MOB I WEAR CHECK

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PORT ENGINE
Component
Port Diesel Engine
Fluid
SHELL 15W40 (--- LTR)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

Chromium ppm levels are severe. Iron and aluminum ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. Ring wear is indicated. Piston wear is indicated. A cylinder ring may be cracked or broken.

CONTAMINATION

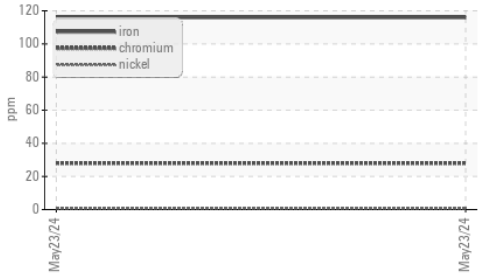
There is no indication of any contamination in the oil.

FLUID CONDITION

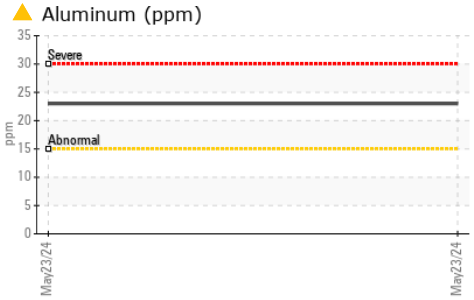
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0948714	---	---
Sample Date		Client Info		23 May 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		Not Changd	---	---
Sample Status				SEVERE	---	---
PQ		ASTM D8184*		11	---	---
Iron	ppm	ASTM D5185(m)	>100	▲ 116	---	---
Chromium	ppm	ASTM D5185(m)	>15	▲ 28	---	---
Nickel	ppm	ASTM D5185(m)	>4	<1	---	---
Titanium	ppm	ASTM D5185(m)	>2	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>15	▲ 23	---	---
Lead	ppm	ASTM D5185(m)	>50	3	---	---
Copper	ppm	ASTM D5185(m)	>170	17	---	---
Tin	ppm	ASTM D5185(m)	>4	<1	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
Silicon	ppm	ASTM D5185(m)	>25	11	---	---
Potassium	ppm	ASTM D5185(m)	>20	2	---	---
Fuel		WC Method	>3.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	ASTM D7844*	>6	0.6	---	---
Nitration	Abs/cm	ASTM D7624*	>20	7.5	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.2	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---
Sodium	ppm	ASTM D5185(m)	>150	9	---	---
Boron	ppm	ASTM D5185(m)		2	---	---
Barium	ppm	ASTM D5185(m)		0	---	---
Molybdenum	ppm	ASTM D5185(m)		62	---	---
Manganese	ppm	ASTM D5185(m)		2	---	---
Magnesium	ppm	ASTM D5185(m)		972	---	---
Calcium	ppm	ASTM D5185(m)		1094	---	---
Phosphorus	ppm	ASTM D5185(m)		1041	---	---
Zinc	ppm	ASTM D5185(m)		1207	---	---
Sulfur	ppm	ASTM D5185(m)		2547	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.2	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		13.6	---	---

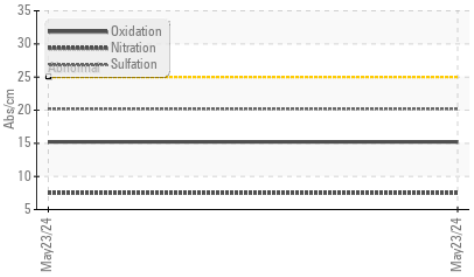
Ferrous Alloys



Aluminum (ppm)

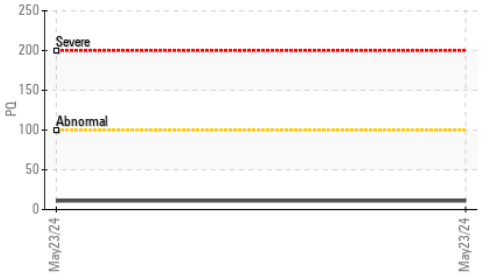


FT-IR (Direct Trend)

