



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id  
**139**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0719750</b>	WC0719771	---
Sample Date		Client Info		<b>04 Feb 2024</b>	07 Jun 2023	---
Machine Age	mls	Client Info		<b>16994</b>	12942	---
Oil Age	mls	Client Info		<b>0</b>	0	---
Filter Age	mls	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>ABNORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>155</b>	73	---
Chromium	ppm	ASTM D5185m	>20	<b>3</b>	<1	---
Nickel	ppm	ASTM D5185m	>4	<b>1</b>	0	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>13</b>	4	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	---
Copper	ppm	ASTM D5185m	>330	<b>24</b>	17	---
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

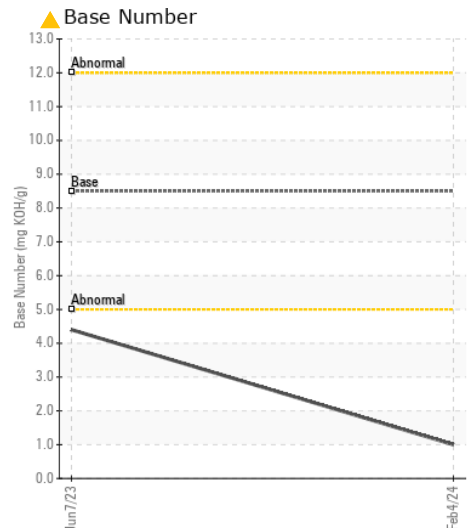
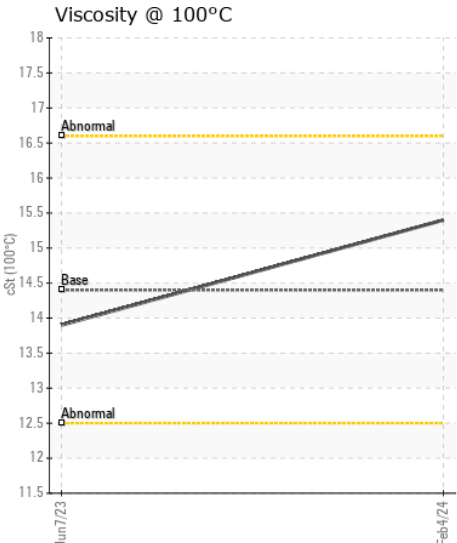
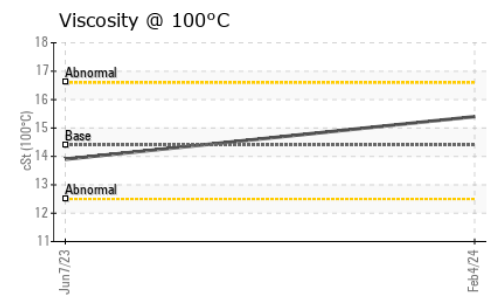
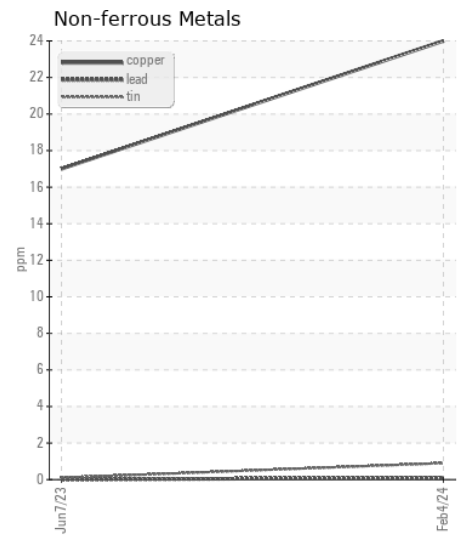
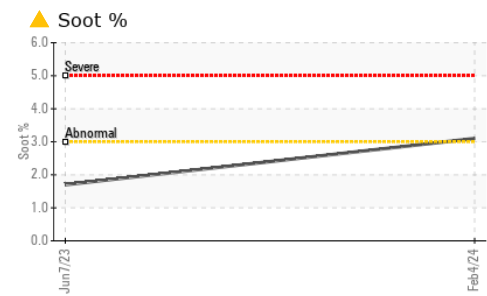
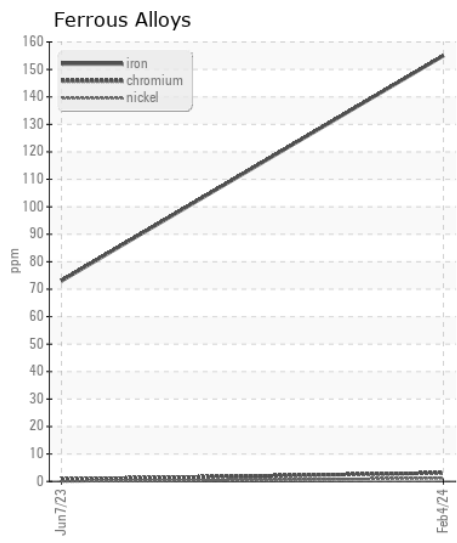
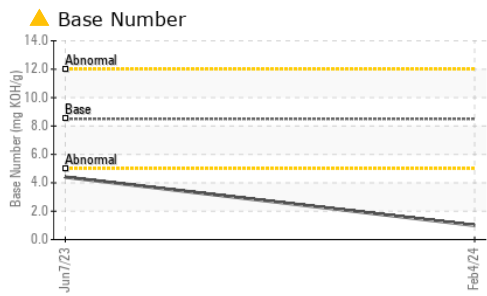
There is an abnormal amount of solids and carbon present in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>15</b>	10	---
Potassium	ppm	ASTM D5185m	>20	<b>24</b>	13	---
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>3.1</b>	1.7	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>25.5</b>	17.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>44.9</b>	32.4	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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>2</b>	2	---
Boron	ppm	ASTM D5185m	250	<b>3</b>	2	---
Barium	ppm	ASTM D5185m	10	<b>&lt;1</b>	0	---
Molybdenum	ppm	ASTM D5185m	100	<b>67</b>	61	---
Manganese	ppm	ASTM D5185m		<b>3</b>	2	---
Magnesium	ppm	ASTM D5185m	450	<b>883</b>	859	---
Calcium	ppm	ASTM D5185m	3000	<b>1090</b>	1072	---
Phosphorus	ppm	ASTM D5185m	1150	<b>846</b>	877	---
Zinc	ppm	ASTM D5185m	1350	<b>1180</b>	1113	---
Sulfur	ppm	ASTM D5185m	4250	<b>2458</b>	3148	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>56.5</b>	34.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>1.0</b>	4.4	---
Visc @ 100°C	cSt	ASTM D445	14.4	<b>15.4</b>	13.9	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0719750 **Received** : 14 Feb 2024  
**Lab Number** : 06089255 **Tested** : 16 Feb 2024  
**Unique Number** : 10876700 **Diagnosed** : 16 Feb 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**ALMSTEAD TREE & SHRUB CARE CO**  
 58 BEECHWOOD AVE  
 NEW ROCHELLE, NY  
 US 10801  
 Contact:

Certificate L2367  
 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)

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F: