

Machine Id
1175
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		PC0084350	PC0056609	PC0070910
Sample Date		Client Info		28 Feb 2024	06 Mar 2023	01 Mar 2023
Machine Age	kms	Client Info		20508	11244	10060
Oil Age	kms	Client Info		0	0	0
Filter Age	kms	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	SEVERE

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	22	5	25
Chromium	ppm	ASTM D5185(m)	>20	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	7	2	7
Lead	ppm	ASTM D5185(m)	>40	10	2	11
Copper	ppm	ASTM D5185(m)	>330	446	77	▲ 400
Tin	ppm	ASTM D5185(m)	>15	4	2	8
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

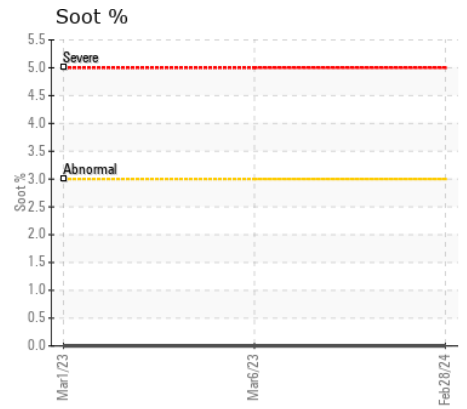
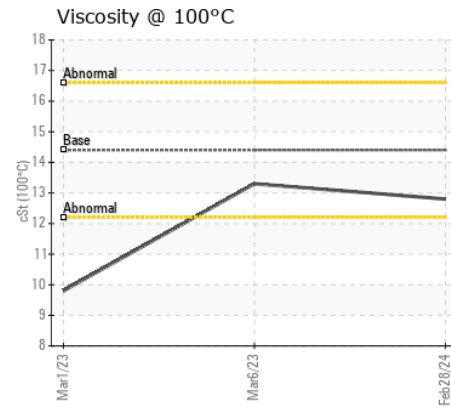
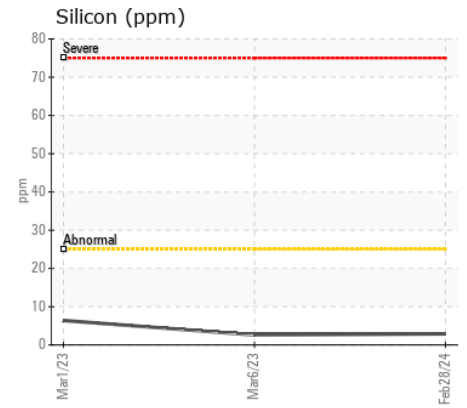
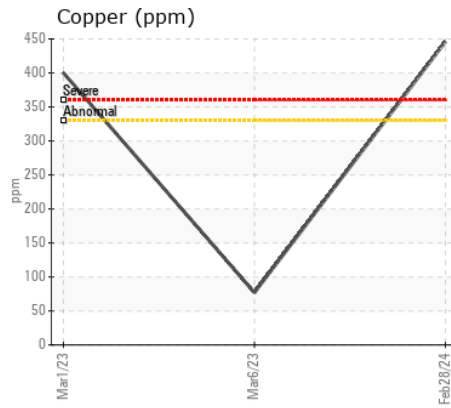
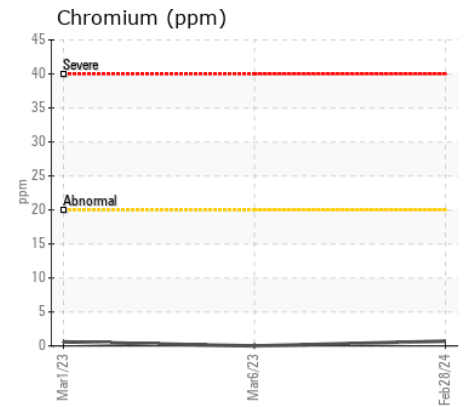
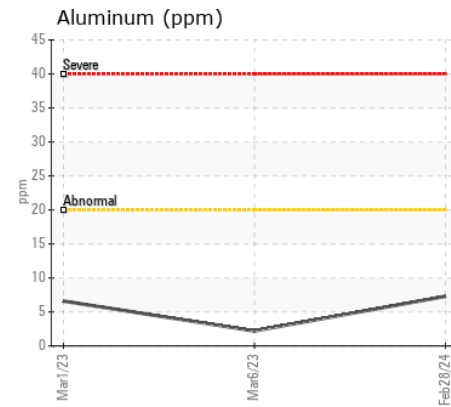
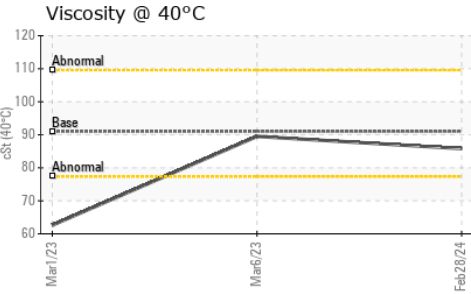
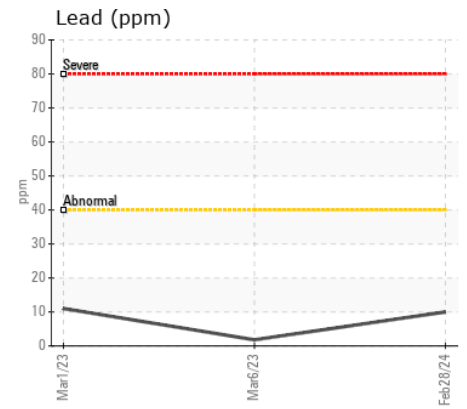
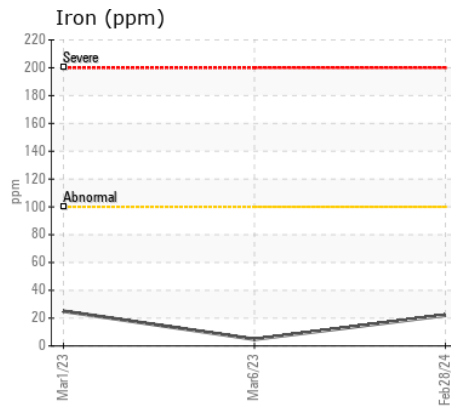
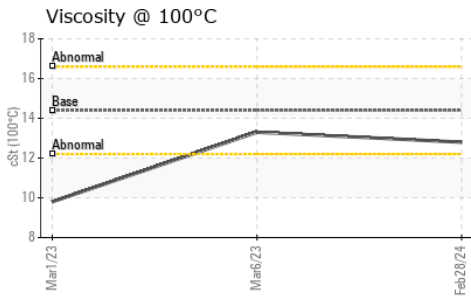
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	3	3	6
Potassium	ppm	ASTM D5185(m)	>20	20	1	11
Fuel		WC Method	>5	<1.0	<1.0	0.4
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	7.1	5.1	7.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.6	20.9	24.4
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	2	2	4
Boron	ppm	ASTM D5185(m)	250	6	8	54
Barium	ppm	ASTM D5185(m)	10	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	55	53	42
Manganese	ppm	ASTM D5185(m)		<1	<1	3
Magnesium	ppm	ASTM D5185(m)	450	872	868	501
Calcium	ppm	ASTM D5185(m)	3000	1158	1167	1810
Phosphorus	ppm	ASTM D5185(m)	1150	934	1020	812
Zinc	ppm	ASTM D5185(m)	1350	1113	1111	890
Sulfur	ppm	ASTM D5185(m)	4250	2347	2550	1967
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.2	14.3	21.4
Visc @ 40°C	cSt	ASTM D7279(m)	91	85.8	89.5	62.6
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	12.8	13.3	9.8
Viscosity Index (VI)	Scale	ASTM D2270*	164	147	149	140



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0084350
Lab Number : 02618895
Unique Number : 5736005
Test Package : MOB 1 (Additional Tests: KV40, VI)

LES ENTREPRISES MICHAUVILLE INC.
 270 RUE BRUNET
 MONT ST-HILAIRE, QC
 CA J3H 0M6
 Contact: Martin Trudel
 mtrudel@michaudville.com

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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