



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Machine Id  
**46454**  
 Component  
**Diesel Engine**  
 Fluid  
**EXXON 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0903331</b>	WC0684332	WC0684296
Sample Date		Client Info		<b>08 Apr 2024</b>	09 Jun 2022	07 Apr 2022
Machine Age	mls	Client Info		<b>214148</b>	17000	20000
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	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>11</b>	7	13
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>2</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	1
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	5	12
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>3</b>	60	80
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	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.

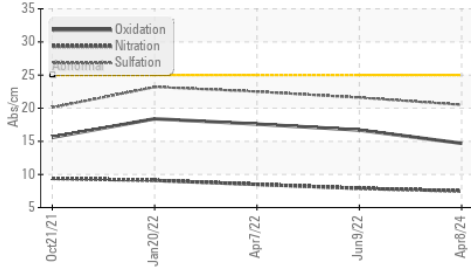
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	9	29
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	7.9	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.5</b>	21.6	22.5
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

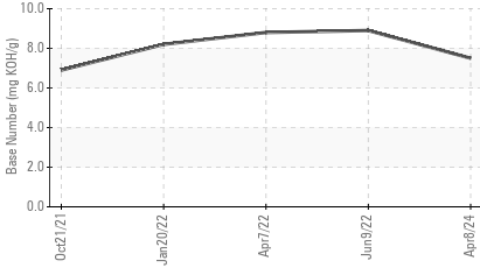
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	<1	2
Boron	ppm	ASTM D5185m		<b>210</b>	9	8
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>83</b>	84	74
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m		<b>588</b>	847	1021
Calcium	ppm	ASTM D5185m		<b>1413</b>	1062	1180
Phosphorus	ppm	ASTM D5185m		<b>1025</b>	922	1045
Zinc	ppm	ASTM D5185m		<b>1262</b>	1150	1271
Sulfur	ppm	ASTM D5185m		<b>3665</b>	2575	2257
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	16.7	17.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.5</b>	8.9	8.8
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.3</b>	12.6	12.6

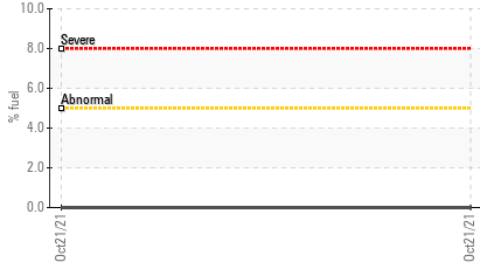
**FT-IR (Direct Trend)**



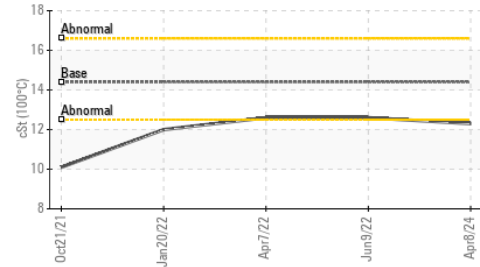
**Base Number**



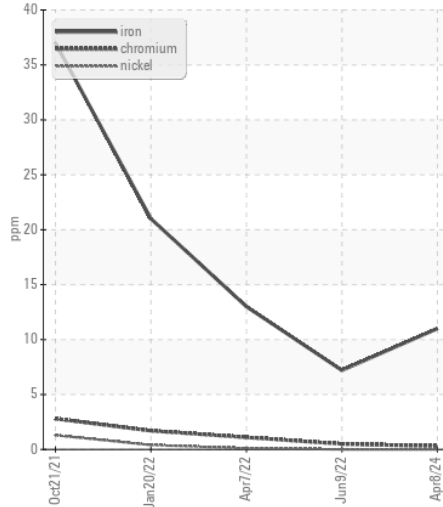
**Fuel Dilution**



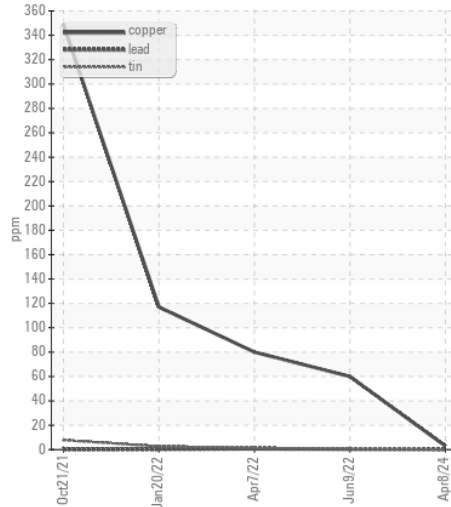
**Viscosity @ 100°C**



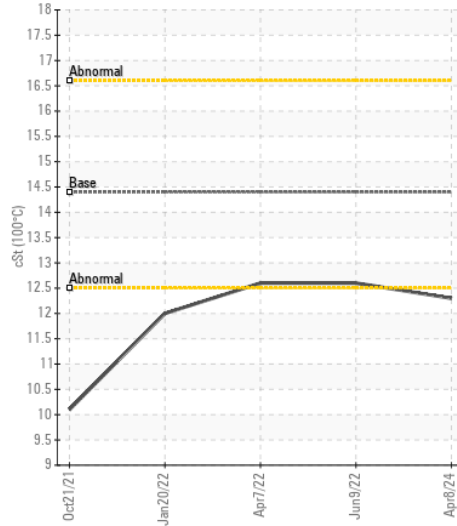
**Ferrous Alloys**



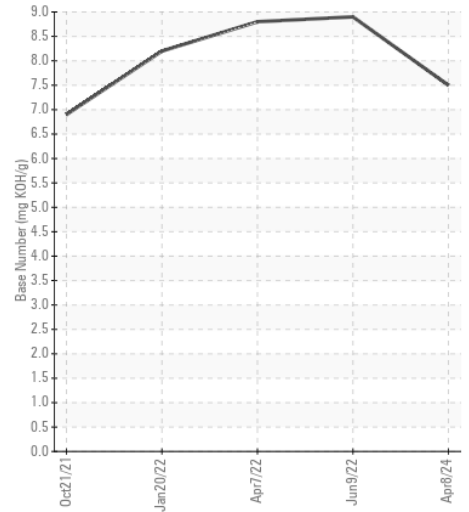
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0903331 **Received** : 05 Jul 2024  
**Lab Number** : 06229584 **Tested** : 09 Jul 2024  
**Unique Number** : 11113077 **Diagnosed** : 09 Jul 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution )

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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)