

Cat MD6420B rotary drill sets new world record in mining

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At Glencore's Ravensworth Open Cut operation in Hunter Valley, New South Wales, Australia, two new Cat® MD6420B Rotary Drills have been cutting their teeth on the overburden of Australian coal and the results are record-breaking.

Glencore is one of the world's largest global diversified natural resource companies and a major producer and marketer of more than 90 commodities. Their operations comprise over 150 mining and metallurgical sites, oil production assets and agricultural facilities. The company is one of Australia's largest coal producers with 13 mining complexes across New South Wales and Queensland.

Supported by Cat Dealer Westrac, their nearly all Cat fleet includes 19 Cat machines and attachments – D10 and D11 Dozers, 24M and 16M Motor Graders, three 6090, one 6060 and two 6040 Hydraulic Mining Shovels, and two MD6420B, one MD6420A, two MD6290, and a legacy model SK40 Rotary Drills. The truck fleet includes 797F XQ, 789D XQ and 789CXQ Off-Highway Trucks. Also notable is that the entire new fleet is sound attenuated.

After 12 months of use, the new Rotary Drills production results are in and the engine hours are well above the industry's "good" and "excellent" ratings.

The first unit, #112, has achieved a record level of 6,876 hours in the first year and #113 has come in at 7,006 hours. These results are unprecedented. Although it may seem like the makings of a miner's tall tale, notice in the information below – the mean time between failures is 33-38.2 hours and the average repair duration is 1.9-2.3 hours.

Here is a complete picture of all the ratings for drill performance:

No. 112

- 6876 Engine Hours Per Year
- 33.5 Engine Hours Mean Time Between Failures
- 2.3 Engine Hours Mean Time to Repair

No. 113

- 7006 Engine Hours Per Year
- 38.2 Engine Hours Mean Time Between Failures
- 1.9 Engine Hours Mean Time to Repair

Industry Average Approximations

- 5000 Engine Hours Per Year
- 25 Engine Hours Mean Time Between Failures
- 6 Engine Hours Mean Time to Repair

“What this means is the MD6420B is a low maintenance drill overall, it self-monitors and diagnoses issues which drives low mean time to repair,” says Andrew Elbourn, Caterpillar Drills product support representative. “The performance of these drills has been incredible. It just keeps drilling.”

According to Caterpillar, with a maximum bit load force of 42 000 kg (92,594 lb) and three different mast lengths to choose from, the new MD6420B can drill holes as large as 311 mm (12.25 in) in diameter and as deep as 74.4 m (244 ft)—making it ideal for high-production drilling in hard- or soft-rock applications. The rotary drill features heavy-duty structures, rugged components, a comfortable cab, convenient service access and many other attributes that reduce cycle time, improve productivity and lower ownership costs.

One example is the new operating system. MD6420B has advanced controls and technology such as the control system that is ECM / CANbus which is fully electronic with state-of-the-art user interface. Drill monitoring and diagnostics are displayed on a large touchscreen panel. History files detailing machine performance and health are downloadable. Advanced automation features include:

- Auto-level
- Auto-Drill
- Auto-Mast
- Virtual Stops in upper and lower head positions

The control system also includes real-time machine health monitoring and built-in diagnostic tools that contribute to strategic service and maintenance planning.

With the right equipment, people, careful planning and low-cost production, you can look for more broken records out of Ravensworth.

Source: Corporate Trade Press Relations – Caterpillar