



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINANTS	SEVERE
OIL CONDITION	NORMAL

Machine Id
PH632.010.17
Component
Port Hydraulic System
Fluid
PETRO CANADA ENDURATEX EP 150 (4500 LTR)

RECOMMENDATION

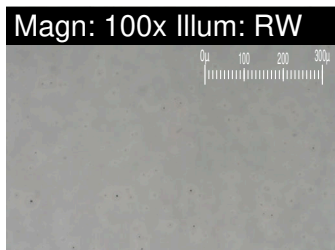
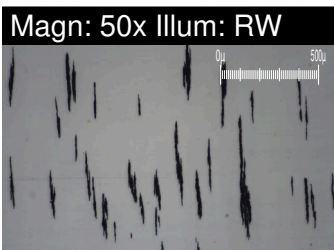
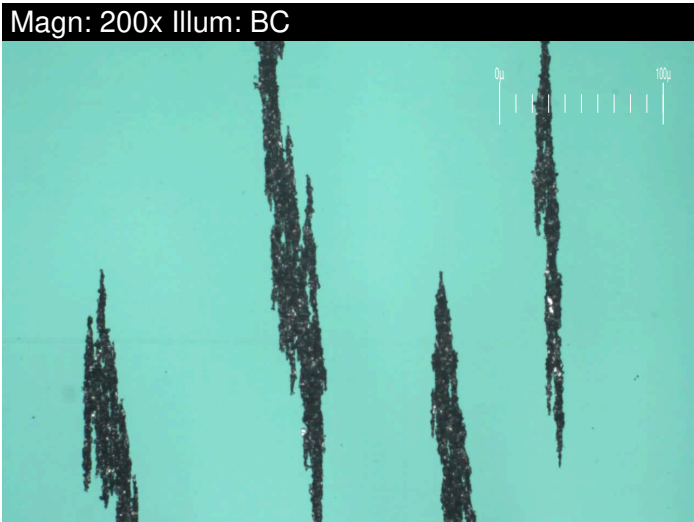
Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.

WEAR

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0873831	WC0557343	---
Sample Date		Client Info		09 Mar 2024	18 Feb 2022	---
Machine Age	hrs	Client Info		39119	36000	---
Oil Age	hrs	Client Info		8901	0	---
Filter Age	hrs	Client Info		643	394	---
Oil Changed		Client Info		N/A	Not Changed	---
Filter Changed		Client Info		N/A	Changed	---
Sample Status				SEVERE	NORMAL	---

PQ		ASTM D8184*		0	---	---
Iron	ppm	ASTM D5185(m)	>20	5	3	---
Chromium	ppm	ASTM D5185(m)	>10	0	0	---
Nickel	ppm	ASTM D5185(m)	>10	0	<1	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		0	0	---
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	---
Lead	ppm	ASTM D5185(m)	>20	2	3	---
Copper	ppm	ASTM D5185(m)	>20	30	25	---
Tin	ppm	ASTM D5185(m)	>10	3	3	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Large Particles		DR-Ferr*		35.1	---	---
Small Particles		DR-Ferr*		13.8	---	---
Total Particles		DR-Ferr*	>---	48.9	---	---
Large Particles Percentage	%	DR-Ferr*		43.6	---	---
Severity Index		DR-Ferr*		748	---	---
Ferrous Rubbing	Scale 0-10	ASTM D7684*		4		
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		1		
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*				
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				



