



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
8 CLIPPER CRT BRAMPTON MANDARIN MANDARIN

Component
Rear Diesel Engine

Fluid
ESSO XD-3 EXTRA 15W40 (20 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PN0005715	PN0000608	PN0303207
Sample Date		Client Info		07 Feb 2024	01 Nov 2019	01 Nov 2018
Machine Age	hrs	Client Info		123	109	194
Oil Age	hrs	Client Info		0	0	10
Filter Age	hrs	Client Info		0	0	10
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	1	1	2
Chromium	ppm	ASTM D5185(m)	>20	0	<1	0
Nickel	ppm	ASTM D5185(m)	>4	0	0	0
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	<1	<1
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	2	1	2
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

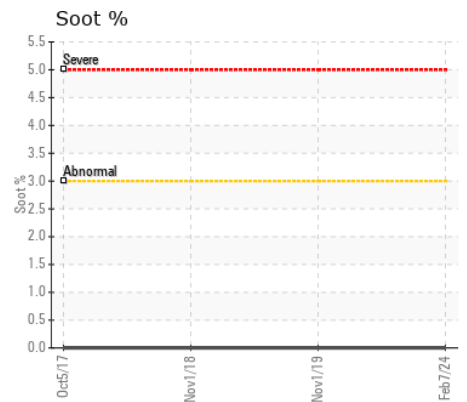
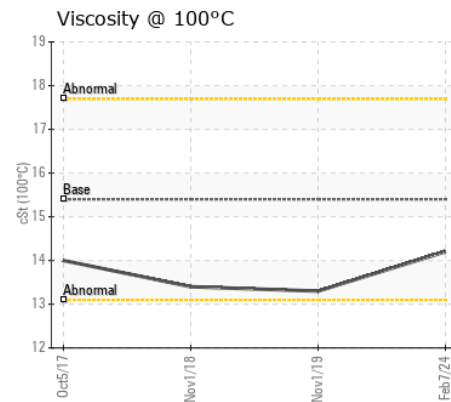
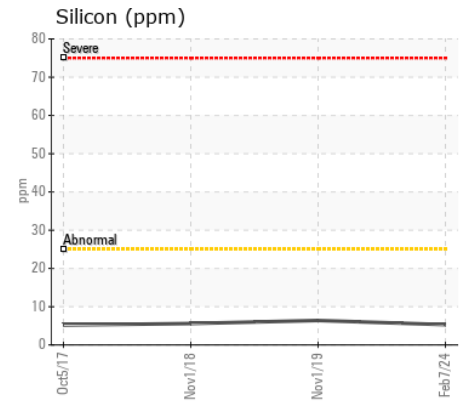
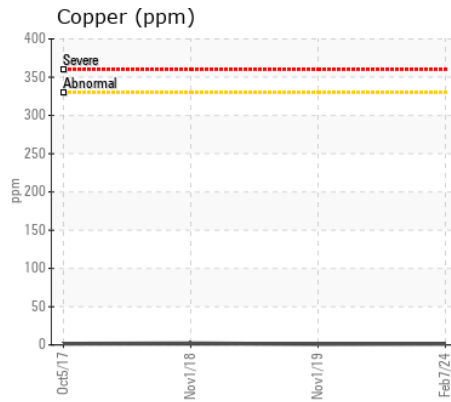
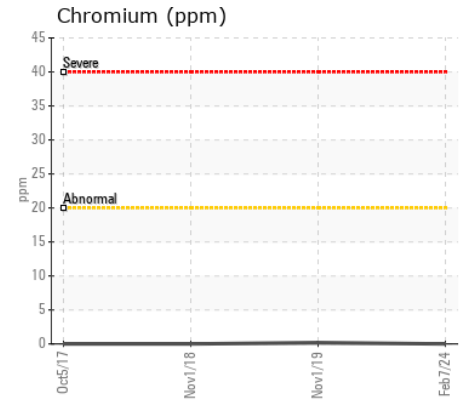
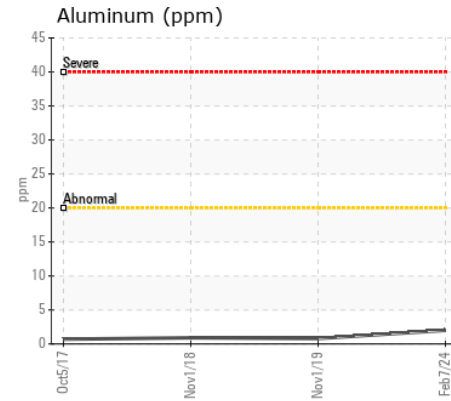
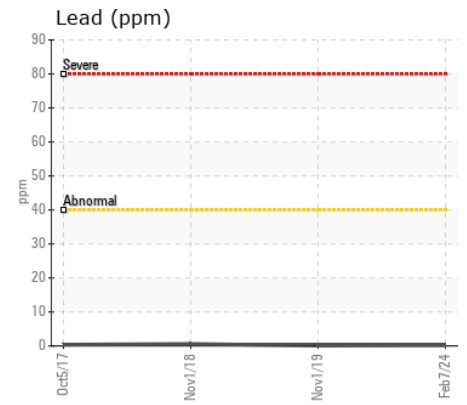
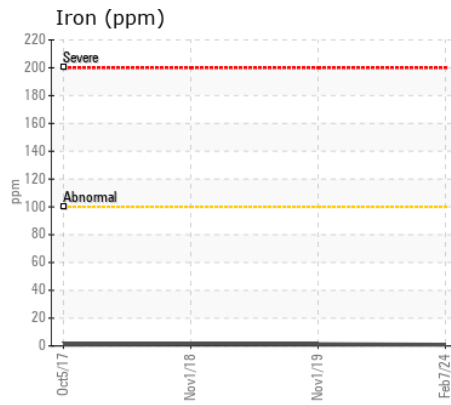
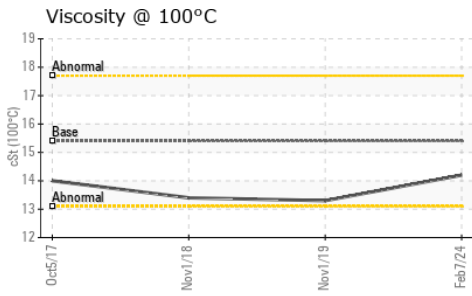
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	5	6	6
Potassium	ppm	ASTM D5185(m)	>20	<1	0	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	6.9	5.4	5.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	17.0	24.4	21.1
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>192	<1	6	2
Boron	ppm	ASTM D5185(m)		64	55	51
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		40	38	39
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		188	473	498
Calcium	ppm	ASTM D5185(m)	3780	1926	1624	1530
Phosphorus	ppm	ASTM D5185(m)	1370	992	733	743
Zinc	ppm	ASTM D5185(m)	1500	1088	841	848
Sulfur	ppm	ASTM D5185(m)	3800	3316	2118	2130
Oxidation	Abs/.1mm	ASTM D7414*	>25	12.6	19.0	18.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.2	13.3	13.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PN0005715
Lab Number : 02615901
Unique Number : 5733011
Test Package : MOB 1
Received : 15 Feb 2024
Tested : 15 Feb 2024
Diagnosed : 15 Feb 2024 - Kevin Marson

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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.