

Machine Id
1593
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (--- GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0083226	PC0084431	PC0082476
Sample Date		Client Info		14 May 2024	26 Feb 2024	21 Nov 2023
Machine Age	hrs	Client Info		8285	7755	7265
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	24	22	22
Chromium	ppm	ASTM D5185(m)	>20	1	1	1
Nickel	ppm	ASTM D5185(m)	>4	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	7	11	15
Lead	ppm	ASTM D5185(m)	>40	0	<1	1
Copper	ppm	ASTM D5185(m)	>330	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

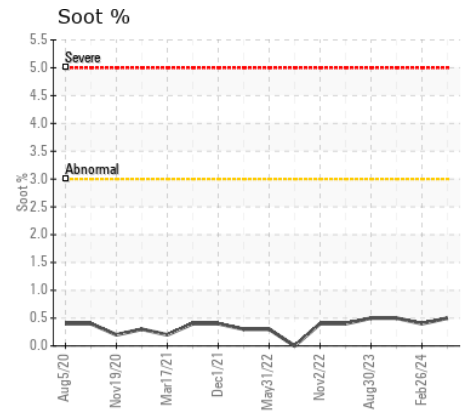
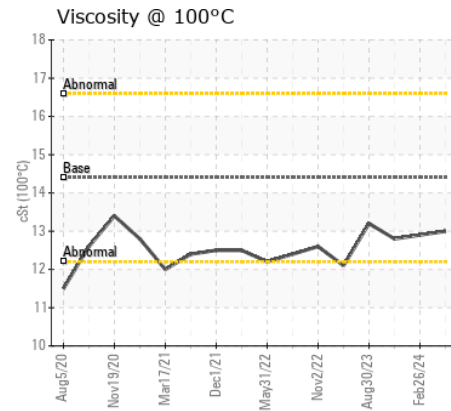
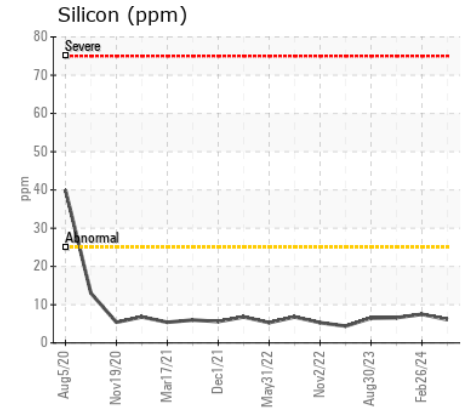
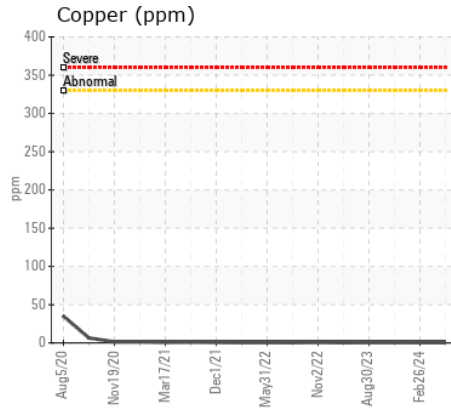
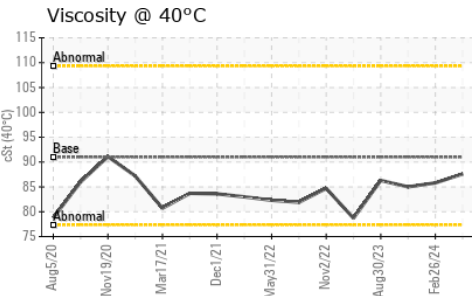
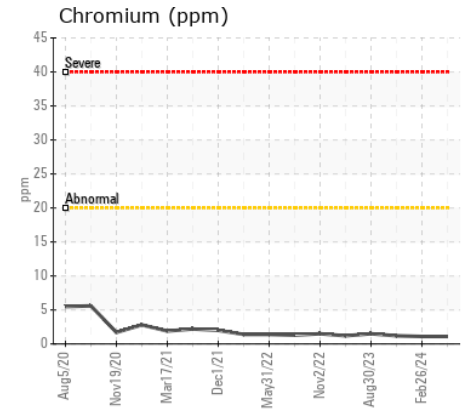
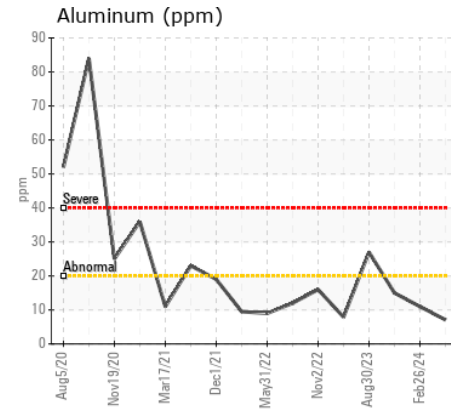
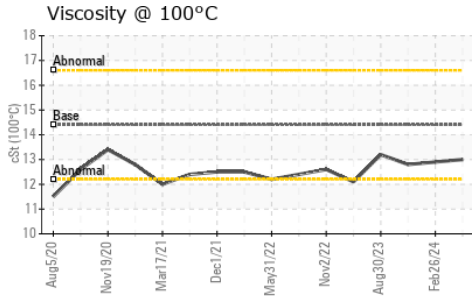
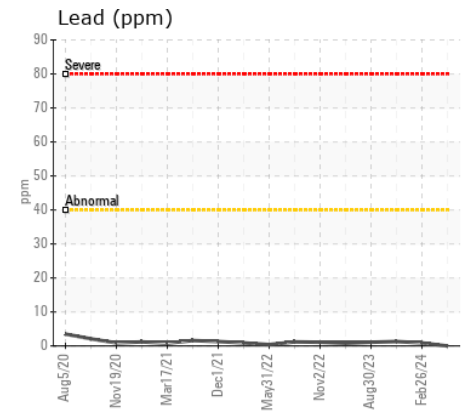
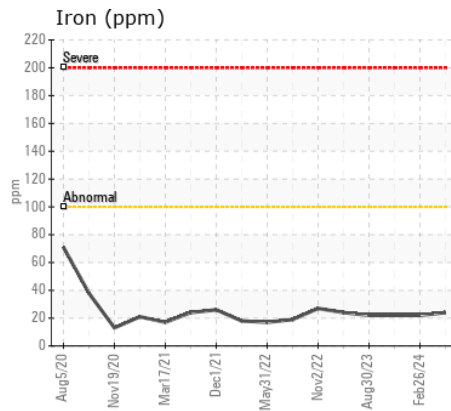
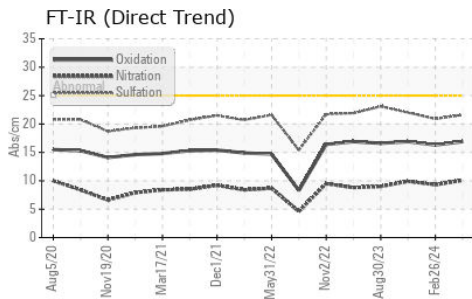
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	6	8	7
Potassium	ppm	ASTM D5185(m)	>20	12	19	40
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	0.5	0.4	0.5
Nitration	Abs/cm	ASTM D7624*	>20	10.1	9.3	9.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.6	20.9	22.0
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)	>44	3	3	4
Boron	ppm	ASTM D5185(m)	250	1	<1	1
Barium	ppm	ASTM D5185(m)	10	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	60	59	60
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)	450	993	952	972
Calcium	ppm	ASTM D5185(m)	3000	1109	1167	1106
Phosphorus	ppm	ASTM D5185(m)	1150	1035	1035	1015
Zinc	ppm	ASTM D5185(m)	1350	1237	1200	1218
Sulfur	ppm	ASTM D5185(m)	4250	2495	2711	2454
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.9	16.3	16.9
Visc @ 40°C	cSt	ASTM D7279(m)	91	87.6	85.8	85.0
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	13.0	12.9	12.8
Viscosity Index (VI)	Scale	ASTM D2270*	164	147	149	149



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0083226
Lab Number : 02635577
Unique Number : 5776730
Test Package : MOB 1 (Additional Tests: KV40, VI)

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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.

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F: