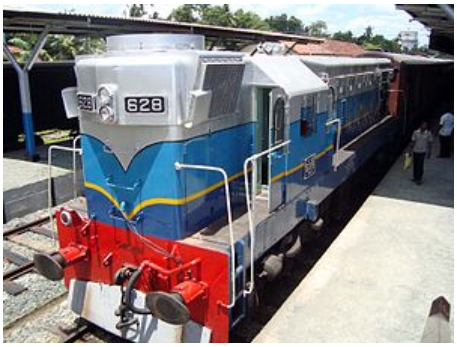
Locomotives of Sri Lanka Railways

Locomotives and train sets of Sri Lanka Railways consist mostly of diesel locomotives and multiple units. Steam locomotives are no longer used, except on heritage trains, such as the Viceroy Special.

The first locomotives pulled trains on the original segment of the Main Line, on 54 kilometres (34 miles) connecting Colombo and Ambepussa.[1] In 1953, Sri Lanka Railways enhanced its service to more power with diesel locomotives.[2] Since then, various types of diesel locomotives were added to the service.



Class M2D, No. 628 "*Kankesanthurai*" locomotive at Matara Railway Station, ready to haul an express train to Colombo.

Contents

History

Sri Lanka's first railway locomotive was *Leopold*, in 1864. It was one of seven 4-4-0 locomotives built that year for the Ceylon Government Railway by Robert Stephenson and Company (nos. 1–5) and Beyer, Peacock and Company (nos. 6 and 7).[3] Many more steam locomotives were added to the system, through to the 1950s. All the steam locomotives bar three were manufactured in the United Kingdom; the exceptions were three 4-4-0s built at the railway's Maradana Works near Colombo in 1900 and 1905. In 1938, locomotives were reclassified, based on wheel arrangement and gauge. Sub-classification was based on weight, modifications, heating type, boiler capacity, or other features.[4]


Early steam powered train on the hill-country railway line

Throughout its history, Ceylon Government Railway had 410 steam locomotives.[5]

The Railways upgraded its service to diesel locomotives, under the leadership of B. D. Rampala in the mid 1950s.[2] In 1953, the first locomotives from British builder Brush Bagnall were imported. Since then, the Railways have imported locomotives from Canada, Japan, West Germany, India, France, and China[6][7][8]

In the 1990s, Sri Lanka Railways converted the narrow gauge (2 ft 6 in (762 mm)) Kelani Valley line into 5 ft 6 in (1,676 mm) broad gauge. This was the last narrow gauge line left in Sri Lanka, and its conversion to broad gauge put the fleet of narrow gauge locomotives out of use. All operational locomotives in the country today are broad gauge.

As of August 2011, Sri Lanka does not have commercially operational electric locomotives or train sets. Electrification has been proposed, to improve energy efficiency and sustainability.[9]

Liveries

Sri Lanka's locomotives have appeared in several different liveries over the years.

The steam locomotives were mainly black.

With the introduction of diesel locomotives, coloured liveries appeared. Typical for many locomotives is a livery that has thick horizontal bands of dark blue, light blue, silver and a yellow stripe. Also common for many locomotives is a livery of horizontal bands of green, brown, and a yellow stripe. Various other liveries also exist. M6 ICE locomotives have a unique ICE livery of brown and orange.

The DMUs are painted in various liveries, unique to their classes. Typically they feature horizontal bands of colour running their entire length and a solid colour on the front and back ends.

