



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**INTERNATIONAL 5916190**  
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		<b>IL0035442</b>	IL0035449	IL0028482
Sample Date		Client Info		<b>23 May 2024</b>	23 Feb 2024	22 Nov 2023
Machine Age	mls	Client Info		<b>326146</b>	314981	302251
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>12</b>	11	2
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

There is no indication of any contamination in the oil.

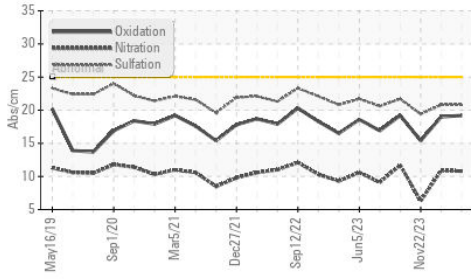
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.8</b>	10.9	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.8</b>	20.8	19.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

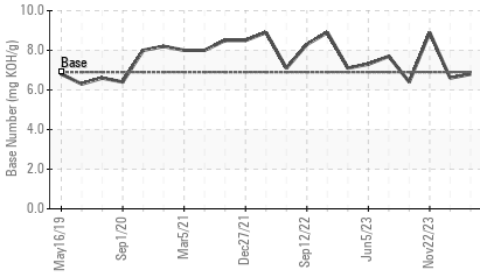
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	6	<1
Boron	ppm	ASTM D5185m	39	<b>23</b>	38	80
Barium	ppm	ASTM D5185m	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	49	<b>56</b>	54	55
Manganese	ppm	ASTM D5185m	1	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	616	<b>823</b>	677	656
Calcium	ppm	ASTM D5185m	1554	<b>1395</b>	1202	1164
Phosphorus	ppm	ASTM D5185m	899	<b>786</b>	674	715
Zinc	ppm	ASTM D5185m	1069	<b>971</b>	812	900
Sulfur	ppm	ASTM D5185m	2624	<b>2874</b>	2442	1895
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.2</b>	19.0	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	<b>6.8</b>	6.6	8.9
Visc @ 100°C	cSt	ASTM D445	13.6	<b>13.2</b>	12.6	13.2

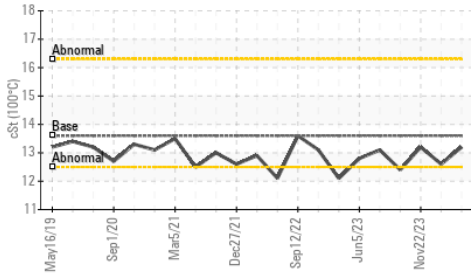
FT-IR (Direct Trend)



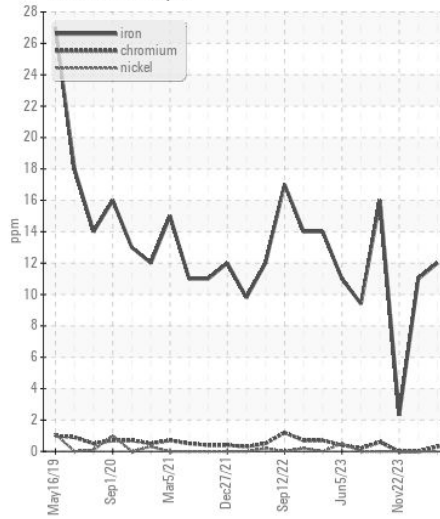
Base Number



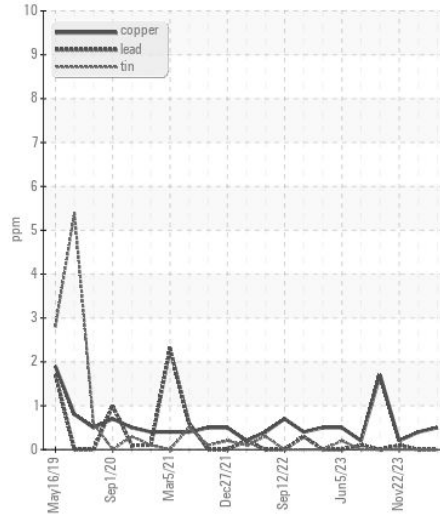
Viscosity @ 100°C



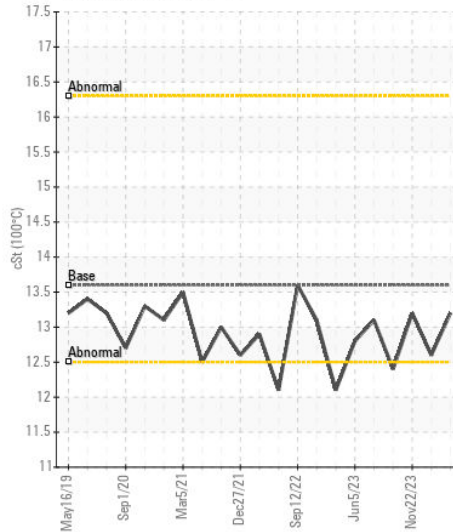
Ferrous Alloys



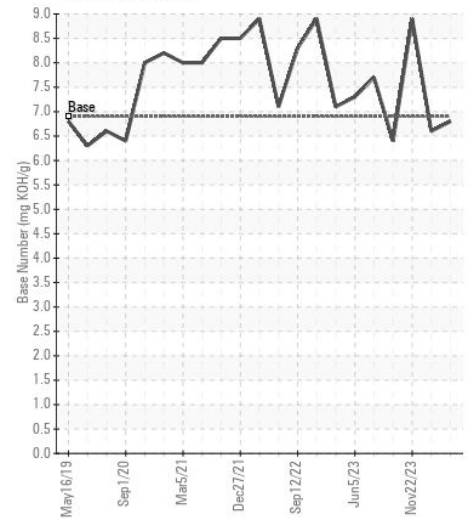
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : IL0035442

Lab Number : 06193585

Unique Number : 11050337

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)