OIL MAINTENANCE
INDUSTRY

CJC™ Application Study

Application Study written by:

Rick Klassen
Klassen Specialty
Hydraulics Inc.,
Canada

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CUSTOMER

Ed Epp, contracting to JD Transport, a long-haul trucking company based in Chilliwack, BC, Canada.

THE SYSTEM

Detroit 60 Series diesel engine lube oil, approximately 40 Litres of 15W-40 Chevron Delo oil.

THE GOAL

The goal of this project was to extend the oil change intervals. Prior to installation, the oil and spin-on filters were being changed every 12,000 kms. Routine oil analysis was used to monitor the condition of the oil, and to indicate when replacement was necessary.

THE SOLUTION

A **CJC™ HDU 15/25 PV** with a **CJC™ Filter Insert B 15/25** was installed inside a tool box on the truck, and fitted with a 12 Volt DC motor. Existing ports on the oil pan allowed for easy suction and return line hook-up.
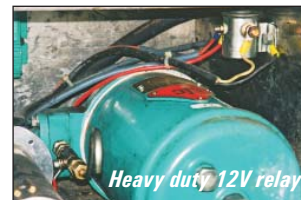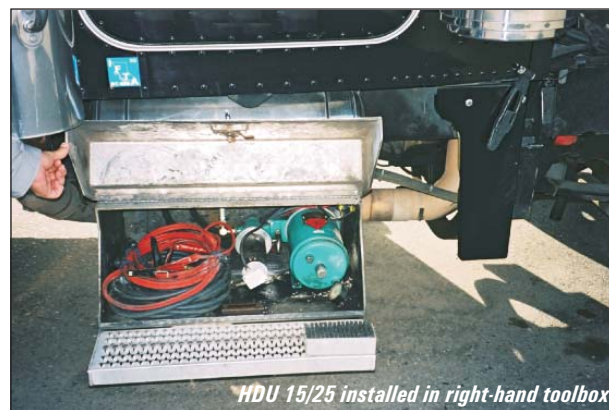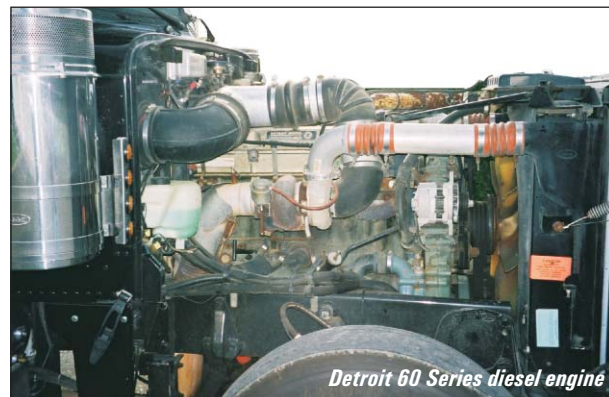
THE TEST

Starting with new oil, an initial sample was taken after an hour of running the engine. The CJC Fine Filter was then installed and filtration started. Samples were taken periodically and analyzed.
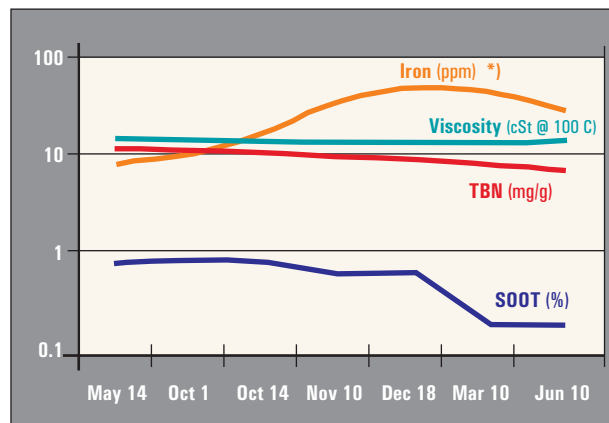
THE RESULT

The CJC™ Fine Filter easily accomplished the goal of extending the oil changes; the truck ran over 100,000 kms on the same oil, which was cleaner than at the start of the test. Additionally, the analysis revealed a significant increase in iron particles. This prompted a thorough engine inspection; the culprit was a failed compressor bearing. The B 15/25 Filter Insert was to credit for saving the engine from extensive damage by retaining the wear metals. (Oil was topped up at this point with 6 new litres.) Also noteworthy was the trend of soot content, viscosity, and TBN. After the initial 1 hour run-in the soot was already 0.85 %, but it decreased steadily with filtration before levelling off at 0.2 %. The viscosity remained level, while the TBN gradually decreased to 6.9, prompting an oil change.

Thanks to CJC offline filtration, oil life was extended 8 times.

Detroit 60 Series diesel engine

HDU 15/25 installed in right-hand toolbox

Oil line hook-ups

Heavy duty 12V relay

THE RESULT

Iron (ppm) *)
Viscosity (cSt @ 100 C)
TBN (mg/g)
SOOT (%)

100						
10						
1						
0.1						
May 14	Oct 1	Oct 14	Nov 10	Dec 18	Mar 10	Jun 10

*) Due to failed compressor bearing (see RESULTS to the left.)