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
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 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 LS Secondary Crankshaft.tif
CME 11006 Clayton L7 Main Crankshaft 200 HP Engine for Locos.tif
CME 11007 Clayton L6 Crankcase.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.

711 Firebox for Loco Boiler for 9½" Cyl Bogie Engine (Eng D) [D.170/576] ND [ink on paper] 840×630
728 Dome for Loco Boiler for 9½" Cyl Bogie Eng [Eng D] [D.170/576] ND [ink on linen] 590×530
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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