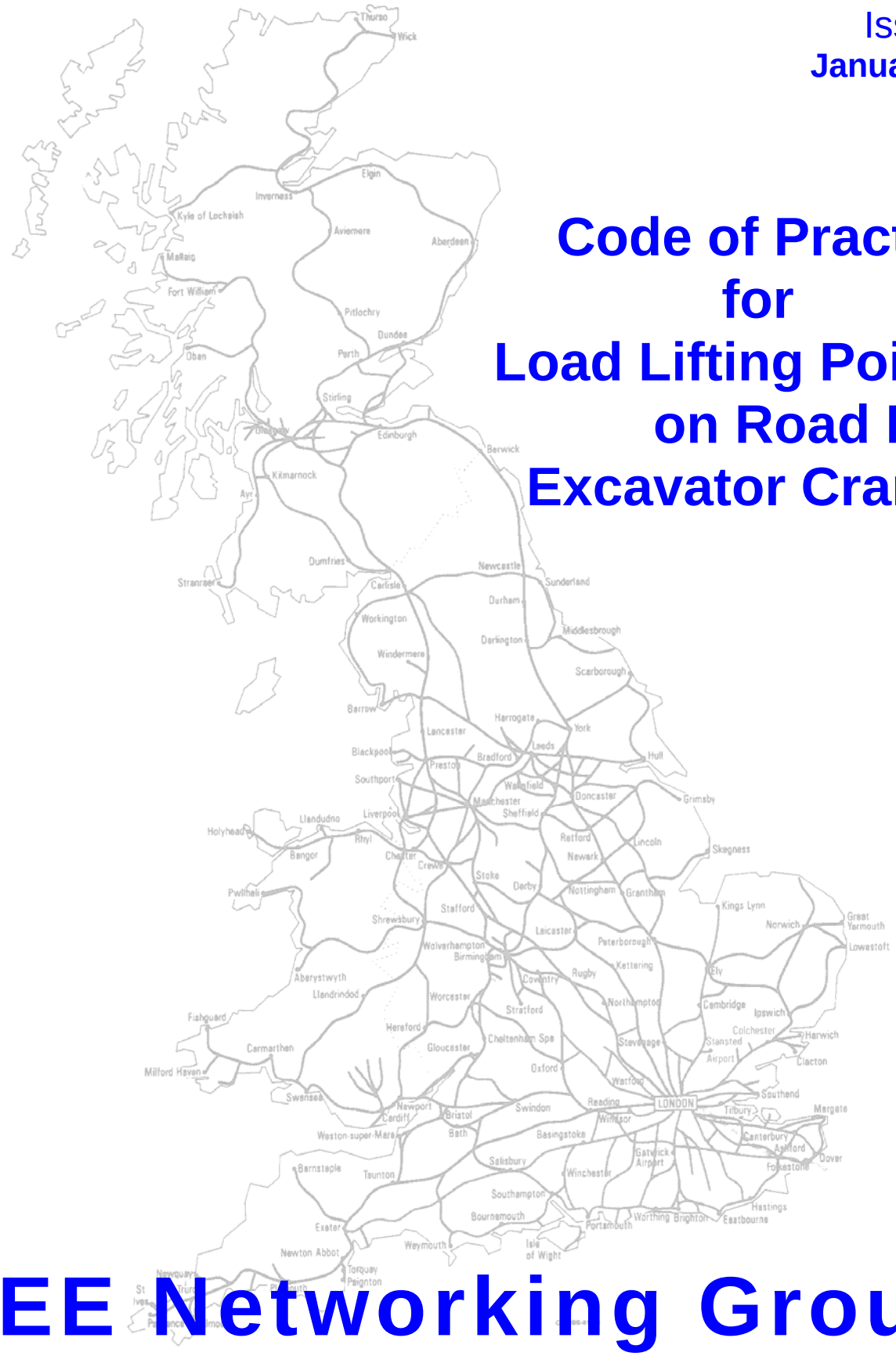
COP0015

Issue 2

January 09

Code of Practice for Load Lifting Points on Road Rail Excavator Cranes



M&EE Networking Group

Document revision history

Issue	Date	Reason for change
1	March 07	First issue
2	Jan 09	Revised to include lifting through the jaws of the quick hitch

Background

A sub-group of the M & EE Networking Group have looked at the arrangements for the installation, use and testing of load lifting points on road rail excavator cranes and recommend the following as good practice for the industry.

