

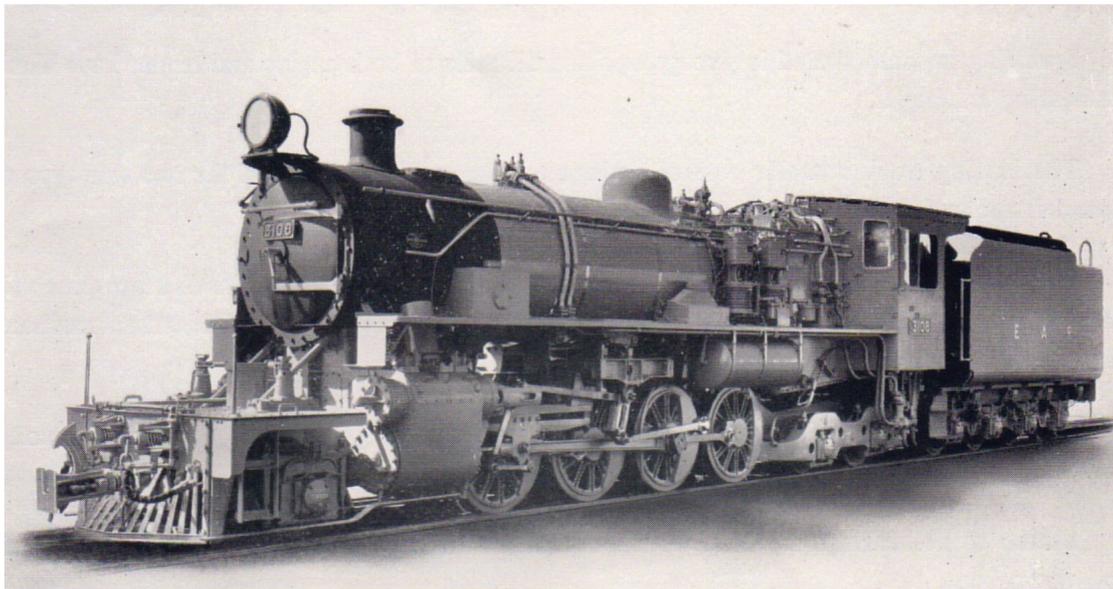
EAST AFRICAN RAILWAYS



Metre Gauge

1955

2-8-4 (31 Class)



Cylinders.....	(2) 17 in. Diam. x 26 in. Stroke	Maximum Axleload.....	11.35 tons
Diameter Coupled Wheels.....	4 ft. 0 in.	Weight :	
Working Pressure.....	200 lb.	Engine in Working Order.....	70.15 "
Tractive Effort at 85% Pressure.....	26,620 lb.	Tender.....	45.0 "
		Total.....	115.15 "

In 1955 46 locomotives of new type were built by Vulcan for general service on all lines of the East African Railways and Harbours. Although the design is based on the original Nigerian River Class, the boiler and cylinders are somewhat smaller and these factors, together with a 2-8-4 wheel arrangement, permit an axle-load of only 11.35 tons.

These engines are all oil-fired with two burners side by side at the front end of the firebox and are primarily for service in Kenya and Uganda. All of them are equipped with Westinghouse brakes, but five are provided with vacuum brake valves also so that they may be used in Tanganyika when required.

The boiler has a Belpaire firebox and all-welded steel inner shell and the 21 element superheater is equipped with a multi-valve regulator.



The 3¼ in. bar frames run the full length of the engine and are set in at both front and rear ends to allow for full swing over on the minimum curve of 330 ft. radius with ½ in. gauge widening.

Springing is compensated in two groups and all axles of both engine and tender have Timken roller-bearing axleboxes.

The leading truck has side control springs and the trailing truck is of the two-axle type with cast steel frame and rocker centering gear at each rear corner.

Each cast iron cylinder is made integral with half the smokebox saddle and bye-pass valves are located on the steamchests. Oil is fed to the valves and pistons by a Silvertown mechanical lubricator.

The main driving crankpins have Timken roller-bearings, but all the other crankpins revolve in gun-metal bushes, oil lubricated.

Skefko roller-bearings are fitted to the eccentric rods and the rest of the motion is lubricated by oil throughout.

General accessories include two Davies & Metcalfe No. 9 monitor injectors, two 3 in. Ross Pop safety valves, Klinger water gauges, Alfloc continuous blow-down valve, Everlasting blow-off cocks, M.C.A. couplers, Smiths-Stone speedometer, Lambert's sanding, and Stone's electric lighting.

The tender water and fuel tanks are of rivetted and welded construction and carry 4,130 gallons of water and 74 tons of oil fuel respectively.

These 46 locomotives are arranged for easy conversion from metre to 3 ft. 6 in. gauge if required, and all of them were shipped fully erected to the port of Mombasa.