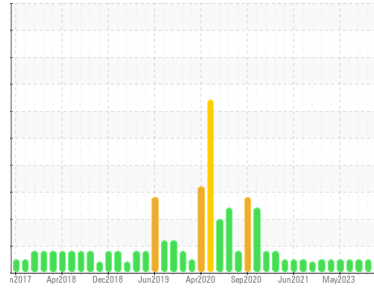


Area
Cranes [450255636]
 Machine Id
Crane - Fwd Hoisting Winch Gearbox (S/N Sample Tag MA-04003-S5)
 Component
Gearbox
 Fluid
PETRO CANADA GEARLUBE TOS 80W90 (26 LTR)



DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is no indication of any contamination 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	PC0081072	PC0076458	PC
Sample Date	Client Info	24 Jan 2024	04 Oct 2023	13 Aug 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		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	NEG	NEG

WEAR METALS

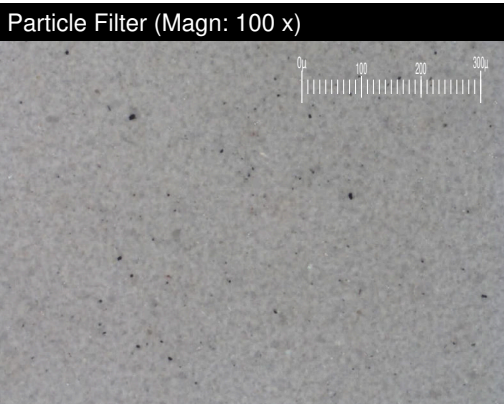
method	limit/base	current	history1	history2
PQ	ASTM D8184*	0	0	0
Iron	ppm ASTM D5185(m) >150	6	5	18
Chromium	ppm ASTM D5185(m) >10	0	0	<1
Nickel	ppm ASTM D5185(m) >10	<1	<1	<1
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	<1	0
Aluminum	ppm ASTM D5185(m) >5	<1	0	<1
Lead	ppm ASTM D5185(m) >65	0	0	0
Copper	ppm ASTM D5185(m) >80	<1	<1	<1
Tin	ppm ASTM D5185(m) >8	0	0	0
Antimony	ppm ASTM D5185(m) >5	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

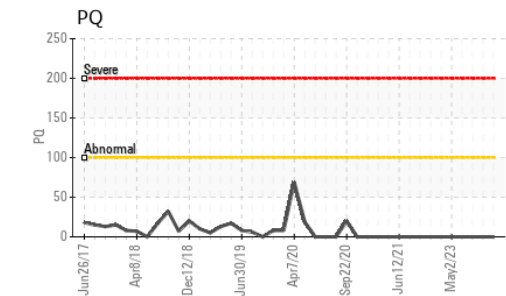
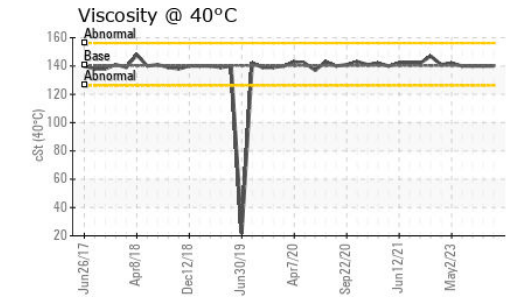
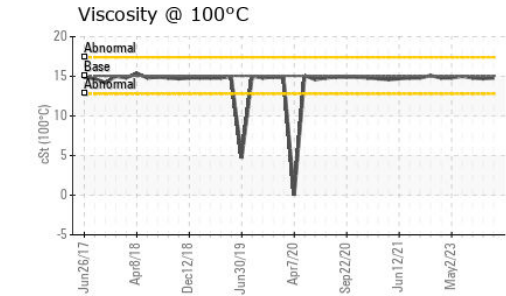
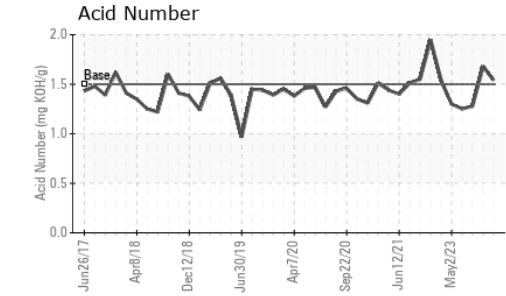
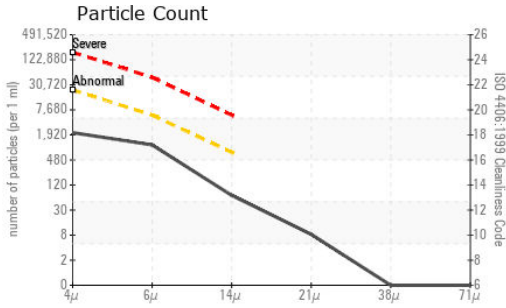
method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 240	249	264	240
Barium	ppm ASTM D5185(m) 1	0	<1	<1
Molybdenum	ppm ASTM D5185(m) 0.0	0	0	0
Manganese	ppm ASTM D5185(m)	0	0	<1
Magnesium	ppm ASTM D5185(m) 2	1	<1	1
Calcium	ppm ASTM D5185(m) 6	3	4	4
Phosphorus	ppm ASTM D5185(m) 1000	1013	975	1061
Zinc	ppm ASTM D5185(m) 3	12	13	42
Sulfur	ppm ASTM D5185(m) 19400	17872	17499	17695
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >20	8	10	2
Sodium	ppm ASTM D5185(m)	<1	<1	<1
Potassium	ppm ASTM D5185(m) >20	<1	0	<1



OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0081072
Lab Number : **02616453**
Unique Number : 5733563
Test Package : MAR 2 (Additional Tests: KV100, PQ, PrtCount, PRTFILTER, TAN Man, VI)
Received : 16 Feb 2024
Tested : 26 Feb 2024
Diagnosed : 26 Feb 2024 - Kevin Marson
*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.*

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

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	1900	123535	49832	
Particles >6µm	ASTM D7647	>5000	970	41403	9025	
Particles >14µm	ASTM D7647	>640	60	201	220	
Particles >21µm	ASTM D7647	>160	7	33	28	
Particles >38µm	ASTM D7647	>40	0	8	3	
Particles >71µm	ASTM D7647	>10	0	5	2	
Oil Cleanliness	ISO 4406 (c)	>21/19/16	18/17/13	24/23/15	23/20/15	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.5	1.54	1.68	1.28

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	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*	>0.2	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)	140.3	140	140	140
Visc @ 100°C	cSt	ASTM D7279(m)	15.05	14.8	14.7	14.8
Viscosity Index (VI)	Scale	ASTM D2270*	109	105	104	105

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