

PHOT-X II

MODEL 303

DENTAL X-RAY

Service Manual

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1

Replace the arm in question (horizontal or balance arm) if any failure is found.

Possible cause 3

If seven segment LED displays not more than 1 mA, the power PC board or the head is out of order.

Solution

1. Both the power PC board and x-ray head should be changed, if the manufactured date is Oct. 2005 or earlier.
2. X-ray head should be changed if the manufactured date is Nov. 2005 or later. If the tube current is not more than 1 mA after the head is replaced, change the power PC board, too.

Possible cause 4

If seven segment LED displays more than 1 mA, but not more than 1.9 mA (when 4 mA is set) or not more than 3.4 mA (when 7 mA is set), tube current might be low at transient period of exposure.

Solution

1. Both the power PC board and x-ray head should be changed, if the manufactured date is Oct. 2005 or earlier.
2. X-ray head should be changed if the manufactured date is Nov. 2005 or later.

2.8

2.16

Replace the arm in question (horizontal or balance arm) if any failure is found.

Possible cause 3

The head is out of order.

Verification

Disconnect the head connector (10P) from the arm cable and check continuity between #2 and #6 terminals in the head connector.

Solution

Replace the head if no continuity between #2 and #6 terminals is confirmed.

2.19

The communication cable (power line) is broken. * If the fuse blows again when fuse is replaced, no break exists in the communication cable.

Verification

Check continuity of the #1 and #4 wires of the communication cable.

Solution

Replace the communication cable if any failure is found.

Possible cause 2

The power supply circuit on the timer PC board is out of order.

Solution

Replace the timer PC board.

Possible cause 3

The control power supply circuit on the power PC board is out of order.

Solution

Replace the power PC board.

Symptom

Exposure can not be made although the ready light is on.

Verification

Remove the exposure switch and the hand switch from the PC board and check continuity of the cables. (Pay special attention to the cord bush and connectors.)

Solution

Replace the exposure switch or the hand switch if any failure is found.

If not resolved

Possible cause 1

The communication cable (exposure signal line) is broken.

Verification

Check continuity of the #3 wire of the communication cable.

Solution

Replace the communication cable.

Possible cause 2

The exposure switch circuit on the timer PC board is out of order.

Solution

Replace the timer PC board.

Possible cause 3

The exposure switch circuit on the power PC board is out of order.

Solution

Replace the power PC board.

the film type you want and the press the

the same process as above to store a new tube voltage adjustment value for 70 kV.

within the prescribed range, XX specified in (2)-

digital mode are off.

4.2.2 Film number and exposure time in film mode

4.2.4 Film number and exposure time in film mode

4.2.6 Film number and exposure time in film mode

4.2.8 Film number and exposure time in film mode

4.2.10 Sensor sensitivity number and exposure time in digital mode

4.2.12 Sensor sensitivity number and exposure time in digital mode

4.2.14 Sensor sensitivity number and exposure time in digital mode

4.2.16 Sensor sensitivity number and exposure time in digital mode

3. Press the kV switch, and the LED will show 70 kV. Press the exposure time adjusting switches (π or θ) and adjust the CP number so that it is the same value as 70kV, which is written on the label inside the head yoke. (Fig. 4) Press the P (Patient) switch to save its value. Be sure to hold down the P (Patient) switch until you hear two (2) beeps.
4. Turn off the main power switch and wait until the LEDs on the subcontroller turn off. Turn on the main power switch again.

B. Tube current adjustment

1. Hold down the tooth selection switches together (T1, T4, and T5) until "h.xx" appears in the exposure time display window.
2. Wait until the display changes to "0.01." Make an x-ray exposure by depressing the exposure switch.
3. Repeat step 2 until "Fin" is displayed in the exposure time display window (you will make approximately eight (8) to ten (10) x-ray exposures until "Fin" is displayed).
4. Turn off the main power switch on the front panel of PHOT-X II.

Adjustment after exchanging the power PC board (mA adjustment)

1. Turn on the main switch at the circuit breaker panel and the main switch on the x-ray front panel.
2. Hold down the tooth selection switches together (T1, T4, and T5) until “h.xx” appears in the exposure time display window.
3. Wait until the display changes to “0.01.” Make an x-ray exposure by depressing the exposure switch.
4. Repeat step 3 until “Fin” is displayed in the exposure time display window (you will make approximately eight (8) to ten (10) x-ray exposures until “Fin” is displayed).