

Machine Id
OR252
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 10W30 (42 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0082014	PC0012635	PC0004991
Sample Date		Client Info		22 Feb 2024	03 Jun 2019	04 Feb 2019
Machine Age	hrs	Client Info		18014	8517	8040
Oil Age	hrs	Client Info		0	8040	0
Filter Age	hrs	Client Info		0	8040	0
Oil Changed		Client Info		Not Chngd	Changed	Changed
Filter Changed		Client Info		Not Chngd	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	14	21	18
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>15	2	<1	1
Lead	ppm	ASTM D5185(m)	>30	<1	1	<1
Copper	ppm	ASTM D5185(m)	>125	<1	4	1
Tin	ppm	ASTM D5185(m)	>5	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

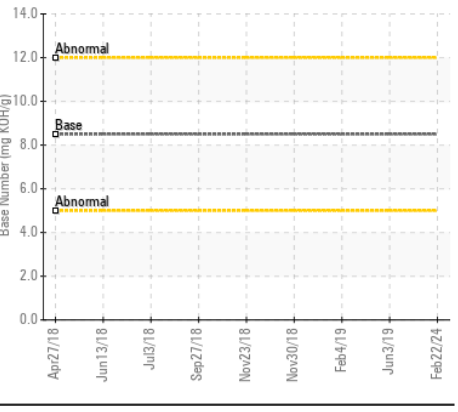
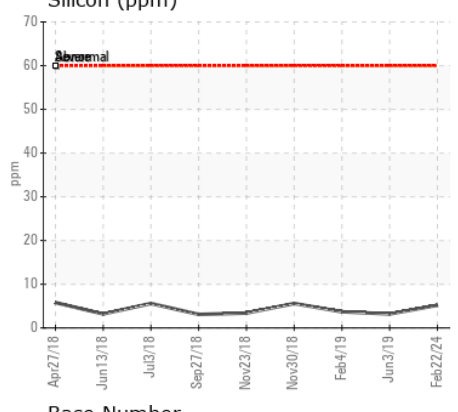
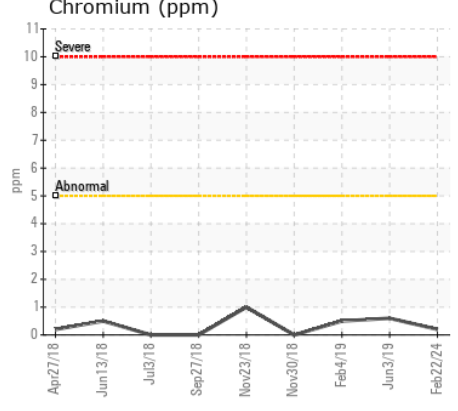
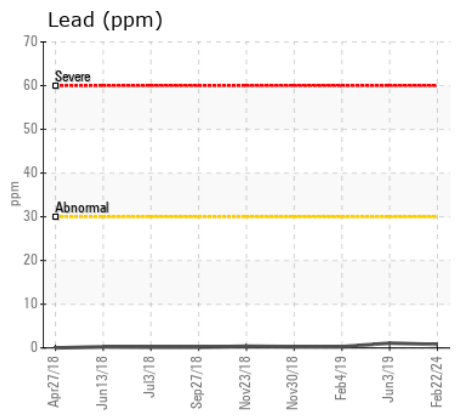
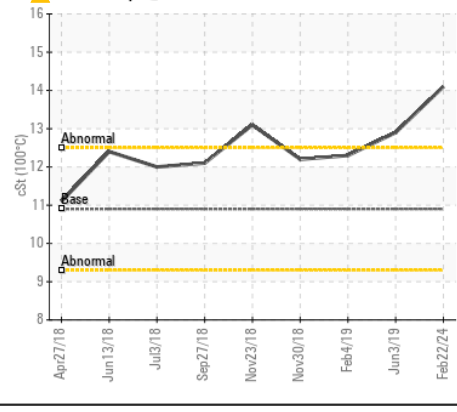
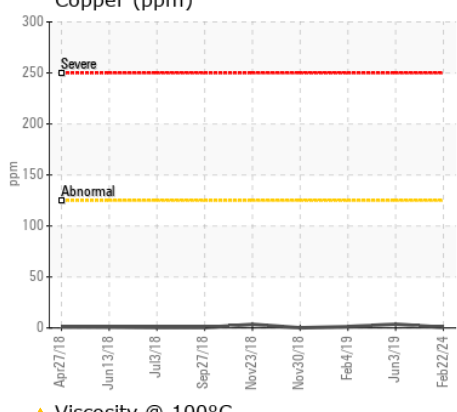
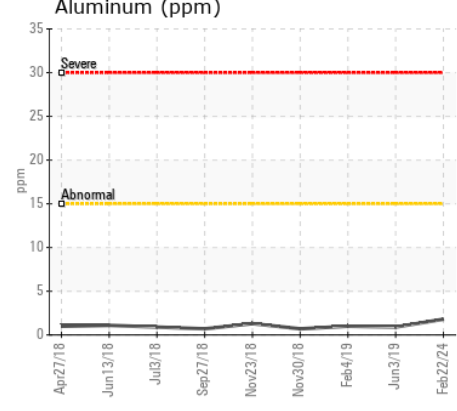
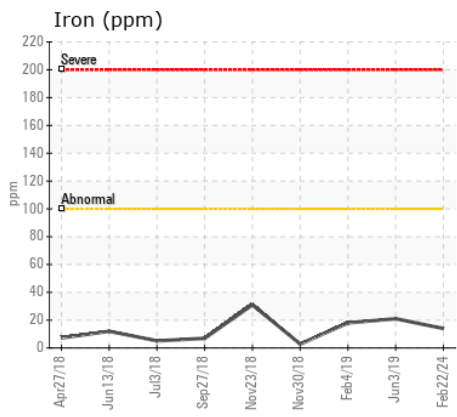
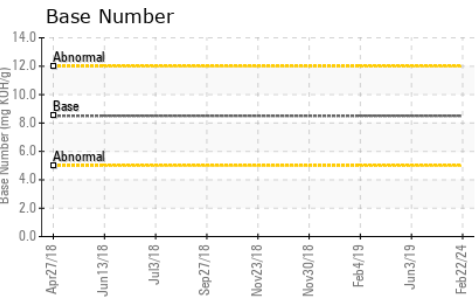
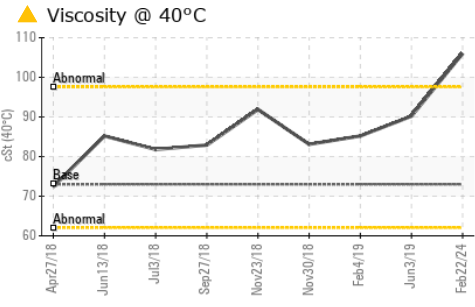
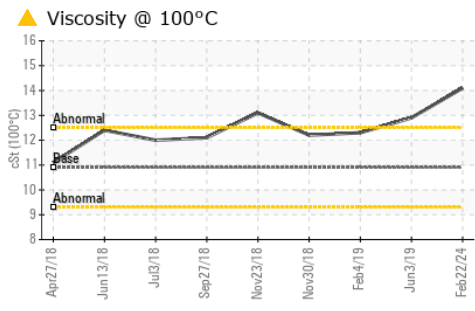
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	5	3	4
Potassium	ppm	ASTM D5185(m)	>20	3	6	4
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	1.5	1.3	0.9
Nitration	Abs/cm	ASTM D7624*	>20	10.7	9.8	8.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.9	25.1	21.8
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 15W40 range, advise investigate. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		2	2	2
Boron	ppm	ASTM D5185(m)	250	23	89	81
Barium	ppm	ASTM D5185(m)	10	0	0	0
Molybdenum	ppm	ASTM D5185(m)	100	54	3	8
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	851	211	481
Calcium	ppm	ASTM D5185(m)	3000	1475	2032	1637
Phosphorus	ppm	ASTM D5185(m)	1150	1105	916	793
Zinc	ppm	ASTM D5185(m)	1350	1285	1099	940
Sulfur	ppm	ASTM D5185(m)	4250	2878	2940	2781
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.3	17.6	15.5
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	9.45	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	73	▲ 106	90.2	85.2
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	▲ 14.1	12.9	12.3
Viscosity Index (VI)	Scale	ASTM D2270*	138	134	141	139



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0082014
Lab Number : 02617989
Unique Number : 5735099
Test Package : MOB 1 (Additional Tests: KV40, TBN, VI, Visual)

Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations
 151 Ram Forest Rd,
 Stouffville, ON
 CA L4A 2G8
 Contact: Shannon Abbott
 sabbott@gipi.com
 T: (905)750-5900
 F:

Received : 26 Feb 2024
Tested : 28 Feb 2024
Diagnosed : 28 Feb 2024 - Kevin Marson
 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.