



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**1013**  
Component  
**Gasoline Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0858198</b>	WC0858166	WC0760026
Sample Date		Client Info		<b>22 May 2024</b>	07 Nov 2023	03 May 2023
Machine Age	mls	Client Info		<b>3010</b>	2549	38226
Oil Age	mls	Client Info		<b>520</b>	520	520
Filter Age	mls	Client Info		<b>520</b>	520	520
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	<b>29</b>	23	29
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	1	2
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>40	<b>2</b>	3	<1
Lead	ppm	ASTM D5185m	>50	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m	>155	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

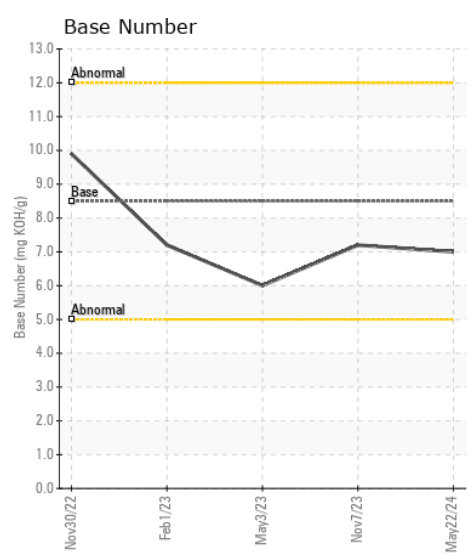
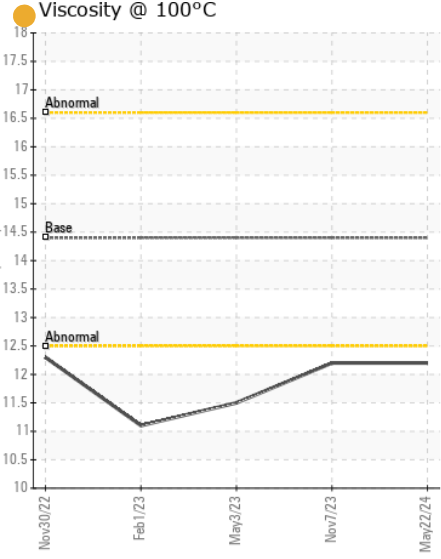
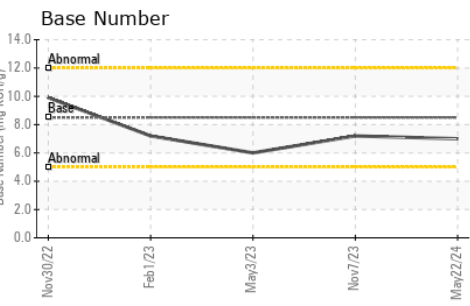
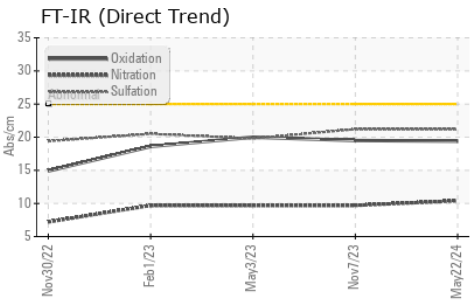
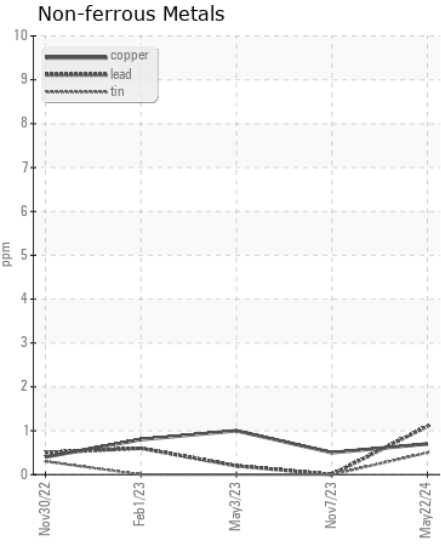
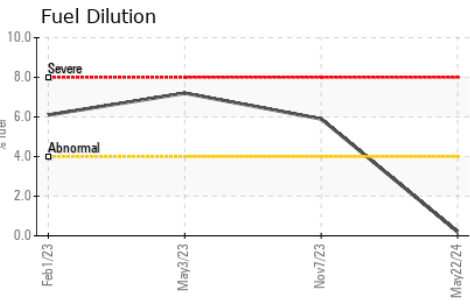
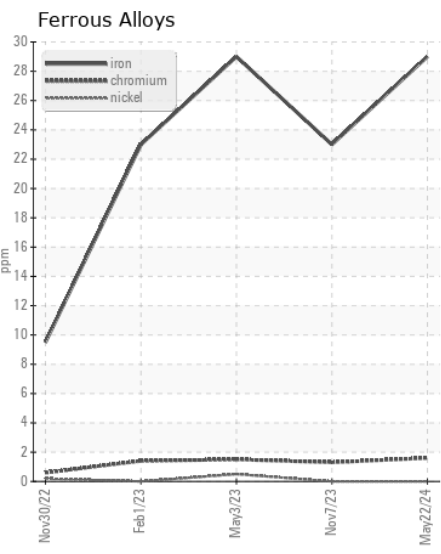
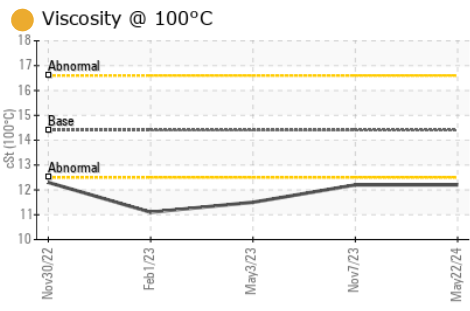
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	<b>5</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	0	1
Fuel	%	ASTM D3524	>4.0	<b>0.2</b>	▲ 5.9	▲ 7.2
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.4</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.4</b>	9.7	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.2</b>	21.2	19.8
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	<b>3</b>	3	<1
Boron	ppm	ASTM D5185m	250	<b>5</b>	4	4
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>60</b>	56	63
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>871</b>	881	817
Calcium	ppm	ASTM D5185m	3000	<b>1116</b>	971	1068
Phosphorus	ppm	ASTM D5185m	1150	<b>1018</b>	920	953
Zinc	ppm	ASTM D5185m	1350	<b>1136</b>	1163	1155
Sulfur	ppm	ASTM D5185m	4250	<b>3316</b>	2783	2893
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.4</b>	19.5	20.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.0</b>	7.2	6.0
Visc @ 100°C	cSt	ASTM D445	14.4	● <b>12.2</b>	▲ 12.2	▲ 11.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0858198 **Received** : 29 May 2024  
**Lab Number** : 06194865 **Tested** : 03 Jun 2024  
**Unique Number** : 11056988 **Diagnosed** : 03 Jun 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: PercentFuel, TBN )

**Apple Valley Waste - Hometown Location**  
 155 Airport Road  
 Selinsgrove, PA  
 US 17870  
 Contact: Service Manager

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)