

1. SCOPE

This document details the application of SOP 252 (Applicable to Siemens Type 8DA10 33kV Vacuum in SF6 extensible metal clad switchgear) issued by the Energy Networks Association.

2. ISSUE RECORD

This is a Reference document. The current version is held on the EN Document Library.

It is your responsibility to ensure you work to the current version.

Issue Date	Issue No.	Author	Amendment Details
October 2000	1	Esther Stewart	Initial Issue in New Format: 2 Page Document
December 2019	2	Patrick Dolan	Addition of missing references on the original issue and clarification of affected range

3. ISSUE AUTHORITY

Author	Owner	Issue Authority
Patrick Dolan Lead Engineer	Fraser Shaw Substations Manager	Fraser Ainslie Head of Engineering Design and Standards

4. REVIEW

This is a Reference document which has a 5 year retention period after which a reminder will be issued to review and extend retention or archive.

5. DISTRIBUTION

This document is not part of a Manual maintained by Document Control and does not have a maintained distribution list.

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7. SOP DETAILS

EQUIPMENT TYPE	Siemens Type 8DA10 33kV Vacuum in SF6 extensible metal clad switchgear
ORIGINATING COMPANY	Scottish & Southern
DATE	12/04/2000
NUMBER INSTALLED IN ENERGY NETWORKS NORTH	47
NUMBER INSTALLED IN ENERGY NETWORKS SOUTH	140
REASON	<p>An incident occurred in which a circuit was re-energised by the closure of the circuit breaker, after the apparent selection of the selector switch to EARTH. A clevis pin transmitting drive from the operating mechanism at the front of the switchgear had become displaced due to its retaining circlip being detached. The mimic diagram indicated that EARTH had been selected, but the selector switch contacts had not moved from the ON position. The switch linkage bell cranks are a true indication of the switch position.</p>
STATUS IN INITIATING COMPANY	<p>The following restriction to apply to all switchgear of the above type:</p> <p>Prior to any operation of the three position selector switch and again immediately after its operation, the position of the switch operating mechanism is to be visually inspected to confirm the integrity of the switch mechanism drive and the correct position of the switch contacts. This inspection is to be carried out BEFORE attempting to close the circuit breaker.</p> <p>The switch operating mechanism may be viewed from the rear of the switchgear. The drive linkage for the switch is the upper of the two horizontal rods, running from front to rear in the unit. The rod has three welded bell cranks, each with a drive link into its selector switch. The angular position of these bell cranks must be noted before operation of the selector switch mechanism, and their change of position noted after operation of the switch mechanism.</p>

SPEN APPLICATION

The following operational restriction applies to all UK WIR version Siemens 8DA10 36kV switchgear produced between mid 1995 – May 2000 unless the remedial action advised by the manufacturer has been carried out.

Prior to any operation of the three position selector switch, and again immediately after its operation, the position of the switch operating mechanism is to be visually inspected to confirm the integrity of the switch mechanism drive, and the correct position of the switch contacts, BEFORE attempting to close the circuit breaker.

The switch operating mechanism may be viewed from the rear of the switchgear. The drive linkage for the switch is the upper of the two horizontal rods, running from front to rear in the unit. The rod has three welded bell cranks, each with a drive link into its selector switch. The angular position of these bell cranks must be noted before operation of the selector switch mechanism, and their change of position noted after operation of the switch mechanism. Photographs of the position of these bell cranks are shown below in Figures 1-6. They show the correct position in each of the switch locations - ON, OFF, EARTH. The correct position of the switch contacts must be confirmed by inspection of the bell cranks before the circuit breaker is closed.



Fig 1

ON Position



Fig 2



Fig 3

OFF Position



Fig 4



Fig 5

Earth Position



Fig 6

ADDITIONAL INFORMATION

UPDATE

Confirmation from the manufacturer that issue affects a specific model type and production range of 8DA10 and that it is possible to repair the defect.

REMEDIAL ACTION

Siemens have implemented an inspection programme initially after the Defect was first reported and offered a remedial solution for equipment found with the issue. Unless there is confirmation that the required inspection and remedial works have been completed, the SOP will remain in force on affected units.

8. SOP HEADER

Field Name	Field Value	Field Size
Name (SOPXXX) *	SOP252 8DA10 CB 3 position switch mechanism issue	61
The reason for the Operational Restriction *	Inspection prior to operation	30
Nature of the Operational Restriction *	CB 3-pos SW indication may differ to position	50
Comments *	The switch operating mechanism shall be inspected prior to and immediately after any operation of the 3 pos selector switch, to confirm the correct position of switch contacts prior to CB closure.	200
Restricted Access to Substation Flag *	N	1
SOP Impact Code * <i>(highlight or underline the appropriate code)</i>	0 Temporary/Impact under assessment <u>1 Very minor operational/network impact</u> 2 Moderate operational/network impact 3 Significant impact on system perf./measurable business costs 4 Inoperable without intervention 5 Inoperable – no cost effective solution/must be replaced	N/A
SOP component type * <i>(highlight or underline the appropriate code)</i>	01 Bushing only <u>02 Circuit Breaker</u> 03 Fixed Portion only 04 Moving Portion only 05 Switch 06 RMU 07 Transformer only 08 Tap Changer only 09 Transformer & Bushing 10 Transformer & Tap Changer	N/A
Search Criteria *	Equipment type = Siemens 8DA10 Range = Year of Manufacture (1995 – 2000) inclusive	N/A

* This denotes a Mandatory Field