



On-Track Plant Engineering Conformance Certificate

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

NAME OF VEHICLE ACCEPTANCE BODY	ACCREDITATION CODE
<i>SNC-Lavalin Rail & Transit Verification Limited</i>	21
<u>Vehicle Class / Description</u>	976/Aquarius/R2R 4x4 (Defender 130)/9C
<u>Vehicle Owner</u>	Aquarius Railroad Technologies Ltd
<u>Issue Date</u>	30 January, 2017
<u>Expiry Date</u>	11 September, 2021

<u>Vehicle Number(s)</u>
99709_976090-9

<u>First Of Class</u>
99709 976090-9 on Engineering Acceptance Certificate IF/0524/14 against RIS-1530-PLT, Issue 5.

Authorised by: Bryan Lowe <i>SNC-Lavalin Rail & Transit Verification Limited</i>	OFFICIAL STAMP SNC · LAVALIN
---	---

<u>Reason for issue and Scope of Work</u>
Certification of Land Rover Defender 130 RRV with Aquarius Rail Gear. Chassis number: SALLDKVP7DA444365 , Registration: YE63 LRN. Originally assessed for compliance with RIS-1530-PLT, Issue 5. On this certificate: Correction of expiry date only. Expiry date conforms to the requirements of RIS-1530-PLT, Issue 6.

<u>Deviations associated with this certificate</u>
None

<u>Previous Certificate Number</u>
21/0080/17.

Customer Copy	Certificate Number: 21/0118/17
Page 1 of 2	



On-Track Plant

Maintenance Plan Details

AQUARIUS RAILROAD TECHNOLOGIES Highway Based Vehicle <3.5 tonne Maintenance Manual Issue 2 Rev 4, 22/06/14.

AQUARIUS RAILROAD TECHNOLOGIES Attachments SIV Maintenance Manual Issue 1, 20/10/16.

Limitations of Use

1. The vehicle shall only operate inside possessions.
 2. When travelling, the RRV is within W6a gauge and exception for road wheels as RIS-1530-PLT. Cab doors can be out of gauge when open and account must be taken in the safe system of work.
 3. When working in conjunction with the SIV sampling rig exceeds lower gauge.
 4. The vehicle is not permitted to on/off track, travel or work on live conductor rail lines.
 5. The vehicle shall not on/off track if adjacent lines are open to traffic.
 6. The vehicle will not activate train operated points.
 7. Vehicle shall not travel or work on track with :
 - cants greater than 200mm, gradients greater than 1:25 and/or curves less than 80m.
 8. When operating in reverse, before moving, the driver shall ensure that he has adequate visibility of the track to the rear, otherwise the reverse movements shall be controlled by an assistant in the rear compartment and/or ground staff.
 9. The vehicle may only operate with the opening door adjacent to a cess or a line closed to all train movements or the safe system of work must take account of adequate safe clearances to adjacent lines. Vehicle door to adjacent line to be disabled (with ALO lock cover) and second person used to unlock the door when required.
When using piling rig, attach R2R 4x4 Vortok mounting bracket to side of vehicle with adjacent line open.
 10. Vehicle shall not on/off track on track with cants greater than 150mm and/or gradients greater than 1:25.
 11. For on/off tracking, a site specific work plan shall be used taking account of the requirements in Network Rail Standard NR/PLANT/0200.
 12. The vehicle is suitable for use under live OLE (on/off track / travel / work) when used in conjunction with a safe system of work determined and authorised by taking guidance from the requirements of GE/RT8024. Except for the cab, access is prohibited onto any surfaces higher than 1.4m above rail level.
 13. Vehicle is permitted to tow or propel:
 - Up to three Aquarius Ultra Light (ULT) 1,000kg (GLW) trailer; maximum combined GLW 3,000kg. OR
 - One or two Aquarius R2R Trailer 3,500kg (GLW) trailers; maximum combined GLW 7,000kg. OR
 - One or two Load Tray Extension (LTE) 550kg (GLW) trailers, maximum combined GLW 1,100kg.
- Note- The maximum towed and/or propelled weight may have to be reduced where the railhead conditions for adhesion and/or ruling gradient may affect the safe traction performance of the RRV.

Supplementary Information

1. Vehicle is an Aquarius Land Rover Defender 130 with Aquarius Rail Gear.
2. Chassis number SALLDKVP7DA444365, Registration YE63 LRN.
3. Vehicle is fitted with a trailer service brake control, working pressure 0-5.5 bar.
4. Vehicle operates in low ride only.
5. Tare weight- 2,450kg.
6. Sampling rig weight- 850kg.
7. When sampling rig fitted, a maximum payload of 600kg shall not be exceeded and shall be uniformly distributed permitting up to 5 persons in the cab (80kg/person) and/or equipment in the rear.
8. When personnel carrier fitted, a maximum payload of 930kg shall not be exceeded and shall be uniformly distributed permitting up to 5 persons in the cab (80kg/person) 6 persons (80kg/person) in the rear and/or equipment in the rear.
9. Maximum speeds (travel and working) on rail not to exceed:
 - 20mph plain line; 5mph switches and crossings;
 - 10mph towing/propelling; 5mph emergency recovery;
 - 15mph reversing only when driver has unrestricted view to the rear of the vehicle, otherwise 3mph.