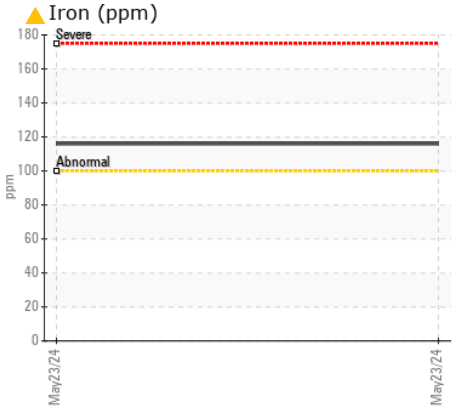


Viscosity @ 100°C

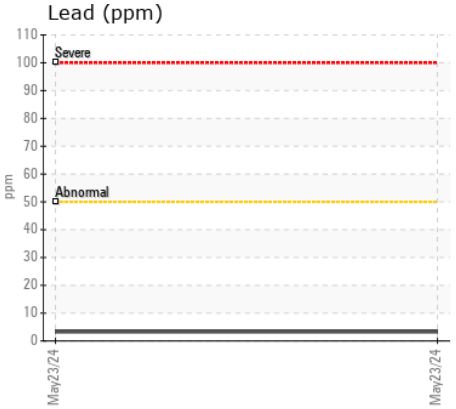
PQ



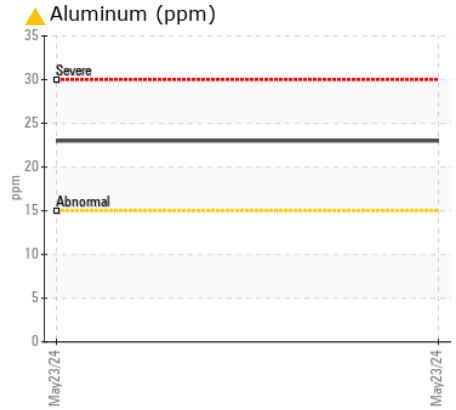
Iron (ppm)



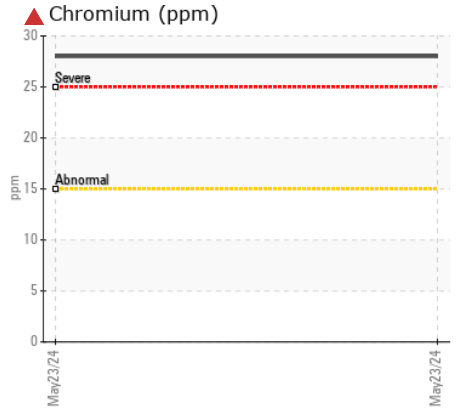
Lead (ppm)



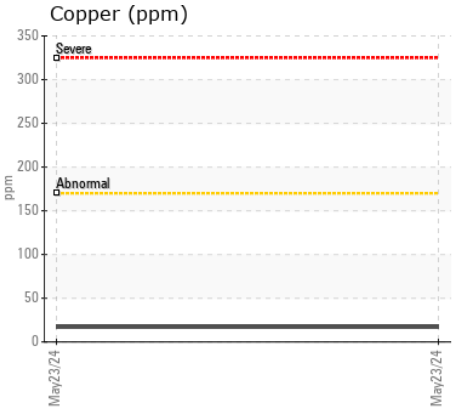
Aluminum (ppm)



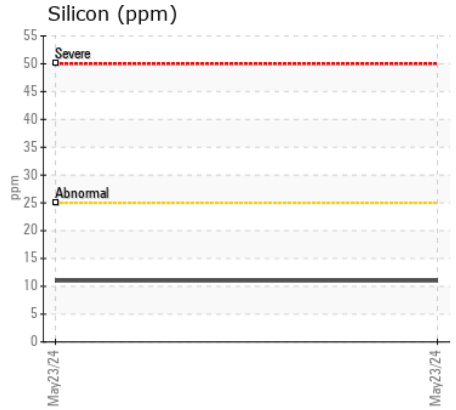
Chromium (ppm)



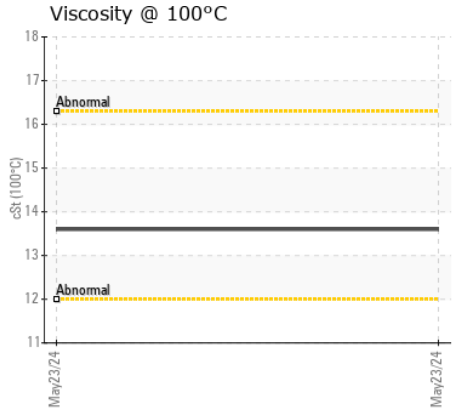
Copper (ppm)



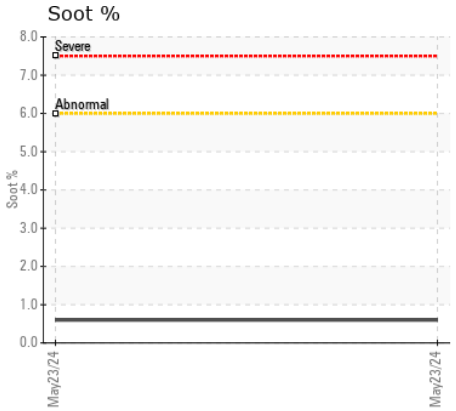
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9		
Sample No.	: WC0948714	**Received**	: 29 May 2024
Lab Number	: 02638370	**Tested**	: 30 May 2024
Unique Number	: 5787532	**Diagnosed**	: 30 May 2024 - Kevin Marson
Test Package	: MOB 1 (Additional Tests: PQ)		

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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