



In the Field with Donaldson

# Clean Fuel & Lubricant Solutions

A close-up photograph of a transmission's internal gears, showing the metallic surfaces and the complex arrangement of the components. The image is overlaid with a blue gradient and white text.

## FLUID SITUATION: TRANSMISSION REMANUFACTURER TUNES UP ITS TESTING PROTOCOL

### THE SITUATION

TransAxle, the largest remanufacturer of drivetrain components for on- and off-highway equipment in the eastern United States, remanufactures transmissions at its Pennsauken, New Jersey, facility.

TransAxle warrants every transmission it remanufactures, and tests every unit under full-load conditions on one of the company's two dynamometers to ensure that customers can install their remanufactured transmissions with confidence.

### THE CHALLENGE

Most transmission failures are caused by surface degradation from foreign contaminants in the fluid, so it was vital that the transmission fluids used during testing were meeting cleanliness standards.

Working proactively, TransAxle identified a potential contamination issue and had an outside party analyze the automatic transmission fluid used during testing to ensure cleanliness standards were being met — and to ensure TransAxle was delivering the best remanufactured transmissions possible.

For transmission oils, the ideal target cleanliness rating defined by the International Standards Organization (ISO) is 16/14/11 corresponding to allowable ranges for particles of 4 microns and larger, 6 microns and larger, and 14 microns and larger per milliliter, respectively.

TransAxle's fluid analysis revealed contamination levels of 20/18/12 and higher — more than 15 times dirtier than recommended levels in some cases. Clearly something needed to be done.

As a first step, branch manager Keith Loura contacted Donaldson Clean Solutions to help improve fluid cleanliness and extend fluid life.

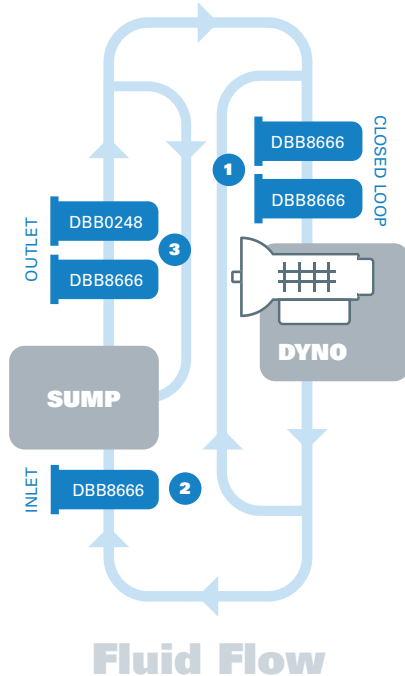


## THE CLEAN SOLUTION

Donaldson specialists suggested a multi-step approach.

- 1 They recommended installing two Donaldson Blue® bulk filters DBB8666 (4 micron efficiency) on the dynamometers' closed-loop lubrication systems. The two filters can handle flow rates of up to 125 gpm and are packaged in a kit that includes all installation hardware.
- 2 For the sump inlets, Donaldson recommended installing one DBB8666 filter with an efficiency of 4 microns.
- 3 For the sump outlets, Donaldson recommended installing a DBB8666 followed by a DBB0248 water-absorbing filter (in series) to remove both particulate and water.

The solution included a recommendation that TransAxle continue third-party fluid analysis to monitor cleanliness levels and create a proactive maintenance schedule with filter servicing based on differential pressure readings.



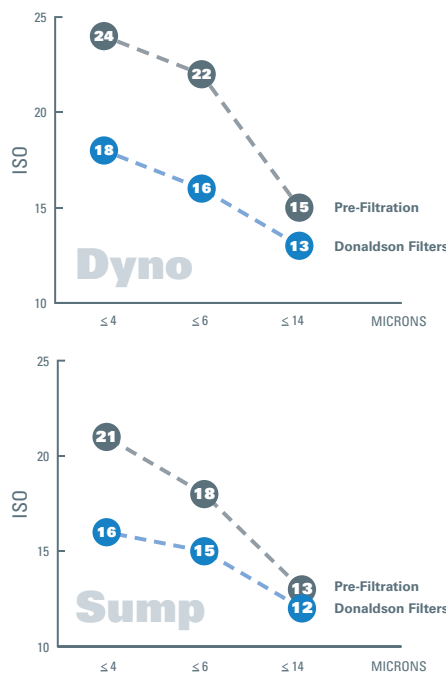
## THE RESULTS

Thanks to the higher-efficiency filter solution, TransAxle experienced a marked improvement in its transmission fluid cleanliness.

"We believe that the Donaldson filtration system helped us exceed standards for best practices in our transmission oil cleanliness," said TransAxle's Loura. "This has allowed us to provide our customers with the best in overall quality and performance of our remanufactured transmissions and helped meet our exceptionally high standards for customer satisfaction."

He added, "The improved fluid cleanliness has also greatly reduced our exposure to field-based warranty claims."

### 3rd Party Oil Analysis ISO Cleanliness Code Results:



Dyno and sump saw marked improvement in fluid cleanliness

## CONCLUSION

For TransAxle and other transmission remanufacturers, adding Donaldson Blue bulk fluid filters to their operation can increase customer satisfaction and reduce in-field warranty claim exposure by improving the ISO cleanliness levels of the fluid used in its test dynamometers. That helps ensure that every customer receives a high-quality, high-performing remanufactured transmission.

For transmission users themselves, incorporating Donaldson Blue bulk fluid filtration systems into onsite transmission bulk fluid storage can reduce surface degradation in the transmission due to contaminants in the fluid, extending transmission life and lowering overall maintenance costs.

Equipment manufacturers can also benefit by installing Donaldson Blue bulk fluid filters at their manufacturing facilities for use during the final transmission flush prior to shipment, thereby enhancing fluid cleanliness and improving customer satisfaction.

**"We believe that the Donaldson filtration system helped us exceed standards for best practices in our transmission oil cleanliness."**

TransAxle Branch Manager,  
Keith Loura



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Brochure No. F111539 ENG (10/18)

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