

Machine Id
OR645
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		PC0071590	PC0082046	PC0072905
Sample Date		Client Info		12 Apr 2024	25 Oct 2023	19 Mar 2023
Machine Age	hrs	Client Info		14005	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>51	24	15	16
Chromium	ppm	ASTM D5185(m)	>11	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>31	4	2	2
Lead	ppm	ASTM D5185(m)	>26	0	<1	<1
Copper	ppm	ASTM D5185(m)	>26	2	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

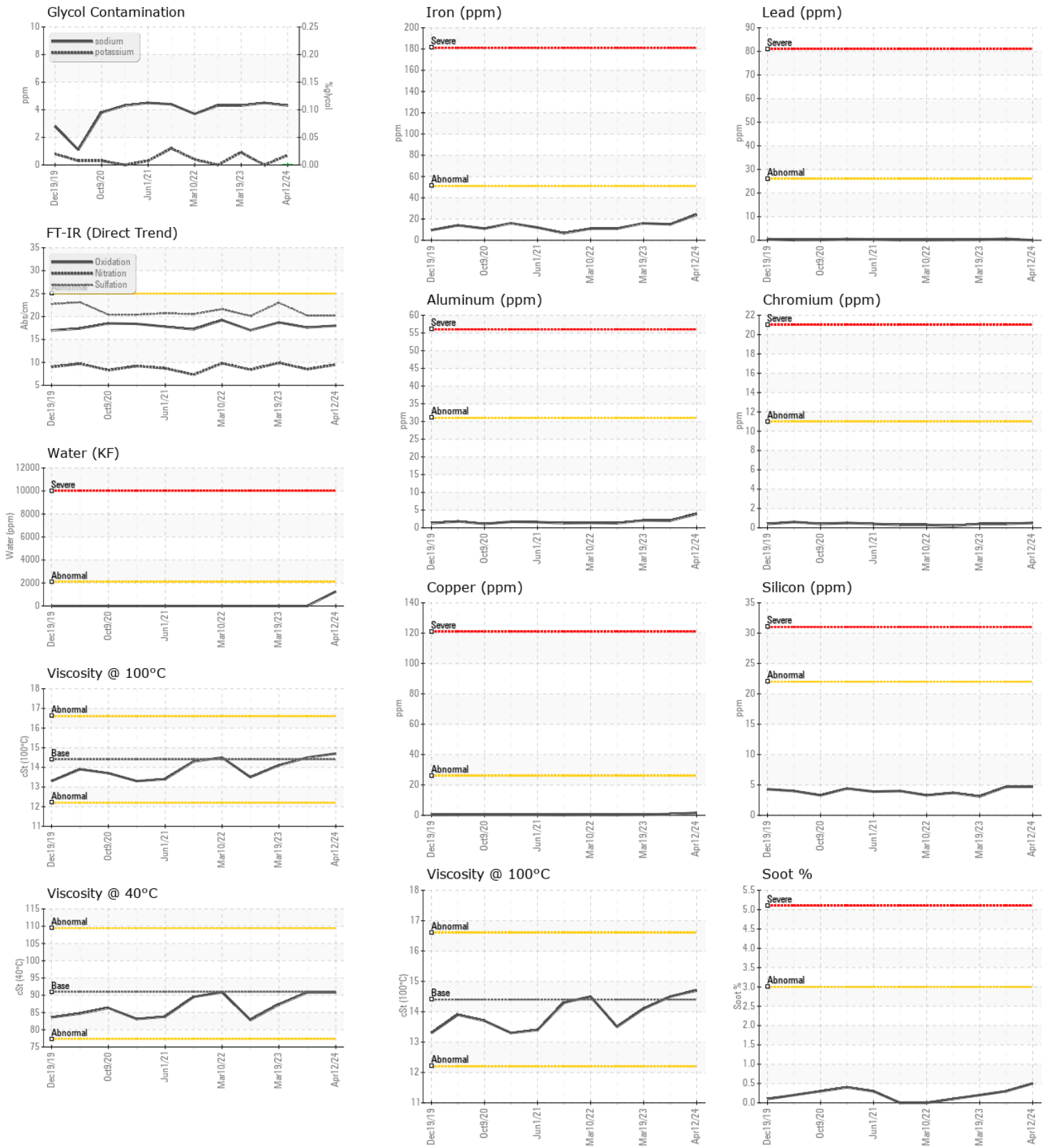
The water content is negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>22	5	5	3
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water	%	ASTM D6304*	>0.21	0.125	---	---
ppm Water	ppm	ASTM D6304*	>2100	1258	---	---
Glycol	%	ASTM D7922*		0.0	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.5	0.3	0.2
Nitration	Abs/cm	ASTM D7624*	>20	9.5	8.5	9.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.2	20.2	23.0
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	VLITE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.21	.2%	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)	>44	4	4	4
Boron	ppm	ASTM D5185(m)	250	43	38	35
Barium	ppm	ASTM D5185(m)	10	0	0	0
Molybdenum	ppm	ASTM D5185(m)	100	57	61	59
Manganese	ppm	ASTM D5185(m)		<1	0	<1
Magnesium	ppm	ASTM D5185(m)	450	1066	1049	1118
Calcium	ppm	ASTM D5185(m)	3000	818	891	893
Phosphorus	ppm	ASTM D5185(m)	1150	955	945	1094
Zinc	ppm	ASTM D5185(m)	1350	1153	1171	1221
Sulfur	ppm	ASTM D5185(m)	4250	2609	2688	2822
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.0	17.6	18.7
Visc @ 40°C	cSt	ASTM D7279(m)	91	90.8	90.8	87.3
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	14.7	14.5	14.1
Viscosity Index (VI)	Scale	ASTM D2270*	164	169	166	166



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0071590
Lab Number : 02630915
Unique Number : 5772068
Test Package : MOB 1 (Additional Tests: Glycol, KF, KV40, VI, Visual)

Received : 23 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 24 Apr 2024 - Wes Davis

Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations
 151 Ram Forest Rd,
 Stouffville, ON
 CA L4A 2G8
 Contact: Bill Acton
 bacton@gipi.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.

T:
F: