



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL T12101
Component
Diesel Engine
Fluid
VALVOLINE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0036659	IL05952600	IL05758658
Sample Date		Client Info		13 Jun 2024	21 Aug 2023	02 Feb 2023
Machine Age	mls	Client Info		351756	286485	249075
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	20	29	35
Chromium	ppm	ASTM D5185m	>20	<1	<1	2
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	7	<1	9
Lead	ppm	ASTM D5185m	>40	4	6	5
Copper	ppm	ASTM D5185m	>330	1	1	2
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

There is no indication of any contamination in the oil.

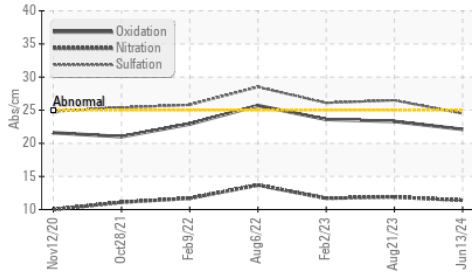
Silicon	ppm	ASTM D5185m	>25	5	7	7
Potassium	ppm	ASTM D5185m	>20	13	8	16
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.6	0.7
Nitration	Abs/cm	*ASTM D7624	>20	11.4	11.9	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.5	26.5	26.1
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

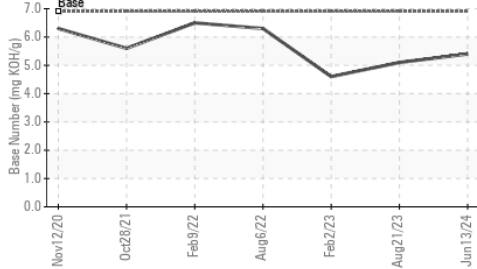
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	3	3
Boron	ppm	ASTM D5185m	39	19	30	21
Barium	ppm	ASTM D5185m	1	<1	0	0
Molybdenum	ppm	ASTM D5185m	49	60	72	75
Manganese	ppm	ASTM D5185m	1	1	<1	<1
Magnesium	ppm	ASTM D5185m	616	697	673	648
Calcium	ppm	ASTM D5185m	1554	1207	1430	1317
Phosphorus	ppm	ASTM D5185m	899	748	866	745
Zinc	ppm	ASTM D5185m	1069	955	1108	930
Sulfur	ppm	ASTM D5185m	2624	2738	3179	2756
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.1	23.3	23.6
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	5.4	5.1	4.6
Visc @ 100°C	cSt	ASTM D445	13.6	12.8	13.2	13.3

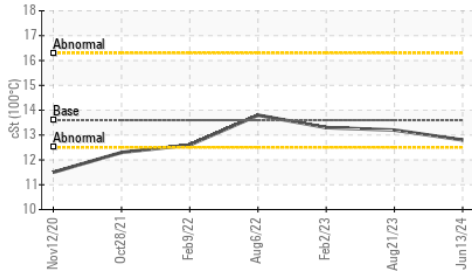
FT-IR (Direct Trend)



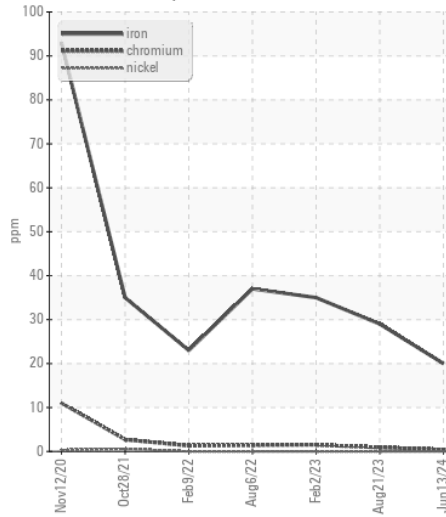
Base Number



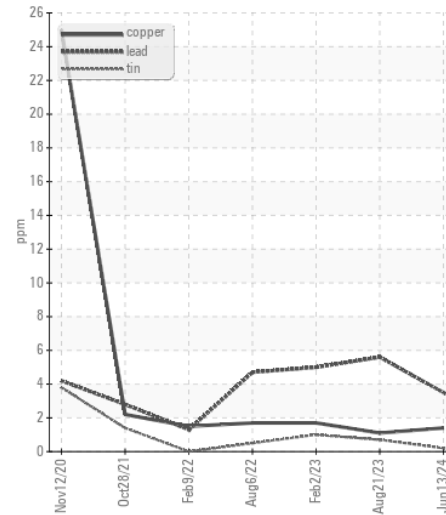
Viscosity @ 100°C



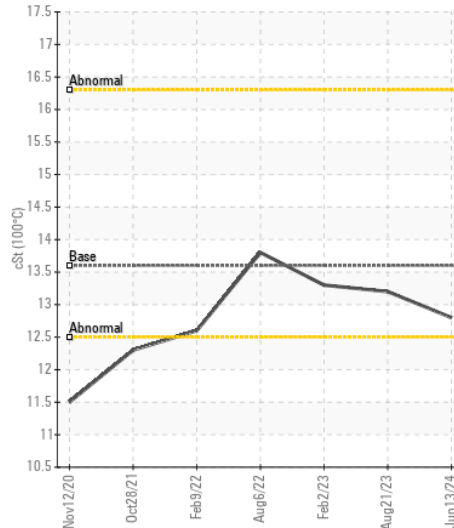
Ferrous Alloys



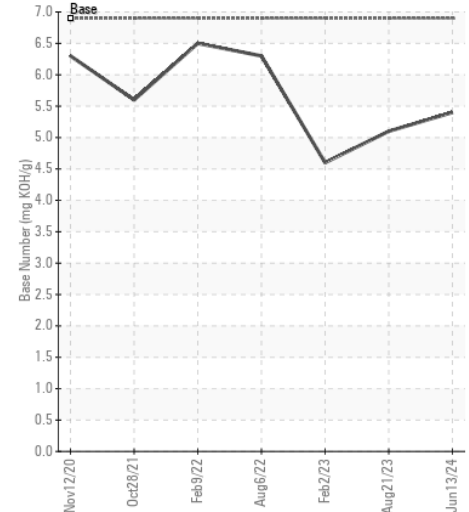
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : IL0036659

Lab Number : 06220670

Unique Number : 11098867

Test Package : FLEET

Received : 26 Jun 2024

Tested : 27 Jun 2024

Diagnosed : 27 Jun 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)