



OIL ANALYSIS REPORT

WEAR	MARGINAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
PRESS #2 AFTER FILTERS
 Component
Hydraulic System
 Fluid
PETRO CANADA HYDREX AW 68 (20000 LTR)

RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you check for visible metal particles in the oil. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend that you use electrostatic filtration to remove insolubles from the oil and to reduce the levels of varnish in the system. Alternatively draining a percentage of the oil and topping up with fresh oil (sweetening the oil) may provide a reduction in the varnish potential level. We recommend an early resample to monitor this condition. We suspect that the abnormal contaminant(s) is the result of incorrect sampling technique. DISCLAIMER: Interpretation of results is based on the sample as received from the customer. The condition of the sample and the method of sampling cannot be verified. Please note that this is a corrected copy for laboratory data updates.

WEAR

Light concentration of visible metal present.

CONTAMINATION

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. Light concentration of visible dirt/debris present in the oil. MPC (Membrane Patch Colorimetry) test indicates a high concentration of varnish present. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0934402	WC0934401	WC0934409
Sample Date		Client Info		16 May 2024	14 May 2024	30 Apr 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>20	1	2	2
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	0	0	0
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>20	11	11	11
Tin	ppm	ASTM D5185(m)	>20	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>15	0	0	0
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Water		WC Method	>0.05	NEG	NEG	NEG
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	73	---	---
Particles >4µm		ASTM D7647		63610	▲ 21361	▲ 22971
Particles >6µm		ASTM D7647		21282	● 1859	● 1955
Particles >14µm		ASTM D7647	>160	832	31	43
Particles >21µm		ASTM D7647	>40	150	5	9
Particles >38µm		ASTM D7647	>10	4	0	1
Particles >71µm		ASTM D7647	>3	1	0	0
Oil Cleanliness		ISO 4406 (c)	>-/-/14	23/22/17	▲ 22/18/12	▲ 22/18/13
Silt	scalar	Visual*	NONE	VLITE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		<1	0	0
Boron	ppm	ASTM D5185(m)	0	0	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	0	0	<1
Calcium	ppm	ASTM D5185(m)	50	15	16	16
Phosphorus	ppm	ASTM D5185(m)	330	281	287	286
Zinc	ppm	ASTM D5185(m)	430	237	239	242
Sulfur	ppm	ASTM D5185(m)	760	519	531	519
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.35	0.37	0.37
Visc @ 40°C	cSt	ASTM D7279(m)	67.4	65.8	65.8	65.9

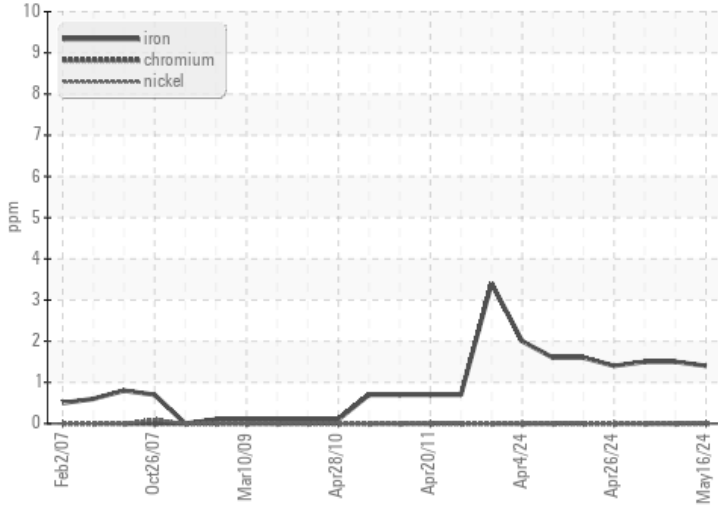
MPC (Varnish Test)



