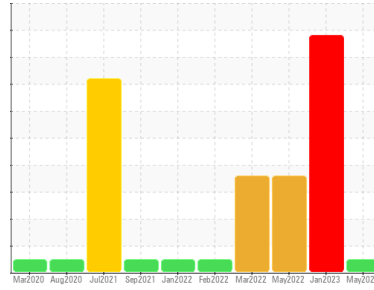


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
EBI DE COSTA RICA
Machine Id
VOLVO A40E A40E-01
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (55 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Test for glycol is negative. There is no indication of any contamination 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		PC0069038	PC0063684	PC0055893
Sample Date	Client Info		19 May 2023	05 Jan 2023	19 May 2022
Machine Age	hrs	Client Info	20016	19456	18493
Oil Age	hrs	Client Info	500	250	250
Oil Changed	Client Info		Changed	Changed	N/A
Sample Status			NORMAL	SEVERE	ATTENTION

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	1.7

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>200	12	8	13
Chromium	ppm	ASTM D5185(m)	>20	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>10	<1	0	<1
Titanium	ppm	ASTM D5185(m)		<1	<1	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>30	2	2	3
Lead	ppm	ASTM D5185(m)	>40	<1	2	1
Copper	ppm	ASTM D5185(m)	>20	2	8	2
Tin	ppm	ASTM D5185(m)	>20	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	<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

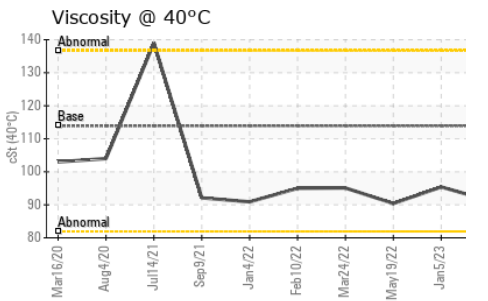
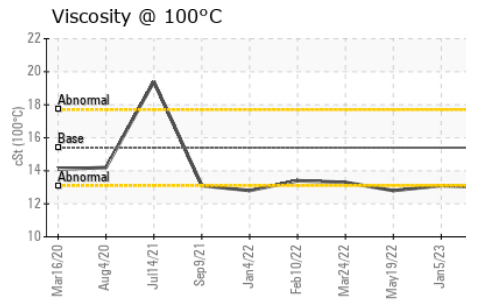
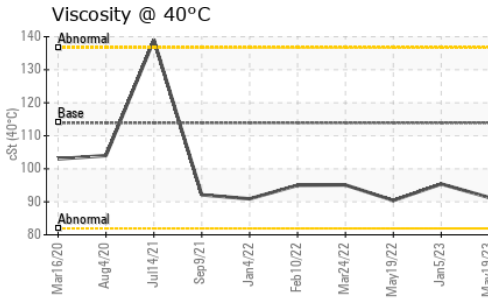
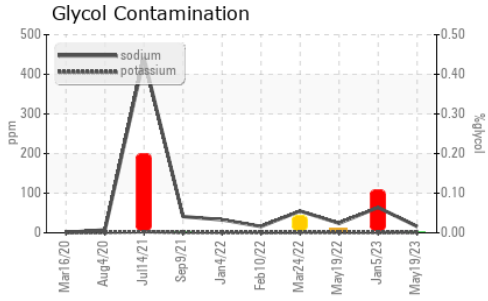
	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	3	8	4
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	56	60	58
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	930	957	998
Calcium	ppm	ASTM D5185(m)	1070	1048	1096	1084
Phosphorus	ppm	ASTM D5185(m)	1150	1066	1087	1075
Zinc	ppm	ASTM D5185(m)	1270	1123	1203	1216
Sulfur	ppm	ASTM D5185(m)	2060	2608	2691	2677
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	5	4	7
Sodium	ppm	ASTM D5185(m)		16	▲ 64	▲ 24
Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1
Glycol	%	ASTM D7922*		0.0	🔴 0.108	▲ 0.01

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.6	0.3	0.4
Nitration	Abs/cm	ASTM D7624*	>20	6.2	6.5	6.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.6	20.0	20.5

