

ALCO

ALCO
4300/4000 HP
CENTURY 643 (4360/4060 CV)
DIESEL-HYDRAULIC
LOCOMOTIVE

GENERAL SPECIFICATION DH-643

HIGH SPEED FREIGHT SIX AXLE DIESEL-HYDRAULIC LOCOMOTIVE
WITH 4060 CV NET INPUT TO THE GENERATOR



ALCO 4300/4000 HP

CENTURY 643 (4360/4060 CV)

DIESEL-HYDRAULIC LOCOMOTIVE

- Unit for main or branch-line freight service, especially suited for applications where high speed and very high continuous tractive effort are required.
- Available for standard gauge.
- Built for axle loads of 28,6 metric tons.
- Equipped with high-adhesion trimount trucks

DH-643 General Characteristics

Diesel Engine: 2 ALCO 12-251-C 2180/2030 CV each (2150/2000 HP each)

Wheel Arrangement: Co-Co

Principal Dimensions:

Height (maximum) — 4801 mm (15' 9")

Width (maximum) — 3089 mm (10' 1 5/8")

Length (over body) — 21793 mm (71' 6")

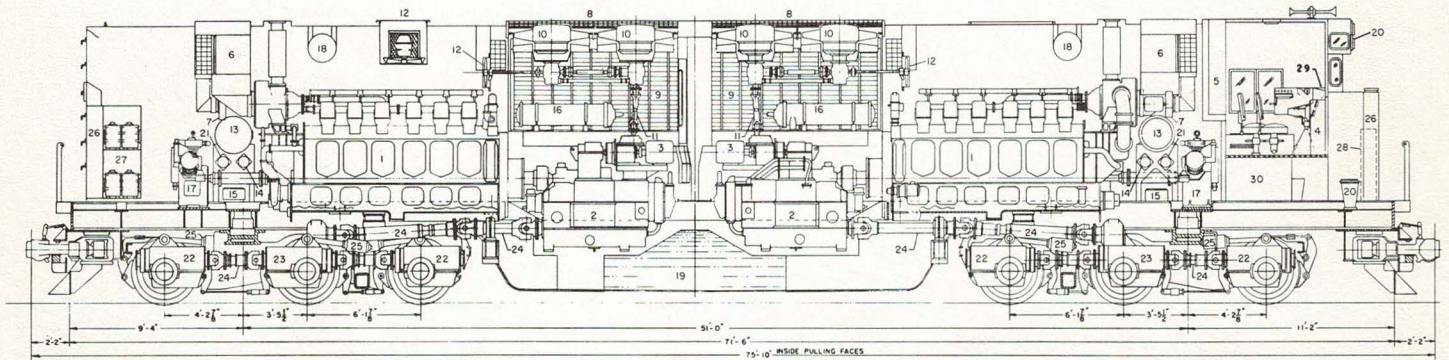
Basic Locomotive Weight: 171 460 Kg. (378,000 lbs.)

Axle Load: 28 577 Kg. (63,000 lbs.)

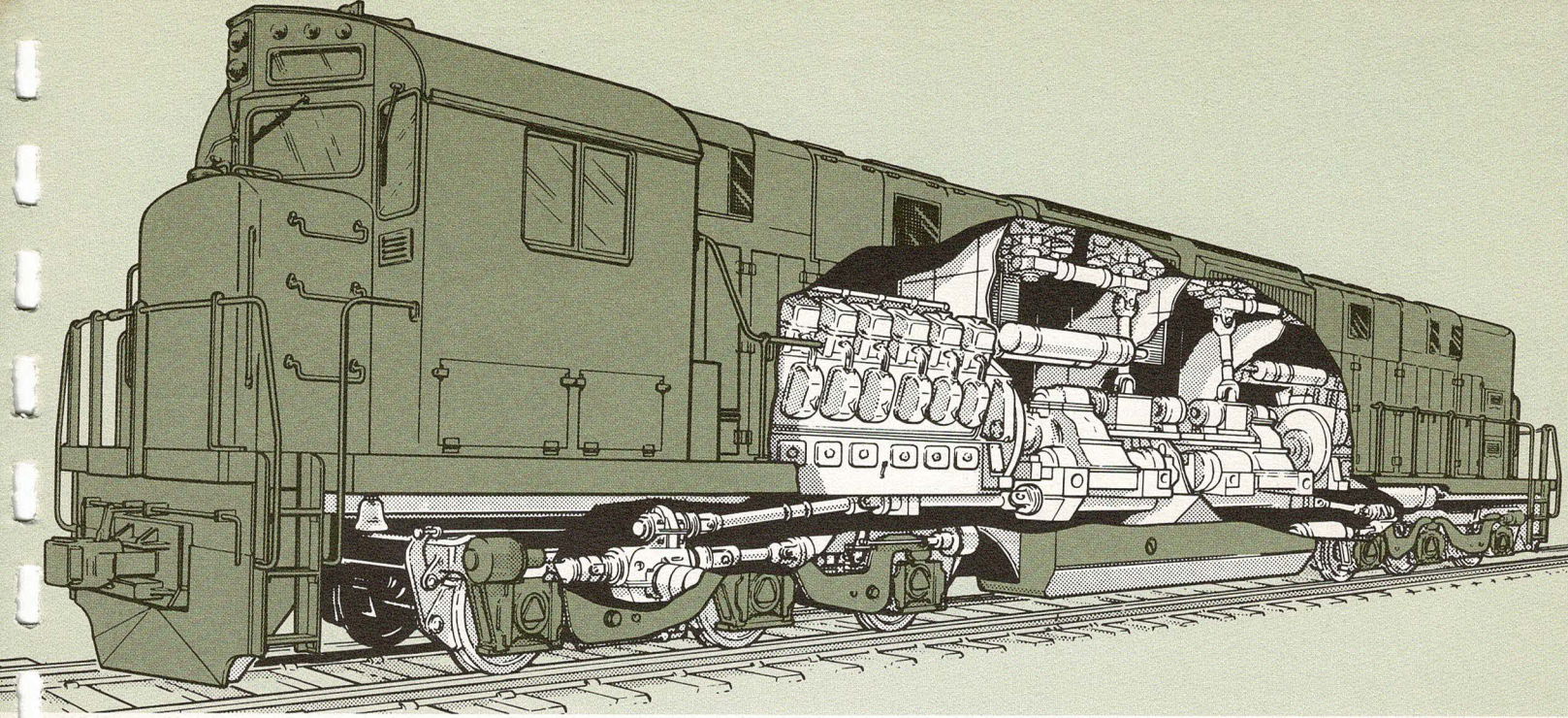
Wheel Diameter Basic: 1016 mm (40")

Fuel Oil Capacity Basic: 15 140 l. (4,000 U.S. Gallons); (3,340 Imp. Gallons)

Voith Turbo Transmission L 830R U: Standard Gauge

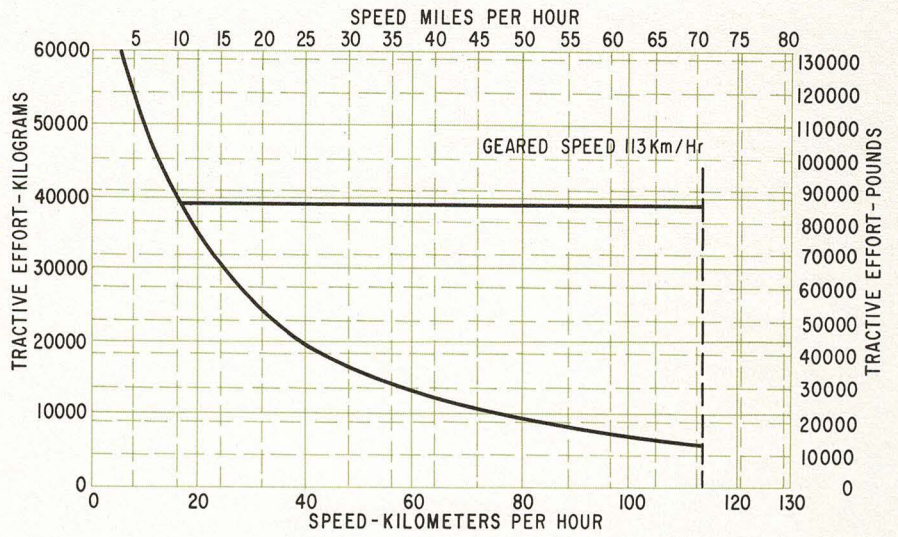


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|---|-------------------------------------|---------------------------------|-------------------------|
| 1. Engine | 9. Radiator | 17. Air Compressor | 24. Cardan Shaft |
| 2. Hydraulic Transmission | 10. Radiator Fan | 18. Engine Water Expansion Tank | 25. Torque Reaction Arm |
| 3. Auxiliary Generator | 11. Radiator Fan Drive Shaft | 19. Fuel Tank | 26. Sand Box |
| 4. Control Stand | 12. Engine Hood Ventilator | 20. Headlight | 27. Batteries |
| 5. Electrical Control Equipment | 13. Lubricating Oil Filter | 21. Fuel Oil Filter | 28. Hand Brake |
| 6. Mechanical Air Cleaner (Engine Air) | 14. Lubricating Oil Strainer | 22. Axle Gear Box | 29. Cab Heater |
| 7. Air Cleaner Exhauster | 15. Lubricating Oil Cooler | 23. Axle Gear Box, Intermediate | 30. Brake Equipment |
| 8. Engine and Transmission Cooling Unit | 16. Transmission Oil Heat Exchanger | | |



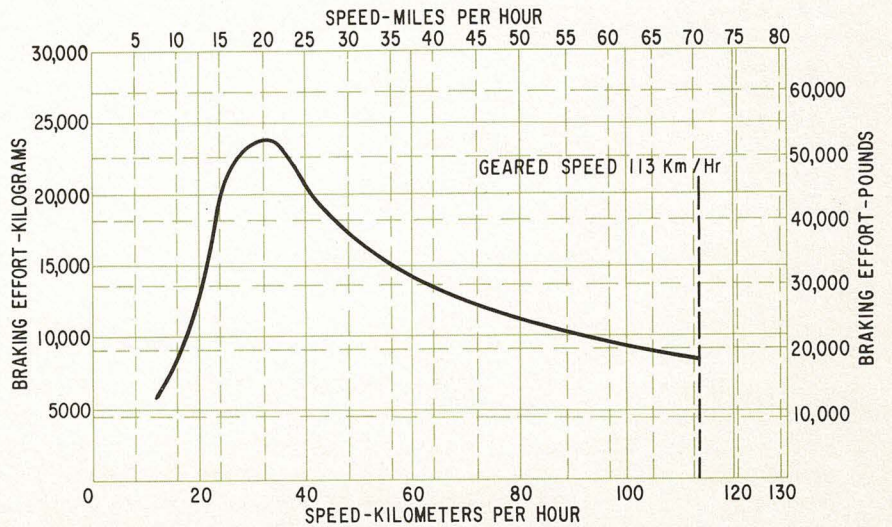
TRACTIVE EFFORT

TOP GEARED SPEED		MAXIMUM CONTINUOUS TRACTIVE EFFORT			
Km/h.	MPH	Kg.	Lbs.	Km/h.	MPH
WITH 1016 mm (40") wheels					
113	70	39 240	86,500	16,0	10.0

