



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

Machine Id  
**4537L**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

### RECOMMENDATION

The oil is near the end of its useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL06175100</b>	IL0025782	IL0025803
Sample Date		Client Info		<b>03 May 2024</b>	18 Jul 2023	14 Oct 2022
Machine Age	mls	Client Info		<b>101894</b>	87304	72616
Oil Age	mls	Client Info		<b>0</b>	15000	15000
Filter Age	mls	Client Info		<b>0</b>	15000	15000
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	SEVERE	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>45</b>	58	27
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	3	1
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>6</b>	8	8
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
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

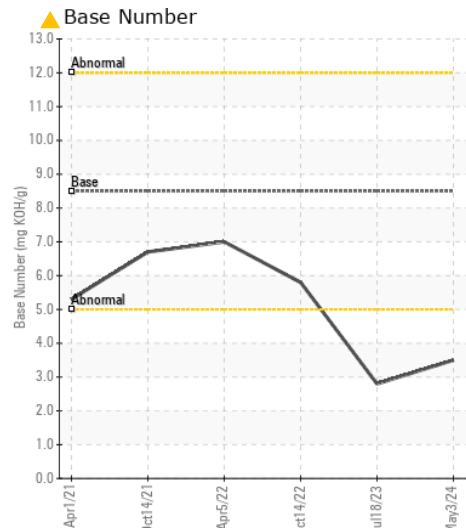
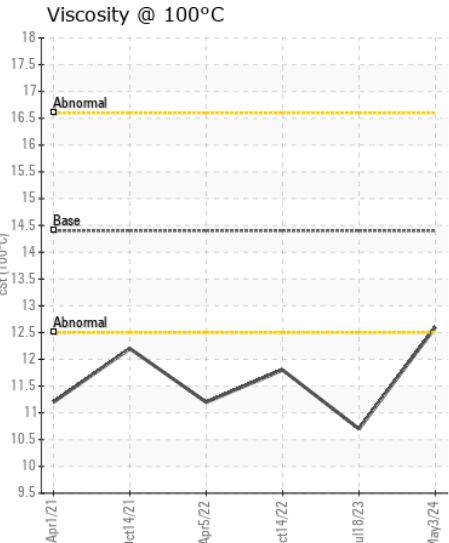
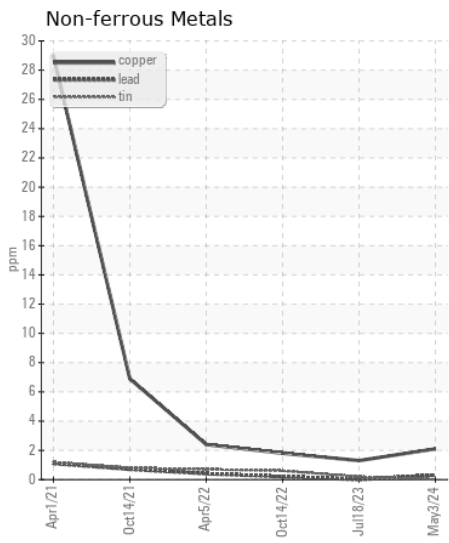
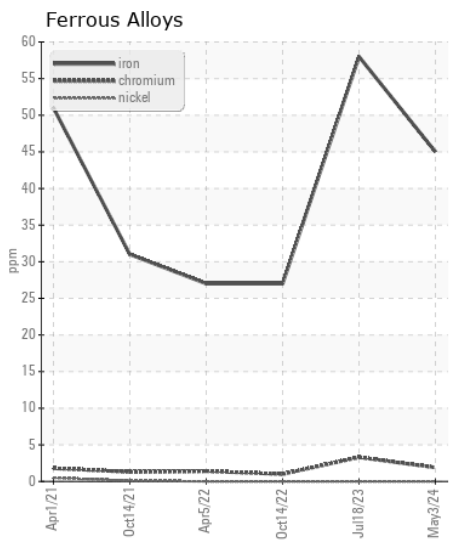
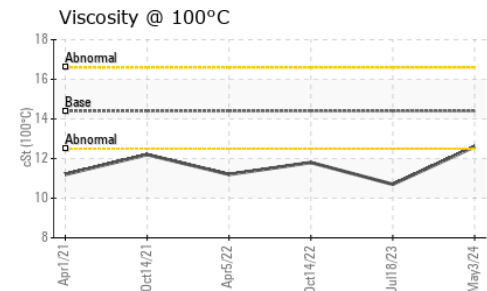
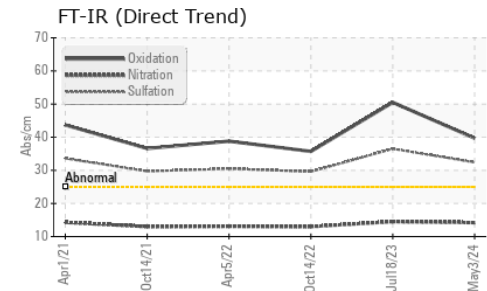
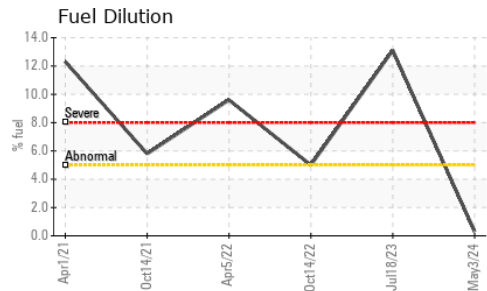
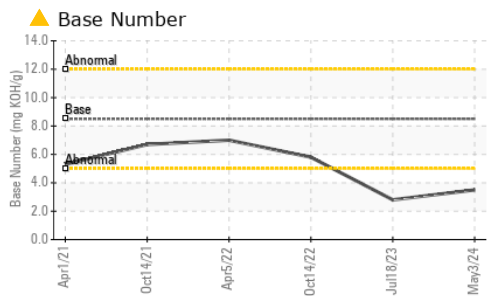
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>10</b>	8	11
Fuel	%	ASTM D3524	>5	<b>0.3</b>	▲ 13.1	▲ 5.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	0.9	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>14.2</b>	14.5	13.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>32.4</b>	36.5	29.6
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 level is low. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>158	<b>3</b>	2	<1
Boron	ppm	ASTM D5185m	250	<b>0</b>	5	25
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>58</b>	50	25
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>885</b>	832	466
Calcium	ppm	ASTM D5185m	3000	<b>1027</b>	1032	1396
Phosphorus	ppm	ASTM D5185m	1150	<b>917</b>	830	548
Zinc	ppm	ASTM D5185m	1350	<b>1099</b>	1074	757
Sulfur	ppm	ASTM D5185m	4250	<b>3147</b>	3230	2855
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>39.7</b>	50.5	35.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	▲ <b>3.5</b>	▲ 2.8	5.8
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.6</b>	▲ 10.7	▲ 11.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL06175100  
**Lab Number** : 06175100  
**Unique Number** : 11021153  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

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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)