



Machine Id  
**M3744**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

### RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL0012710</b>	---	---
Sample Date		Client Info		<b>17 Jan 2024</b>	---	---
Machine Age	mls	Client Info		<b>0</b>	---	---
Oil Age	mls	Client Info		<b>0</b>	---	---
Filter Age	mls	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>Changed</b>	---	---
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>30</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>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m	>20	<b>▲ 10</b>	---	---
Lead	ppm	ASTM D5185m	>40	<b>3</b>	---	---
Copper	ppm	ASTM D5185m	>330	<b>83</b>	---	---
Tin	ppm	ASTM D5185m	>15	<b>3</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---

### CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Light fuel dilution occurring.

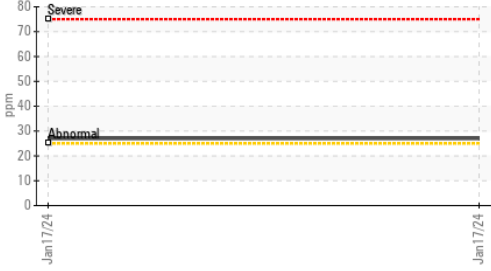
Silicon	ppm	ASTM D5185m	>25	<b>▲ 27</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>17</b>	---	---
Fuel	%	ASTM D3524	>5	<b>▲ 2.4</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.7</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</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

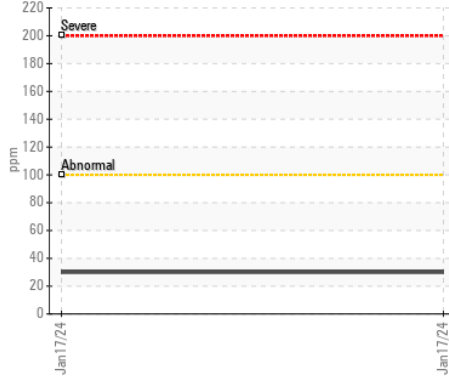
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	<b>3</b>	---	---
Boron	ppm	ASTM D5185m	250	<b>93</b>	---	---
Barium	ppm	ASTM D5185m	10	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	100	<b>98</b>	---	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	450	<b>640</b>	---	---
Calcium	ppm	ASTM D5185m	3000	<b>1148</b>	---	---
Phosphorus	ppm	ASTM D5185m	1150	<b>782</b>	---	---
Zinc	ppm	ASTM D5185m	1350	<b>876</b>	---	---
Sulfur	ppm	ASTM D5185m	4250	<b>3091</b>	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.9</b>	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	<b>▲ 12.3</b>	---	---

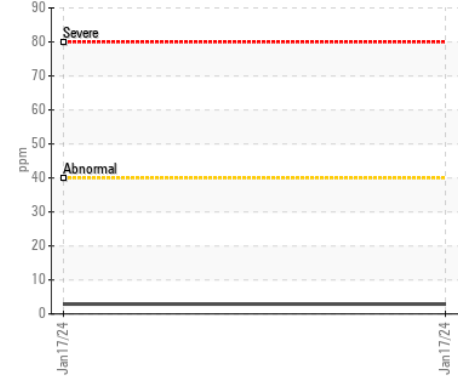
▲ Silicon (ppm)



Iron (ppm)



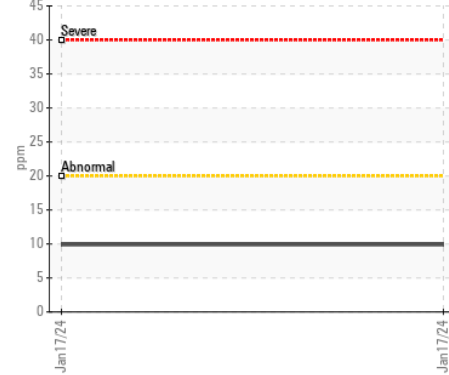
Lead (ppm)



