



# On-Track Plant Engineering Conformance Certificate

This certificate is issued in accordance with RIS-1530-PLT Issue 6

<b>NAME OF VEHICLE ACCEPTANCE BODY</b>	<b>ACCREDITATION CODE</b>
<i>SNC-Lavalin Rail &amp; Transit Verification Limited</i>	<b>21</b>
<b>Vehicle Class / Description</b>	<b>940/GOS/Doosan Ultimate 270/9B</b>
<b>Vehicle Owner</b>	<b>Stobart Rail</b>
<b>Issue Date</b>	<b>28 March, 2017</b>
<b>Expiry Date</b>	<b>22 August, 2021</b>

**Vehicle Number(s)**

99709\_940779-0

**First Of Class**

99709 940086-2 on certificate IF/0349/13 under RIS-1530-PLT Issue 4.

**Authorised by:**

**Bryan Lowe**

*SNC-Lavalin Rail & Transit Verification Limited*

**OFFICIAL STAMP**



**SNC · LAVALIN**

**Reason for issue and Scope of Work**

Certification of GOS / Doosan Ultimate 270 Road Rail Vehicle, (base vehicle - Doosan DX170W).

Serial No. 5318. GOS No. RRC346. Stobart Fleet No. W179.

Originally assessed for compliance with RIS-1530-PLT Issue 4.

The vehicle is fitted with an electronic slew and height limiting system through the GKD SpaceGuard RCI which has been approved by Network Rail Technical Services, document reference MLD/L015: Approval of MLD005: GOS / GKD SpaceGuard Slew and Height Limiter Doosan DX170, against RIS-1530-PLT Issue 4 and Network Rail remit MLD/R003 for slew and height limiting devices.

On this certificate: Update to RCI information (Supplementary Information 11) following modifications to the boom cylinder pivot. No other engineering change.

Expiry date conforms to the requirements of RIS-1530-PLT.

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**Certificate Number: 21/0307/17**



# On-Track Plant

## Deviations associated with this certificate

None

## Previous Certificate Number

Previous certificate: IF/0344/15.

## Maintenance Plan Details

GOS Operation and Maintenance Manual RP102; Issue 7; 05/2014- Road Rail Conversion of Doosan DX170 Wheeled Excavator.

## Limitations of Use

1. When travelling, the vehicle is within W6a gauge as defined in RIS-1530-PLT.
2. When working the vehicle may be out of W6a gauge. Minimum underside height of tail swing above rail is 1418mm. Maximum tail swing gauge exceedance is 832mm.  
A site survey shall be undertaken to assess potential damage to infrastructure equipment prior to use.
3. Vehicle shall not on/off track, travel or work on live conductor-rail lines.
4. Vehicle shall not on/off track if adjacent lines are open to traffic.
5. The vehicle shall only be permitted to work ALO with the GKD SpaceGuard RCI system active, the Slew Limit and/or Virtual Wall correctly set and the system functionality has been proven correct prior to vehicle use.  
ALO working shall only be in accordance with the approved safe system of work (SSoW) for the possession, taking account of the extra gauge exceedance caused by attachments.
6. Vehicle will not activate train operated points.
7. Vehicle shall not travel on:
  - Track cants greater than 200mm;
  - Track gradients greater than 1:25;
  - Curve less than 80m.
8. Vehicle shall not work on:
  - Track cants greater than 150mm;
  - Track gradients greater than 1:25;
  - Curve less than 80m.
9. When reversing, the vehicle shall only proceed at walking speed with the driver utilising the CCTV and/or ground staff, until the superstructure/boom can be slewed to face the direction of travel.
10. For access/egress, the vehicle shall only operate with the door to the cab adjacent to a cess or a line closed to all train movements, or the safe system of work takes account of adequate clearances to adjacent lines.
11. Setting up and packing away - from inside cab.
12. Vehicle shall not be on/off tracked on cants greater than 100mm.
13. Vehicle shall not be on/off tracked on gradients greater than 1:25.
14. For on/off tracking, a site specific work plan shall be used taking account of the requirements in Network Rail Infrastructure Plant Manual NR/PLANT/0200.
15. The vehicle shall NOT on/off-track, travel or work under live OLE, unless the GKD SpaceGuard RCI system is active, the Height Limit correctly set and the system functionality been proven correct prior to vehicle use.  
Under live OLE, working shall only be in accordance with the safe system of work for the possession, determined and approved by taking guidance from the requirements of GE/RT8024, and account taken of:-
  - A maximum SpaceGuard default height of the boom above the rail of 3.500m.
  - A minimum OLE wire height of 4.165m.
  - The earth bonds on the RRV shall have been examined for security and presence, prior to use.
  - Attachments and their load shall not exceed the height of the top of the boom.

