



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**TB112**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 5W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0089309</b>	PC0082670	PC0075782
Sample Date		Client Info		<b>15 May 2024</b>	02 Jan 2024	23 May 2023
Machine Age	hrs	Client Info		<b>5154</b>	4939	4372
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>19</b>	32	28
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	▲ 34	18
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	<1	0
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	12	10
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

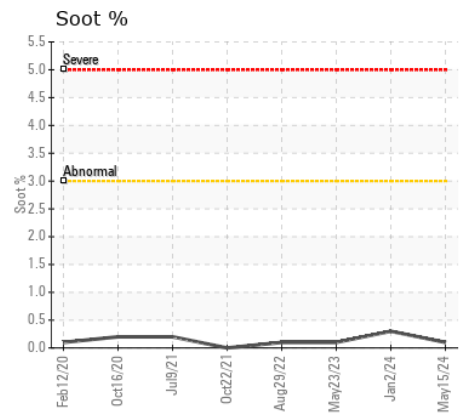
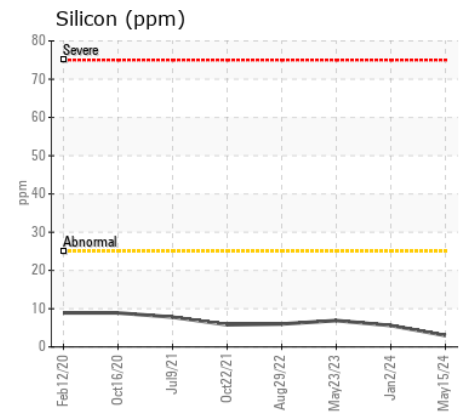
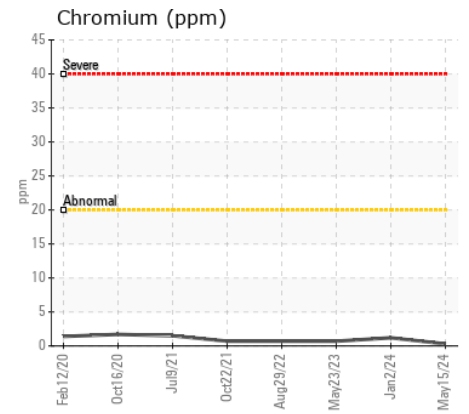
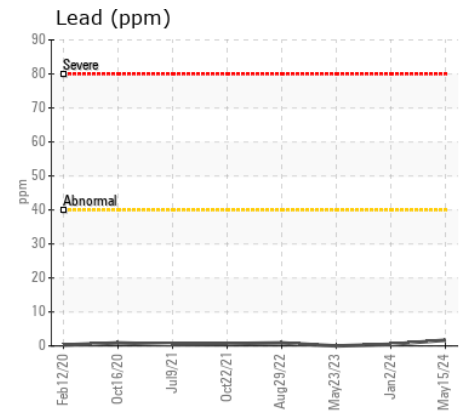
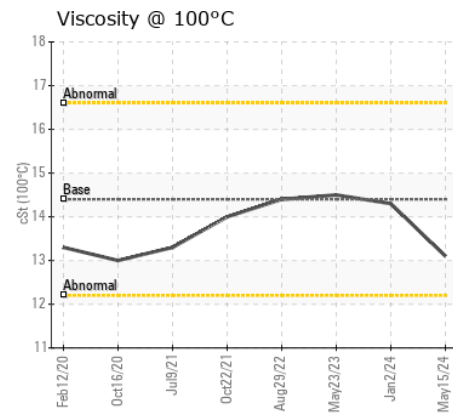
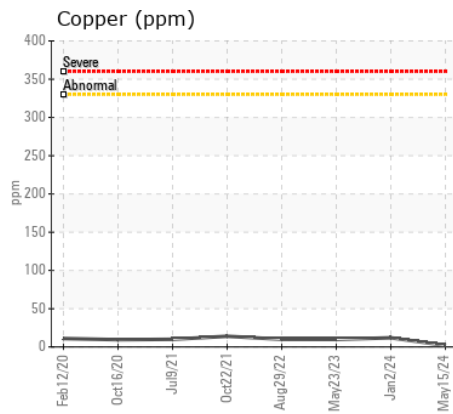
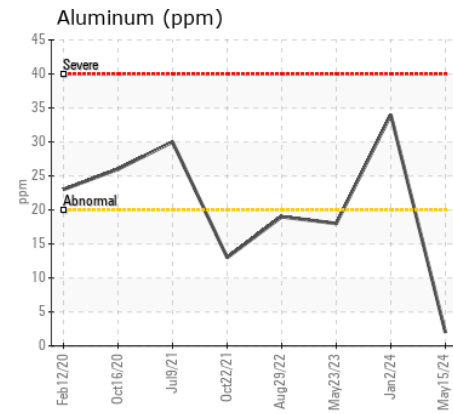
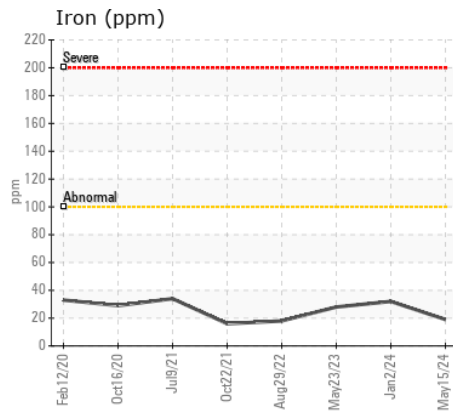
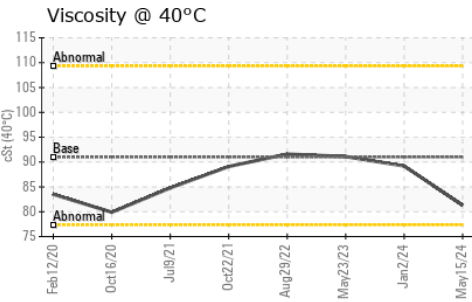
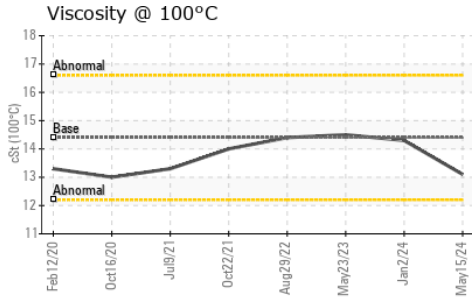
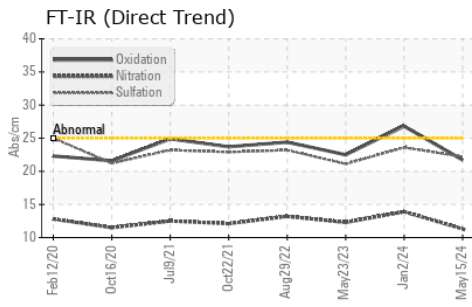
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>3</b>	6	7
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	14	5
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	0.0	NEG
Soot %	%	ASTM D7844*	>3	<b>0.1</b>	0.3	0.1
Nitration	Abs/cm	ASTM D7624*	>20	<b>11.3</b>	13.9	12.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.2</b>	23.6	21.1
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>44	<b>5</b>	5	5
Boron	ppm	ASTM D5185(m)	250	<b>24</b>	20	41
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	100	<b>60</b>	58	61
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	<b>1112</b>	1093	1123
Calcium	ppm	ASTM D5185(m)	3000	<b>856</b>	812	875
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1015</b>	978	1088
Zinc	ppm	ASTM D5185(m)	1350	<b>1200</b>	1177	1218
Sulfur	ppm	ASTM D5185(m)	4250	<b>2718</b>	2857	2830
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>21.7</b>	26.8	22.5
Visc @ 40°C	cSt	ASTM D7279(m)	91	<b>81.3</b>	89.2	91.1
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	<b>13.1</b>	14.3	14.5
Viscosity Index (VI)	Scale	ASTM D2270*	164	<b>162</b>	166	165



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0089309  
**Lab Number** : 02636334  
**Unique Number** : 5785496  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )

**Received** : 17 May 2024  
**Tested** : 17 May 2024  
**Diagnosed** : 17 May 2024 - Wes Davis

Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations  
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 Stouffville, ON  
 CA L4A 2G8  
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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: