

TECHNICAL INSTRUCTION

TI 129
Issue 2
21/12/2011
Expiry Date: See page 3
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NETWORK RAIL - SIGNAL ENGINEERING Swinging Overlap Rogue Point Test

Relevant Standard: [NR/L2/SIG/30014](#)

Purpose

This TI covers the introduction of an improved rogue point test, to be undertaken by Signal Works Principle Testers. The enhanced test now includes points that 'swing' in the overlap.

Background

The rogue point test was developed as a result of an error [*points moving out of sequence*] found during the principle testing of SSI data in the late 1980's. In the intervening period the rogue point test has become an accepted test to be undertaken whilst principle testing of SSI data, albeit only considered for points in the line of route. [*Excluding any points in the overlap*]

A significant alteration was carried out on an SSI system on Network Rail Infrastructure to accommodate a revised S & C layout. Post commissioning there was an incident where points set reverse for a route were called normal as the result of an erroneous 'swinging overlap' condition.

The subsequent inquiry found that the standard 'rogue point test' would not have found this error. An enhanced rogue point test has been developed to include points that have the ability to swing in an overlap, to overcome this deficiency.

Changes in issue 2

Following another incident, the Swinging Overlap Rogue Point Test has been enhanced and is described in this revised TI. Notice Board 118 describes the latest incident. The Swinging Overlap Rogue Point Test, or the testing technique described for swinging overlaps in Notice Board 118 or another suitable custom designed test shall be applied to all interlockings where there is potential for this error.

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Enhanced Rogue Point Test

Section a) briefly describes the standard rogue point test, section b) details the additional test to be undertaken to accommodate the points that have the ability to swing in an overlap.

a) Standard Rogue Point Test

The tester should place ALL points in the interlocking to the normal position and then set the route under test, then note which points are called reverse. This is then repeated by the tester placing ALL points in the interlocking to the reverse position and then again set the route under test, but this time taking note of which points are called normal. This will indicate if any rogue points are being called by the route.

b) Swinging Overlap Rogue Point Test

ALL points NORMAL

1. Call all points in the interlocking NORMAL.
2. Set the route under test & check that only those points, which should be called REVERSE, are called.
3. Call the overlap hinge points of the route under test REVERSE & check that only those points, which should be called REVERSE by the overlap are called.
4. Call overlap hinge point of route under test back to NORMAL & check that only those points, which should be called REVERSE by the overlap are called.
5. Cancel route under test.

All points REVERSE

1. Call all points in the interlocking REVERSE.
2. Set the route under test & check that only those points, which should be called NORMAL, are called.
3. Call the overlap hinge points of the route under test NORMAL & check that only those points, which should be called NORMAL by the overlap, are called.
4. Call overlap hinge point of route under test back to REVERSE & check that only those points, which should be called NORMAL by the overlap, are called.
5. Cancel route under test.

Following the above, the test below shall also be carried out on all swinging overlaps:

1. Set all points within the interlocking control area normal (for SML interlocking the control area may include multiple VIXL areas due to the 'seamless' boundary control data construct, see test spec part 8 for VIXL-VIXL inter relationship assessment)
2. Set route to exit signal with swinging overlap
3. Set all facing overlap points normal (where a valid Overlap would be created)
4. Confirm the set of hinge points under test are keyed centre
5. Check all subsequent hinge points are keyed normal
6. Apply direct track locking to hinge points under test
7. Key all points reverse (all points applies to all points within VIXL areas identified during inter relationship assessment)
8. Check hinge points under test have remained normal
9. Key all points Normal (excluding hinge points in the overlap under test)