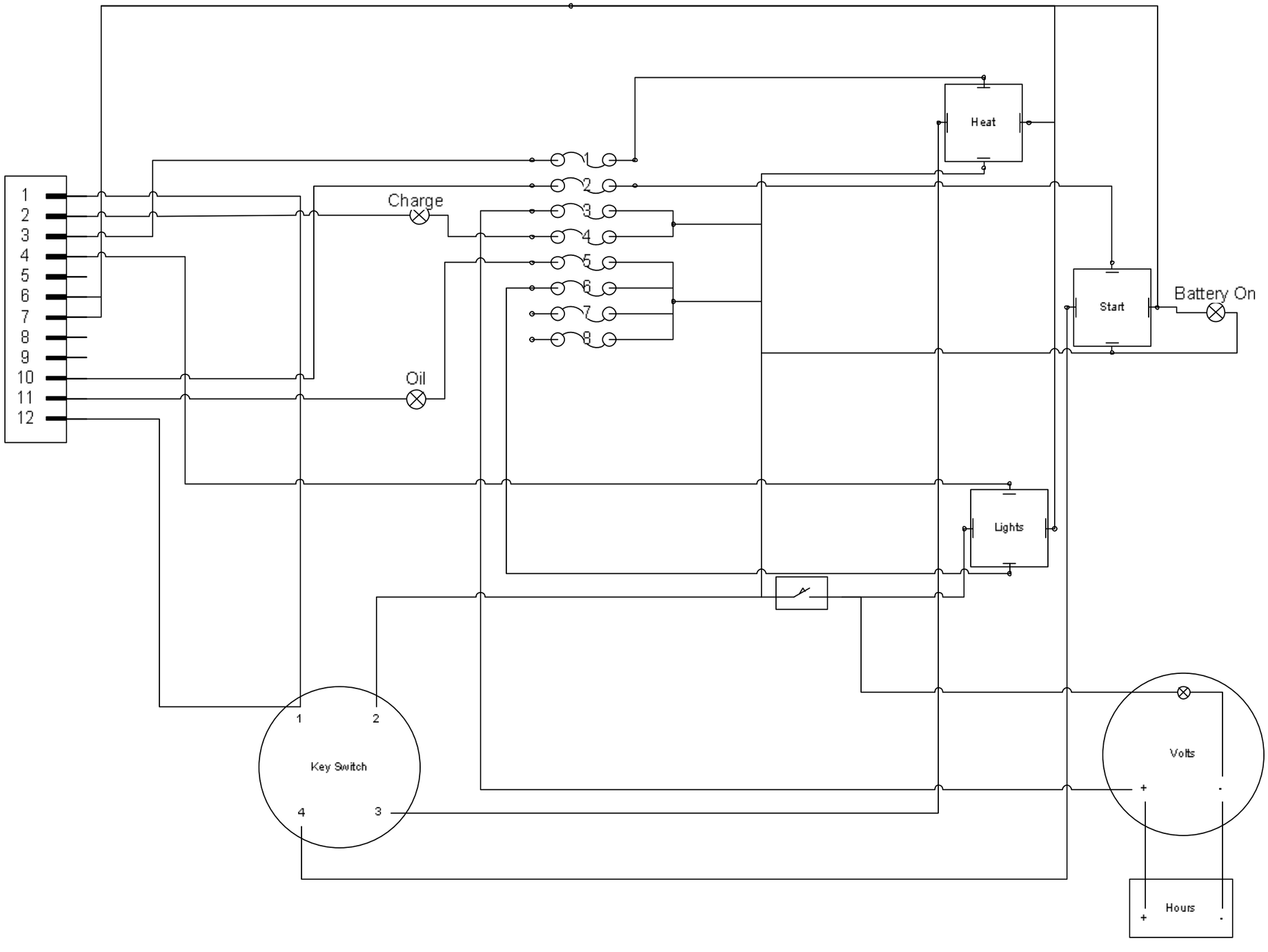


Schedule of Pins

1(12)	Battery + VE (INPUT)
2	Charge Lamp
3*	Heater plug relay signal
4*	Lights relay Output
5*	Not Used
6(7)	Battery – VE (INPUT)
7(6)	Battery – VE (INPUT)
8*	Not Used
9*	Not Used
10	Starter relay signal
11	Oil pressure light
12(1)	Battery + VE (INPUT)

