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# **RAIL**INFRASTRUCTURE CORPORATION

Discipline  
**Rolling Stock Engineering Standard**

Category  
**Inspection**

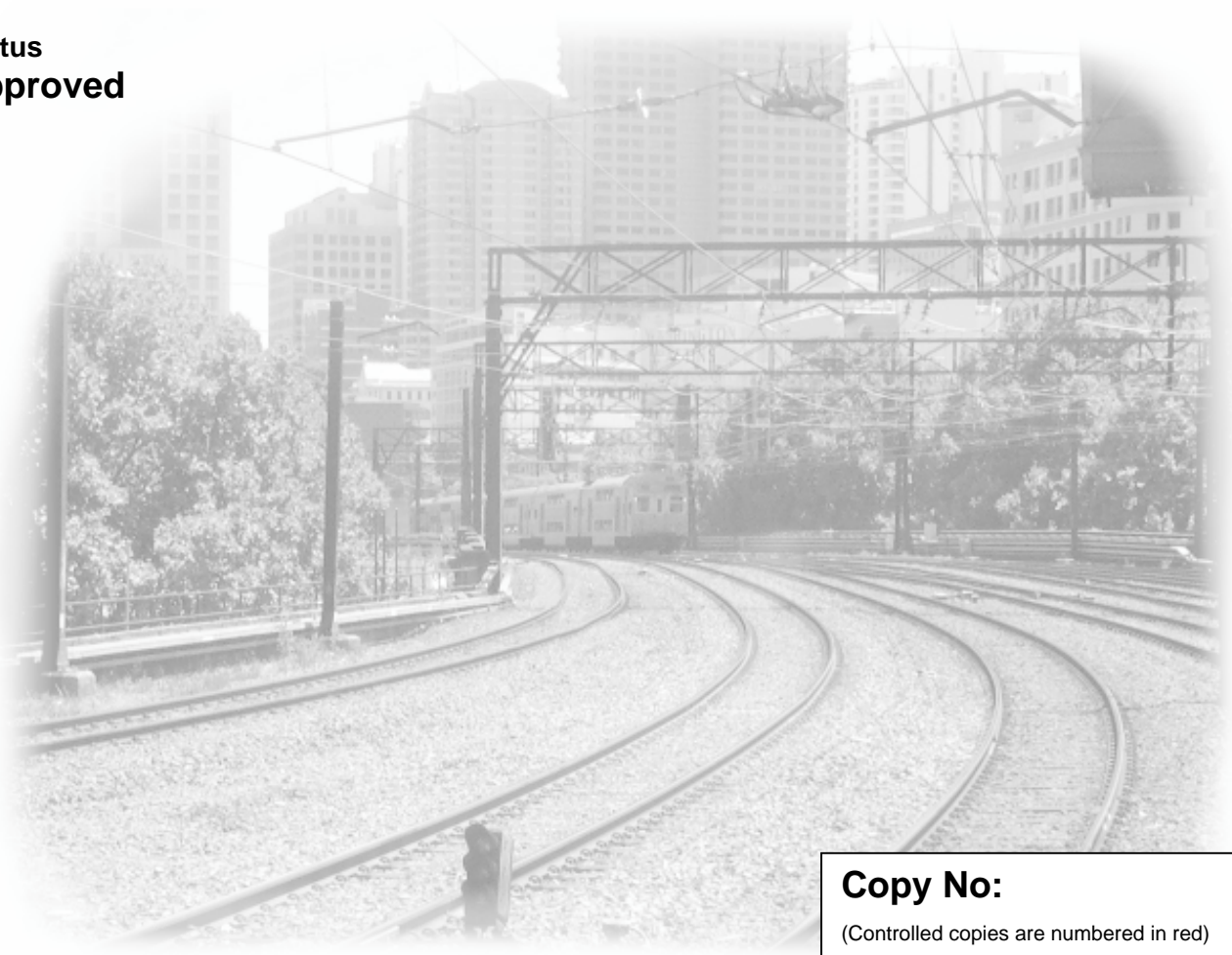
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**GENERAL TRAIN INSPECTION (FX2)**

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## About This Standard

The procedure for examining general freight trains was based on general requirements set out in SWU 186 and 191.

With the cancellation of the Safe Working Units in December 2002, Operators were required to have procedures for train inspections. The general train inspection replaced the FX2 train examination.

This Standard complies with the requirements of Section 6, Train Inspection in the General Instruction Pages of the Train Operating Conditions (TOC) manual and Network Rule NTR 402 Inspecting Trains.

Refer to RSS 0012 for Full Train Inspections (previously FX1 Examinations).

## Version History

### Version 1.0

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## 1 Scope

This procedure for inspecting Rail Infrastructure Corporation trains is based on general requirements set out in of Section 6, Train Inspection in the General Instruction Pages of the Train Operating Conditions (TOC) manual and Network Rule NTR 402 Inspecting Trains.

The general train inspection replaces the FX2 train examination.

Train crews are to inspect trains according to this standard.

