

1. SCOPE

This document details the application of SOP 264 (Applicable to Ferguson Pailin BVRP and AEI BVRP Circuit Breakers operating at voltages 6.6 and 11kV) issued by the Energy Networks Association.

SOP 264 now supersedes and replaces SOP 245, which has been archived following the publication of Issue 2 of this document.

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
August 2002	1	David Naylor	Initial Issue 2 Page Document
October 2023	2	Benjamin Hughes	Update to new format and consolidation of SOP 245 and SOP 264 (SOP 245 is now withdrawn)

3. ISSUE AUTHORITY

Author	Owner	Issue Authority
Name: Benjamin Hughes Title: Lead Engineer Engineering Design & Standards	Name: Jon Ruiz De Aguirre Title: Substations Manager	Name: Fraser Ainslie Title: Head of Engineering Design & 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. It is published on the SP Energy Networks website.

6. CONTENTS

1. SCOPE.....	1
2. ISSUE RECORD.....	1
3. ISSUE AUTHORITY	1
4. REVIEW	1
5. DISTRIBUTION.....	1
6. CONTENTS	2
7. SOP DETAILS	3
8. SOP HEADER	5
9. APPENDIX A	6

7. SOP DETAILS

EQUIPMENT TYPE	Ferguson Pailin BVRP and AEI BVRP (SP17 Form A mechanism only) 11kV CBs
ORIGINATING COMPANY	ScottishPower
DATE	12/10/00
NUMBER INSTALLED IN ENERGY NETWORKS NORTH	519
NUMBER INSTALLED IN ENERGY NETWORKS SOUTH	0
REASON	OCB slow closed whilst in service.
STATUS IN INITIATING COMPANY	Risk of slow closing. Do not charge springs with the OCB in the service position until a full functional check has been carried out with the OCB isolated and withdrawn. The OCB to be spring charged, closed, spring charged again and then tripped, closed, and tripped. The OCB may be returned to normal service if this process is completed without problems. Otherwise, maintenance must be carried out on the switch.
SPEN APPLICATION	<p>Applying a charge to the CB closing springs is prohibited with the CB in the service position unless the following functional check is carried out immediately prior to operation and with the CB withdrawn.</p> <p>Starting with the CB in the open position:</p> <ol style="list-style-type: none">1. Charge springs2. Close CB3. Apply charge to springs4. Trip CB5. Close CB6. Trip CB <p>Repeat this sequence (5 times) in total</p> <p>If this functional check does not exhibit any issues then the CB can be returned to service.</p> <p>Otherwise, the mechanism shall be subject to a minor service as the Plant Maintenance Manual (SWG-13-100) and the process repeated to prove operation prior to returning to normal service.</p>
ADDITIONAL INFORMATION	<p>Only original BVRP17 units with SP17 (original form) mechanisms form part of the affected range, BVRP17 units with SP17 Form B units are not affected. See Appendix A for information</p> <p>Unit types affected include:</p> <ul style="list-style-type: none">• AEI/Metro Vicks BVRP3 11kV Oil Circuit Breakers• AEI/Metro Vicks BVRP17 11kV Oil Circuit Breakers

- Ferguson-Palin BVRP3 11kV Oil Circuit Breakers
- Ferguson-Palin BVRP4 6.6/11kV Oil Circuit Breakers
- Ferguson-Palin BVRP5 11kV Oil Circuit Breakers
- Ferguson-Palin BVRP7 11kV Oil Circuit Breakers
- Ferguson-Palin BVRP17 (SP17 Mech) 11kV Oil Circuit Breakers

UPDATE

Nov 2023 – This update now incorporates the failure mode associated with SOP 245 (applicable to Ferguson Pailin BVRP 6.6/11kV CBs). The issues are similar, SOP 245 detailed a slow open rather than a slow close. The controls now cover both eventualities.

REMEDIAL ACTION

SOP is permanent.

