



Machine Id
F55053
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 5W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

WEAR

Aluminum ppm levels are abnormal. Piston wear is indicated.

CONTAMINATION

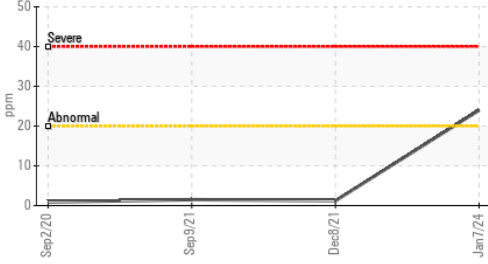
Test for glycol is positive. There is a light concentration of glycol present in the oil.

FLUID CONDITION

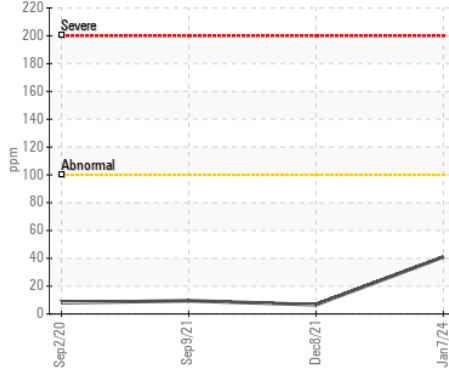
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0075915	PC0056873	PC0054219
Sample Date		Client Info		07 Jan 2024	08 Dec 2021	09 Sep 2021
Machine Age	hrs	Client Info		3907	2629	2328
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				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>100	41	7	10
Chromium	ppm	ASTM D5185(m)	>20	1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	▲ 24	1	2
Lead	ppm	ASTM D5185(m)	>40	<1	0	<1
Copper	ppm	ASTM D5185(m)	>330	16	1	3
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>25	8	6	12
Potassium	ppm	ASTM D5185(m)	>20	▲ 79	<1	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		▲ 0.017	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.1	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.8	6.7	7.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.9	19.7	18.9
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)	>44	▲ 1069	2	2
Boron	ppm	ASTM D5185(m)	250	12	2	3
Barium	ppm	ASTM D5185(m)	10	0	0	0
Molybdenum	ppm	ASTM D5185(m)	100	157	57	57
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	875	1036	1054
Calcium	ppm	ASTM D5185(m)	3000	1044	1100	1113
Phosphorus	ppm	ASTM D5185(m)	1150	979	1041	1042
Zinc	ppm	ASTM D5185(m)	1350	1131	1234	1255
Sulfur	ppm	ASTM D5185(m)	4250	2727	2560	2494
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.6	14.7	15.1
Visc @ 40°C	cSt	ASTM D7279(m)	91	92.2	91.9	90.8
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	13.7	13.5	13.3
Viscosity Index (VI)	Scale	ASTM D2270*	164	150	148	146

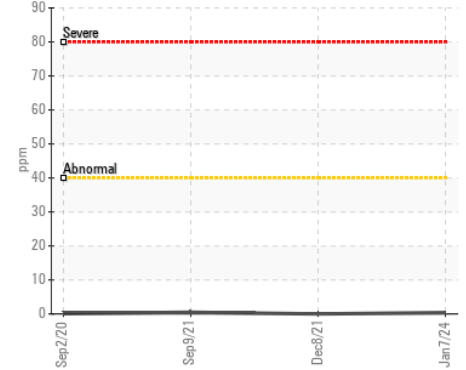
▲ Aluminum (ppm)



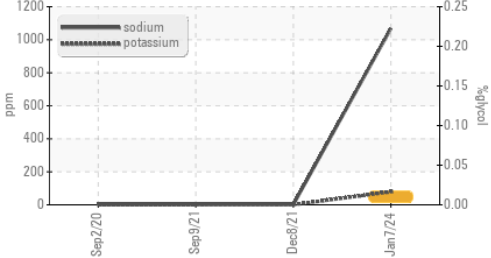
Iron (ppm)



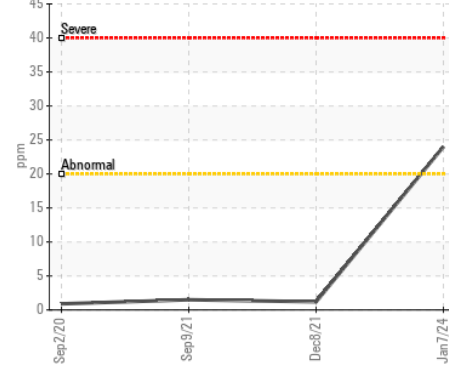
Lead (ppm)



