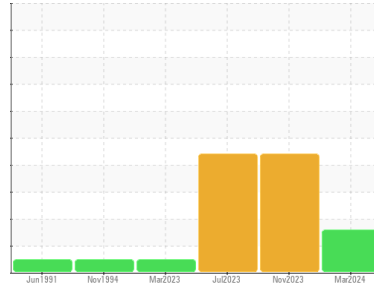




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
OLD P3 Line
Machine Id
P3 Runnout Table

Component
Hydraulic System
Fluid
PETRO CANADA HARMONY AW 46 (30 GAL)

DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0921566	WC	PP
Sample Date	Client Info	27 Mar 2024	06 Nov 2023	16 Jul 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	SEVERE	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2	
Water	WC Method	>0.05	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>20	0	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	0	<1	0
Lead	ppm	ASTM D5185(m)	>20	0	<1	<1
Copper	ppm	ASTM D5185(m)	>20	2	6	6
Tin	ppm	ASTM D5185(m)	>20	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185(m)		3	<1	<1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	<1
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	110	8	2	2
Calcium	ppm	ASTM D5185(m)	60	74	45	46
Phosphorus	ppm	ASTM D5185(m)	330	349	313	336
Zinc	ppm	ASTM D5185(m)	390	442	370	379
Sulfur	ppm	ASTM D5185(m)	660	812	832	808
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

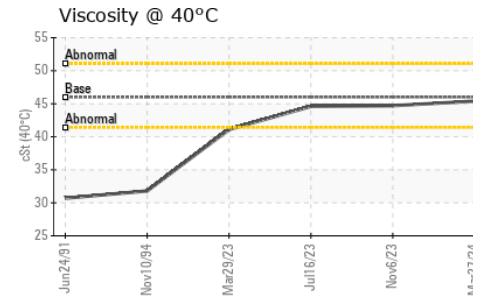
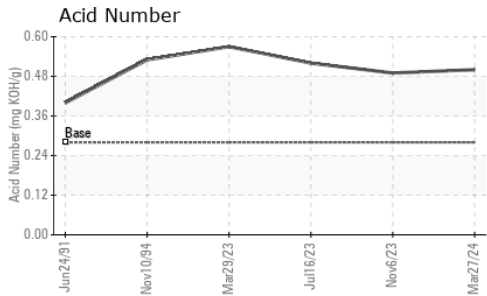
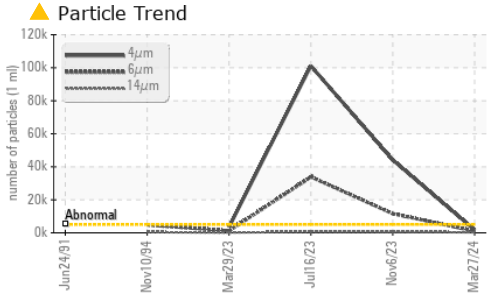
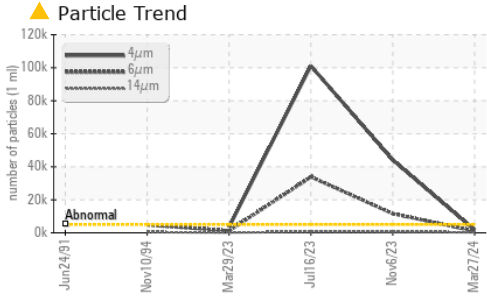
method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>15	0	0	0
Sodium	ppm	ASTM D5185(m)		0	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

FLUID CLEANLINESS

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>5000	1740	▲ 44112	▲ 101102
Particles >6µm	ASTM D7647	>1300	1023	▲ 11602	▲ 33874
Particles >14µm	ASTM D7647	>160	● 279	▲ 524	▲ 624
Particles >21µm	ASTM D7647	>40	▲ 121	▲ 115	● 72
Particles >38µm	ASTM D7647	>10	● 16	12	3
Particles >71µm	ASTM D7647	>3	1	2	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	● 18/17/15	▲ 23/21/16	▲ 24/22/16



OIL ANALYSIS REPORT

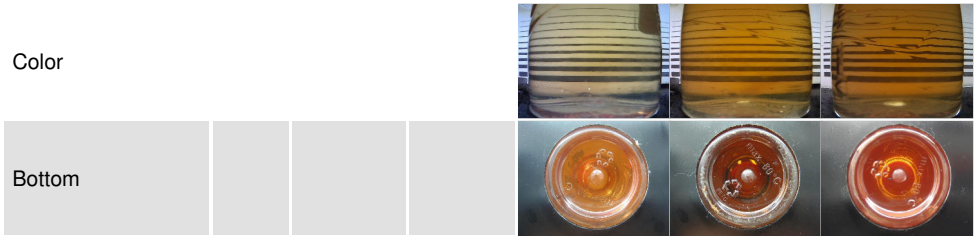


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.28	0.50	0.49	0.52

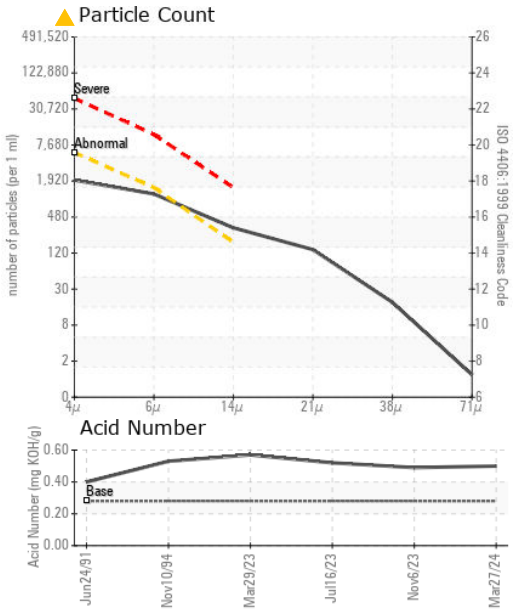
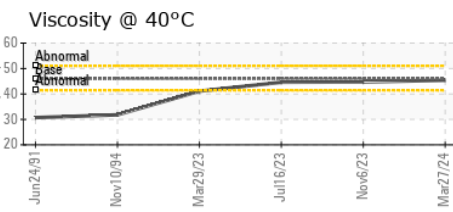
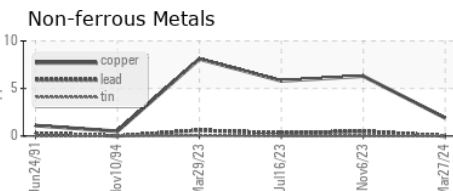
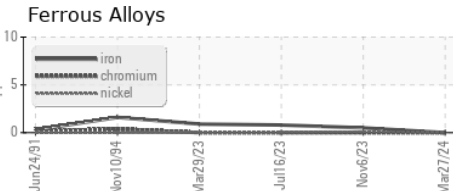
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	VLITE
Debris	scalar	Visual*	NONE	NONE	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	VLITE	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
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46.0	45.4	44.7	44.6

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0921566 **Received** : 01 Apr 2024
Lab Number : **02625681** **Tested** : 02 Apr 2024
Unique Number : 5750800 **Diagnosed** : 02 Apr 2024 - Wes Davis
Test Package : IND 2

Hydro Extrusion North
 5675 Kennedy Road
 Mississauga, ON
 CA L4Z 2H9
 Contact: Harsh Murria
 Harsh.murria@hydro.com
 T: (819)462-0479
 F: (866)462-6478

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.