## 2 Equipment required

- Continuity tester
- Radio (in most locations)
- Watch
- Pen
- Torch (if required)

## 3 Basic Procedure

Each general train inspection consists of the following procedures:

- Brake pipe leakage test
- Apply brakes by fully exhausting the brake pipe
- Proceed to rear of train inspecting wagons with brakes applied
- Check brake holding of rear wagons
- Signal for brakes to be released
- Proceed to front of train inspecting wagons with brakes released
- Complete paper work

## 4 Brake pipe leakage test

Train inspections must commence with a brake pipe leakage test. The results of this test gives the driver a good indication of the state of the train in regards to air leakage. A high figure means that there is likely to be one or more reasonably large air leaks on the train. It should be noted that as the test is carried out with the brakes applied, any air leakage could be from the brake pipe, brake cylinders or valves.

- Charge brake pipe to 500 kPa
- Reduce brake pipe pressure to 350 kPa by operating brake valve handle
- Isolate brake pipe from air supply by closing brake valve isolating cock or valve
- Wait one minute
- Note brake pipe pressure
- Wait a further minute
- Note brake pipe pressure and subtract from initial pressure to get leakage rate
- The brake pipe pressure must not have dropped by more than **35 kPa / minute**.
- Write leakage rate on train inspection certificate or train consist form

## 5 Apply brakes by fully exhausting the brake pipe

The brake pipe pressure must be fully exhausted at the commencement of the inspection. The brake valve handle is to be kept in the emergency position while the brakes are applied. (This is to ensure that air pressure can not build up in the brake pipe and so keeping brakes applied.)

## 6 Proceed to rear of train inspecting wagons with brakes applied

- Walk from the front to the rear of the train (normally on the drivers side of the train).
- Visually check each vehicle for the following (see notes for details):
- Air hoses are correctly coupled and appropriate coupling cocks open
- Brakes are applied with brake blocks against the wheels
- Brake block thickness is acceptable (see note a)
- Load compensation is correctly set (see note b)
- Where fitted, grade control valve are correctly set (see note c)
- Wheel condition (Refer RSS 0030)
- Automatic couplers are secured and in correct engagement (see note d)
- Brake rigging is secured
- Loading is secured



## NOTES:

- a) Blocks must be correctly aligned with the wheel treads and be above the minimum acceptable thickness for the distance and the gradients over which the train must travel and, in any event, **not less than 10 mm at the thinnest point.**

When carrying out a general train inspection and a brake block is found less than 10 mm thick, the brakes should be cut out on that wagon.

- b) Manual empty/load valves must be placed in the loaded (L) position when the payload exceeds 20 tonne otherwise the valve is to remain in the empty (E) position.

If a wagon has a number in the square on the code plate of the wagon, this number is to be used instead of 20 tonne.

- c) Grade control valves, if fitted, are normally placed in the EX position during general train inspections.
- d) The difference in height of adjacent coupler knuckles must not exceed one-half the depth of the knuckle. If the difference in height between the connected knuckles exceeds this requirement, the wagons must be remarshalled. If the height cannot be corrected by remarshalling the wagons, the wagon with the lowest coupler must be detached and reported as unfit to run.

## 7 Check brake holding of rear wagons

When you arrive at the last three wagons of the train:

- Carry out a brake holding test by checking that the brakes are applied on the last three wagons (or all wagons if there is less than three wagons on the train).
- On these wagons, check that the brake blocks are firmly against the wheel treads and the handbrakes are operable.
- If required carry out an extended brake holding test by waiting the required time before checking that the brakes are applied on the last three wagons.
- If the train requires a holding test on the leading three wagons, request for the second person to check and confirm that the brakes are applied on the leading three wagons and the handbrakes are operable.
- Attach continuity tester to rear brake hose and open coupling cock.
- Signal for brakes to be released.
- Ensure brake pipe pressure builds up to at least 425 kPa.
- Signal for brakes to be reapplied and check that the brakes apply on the rear vehicle.

- Enter the code and number of the last three wagons on the train inspection certificate or train consist form.

## **8 Proceed to front of train inspecting wagons with brakes released**

Remove continuity from rear brake hose

Walk on opposite side of the train, if possible

Visually check each vehicle for the following:

- Air brakes are released
- Handbrakes are released
- Brake block alignment and thickness is correct
- Loading is secured

## **9 Continuity Test**

If you have interfered with the brake pipe continuity on your return to the front of the train, carry out a full continuity test.

If the brake pipe continuity has not been interfered with, no further continuity test is required.

## **10 Complete paper work**

If a brake holding test was successfully carried out on the leading three wagons, write the wagon code and number on the train inspection certificate or train consist form.

Also write on the certificate the code and number of any wagon with air brakes not working or cut out. Ensure that the train does not exceed the allowable cutouts i.e. 1 in 10 wagons or 10% of trailing load.

Sign the certificate leaving the top copy in the locomotive cab.

## **11 Reference Documents**

### **11.1 RIC Standards**

OS 001 IM	Train Operating Conditions manual
NTR 402	Network Rules, train working, inspecting trains
RSS 0001	Minimum Operating Standards for Rolling Stock
RSS 0012	Full train Inspection
RSS 0030	Wheel Defect Manual
RSS 0050	Inspection of Drawgear
RSS 0060	Air Brake Maintenance
RSS 0061	Single Car Air Test