Trio of New EcoTec3 Engine Powers 2014 Chevy Silverado, GMC Sierra

In today's hugely competitive light-duty pickup truck market, customers want trucks that are more powerful, have more torque, yet can deliver greater fuel economy than ever.

Thanks to General Motors' trio of new EcoTec3 engines, GM officials say the automaker's 2014 Chevrolet Silverado 1500 and GMC Sierra 1500 will be able to deliver on buyers' expectations in all three areas.

The new engine family includes a 4.3-liter V6, a 5.3-liter V8 and a 6.2-liter V8. The name EcoTec3 refers to the three state-of-the-art technologies – direct injection, cylinder deactivation and continuously variable valve timing – that, according to GM officials, combine to make these trucks more powerful while going further with each gallon of fuel.

"We believe these are the most technologically advanced engines ever offered in light-duty pickups, and they are 100 percent truck – specifically designed for the way customers use trucks in the real world," said Jordan Lee, Small Engine Block chief engineer and program manager.

"They have all the power and torque needed to confidently handle the tough jobs, and they seamlessly switch to four-cylinder mode to increase efficiency during light-load driving.

"This is technology no other truck maker can match, and we offer it in every one of our EcoTec3 engines, for every one of our customers," Lee continued. "It is not an extra cost feature. You get our best and most sophisticated technology regardless of trim level."

All three new engines are matched with GM's six-speed transmissions in the United States and Canada.

Central to the performance of the EcoTek3 engine family is an advanced combustion system that is able to maximize the potential of the direct fuel injection system, cylinder deactivation, continuously variable valve timing and other advanced technologies. According to GM officials, these larger displacement EcoTec3 engines are able to produce maximum power under heavy loads for extended periods of time, such as towing a heavy trailer up a steep mountain grade.

At the same time, these engines can switch instantly to more economical, four-cylinder mode when less power is required.

"It gives customers the best of both worlds – a rugged truck engine when they need it, with improved efficiency in light-load driving," said Lee.

This precise combustion control enables the new engines to run with a higher compression ratio – 11.0:1 for versions recommended to run with regular fuel – a proven way to produce more power while simultaneously adding efficiency.

The EcoTec3 engines can maintain this increased efficiency over a broader range of operating conditions, GM officials say. Emissions, they say, are also reduced, especially during cold starts.

The new engines employ direct fuel injection technology, which precisely meters each drop of fuel going into the cylinders. The engines have also been enhanced by a new cylinder head design and a new, sculpted piston to optimize the air/fuel mixing in the engine and control fuel burning to create power.

Another key component of the trio of truck technologies is cylinder deactivation, which uses oil pressure, controlled by the powertrain control module, to deactivate the lifters on selected cylinders, effectively closing the valves on those cylinders.

It deactivates four cylinders on V8 engines and two cylinders on the V6 engines when they are working under light load conditions.

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"GM pioneered cylinder deactivation technology, and we consider it a great technology for im-



2014 4.3L V6 EcoTec3 AFM VVT DI (LV3) for Chevrolet Silverado and GMC Sierra

proving the efficiency of full-size trucks," Lee said.

Based on GM's Small Block engine architecture, the all-new EcoTec3 family of engines also boasts weight-saving aluminum engine blocks; an advanced oiling system that boosts the efficiency of oil delivery based on engine operating conditions; oiljet piston cooling, and PCV-integrated rocker covers, which house a patent-pending integrated positive crankcase ventilation system that, GM officials say, increases oil life, lowers oil consumption and reduces exhaust emissions.

Club GM Reduces Auto Show Tickets

Those wishing to purchase tickets to the upcoming North American International Auto Show, Jan. 19-27, should contact Club GM. Tickets purchased through the club are \$9 for adults, a \$3 savings. They may be purchased at Club GM stores. To learn more about how to order tickets, contact Len Wernette at 248-478-3231.

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