CONTAMINANTS

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

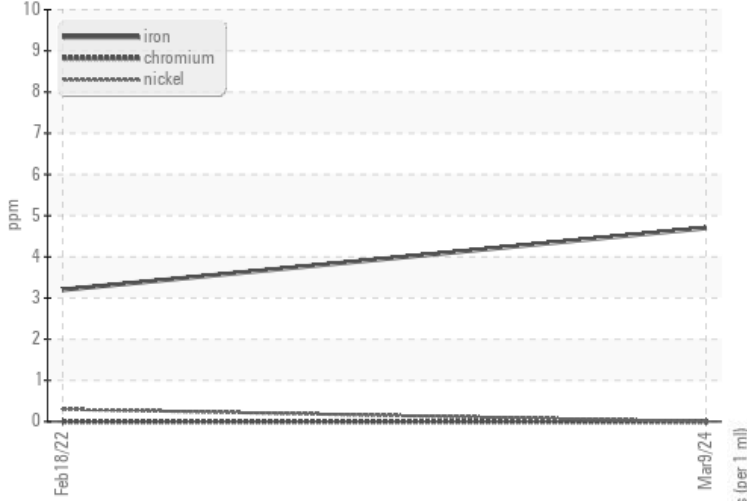
Silicon	ppm	ASTM D5185(m)	>15	2	2	---
Potassium	ppm	ASTM D5185(m)	>20	<1	0	---
Water		WC Method	>0.05	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	▲ 60012	---	---
Particles >6µm		ASTM D7647	>1300	▲ 4915	---	---
Particles >14µm		ASTM D7647	>160	86	---	---
Particles >21µm		ASTM D7647	>40	21	---	---
Particles >38µm		ASTM D7647	>10	2	---	---
Particles >71µm		ASTM D7647	>3	1	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 23/19/14	---	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	VLITE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	---
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*				
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		1		

OIL CONDITION

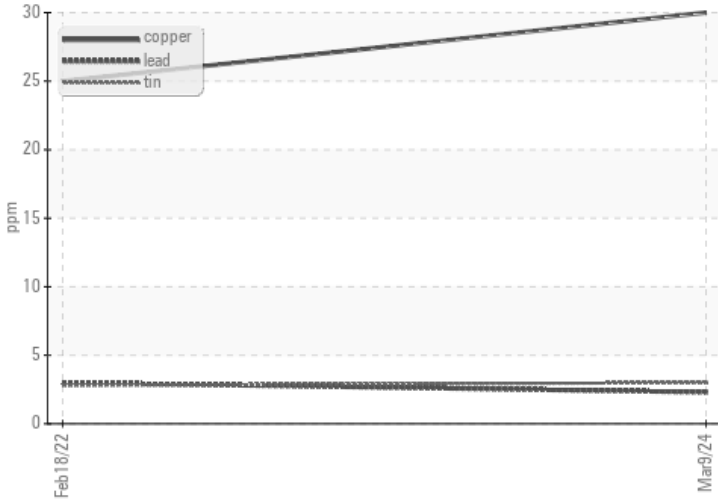
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service (unconfirmed). The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		13	11	---
Boron	ppm	ASTM D5185(m)	55	35	46	---
Barium	ppm	ASTM D5185(m)	0	0	0	---
Molybdenum	ppm	ASTM D5185(m)	0	0	0	---
Manganese	ppm	ASTM D5185(m)	0	0	0	---
Magnesium	ppm	ASTM D5185(m)	2	2	2	---
Calcium	ppm	ASTM D5185(m)	6	10	12	---
Phosphorus	ppm	ASTM D5185(m)	250	224	227	---
Zinc	ppm	ASTM D5185(m)	3	7	6	---
Sulfur	ppm	ASTM D5185(m)	7500	6542	6474	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.5	0.39	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	150.0	146	146	---
Lubricant Degradation	Scale 0-10	ASTM D7684*				

