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ISSUE 002

(Replaces previous issue 19/8/94)

MODIFICATIONS TO CP42-10 CIRCUIT BOARD

Following investigation of various field failures of circuit board CP42-10, the following modifications have been made.

- 1 Resistor R57 (680 Ohm, 0.6W) can fail open circuit, which causes the wirespeed to be always at creep speed. Replace R57 with a 680 Ohm, 1 Watt resistor (part no. CP42-10/2), or with two 330 Ohm, 0.6 Watt resistors in series.
- 2 Integrated circuit U3 (LM324) can fail which usually causes the machine to stay 'on' continuously, hence the gun switch has no effect. Add new component, resistor R64 (100K, CP64-17/13) into the circuit track from plug P3/4 to U3 pin 6.
- 3 The spot/cycle arc timer can be unreliable, especially at long interval times:
 - a) Change the resistor R35 to 56K, 0.6W (part no. W16-11/6), (was 33K);
 - b) Add diode 1N4004 (part no. W17-7/18) into the circuit track from the cathode of diode D11 to the emitter of H7.
- 4 Capacitor C21 (0.1 μ f, W11-6/13) is shown in circuit diagrams, but was omitted from the pcb layout, hence never fitted. This component is intended to provide a level of HF bypass for the input of opto-isolator U7.
- 5 A quantity of production pcb's have been assembled using BC337-16 in substitution for the standard part, BC337-40.

The BC337-16 has a lower gain, and several failures have been reported where this component has been used as H11 which drives the gas valve. The transistor fails short circuit, leaving the gas valve continuously 'on' when the machine is energised. The BC337-16 appears to function satisfactorily in all other circuit positions.

These changes are being incorporated into production machines, as modifications to the current P44/02 printed circuit board, as of the above date. The changes will also be fully integrated into printed circuit board P44/03, which will reach production in October 1994.

Attached are copies of updated circuit diagram CP42-10/C1 Rev.D, and fitting instructions for the above modifications.

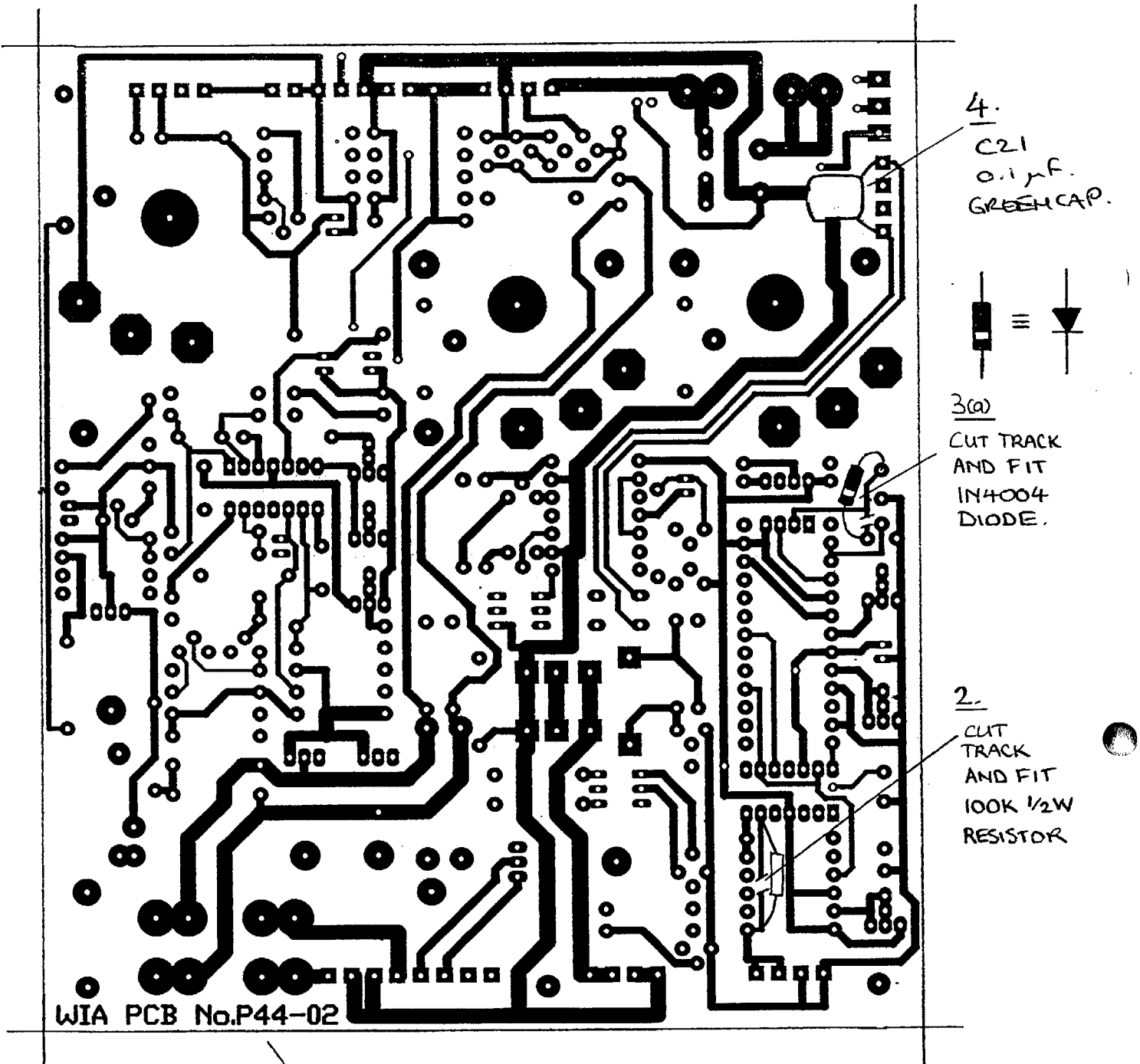


GARY CHEESMAN
MARKETING MANAGER - EQUIPMENT

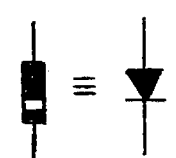
QUALITY WELDING PRODUCTS, SYSTEMS & SERVICE

PCB # P44/02

SOLDER SIDE VIEW.



