

EPIC MEDICAL EQUIPMENT SERVICES, Inc.

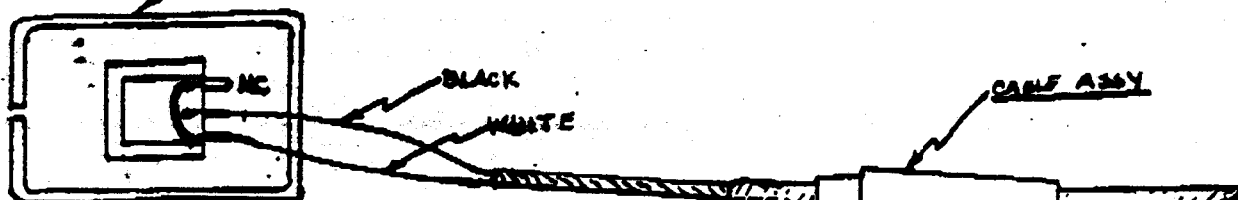
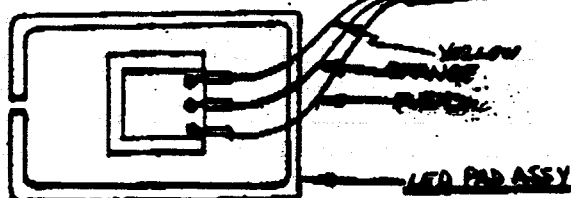
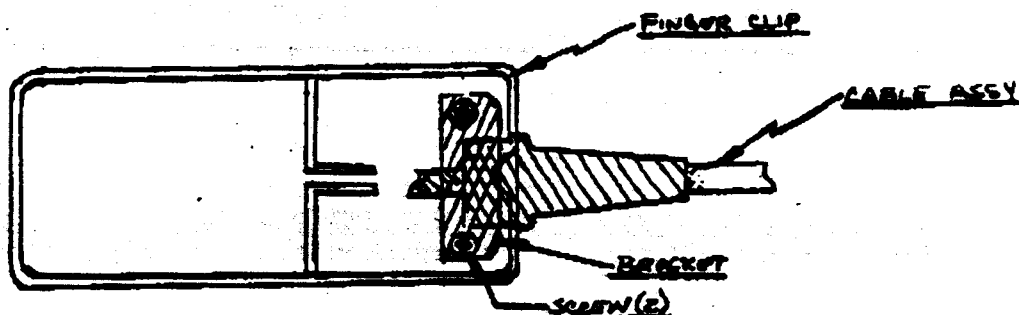
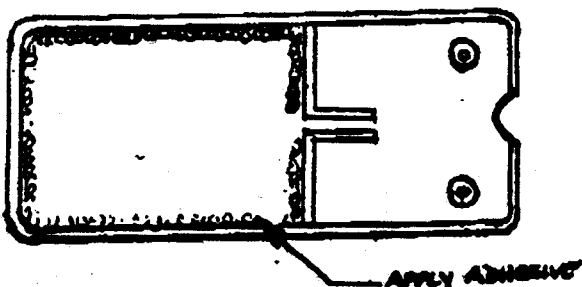
Dallas, Texas

MANUFACTURING PROCESS INSTRUCTIONS (CONT)

Page 2 of 3

STOCK NO. E8700/5-100 NAME FINAL ASSEMBLY

ASSEMBLY OPERATION 4 OF 4

SENSOR PAD ASSY.ASSEMBLY PROCEDUREFIG 'A'FIG 'B'FIG 'C'FIG 'D'

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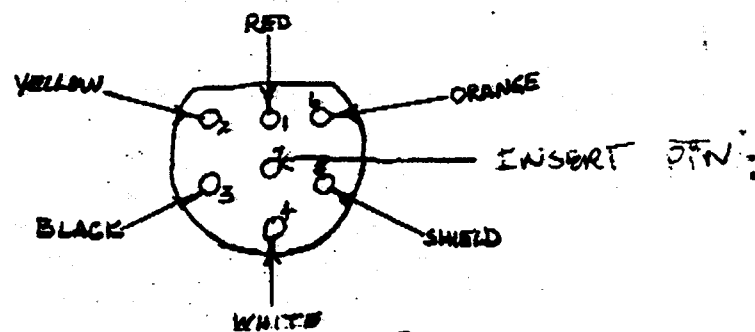
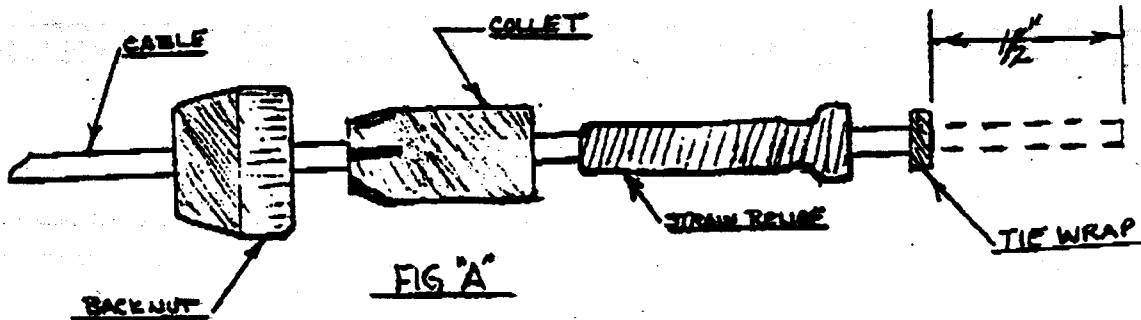
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MANUFACTURING PROCESS INSTRUCTIONS (CONT)