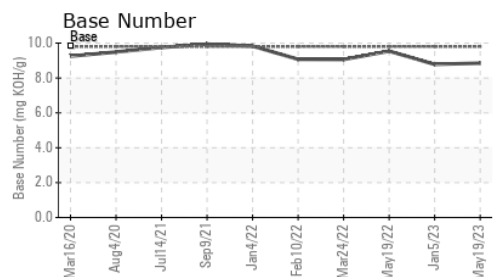
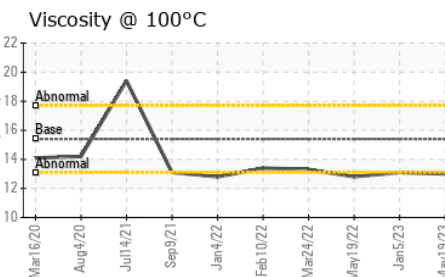
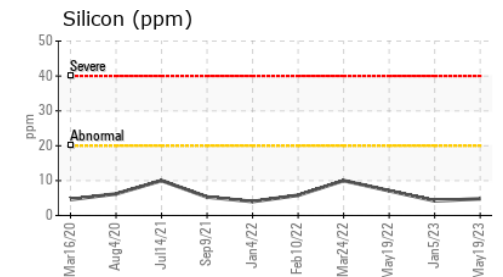
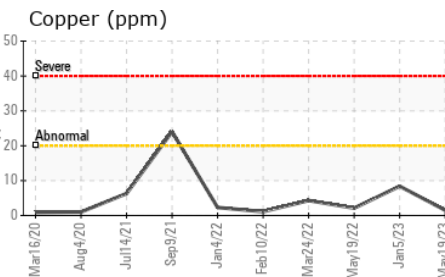
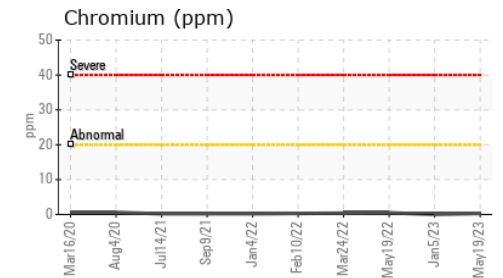
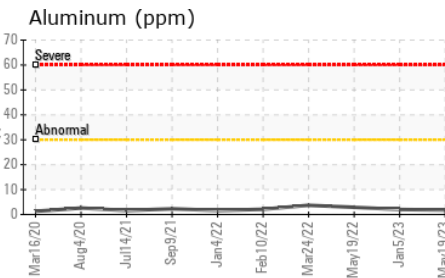
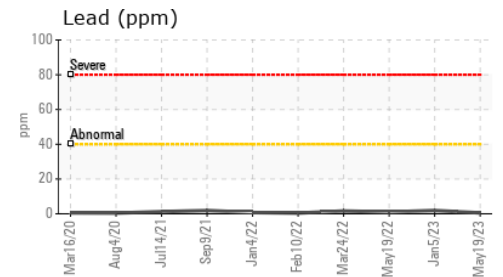
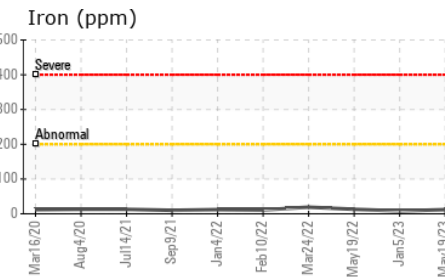


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	12.8	13.6	13.5
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	8.85	8.78	9.54

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	▲ .2%	NEG
Free Water	scalar	Visual*		NEG	▲ 1%	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	113.9	91.3	95.4	90.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.0	13.1	12.8
Viscosity Index (VI)	Scale	ASTM D2270*	142	140	135	139

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **INDUSTRIAS del PETROLEO CANAD. SA**
Sample No. : PC0069038 **Received** : 06 Jun 2023 Contiguo FANAL, frente a la Autopista Bernardo Soto
Lab Number : 02562031 **Diagnosed** : 07 Jun 2023 Grecia, A
Unique Number : 5591072 **Diagnostician** : Wes Davis CR
Test Package : MOB 2 (Additional Tests: KV40, 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.

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