



Clean Fuel & Lubricant Solutions

# Rear Wheel Off Line Filtration

for Popular Large Haul Truck Applications



## Essential Fluid Cleanliness for Haul Truck Rear Wheels

Haul trucks are an integral piece of equipment to any mining operation. For haul trucks with electrically driven rear wheels, protecting the rear wheel gear box is essential to keep them running and achieve lower total cost of ownership.

Each rear wheel assembly on a haul truck represents cost of \$250,000 or a replacement cost of \$600,000 USD. According to General Electric\*, the estimated expected life of a rear wheel motor is 24,000 hours. In order to achieve or surpass that life, fluid cleanliness is essential. Fluid that does not meet the specification for contamination, water, and wear metals like iron must be drained and replaced.



*Kidney Loop Cart with Donaldson Blue® DBB8665 filters.*

**4x**  
EXTENDED DRAIN  
INTERVALS

A Kidney Loop Cart with **Donaldson Blue® DBB8665** filters provide 7-micron filtration efficiency @ Beta 2000 on the gear oil used in rear wheel systems. This system cleans the fluid and allows it to meet or exceed OE standards, allowing **an average of 4x longer drain intervals** between fluid replacement compared to systems without kidney loop filtration.\*\* **This equates to a reduction of five ISO contamination codes, resulting in a significant reduction of wear metal.**

*\*Reference the GE publication no. WB2790.*

*\*\*Results based on two surface mining operations.*

## PROBLEM

After 500 hours on new fluid, analysis showed ISO code increases to 25/23/18 with iron concentration at 250ppm or more.



Contamination captured by magnetic plugs.

## RESULT

**Lower Cost of Ownership:** Increasing the cleanliness of the fluid through filtration allowed gear lube drain intervals to be extended. The reduction in contamination (dirt and iron) resulted in up to **1.7x (or 40,000 hours)** the life extension of the component based on Noria Corporation's Life Extension Table.

Note: It is important to continue to perform fluid inspection every 500 hours or as directed by the OE manufacturer's recommendations.

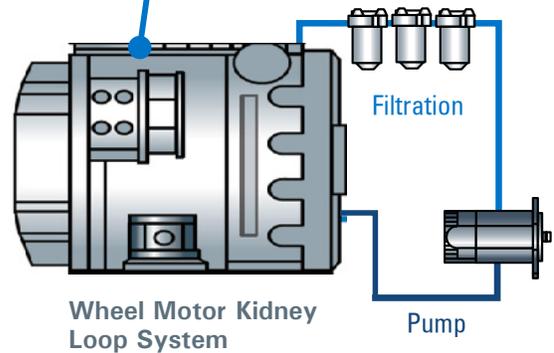
Each solution is customized to meet your needs. Contact Donaldson for assistance at **855-518-7784** or **MyCleanDiesel@donaldson.com**.

*\*\*Results based on two surface mining operations.*

## SOLUTION

Using a Kidney Loop Cart with **Donaldson Blue® DBB8665** filters, ISO codes between 18/16/13 to 20/18/14 can be achieved, **resulted in an average of 4x longer drain intervals.**\*\* Two auxiliary Rear Wheel Kidney Loop carts ran on individual wheel motors while other preventative maintenance services were being completed; typically taking less than 3 hours to complete.

**DBB8665 Donaldson Blue® Lubricant Filter** has multi-layered synthetic media which is optimized for efficiency, capacity, and pressure drop.



**Looking for a kidney loop solution for hydraulic or transmission applications?**

X011297 Portable Filter Assembly  
DBB8665 Donaldson Blue® Lubricant Filter

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As a global organization, we have offices throughout the world. Please direct your inquiry to [clean.solutions@donaldson.com](mailto:clean.solutions@donaldson.com). This will enable us to address your inquiry in the shortest possible time.

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