4.
C21
0.1 μ F.
GREEN CAP.



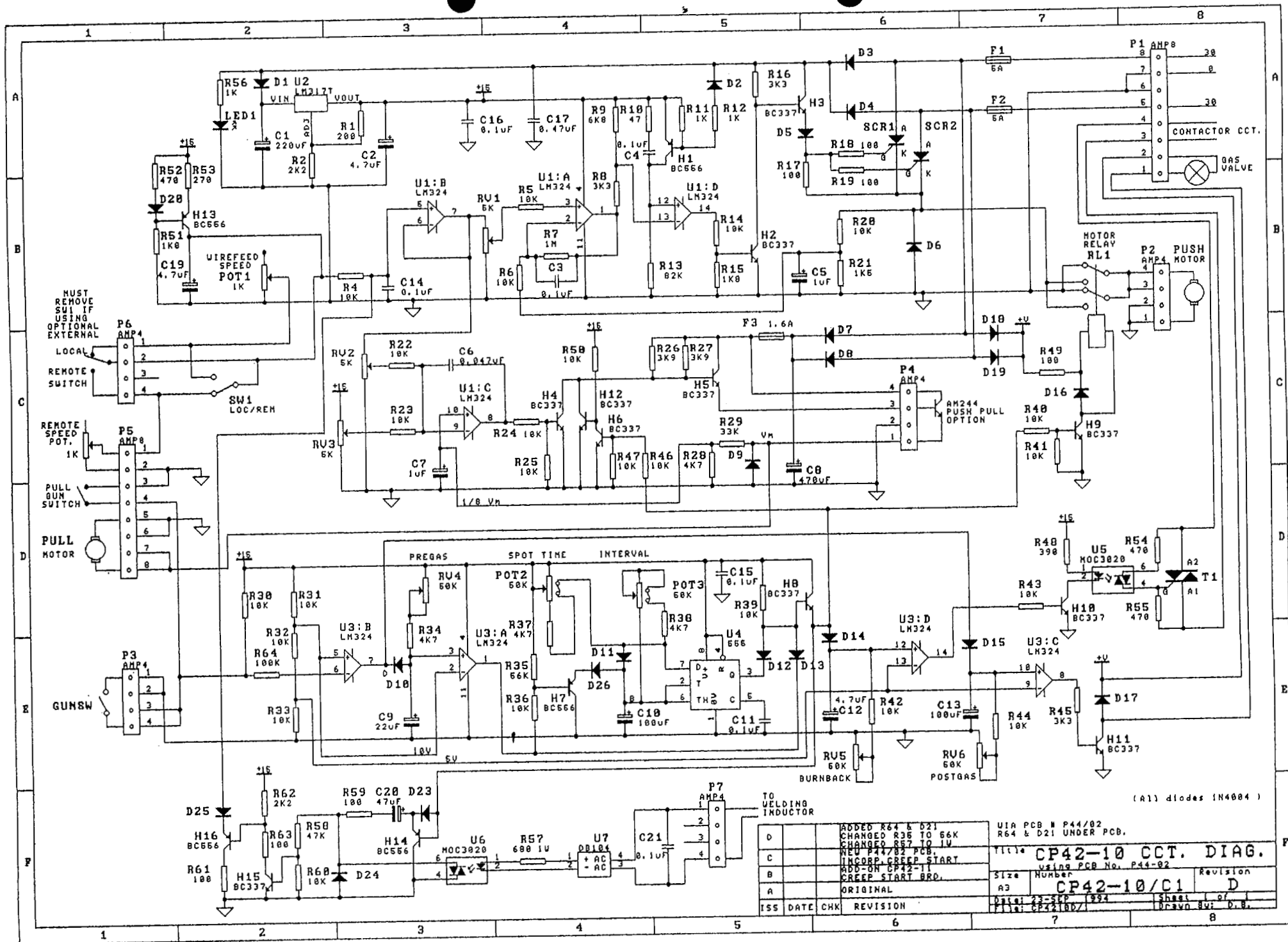
3(a)
CUT TRACK
AND FIT
IN4004
DIODE.

2.
CUT
TRACK
AND FIT
100K 1/2W
RESISTOR

WIA PCB No.P44-02

(NOTE: PCB. BISCUIT NO ONLY)

P44-05 Bottom Layer



D C B A ORIGINAL			ADDED R64 & D21 CHANGED R35 TO 56K CHANGED R57 TO 1K NEW P44/82 PCB. INCOBP GREEN START ADD-ON CP42-11 GREEN START BRD.	U1A PCB # P44/82 R64 & D21 UNDER PCB. using PCB No. P44-82	Title: CP42-10 CCT. DIAG. Size Number: CP42-10/C1 Date: 23-SEP-83 File: CP4210D7	Revision: D Sheet 1 of 1 Drawn By: D.B.
ISS	DATE	CHK	REVISION			