

## 1. SCOPE

This document details the application of SOP 182 (Applicable to GEC Alstom Type OX36 and HMX36) 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
December 2020	2	Ryan Miller	Update to show affected serial number range of switchgear

## 3. ISSUE AUTHORITY

Author	Owner	Issue Authority
Ryan Miller Project 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

<b>EQUIPMENT TYPE</b>	GEC Alstom Type OX36 and HMX36
<b>ORIGINATING COMPANY</b>	Scottish Power
<b>DATE</b>	16/05/97
<b>NUMBER INSTALLED IN ENERGY NETWORKS NORTH</b>	200
<b>NUMBER INSTALLED IN ENERGY NETWORKS SOUTH</b>	
<b>REASON</b>	An OX36 circuit breaker slow opened when being operated from OFF to ON whilst in the deenergised state, An investigation by the manufacturer has confirmed that the defect is due to inherent weakness in the closing spring
<b>STATUS IN INITIATING COMPANY</b>	<p>RESTRICTION:</p> <p>The following operational restrictions have been applied from the above date:</p> <p>(1) Live operation of units shall wherever practicable be carried out by remote control. When local operation is necessary restrictions 2-4 below will apply.</p> <p>(2) Staff to notify the control engineer before working in the vicinity of the affected switchgear. The control engineer will inhibit the auto-reclose facility and prevent remote operation.</p> <p>(3) The appropriate fuse / link shall be withdrawn to inhibit motor charging of the closing spring prior to any operation of the circuit breaker.</p> <p>(4) After the closing spring of an open circuit breaker has been charged the appropriate fuse/link shall be withdrawn to inhibit subsequent motor charging of the closing spring prior to closing the circuit breaker. All staff to be cleared from the vicinity of the affected switchgear before the fuse / link is replaced.</p> <p>Additionally GEC are currently working to establish if the suspect circuit breakers can be confined to a specific serial number batch. A programme of checks is to be initiated on suspect circuit breakers.</p>
<b>SPEN APPLICATION:</b>	Restrictions as above.
<b>UPDATE:</b>	<b>As per GEC Alstom issued procedure document IMP 97 - 005/C, units which are potentially affected have serial numbers 68428 and lower. Units with serial numbers 68429 and higher can be considered clear of the operating restriction.</b>
<b>REMEDIAL ACTION:</b>	N/A

**8. SOP HEADER**

Field Name	Field Value	Field Size
<b>Name (SOPXXX)</b> *	<b>SOP182 GEC Alstom OX36/HMX36</b>	61
<b>The reason for the Operational Restriction</b> *	Slow closing of CB	30
<b>Nature of the Operational Restriction</b> *	Defect involving closing spring	50
<b>Comments</b> *	Live operation of units shall where practicable be done remotely Staff notify control engineer before working in vicinity of switchgear Staff clear from vicinity of switchgear before fuse/link replaced	200
<b>Restricted Access to Substation Flag</b> *	N	1
<b>SOP Impact Code</b> * <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
<b>SOP component type</b> * <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
<b>Search Criteria</b> *	OX36/HMX36, GEC Alstom, Circuit Breaker	N/A

\* This denotes a Mandatory Field