Schedule of Fuses

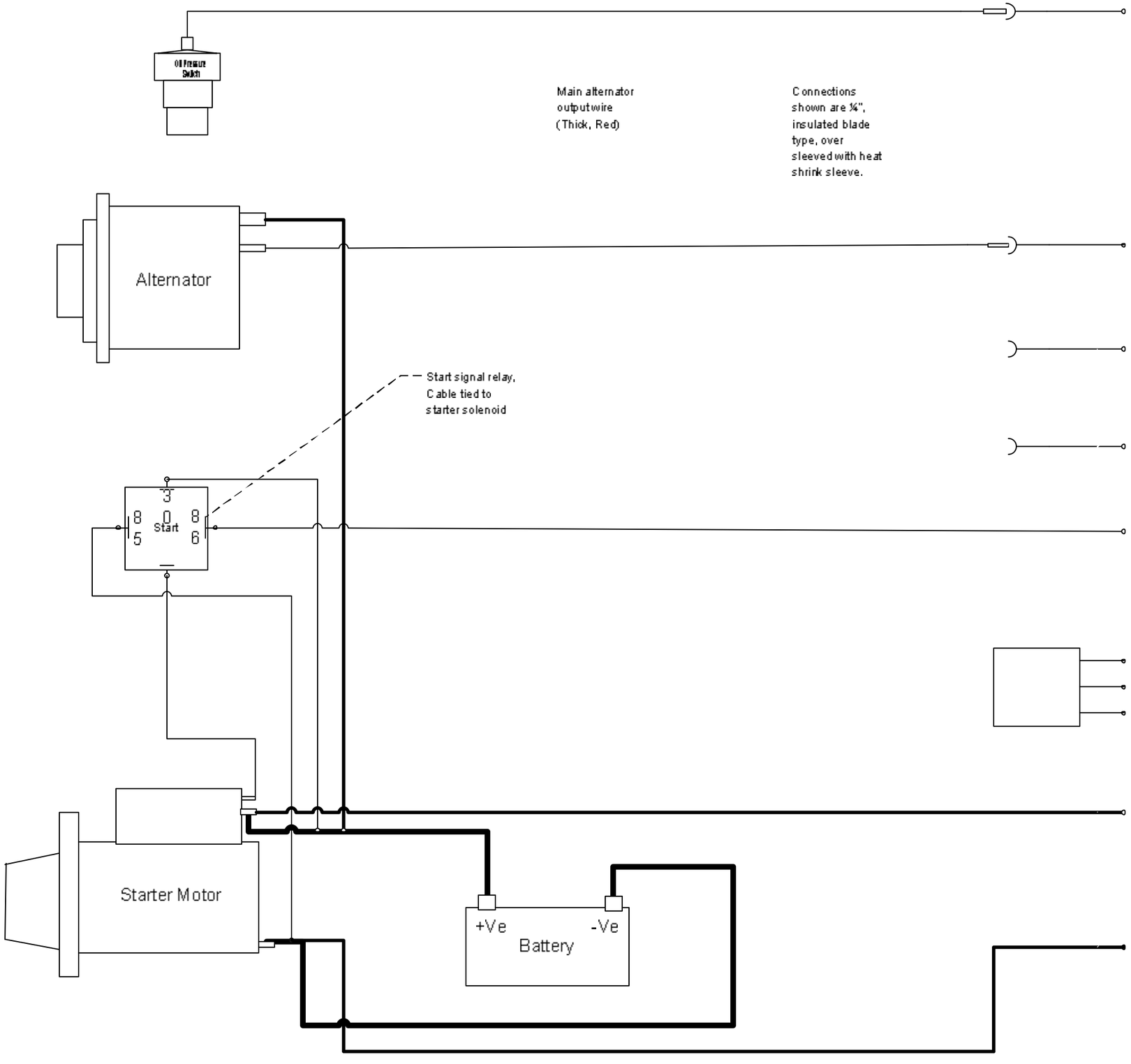
(Top to Bottom)

1	10A	Heater plug relay signal
2	10A	Starter relay signal
3	3A	Volt meter / Hour Meter
4	5A	Charge Light
5	5A	Oil pressure light
6	30A	Lights relay output
7		Not used
8		Not used

* See "Notes" sheet for details

Control Panel wiring for "Southam".