Class M6 No. 788 painted in the M6's unique ICE (Intercity Express) livery

Numbering

Steam locomotives were numbered from 1 upwards, reaching 161 in 1911. Whereafter replacement locomotives were given the same number as the locomotive that they replaced with an "R" prefix; until such time as the old locomotive, now running with an "O" prefix, was finally withdrawn.[10] This system was abandoned in 1928,[10] with new locomotives being numbered from 249 upwards,[11] and reaching 336 by 1940, and 362 in 1951 when the last steam locomotive — a 4-8-0 from W. G. Bagnall — was delivered.[12]

Narrow gauge locomotives were numbered in the same list as broad gauge locomotives. Diesel locomotives and multiple unit numbering started from 500 – an Armstrong Whitworth 122 hp 0-4-0 diesel-electric shunter delivered in 1934[12] – and reached 840 in 1991.[13] and included one locomotive experimentally converted to electric traction.[4][14]

Number plate on class M6 No. 795

Steam locomotives

Steam locomotives were used on regular services until the 1970s.[2][4]

Photo	Class	Numbers	Type	Quantity	Manufacturer	Year	Notes
	—	1–15, 24–25, 28–29, 39–40, 43–47	4-4-0	26	R. Stephenson & Co. (5) Beyer, Peacock & Co. (7) Kitson & Co. (14)	1864–1880	5-foot driving wheels
	—	20–23, 26–27	4-4-0	6	Beyer, Peacock & Co. (4) Kitson & Co. (2)	1868–1872	6-foot driving wheels; 16″×22″ cylinders
	—	63–71, 89–92	4-4-0	13	Dübs & Co.	1892–1895	6-foot driving wheels; 17″×24″ cylinders
	—	16–19, 41–42	0-6-0	6	John Fowler & Co.	1868–1878	
	—	30–31	0-4-0ST	2	R. Stephenson & Co.	1868	Ex Breakwater branch; absorbed in 1874; a third loco was not taken into stock
	—	32–38, 48	4-4-0T	8	R. Stephenson & Co. (3) Kitson & Co. (5)	1876–1880	
	—	30–31, 1 (second)	4-4-0	3	CGR Maradana Works	1900–1905	5-foot driving wheels; 16″×24″ cylinders
	—	163	0-6-0CT	1	Hawthorn, Leslie & Co.	1913	Crane tank
	A1	18–19, 41–42	4-8-0	4	Kitson & Co.	1913–1921	
	A2	155–156	4-8-0	2	Kitson & Co.	1911	renumbered 16–17
	A3	275–278, 296–297, 334–336, 357–362	4-8-0	15	Hunslet Engine Co. (6) W. G. Bagnall (9)	1928–1951	
	B1	4, 30, 242–262, 279–290 294–295 347–342 351–356	4-6-0	49	Beyer, Peacock & Co. (25) Armstrong Whitworth (12) R. Stephenson & Co. (12)	1927–47	"Governor" class – many named; no. 30 *Sir Thomas Maitland*, runs the Viceroy Special service.[4][15]
	B2	1, 3, 25–29, 39–40, 43–47 193–196, 204–213, 222–228	4-6-0	35	Kitson & Co. (3) R. Stephenson & Co. (11) Vulcan Foundry (21)	1925–1925	No. 213 preserved and operational
	B3	8–11, 22, 169–171, 185–192	4-6-0	16	Kitson & Co.	1913–1914	
	B4	72–75, 147–147, 158–159	4-6-0	9	Neilson & Co. (4) Kitson & Co. (5)	1893–1912	
	B5	76–80	4-6-0	5	Neilson & Co. (3) Vulcan Foundry (2)	1894	
	B6	49–62	4-6-0	14	Kitson & Co. (10) Vulcan Foundry (4)	1882–1890	
	B7	81–88	4-6-0	8	Hawthorn Leslie & Co.	1894	
	B8	214–219,	4-6-0	18	Hunslet	1922–	

