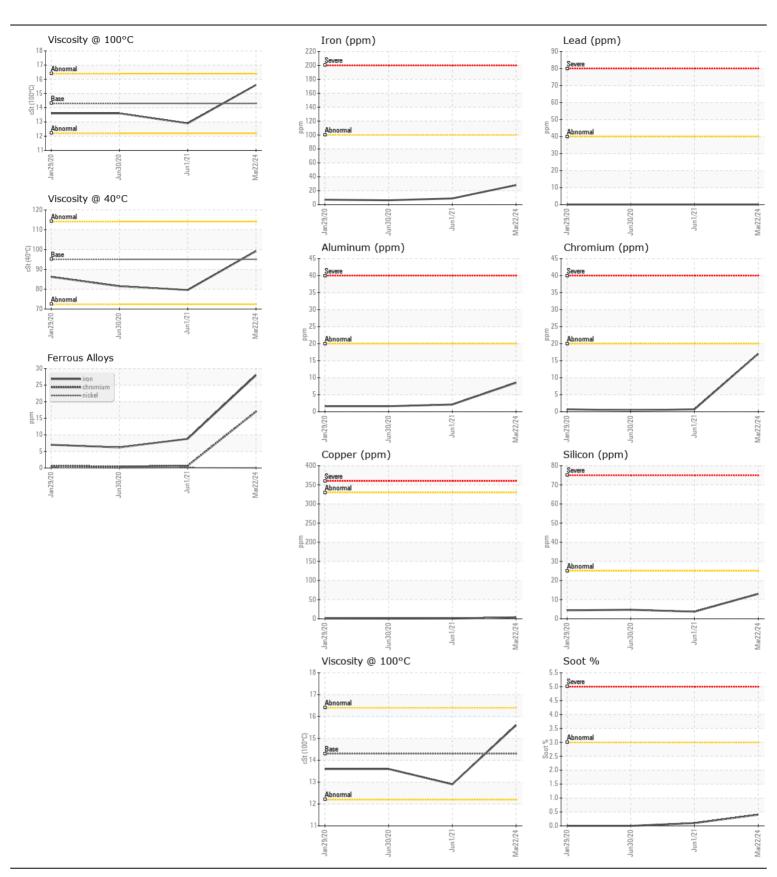
**WEAR** CONTAMINATION **FLUID CONDITION** 

**NORMAL NORMAL NORMAL** 

Machine Id ST250

Component Diesel Engine

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		PC0082693	PC0047889	PC0026252
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.	Sample Date		Client Info		22 Mar 2024	01 Jun 2021	30 Jun 2020
	Machine Age	hrs	Client Info		3677	2640	2165
	Oil Age	hrs	Client Info		0	2165	0
	Filter Age	hrs	Client Info		0	2165	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185(m)	>100	28	9	6
An increase in the chromium level is noted. All other component wear rates are normal.	Chromium	ppm	ASTM D5185(m)	>20	17	<1	<1
	Nickel	ppm	ASTM D5185(m)	>4	0	<1	0
	Titanium	ppm	ASTM D5185(m)		<1	0	0
	Silver	ppm	ASTM D5185(m)	>3	0	<1	0
	Aluminum	ppm	ASTM D5185(m)	>20	8	2	2
	Lead	ppm	ASTM D5185(m)	>40	0	0	0
	Copper	ppm	ASTM D5185(m)	>330	4	<1	<1
	Tin	ppm	ASTM D5185(m)	>15	1	<1	<1
	Vanadium	ppm	ASTM D5185(m)		0	0	0
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>25	13	4	5
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)	>20	1	<1	1
	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	0.4	0.1	0
	Nitration	Abs/cm	ASTM D7624*	>20	13.7	9.6	8.7
	Sulfation	Abs/.1mm	ASTM D7415*		23.4	20.4	23.9
	Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		5	4	<1
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)	65	46	43	61
	Barium	ppm	ASTM D5185(m)	0	0	0	0
	Molybdenum	ppm	ASTM D5185(m)	65	69	58	61
	Manganese	ppm	ASTM D5185(m)		0	<1	<1
	Magnesium	ppm	ASTM D5185(m)		1386	1104	1202
	Calcium	ppm	ASTM D5185(m)	820	1042	878	876
	Phosphorus	ppm	ASTM D5185(m)		1124	1023	1128
	Zinc	ppm	ASTM D5185(m)	1260	1439	1284	1316
	Sulfur	ppm Abo/1mm	ASTM D5185(m)	3000	2787	2897	3044
	Oxidation	Abs/.1mm	ASTM D7414*		24.9	19.2	17.2
	Visc @ 40°C	cSt	ASTM D7279(m)		99.2	79.6	81.5
	Visc @ 100°C	cSt	ASTM D7279(m) ASTM D2270*	14.3	15.6	12.9	13.6 170
	Viscosity Index (VI)	Scale	ASTIVI DZZ/0"	109	167	162	1/0





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations

: PC0082693 Lab Number : 02624908

Received **Tested** Unique Number : 5750027

Diagnosed Test Package : MOB 1 ( Additional Tests: KV40, VI )

: 27 Mar 2024 : 27 Mar 2024 : 27 Mar 2024 - Kevin Marson

151 Ram Forest Rd, Stouffville, ON CA L4A 2G8 Contact: Shannon Abbott

sabbott@gipi.com T: (905)750-5900

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.