



OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION
NORMAL
NORMAL

Machine Id
CRT EXPRESS PORT (S/N 12310)

Component
Port Main Engine

Fluid
SHELL 15W40 (200 LTR)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

WEAR

Copper ppm levels are noted. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

CONTAMINATION

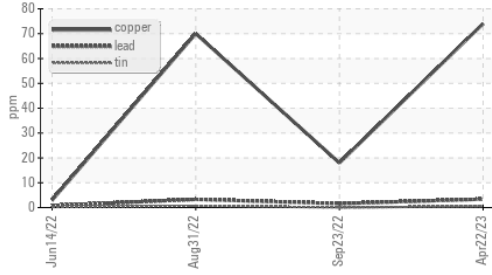
There is no indication of any contamination in the oil.

FLUID CONDITION

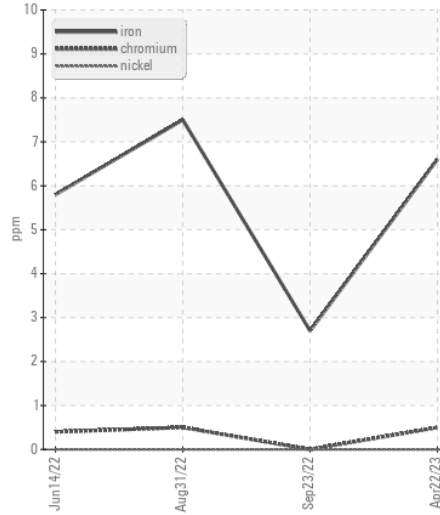
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0722089	WC0722081	WC0693930
Sample Date		Client Info		22 Apr 2023	23 Sep 2022	31 Aug 2022
Machine Age	hrs	Client Info		41570	41010	40935
Oil Age	hrs	Client Info		860	100	850
Filter Age	hrs	Client Info		860	100	850
Oil Changed		Client Info		N/A	Not Changd	Changed
Filter Changed		Client Info		N/A	Not Changd	Changed
Sample Status				ATTENTION	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>75	7	3	8
Chromium	ppm	ASTM D5185(m)	>8	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>2	0	0	0
Titanium	ppm	ASTM D5185(m)	>3	<1	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	1	<1	1
Lead	ppm	ASTM D5185(m)	>18	3	2	3
Copper	ppm	ASTM D5185(m)	>80	▲ 74	18	▲ 70
Tin	ppm	ASTM D5185(m)	>14	<1	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>20	5	4	10
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1
Fuel		WC Method	>4.0	<1.0	<1.0	▲ 3.6
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	8.6	5.9	8.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.4	19.6	20.6
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)	>150	3	2	5
Boron	ppm	ASTM D5185(m)		24	30	69
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		63	59	61
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		845	787	501
Calcium	ppm	ASTM D5185(m)		1405	1355	1695
Phosphorus	ppm	ASTM D5185(m)		1113	1052	1122
Zinc	ppm	ASTM D5185(m)		1232	1165	1222
Sulfur	ppm	ASTM D5185(m)		2765	2904	3142
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.6	14.8	18.5
Base Number (BN)	mg KOH/g	ASTM D2896*		8.41	9.44	8.00
Visc @ 100°C	cSt	ASTM D7279(m)		12.8	13.8	12.6

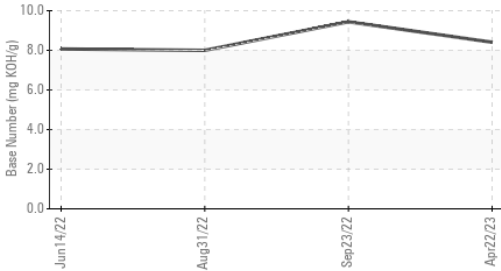
▲ Non-ferrous Metals



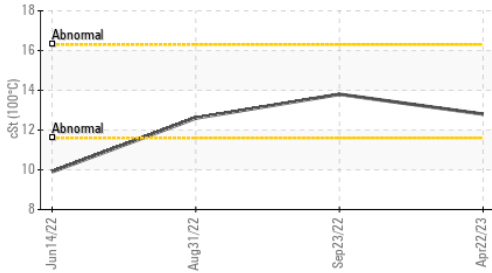
Ferrous Alloys



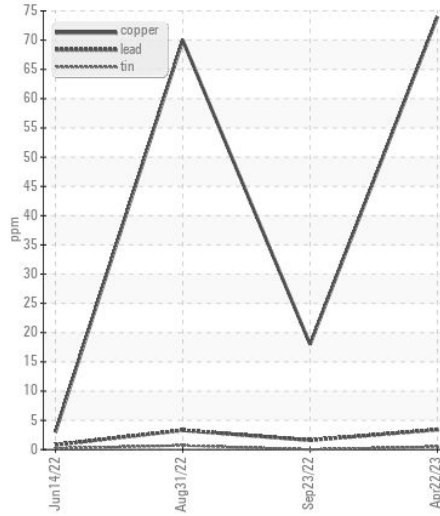
Base Number



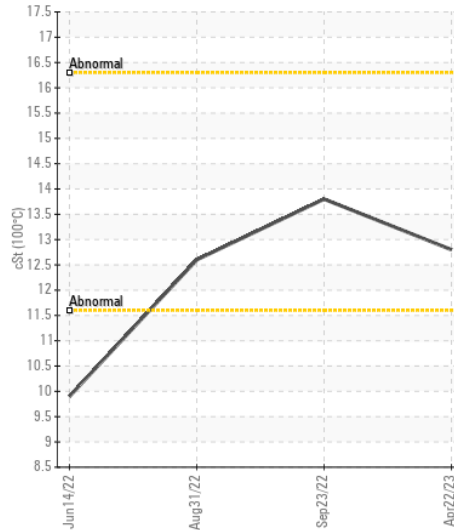
Viscosity @ 100°C



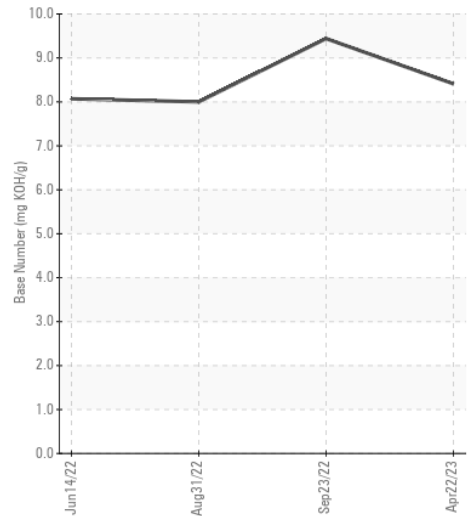
▲ Non-ferrous Metals



Viscosity @ 100°C



Base Number



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **CANSHIP UGLAND - CRT EXPRESS**
Sample No. : WC0722089 **Received** : 28 Apr 2023 1315 TOPSAIL ROAD, PO BOX 8040 STN A
Lab Number : 02554062 **Diagnosed** : 01 May 2023 ST JOHNS, NL
Unique Number : 5567077 **Diagnostician** : Kevin Marson CA A1B 3M7
Test Package : MAR 2

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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