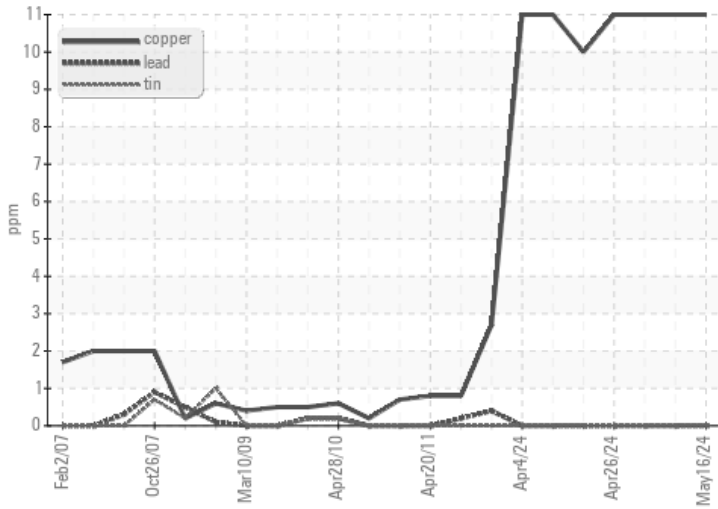
Sample Color & Clarity



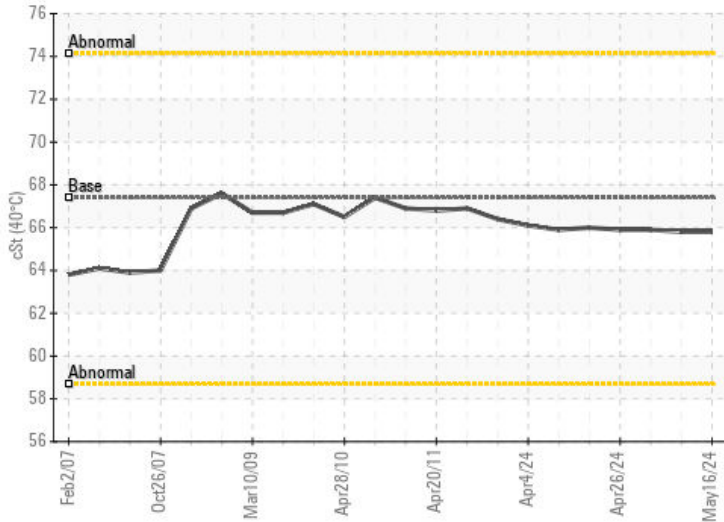
Ferrous Alloys



Non-ferrous Metals



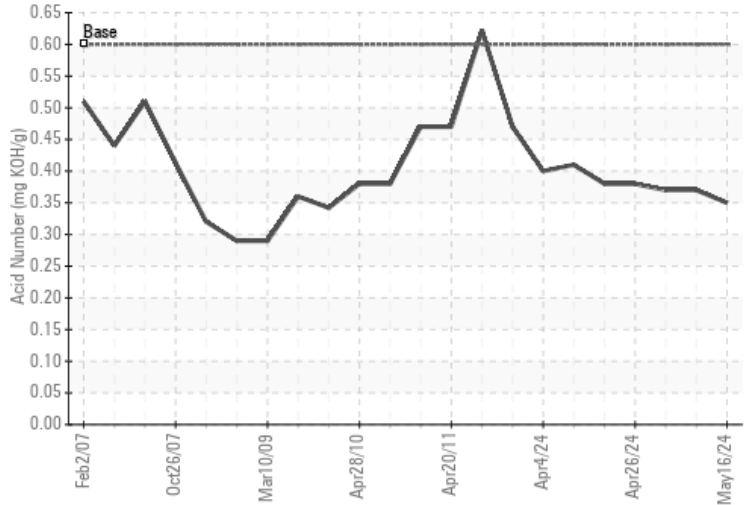
Viscosity @ 40°C



Particle Filter (Magn: 100 x)



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **SPECTRA ALUMINUM PRODUCTS INC.**
Sample No. : WC0934402 **Received** : 21 May 2024 95 REAGENS INDUSTRIAL PKWY
Lab Number : 02636659 **Tested** : 21 Jun 2024 BRADFORD, ON
Unique Number : 5785821 **Diagnosed** : 21 Jun 2024 - Kevin Marson CA L3Z 2A4
Test Package : IND 2 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, MPC, PrtFilter) **Contact:** Chris Mayr
 cmayr@spectraaluminum.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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