		239–240			Engine Co. (13) Hawthorn Leslie & Co. (2) Nasmyth, Wilson & Co. (3)	27	
	B9	140–141	4-6-0	2	Hunslet Engine Co.	1908	renumbered 134–135
	B10	109–119	4-6-0	11	Dübs & Co.	1901	
	C1	241, 343–350	2-6-2+2-6-2	9	Beyer, Peacock & Co.	1927, 1945	1945 locos later converted to oil firing
	D1	270–274	2-6-4T	5	R. Stephenson & Co.	1928	“College” class, most named;
	D2						
	D3	12–15, 20–21, 131–139, 150–151, 164–168	2-6-4T	22	R. Stephenson & Co. (20) Hawthorn, Leslie & Co. (2)	1907–1914	131–139 renumbered 32–37, 131–133; 150–151 renumbered 38, 40; 12 rebuilt as class D1 and numbered 298 in 1930; D3 class saturated, reclassified D2 when superheated
	E1	23–24, 93–94, 101 162, 179–183, 197–200	0-6-0T	15	Dübs & Co. (3) North British Loco. Co. (5) Hunslet Engine Co. (7)	1898–1915	Most rebuilt as 0-6-2T; No. 93 built in 1898 is the oldest surviving steam locomotive in the country - now at National railway museum, Kadugannawa
	E1	265–269	0-6-2T	5	R. Stephenson & Co.	1928	
	F2	2, 5–7, 144–157, 172–173	4-4-0	20	Vulcan Foundry (5) North British Loco. Co. (15)	1911–1913	144–151 delivered as 152–154, 157–161; F2 saturated, reclassified F2 when superheated. All scrapped
	F3	95–100, 124–129	4-4-0	12	Dübs & Co. (6) Kitson & Co. (2) North British Loco. Co. (4)	1900–1903	
	H1	293	2-4-0+0-4-2	1	Beyer, Peacock & Co.	1930	Narrow gauge Garratt
	J1	220–221, 263–264, 291–292	4-6-4T	6	Hunslet Engine Co.	1924–1929	Narrow gauge
	J2	142–146, 160–161, 174–178, 184, 201–202	4-6-4T	15	Hunslet Engine Co. (11) North British Loco. Co. (4)	1908–1919	Narrow gauge; 142–146 renumbered 136–140
	K1	102–108	4-4-0T	7	Hunslet Engine Co.	1900–1901	Narrow gauge
	L1	120–123, 130, 203	0-4-2T	6	Sharp, Stewart & Co. (4) Hunslet	1902–1904, 1920	Narrow gauge

					Engine Co. (2)		
	R1	301–313	Steam railcar	13	Sentinel	1925–1927	Some were later fitted with small under-floor diesel units and were reclassified T2
	R2	317–320	Steam railcar	4	Sentinel	1928	Some were later fitted with small under-floor diesel units and were reclassified T2
	R3	321–327	Steam railcar	7	Sentinel	1928	Some were later fitted with small under-floor diesel units and were reclassified T2
	R4	314–316	Steam railcar	3	Clayton	1928	Some were later fitted with small under-floor diesel units and were reclassified T2
	V1	328–330	Steam railcar	3	Sentinel	1927	Narrow gauge
	V2	331–333	Steam railcar	3	Sentinel	1928	Narrow gauge

Diesel locomotives

Class	Type
M	Diesel Electric Locomotives
W	Diesel Hydraulic Locomotives
G & Y	Shunters
N & P	Narrow Gauge Locomotives
S	Diesel Multiple Units
T	Diesel Rail Cars

Class M — Diesel Electric Locomotives[16]

Diesel locomotives of Sri Lanka Railway are categorized into several classes and their sub classes.