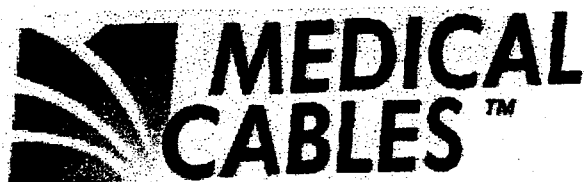
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STOCK NO. E8700/5-901 NAME CABLE ASSEMBLY

ASSEMBLY OPERATION 3 of 4

ASSEMBLY PROCEDURE (CONNECTOR END)

15 DEC 1997



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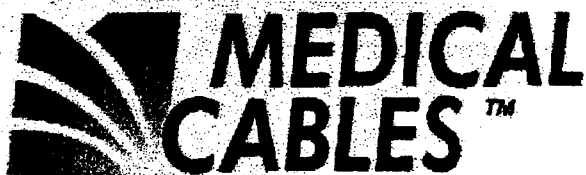
Pulse Oximeter Finger Probe Repair Procedure

Model: **[REDACTED]** P875 RA

1.1 **[REDACTED]** Parts List P875 RA

Item No.	Description	Quantity	Manufacture	Part Number
	Complete Clip Assembly	1	MCI	MC-P100A
1	Top Shell	1	MCI	MC-P101
2	Bottom Shell	1	MCI	MC-P102
3	Wire Spring	1	MCI	MC-P103
4	Buttons	2	MCI	MC-P104
5	Soft Finger Pad (LED)	1	MCI	MC-P105
6	Hard Finger Pad (Detector)	1	MCI	MC-P106
7	Top Pad Support Frame	1	MCI	MC-P107
8	Bottom Pad Support Frame	1	MCI	MC-P108
9	LED assembly	1	MCI	MC- [REDACTED] P875-LED
10	Detector	1	MCI	MC- [REDACTED] P875-OET
	Cable Assembly Kit		MCI	MC- [REDACTED] P875-CAB
11	Cable	1	MCI	MC- [REDACTED] P875-111
12	Connector Strain Relief	1	MCI	MC- [REDACTED] P875-112
13	Back Nut	1	MCI	MC- [REDACTED] P875-113
14	Plastic Collet	1	MCI	MC- [REDACTED] P875-114
15	7 - pin insert (male)	1	MCI	MC- [REDACTED] P875-115
16	Shell	1	MCI	MC- [REDACTED] P875-116
17	Pins	7	MCI	MC- [REDACTED] P875-117
18	Probe Strain Relief	1	MCI	MC- [REDACTED] P875-118
19	Silicone (RTV)			
20	Glue			

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1.2 **Repair Procedure P875 RA.**

1.2.1 Probe Disassembly:

1. Inspect cable, shell, pads and connector for damage or cracks. Note any damage and list part that need to be replaced.
2. Cut and discard cable (item 11) at the probe strain relief (item 18) to remove from the finger probe clip assembly.
3. Remove top pad support frame (item 7) with soft finger pad (item 5) from top shell. Remove soft finger pad from support frame. Remove bottom pad support frame (item 8) with hard finger pad (item 6) from bottom shell (item 2). Remove hard finger pad from support frame.
4. Separate shells (items 1 & 2) and remove spring (item 3) and buttons (item 4) to disassemble finger probe.

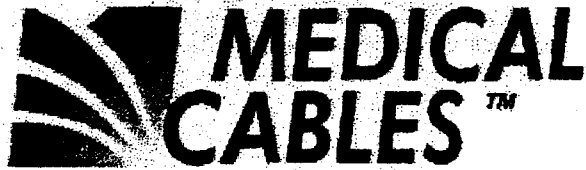
1.2.2 Probe Testing:

5. Remove LED assembly (item 9) from top pad. Inspect for physical damage. Test the individual RED and IR LEDs. The test specifications for the LEDs are listed in Table 1 below.
If item 9 is within test specifications then reuse LED assembly. Replace assembly if Red or IR LED failed to meet test specifications.
6. Remove Detector (item 10) from bottom pad. Inspect detector for physical damage and test the Detector. The test specifications for the LEDs are listed in Table 1 below.
If item 10 is within test specifications then reuse detector. Replace item 10 if detector failed to meet test specifications.

