



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
6216918
Component
Diesel Engine
Fluid
VALVOLINE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0035100	IL05934651	IL05636107
Sample Date		Client Info		25 Jan 2024	03 Aug 2023	26 Aug 2022
Machine Age	mls	Client Info		89158	72698	40530
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				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	29	21	38
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	21	13	27
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

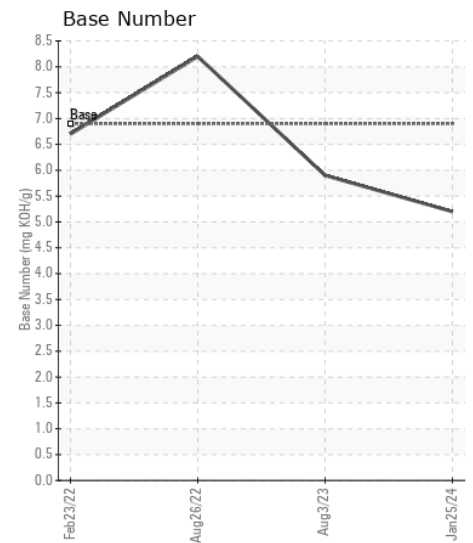
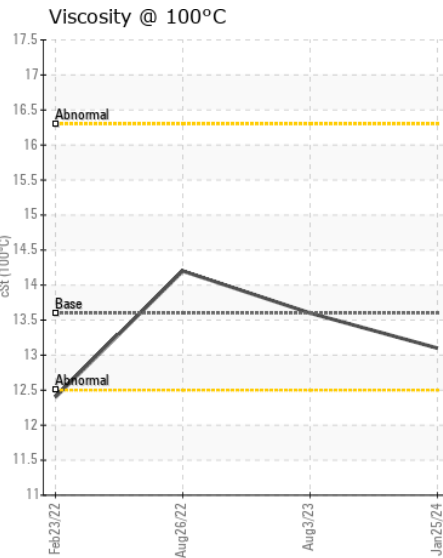
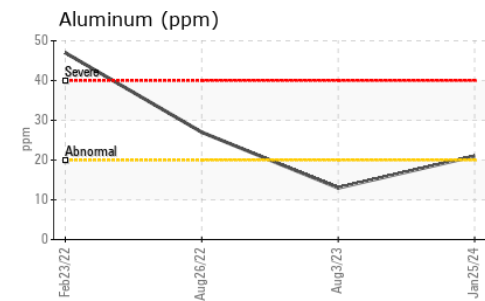
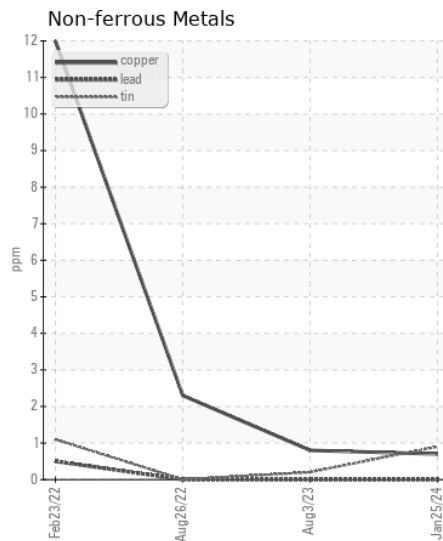
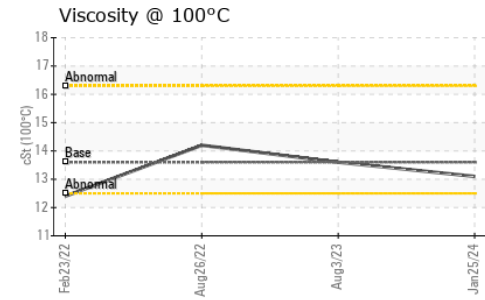
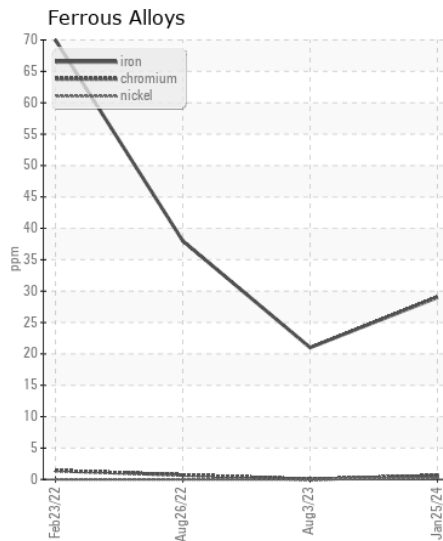
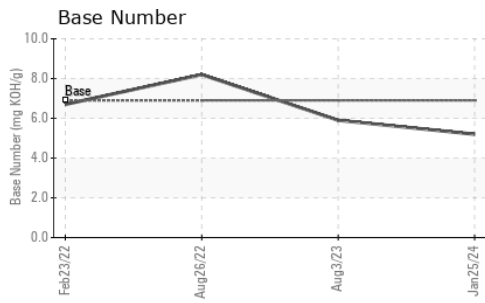
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	5	8
Potassium	ppm	ASTM D5185m	>20	46	26	48
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	0.6	0.5	0.8
Nitration	Abs/cm	*ASTM D7624	>20	12.4	11.6	15.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.3	21.8	29.1
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 suitable for further service.

Sodium	ppm	ASTM D5185m		4	4	2
Boron	ppm	ASTM D5185m	39	54	120	69
Barium	ppm	ASTM D5185m	1	0	0	3
Molybdenum	ppm	ASTM D5185m	49	74	70	106
Manganese	ppm	ASTM D5185m	1	<1	<1	1
Magnesium	ppm	ASTM D5185m	616	662	653	706
Calcium	ppm	ASTM D5185m	1554	1315	1427	1462
Phosphorus	ppm	ASTM D5185m	899	853	916	697
Zinc	ppm	ASTM D5185m	1069	1030	1121	907
Sulfur	ppm	ASTM D5185m	2624	2662	3374	2410
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.7	19.6	26.9
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	5.2	5.9	8.2
Visc @ 100°C	cSt	ASTM D445	13.6	13.1	13.6	14.2



Certificate L2367

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

Sample No. : IL0035100

Lab Number : 06084502

Unique Number : 10871947

Test Package : FLEET

Received : 09 Feb 2024

Tested : 09 Feb 2024

Diagnosed : 09 Feb 2024 - Wes Davis

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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)