

## **NZGR D-class steam locomotives**

New Zealand Government Railways operated a number of small four-coupled steam tank locomotives known as class D. The first entered service in 1874 and the last was written off NZR's list of assets in 1936. Several D-class locomotives went on to second careers with private owners. The NZR&LS Archives hold a number of working drawings of D class locomotives, which have all been scanned.

Copies of these scans can be purchased on USB thumbdrive. A copy of the Society's current scale of charges can be found at the bottom of the list. Scans are 300 ppi at original size and are either 8-bit greyscale or 8-bit RGB colour LZW-compressed TIFFs depending on the original. File size varies between 25 MB and 250 MB, but is generally in the range of 40–70 MB.

If you wish to purchase copies of any of the scanned drawings, please email the NZR&LS archives group at <locoarchive@actrix.co.nz>, write to us at 1a North Street, Petone, Lower Hutt, New Zealand 5012, or telephone 64-4-568 4938 to discuss your requirements and arrange payment. You can also view the scans on screen at our Ava premises by arrangement with the archivist.

### **D 2-4-0T PWD5719 March 1877**

PWD 5719-5 [NZR&LS M4264] Smokebox.tif

PWD 5719-56 (3499) [NZR&LS M4268] Drawgear.tif

For further drawings see Archives New Zealand ADQD, 17562, RW2109, Folders 80–83 for sixty-one No. 1877 Neilson D maker's drawings.

### **Da 2-4-0T PWD8613 Neilson 2561–2566, 1880**

PWD 8613 Firebox Foundation Ring.tif

PWD 8613-1 Da General Arrangement.tif

PWD 8613-2 Pipe Arrangement.tif

PWD 8613-3 Boiler.tif

PWD 8613-4 Steam Dome.tif

PWD 8613-5 Boiler & Cab Handrail Details, Gaugeglass Lampholder & Mud Plug Seatings.tif

PWD 8613-6 Firebox.tif

PWD 8613-7 Firebox Tubeplate.tif

PWD 8613-9 Firebars & Carriers.tif

PWD 8613-10 Firebox Gusset Stay.tif

PWD 8613-11 Firebox Expansion Bracket.tif

PWD 8613-12 Firedoor.tif

PWD 8613-13 Ashpan & Firebar Arrangement.tif

PWD 8613-14 Safety Valve.tif

PWD 8613-15 Regulator Valve.tif

PWD 8613-16 Regulator handle & linkage.tif

PWD 8613-17 Mainframe.tif

PWD 8613-18 Bissell Bogie.tif

PWD 8613-19 Driving & Trailing Axlebox Guides.tif

PWD 8613-20 Driving & Trailing Hornplate Clips & Spring Details.tif

PWD 8613-21 Bogie Axlebox Guides, Hornplate Clips & Spring Details.tif

PWD 8613-22 Driving & Trailing Spring.tif

PWD 8613-23 Bogie Spring.tif

PWD 8613-24 Bogie Slide.tif

PWD 8613-25 Bogie Pins.tif  
PWD 8613-26 Bogie Radial Bar.tif  
PWD 8613-27 Cowcatcher & Headstock.tif  
PWD 8613-28 Cowcatcher Details.tif  
PWD 8613-29 Cowcatcher Details.tif  
PWD 8613-30 Buffer & Drawhook.tif  
PWD 8613-31 Driving & Trailing Splashers.tif  
PWD 8613-32 Footstep & Stay.tif  
PWD 8613-33 Sandbox.tif  
PWD 8613-34 Driving & Trailing Wheel.tif

For further drawings see Archives New Zealand ADQD, 17562, RW2109, Folders 9–14 for 86 No. 1880 Neilson D maker's drawings.

### **CMEO Tracings D-class 2-4-0T Loco Modifications**

These drawings cover some of the alterations made by NZGR after they purchased the original D-class 2-4-0T locomotives. Note that the NZR&LS does not hold copies of the principal NZGR boiler drawings.