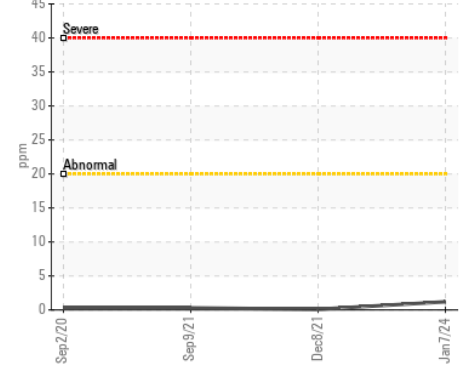
▲ Glycol Contamination



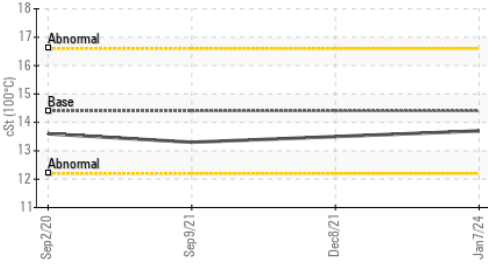
▲ Aluminum (ppm)



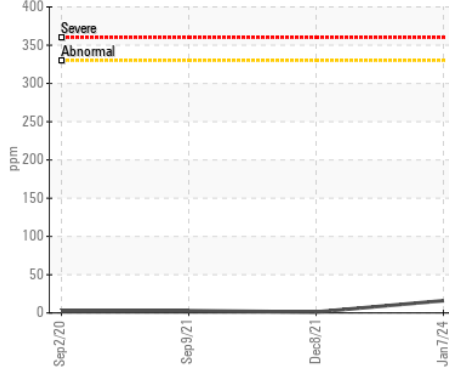
Chromium (ppm)



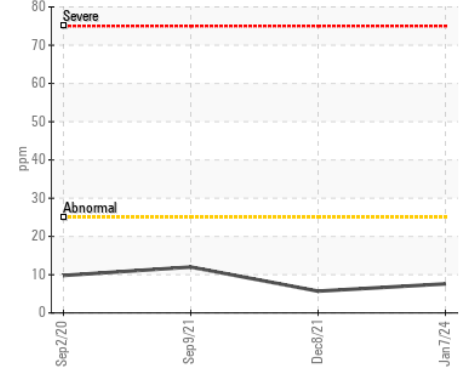
Viscosity @ 100°C



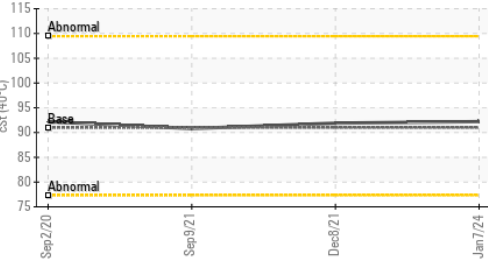
Copper (ppm)



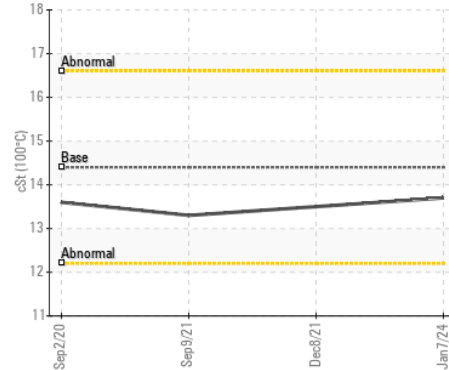
Silicon (ppm)



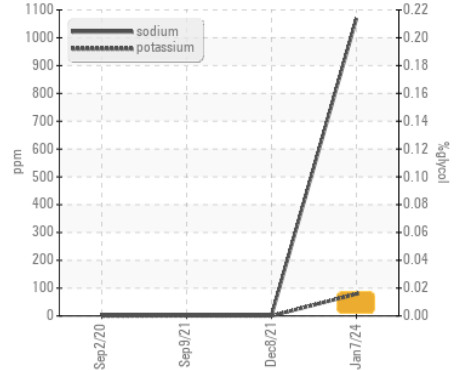
Viscosity @ 40°C



Viscosity @ 100°C



▲ Glycol Contamination



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 LES ENTREPRISES MICHAUDVILLE INC.
Sample No. : PC0075915 **Received** : 08 Jan 2024
Lab Number : 02606989 **Diagnosed** : 08 Jan 2024
Unique Number : 5708075 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: Glycol, 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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