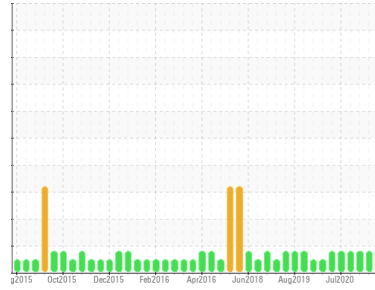


OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area

Cranes

Machine Id

Crane - Fwd Engine Crank Case (S/N Sample Tag MA-04003-S10)

Component

Forward Diesel Engine

Fluid

PETRO CANADA DURON HP 15W40 (42 LTR)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PC0931369	PC	PC0076454
Sample Date	Client Info	16 May 2024	20 Mar 2024	04 Oct 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		MARGINAL	MARGINAL	MARGINAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	0	0	0
Iron	ppm ASTM D5185(m) >100	13	6	6
Chromium	ppm ASTM D5185(m) >20	<1	<1	<1
Nickel	ppm ASTM D5185(m) >4	1	<1	<1
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m) >3	0	0	<1
Aluminum	ppm ASTM D5185(m) >20	2	2	2
Lead	ppm ASTM D5185(m) >40	<1	<1	2
Copper	ppm ASTM D5185(m) >330	<1	<1	1
Tin	ppm ASTM D5185(m) >15	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) 0	<1	<1	<1
Barium	ppm ASTM D5185(m) 0	0	0	<1
Molybdenum	ppm ASTM D5185(m) 60	63	63	59
Manganese	ppm ASTM D5185(m) 0	0	0	0
Magnesium	ppm ASTM D5185(m) 1010	976	979	929
Calcium	ppm ASTM D5185(m) 1070	1033	1028	1007
Phosphorus	ppm ASTM D5185(m) 1150	988	997	953
Zinc	ppm ASTM D5185(m) 1270	1180	1193	1157
Sulfur	ppm ASTM D5185(m) 2060	2443	2475	2393
Lithium	ppm ASTM D5185(m)	<1	<1	<1

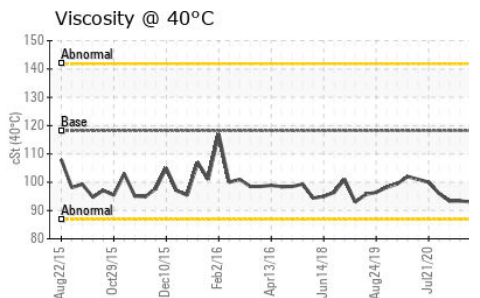
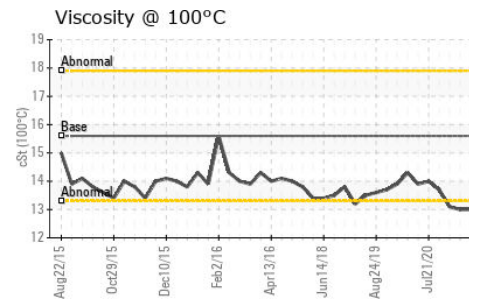
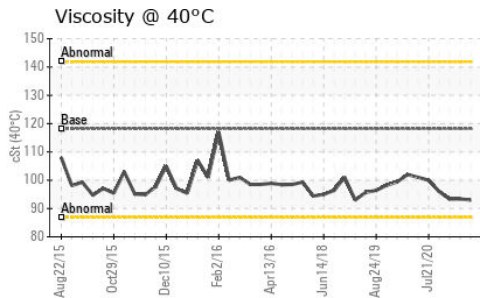
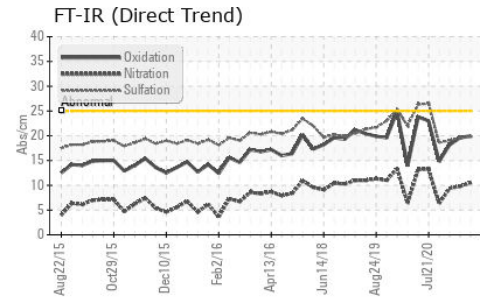
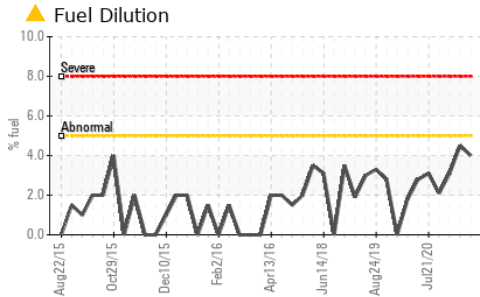
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	1	1	2
Sodium	ppm ASTM D5185(m)	7	2	2
Potassium	ppm ASTM D5185(m) >20	3	<1	0
Fuel	% ASTM D7593* >5	▲ 4	▲ 4.5	▲ 3.1