CMET 883 NZR Brick Arch Class D 29-9-88.tif  
CMET 911 NZR Metallic Valve Spindle Packing Classes C,D,F,G,J,K,L,M,Q 27-9-88.tif  
CMET 911A NZR Metallic Valve Spindle Packing Classes C,D,F,L,Fa,La,G,H,J 16-6-94.tif  
CMET 1154 NZR Alteration to Cross-Heads Classes D&J 3-11-89.tif  
CMET 3818 Locos Class D&C Axles.tif  
CMET 5094 Locos Class D Firebox Fixings for Boiler Drg 1901 6-9-11.tif  
CMET 5194 Locos Class D Firebox Bottom Ring 16-10-12.tif  
CMET 5196 Locos Class D Copper Tubeplate 10-10-11.tif  
CMET 5197 Locos Class D Material List for Boiler Drg 5192 25-8-11.tif  
CMET 5601 Locos Class C&D Cast Steel Bogie Wheels 17-11-13.tif  
CMET 5815 Locos Class D W.H.Brake Fittings (Brackets &c) 27-3-14.tif  
CMET 1178 Application of Dust Guard to Slide Bars of Locos D,F&L 4-5-90.tif  
CMET Y3852 Locos Class D Strengthening Angle to Leading Headstock 3-7-05.tif  
CMET Y5198 Locos Class D Firehole Door Hinge & Catch 16-9-26.tif

### **Clayton D-class 0-4-0T**

The Chief Mechanical Engineer's Drawing Office Plan Register contains a note that all the blueprints supplied by Clayton were destroyed in April 1943, but some survived and many years later were passed to the NZR&LS. Note that the outline drawing 11001D depicts the Indian ISNWR 1676mm-gauge locomotives, with some dimensions altered to those of the NZR machine. The closest to a general arrangement drawing of NZGR's Clayton D-class 0-4-0T is the modified arrangement of Westinghouse air compressor and reservoirs drawing 11068, but you would also need other drawings to dimension this.

CME 11001D Clayton L1 Location of 200 HP Engine in Loco Frame.tif  
CME 11002(2) Clayton L2 Cylinders 7" Dia 10" Stroke (Poppet Balanced Valves) 200 HP B Type Locomotive.tif  
CME 11003 Clayton L2 Cylinders 7" Dia 10" Stroke (Poppet Balanced Valves) 200 HP B Type Locomotive.tif  
CME 11004 Clayton L4 Connecting Rod.tif  
CME 11005 Clayton L5 Secondary Crankshaft.tif  
CME 11006 Clayton L7 Main Crankshaft 200 HP Engine for Locos.tif  
CME 11007 Clayton L6 Crankcase.tif

