



CASE STUDY

CUSTOMER

STEP ENERGY SERVICES

LOCATION

BLACKFALDS, AB CANADA / 2012-2013

EQUIPMENT

TWIN PUMPER

APPLICATION

QUINTUPLEX PUMP POWER END LUBE OIL

PROVEN RESULTS



**EXTENDED
OPERATIONAL
CYCLES**

**REDUCED
MAINTENANCE
COSTS**

CHALLENGE

Premature wear of the pump drive ends is the result of high levels of contamination under 10 microns in size. Left in the oil this contamination builds in volume, reduces the lubrication capability and accelerates the wear cycle. Traditional filtration is unable to remove contamination under 10 microns from lube oil.



SOLUTION

Install an OEI ADD-Vantage 9000 Dual Stage magnetic filter on the power end lube oil system to remove the contamination under 10 microns.



PRODUCT RECOMMENDATION

**ADD-VANTAGE 9000
DUAL STAGE FILTER**



403.242.4221



QUOTES@ONEEYEINDUSTRIES.COM

RESULTS

The photo shows the tremendous amount of contamination removed by the OEI two stage magnetic filter during their yearly PM. STEP Energy Services had the contamination analyzed. It was found that it contained large amount of both ferrous and non-ferrous particles from 30 microns down to sub-micron levels.

The analysis conducted on the contamination identified that over 50% was iron oxide, 40% non ferrous and 7% water. The majority of the particles were found to be less than 10 micron in size.



Lubricant Inspection Record		
METRO TECH SYSTEMS LTD. Petroleum Products Consultants Bay 112, 5621 - 11th Street N.E. Calgary, Alberta T2E 6Z7 Telephone (403) 295-8803 Fax (403) 295-3848 eMail metrotech@metrotechsystems.ca		Client: STEP Energy Services Location: 33P05RMP Unit Number: RIGHT MAGNET Component: Power End Lube Make/Model: Serial #:
Lab Number:	TH5077	New Oil
Sample Date:	Aug 20/13	
Unit:	2747.0 Hrs	
Oil:		
Oil Type:	TRAXON E CD-50	TRAXON E CD-50
METALS (D5185): Milligrams per Kilogram (PPM) Highlighted Test Results Indicate Abnormal Concentrations		
Tin	29	0
Lead	3	1
Copper	87	0.1
Aluminum	6	1
Silicon	18	2
Iron	509	2
Chromium	32	0
Silver	0	0
Zinc	46	2
Magnesium	2	0
Nickel	119	0
Barium	0	0
Sodium	22	2
Calcium	340	46
Vanadium	0	0
Phosphorus	1000	1300
Molybdenum	0	0
Boron	37	283
Manganese	2	0
PHYSICAL PROPERTIES		
Viscosity (D445) @ 40°C		
Viscosity (D445) @ 100°C	**	16.95
Water (D4007) (% v/v)	>8	0
Solids (D4007) (% v/v)	**	0
Glycol		
Fuel Dilution		
OTHER PROPERTIES		
Acid No. (D664)	13.10	
Base No. (D2896)		
Base No. (D4739)		
Oxidation		
Nitro Compounds		
Organic Nitrates		
Particle Count (ISO 4406)		
Oil Changed?	No	
COMMENTS RATING SYSTEM: A is LOW B is LOW to MODERATE C is MODERATE D is HIGH E is SEVERE TH5077 - ** See SEM/EDS report also. Viscosity was obscured due to too viscous **		



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