

Americas'

MINES & QUARRIES



Star of the Show Goes to Work

A star was born at MINExpo 2008, and it sure looked the part. Hitachi's latest innovation in mining trucks — the EH3500ACII — had the look of a debutante at her "coming-out" party with its orange body gleaming and its tires waxed to a shiny black. But with the show over, it was time to get a real job. These days you'll find it toiling for Massey Energy in the coal-rich Appalachian Mountains.

"Based on our good experience with Euclid Trucks over the years, and after Massey management toured the Hitachi Truck plant in Japan and saw the EH3500ACII being built, they decided to buy four — the first ones in the United States," says Jim Nagy, Equipment Manager, Southern Division, Massey Energy.

The new Hitachi EH3500ACII combines the time-honored front trailing arm with its NEOCON-E™ Suspension System with the vertical integration of



The IGBT controller, alternator, and AC-drive motors are designed and built by Hitachi.

Hitachi components for the drive system, giving the operator a smooth feel at the steering wheel for greater productivity, while reducing the operations costs through the use of Hitachi's AC-Drive technology to reduce downtime and operating costs.

The HI-Tech cab has a simple, flat-panel dashboard with a 10.4-inch LCD electronic monitor that keeps the operator current on basic operational items like fuel level, oil pressure, and oil temperature — as well

as alarms and faults. The monitor also allows the technician to troubleshoot from the cab. The newly designed air-ride seat and optional semi-active seat, combined with a three-point rubber ISO-mount on the cab, deliver a comfortable ride.

Most importantly, all drive-system components are all Hitachi.

The EH3500ACII employs a time-tested Hitachi-designed-and-built IGBT controller for reliable, consistent operation. The electric-power-generation system and AC-wheel motors are also examples of Hitachi technology and manufacturing expertise.

The EH3500ACII is the first truck in its class to be built by a company that also designs and builds its electric-drive components. Its competitors all depend on suppliers for this technology. Hitachi is one of the largest electronics developers and manufacturers in the world.

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Massey Energy is America’s fourth largest coal company — and the largest in central Appalachia — because of a well-earned reputation for reliable production of coal energy. We’d like to think some of Massey Energy’s reputation for reliability is due to their fleet of Hitachi excavators, which has been on the job since the 1990s.

This fall, their long history with orange equipment translated into their first Hitachi truck order for four EH3500ACII 190-ton class trucks, as discussed on page 1. This ushers in a new era at their Black Castle Mine facility, but we thought you’d like to know more about the machines that laid the groundwork for this momentous occasion — their Hitachi excavators.

“We purchased our first Hitachi excavator in 1994,” says Tom Meikle, president of Black Castle Mine, the leading producer among Massey’s 12 surface mines operating in Appalachia. “It was an EX1800 with a backhoe attachment. It increased our production here at Black Castle to about 760,000 tons per year. In 1997, we bought an EX3500, and this addition brought our production to about 1.6 million tons. Recently, our company invested in an EX5500 and, in conjunction with other changes we made at the mine, has brought our current production level to about 3.2 million tons a year.”

Surface mining in Appalachia today consists primarily of following the geological contours and resulting layers of coal around multiple hilltops, valleys, and watersheds. One can still find many mines, mostly privately owned, following a seam first found by somebody’s granddaddy.



Tom Meikle, President, Black Castle Mine



Jim Nagy, Equipment Manager, Southern Division, Massey Energy

Naturally, community life is located near mine entrances. So, when a heavy-haul convoy rolls in to deliver a new piece of mining equipment, the many ridges and “hollows” that define the Appalachians can create problems, since convoys, motorists, and

on-road coal haulers must share the same winding highways. Fortunately, the Massey Group of mines has not created too many road challenges over the year, thanks to Hitachi reliability.

“We’ve been running the Hitachi EX1800- to EX2500-sized excavators for about 15 years,” says Jim Nagy, equipment manager for Massey’s Southern Division. “Even our high-hour machines continue in the mid-to-high-90 availability range, which is exceptional. As we grow, we add new Hitachis. But so far, they have simply stayed, only to be moved around as needed.”

The company focuses on Hitachi excavators with the backhoe configuration.

“We like the versatility of the backhoe,” notes Meikle. “It can be used for both contour and mountaintop-removal mining operations.” Massey surface mines rarely have a pit situation. Instead they are constantly moving forward, up or around as they follow the twisting coal seams.

At Massey Energy, the ratio is two to one, underground to surface mines.

WHY HITACHI?

“Hitachi makes a great product that is strong and durable,” says Nagy. “We mine seven days a week and need machines that will perform. Based on 15 years of working with Hitachi, they pass the test.”

“We currently have two large 2500s on-site, the first we’ve had since late 2005/early 2006,” says Jimmy Wood, President, Republic Energy, another Massey company. “About three months ago, we purchased the EX2500-6. We’re very pleased.”

Dale Williams, maintenance manager for Republic Energy, has been pleased not only with Hitachi, but with their relationship with their Hitachi dealer. “The reliability of our Hitachi excavators is matched by the service provided by our Hitachi dealer, Rudd Equipment, out of Charleston, West Virginia. On a regular program, they replace hydraulic cylinders and other components, rebuild them in their Charleston facility, and keep them until we need them. They also do a great job of predicting when we should replace other components, such as excavator track, bearings, and other components that have a long lead-time for delivery.”

The Massey Energy mines are serviced by Rudd Equipment Company, Charleston, West Virginia.



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for Massey Energy



Star of the Show

Continued from Page 1

Hitachi is the only truck manufacturer in the world to provide its own IGBT controller, alternator, and wheel motors.



The EH3500ACII trucks are assembled at the new Hitachi Rinko factory in Japan.

EH3500ACII	
Target Gross Machine Weight	716,500 lb. (325,000 kg)
Nominal Payload	185 tons (168 metric tons)
Engine and Power	Cummins QSK50C, 2,000 hp (1491 kW)
Drive System	Hitachi IGBT AC-Drive
Maximum Dynamic Retarding, Standard	3,753.4 hp (2800 kW)
Body Capacity (SAE 2:1)	145.0 cu. yd. (111 m ³)
Body Raise Time	17.5 sec.
Tires	37.00R57
Speed	34.8 mph (56 km/h)
Fuel Tank	779.3 gal. (2950 L)

Other new features include:

- Planetary design with two fixed planetary gears
- Final drive with gear-oil circulation system
- Upgraded frame similar to Hitachi EH5000ACII
- Body design with sloped floor and tail chute for less spillage and smoother shedding of materials
- Hitachi load-weighing system with correction by axle/weight ratio and slope angle for greater accuracy
- Easy-access front ladder standard
- Fast-filling system is ground-level accessible for coolant, grease, hydraulic oil, and engine oil; couplers are optional

The EH3500ACII is well matched to Hitachi excavators. It takes seven passes with an EX2500-6, five passes with an EX3600-6, and three to four passes with an EX5500-6.



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Hitachi excavators have longer lives, lower operating costs, and better breakout power than wheel loaders in most quarry environments. Plus, they're able to work in more widely varied conditions and even build ramps. A reputation for productivity and uptime has made Hitachi the most popular excavator in mines and quarries worldwide.

Tired of tire troubles? Send your rubber-tired loaders on their way. Learn more about Hitachi Zaxis and EX Series Excavators today at www.hitachimining.com.

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