

**Completion Of Heritage Annual Inspection  
Diesel-Electric Locomotives**

*This cover sheet is to be completed by the inspector for each Heritage Vehicle inspected. The Heritage Vehicle Provider is to provide a copy to Heritage Excursions" [Heritage.Excursions@kiwirail.co.nz](mailto:Heritage.Excursions@kiwirail.co.nz) .*

Heritage Vehicle number \_\_\_\_\_ presented for inspection by  
\_\_\_\_\_ passed its Annual Inspection in  
*(name of organisation)*

accordance with the requirements of APIS-11 on \_\_\_\_/\_\_\_\_/\_\_\_\_ and is fit to run on  
*(date of inspection)*

the National Rail System with the following operational restrictions:<sup>1</sup>

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This inspection will expire on \_\_\_\_/\_\_\_\_/\_\_\_\_  
*(expiry date)*

*(If left blank the inspection will expire in one year. Note that Heritage Vehicles inspected within the date tolerances shown in APIS-11 retain their inspection anniversary date).*

I am an ***In-house / Independent (R.A.I.L)*** inspector.  
*(delete one).*

Signed by \_\_\_\_\_  
*(signature)* *(print name of inspector)*

Notes:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

<sup>1</sup> List only restrictions that need to be conveyed to those involved in operating the vehicle such as speed restrictions, marshalling or other operational requirements.

**Notes**

- This form is to be used for all annual inspections or inspections after overhaul.
- This form is to function as a guide to assist in ensuring that all locomotives are inspected to an acceptable and common standard for operation on the National Rail Network.
- Some reference to codes and standards may be required to complete this inspection form.
- All items on this form are to be marked as  
 ✓ - Passed; or                      X - Failed; or                      NA - Not applicable

Any items that have failed are to be included on the Inspection Fault Report included at the end of this form.

Issue	Prepared (P), Reviewed (R), Amended (A)	Approved by	Effective Date
1	P McCallum (P)	Heritage Technical Committee	27 June 2006
2	P McCallum (A)	Heritage Technical Committee	7 May 2007
2.1	P McCallum (A)	Heritage Technical Committee	22 April 2008
3.0	M Hobbs (A) P Steer (R) S Brown (R) A Wong (R)	Heritage Technical Committee	25 July 2025

**Amendment History**

Version	Section	Amendment
2	Page 1	Revised cover page format
	Page 2	Added or revised crack tests in accordance with B3.1.4.01
	Wheel readings	Added gauge certification and code compliance check
2.1	Page 1	Amended "restrictions" para and added footnote
3.0	Multiple	Multiple Amendments

Sections 1 – 3 to be completed by vehicle operator prior to inspection. Inspector to review and confirm these.

**1 Certifications**

Radio certificate – expires	/	/	
Event recorder certificate – expires	/	/	
Electrical system – certificate expires	/	/	
Fire extinguisher certificate(s) – expires	/	/	
Fire Suppression certificate – expires	/	/	
Asbestos Condition Report (if applicable)	/	/	

**2 Crack & Corrosion Tests (See B3.1.4.01 - Corrosion, Crack and Structural Inspection)**

**Axles**

Date of Last Test	/	Distance Run Since Test	km
Limits	10 years		50,000 km

**Coupler Crack Testing**

Date of Last Test	/	Distance Run Since Test	km
Limits	10 years		50,000 km

**Air Reservoirs**

Next Internal Inspection Due:	/	Limits	5-12 years
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**3 Wheel Readings**

Axle	A Side					B Side					Type T/S
	X	Y	V	W	Z	X	Y	V	W	Z	
1											
2											
3											
4											
5											
6											
7											
8											
<b>Limit</b>	40†	6	6	14	*	40†	6	6	14	*	

\* See B3.1.1.01 - Mechanical Code for minimum allowed and max variation.

† Unless on last turn, wheels should be programmed for turning when X ≥ 24 to avoid wasting material.

