

ANWT 318

# Work That Affects Traction Return Currents or Track-Circuits

**Applicability**

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NSW

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SMS

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**Publication Requirement**

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External Only

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**Document Status**

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2.0	11 October 2015

## Purpose

To prescribe the rules for work that affects *traction return currents* or *track-circuits*.

## General

Work that affects traction return currents or track-circuits *must* be done in accordance with *Australian Rail Track Corporation (ARTC) Engineering Standards*.

## Traction return currents

The *Signals Engineer* must be consulted before work that could affect traction return currents is started. The Signals Engineer gives details of bonding arrangements and other requirements.

Only the Signals Engineer or *delegate* may authorise the use of temporary *rail bonds*.

Authority to use temporary rail bonds is recorded on a Temporary Rail Bond Approval form (ANRF 013).

An *Electrical Representative* must be at the worksite, to provide suitable bonding arrangements and deal with other requirements, before:

- an electrical cable which connects rails to a *substation* is disconnected, or
- rails near a substation are removed or broken.



**Unless special precautions are taken, a potentially fatal voltage can develop across rail gaps when the traction return circuit is broken.**

Broken or disconnected electrical cables connecting a substation to a rail must be reported immediately to the *Electrical System Operator*.

Workers must stay clear of the cables until the Electrical System Operator or delegate advises that it is safe.

## Track-circuits

The *Maintenance Representative* must inform the Signals Engineer before starting *work on track* that may affect track-circuits.

The Signals Engineer must decide if a *Signals Maintenance Representative* should attend.

If a Signals Maintenance Representative is needed, work on track must not start before it is authorised by the Signals Maintenance Representative.



**Areas that are not fully track-circuited may have portions of line that are track-circuited.**

If work can affect the track-circuits for an automatic *level crossing*, the level crossing must be protected.



**Work that affects track-circuits affects the signalling system.**

## Related ARTC Network Procedures

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NIL

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## Effective Date

11 October 2015