



# OIL ANALYSIS REPORT

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

Machine Id  
**224**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DC0029341</b>	DC0028105	DC0029365
Sample Date		Client Info		<b>18 Dec 2023</b>	27 Nov 2023	26 Jun 2023
Machine Age	mls	Client Info		<b>348549</b>	346088	326600
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	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>19</b>	81	▲ 121
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	2
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	1	1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	4
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	3	14
Copper	ppm	ASTM D5185m	>330	<b>1</b>	5	10
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
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

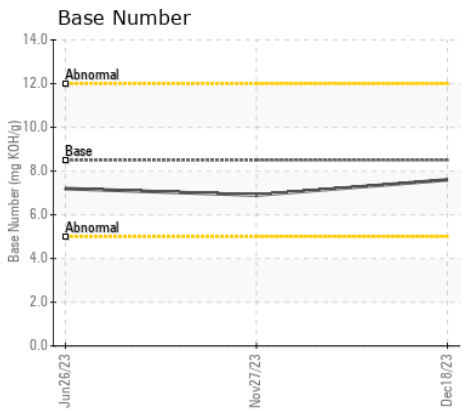
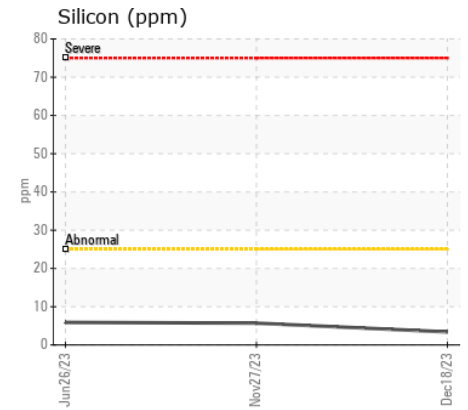
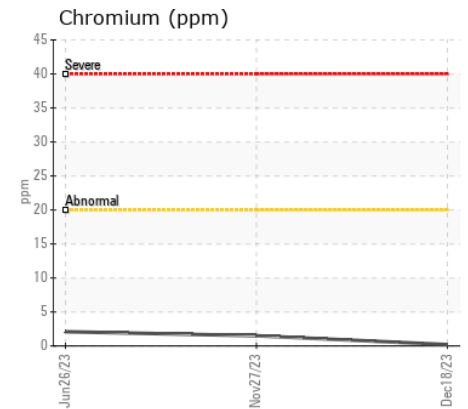
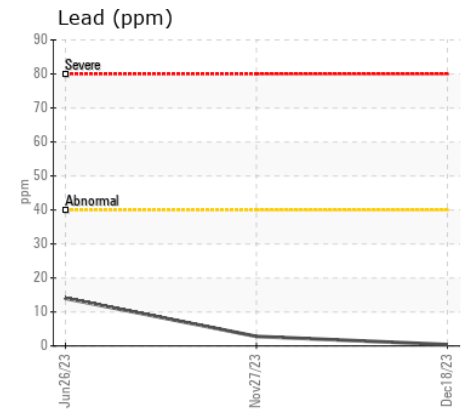
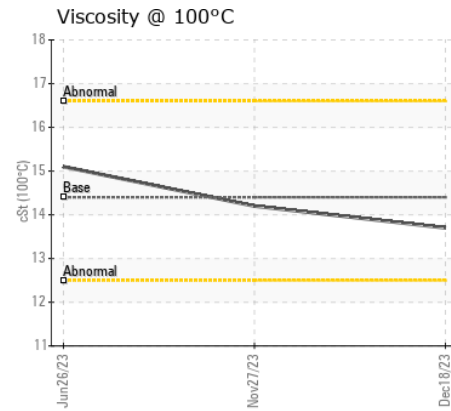
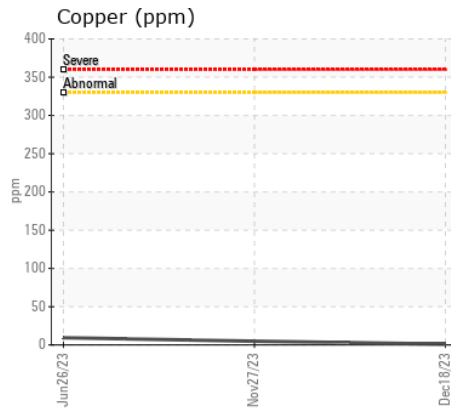
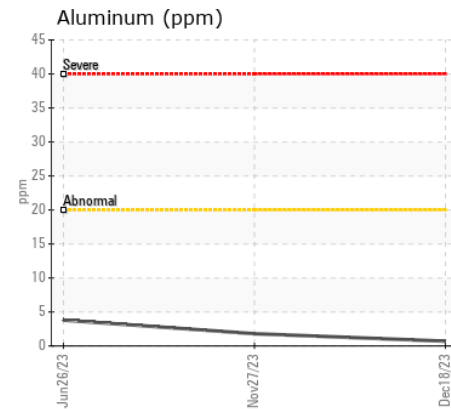
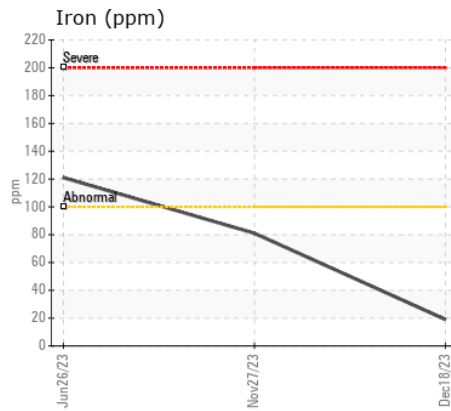
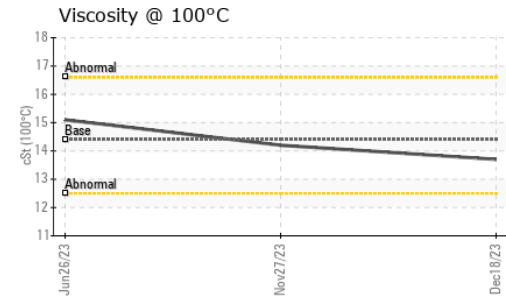
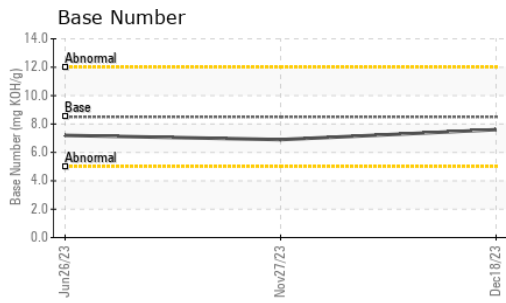
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>3</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	3	2
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>	0.8	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.7</b>	12.1	14.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.4</b>	23.8	28.1
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	>158	<b>3</b>	6	15
Boron	ppm	ASTM D5185m	250	<b>6</b>	16	31
Barium	ppm	ASTM D5185m	10	<b>0</b>	12	0
Molybdenum	ppm	ASTM D5185m	100	<b>8</b>	29	46
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	1
Magnesium	ppm	ASTM D5185m	450	<b>106</b>	323	511
Calcium	ppm	ASTM D5185m	3000	<b>2186</b>	2212	1904
Phosphorus	ppm	ASTM D5185m	1150	<b>930</b>	958	867
Zinc	ppm	ASTM D5185m	1350	<b>1103</b>	1125	1082
Sulfur	ppm	ASTM D5185m	4250	<b>3681</b>	3264	3020
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.8</b>	21.7	29.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.6</b>	6.9	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.7</b>	14.2	15.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0029341 **Received** : 10 Jan 2024  
**Lab Number** : 06056497 **Diagnosed** : 11 Jan 2024  
**Unique Number** : 10822446 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**FRANCIS O DAY**  
 14900 SOUTHLAWN LN  
 ROCKVILLE, MD  
 US 20850  
 Contact: JAMIE FORESTER

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: