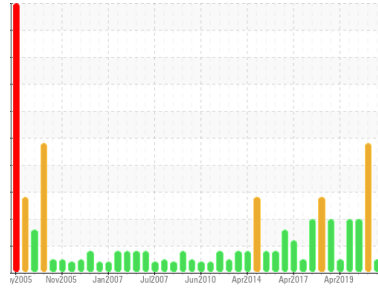


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
[450267871]

Machine Id
Crane - Fwd Thruster Crane (S/N Sample Tag MC-04202-S1)

Component
Crane

Fluid
PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (300 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MAR 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

Wear

Component wear rates appear to be normal (unconfirmed).

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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	PC0052493	PC0061642	PC
Sample Date	Client Info	20 Feb 2024	12 Sep 2023	27 May 2020
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	SEVERE	ABNORMAL

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	0
Chromium	ppm ASTM D5185(m) >10	0	0	0
Nickel	ppm ASTM D5185(m) >10	<1	0	<1
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	0	<1
Aluminum	ppm ASTM D5185(m) >10	<1	0	0
Lead	ppm ASTM D5185(m) >20	1	1	<1
Copper	ppm ASTM D5185(m) >20	<1	<1	<1
Tin	ppm ASTM D5185(m) >10	0	0	0
Antimony	ppm ASTM D5185(m)	0	0	<1
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) 0	0	<1	<1
Barium	ppm ASTM D5185(m) 0	0	0	<1
Molybdenum	ppm ASTM D5185(m) 0	0	0	0
Manganese	ppm ASTM D5185(m) 1	0	0	0
Magnesium	ppm ASTM D5185(m) 0	1	1	<1
Calcium	ppm ASTM D5185(m) 100	89	89	● 1
Phosphorus	ppm ASTM D5185(m) 670	623	682	● 403
Zinc	ppm ASTM D5185(m) 850	710	740	● 31
Sulfur	ppm ASTM D5185(m) 1600	1558	1498	1207
Lithium	ppm ASTM D5185(m)	<1	<1	<1

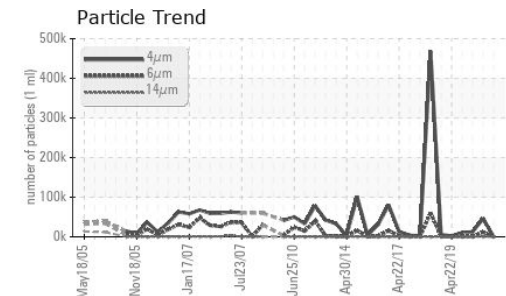
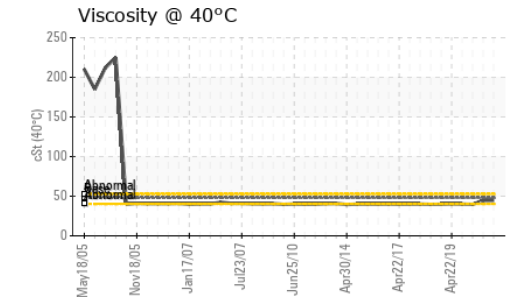
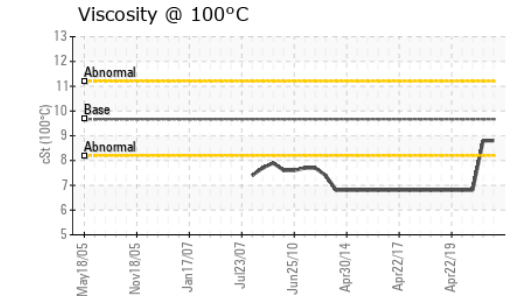
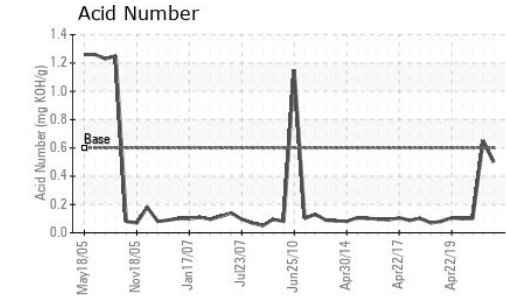
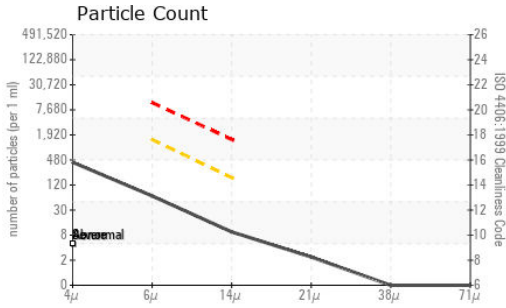
CONTAMINANTS

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

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	372	45723	12660
Particles >6µm	ASTM D7647 >1300	58	▲ 11793	564
Particles >14µm	ASTM D7647 >160	8	▲ 498	8
Particles >21µm	ASTM D7647 >40	2	▲ 91	3
Particles >38µm	ASTM D7647 >10	0	1	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >--/17/14	16/13/10	▲ 23/21/16	21/16/10

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0052493 **Received** : 12 Mar 2024
Lab Number : 02621430 **Tested** : 13 Mar 2024
Unique Number : 5746549 **Diagnosed** : 13 Mar 2024 - Kevin Marson
Test Package : MAR 2 (Additional Tests: KV100, VI)

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.

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.50	0.65	0.10

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	44.7	44.6	39.7
Visc @ 100°C	cSt	ASTM D7279(m)	9.67	8.8	8.8	▲ 6.8
Viscosity Index (VI)	Scale	ASTM D2270*	192	180	181	▲ 128

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						no image
Bottom						
PrtFilter						no image

Suncor - Terra Nova Projects
 Scotia Centre, 235 Water Strret
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshhynes@suncor.com
 T: (709)778-3575
 F: (709)724-2835