



AXLE TEST RIG

Description

CSA Group Leyland's axle rig can be used for the performance, efficiency and durability testing of axles, transmissions and differentials. The motive power is provided by an electric motor and multi-speed gearbox providing full speed and torque control. A test axle is installed between two slave gearboxes that connect to the axle output shafts; the output power transmitted by the axle is then absorbed by an eddy current dynamometer attached to the slave gearboxes. Finally, slave gearboxes are connected together to maintain a constant speed from each axle drive shaft.

Typical Applications

- Efficiency measurement
- Lubrication studies
- Speed & torque characteristic
- Temperature surveys
- Durability running to fixed cycle, block programme or RLD (Road Load Data)

Specification

- Drive: 250kW AC Machine (up to 4,000 rpm and 800Nm Primary Torque)
- 9-Speed slave gearbox for a wide range of axle input speeds and torques
- Axle output torque up to 37,500Nm per side
- Axle input torque up to 7,500Nm
- Interchangeable ratio for wheel station reduction boxes of 5.55 or 21.65
- Control: Speed / Torque Steady State or Real Time
- High Accuracy (0.01% FSD) GIF torque transducers on the input and both outputs for efficiency measurements
- 700 kW EC Dynamometer for high torque reaction at low output speeds