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TOC Waiver – TW: 203-1452

Issued to: Sydney Rail Operations Centre
Specialised Container Transport (SCT)

Issued by: Jakub Zawada
Principal Engineer, Fleet Access Integrity

Issue date: 31 May 2024
Effective dates: 31 May 2024 to 29 November 2024

Prevalence: This TOC Waiver supersedes TOC Waiver 203-1398 and 203-1087

Title: Restricted operation and testing of CSR Gen 1B and Gen 2 Locomotives

This TOC Waiver supersedes TOC Waiver 203-1398, 203-1087, and extends operation/testing for 6 months. This TOC permits the restricted operation of CSR Gen 1B and Gen 2 locomotives and adhesion testing on the Main North.

A waiver to the published conditions in the Train Operating Conditions (TOC) Manual is granted for the testing and operation of CSR Gen 1B/Gen 2 on the TfNSW Metropolitan Heavy Rail Network.

Operating conditions shall be as follows:

Table 1 – Specialised Container Transport - Locomotives

Code	Load category	Description	Max speed (km/h)	Live weight (t)	Length coupled (m)	Draw capacity (MN)	Horse power	Remarks	Notes
CSR	Refer Notes	Diesel AC (SDA1 G1B)	115*	134	22.0	2.25	4000	SDA1 Gen 1B (CSR 001, 004, 006-012)	R11, a, b, c, 1 - 15 *see notes
CSR	Refer Notes	Diesel AC (SDA1 G2)	115*	134	22.0	2.25	4225	SDA1 Gen 2 (CSR 013 – CSR 024)	R11, a, b, c, 1 - 15 *see notes

Notes:

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R11 - Refer to instructions for:

Block working of all classes of light locomotives (page 53) in the Sydney Metropolitan area contained in the **General Instruction Pages, Section 2 – Locomotives Operations.**

a. *CSR (Gen 1B and Gen 2) Class locomotives are permitted to operate on the following routes only:*

- *i. Woodville Junction to Metropolitan Freight Network (Flemington South Junction) via North Strathfield underpass or North Strathfield goods line and return*
- *ii. Bowenfels to Metropolitan Freight Network (Flemington South Junction) and return*
- *iii. Lidcombe to North Strathfield Junction and return via Flemington Middle and East Junctions*
- *iv. Macarthur to Metropolitan Freight Network (Sefton Park Junction) and return*
- *v. Macarthur to Metropolitan Freight Network (Marrickville Junction) via East Hills Line and return*
- *vi. Cabramatta to Granville (for access to Yennora Yard) via Old Main South (up and down)*
- *vii. Bomaderry, Unanderra, and Port Kembla to Meeks Road Junction and return (this also includes Unanderra to Inner Harbour and return)*

All other routes across the TfNSW Metropolitan Heavy Rail Network may be traversed if dead attached (not powering or providing tractive effort) subject to all track and civil requirements being met.

b. *The maximum speed for light engine operation shall be 100 km/h. Operation within train consists is up to a maximum speed of 115 km/h.*

c. *Traversing of siding/loops and their entry/exit points/crossings shall be restricted to 20km/h. Main line operation is unrestricted.*

1. The locomotives are permitted to operate on the TfNSW Metropolitan Heavy Rail Network under restricted operation conditions and for adhesion testing purposes.
2. The locomotives may be hauled dead attached or powering as required.
3. All WOLO and temporary speed restrictions shall be adhered to.
4. The CSR (SDA1 Gen 1B) locomotives do not have a formal designated load category yet. They may be operated as a light engine or within a light engine consist, alternatively they may be marshalled in an appropriate train, with trailing load restrictions as follows:
   - i. The locomotives may operate up to a maximum trailing load of AC6 – 23.5%, that is the AC6 loading minus 23.5%. For the Main North, an AC6 load category permits a full sectional load of 1500t, the CSR (SDA1 Gen 1B) shall be limited to 1148t as a maximum.
   - ii. Where a single locomotive operation occurs, a further 10% load reduction is required, resulting in a total of 31% load reduction from an AC6 load category. For

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the Main North the full sectional load of 1500t would be limited to 1033t for the CSR (SDA1 Gen 1B).

iii. SCT to provide wagon consist, trailing loads, minimum speed, and running times of trains loaded to at least 90% of the locomotives maximum allowable trailing load. Data to be sent to AMB (jakub.zawada@transport.nsw.gov.au).

iv. An exception is permitted for adhesion testing as detailed in item 6 to 15 where full loading is required (for CSR Gen 1B this is expected to be 1350t single load 2700t double load).

5. The CSR (SDA1 Gen 2) locomotives do not have a formal designated load category yet. They may be operated as a light engine or within a light engine consist, alternatively they may be marshalled in an appropriate train, with trailing load restrictions as follows:

   i. The locomotives may operate up to a maximum load category of AC6 – 15%, that is the AC6 loading minus 15%. For the Main North, an AC6 load category permits a full sectional load of 1500t, the CSR (SDA1 Gen 2) shall be limited to 1275t as a maximum.

   ii. Where a single locomotive operation occurs, a further 10% load reduction is required, resulting in a total of 23.5% load reduction from an AC6 load category. For the Main North the full sectional load of 1500t would be limited to 1148t for the CSR (SDA1 Gen 2).

   iii. SCT to provide wagon consist, trailing loads, minimum speed, and running times of trains loaded to at least 90% of the locomotives maximum allowable trailing load. Data to be sent to AMB (jakub.zawada@transport.nsw.gov.au).

   iv. An exception is permitted for adhesion testing as detailed in item 6 to 15 where full AC6 loading is required.

6. An all-weather adhesion test is permitted with the CSR (Gen 1B or Gen 2) Class locomotives between Hawksbury River and Cowan Bank in a suitable train consist (that may be part of a general movement from outside the network to an appropriate yard or destination).

7. The train consist shall be marshalled with CSR (Gen 1B or Gen 2) test locomotives in the lead position and at least one other compatible locomotive assisting as required (held offline and not providing tractive effort).

8. The all-weather adhesion test shall be undertaken as per T HR RS 40001 PR Testing of Locomotive All-Weather Adhesion Performance.

9. Assisting locomotives shall be offline/not providing any tractive effort approaching Hawkesbury River station and during the adhesion test up to Cowan.

10. The water spray equipment installed for testing shall remain on at all times throughout the duration of the test (may be paused within the confines of tunnels).

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11. The trailing load for the CSR class locomotives under test, shall comprise of the assisting offline locomotives and typical freight vehicles as expected during normal service operation. The trailing load, including the weight of the assisting offline locomotive, shall not be less than the following loads:
    i. CSR Gen 1B – 2700t
    ii. CSR Gen 2 – 3000t
12. At the discretion of the Test Engineer, the test shall be terminated immediately if any indications of uncontrolled wheelslip are observed.
13. A copy of the recorded parameters (as per T HR RS 40001 PR) from the test shall be provided to the AMB within a week of completing the test.
14. A copy of this TOC waiver shall be given to the crew of the locomotives.
15. For any test enquiries on the day of testing contact Test Engineer (Naveen Muthuraj) who will be riding in the leading cab of the test locomotive on the day of the test and can be contacted on 0439 452 714.

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