

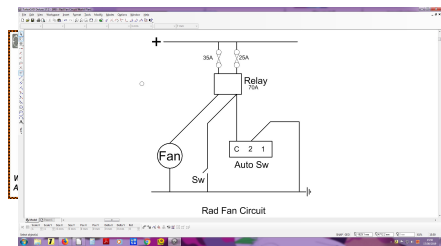
MY ENGINE COOLING & HEATER UPGRADE

Engine Coolant system

MB50 cooling system modified thus:-

- Redesigned radiator made by Coolex (is now aluminium)
- Revised hoses and layout
- Original rad. Fan (pusher) replaced 16" Spal fan (puller)
- Upgraded fan relay (70A) and fuse (30A) as originals running hot.
- Aeroline rad. fan control switch incorporated (bulb taped to rad. topside)
- Manual override fan switch incorporated
- Original coolant reservoir tank replaced by VW golf (orig. tank is Sierra MK1, Fiesta MK?)
- Coolant low level audible warning circuit incorporated
- Air intake reworked

Fan: 16" Spal Pt No: VA18-AP70/LL-86A BT (single speed fan).
 Switch: Manual switch incorporated in case auto switch fails.
 Auto Switch: Aeroline Capillary Radiator Fan Control Switch.
 Terminal's: 'C' fan relay coil No '2' earth.
 No '1' redundant



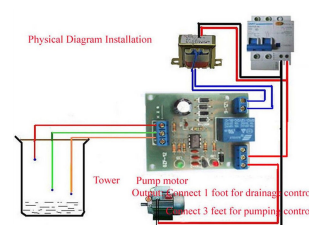
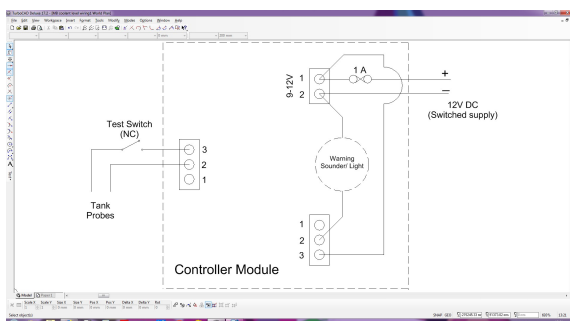
Modified fan circuit

Coolant level warning

MB original coolant tank failed and now replaced with VW Golf coolant reservoir/ tank which conveniently has terminals for low coolant level warning circuit. To utilise the low level warning for MB a booster signal module circuit must be incorporated to power a Piezo alarm. A test switch is also included.

Module from ebay: "9-12V Liquid Level Controller Sensor Modules Water Level Detections Sensor^AC/DC".

<https://www.ebay.co.uk/itm/9-12V-Liquid-Level-Controller-Sensor-Modules-Water-Level-Detections-Sensor-AC-DC/163537505556?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.12649>



Module, with test switch, is located under the dash on drivers side.

Heater update

MB50 matrix was shot and replacements no longer available (different to Reliant jobbies) so decided to look at alternative heater design.

Brief:-

1. A single blower close to the matrix (who thought it a good idea to have two blowers each 2m from the matrix?).
2. Larger heater matrix.
3. Matrix and blower to be plentiful (to ensure spare parts supply).
4. Matrix and blower to be easily accessible for maintenance (a huge undertaking to get at those parts in the original build).

Eventual Spec'n:-

1. Double headed 3 speed blower, Spal 008-A45-02 (£85)
2. Matrix, Ford Transit Mk3/4 (£20)*
3. Relay x 3 (£21)**
4. Diverter valve x 2 (£40)***
5. Aluminium sheet to make heater box (£?).
6. Bulkhead flanges, 60mm x 4 (£24)
7. Heater ducting, 60mm flexible (£?)

