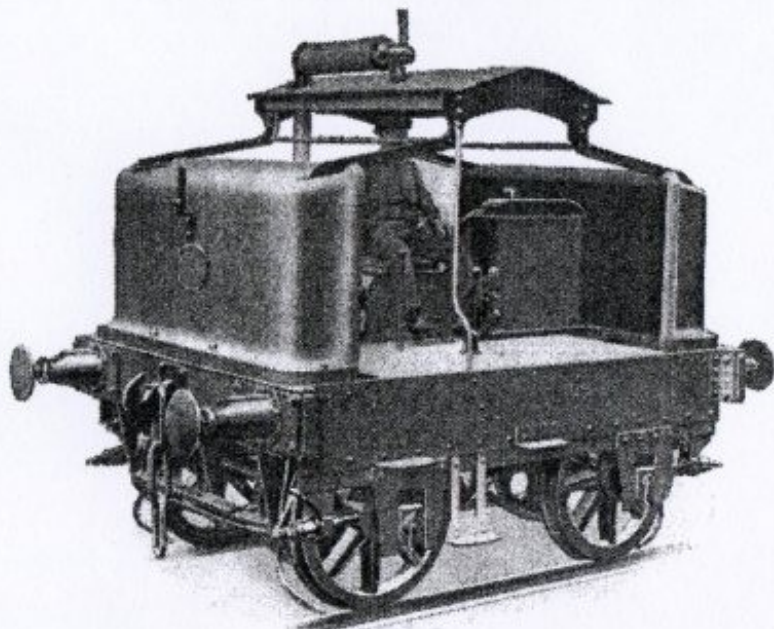


SIMPLEX

TELEPHONE: BEDFORD 2110.

TELEGRAMS & CABLES: SIMPLEX, BEDFORD.

1932 Catalogue
(Published Aug/2000
Moxley railway
Trust & Alan
Keef Ltd)



40/50 B.H.P. PETROL LOCOMOTIVE.

RAIL GAUGE 4' 8 $\frac{1}{2}$ "

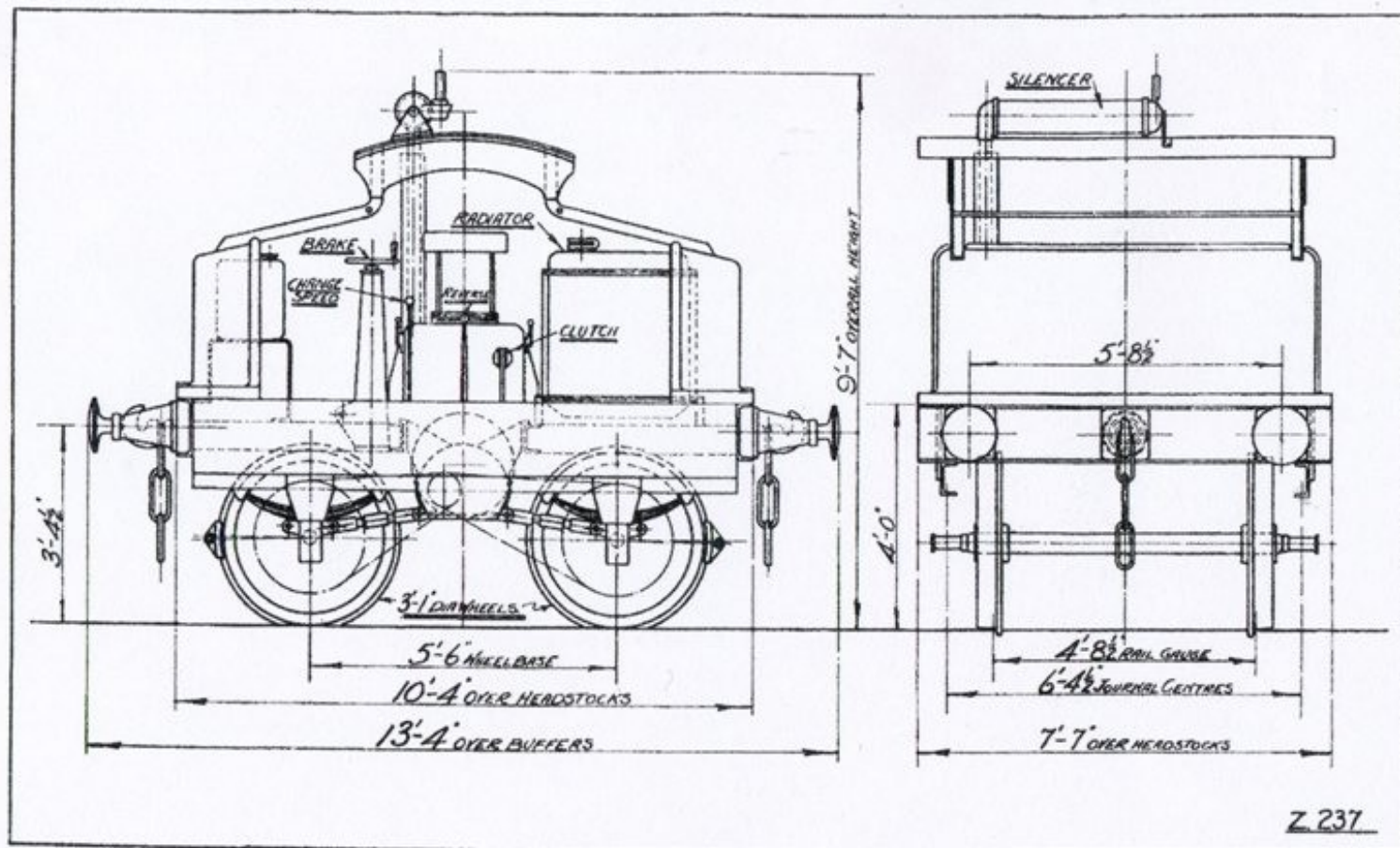
WEIGHT 10 TONS.

