



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**GROVE 7164 (S/N 227867)**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DC0025394</b>	---	---
Sample Date		Client Info		<b>15 Nov 2022</b>	---	---
Machine Age	hrs	Client Info		<b>7317</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Filter Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>Not Changd</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>16</b>	---	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m		<b>0</b>	---	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m	>330	<b>1</b>	---	---
Tin	ppm	ASTM D5185m	>15	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	---	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---

## CONTAMINATION

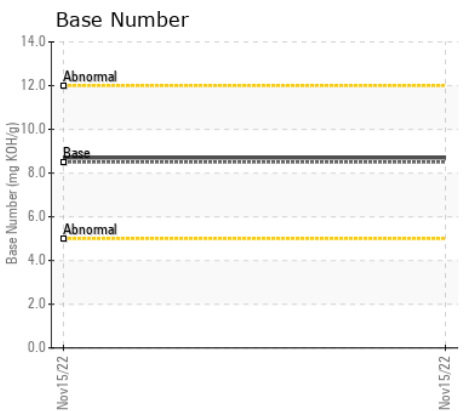
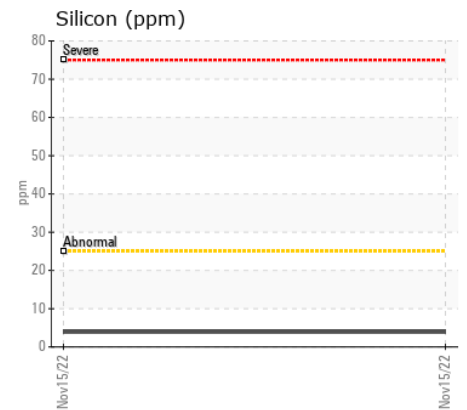
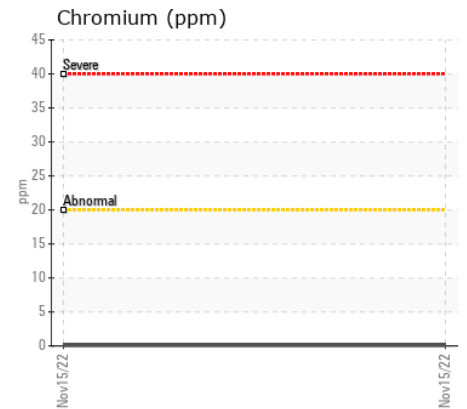
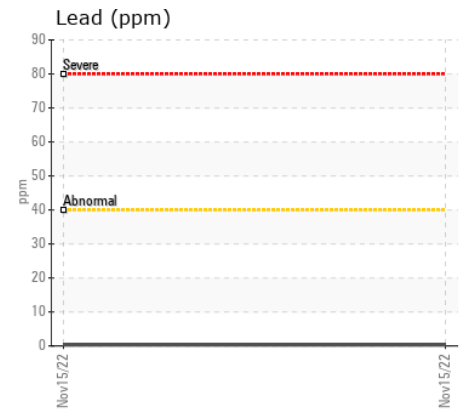
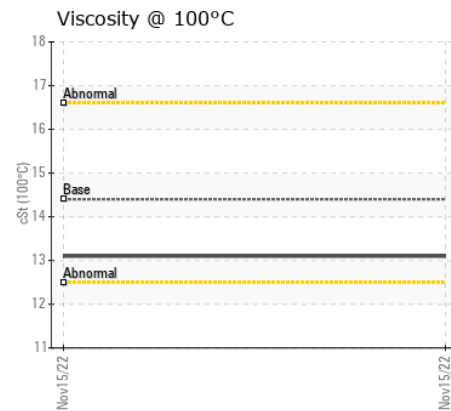
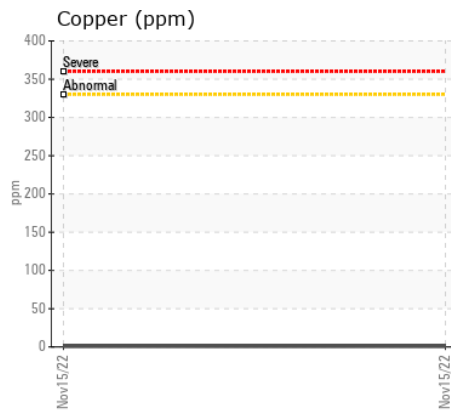
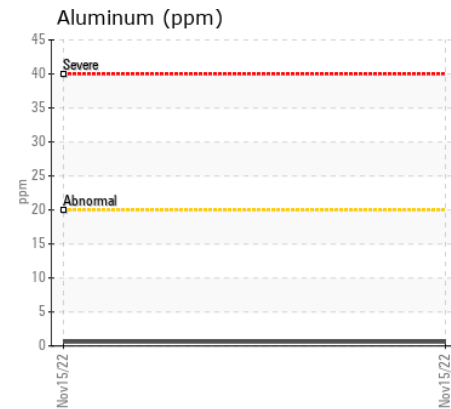
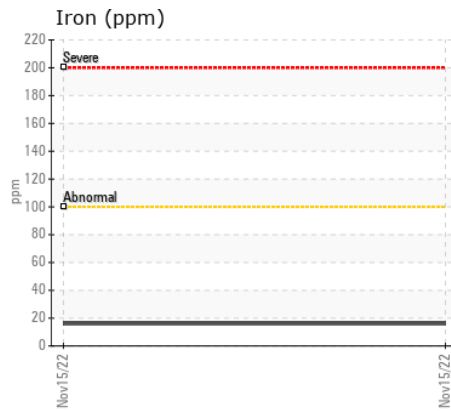
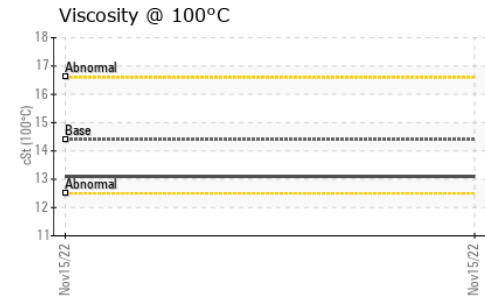
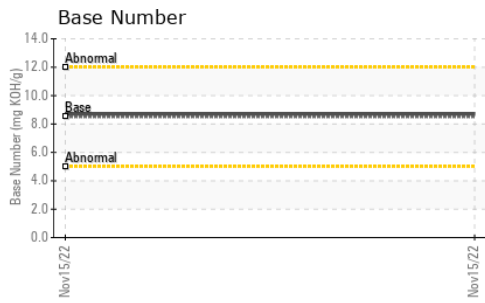
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	---	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.2</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.2</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	---	---

## 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>	---	---
Boron	ppm	ASTM D5185m	250	<b>152</b>	---	---
Barium	ppm	ASTM D5185m	10	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	100	<b>17</b>	---	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	450	<b>59</b>	---	---
Calcium	ppm	ASTM D5185m	3000	<b>2057</b>	---	---
Phosphorus	ppm	ASTM D5185m	1150	<b>913</b>	---	---
Zinc	ppm	ASTM D5185m	1350	<b>1069</b>	---	---
Sulfur	ppm	ASTM D5185m	4250	<b>3428</b>	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.7</b>	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.1</b>	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0025394  
**Lab Number** : 05738178  
**Unique Number** : 10292777  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**ABERDEEN PROVING GROUND**  
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 ABERDEEN, MD  
 US 21005  
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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)