On-Track Plant
Engineering Conformance Certificate

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

NAME OF VEHICLE ACCEPTANCE BODY

SNC-Lavalin Rail & Transit Verification Limited

ACCREDITATION CODE

21

Vehicle Class / Description	**940/GOS/Doosan Ultimate 260/9B**
Vehicle Owner	**Stobart Rail**
Issue Date	**27 April, 2018**
Expiry Date	**26 January, 2025**

Vehicle Number(s)

99709_940055-5

First Of Class

99709 940055-5 on certificate 21/0049/18 against RIS-1530-PLT Issue 6.

Authorised by:

Adrian Staples .....

SNC-Lavalin Rail & Transit Verification Limited

OFFICIAL STAMP

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Reason for issue and Scope of Work

Certification of GOS / Doosan Ultimate 260 Road Rail Vehicle, (base vehicle - Doosan DX160W).

Serial No. 50230. GOS No. RRC241. Fleet No. W151.

Assessed for compliance with RIS-1530-PLT Issue 6.

On this certificate: Update to operations and maintenance plan references following completion. No engineering change.

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

Deviations associated with this certificate

None

Previous Certificate Number

21/0144/18.

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Certificate Number: 21/0225/18

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Maintenance Plan Details

Doosan 260 Maintenance Plan - STOB/MP/101, Issue 1, 01/18.

Doosan DX160 (Stobart Rail Upgrade) Instruction Manual - STOB/OM/101, Issue 1, 12/17.

Limitations of Use

1. It shall only operate inside possessions.
2. When travelling, the vehicle is within W6a gauge as defined in RIS-1530-PLT.
3. 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 (i.e. 1525mm outside the running edge of the rail).
   A site survey shall be undertaken to assess potential damage to infrastructure equipment prior to use.
4. Vehicle shall NOT on/off track, travel or work on live conductor-rail lines.
5. Vehicle shall NOT on/off track if adjacent lines are open to traffic.
6. 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.
7. Vehicle will NOT activate train operated points.
8. Vehicle shall NOT travel on track with:
   - cants greater than 200mm; - gradients greater than 1:29; and/or - curves less than 80m.
9. Vehicle shall NOT work on track with:
   - cants greater than 150mm; - gradients greater than 1:29; and/or - curves less than 80m.
10. 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.
11. 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.
12. Setting up and packing away - from inside cab.
13. Vehicle shall NOT be on/off tracked on cants greater than 150mm and/or 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/L2/RMVP/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.
16. The RCI shall be switched on at all times, unless in digging mode.
17. It is permitted to tow and/or propel rail trailers with compatible coupling and brake systems:
    - Hydraulic brakes - supply pressure for park brake release is 100bar, and service brake is 0-100bar.
    - Air brakes - supply pressure for park brake release is 8bar, and service brake is 0-8bar.
      - Trailers with park and service brakes and air reservoirs.
    - Maximum weight is 49tonnes / 2 trailers.

    NOTE: 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.

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Supplementary Information

1. The RRV is a GOS rail-conversion of a Doosan road excavator with 1.85m boom, 3.5m artic and 2.1m standard dipper.
2. Manufacturer Serial No. 50230. GOS No. RRC241. Fleet No. W151.
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. The Stabilisers are interlocked out-of-use in rail travel mode.
7. Gross vehicle weight is 26.5tonnes.
8. Fitted with external emergency brake control for use with GOS/Philmor Personnel Carrier attachments to GOS/Philmor Rail Trailers.
9. 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.
10. The RCI shall be switched on at all times, unless in digging mode.
    Where an attachment may have a significant adverse affect on the RRV stability, the RCI shall always be in 'Lift Mode'.
11. Load Lifting points (2.1m dipper):
    - Dipper pin 10T SWL.
    - Auxiliary eye 10T SWL.
12. RCI Information for 2.1m Dipper:
    - Fitted with a GKD SpaceGuard Rated Capacity Indicator (RCI);
    - Model - GKD 3RCI;
    - Serial Number - 01178T;
    - RCI Software I/D - 8.601;
    - Duty chart (2.1m dipper)-
      RRC241/50230 Ref Stobart Rail Install dated 21-Apr-2017 for all load lifting points.
13. This vehicle has Normal and Tandem Lifting Modes.
14. 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/L027: Approval of MLD013: GOS / GKD SpaceGuard Slew and Height Limiter Doosan DX160, against RIS-1530-PLT and Network Rail remit MLD/R003 for slew and height limiting device.

Authorised by:

Adrian Staples ..... A Staples .....

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Certificate Number: 21/0225/18