

Signalling principal supply point switchgear and control gear

1 Scope

Includes: LV switchgear and controls for signalling principal supply points

Excludes: Heating, lighting, ventilation and air conditioning circuits, generating plant, uninterruptible power supplies and regulating transformers

2 Preparation

Tools and equipment required but not limited to:

- Calibrated multimeter
- Injection test set for LV monitors (where applicable)
- Injection test set for Protection & Control Devices (Signet etc)

Work planning considerations:

- It is preferable that the examinations that reduce the reliability of the overall system should be carried out during no traffic periods and that they should be co-incident with any examinations to the generator, UPS or regulating transformer

3 Method

3.1 'D' Examination

Carry out function test of the changeover mechanism where possible by simulation without interrupting the signalling supply

NOTE This is achieved where a generator is the standby supply by carrying out the on-load test specified in NR/FP C040.

3.1.1 Functional Tests

This test may be performed with or without interruption of the signalling power supply.

- a) Initiate and observe operation of changeover system.
- b) Check that all meters and indicator lamps are operating correctly – voltmeter reads nominal voltage.
- c) Check remote indications with the signaller.
- d) Check correct function of by-pass switches.
- e) Check the operation of any ammeters/voltmeters/power quality meters.

3.2 'E' Examination

3.2.1 Transformers

- a) Check Transformer breather crystals and renew.

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- b) Check that the transformer casing is secure, clean, and in good condition.
- c) Check that the appropriate labels are present, firmly attached, and legible. Replace or arrange for replacement of, missing labels.
- d) Report any damage or signs of wear to casing.

3.3 'F' Examination

3.3.1 General

- a) Vacuum switchboards and control cubicles. Clean room, sweep floor and remove all rubbish and unauthorised materials.
- b) Check that all authorised notices and labels (internal and external) are present, legible and secure.
- c) Check availability of drawings and literature.
- d) Check that all doors and door locks function correctly.
- e) Remove vegetation and debris from the vicinity of the building and compound.

3.3.2 LV Switchgear and Controlgear

- a) Check all indicator lights, push buttons and switches for condition, security and correct operation.
- b) Check panel exterior for signs of corrosion or physical damage etc. (Touch up paintwork, if necessary).

3.3.3 Relays and Contactors

- a) Check and clean the following on all power contactors:
 - 1) mechanical and electrical operation.
 - 2) interior.
 - 3) magnetic pole faces.
 - 4) coil.
 - 5) arc chutes.
- b) Where equipment cannot be dismantled, check contacts through visual inspection and volt drop test.