



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
5012902
Component
Diesel Engine
Fluid
VALVOLINE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0028406	IL0034256	IL05934641
Sample Date		Client Info		30 Jan 2024	30 Oct 2023	28 Jul 2023
Machine Age	mls	Client Info		302352	283481	260217
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	36	50	39
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	9	6	6
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

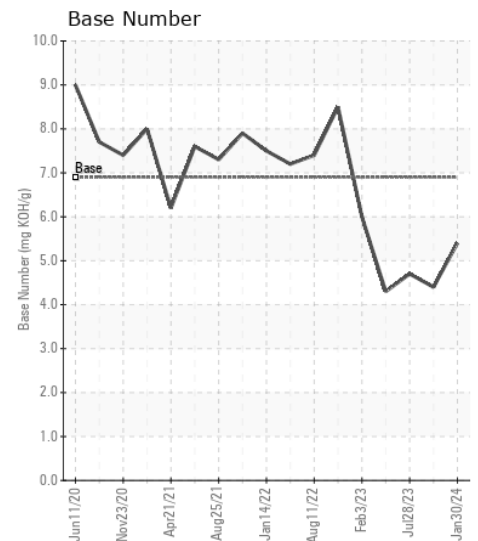
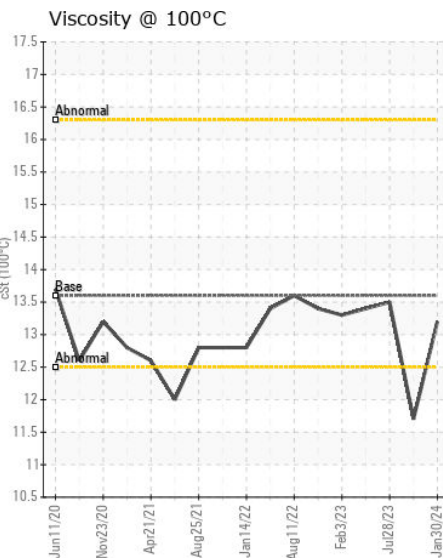
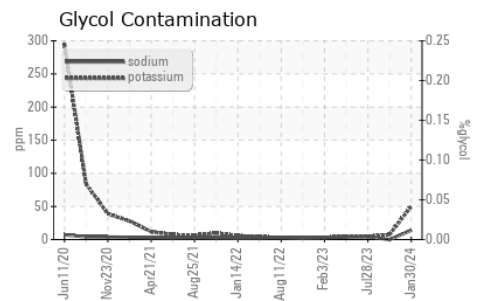
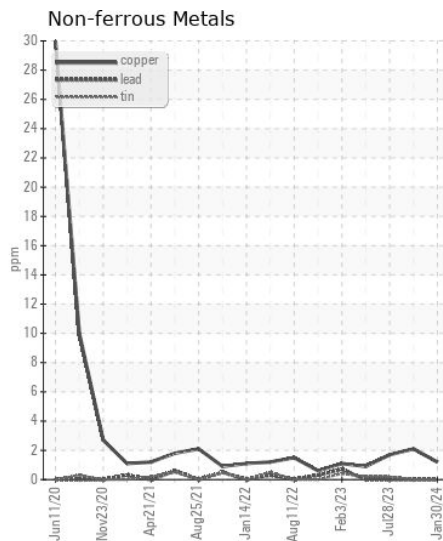
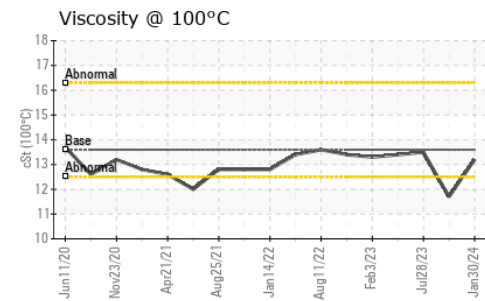
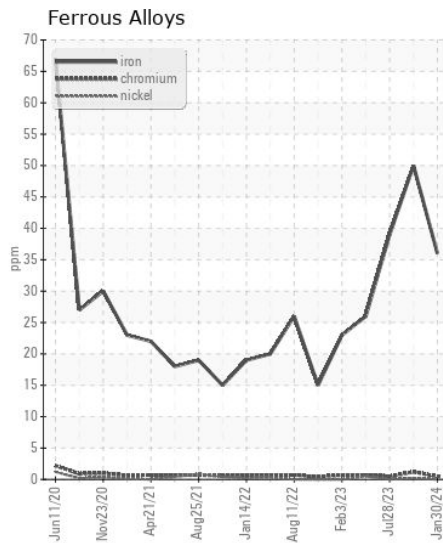
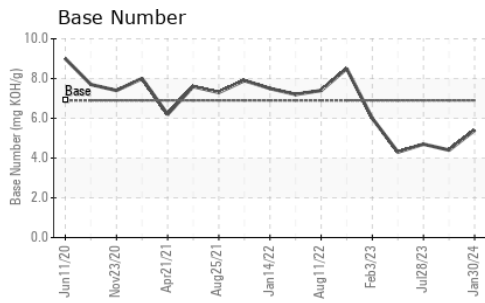
Sodium and/or potassium levels are high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	7	9	11
Potassium	ppm	ASTM D5185m	>20	50	7	4
Fuel		WC Method	>5	<1.0	0.6	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.9	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	13.5	13.4	13.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.7	28.6	27.1
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		14	0	5
Boron	ppm	ASTM D5185m	39	46	23	29
Barium	ppm	ASTM D5185m	1	0	<1	0
Molybdenum	ppm	ASTM D5185m	49	80	110	90
Manganese	ppm	ASTM D5185m	1	0	<1	<1
Magnesium	ppm	ASTM D5185m	616	660	661	810
Calcium	ppm	ASTM D5185m	1554	1435	1477	1642
Phosphorus	ppm	ASTM D5185m	899	851	872	960
Zinc	ppm	ASTM D5185m	1069	1120	1105	1216
Sulfur	ppm	ASTM D5185m	2624	2593	3010	3251
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.6	27.7	26.0
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	5.4	4.4	4.7
Visc @ 100°C	cSt	ASTM D445	13.6	13.2	▲ 11.7	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0028406
Lab Number : 06084615
Unique Number : 10872060
Test Package : FLEET (Additional Tests: Glycol)

Received : 09 Feb 2024
Tested : 12 Feb 2024
Diagnosed : 12 Feb 2024 - Jonathan Hester

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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)