Wheel gauge certification expires:-

Date / /

Wheel profiles comply with code requirements

YES / NO
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Readings Done By:-

Name (print):

Date: / /

Signature:

Reviewed By  
Inspector: -

Name (print):

Date: / /

Signature:

**Sections 4 – 14 to be completed by inspector**

**4 Axle & Wheel Defects**

<b>Wheel profiles within code (see above)</b>	
<b>Looseness on axle</b> (Rust discharge, polishing or disturbance of dirt or rust build-up)	
<b>Loose tyres</b> (if fitted) (Rust discharge, polishing or disturbance of dirt or rust build-up)	
<b>Loose Gibson Rings</b> (if fitted) (Rust discharge, polishing or disturbance of dirt or rust build-up)	
<b>Visible cracks on tread ‡</b>	
<b>Tread damage</b> (Flats, skids, scaling, spalling or other surface damage) ‡	
<b>Overheating of wheels ‡</b>	
<b>Edge rollover of tread</b> (None permitted)	
<b>Axle damage</b> (No gouge between the wheels more than 1mm deep. No rubbing.)	
<b>Wheels rubbing on frames</b>	

‡ See B3.1.1.01 - Mechanical Code or NRSS-6, Section 8.5 for maximum permissible limits for this damage.

**5 Axleboxes & Bearings - Roller**

<b>Boxes</b> – intact, no cracks, bolts secure, front and rear covers lockwired, oil drains lockwired	
<b>Leakage</b> – no excessive oil or grease discharge from boxes	
<b>Horns, liners and keeps</b> - Secure, no cracked welds, split pins or lock nuts fitted	
<b>Clearances</b> – lateral, longitudinal and to keeps within limits	

**6 Locomotive Frames**

<b>Frames</b> - no cracks, damage, loose rivets or excessive wastage	
<b>Headstock(s)</b> - Corrosion, damage	
<b>Stretchers</b> - bolts / rivets secure	
<b>Fuel and water tanks</b> – secure, no leaks, no corrosion or cracks in tanks or supports	
<b>Equipment brackets</b> - secure	

**7 Cowcatchers**

<b>Height</b> -100 - 175 mm (record)	No 1:	mm	No 2:	mm	
<b>General</b> – no cracks or damage, fastenings secure					

**8 Drawgear**

	End	No. 1	No. 2
<b>Coupler height</b> – record measurements (Locomotives – 715 to 760 mm. Railcars; non-standard - see drawings.)	mm		mm
<b>Buffer pins</b> - Intact, diameter ≥36 mm, slot protector intact			
<b>Hook bridles</b> – Serviceable; prevents the corresponding hook from lifting.			
<b>Automatic Coupler wear</b> - Use gauges 12050054 B1 and 12050054 B2 for the head and gauge 12050054/A for the knuckle.			
<b>Automatic coupler operation (where fitted)</b> - operating lever and locklifter free to move, operating lever undamaged and freely enters locking clip. When coupler is locked locking block easily drops, bottom of locklifter level with indicator chain /operating lever locks properly (operating lever on coupler).			
<b>Coupler rests</b> - Not worn so as to restrict buffer movement, fastenings secure			
<b>Coupler straightness</b> - Not be bent more than 25 mm from the centreline measured at the buffer face. Wear marks on face not to extend to edge of face.			
<b>Coupler sideplay</b> – Max of 50 mm side to side (at headstock). No appreciable end movement			
<b>Coupler packing</b> – 3 mm minimum thickness, no cracked welds (if welded type)			
<b>Janney yokes</b> - No cracks or other damage. Key retaining bolt secure and not excessively worn, carrier plate fastenings secure			
<b>Draft lugs</b> - Undamaged, securely attached			
<b>Spring packs</b> - No deterioration, broken coils (spring type), yoke guide pins intact			
<b>Sidechains</b> (if fitted) - Hang well clear of rail, intact, no cracks, excessive wear			

**9 Bogies**

	Bogie	1	2	3
<b>Springs and hangers</b> - No broken leaves / coils, loose buckles, corrosion, wear & wastage, correctly seated and aligned.				
<b>Dampers</b> - (vertical and horizontal) secure, no leakage, dust covers intact				
<b>Safety brackets</b> – secure, no damage				
<b>Upper bolsters</b> - level, correct height				
<b>Bolster swing links and pins</b> – Wear, security, cracks				
<b>Centre castings</b> – Clearance, security, fretting (no cracks in webs)				
<b>Centre pins</b> – cotters, pins, retainers secure, locking wires intact				
<b>Centre bogie rollers</b> - wear of rollers and plates, lubrication				

<b>Horns, liners and keeps</b> - Secure, split pins fitted, clearances within limits			
<b>Bogie safety chains</b> - secure, chain wear (max 25% of area).			
<b>Float blocks and brackets</b> - secure, no cracks or damage, correct packing			
<b>Float clearances</b> - within limits, no cross cornering (See Mechanical Code for limits)			
<b>Clearance to underframe</b> – within limits, no fouling as bogie moves			
<b>Carbody to bogie hoses</b> - intact, secure, not rubbing			
<b>Snubbers (EMD)</b> - intact, retaining nut backed off			
<b>Bolster claws (EMD)</b> - Intact, not bent, no binding			
<b>Bolster straps (EMD Passenger Locomotives if fitted)</b> - Intact, not bent, no binding, bolts tight, shims tight			