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Certificate Number: 21/0307/17



## On-Track Plant

16. The RCI shall be switched on at all times, unless in digging mode.
17. The RCI has a tandem lifting mode.
18. It is permitted to tow and/or propel rail trailers with compatible coupling and brake systems:
  - Air brakes - supply pressure for park brake release is 6bar, and for service brake is 0-6bar.
  - Trailers with park and service brakes and air reservoirs.
  - Maximum weight is 120tonnes / 6 trailers. The trailer formation shall not exceed a maximum of 3 trailers at the front of the RRV and/or 3 trailers at the rear of the RRV.
19. Trailer maximum towing capacities relating to Track Gradients incorporating dry and uncontaminated rail head conditions as follows:
  - 1:29- Maximum weight is 49t
  - 1:41- Maximum weight is 52t
  - 1:60- Maximum weight is 90t
  - 1:255- Maximum weight is 110t
  - 1:500- Maximum weight is 120t

NOTE: The towed and propelled trailers consist shall not be of mixed brake types. The maximum towed and/or propelled weight may have to be reduced where the railhead conditions for adhesion and/or running gradient may affect the safe traction performance of the vehicle.

### Supplementary Information

1. The RRV is a GOS rail-conversion of road excavator with 1.9m boom, 3.65m artic and 2.1m dipper.
2. Manufacturer Serial No. 5318. GOS No. RRC346. Stobart Fleet No. W179.
3. The vehicle is approved to carry 2 persons seated in the drivers cab.
4. It operates on rail in high-mode only.
5. CCTV camera fitted to the rear.
6. Fitted with GOS direct rail wheel braking (Type 9B-l)
7. Gross vehicle weight is 29 tonnes.
8. Maximum speeds travelling on rail not to exceed:-
  - 20mph plain line;
  - 5mph switches and crossings;
  - 1mph raised check/guard rails;
  - 10mph working/towing/propelling;
  - 5mph emergency recovery.
9. Where an attachment is known to have a significant adverse affect on the RRV stability, the RCI shall always be in 'Lift Mode' when using the attachment.
10. Load Lifting points:
  - Dipper pin 7.5T SWL
  - Auxiliary eye 10T SWL
11. RCI Information:
  - Fitted with a GKD SpaceGuard Rated Capacity Indicator (RCI);
  - Model - GKD 3RCI;
  - Serial Number - 804T;
  - RCI Software I/D - 8.601;
  - Duty chart - G7602/RRC346/W179 dated 28-Mar-2017 for all load lifting points.
  - This vehicle has Normal and Tandem Lifting Modes.
  - Vehicle is permitted to lift and carry through 360 degree operation.
12. GKD SpaceGuard RCI Information:

The vehicle is fitted with an electronic slew and height limiting system through the GKD SpaceGuard RCI which has been approved by Network Rail Technical Services, document reference MLD/L015: Approval of MLD005: GOS / GKD SpaceGuard Slew and Height Limiter Doosan DX170, against RIS-1530-PLT Issue 4 and Network Rail remit MLD/R003 for slew and height limiting devices.

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