Designed by: Dave Quirk
Drawn by: C.Douay
Date: June 2004



Oil Pressure Lamp. (Blue spiral wrapped to connector)
[Pin 11 on plug]

Alternator excitation wire from charge light (Thin, Black)
[Pin 2 on plug]

Heater Plug Relay signal (Not used) Red sleeve
[Pin 3 on plug]

Lights Relay output (Not used) Yellow sleeve
[Pin 4 on plug]

"Start" signal from Control Panel
[Pin 10 on plug]

Spare, unused wires from Control Panel. Terminated in grey heat shrink sleeve.
[Pins 5, 8 & 9 on plug]

Main Control Panel +12 Volt feed. 2 x white lead.
[Pins 1 & 12 on plug]

Main Control Panel - 12 Volt feed. 2 x white lead.
[Pins 6 & 7 on plug]

Engine wiring for "Southam".

Designed by:	Dave Quirk
Drawn by:	Dave Quirk
Date:	Aug. 2004

Notes on the engine wiring for "Southam"

Introduction

The control panel and engine wiring for Southam are constructed using modern, automotive type materials which comply with various national and international standards.
The design strategy is based upon good practice designs with protection of the control and signal wiring in built.

The wiring system is made up of two basic parts: the control panel and the engine harness.

The control panel has been constructed to accommodate the engine's current wiring and some possible future requirements.
The engine wiring covers the very basic level of requirements for the BMC 3.8 litre, direct injection, Diesel engine currently fitted.

Engine wiring

The engine has the following electrical components: The electric starter motor, the start signal relay, the battery charging alternator and the low oil pressure warning switch. In addition to these engine mounted components is a lead acid storage battery used to power the engine's starter motor.

The battery is connected to the main, high current terminals of the starter motor using heavy two heavy gauge cables. These cables have crimped lugs on either end and the two cables are sheathed in a woven, abrasion resistant, sleeve.

The positive terminal of the battery is also connected, via the positive terminal on the starter motor, to the main output terminal of the alternator and to the +12 volt power feed for the control panel.

The start signal relay takes its main power feed (relay terminal #30) from the starter motor main positive terminal and its coil return (relay terminal #85) is connected to the starter motor main negative terminal. During operation of the starter switch the start signal relay is energised from the control panel by + 12 volts being applied to relay terminal 86. This causes the relay contacts to close and current to be fed from relay terminal 30 to the starter motor engagement solenoid, engaging the starter motor.

The alternator "charge" lamp (excitation circuit) and the "low oil pressure" warning lamps are connected to the control panel via ¼", insulated crimp terminals. Both of these joints have been over sleeved with a heat shrink sleeve to prevent accidental disconnection.

In addition to the circuits described above there is provision for a heater plug control (via the "Heater plug relay signal" wire) and external lights (via the "Lights relay output" wire). Both of these signal wires have are terminated in a ¼" female crimp terminal sleeved with a piece of heat shrink sleeve for protection and identification purposes. The heater plug relay signal wire has a red sleeve and the lights relay signal wire a yellow sleeve.

There are three additional wires from the control panel which are not connected at either end. These wires are reserved for future use. At the engine end the wires are terminated in a piece of heat shrink sleeve. In the control panel the wires, which have sufficient length to allow connection to any point in the control panel should the need arise, are insulated and secured.

Control Panel

The control panel comprises the main ignition switch, a voltmeter, an hour meter, the lights switch, an auxiliary switch (spring return, centre off type), three indicator lamps (bottom, Green, "Power On"; middle, Red, "Low oil pressure"; top, Red, "Charge"), the eight way blade fuse box (fitted at the side of the control panel) and (housed inside the panel) the three signal relays for the "Start", "Heater Plugs" and "Light" functions. An explanation of the fuses may be found on the Control Panel drawing.

With the exception of the panel lamps there are no user serviceable parts inside the control panel. If a problem is suspected inside the control panel consult D Quirk before carrying out any work .

The ignition switch is operated using a standard Lucas Diesel key (the same type as is used on "Forget Me Not") and has four positions: 1) **Off** (the key may be removed in this position), 2) **On** (in this position the panel lights will illuminate and the hour meter will "tick"), 3) **Heat** (this is the first spring position and is not currently connected to anything outside the control panel) and 4) **Start** (the second spring position in which the engine will crank)

Once the engine has started the two red lamps on the control panel should go out if the engine and charging system are healthy.

Notes on engine wiring for "Southam"

Designed by:	Dave Quirk
Drawn by:	Dave Quirk
Date:	Aug. 2004