

**SN (NI) 2002/12**  
**DATE: 15 March 2002**

**For Attention and Action by:**  
**Chief Executive of each HSS Trust**  
**General Manager/Chief Executive of each HSS Board**  
**Chief Executive of each Agency**



HEALTH ESTATES  
ESTATE POLICY

**NORTHERN  
IRELAND  
ADVERSE  
INCIDENT  
CENTRE**

**TITLE:**  
**X-RAY GENERATOR EXPOSURE TIMER: MANUAL TIMER  
SELECTOR SWITCH ON PICKER R703 MKII AND R500  
MKII GENERATORS**

**MANUFACTURER/SUPPLIER**

Picker International.

**PROBLEM**

Wear or damage to the exposure time selector switch leading to a non-termination of the X-ray exposure.

**DISTRIBUTION**

This notice should be brought to the attention of all who need to know or be aware of it, including those listed below, in accordance with local procedures. This will include:

- Liaison Officers
- Risk Managers
- Health & Safety Officers/Advisors
- Device Managers
- Estates Managers
- Directors of Radiology
- Radiologists
- Private Clinics
- Radiology Managers
- Radiographers
- Radiation Protection Supervisors
- Radiation Protection Advisors
- Medical Physics
- Supplies Staff

Boards/Trusts should ensure that if appropriate, this information is passed to all persons having the responsibility for the premises registered under "THE REGISTERED HOMES (NI) ORDER 1992.

**ACTION**

Several incidents have been reported to the Medical Devices Agency (MDA) in which there has been a non-termination of X-ray exposure. This was traced to wear or damage within the exposure time selector switch. Users should:

1. Contact their service agent to arrange to have the generator upgraded and ensure they are aware of the Philips Medical Systems service Newsletter 497 and upgrade kit part number 4513 601 03439. These are available from Philips Medical Systems at a cost of £215.80 each;
2. Always ensure that only one time setting indicator light is illuminated on the control panel before making an X-ray exposure.

**SAFETY**

**NOTICE**

## BACKGROUND

The R703 MkII and R500 MkII generators were manufactured by Odel to a design specification by Picker International Ltd, who subsequently became Marconi Medical Systems. Philips Medical Systems has recently acquired Marconi Medical Systems and this activity is now trading as Philips Medical Systems. Philips Medical Systems are now the Design Authority for this product.

These generators do not have a backup timer. Under fault conditions the exposure will not terminate until the hand switch is released.

The following problems have been found following reports to MDA.

- Electrical contacts within the X-ray exposure timer switch fitted to these generators may wear to such an extent that the switch is open-circuit, which means no time setting will be selected. Under such circumstances, exposure will continue until the hand switch is released;
- The switch selector indexing can wear so that the switch will not locate at specific time settings. In such circumstances, two time settings may be selected simultaneously; two time setting indicators would also be illuminated on the control panel. Under such circumstances, exposure will continue until the hand switch is released;
- The end stop tag (on the index wheel) may be missing or bent to such an extent that it is possible to rotate the switch through 360 degrees, i.e. to switch directly from the shortest (0.03 sec) to the longest (5 sec) time setting. Under these circumstances, it may be possible for the user to inadvertently select the 5 sec time setting instead of 0.003 sec (R703 MkII) or 0.01 sec (R500 MkII).

**All timer switches need to be replaced with the latest version.** The new version includes a mechanical stop to prevent complete rotation of the timer switch. Timer switches should then be replaced on a regular basis (every ten years).

**All units should have the diode matrix PCB replaced with a PCB (part No. 560199.4498).** This modification prevents non-termination of the exposure if the timer switch is between indexed exposure settings.

*Users should also be aware that the modification results in the loss of the five-second exposure time setting.*

## ENQUIRIES

Enquires to the manufacturer should be addressed to:

Mr. J Povey, Philips Medical Systems, The Observatory, P.O. Box 263, Castlefield Road, Reigate, Surrey, RH2 0FY, Tel: 01737 230 588, Fax: 01737 230 522, Email john.povey@philips.com

Enquires to the NIAIC should quote the reference number SN(NI) 2002/12 and be addressed to:

Northern Ireland Adverse Incident Centre (NIAIC), Health Estates, Estate Policy Directorate, Stoney Road, Dundonald, Belfast BT16 1US, Tel: 02890 523714, Fax: 02890 523900, Email: brian.godfrey@dhsspsni.gov.uk

Brian Godfrey  
NIAIC Manager

### HOW TO REPORT ADVERSE INCIDENTS

Adverse Incidents relating to medical devices, non-medical equipment, plant and buildings should be reported to NIAIC as soon as possible. Advice on how to report is given in Safety Notice SN (NI) 2002/01. If you are in doubt about how to report incidents, please speak to your liaison officer or contact NIAIC using the telephone number provided. Adverse Incident reporting forms and an on-line reporting facility are available on the NIAIC website at [www.dhsspsni.gov.uk/niaic](http://www.dhsspsni.gov.uk/niaic)

*Health Estates is an Executive Agency of the Department of Health, Social Services and Public Safety  
Aisíneacht Feidhmeannach don Roinn Sláinte, Serbhísi Sóisialta agus Sábháilteacht Phoiblí*



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