Specification Ref. No. 32/1310.

MOTOR RAIL LTD

LIGHT RAILWAY ENGINEERS.

Simplex Works, Bedford, England.



GUARANTEE.

In lieu of any warranty implied by law, we expressly guarantee to repair or supply new, any parts which, within a period not exceeding **twelve months** from delivery, may prove defective through bad material or workmanship, providing such parts are sent for inspection at our Works. All goods are supplied on condition that we shall not be liable for any loss incurred through stoppages, nor for any subsequential damages. The details of the illustrations are subject to modifications as improvements are introduced. The dimensions, weights, and other particulars are carefully stated, but must be taken as approximate only.

SPECIFICATION.

ENGINE

Four cylinder water cooled Engine. Cylinders of best close grained cast iron, bore 120 m/m, stroke 140 m/m, fitted with Ricardo detachable heads, and developing 45 B.H.P. at 1,000 revs. per min. at sea level. All bearings of liberal dimensions, provided with automatic forced feed lubrication from geared oil pump in Sump, the oil being constantly pumped through oil filters. Oil level indicator and large oil filling aperture provided. Ignition is made by means of High Tension Magneto, provided with advance lever. Valves of the usual poppet type, provided with adjustable tappets. Both inlet and exhaust valves, springs, etc., being interchangeable.

TRANSMISSION

Patent change speed gearbox, providing two speeds in both directions. The whole gear-box is completely enclosed and running in oil. The shafts are mounted on ball and roller bearings properly housed, and the gears are made of high grade steel, carefully hardened and ground where necessary. From this gear-box heavy roller chains take the drive to each axle, simple provision being made for adjustment.

CLUTCH

Of the single plate type of large diameter, ensuring smooth running, easy gear changing, absence of slip and maximum life of clutch fabric.

WHEELS AND AXLES

Heavy disc type wheels, with steel tyres turned on flanges and tread, 3' 1" diameter. The wheels are pressed hydraulically on to steel axles which are provided with journals of ample bearing surface and strength.

AXLEBOXES

Railway type, with gunmetal bearings for oil lubrication. The bearings are removable by means of a check plate without removing the axlebox. The lubrication is effected by a wick type feeder lightly pressed against the lower half of the journal by springs. End dust shields are provided.

SPRINGS

Laminated. Oil hardening steel of Silico-Manganese quality.

FRAMEWORK

Riveted constructional steel work, well cleated and gusseted.

BRAKE

Standard screw brake operating cast iron brake blocks on all wheels.

BUFFER & COUPLING

Four Spring Plunger Buffers and two Central Spring Couplings.

CONTROL

Control levers arranged conveniently for use by the driver in sitting position for control in either direction.

RADIATOR

The engine is cooled by means of a radiator situated longitudinally on the Locomotive, through which the water from the water jacket of the cylinders is forced by a direct coupled centrifugal pump, and cooled by means of a fan, the cooling effect being equally efficient whichever way the Locomotive is travelling.

POWER UNIT COVERS

Steel hinged power unit casing providing easy and full accessibility.

FUEL TANK

Petrol tank of large capacity with gravity feed.

10 ton
Data

SANDING DEVICE

Sanding gear to deliver sand to all wheels.

WARNING SIGNAL

Powerful exhaust whistle is fitted on the silencer, and operated by handle from inside the canopy.

SPEEDS

With the engine running normally, at 1,000 r.p.m., there are two speeds in either direction:—

3 miles per hour on low gear.

7.2 miles per hour on top gear.

ACCELERATION

The above speeds can be readily increased 50% by accelerating the Engine.

HAULAGE CAPACITY

Frictional Resistance	Locomotive Speeds		Normal Engine Speed	Tractive Effort	TONS HAULED									
					On Level	Up 1 in 200	Up 1 in 100	Up 1 in 80	Up 1 in 70	Up 1 in 60	Up 1 in 50	Up 1 in 40	Up 1 in 30	Up 1 in 20
Per ton	Gear	m.p.h.	r.p.m.	lbs.	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
15 lbs.	Low	3	1000	4750	307	171	117	100	91	81	69	57	43	27
	Top	7.2	1000	1979	122	66	43	36	32	28	23	18	12	5½
22 lbs.	Low	3	1000	4750	206	133	97	85	78	70	61	51	39	25
	Top	7.2	1000	1979	80	49	35	30	27	23	20	15	10½	4½

Adhesion required for above haulage—475 lbs. per ton.

FRICITIONAL RESISTANCE may be based on the following conditions:—

Use 15 lbs. per ton with easy running trucks and good track.

Use 22 lbs. per ton with harder running trucks or indifferent track.

FUEL CONSUMPTION

Consumption of Petrol .64 pints per B.H.P. per hour.

PAINTING

The Locomotive would be suitably painted or finished to suit the requirements of clients.

PACKING SPECIFICATION

One package, 10' 6" × 8' 0" × 7' 6".

Gross weight, 11 tons.

Shipping measurement, 15 tons.

MATERIAL AND WORKMANSHIP ARE ENTIRELY BRITISH.