Photo	Class	Numbers	Type	Quantity	Manufacturer	Year	Model	Power	Notes
	M1	539–563	A1A-A1A de	25	Brush Bagnall Traction	1952	—	1000 hp	Currently not in service
	M2	569–573 591–595 626–629	A1A-A1A de (12) Bo-Bo (2)	14	General Motors Diesel (12) Electro-Motive Division (2)	1954–1966	G12	1400 hp	Except one (571 Saskatchewan) all others are still in active service
	M3	589–590	Bo-Bo de	2	Sri Lankan railways	1956–1958		360 hp	Engines (180 hp × 2) taken from S1 class
	M4	743–756	Co-Co de	14	Montreal Locomotive Works	1975	MX-620	1750 hp	
	M5	767–782	Bo-Bo de	16	Hitachi	1979		1150 hp	M5A: Re-engined locally using MTU V12 in 1991; M5B: Re-engined locally using Paxman V12 in 1997; M5C: Re-engined locally using Caterpillar 3516 DITA.
	M6	783–798	A1A-A1A de	16	Thyssen-Henschel	1979–1980	G22	1650 hp	
	M7	799–814	Bo-Bo de	16	Brush Traction	1981		1000 hp	
	M8	M8 (841-848), M8A (877,878)	Co-Co de	M8 (8), M8A (2)	Banaras Locomotive Works	M8 (1995), M8A (2001)	WDM-2	M8 (2600 hp), M8A (1950 hp)	Sub Class M8A: Only 2 locomotives were introduced
	M9	864–873	Co-Co de	10	Alstom	2000	AD32C	1800 hp	Several units out of service shortly after introduction due to cost of spares and repair.
	M10	M10 (914-916), M10A (940-945)	Co-Co de	M10 (3), M10A (6)	Banaras Locomotive Works	2012	WDM3D (With Alco 251 series 12 diesel engine)	2300 hp	Sub class M10A was introduced in 2013 which is a technical variant.[17]

	M11	M11 (949-958),	Co-Co	M11 (10)	Banaras Locomotive Works	2018	WDG4D (With EMD 12-710 diesel engine)	3000 hp	2 out of 10 are currently in use

Class W — Diesel Hydraulic Locomotives[14]

Photo	Class	Numbers	Type	Quantity	Manufacturer	Year	Model	Power	Notes
	W1	630–674	B-B dh	45	Rheinstahl Henschel	1968–1969		1150 hp	10 rebuilt with Caterpillar engines and reclassified W3. Only 2 locomotives are in operation.
	W2	703–716, 729	B-B dh	15	LEW	1968–Present		1500 hp	729 ex demonstrator, ran as DR V150.001; imported 1970. Several re-furbished and in operation.
	W3	631…674	B-B dh	10	Sri Lankan Railways	1997–Present		1150 hp	10 rebuilt from class W1 with Caterpillar engines. Mainly used in up country line.

Classes G and Y — Shunters [18]

Photo	Class	Numbers	Type	Quantity	Manufacturer	Year	Model	Power	Notes
	G1	500	0–4–0 de	1	Armstrong Whitworth	1934 - 2006		122 hp	Sulzer engine. Not in use.
	G2	531–538	Bo-Bo de	8	North British Loco. Co.	1950-2000		625 hp	Paxman V8 engine. Not in use.
	Y	675–702	0-6-0 dh	28	Hunslet Engine Co.	1968-1973		530 hp	Still in operation.
	Y1	721–728	D dh	8	Sri Lanka Railways	1972–1973			Paxman V12 engine. Not in operation.

Classes N and P — Narrow Gauge Locomotives [14]

Photo	Class	Numbers	Type	Quantity	Manufacturer	Year	Model	Power	Notes
	N1	564–568	1C1 dh	5	Krupp	1952–53		500 hp	Not in use.
	N2	730–732	B-B dh	3	Kawasaki	1973		600 hp	GM Detroit Diesel V16 engine. Ordered by Sri Lanka Veneers & Plywood. Not in use.
	P1	527–530	0-6-0 dm	4	Hunslet Engine Co.	1950		120 hp	Not in use.

