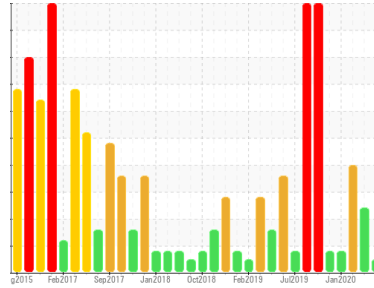


Area
Fwd Machinery Space [450258403]
Machine Id
Hose Reel - Calcium Nitrate Hyd. System (S/N Sample Tag XX-42161)
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX MV ARCTIC 15 (100 LTR)



DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

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		PC0076671	PC0062112	PC
Sample Date	Client Info		01 Feb 2024	08 Oct 2023	19 Feb 2020
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	ABNORMAL	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	0
Chromium	ppm	ASTM D5185(m)	>10	0	0
Nickel	ppm	ASTM D5185(m)	>10	0	<1
Titanium	ppm	ASTM D5185(m)		0	<1
Silver	ppm	ASTM D5185(m)		0	<1
Aluminum	ppm	ASTM D5185(m)	>10	<1	0
Lead	ppm	ASTM D5185(m)	>20	<1	<1
Copper	ppm	ASTM D5185(m)	>20	<1	2
Tin	ppm	ASTM D5185(m)	>10	0	0
Antimony	ppm	ASTM D5185(m)		0	<1
Vanadium	ppm	ASTM D5185(m)		0	0
Beryllium	ppm	ASTM D5185(m)		0	0
Cadmium	ppm	ASTM D5185(m)		0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	0	<1
Barium	ppm	ASTM D5185(m)	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	<1
Calcium	ppm	ASTM D5185(m)	50	50	49
Phosphorus	ppm	ASTM D5185(m)	330	321	347
Zinc	ppm	ASTM D5185(m)	430	406	445
Sulfur	ppm	ASTM D5185(m)	760	781	841
Lithium	ppm	ASTM D5185(m)		<1	<1

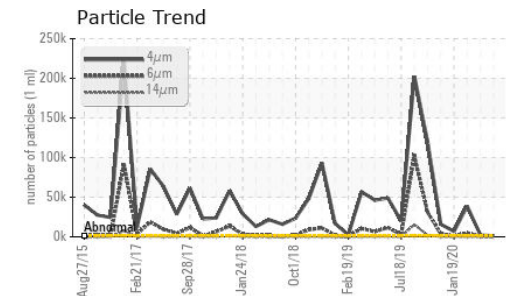
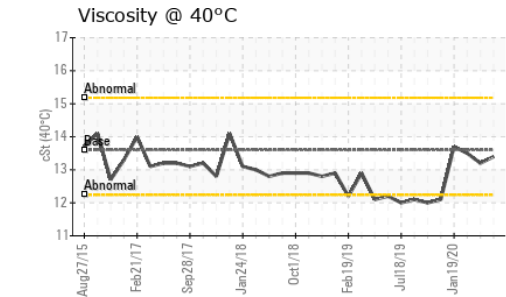
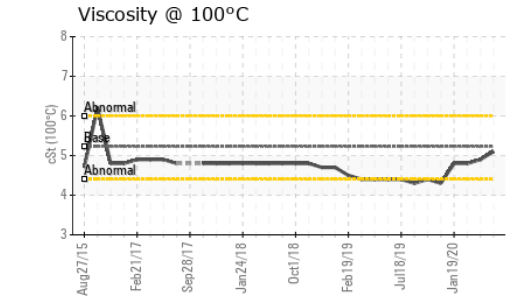
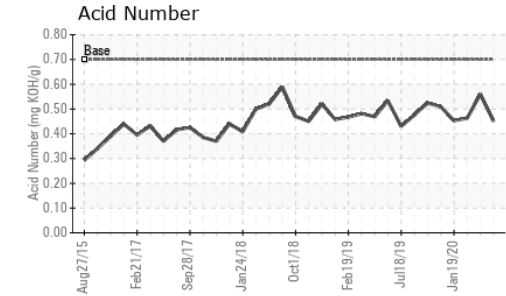
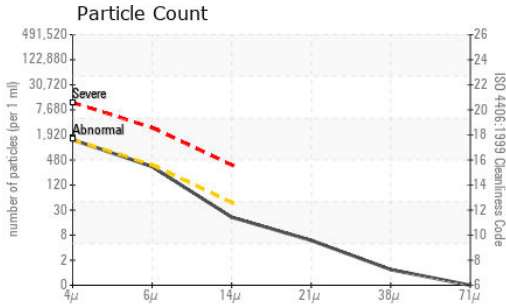
CONTAMINANTS

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

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>1300	1294	▲ 2178	● 38732
Particles >6µm	ASTM D7647	>320	293	▲ 743	● 4963
Particles >14µm	ASTM D7647	>40	18	▲ 113	▲ 94
Particles >21µm	ASTM D7647	>10	5	▲ 46	▲ 21
Particles >38µm	ASTM D7647	>3	1	▲ 6	2
Particles >71µm	ASTM D7647	>3	0	1	0
Oil Cleanliness	ISO 4406 (c)	>17/15/12	17/15/11	▲ 18/17/14	● 22/19/14

OIL ANALYSIS REPORT

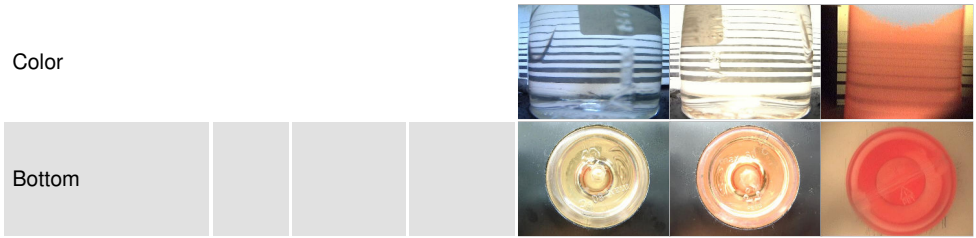


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	0.45	0.56	0.463

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	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	.2%
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	13.6	13.4	13.2	13.5
Visc @ 100°C	cSt	ASTM D7279(m)	5.23	5.1	4.9	4.8
Viscosity Index (VI)	Scale	ASTM D2270*	394	385	365	▲ 338

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0076671 **Received** : 16 Feb 2024
Lab Number : **02616245** **Tested** : 20 Feb 2024
Unique Number : 5733355 **Diagnosed** : 20 Feb 2024 - Kevin Marson
Test Package : MAR 2 (Additional Tests: KV100, VI)

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

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.