CME 11008 Clayton L8 Housing Crankshaft Roller Bearings.tif  
CME 11009 Clayton L9 Outside Cam Driving Box, Roller Bearing Housing.tif  
CME 11010 Clayton L10 Cam Box Covers.tif  
CME 11011 Clayton L11 Cam Box Cover, Cylinder Covers, Piston.tif  
CME 11012 Clayton L12 Inside Cams Driving Boxes.tif  
CME 11013 Clayton L13 Cam Box Centre Bush, Valve Stems Guides, Valve Seats Cap.tif  
CME 11014 Clayton L14 E&F Assembly of Inlet Camshafts.tif  
CME 11015 Clayton L15 Assembly of Exhaust Camshafts.tif  
CME 11016 Clayton L16 Outer Valve Stem Exhaust Guides, Valve Stems, Valve Roller, Valve Roller Pin, Valve Spring Socket.tif  
CME 11017 Clayton L17 Valve Springs, Con Rod Bolts & Nuts, Cap Hinge Bolt, Spring.tif  
CME 11018 Clayton L18 Main Driving Gear Case Top Half.tif  
CME 11019 Clayton L19 Main Driving Case Bottom Half.tif  
CME 11020 Clayton L20 Cover for Main Driving Gear Case.tif  
CME 11021 Clayton L21 Bored Guide & Distance Piece RH.tif  
CME 11022 Clayton L22 Bored Guide & Distance Piece LH.tif  
CME 11023 Clayton L23 Con Rod Brasses, Cap, Top Half Eccentric Strap.tif  
CME 11024 Clayton L24 Main Drive Pinion.tif  
CME 11025 Clayton L25 Arrangement of Valve Driving Gear.tif  
CME 11026 Clayton L26 Delivery Valve, Pin for Eccentric Rod, Bolt for Eccentric Shaft.tif  
CME 11027 Clayton L3 Arrangement of 200 HP Vertical Engine for B Type Loco.tif  
CME 11028 Clayton L28 E&F Oil Pump Body, Gear & Eccentric.tif  
CME 11029 Clayton L29 Coupling Gears.tif  
CME 11030 Clayton L30 Exhaust Manifold.tif  
CME 11031 Clayton L31 Spur Wheel (Main Drive).tif  
CME 11032 Clayton L33 E&F Main Drive Pinions.tif  
CME 11033 Clayton L35 E&F Cam Distribution Box Cover & Steam Breeches Pipe.tif  
CME 11034 Clayton L36 Vertical Shaft Mitre Wheel, Jackshaft Mitre Wheel, Jackshaft Spur Wheel, Jackshaft End Cover.tif  
CME 11035 Clayton L37 Cam Drive Distribution Box.tif  
CME 11036 Clayton L38 Distance Piece, Vertical Jackshaft, Horizontal Jackshaft, Housing, Oil Thrower, Mitre Wheel Nut, Shaft Nut.tif  
CME 11037 Clayton L39 Distribution Box End Covers, Main Drive & Centre Mitres.tif  
CME 11038 Clayton L40 Cam Drive Distribution Shaft, Oil Pump Eccentric Rod.tif  
CME 11039 Clayton L41 Mitre, Valve Driving Gear, Housing Cover, Cover for Main Roller Bearing Housing.tif  
CME 11040 Clayton L42 Oil Thrower Nuts Bolt.tif  
CME 11041 Clayton L43 Cam Operating Box.tif  
CME 11042 Clayton L44 Worm Box.tif  
CME 11043 Clayton L45 Cam Operating Box Cover, Control Gear Worm & Wheel, Cam Operating Lever, Bottom Half Coupling.tif  
CME 11044 Clayton L46 Operating Box Bush & Sleeve, Die, Camshaft Nut, Worm Box Bushes, .tif  
CME 11045 Clayton L47 Oil Sump.tif  
CME 11046 Clayton L48 Crankcase Bottom Cover, Piston Rod.tif  
CME 11047 Clayton L50 Oil Filler Body, Cam Driving Mitre, Top & Bottom Halves Vert Cam Drive Shaft.tif  
CME 11048 Clayton L54 Housings, Nuts, Oil Thrower, Bushes.tif