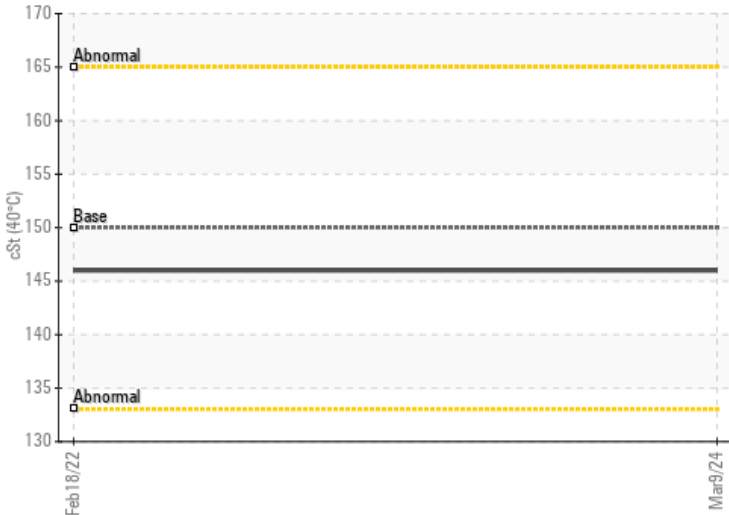
Ferrous Alloys



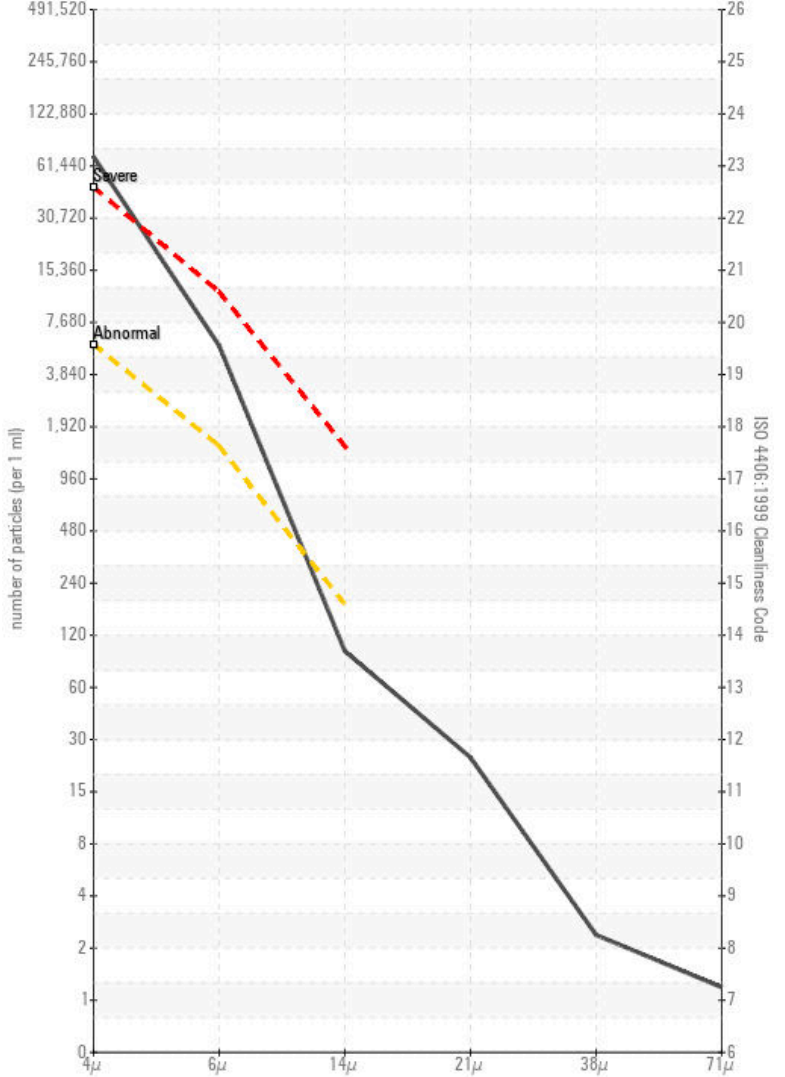
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0873831
Lab Number : 02626979
Unique Number : 5760111
Test Package : MAR 3
Received : 05 Apr 2024
Tested : 09 Apr 2024
Diagnosed : 09 Apr 2024 - Kevin Marson

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 Contact: Brian Bishop
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 F: (709)782-0225

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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