



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
162002
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL06055290	IL05739492	IL05227444
Sample Date		Client Info		11 Dec 2023	15 Nov 2022	23 Mar 2021
Machine Age	hrs	Client Info		8082	7078	3465
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	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	12	29
Chromium	ppm	ASTM D5185m	>20	<1	<1	3
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	4
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	▲ 13
Lead	ppm	ASTM D5185m	>40	2	1	7
Copper	ppm	ASTM D5185m	>330	<1	<1	3
Tin	ppm	ASTM D5185m	>15	1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

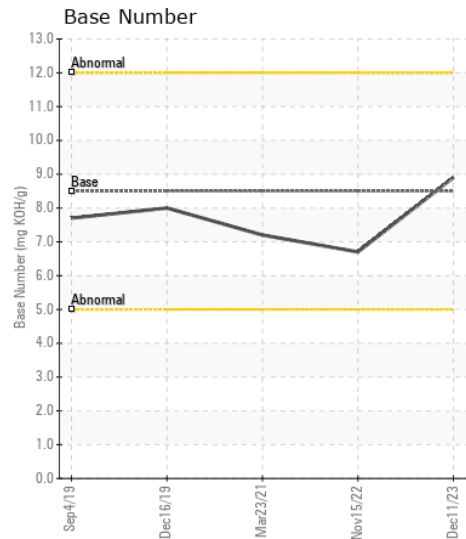
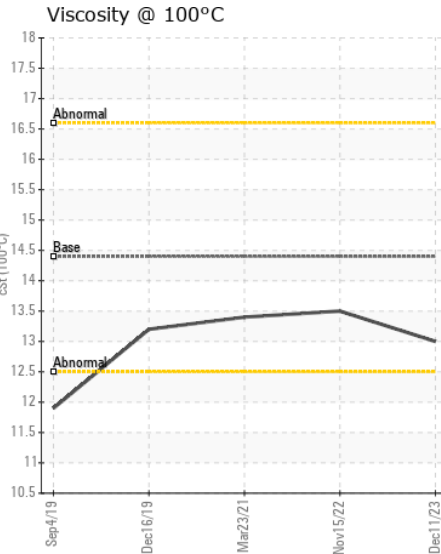
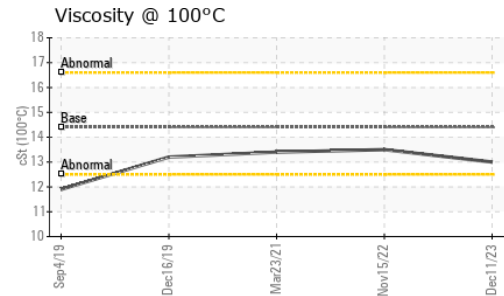
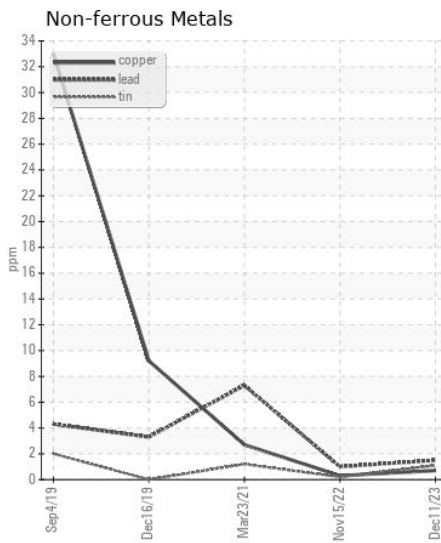
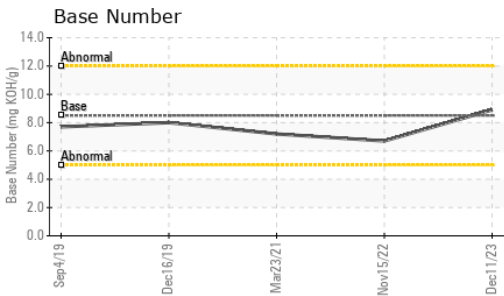
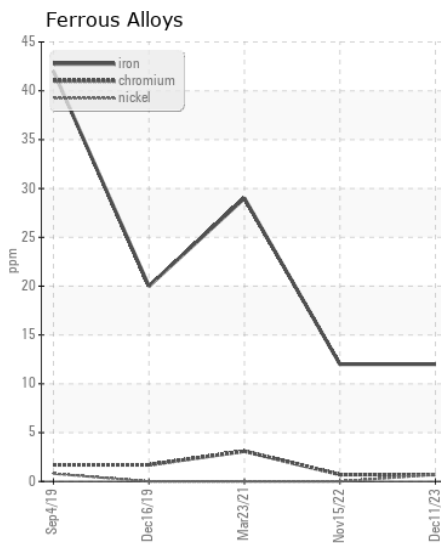
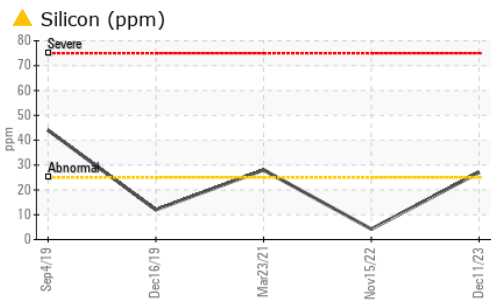
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>25	▲ 27	4	▲ 28
Potassium	ppm	ASTM D5185m	>20	8	11	▲ 55
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	0.3	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.4	8.7	11.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	21.3	26.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>216	<1	0	2
Boron	ppm	ASTM D5185m	250	2	129	31
Barium	ppm	ASTM D5185m	10	0	1	0
Molybdenum	ppm	ASTM D5185m	100	56	25	26
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	918	171	616
Calcium	ppm	ASTM D5185m	3000	1069	2014	1399
Phosphorus	ppm	ASTM D5185m	1150	887	929	793
Zinc	ppm	ASTM D5185m	1350	1177	1129	937
Sulfur	ppm	ASTM D5185m	4250	3547	3175	2342
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	18.0	23.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.9	6.7	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	13.0	13.5	13.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL06055290 **Received** : 09 Jan 2024
Lab Number : 06055290 **Diagnosed** : 10 Jan 2024
Unique Number : 10821239 **Diagnostician** : Jonathan Hester
Test Package : FLEET

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Certificate L2367
 To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)