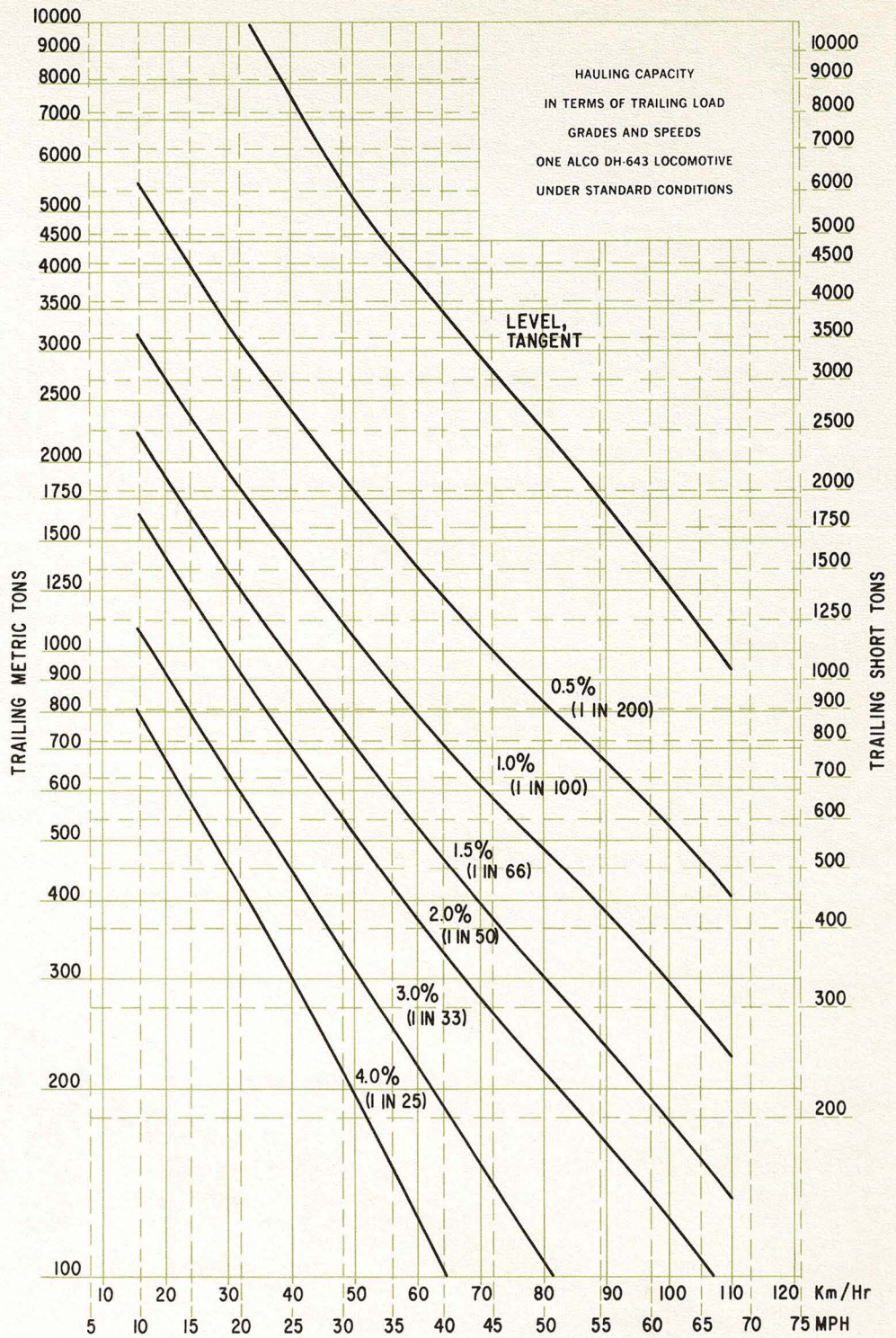


HYDRODYNAMIC BRAKING EFFORT

BRAKE PEAK SPEED		PEAK BRAKING EFFORT	
Km/h.	MPH	Kg.	Lbs.
WITH 1016 mm (40") wheels			
31,4	19.5	23 950	52,800



TONNAGE RATING



NOTE:

The hauling capacity shown above is for 4 axle 50 metric ton freight wagons, in good condition, and has been calculated by Davis' formula, for standard conditions: Sea level, 760 mm. Hg. (29.92"), 16°C. intake temperature (60°F) and fuel of 10850 Cal/Kg. (19,500 BTU/lb.) meeting ASTM D-2 specification.

*Higher calorific value

FOREIGN ASSOCIATES AND LICENSEES

- Australia: A. E. Goodwin, Ltd., Sydney N. S. W., Australia
- Canada: Montreal Locomotive Works, Montreal, Quebec
- England: A. E. I. (Associated Electrical Industries), Manchester, England
- France: Forges et Chantiers de la Méditerranée, Paris, France
- India: Diesel Locomotive Works, Varanasi, U.P., India
- Spain: Cia. Euskalduna, Madrid, Spain



ALCO PRODUCTS, INC., 530 FIFTH AVENUE, NEW YORK, N. Y., 10036

Cable Address: Locomotive, New York