pre & post heat
- 2 Earthing relay to connect system -ve line to body of engine for glowplug operation.
- 3 Electronic relay for Engine Temperature Thermistor sensor.

Functions 1 & 2 are controlled by an internal time-delay circuit.

Replacing 064-40953 with later units, 757-23720 (controller) & 757-62260 (relay) will provide a solution to this but not without modifications to the wiring.

Because the electronic relay for temperature sensing is no longer available as a separate item it is also necessary to fit the later type temperature switch - 329-15140.

**NB The following instructions outline wiring modifications required but it is recommended that these are only carried out by someone with electrical/wiring knowledge.
No liability is accepted for consequential loss or damage caused by this modification !**

- 1 Turn off Battery Master Switch !
- 2 Locate existing thermistor sender (on port side of fresh water pump, remove connector & cut two wires (purple) close to connector block.
- 3 Unscrew switch from pump housing & replace with new switch.
(note - adaptor is available to enable fitting in alternate location if required).
This can be carried out without draining down cooling system providing all parts are ready to fit.
Do not overtighten new switch - use sealant if necessary.
- 4 Reterminate purple wires with 6.3mm Lucars & connect to new switch.
- 5 Locate 2 x purple wires & 1 x pink wire in connector blocks below 064-40953 combination relay (starboard side of engine) & cut leaving sufficient cable on terminals to allow reconnection as specified in 8a & 9a/b.
- 6 Connect 1 x purple wire to pink wire in cable loom.
- 7 Connect other purple wire to negative of wiring system (terminal on rear of M80 starter motor or may be commoned up with negative connections specified in 8b & 9a below)
- 8 Rewire controller socket as follows:
 - a. Relocate red wire to position previously occupied by pink wire.
 - b. Fit new 6.3mm Lucar receptacle fitted with black wire (1mm² min) in vacant space adjacent to this connection & connect to system -ve (rear of starter motor)
- 9 Rewire relay socket as follows:
 - a. Introduce black wire (1mm² min) from engine -ve (rear of starter motor) to terminal occupied by purple wire)
 - b. Introduce brown wire (1mm² min) from glowplug +ve to terminal occupied by other purple wire.
- 10 Check all connections & plug in replacement controller and relay - note, it is recommended that a bracket is constructed to provide physical support for these items.
- 11 Turn on Battery Master Switch !

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