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0	0	0
Nitration	Abs/cm ASTM D7624* >20	10.5	9.8	9.4
Sulfation	Abs.1mm ASTM D7415* >30	19.8	19.5	19.1

OIL ANALYSIS REPORT

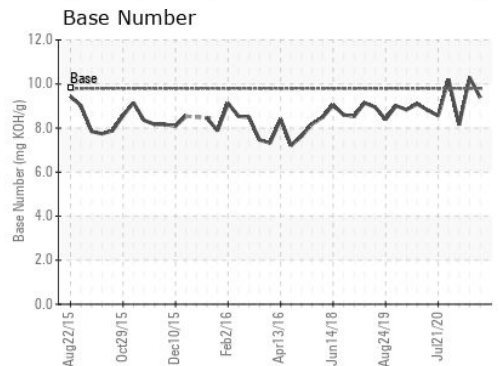
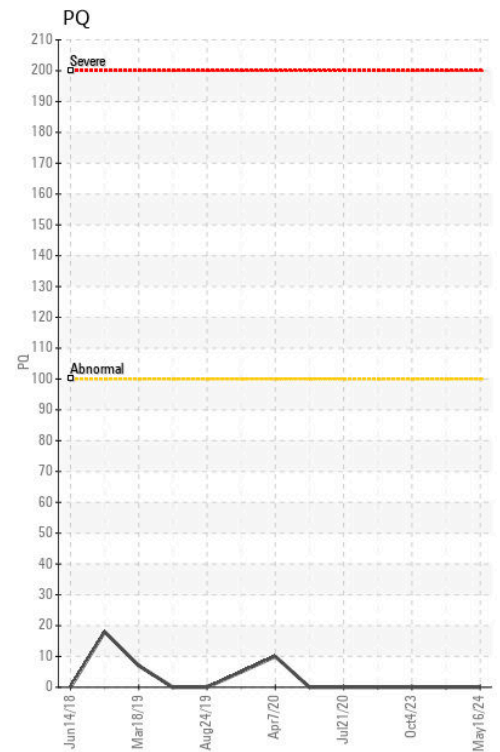
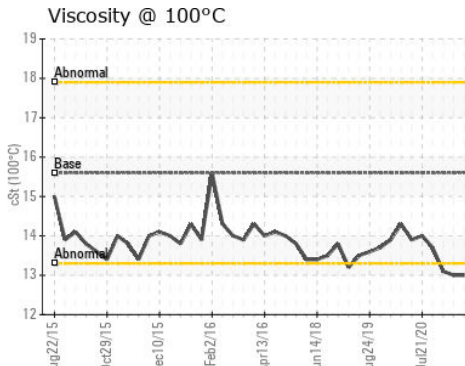
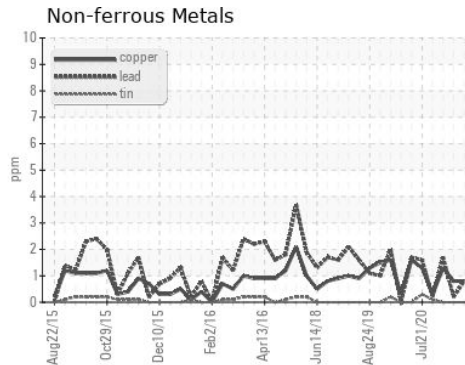
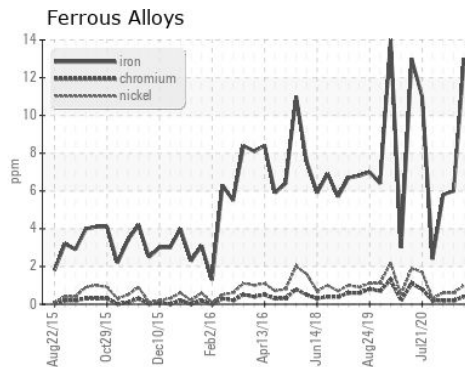


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	20.0	19.6	18.2
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	9.39	10.29	8.14

VISUAL	method	limit/base	current	history1	history2	
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)	118.2	93.0	93.4	93.3
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	13.0	13.0	13.1
Viscosity Index (VI)	Scale	ASTM D2270*	139	137	137	139

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0931369
Lab Number : 02638768
Unique Number : 5787930
Test Package : MAR 2 (Additional Tests: FuelDilution, KV40, PercentFuel, PQ, VI)

Suncor - Terra Nova Projects
 Scotia Centre, 235 Water Street
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshynes@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.*