



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**4592L**  
 Component  
**Diesel Engine**  
 Fluid  
**MOBIL 15W40 (--- GAL)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL0034324</b>	IL0032502	IL0028999
Sample Date		Client Info		<b>02 May 2024</b>	18 Sep 2023	06 Apr 2023
Machine Age	mls	Client Info		<b>70851</b>	59736	4972
Oil Age	mls	Client Info		<b>15000</b>	15000	0
Filter Age	mls	Client Info		<b>15000</b>	15000	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>91</b>	73	79
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>31</b>	52	37
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>0</b>	2	1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	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 an abnormal amount of solids and carbon present in the oil.

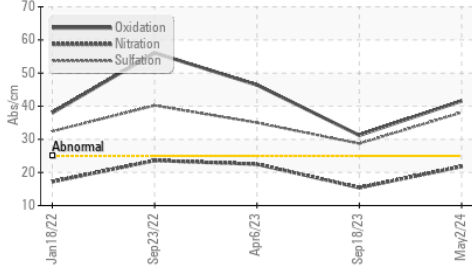
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>92</b>	117	151
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>3.1</b>	1.8	1.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>21.8</b>	15.4	22.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>38.1</b>	28.7	35.0
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

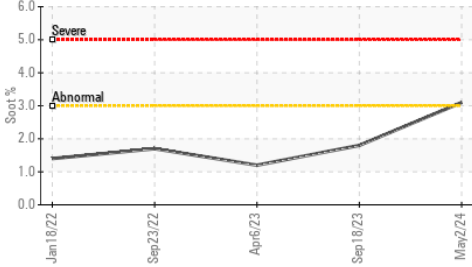
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>118	<b>10</b>	7	17
Boron	ppm	ASTM D5185m		<b>2</b>	1	2
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>61</b>	66	59
Manganese	ppm	ASTM D5185m		<b>1</b>	2	1
Magnesium	ppm	ASTM D5185m		<b>903</b>	1074	831
Calcium	ppm	ASTM D5185m		<b>1051</b>	1134	1073
Phosphorus	ppm	ASTM D5185m		<b>1021</b>	1126	894
Zinc	ppm	ASTM D5185m		<b>1195</b>	1416	1114
Sulfur	ppm	ASTM D5185m		<b>3363</b>	3551	2521
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>41.6</b>	31.2	46.4
Base Number (BN)	mg KOH/g	ASTM D2896		<b>5.4</b>	6.6	2.2
Visc @ 100°C	cSt	ASTM D445		<b>14.6</b>	13.8	14.4

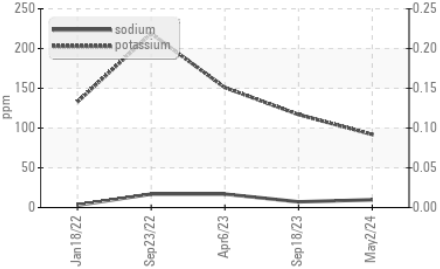
▲ FT-IR (Direct Trend)



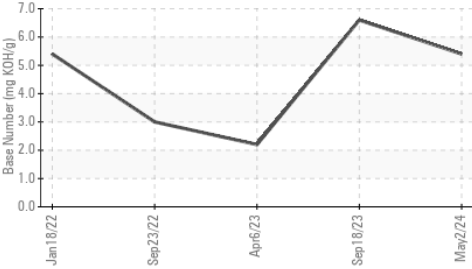
▲ Soot %



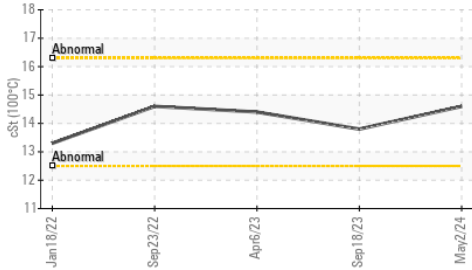
Glycol Contamination



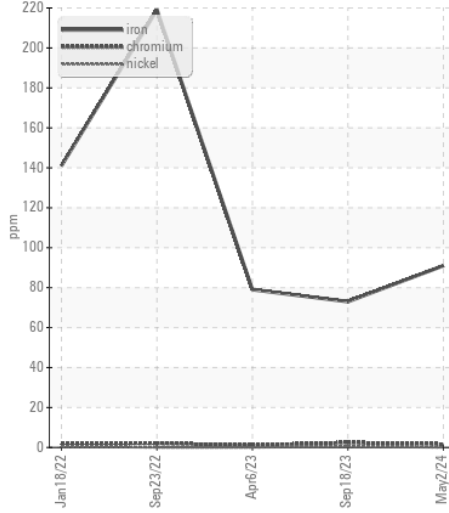
Base Number



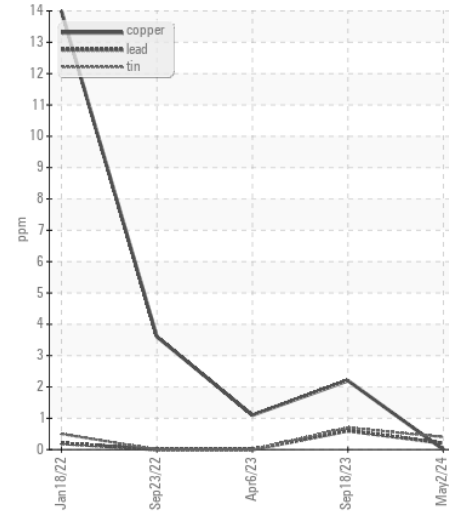
Viscosity @ 100°C



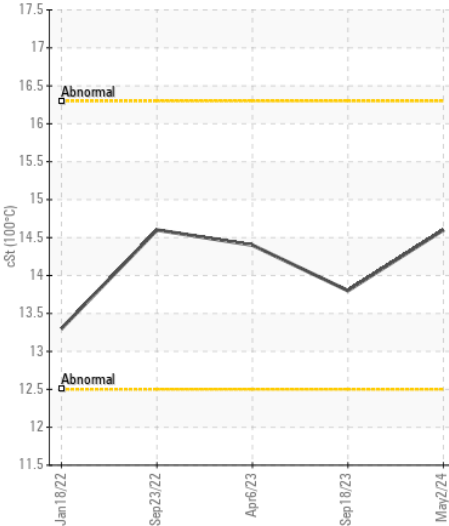
Ferrous Alloys



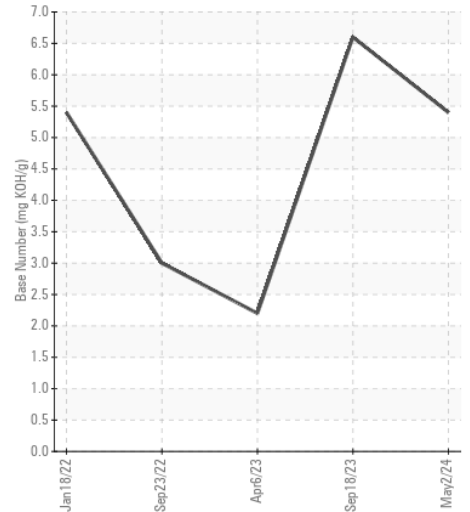
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : IL0034324

Lab Number : 06175173

Unique Number : 11021226

Test Package : FLEET ( Additional Tests: FuelDilution )

Received : 10 May 2024

Tested : 13 May 2024

Diagnosed : 13 May 2024 - Don Baldrige

RUSH TRUCK CENTER - CHICAGO IDEALEASE

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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)