**10 Traction Motors**

<b>Suspension bearing caps</b> - No sign of overheating, no excessive lubricant leakage, security of bolts, lock wire intact	
<b>Traction Motor nose supports (EMD)</b> - Intact, no excessive wear, keeps secure, clamping bolts backed off	
<b>Gear cases</b> - Intact, no excessive lubricant leakage,	
<b>Gear case support arms (EMD)</b> - No sign of cracking	
<b>Dust Guards</b> - fitted, intact	
<b>Traction Motor Covers</b> - Top & bottom covers intact, sealed, secure. bolts are present in the bottom covers.	
<b>Traction Motor Cables</b> - Intact cabling, cleats and earth straps for security	
<b>Traction Motor Bellows</b> - secure, aligned, intact	

**11 Brakes**

<b>Brake piston travel</b> - within limits	
<b>Brake blocks</b> - wear within limits, even	
<b>Brake shoes</b> – intact, secure	
<b>Brake hangers</b> - condition and wear (max lift of spreaders not to exceed 10mm)	
<b>Brake spreaders and pull rods</b> - pinned and secure	
<b>Brake rigging</b> - Intact. Split pins, washers and pins correctly fitted. Not fouling frames	
<b>Safety straps</b> - intact, secure, not fouling	
<b>Hoses and Brake Cocks</b> - No significant deterioration. Cocks operate smoothly.	
<b>Piping</b> – secure, no leaks, corrosion or damage	
<b>Hand brake</b> - applies and will hold locomotive	

<b>Air reservoirs and mountings</b> – secure, no corrosion, cracks, leaks	
<b>Brake cylinders and mountings</b> – secure, good condition	
<b>Brake Air Test</b> – all tests correctly passed (attach test record)	

**12 Cab(s)**

<b>Wipers</b> – operate correctly, no leaks, wiring / piping in good condition	
<b>Horn(s)</b> - operate correctly	
<b>Equipment controls</b> – operate correctly	
<b>Internal fittings, signage</b> - intact, secure	
<b>Cab seats</b> – secure, serviceable	

**13 Body Exterior**

<b>Body attachments</b> – secure, no corrosion or cracking	
<b>Framing and structural members condition</b> (if recently examined)	
<b>Body panels, cladding</b> - Intact, no rot or corrosion	
<b>Doors</b> – open / close correctly, latch in closed position, locks operate	
<b>Windows</b> – Intact, open/close smoothly, latch securely open / closed, approved safety glass	
<b>Steps, ladders and handgrabs</b> – secure, no cracks, corrosion	
<b>Warning Signs (Electrical hazard etc)</b> - Intact	
<b>Vehicle ID</b> - Clearly displayed on both sides of body or underframe	
<b>Cab seats</b> – secure, serviceable	

**14 General**

<b>Headlamps</b> – operate correctly on high and low beam, correctly aligned	
<b>Ditch lights</b> - operate correctly on high and low beam, correctly aligned	
<b>Tail lamps, ground, shunters, engine room lights</b> - operate correctly	
<b>Sanders</b> - feeding correctly, directed onto rails, secure, intact	
<b>Detonators</b> – Sufficient number, securely locked, current expiry date	
<b>Fault reports</b> – no outstanding faults	
<b>KMC/Navman/Other Equipment</b> - Operates	

Vehicle ID		Inspection Date	/ /	Page	of
Inspected by -Name		Signature			

<b>Fault Details</b>	Reference		Priority	
<b>Repair Details</b>	Date completed	/	/	
Repaired by -Name		Signature		
Checked by -Name		Signature		

<b>Fault Details</b>	Reference		Priority	
<b>Repair Details</b>	Date completed	/	/	
Repaired by -Name		Signature		
Checked by -Name		Signature		

<b>Fault Details</b>	Reference		Priority	
<b>Repair Details</b>	Date completed	/	/	
Repaired by -Name		Signature		
Checked by -Name		Signature		

**Priority**

- 1 – Vehicle not to run until repairs made.
- 2 – Repairs to be completed as soon as practical but vehicle may run in the interim.
- 3 – Attention required at next shopping or as noted.