



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
INTERNATIONAL 8718836

Component
Diesel Engine

Fluid
VALVOLINE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0034281	IL05771174	IL05723929
Sample Date		Client Info		20 Feb 2024	04 Feb 2023	09 Dec 2022
Machine Age	mls	Client Info		252870	369137	208612
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	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				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	28	45	28
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	1
Aluminum	ppm	ASTM D5185m	>20	3	6	2
Lead	ppm	ASTM D5185m	>40	26	11	37
Copper	ppm	ASTM D5185m	>330	2	1	4
Tin	ppm	ASTM D5185m	>15	2	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

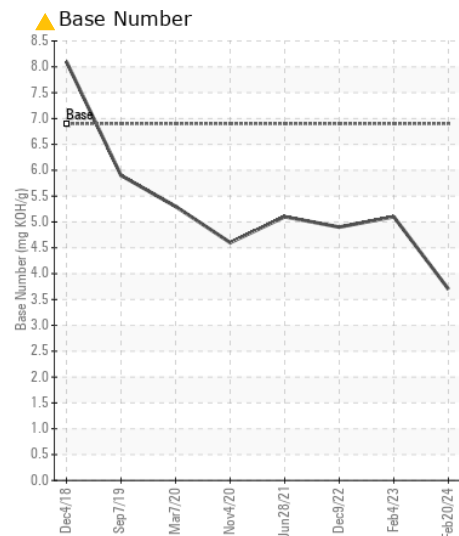
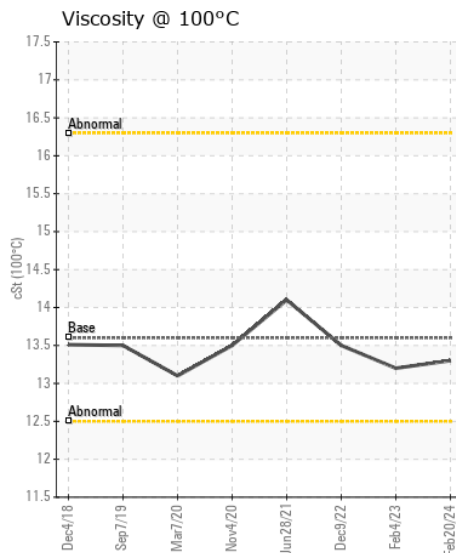
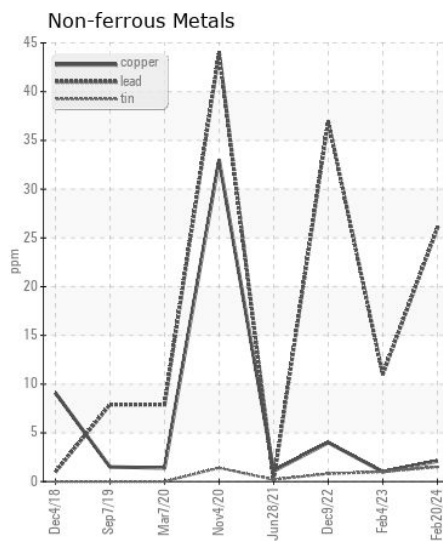
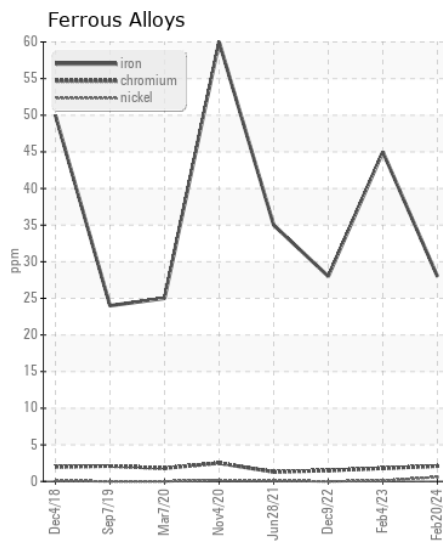
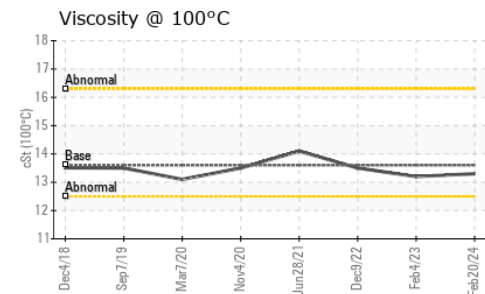
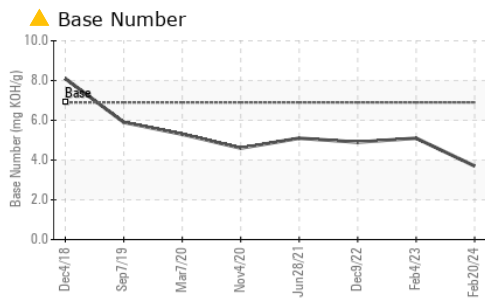
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	9	6
Potassium	ppm	ASTM D5185m	>20	<1	6	2
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	0.7	0.7	0.7
Nitration	Abs/cm	*ASTM D7624	>20	12.6	12.4	14.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.5	26.8	29.5
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 level is low. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		4	2	<1
Boron	ppm	ASTM D5185m	39	22	37	23
Barium	ppm	ASTM D5185m	1	0	0	0
Molybdenum	ppm	ASTM D5185m	49	81	76	77
Manganese	ppm	ASTM D5185m	1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	616	768	671	735
Calcium	ppm	ASTM D5185m	1554	1340	1300	1401
Phosphorus	ppm	ASTM D5185m	899	910	747	753
Zinc	ppm	ASTM D5185m	1069	1149	972	989
Sulfur	ppm	ASTM D5185m	2624	3036	2785	2972
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.2	26.1	28.3
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	3.7	5.1	4.9
Visc @ 100°C	cSt	ASTM D445	13.6	13.3	13.2	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : IL0034281

Lab Number : 06104079

Unique Number : 10902309

Test Package : FLEET

Received : 29 Feb 2024

Tested : 29 Feb 2024

Diagnosed : 02 Mar 2024 - Don Baldrige

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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)