8. SOP HEADER

Field Name	Field Value	Field Size
Name (SOPXXX) *	SOP264	6
The reason for the Operational Restriction *	Potential for slow open/close	30
Nature of the Operational Restriction *	Faulty CB mechanism	50
Comments *	Charging of CB closing mechanism prohibited whilst in service position unless correct operation confirmed via functional checks prescribed immediately prior to operation.	200
Restricted Access to Substation Flag *	<u>N</u>	1
SOP Impact Code * (highlight or underline the appropriate code)	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 * (highlight or underline the appropriate code)	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 *	Manufacturer *Ferguson Pailin* & *AEI* Text Model *BVRP* *BRP* *BVP*	N/A

* This denotes a Mandatory Field

9. APPENDIX A



Image A: Ferguson-Pailin BVP 17 11kV OCB with SP17 Mechanism

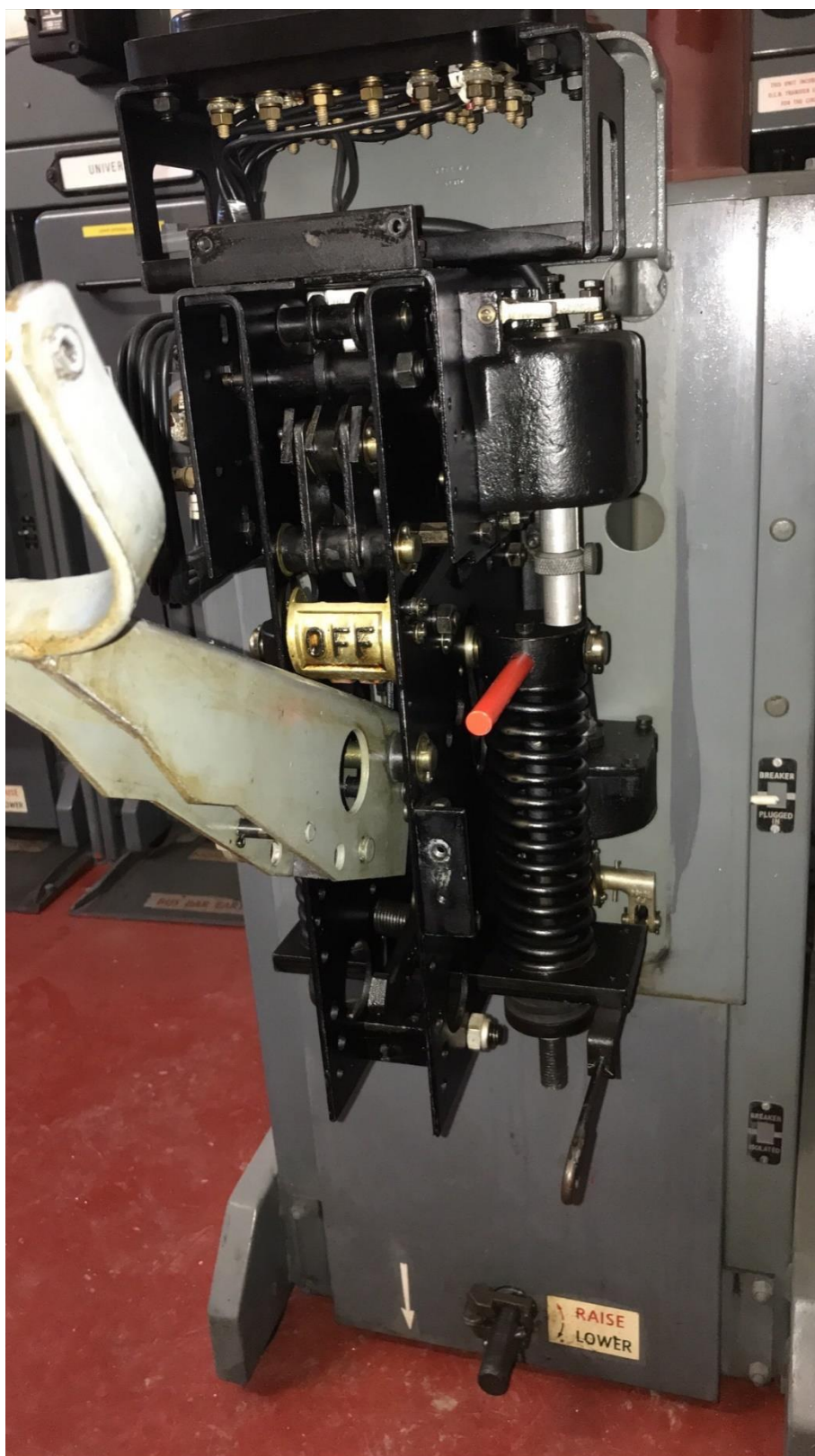


Image B: Ferguson-Pailin BVRP 17 11kV OCB with SP17 form B mechanism
SOP does not apply to this model