CME 11049 Clayton L56 Balance Weights.tif  
CME 11050 Clayton L57 Felt Washers, Roller Bearing Housing Cover, Gland Nut on Crankshaft.tif  
CME 11051 Clayton L58 Oil Throwers, Oil Filler Cap, Main SA Bearing Nut, Balanced Valve, Crankshaft Gland.tif  
CME 11052 Clayton L27 Gear Wheel, Oil Pump Gear Wheel Bush, Oil Pump Spindle Pin, Top Half Adjustable Coupling.tif  
CME 11053 Clayton 1923 Arrgt & Details of Sanding Gear.tif  
CME 11054 Clayton 3223 Maker's Name Plate.tif  
CME 11055 Clayton 3525 Crank Arrangement.tif  
CME 11056 Clayton 3619 Fusible Plug, Mould & Filling Plug.tif  
CME 11057 Clayton 3619 Fusible & Mud Plugs.tif  
CME 11058 Clayton 3622 Axlebox Guide, Hornclip, Spring Link Bkt, Etc.tif  
CME 11060 Clayton 3624 Axlebox Body, Bearing & Keep.tif  
CME 11061 Clayton L97 Delivery Branch, Suction Branch, Suction Valve Seat, Oil Pump Plunger.tif  
CME 11062 Clayton L98 Piston Ring, Strainer & Cover, Tee Piece, Delivery & Suction Valve Stops.tif  
CME 11063 Clayton L99 Assembly of Oil Pump.tif  
CME 11064 Clayton Mark UW 117 Crosshead & Piston Rod.tif  
CME 11065 Clayton MarkUW257 Piston Rod Glands & Gland Studs.tif  
CME 11066 Clayton SW552-F Oil Box Lid.tif  
CME 11067 Clayton 4683 Additional Ventilation of Cab.tif  
CME 11068 Clayton 4684 Modified Arrgt of West Air Compressor & Reservoirs.tif  
CME 11069 Clayton 4685 Details of Exhaust Pipes, Clips Etc.tif  
CME 11070 Clayton 4686 Compressor Supporting Bkts & Pipe Clip.tif  
CME 11071 Clayton 4804 Boiler Details.tif  
CME 11072 Clayton 4857 Tool Box.tif  
CME 11073 Clayton 4549 Brake Shaft & Bkt Etc.tif  
CME 11074 Clayton 4550 Hand Brake Details.tif  
CME 11075 Clayton 4551 Ashpan Door Operating Gear & Details.tif  
CME 11076 Clayton 4552 Arrangement of Sanding Gear.tif  
CME 11077 Clayton 4553 Sand Gear Details.tif  
CME 11078 Clayton 4554 Sanding Gear Details Sheet 2.tif  
CME 11079 Clayton 4555 Pipe Elbows Etc.tif  
CME 11080 Clayton 4556 Floor Plates.tif  
CME 11083 Clayton 4559 Details of Pipe Clips.tif  
CME 11084 Clayton 4560 Cab Collapsible Gate.tif  
CME 11085 Clayton 4805 JS White & Co 1480M Boiler Sections.tif  
CME 11086 Clayton 4561 Air Casing Plates on Front of Boiler.tif  
CME 11087 Clayton 4562 Lagging Plates for Steam Fittings.tif  
CME 11088 Clayton L59 Camshaft & Oil Pump Body.tif  
CME 11089 Clayton L60 Inlet & Exhaust Cams.tif  
CME 11090 Clayton L61 Crankshaft End Piece, Oil Retaining Plate & Bolt, Tee Piece, Distance Piece, Engine Holding Down Bolts, Oil Drain Box Cover.tif  
CME X11162 Clayton 3812 Arrangement of Boiler.tif

## A&G Price drawings

A&G Price made new boilers for several privately-owned ex-NZR D-class locomotives. The NZR&LS holds the following drawings, scans of which are available for purchase.

710	Loco Boiler for 9½" Cyl Bogie Engine Eng D (No.7 erased, Hawkes Bay Farmers Meat) [D.170/576] ND [ink on paper]	885×620
711	Firebox for Loco Boiler for 9½" Cyl Bogie Engine (Eng D) [D.170/576] ND [ink on paper]	840×630
712	Stays for Loco Boiler for 9½" Cyl Bogie Engine "Eng D" [D.170/576], AAM, 29/8/22 [pencil on paper]	940×620
728	Dome for Loco Boiler for 9½" Cyl Bogie Eng [Eng D] [D.170/576] ND [ink on linen]	590×530
916	Boiler for Govt D Type Locomotive ([D.48] Kempthorne Prosser), 5/3/25 [ink on linen]	950×620
A916	Govt D Type Loco Boiler for 160psi ([D.143] Wilsons NZ Portland Cement), HW Wilson 17/9/27 [ink on linen]	935×650
930	Regulator Details (Kempthorne Prosser's Loco), [D.48 c1925] [ink on linen]	990×695
5-5149	"D" Type Loco Boiler (Gear Meat Co – from drg supplied by Gear dated 20/6/43) trcd NVU 25-2-44 [pencil on paper]	955×650

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