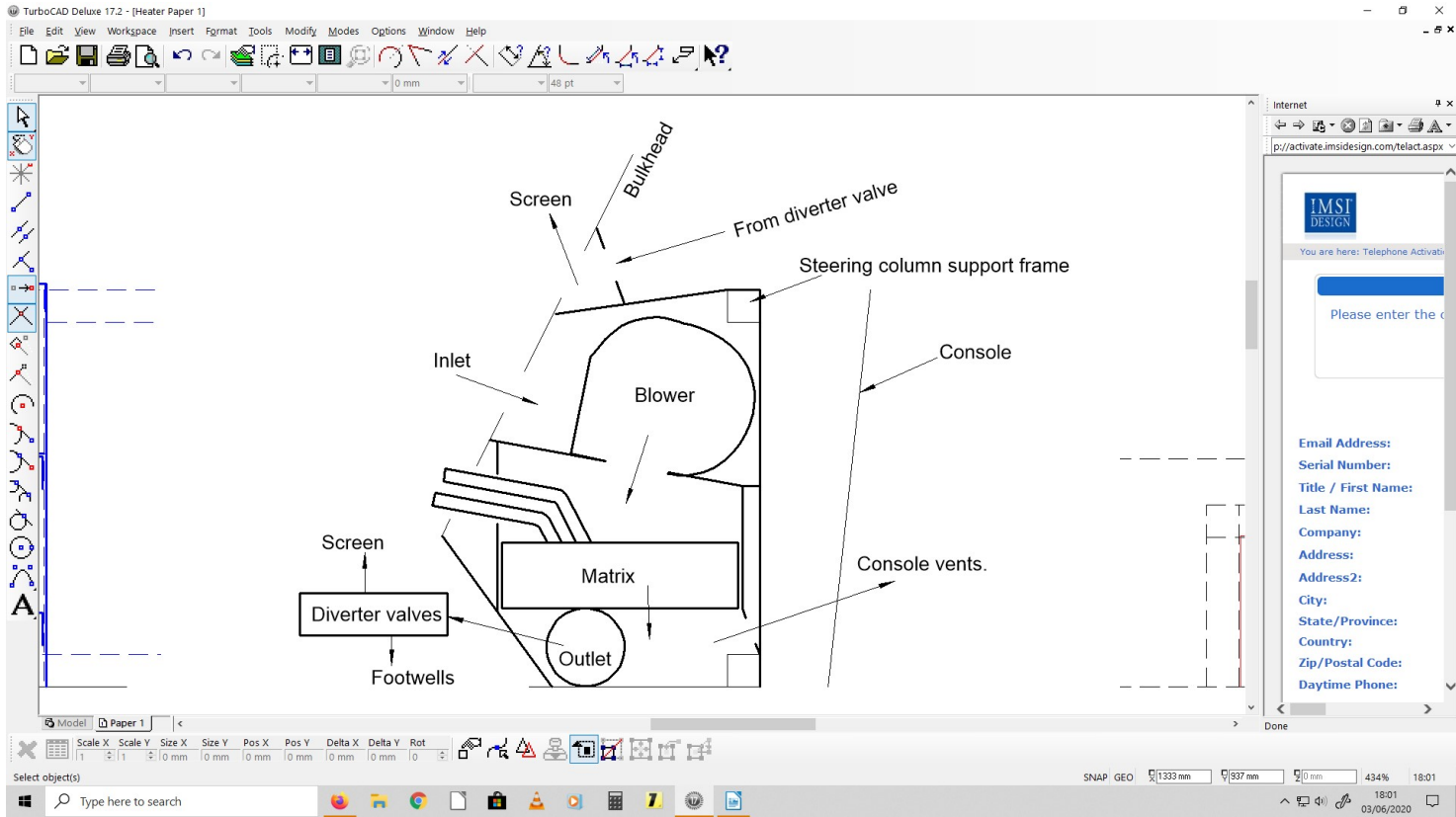
* Transit matrix is good size and hose connections conveniently positioned.

** Couldn't find 3 speed blower switch to take 15A reliably, hence relays used.

***Diverts air flow from feet to screen.

Notes:-

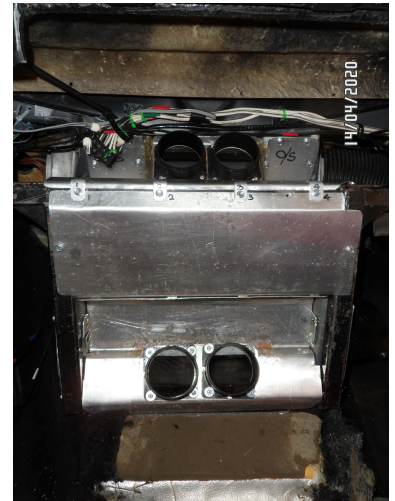
To meet the accessibility brief the new heater box is made of several panels all held together with self tapping screws thus enabling quick in-situ dismantling. Also, the centre console mounting panels were originally retained by screws into the centre console backing plate, which meant the console must first be removed in order then to remove the mounting panels. I simply trimmed away the flanges on the panels through which retaining screws passed and secured the panels to the new heater box with a single self tapper at the centre. Each mounting panel now simply overlaps the backing plate to locate at it's forward edge and can be removed in an instant to access the heater box.



MB matrix v Transit box console vents (MB is the smaller)



Heater box showing matrix



Heater

NOTE: May I take this opportunity to thank the owner of MB 50 on behalf of us all for this incredibly detailed heater & Cooling Middlebridge upgrade.

Thank you from Mick and all the MESS.