Sub-group Contacts

Jim Nutty	Amey, Sutton Courtenay, Abingdon, Oxon, OX14 4PP	Tel07747 627 139
Chris Sayers - Leavy	Network Rail, 40 Melton St, London, NW1 2EE	Tel 0207 557 8188
John Ockenden	Carillion Transport, Gloucester House, Birmingham	Tel 07803975584
Ron Wells	Balfour Beatty Rail Plant Raynesway, Derby,	Tel 01332 288 564
Steve Wadham	Gamble Rail Nowhurst Business Park, Broadbridge Heath, West Sussex. RH12 3PL	Tel 01403 213716
Mick James	RSSB Evergreen House 160 Euston Road, London NW1 2DX	Tel 0207 983 6759

Sign off

The M & EE Networking Group agreed and signed off this Code of Practice on 29 January 2009

Amey	**J Nutty**	Mech Assurance Engineer
Babcock Rail	**J Watson**	Director M&EE
Balfour Beatty Rail Plant	**R Wells**	Plant SC Manager
Carillion	**J Ockenden**	Prof Head Plant Eng
Grantrail	**G Adamson**	Plant Manager
Jarvis plc	**S Farrant**	Chief Mech & Elect Eng
London Underground	**E Dawkins**	Tube Lines
Network Rail	**J Allenden**	Head of Plant Engineering
Rail Plant Association	**R Donald**	Director
RSSB	**M James**	Principal Plant Engineer

Purpose

This Code of Practice is intended to provide explanation and guidance to manufacturers, converters, owners and users of road rail excavator cranes being used for lifting operations on Network Rail managed infrastructure.

Scope

This Code of Practice applies to design, testing and use of load lifting points, including the quick hitch jaws on road rail excavator cranes used on Network Rail managed infrastructure.

Definitions

Auxiliary Load Lifting Point	A load lifting point that is not a calibrated load lifting point
Calibrated load lifting point	The load lifting point(s) that are used to calibrate the Rated Capacity Indicator (RCI)
Load Lifting Point	The points on the vehicle where lifting accessories are attached in order for the vehicle to lift a load (and includes any integral lifting points on a quick hitch and includes the jaws when they meet the requirements of this Code of Practice)
Road Rail Excavator Crane	An excavator (machine) that has been converted for rail use, that can be used for lifting operations in either road or rail mode

1 Load lifting points

1.1 General principles

1.1.1 Except as shown in 1.1.2, all load lifting points, should be approved by the Original Equipment Manufacturer (OEM)/converter (ie the company that issued the current CE mark) and recorded in the Technical Construction File. The owner of the vehicle should also keep a copy of this approval in their machine file. The operations manual should detail the location of the load lifting points and their Safe Working Load.

1.1.2 All load lifting points on quick hitches should be approved by the quick hitch manufacturer and written verification provided. A copy of this information should be available on site with the machine documentation.

1.1.3 Non approved load lifting points must be blanked off or removed.

1.1.4 Lifting should not be undertaken from any other unidentified point (eg bucket tooth etc).

1.1.5 Any alterations to the original design of the load lifting point should comply with cause 3.8.1 of RIS-1530-PLT.

1.2 Design

1.2.1 Load lifting points must take into account the forces from the variety of angles that the suspended load will take up relative to the lifting equipment. A fixed hook does not normally meet this requirement.

1.2.2 It is considered that the load lifting point should be designed with a safety factor of a minimum of 5:1 to yield for use in the rail industry.

1.2.3 If the bucket crowd cylinder has not been fitted with burst hose protection then the design should be such that it does not rely on the pressure in the crowd cylinder to support the load.

1.3 Testing

1.3.1 All load lifting points should be initially proof load tested to a minimum of 150% of the specified Safe Working Load (SWL) of that load lifting point. Copy(s) of test documentation should be retained by the vehicle owner.

1.3.2 Any repairs to a load lifting point should be approved by the OEM/converter and be subjected to proof load testing to a minimum of 150%. Copy(s) to be retained by the vehicle owner.

1.3.3 Testing should be undertaken so that it does not damage the main structure or de-stabilise the vehicle. This could involve additional support to the structure while testing is taking place.

1.4 Labelling

1.4.1 Each Lifting point should be clearly marked in accordance with RIS-1530-PLT section 8.10.2 figure 16. This includes lifting points on quick hitches.

1.5 Maintenance and inspection

1.5.1 Where the current approved maintenance plan does not account for every load lifting point, then all such points not identified in the maintenance plan should be subject to a visual examination by a competent person on a 3 monthly basis to cover checking for fitness for purpose, deformation and unacceptable wear.

1.5.2 The Thorough Examination report (required by LOLER) should be completed every 12 months for lifting equipment and should detail each load lifting point and detail the serial number of the quick hitch if permanently attached.

1.5.3 If a quick hitch is not permanently attached to the machine it is classed as a lifting accessory and should have a Thorough Examination on 6 monthly basis (required by LOLER).

1.6 Pre-use checking of the lifting points

1.6.1 The operator should visually inspect all load lifting points as part of the pre use machine checks for any obvious deformation and correct labelling. Any defects seen should be recorded in the machine log book and the lifting point must not be used unless it is in good order.

1.7 Use of load lifting points

1.7.1 The RCI must be switched on in lifting mode at all times during lifting operations.

1.7.2 Planning and use of calibrated load lifting points should be given priority over auxiliary load lifting points.

1.7.3 If the bucket crowd cylinder is not fitted with burst hose protection then lifting should not be undertaken in a manner such that it relies on pressure in the crowding cylinder. (This normally means that the lifting point is directly below the dipper arm nose pin).

References

Document	Title
LOLER	Lifting Operations and Lifting Equipment Regulations
RIS-1530-PLT	Engineering Acceptance of Possession-only Rail Vehicles and Associated Equipment