

## SECTION 214

### Inspection of the Permanent Way generally

## INSPECTION OF PERMANENT WAY

- I Inspections of the Permanent Way shall be carried out by competent Contractor's personnel in accordance with Railtrack Line Standard RT/CE/S103 and the additions or qualifications specified in this Section of the Specification.

A method statement detailing the inspection regime proposed to be carried out by the Contractor shall be submitted for acceptance with the Tender.

Where a broken rail or serious rail defect as defined by Railtrack Line Standard RT/CE/S103 is discovered, the minimum action required by Railtrack Line Standard RT/CE/S103 to protect the line shall be taken, and the defect reported to the Employer's Representative specified in the relevant Particular Specification.

Where track at the location of a track or bridge renewal is handed over to Railtrack's track renewals or bridge contractor, inspection of the Permanent Way shall be carried out by Railtrack's track renewals or bridge contractor as applicable.

The results of inspections shall be recorded and retained for audit purposes with changes in condition from previous inspections clearly noted.

The Railtrack Engineer to whom all defects shall be reported, and to whom a copy of the signed Inspection Reports shall be forwarded, is as detailed in the relevant Particular Specification.

Where in accordance with this Section of the Specification, a defect is to be reported to the Employer's Representative, such reports shall be sent to the Railtrack Engineer detailed in the relevant Particular Specification.

(214.001)

### Visual inspection of the track

- 2 Defects found during visual inspections of the track shall be marked in paint on the web of the rail, recorded and kept under observation.

During the passage of a train, the condition of the track under load from the passing train shall be observed at the location, and any defects noted, marked and reported.

Where emergency clamped fishplates and bridging pieces are installed, the tightness of each bolt shall be checked during each inspection, and any loose bolts retightened as necessary.

Switch toe openings shall be inspected and checked with the switches in both "normal" and "reversed" positions. Arrangements shall be made with the local signal box staff for the switches to be reversed to enable the inspection to be carried out.

Cross levels to circular and transition curves shall be checked during visual inspections for agreement with the datum values marked on the track. The cross level on straight track shall be checked. Any significant variations from the datum values or zero as applicable shall be reported.

Where gauge tie bars are fitted, the tightness of each bolt or turnbuckle shall be checked, and adjusted as necessary to maintain the correct gauge at the location.

Additional visual inspections shall be undertaken during periods of exceptional hot weather in accordance with Railtrack Line Standard RT/CE/S011, or other abnormal conditions in accordance with Section 220: Permanent Way Incident Management.

Additional visual inspections shall be undertaken at the locations and frequencies listed in the relevant Particular Specification.

Details of locations and frequencies where additional visual inspections are to be carried out shall be obtained from the track maintenance contractor.

Minor track defects such as loose keys discovered during visual inspections shall be rectified during the inspection. Refuges shall be kept clear of obstructions.

(214.002)

## Level crossings

**3** Inspections of features at all pedestrian and/or vehicular level crossings during each track inspection shall include:

- (i) testing of all telephones at all unmanned level crossings,
- (ii) provision and visibility of all signs at level crossings other than public road level crossings,
- (iii) surface of crossing,
- (iv) clearance of flangeways,
- (v) closure of gates at uncontrolled level crossings,
- (vi) cattle guards, where applicable,
- (vii) warning notices.

Any failure of a telephone at an unmanned level crossing shall be reported to the appropriate signal box at the first opportunity.

Gates of unmanned crossings found to be open shall be closed, and the users reminded of their obligations. Each open gate shall be reported to the Employer's Representative.

(214.003)

**Non ballasted  
track on bridges**

- 4** All track components forming direct fastenings to bridge decks, longitudinal timbers, their packings and fastenings shall be inspected in accordance with Railtrack Line Standard RT/CE/SI03.

In addition the following shall be checked with the bridge unloaded and where possible with the bridge loaded under traffic:

- (i) conductor rail supports – loose or splitting from the timber side,
- (ii) holding down assemblies – loose, broken or missing,
- (iii) cleats – missing cleats and wedges,
- (iv) guard rails and associated rerailing devices.

(214.004)

**Flangeway  
clearances to  
switches and  
crossings**

- 5** During visual track inspections, S & C flangeways shall be cleared of any obstructions. Accumulations of wagon spillage, rubbish and materials which can adversely affect the operation of both switches and the track circuits shall be removed.

(214.005)

**PointCare  
generally**

- 6** Inspections and minor maintenance of switches shall be carried out on all switches and swing nose crossings at /3 /6 /12 /monthly intervals. A PointCare Service Record Card shall be completed for each set of switches or swing nose crossings inspected based on the relevant model shown in Appendix 214A. The adoption of PointCare maintenance standards shall not modify the frequency of facing point inspections. A copy of the record card for each inspection of each set of switches or swing nose crossing covered by the scheme shall be retained by the Contractor.

(214.006)

**PointCare –  
switches**

- 7** The following shall be carried out during PointCare inspections:

- (i) Potential obstructions, loose debris, scrap paper, etc., in the immediate area of the switches shall be removed, and the ballast level shall not exceed the sleeper level or as noted in item (ii) below.

Excess grease shall be removed from around all slide chairs.

Signalling and telecommunications equipment and cables shall be checked to ensure that they are not visibly damaged or covered by Permanent Way materials.

- (ii) Ballast level shall be kept at least 30 mm below signalling and telecommunication point equipment.
- (iii) All fixtures and fittings shall be checked for completeness and for correct fitting.
- (iv) Timbers shall be checked for splits, rot and elongated chair/baseplate screw holes.

- (v) Baseplate/chair screws shall be checked to ensure tightness throughout the switches under traffic conditions, and that the first baseplate/chair screw does not impede the switch travel.

Where movement of the baseplate/chair is apparent, the condition of ferrules shall be inspected, to ensure that chair/baseplates screw ferrules do not stand higher than 6 mm, and screws tightened where necessary.

- (vi) The wear on the sole plate gauge stop measured at the centre shall not exceed 2 mm. Cracked gauge stop welds shall be reported. Insulators and bolts shall be examined and re-tightened if necessary.

- (vii) Damaged and badly worn slide and heel chairs or baseplates shall be checked, using a mirror to check the slide table under the stock rail.

Timber indentation wear marks from chairs or baseplates in excess of 6 mm shall be reported.

- (viii) The gauge of switches 100 mm in front of the switch toes and at every fourth bearer position throughout the driven length of the switch shall be checked.

- (ix) The rail seating shall be checked for correctness on the chairs or baseplates, and stock rail bolts shall be checked for security throughout the switches. The head of the bolt and the enclosing pressed steel or cast washer plate on the first chair bolt shall be square to the web of the rail and not likely to foul other switch rail bolts. Broken bolts shall be replaced with swaged collar grooved rivets (multi-groove locking studs), or other approved systems.

- (x) Switch bearers shall be observed under traffic conditions and any voids that exceed 7 mm shall be reported.

- (xi) IRJ's shall be examined and any lipping of material bridging the end post likely to cause a short circuit shall be reported.

The distance between the rail ends shall not be less than 6 mm, or more than 10 mm.

- (xii) Using a 1.0 metre straight edge placed centrally above the rail joint, the rail dip, including rail end batter, shall be measured at a point 10 mm back from the joint, to check rail dip does not exceed:

Line speed 80 mph and over                      3 mm

Line speed 75 mph and below                      6 mm

Any joints with a dip in excess of the applicable dimension above, shall be reported.