



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Machine Id  
**31127**  
Component  
**Diesel Engine**  
Fluid  
**EXXON 15W40 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0933304</b>	WC0903510	WC0885628
Sample Date		Client Info		<b>12 Jun 2024</b>	12 Feb 2024	01 Dec 2023
Machine Age	mls	Client Info		<b>21970</b>	27761	94902
Oil Age	mls	Client Info		<b>21970</b>	22385	25000
Filter Age	mls	Client Info		<b>21970</b>	22385	25000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>8</b>	18	11
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>7</b>	12	10
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>6</b>	24	48
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<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

There is no indication of any contamination in the oil.

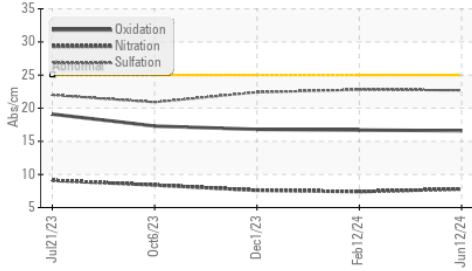
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>11</b>	24	24
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.8</b>	7.4	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.7</b>	22.8	22.4
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

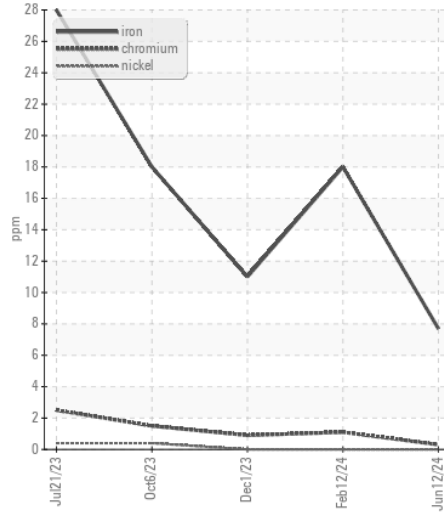
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	3	2
Boron	ppm	ASTM D5185m		<b>189</b>	298	202
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>95</b>	94	78
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>372</b>	481	470
Calcium	ppm	ASTM D5185m		<b>1398</b>	1559	1231
Phosphorus	ppm	ASTM D5185m		<b>1008</b>	1181	881
Zinc	ppm	ASTM D5185m		<b>1233</b>	1407	1157
Sulfur	ppm	ASTM D5185m		<b>3193</b>	3242	2486
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.6</b>	16.7	16.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.2</b>	6.2	6.5
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.4</b>	12.8	12.8

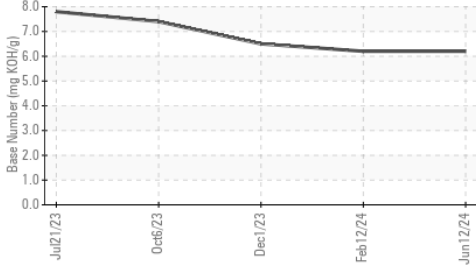
**FT-IR (Direct Trend)**



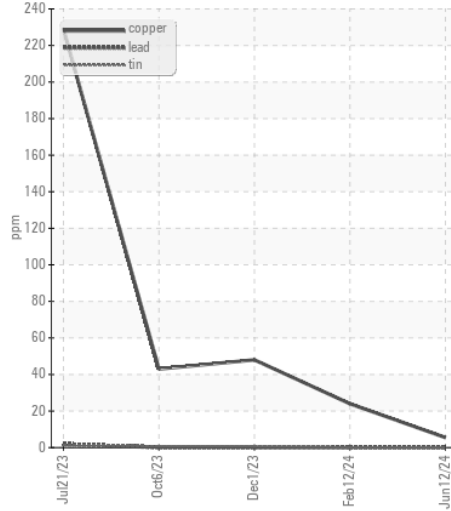
**Ferrous Alloys**



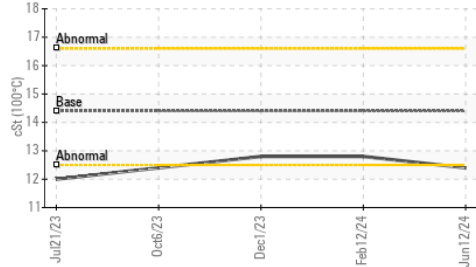
**Base Number**



**Non-ferrous Metals**



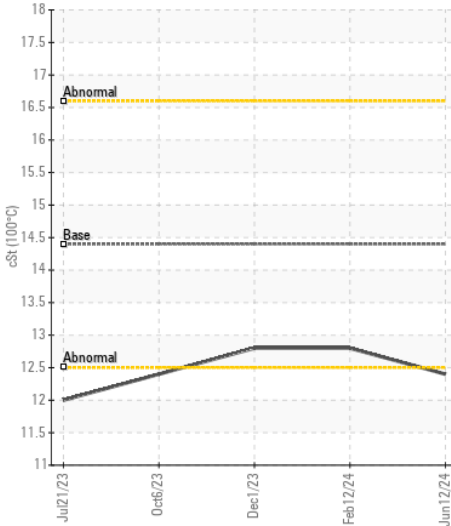
**Viscosity @ 100°C**



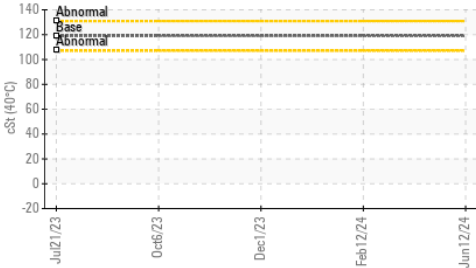
**Fuel Dilution**



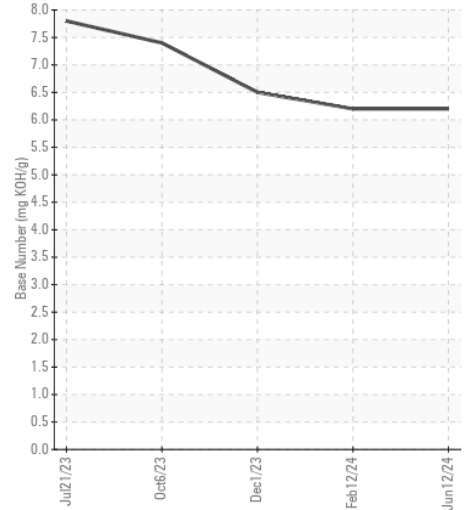
**Viscosity @ 100°C**



**Viscosity @ 40°C**



**Base Number**



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0933304 **Received** : 01 Jul 2024  
**Lab Number** : 06225630 **Tested** : 03 Jul 2024  
**Unique Number** : 11103827 **Diagnosed** : 03 Jul 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, KV40 )

**SALEM NATIONALEASE CORPORATION**  
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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)