

# TECHNICAL INSTRUCTION

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Issue 1  
June 2008  
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NETWORK RAIL - SIGNAL ENGINEERING

## BR 843 Barrier Side Arm Retaining Bolt

**Relevant Standard:** NR/SMS/LC21

### Purpose of TI

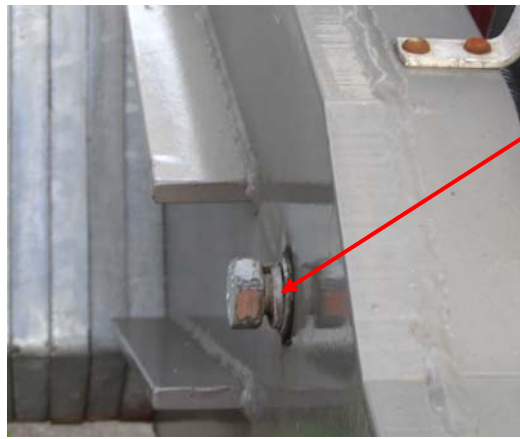
This Technical Instruction is being issued to advise Maintenance Technicians of a potential defect with the side arm retaining bolts of BR843 Barrier pedestals. It is a reminder to correctly interpret and carry out the checks described in Signalling Maintenance Specification LC21, Service A, section 1 during routine maintenance, and to mandate a torque setting for the side arm retaining bolts.

### Scope

This Technical Instruction covers all BR 843 style barrier mechanisms nationwide with particular emphasis on those that may be subject to vandalism and misuse.

### Background

A defect was recently discovered whereby the side arm retaining bolt of a BR 843 pedestal had worked itself loose (see picture 1 below)



Loose  
Side Arm  
Bolt

Picture 1

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This resulted in the whole side arm assembly, including boom, becoming almost detached from the pivot shaft of BR 843 barrier pedestals, (see picture 2 below)



Side Arm  
almost  
Detached

Picture 2

Previous incidents similar to this have also been recorded at other crossings. These have so far all been discovered with the barriers in the lowered position but the potential exists for the side arms to become detached whilst in the raised position which could result in more serious consequences.

## **Detail**

Particular attention should be given to carrying out the checks contained in LC21 Service A section 1, particularly clauses 1.2, and 1.4 correctly.

It is also intended that a torque value for this bolt will be included in the annual servicing of BR 843 barriers at the next issue. The manufacturers SPX, currently use a torque setting of 210Nm when the side arms are attached during the build process.

Please work to this torque value until further notice should it become necessary to tighten the bolt. If adjustment is required, the bolt should first be loosened and then torqued up to this setting.

Any further incidents or problems of a similar nature discovered should be reported to Fault Control and to the relevant Section Manager/Project Engineer for onward transmission for information, to the Level Crossing National Specialist Team (LCNST).

## **Staff to be Briefed**

Signal Maintenance Technicians, Signal Faulting Technicians, Installation and Project renewals staff, Installation Contractors.

## **Expiry Date**

This Technical Instruction shall remain in force until changes to Signal Maintenance Specifications LC21 A and B have taken place to incorporate the torque setting.

**END**

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