

NEW EQUIPMENT & SYSTEM APPROVAL PROFORMA

Ref: 12/43426

Note: the prompts given below are only a guide to the information required for approval. Dependent on the type of equipment or system that requires approval delete any section that is not applicable or include additional information if necessary. **Mandatory** fields are marked with an asterisk (*).

1 Equipment or System to be approved *

Lincoln Electronic Lubricator Application Systems

2 Originator *

Name: Wayne Olsen

Company: ARTC E/W

3 Introduction *

Modern railway lubrication systems are progressing from mechanical plunger style pump lubricators (e.g. Type Approval 08-08-11-120 "Portec Rail Product (UK) Limited PW Series Lubricators") to electronic delivery systems for Gauge Face Lubrication and Top of Rail Friction Modification (TORFM).

The Lincoln electronic lubricator application system is an electronic system which is reliable, consistent, economical and allows a precise dosage of lubricant.

This control unit can be used for both Gauge Face Lubrication and TORFM systems. Only the distribution bars mounted on the rail differ between the 2 applications.



Lincoln Electronic Lubricator

4 Determination of Need *

Improved reliability and consistency of operation of lubrication system.

Electronic delivery allows a precise dosage of lubricant hence wastage eliminated and economic benefits.

Improved distribution provides improved rail lubrication which decreases wheel noise and rail wear, hence decreasing re-rail costs.

Older equipment is becoming obsolete and requires upgrading/replacement.

Alternate supplier to Portec electronic lubrication systems.

5 Significant Change or Not *

This change in equipment or system is assessed as MINOR as Lincoln are a known supplier to ARTC.

6 Review Panel *

- John Furness - Manager Standards
- Wayne Olsen – Project Manager East West
- Jessica Tai – Track Engineer
- Denis Snowden – WHS Co-ordinator

7 Safety

Electronic lubrication systems are currently in use within the ARTC network, particularly Hunter Valley (Type Approval 08-08-11-118) hence no safety issues are foreseen with respect to the introduction of an "electronic" lubrication system itself.

The main safety concern is the performance of an alternate supplier of electronic lubricators, i.e. Lincoln. Performance of the unit will be monitored by the Track Inspector, ARTC Performance Engineering and ARTC Project Management for a period of 6 months to ensure unit is operating effectively. Tribometer friction measurements of the gauge face and running surface will be used to determine effectiveness and spread of lubricants.

There are no changes to the existing method of working, maintenance or environmental conditions hence safety of maintenance personnel will not change.

WHS is to be addressed during the installation and maintenance of the unit.

8 Performance and Suitability

See attached documents :

- Lincoln – Capabilities
- Lincoln – Installation Overview & Instruction

(i) Use in other rail networks

Lincoln electronic lubricators currently used :

- Railcorp, NSW
- QR National, Qld
- GWA, Northern Territory

(ii) Use in the ARTC network

Lincoln units are not currently used within ARTC, however multiple electronic Portec units are used in Hunter Valley for both gauge face lubrication and TORFM.

(iii) Issues arising from usage of the equipment/system

No known issues.

(iv) Changes required to infrastructure or systems for use of the equipment

Train Notice to be issued to advise of changes of lubricator type, or new location.

No alteration to network configuration, hence no Network Alteration Notice required.

May require changes to power supply drawings from Signalling if powered from Signalling sources.

9 Reliability

Power Supply

- If powered from Signalling sources, then isolation from system critical circuitry required.
- If solar powered, regular inspection by track inspector for damage/theft of solar panels.

Unit Performance

- Distribution bars to be inspected during routine maintenance.

10 Maintainability

Track Inspector responsible for maintaining existing lubricators will be trained in operation and maintenance of new electronic units.

Schematic drawings and operating procedures to be provided to Track Inspector.

Larger pot to hold grease will mean less frequent and simpler re-stocking of grease.

Supplier, JSG, will assist in installation and training.

Signage required on pots to eliminate maintenance errors and contamination of units.

11 **Approval ***

The following components of the Lincoln Electronic Lubricators are approved for use on the ARTC network:

- Lincoln WAYSIDE TOR PUMP, CONTROLLER and WIPER system
- Lincoln LUBE PUMP, CONTROLLER and WIPER system

12 **Conditions of Approval ***

1. Installation and maintenance to be as per manufacturer's instructions.
2. The Track Inspector, ARTC Performance Engineering and ARTC Project Management shall monitor the performance of the unit for a period of 6 months.
3. WHS is to be addressed during the installation and maintenance of the unit.

13 **Does the Originator accept the additional Conditions of Approval as set by the Review Panel:**

Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	N/A	<input type="checkbox"/>
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14 **Sign off**

ARTC office use only

Review Panel:

John Furness	Signature on file	Date:	3/09/2012
Wayne Olsen	Signature on file	Date:	5/09/2012
Jessica Tai	Signature on file	Date:	3/09/2012
Denis Snowden	Signature on file	Date:	3/09/2012