



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
T12204
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		IL0035433	IL0028480	IL05952596
Sample Date		Client Info		02 May 2024	11 Nov 2023	17 Aug 2023
Machine Age	mls	Client Info		173352	142100	131108
Oil Age	mls	Client Info		0	0	25000
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				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	26	15	19
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	1	0	0
Aluminum	ppm	ASTM D5185m	>20	5	4	1
Lead	ppm	ASTM D5185m	>40	5	<1	1
Copper	ppm	ASTM D5185m	>330	3	<1	1
Tin	ppm	ASTM D5185m	>15	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	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.

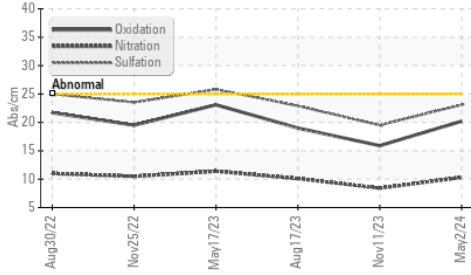
Silicon	ppm	ASTM D5185m	>25	8	6	7
Potassium	ppm	ASTM D5185m	>20	15	9	19
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	*ASTM D7844	>3	0.4	0.2	0.5
Nitration	Abs/cm	*ASTM D7624	>20	10.3	8.4	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	19.5	22.9
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

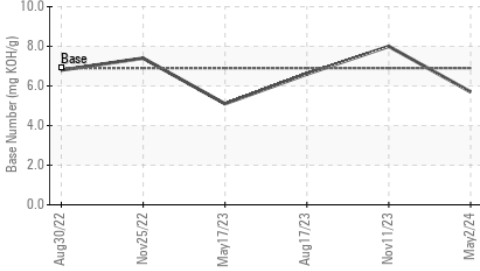
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	1	2
Boron	ppm	ASTM D5185m	39	46	44	66
Barium	ppm	ASTM D5185m	1	0	0	0
Molybdenum	ppm	ASTM D5185m	49	63	65	67
Manganese	ppm	ASTM D5185m	1	1	<1	<1
Magnesium	ppm	ASTM D5185m	616	647	653	676
Calcium	ppm	ASTM D5185m	1554	1301	1174	1404
Phosphorus	ppm	ASTM D5185m	899	790	712	857
Zinc	ppm	ASTM D5185m	1069	959	894	1088
Sulfur	ppm	ASTM D5185m	2624	2932	1837	3194
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.2	15.9	19.0
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	5.7	8.0	6.6
Visc @ 100°C	cSt	ASTM D445	13.6	12.9	12.6	13.6

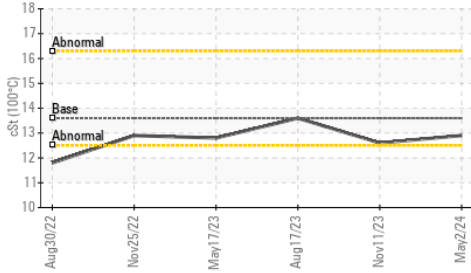
FT-IR (Direct Trend)



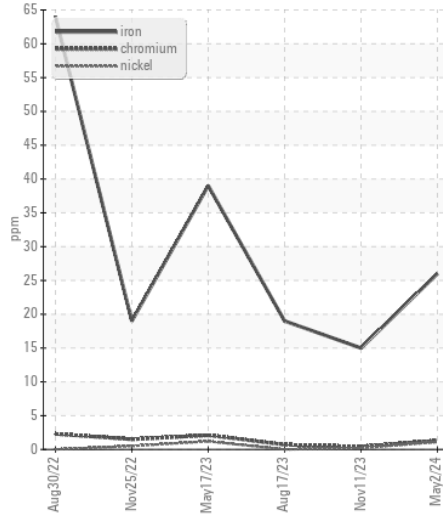
Base Number



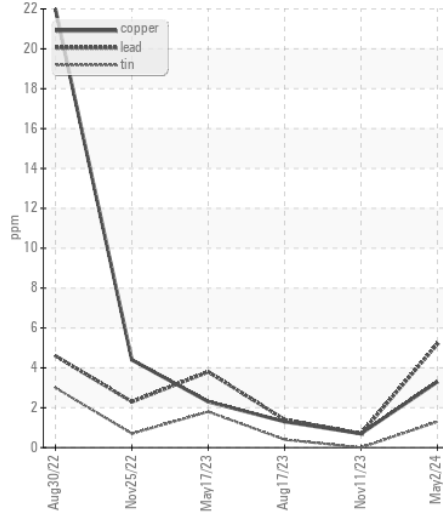
Viscosity @ 100°C



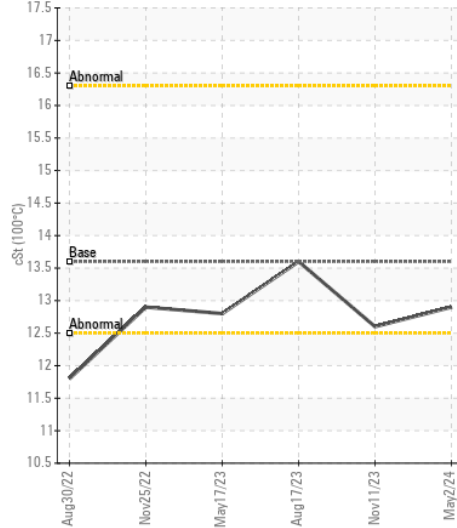
Ferrous Alloys



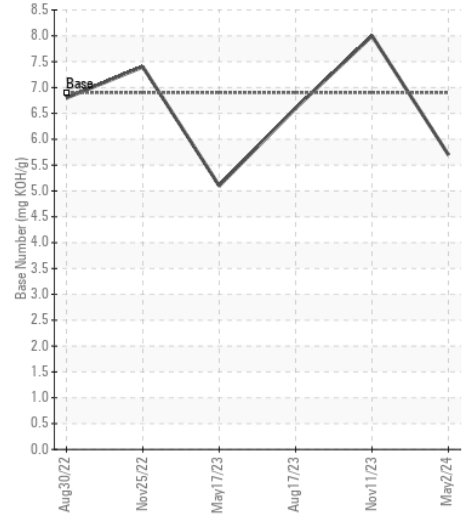
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0035433
Lab Number : 06193658
Unique Number : 11050410
Test Package : FLEET
Received : 29 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 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)