

Machine Id
INTERNATIONAL 110-2300
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0088727	PC0072547	PC0072443
Sample Date		Client Info		17 May 2024	04 Oct 2023	21 Jun 2023
Machine Age	kms	Client Info		61054	48608	35500
Oil Age	kms	Client Info		13054	12000	12000
Filter Age	kms	Client Info		13054	12000	12000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	45	22	25
Chromium	ppm	ASTM D5185(m)	>20	2	1	2
Nickel	ppm	ASTM D5185(m)	>4	<1	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	11	7	9
Lead	ppm	ASTM D5185(m)	>40	0	<1	0
Copper	ppm	ASTM D5185(m)	>330	4	2	4
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

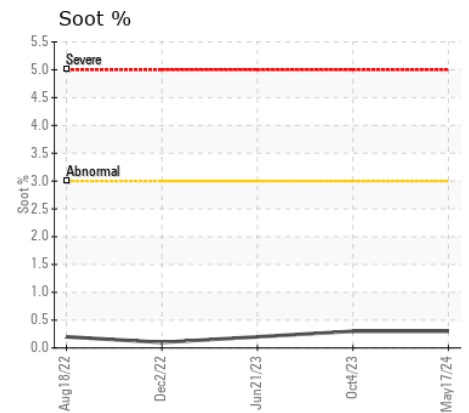
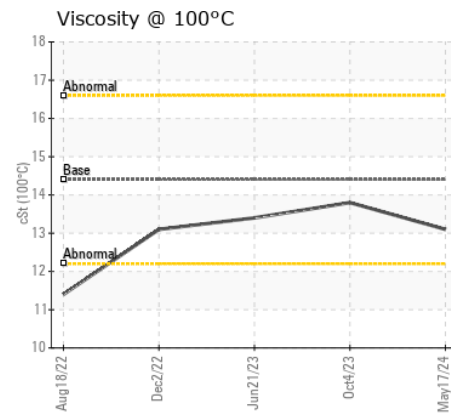
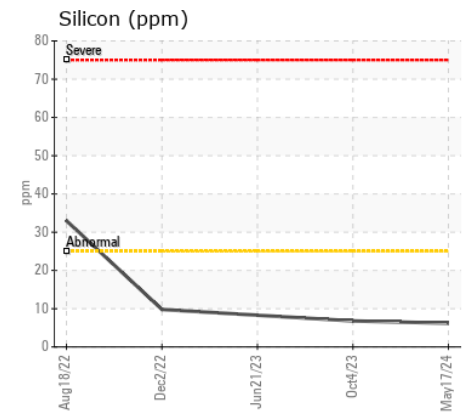
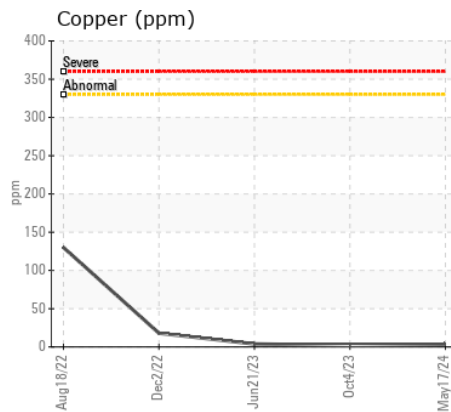
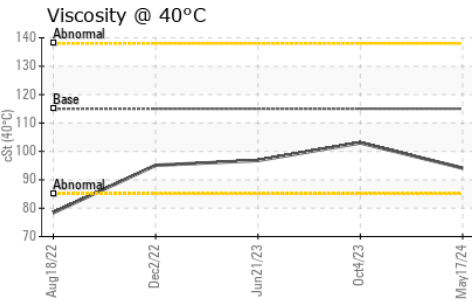
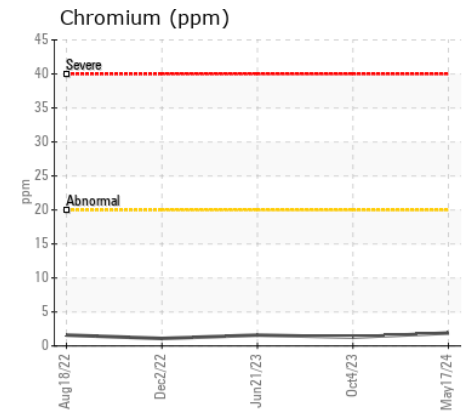
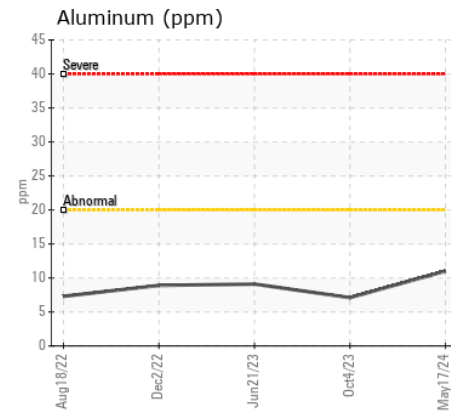
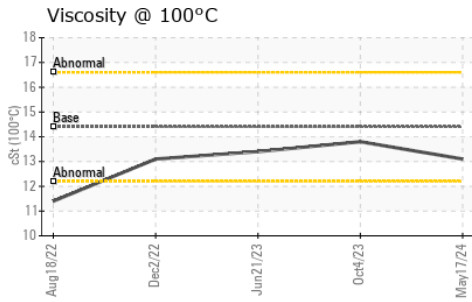
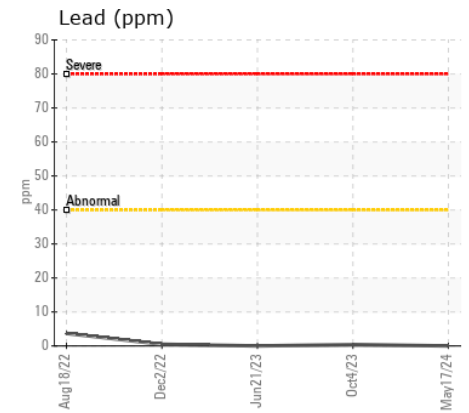
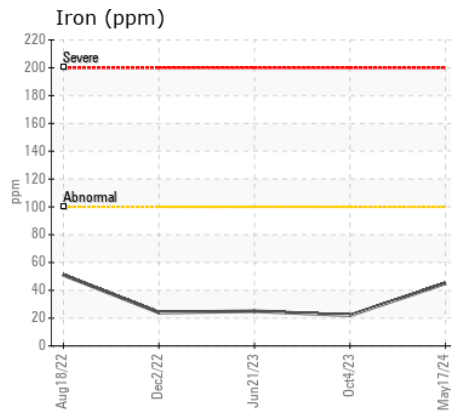
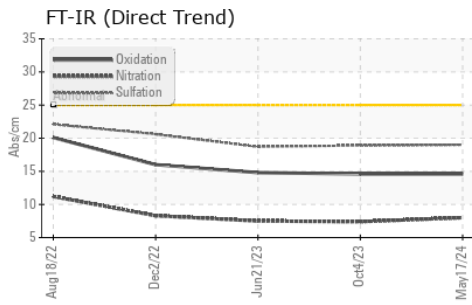
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	6	7	8
Potassium	ppm	ASTM D5185(m)	>20	19	14	18
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.3	0.3	0.2
Nitration	Abs/cm	ASTM D7624*	>20	8.0	7.4	7.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.0	18.9	18.7
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)	>158	1	2	2
Boron	ppm	ASTM D5185(m)	250	4	2	7
Barium	ppm	ASTM D5185(m)	10	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	100	58	60	58
Manganese	ppm	ASTM D5185(m)		<1	0	<1
Magnesium	ppm	ASTM D5185(m)	450	933	978	954
Calcium	ppm	ASTM D5185(m)	3000	1099	1077	1048
Phosphorus	ppm	ASTM D5185(m)	1150	1012	1025	1039
Zinc	ppm	ASTM D5185(m)	1350	1169	1226	1182
Sulfur	ppm	ASTM D5185(m)	4250	2494	2577	2555
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.6	14.6	14.8
Visc @ 40°C	cSt	ASTM D7279(m)	115	94.1	103	96.8
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	13.1	13.8	13.4
Viscosity Index (VI)	Scale	ASTM D2270*	126	137	134	138



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC008872 **Received** : 29 May 2024
Lab Number : 02638354 **Tested** : 29 May 2024
Unique Number : 5787516 **Diagnosed** : 29 May 2024 - Wes Davis
Test Package : MOB 1 (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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