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MEDICAL CABLES™

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# Pulse Oximeter Finger Probe Repair Procedure

## Model: P872RA

### 1.1 P872RA Parts List

| 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-P872-LED |
| 10 | Detector | 1 | MCI | MC-P872-DET |
| | Cable Assembly Kit | | MCI | MC-P872-CAB |
| 11 | Cable | 1 | MCI | MC-P872-111 |
| 12 | Connector Strain Relief Housing | 1 | MCI | MC-P872-112 |
| 13 | Plastic Ring | 1 | MCI | MC-P872-113 |
| 14 | Cord grip | 1 | MCI | MC-P872-114 |
| 15 | Screws | 2 | MCI | MC-P872-115 |
| 16 | Split mid-piece | 1 | MCI | MC-P872-116 |
| 17 | Insert | 1 | MCI | MC-P872-117 |
| 18 | Pins | 7 | MCI | MC-P872-118 |
| 19 | 16kΩ resistor | 1 | MCI | MC-P872-119 |
| 20 | 151 kmf capacitor | 1 | MCI | MC-P872-120 |
| 21 | Outer Ring | 1 | MCI | MC-P872-121 |
| 22 | Probe Strain Relief | 1 | MCI | MC-P872-122 |
| 23 | Silicone (RTV) | | | |
| 24 | Glue | | | |

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## 1.2 P872RA Repair Procedure

### 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 22) 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 mA |
| IR LED | Forward Voltage | $V_F$ | | | | volts | |
| Detector | Forward Voltage | $V_F$ | | | | volts | |