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Green Wheel Loader – reducing fuel consumption through optimized drive technology and innovative operating strategies

The increase of machine productivity and operator comfort as well as the enhancement of energy efficiency and compliance to exhaust emission regulations are currently the main engineering goals of mobile machinery manufacturers.

Within the collaborative research project “TEAM - Green Wheel Loader” a new energy efficient hybrid drive train for a 24-ton wheel loader with 200 kW installed engine power is developed in order to demonstrate the potential efficiency improvement by use of novel drive technology. An optimized diesel engine, a power-split transmission for the travel drive and a displacement controlled attachment drive are coupled with a hydrostatic parallel hybrid system to replace the conventional drive train.



