Pall Corporation

HYDRAULIC & LUBRICATION

# Application Bulletin

**Mobile Equipment OEM**

## Application

Hydraulic Rock Breaker attachment – 14 to 38 tonne capacity used in cement, granite, iron ore and general mining and construction applications

**System Operating parameters:**

| | |
|---|---|
| Fluid: Mineral oil | ISO 18/16/13 |
| Maximum Operating Temp.: | 90 °C (194 °F) |

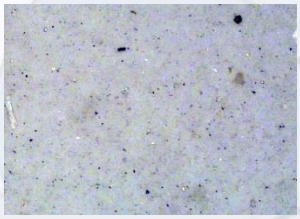
## Problem

Contaminated return line fluid from the rock breaker attachment accumulating debris in the system reservoir causing premature clogging of the existing return line tank mounted filter. System fluid condition outside of recommended specification resulting in equipment failures, reduced machine availability and unacceptable OEM warranty costs

## Solution

**Versalon™ filters improve equipment availability and reduce OEM warranty costs**

Pall **Versalon F410 Series Filter**



Fluid condition improved from 'uncountable' to ISO 4406 17/15/12 cleanliness code

Pall carried out field trails with the OEM's Product Service team to establish the root cause of the problem. Initial fluid sample analysis identified the hydraulic system fluid as too dirty to count and confirmed the source of contamination as the return line from the breaker attachment.

Pall recommended a **Versalon**™ F410 series return-line filter rated at 12 micron ($\beta_{12(c)} > 1000$) between the breaker attachment and the system reservoir, and field trials in different terrain / site conditions. Oil analysis was performed every 250 hours up to 1000 hours service.

## Results

- After 500 hours, the system fluid condition stabilised at ISO 4406 17/15/12 cleanliness level, in line with the OEM's recommended cleanliness specification.
- Existing tank mounted return line filter element service life was extended from 250 to 500 hours.
- Fluid service life was extended from 1000 to 1500 hours
- Incidence of hydraulic pump and valve failures were reduced resulting in improved equipment availability
- Maintenance and warranty costs were significantly reduced
- F410 filters will be fitted to future builds

Contact us at www.pall.com

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