



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Machine Id  
**12961**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0929296</b>	WC0842211	WC0842077
Sample Date		Client Info		<b>17 Jun 2024</b>	30 Mar 2024	13 Jan 2024
Machine Age	mls	Client Info		<b>189465</b>	177882	170968
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	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>57</b>	13	13
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>8</b>	5	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
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.

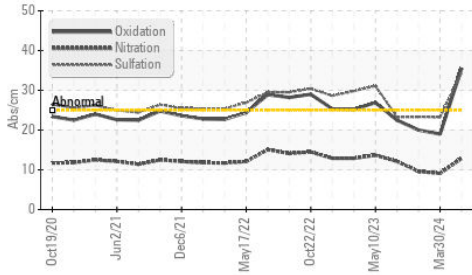
Silicon	ppm	ASTM D5185m	>25	<b>12</b>	7	7
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	2	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.9</b>	9.1	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>34.4</b>	23.2	23.3
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

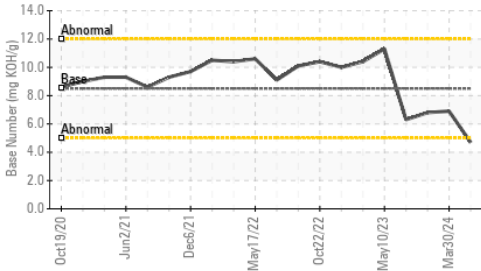
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<b>3</b>	2	3
Boron	ppm	ASTM D5185m	250	<b>117</b>	318	242
Barium	ppm	ASTM D5185m	10	<b>&lt;1</b>	0	<1
Molybdenum	ppm	ASTM D5185m	100	<b>119</b>	88	80
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>572</b>	523	528
Calcium	ppm	ASTM D5185m	3000	<b>1993</b>	1406	1343
Phosphorus	ppm	ASTM D5185m	1150	<b>1354</b>	1043	1018
Zinc	ppm	ASTM D5185m	1350	<b>1690</b>	1340	1192
Sulfur	ppm	ASTM D5185m	4250	<b>3829</b>	3676	3005
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>35.5</b>	19.0	20.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>4.7</b>	6.9	6.8
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.5</b>	13.0	13.3

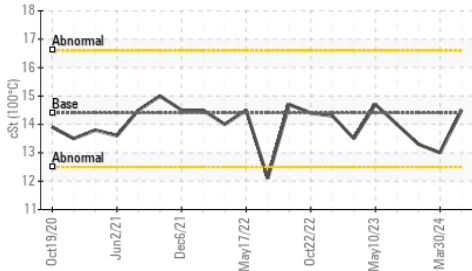
**FT-IR (Direct Trend)**



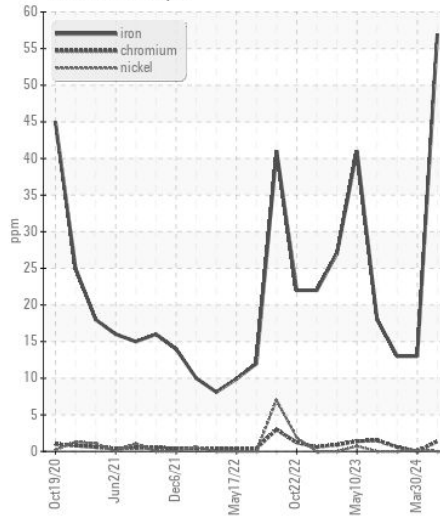
**Base Number**



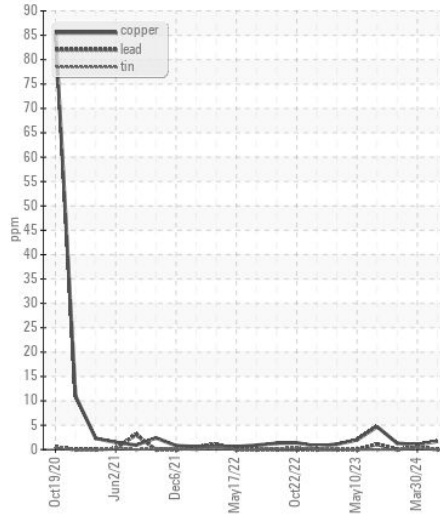
**Viscosity @ 100°C**



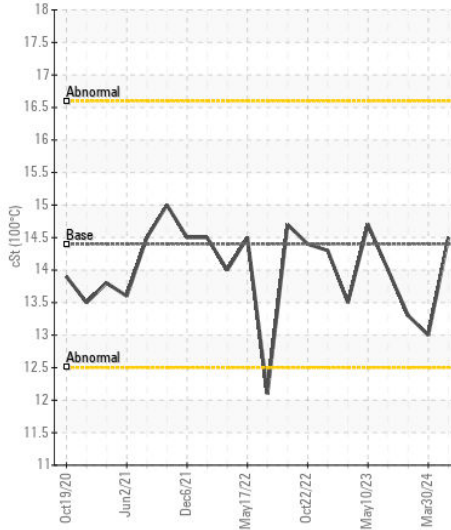
**Ferrous Alloys**



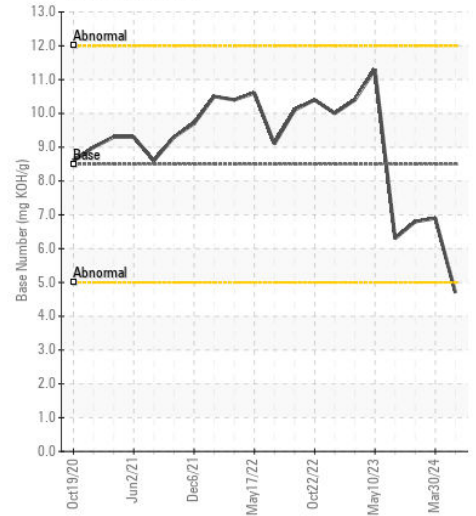
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : WC0929296

**Lab Number** : 06229517

**Unique Number** : 11113010

**Test Package** : FLEET

**Received** : 05 Jul 2024

**Tested** : 09 Jul 2024

**Diagnosed** : 09 Jul 2024 - Don Baldrige

**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)