



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 7811172
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		IL0035917	IL05952572	IL05771167
Sample Date		Client Info		14 May 2024	18 Aug 2023	14 Feb 2023
Machine Age	mls	Client Info		451722	395144	356633
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	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	38	22	▲ 139
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	<1	1	<1
Titanium	ppm	ASTM D5185m		<1	1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	2	6
Lead	ppm	ASTM D5185m	>40	2	3	5
Copper	ppm	ASTM D5185m	>330	<1	<1	1
Tin	ppm	ASTM D5185m	>15	0	2	<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.

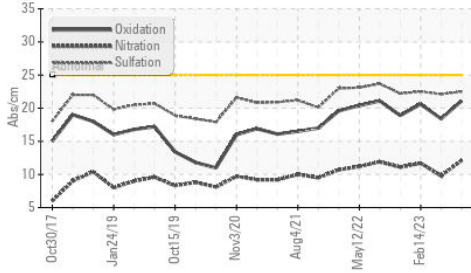
Silicon	ppm	ASTM D5185m	>25	4	6	6
Potassium	ppm	ASTM D5185m	>20	9	6	9
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.3	0.7
Nitration	Abs/cm	*ASTM D7624	>20	12.1	9.8	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	22.1	22.5
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

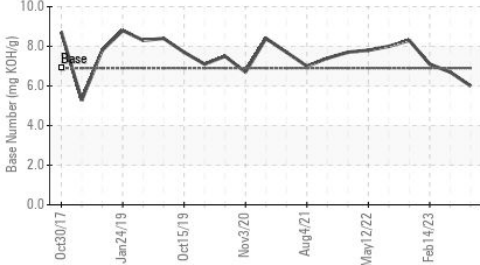
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	2	3
Boron	ppm	ASTM D5185m	39	16	97	28
Barium	ppm	ASTM D5185m	1	0	44	0
Molybdenum	ppm	ASTM D5185m	49	59	66	58
Manganese	ppm	ASTM D5185m	1	<1	1	1
Magnesium	ppm	ASTM D5185m	616	818	569	750
Calcium	ppm	ASTM D5185m	1554	1379	1200	1184
Phosphorus	ppm	ASTM D5185m	899	800	789	644
Zinc	ppm	ASTM D5185m	1069	978	1000	883
Sulfur	ppm	ASTM D5185m	2624	2963	2871	2670
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.1	18.4	20.6
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	6.0	6.7	7.1
Visc @ 100°C	cSt	ASTM D445	13.6	12.8	13.3	13.6

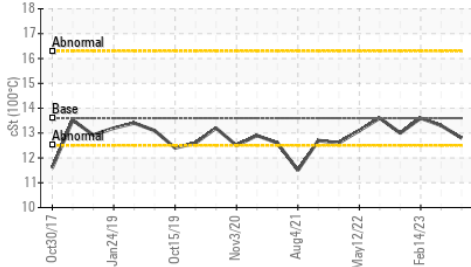
FT-IR (Direct Trend)



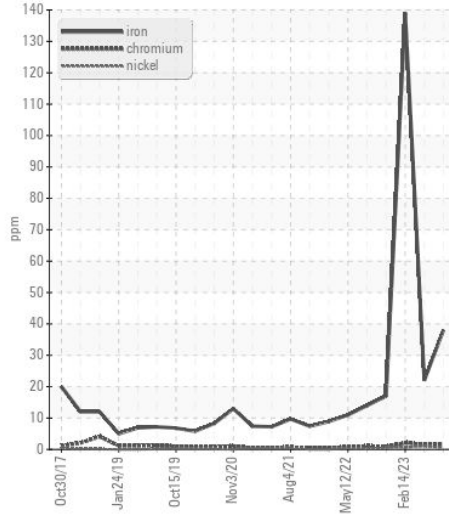
Base Number



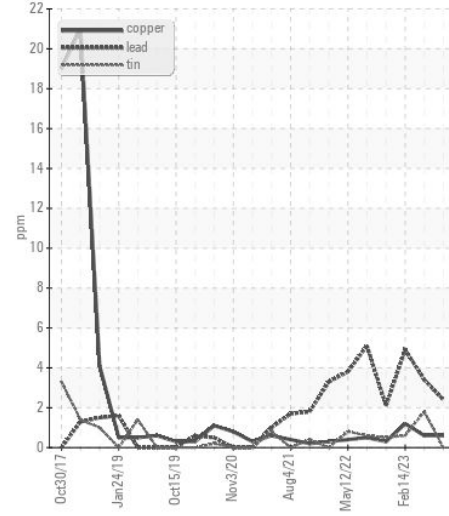
Viscosity @ 100°C



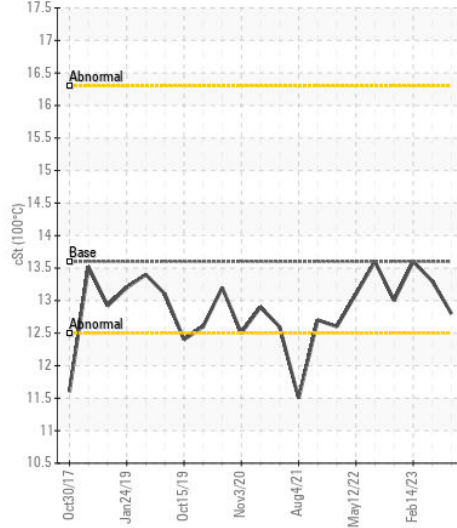
Ferrous Alloys



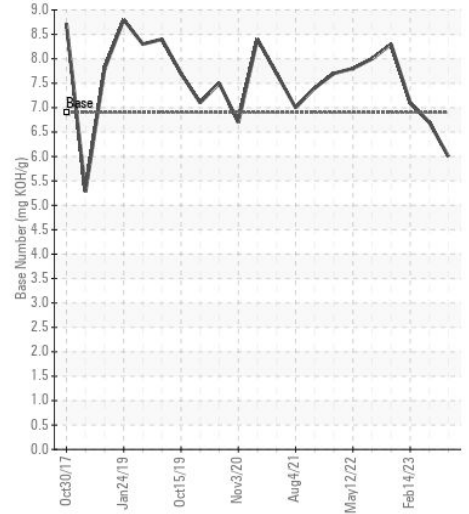
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : IL0035917

Lab Number : 06193584

Unique Number : 11050336

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)