Note: One class N2 locomotive was re-classified as Class E1 after fitting with Alstom pantographs, to be run under electric power. Not to be confused with the steam locomotive E1, this electric locomotive is not in commercial use. One class P1 locomotive was at Viharamahadevi (Victoria) Amusement Park[14]

Class S - Diesel Push Pull Trains [8]

S1–S8 Diesel Hydraulic Multiple Units, S9–S14, S14A Diesel Electric & Electro-Diesel Multiple Units

Photo	Class	Numbers	Type	Quantity	Manufacturer	Year	Model	Power	Notes
	S1	501–503	4-car	3	English Electric	1938		400 hp	Named *Silver Foam*, *Silver Spray*, and *Silver Mist*. Not in operation, and power cars scrapped.
	S2	574–588		15	Schindler Carriage and Wagon	1958		500 hp	Not in operation and the power cars were scrapped.
	S3	596–620		25	Maschinenfabrik Augsburg-Nürnberg, (MAN)	1959		880 hp	Not in operation.
	S4	621–624		5	Maschinenfabrik Augsburg-Nürnberg, (MAN)	1961		1000 hp	Out of service.
	S5	717–720	5-car	2 sets	Hitachi	1970		880 hp	Hitachi Tourist excursion train. Now one is in Airport Express service, operated by *Airport & Aviation Services (Sri Lanka) Limited*.
	S6	733–742		10	Hitachi	1974		1150 hp	Very similar in appearance to S7. Operated mainly on the broad gauged Kelani Valley line. Currently used as presidential train.
	S7	757–766		10	Hitachi	1977		1000 hp	Very similar in appearance to S6. Operated mainly on the broad gauged Kelani Valley line. Not in regular operations.
	S8	821–840		20	Hyundai	1991		1150 hp	Currently in operation.
	S9	849–863		20	CSR	2000		1150 hp	Currently in operation.
	S10	879-893		15	CSR	2008			Currently in operation.
	S11	894–913		20	RITES Ltd	2011–2012		1360 hp	[19] Designed with multi class accommodation.
	S12	917–939		22	CSR	2012		2000 hp	Imported in two variants, one for run on commuter services and other run on long distance services.
	S13	959–970		6 (double sets)	ICF	2018-2019		1800 hp	

									
	S14	971–988		9 sets (2 power cars per set)	CRRC Qingdao Sifang	2019-2020		1950 hp	
	S14A	989–992		4(power cars)	CRRC Qingdao Sifang	2019-2020		1950 hp	

Class T - Diesel Rail Cars [14]

The various Railbus units that are currently operated are not listed below.

Photo	Class	Numbers	Type	Quantity	Manufacturer	Year	Model	Power	Notes
	T1	504–526		23	English Electric	1947		200 hp	Coupled in Twin Units. Not in use.
	T2					(1950)			Converted steam rail car in 1950. Not in use
	Locally built rail buses	RB1 to ..	Rail Bus		SLR Rathmalana Works	(1995)	Based on Tata & Ashok Leyland Buses		A total of 14 Rail Buses were built between 1995 and 2002 with numbers RB1 to RB14.

Other Locomotives

Some other diesel locomotives (typically shunters) are available and operated in Sri Lanka other than the locomotives and shunters owned by Sri Lanka Railways. Some are the locomotives owned by Sri Lanka Ports Authority and Holcim Sri Lanka limited.

Photo	Owner	Locomotives	Quantity	Type	Manufacturer	Year	Model	Power	Notes
	Sri Lanka Ports Authority			19 (3 in operation)	Andrew Barclay				
	Holcim Sri Lanka Limited	Deutz shunters (03), Hunslet shunter (01), Banaras Locomotive Works locomotives (02), Refurbished Beaver shunters (04), SAN locomotive (01)		All are diesel hydraulic type except DLW locomotive which is diesel electric.					Some are not in use. However this limited cater locomotives from SLR for some services.

Locomotives and train sets on order

▪ Another 2 WDG4D locomotives are to be arrived

▪ In February 2018, local newspapers and news websites reported that General Electric company, USA won the tender for 10 diesel electric locomotives for the use of upcountry railways.

• In September 2018, Sri Lankan Railway ordered 160 passenger coaches from India under $318M line of credit given by India. The deal also included 20 container carriers and 30 fuel tank wagons.

See also

- Sri Lanka Railways
- Locomotives in India

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External links

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