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Case IH SCR technology excels in Nebraska tests

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Preliminary Nebraska Tractor Test Lab results indicate that new Tier 4A Case IH tractors with Selective Catalytic Reduction (SCR) technology have set new industry records for fuel-efficient power.

In all, the tests confirmed several advantages for the new Case IH tractors, including:

- Record-breaking fuel efficiency of up to 12 percent advantage over competitors' Tier 3 performance
- Up to 495 drawbar horsepower — a new record for handling today's larger implements
- Lower operating cost through enhanced fluid efficiency

“These preliminary Nebraska Test results provide compelling answers to questions producers have asked about new Tier 4A emissions regulations,” said Tom Dean, high-horsepower tractor marketing manager, Case IH North America. “Producers should be reassured to know these answers translate to Case IH helping them reduce operating costs — and increase power and productivity.”

While many competitors, including Deere, have publicly stated they plan to merely match their existing Tier 3 efficiency performance, the Case IH Tier 4A tractors substantially exceed previous Tier 3 benchmarks.

The Nebraska Tests measured maximum drawbar horsepower and fuel efficiency for Tier 4A Case IH Steiger and Magnum tractors along with Tier 3 compliant tractors in their category, including Deere models. Highlights of preliminary results indicate:

- The new Steiger and Magnum tractors provide up to six percent more drawbar horsepower and are up to 12 percent more fuel efficient than the competition.

- The new Steiger 600 recorded 495 maximum drawbar horsepower, while the Magnum 340 recorded 269 maximum drawbar horsepower. Both results are higher than any Tier 3 tractor in their class.
- Measured at maximum power in horsepower-hours-per-gallon, the new Tier 4A Steiger 600 tested 10 percent more fuel efficient than the Deere 9630 at maximum drawbar pull, and 12 percent more fuel efficient at 75 percent drawbar pull maximum power.
- The new Steiger 450 tested six percent more fuel efficient than the Deere 9430 at maximum drawbar pull, 11 percent more fuel efficient at 75 percent drawbar pull maximum power, and six percent more fuel efficient during standard speed PTO operation.
- The new Magnum 340 tested six percent more fuel efficient than the Deere 8345R at maximum drawbar pull, eight percent more fuel efficient at 75 percent drawbar pull maximum power, and six percent more fuel efficient during standard speed PTO operation.

“The fuel efficiency and enhanced power in the new Case IH SCR tractors provide producers with greater economies of scale and more profit-per-acre,” said Dean.

The new Steiger and Magnum tractors with SCR technology treat emissions outside the engine with Diesel Exhaust Fluid (DEF). This technology has become an industry-standard for newer Tier 4A diesel engines, including many diesel pick-up trucks and on-highway tractor/trailer rigs.

Unlike Exhaust Gas Recirculation (EGR) systems, SCR technology routes clean and cool air to the engine. This allows Case IH to fine-tune their engines’ combustion process for improved fuel efficiency, lower engine temperatures, increased reliability and longer maintenance intervals. It also allows producers to avoid having to deal with issues such as the limiting of engine idling, which some manufacturers with EGR have recommended to minimize particulate filter regeneration and servicing.

"By avoiding EGR, we not only improve fuel efficiency, but also keep the engine oil cleaner, which allows extended oil change intervals and longer engine life," said Dean. The result is lower operating cost, because DEF usage is more than offset by enhanced fuel efficiency and fewer oil changes, providing an improved total overall fluid efficiency.

SCR puts producers in a position to be ready for final Tier 4B regulations in 2014. Many industry observers have acknowledged that SCR will become the future standard for farm tractors.

The new Steiger and Magnum tractors offer a host of new features beyond fuel-saving SCR technology. Both have new cab features including a new, ergonomic MultiControl armrest console and AFS Pro 700 color display, along with a new suspended cab option. Other best-in-class features include increased power ratings up to 670 peak horsepower, hydraulics up to 113 gallons-per-minute, and Quadtrac undercarriage option for increased traction and flotation in the field.