



## Off-Road Case Study

# PowerCore® Air Cleaner

Despite heavy concentrations of dust and soot, the Donaldson PowerCore® Air Cleaner helped keep a dozer in the field when it was most needed.



Frank Keath (right) with son Colin stand with the Fiat FD14E Dozer.

As respected members of the Country Fire Association (CFA) Frank Keath of Keaths Excavations along with sons Colin, Andrew and Graham and the company's service mechanic Andrew, were at the forefront of beating back bush fires that recently threatened properties around Eildon and neighbouring Marysville. At the height of the bushfires, Keaths Excavations deployed each of their units including three Hitachi Excavators, two Fiat Dozers, a Caterpillar Grader, a Cat Excavator and two smaller Backhoes to help build firebreaks and retainers.

Frank recalls that the conditions at the height of the fires in the Marysville area were "the most extreme conditions I have ever faced" with the air full of engine-arresting dust and soot.

"The soot was like thick layers of Talcum powder," he says.

Despite these conditions, Frank praises the recently fitted Donaldson D100031 PowerCore® Air Cleaner as helping keep his equipment in the field when it was needed the most.

Given that it can take less than half a cup of dust to destroy an engine, having an efficient air filtration system is a necessity in hot and dusty conditions. In such conditions, the engine's ability to breathe and provide optimal performance can be compromised.

In Frank's experience with the PowerCore unit, he found that the PowerCore filter lasted substantially longer than other units with which he has had experience.

"The PowerCore achieved 150 hours in the field. That may seem quite small but due to the extreme nature of the conditions and the sheer amount of smoke, dust and soot in the air, the PowerCore unit far outlasted traditional filters which struggled to provide 50 hours worth of life," says Frank.



The D100031 PowerCore air cleaner.





The Dozer at work (above and below) during the clean up of the Marysville area. The dirt and soot left in the aftermath can badly affect engine performance.

The PowerCore unit was fitted to a Fiat FD14E Dozer after consultation with Hitachi Aftermarket Parts Specialist George Calyk and Donaldson Australian Territory Manager, Tony Cooper.

Keaths Excavations fitted the unit themselves at their newly opened service workshop at Yarck. The unit was mounted vertically in the Dozer's engine housing. The Keaths Excavations team chose to install an aluminum reflector plate between the engine and the PowerCore unit to protect the unit from any radiant heat from the engine. Servicing the PowerCore unit is straightforward as the four retaining clips on top of the unit remain accessible and away from heat allowing for easy removal of the PowerCore filter.

Filters with PowerCore technology feature provide maximum filter efficiency with contaminant holding capacity greater than that of traditional cellulose filters. PowerCore filters are also available with Donaldson Ultra-Web® nanofiber technology which provides even greater performance and protection. The performance abilities of the filter media are augmented by the design of the PowerCore unit itself which features a unique, built-in, pre-cleaning section that removes up to 98.9% of heavy contaminant before it hits the filter. This makes the PowerCore unit the perfect solution for high dust environments or environments where fine contaminant can pose a risk to engine performance.



equipment that needs to be in peak performance over extended periods.

In Frank Keath's opinion, the PowerCore unit more than did its job and he remains impressed with the performance of the unit as the clean up in the Marysville area continues. When not fighting fires, you'll find Frank, Colin, Graham, and the two Andrews of Keaths Excavations, a Hitachi Dealership, at their service centre on the Maroondah Highway, Yarck, Victoria. Keaths Excavations specialize in providing earthmoving, landscaping, construction and excavation equipment and associated services including off road vehicle maintenance for a wide range of heavy-duty equipment. The team can be contacted on (03) 5773 4242.



10" PowerCore units are available

PSD PowerCore air cleaner line was designed with the idea that most newer machinery has less available space under the engine cowling or hood than older equipment. By combining compact sizing with multiple options for mounting the unit horizontally or vertically, the PSD product offering becomes a perfect retrofit solution for



PowerCore aftermarket filters are quick to replace making service a breeze.



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