

Comparison electric – thermo-electric

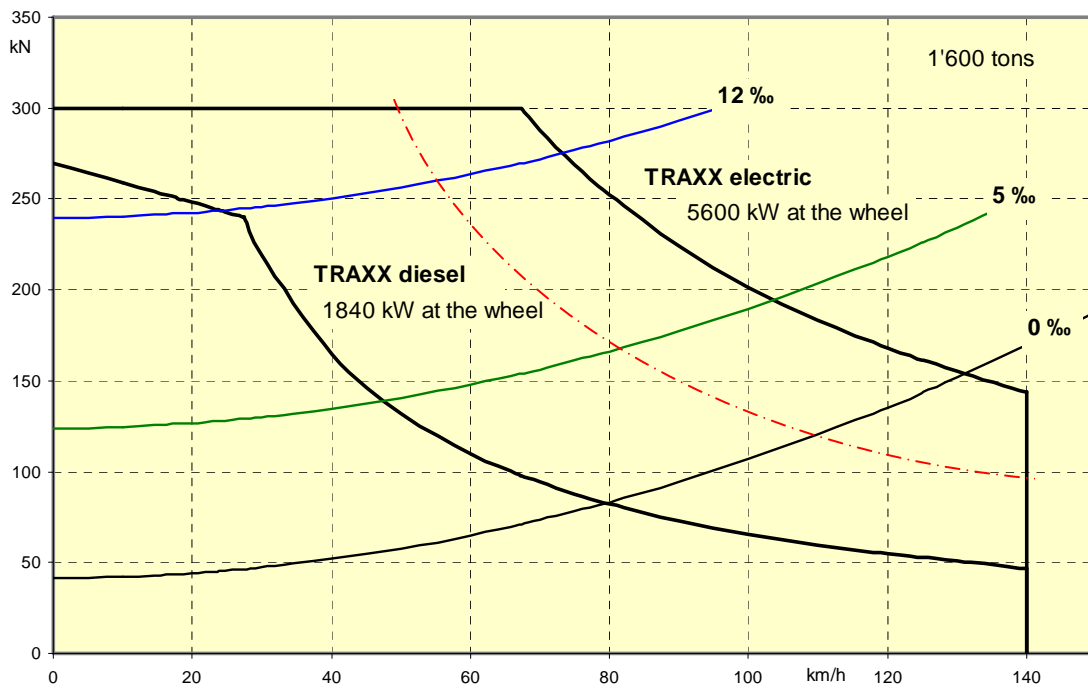


Fig. 4. 229 Locomotives of same weight and same design: electric and diesel (*doc. Bombardier*).

If a diesel-electric motor vehicle is compared with a pure-electric, we see that the performances in continuous regime are higher for an electric locomotive which can develop 4,2 MW (red curve in dash-dotted line) than a diesel-electric limited at 1,84 MW by the power of its diesel motor (2,2 MW). In addition, an electric locomotive can be asked for a higher power during a short time (black curve: about 10 minutes). A 82 tons locomotive can develop 5600 kW but a diesel-electric one only 1840 kW.

The multiple-unit service is more frequent with diesel. The acceleration is lower with trains in diesel-electric traction.