Table 1 LED and Detector Test Specifications

	Test		Typ.	Max.	Range	Units	Test Conditions
Red LED	Forward Voltage	V_F	1.8	2.4	± 0.6	volts	$I_F = 20 \text{ mA}$
IR LED	Forward Voltage	V_F				volts	
Detector	Forward Voltage	V_F				volts	

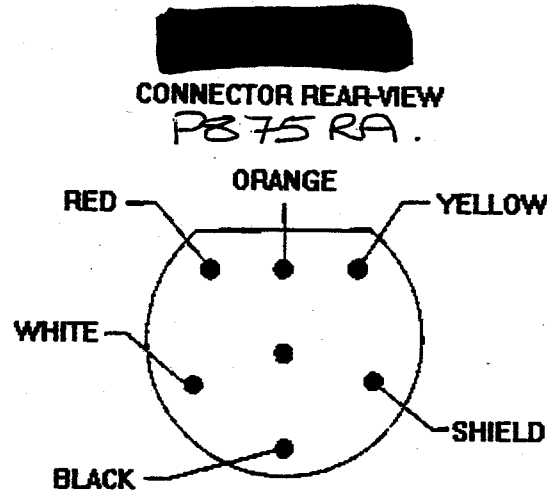
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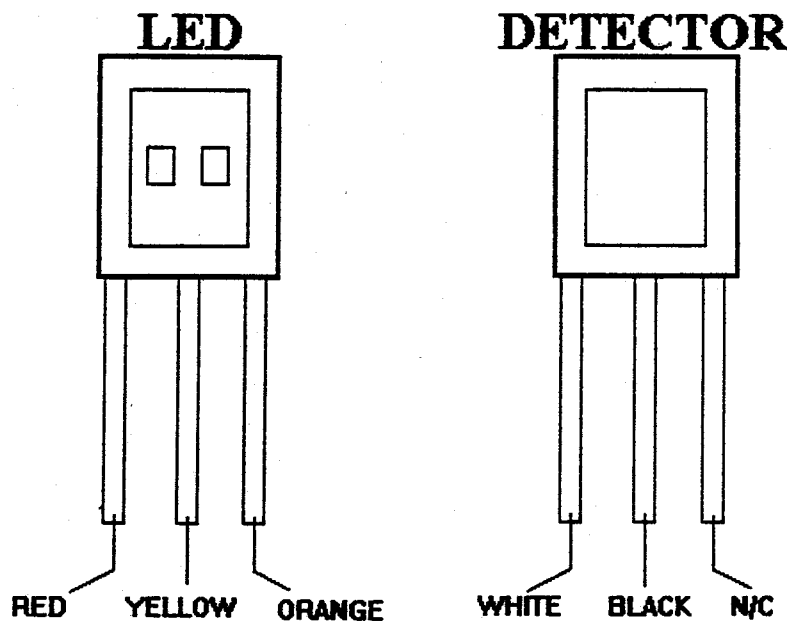
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1.2.3 Probe Reassembly:

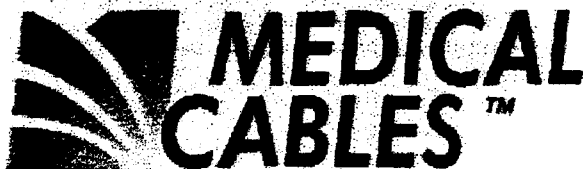
7. Replace cable. Attach back nut (item 13), plastic collet (item 14) and connector strain relief (item 12) onto cable. Attach wires (solder) onto pins (item 17). Solder main shield to pin. Place pins in insert (item 15) according to cable assembly drawing. Slide items 12, 14, and 15 into shell (item 16). Attach back nut (item 13) to shell.



8. Attach probe strain relief (item 18) to cable (item 11). Strip wires back. Connect wires (solder) to LED and Detector. Connect the red, yellow and orange wires to the Led terminals. Connect the black and white wires to the Detector terminals. Test continuity.



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Finger Probe Repair continued P875 RA

9. Inspect finger pads (item 5 & 6) for damage or cracks. Replace finger pads if damaged or cracked. Slide the LED into the top pad and silicone (item 19) into place. Slide the Detector into the bottom pad and silicone (item 19) into place. Let silicone dry.
10. Inspect top and bottom shell, button, and spring for damage or cracks. Replace items if necessary. Attach spring and buttons to top and bottom shell.
11. Inspect support frames and replace if damaged. Attach the top pad to the top support frame with glue (item 20). Attach the bottom pad to the bottom support frame with glue. Snap and glue top and bottom pads into top and bottom shell respectively.
12. Test probe for SpO₂ measurement.
13. Send probe to Quality Control for testing

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18/4/00 P 858 to P 857 SPACELABS (test cable)

✓ take orange off, both shields together. top of connector. black strain relief, cable grip

1/ white

2/ Black-100 res

3/ Both shields + all 3 res

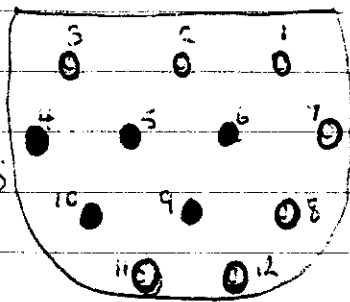
4/ N/C

5/ N/C

6/ N/C

7/ 62k Ω res

8/ 75k Ω res



7/

8/

9/ N/C

10/ N/C

11/ Red

12/ yellow

✓ Black on short leg of 100k

7 pins,

white, yellow, red.

