

ProLINK RegenSIM

Regenerative Braking Simulation









Product Overview

LINK, through the advent of RegenSim, has developed the capability to simulate regenerative braking conditions on inertia brake dynamometers.

RegenSim enables the ProLINK control system to act as a vehicle's Electronic Control Unit (ECU), distributing the amount of work to be done between the friction brake and the regenerative source.

Key Benefits

- LINK's RegenSim is the most advanced regenerative braking testing software available the market today.
- Can be added to any test sequence by entering basic hybrid vehicle parameters.
- The current ProLINK control system is
- flexible to take in different vehicle inputs to simulate regenerative braking profiles.
- ProLINK RegenSim is able to control to a constant deceleration, simulating the regenerative operation from the vehicle.
- The dynamometer provides accurate control even in durations in which there is no work performed by the friction brake.















What is Regenerative **Braking?**

Developments in hybrid powertrain technology within the automotive industry have placed new demands on brake manufacturers to incorporate regenerative braking capabilities into their systems. Operating within a hybrid system, the friction brake is no longer the only source that dissipates energy to decelerate the vehicle mass. In these systems, the conventional friction brake works in tandem with another regenerative source, whether it be an electric hybrid vehicle that uses an electric motor/ generator, a hydraulic hybrid vehicle that uses a hydraulic pump/accumulator, or another application which similarly captures and later reuses the energy.

These developments have created new requirements within the testing laboratory to accurately reproduce vehicle braking operations. The challenge is to dynamically control the vehicle load witnessed at the brake assembly during a single apply by absorbing a proportion of the energy through another means.

Link Engineering Company

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