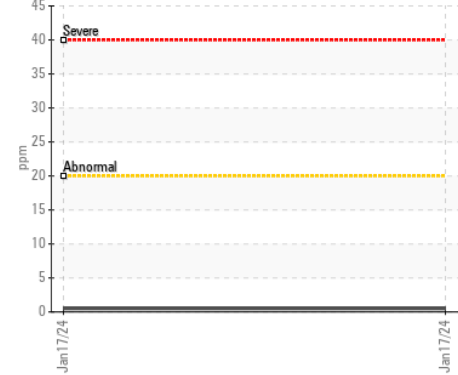
▲ Viscosity @ 100°C



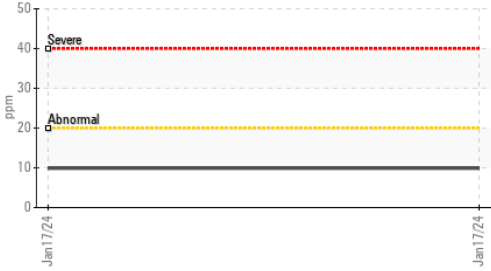
▲ Aluminum (ppm)



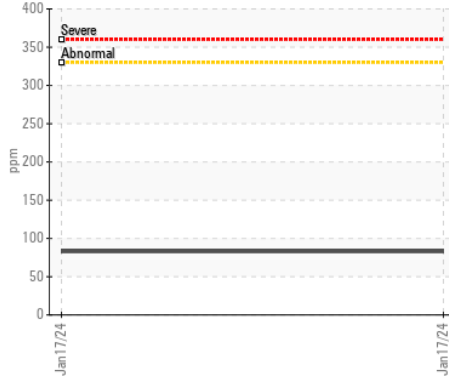
Chromium (ppm)



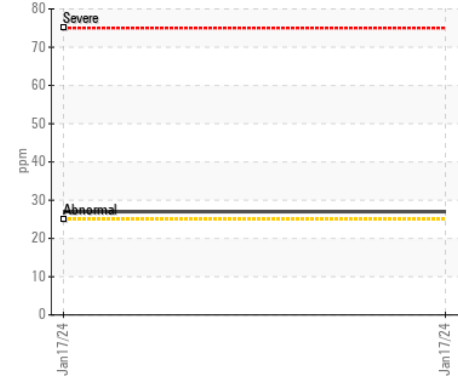
▲ Aluminum (ppm)



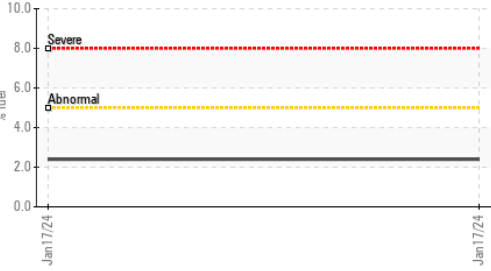
Copper (ppm)



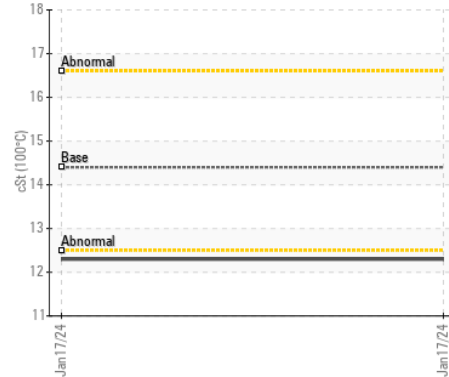
▲ Silicon (ppm)



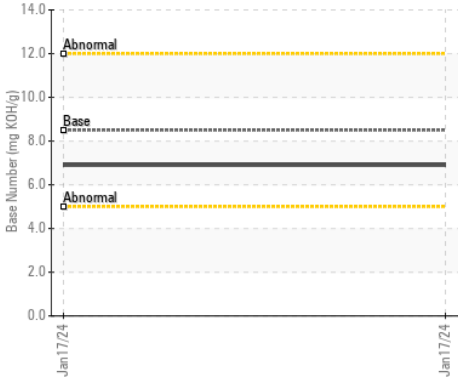
▲ Fuel Dilution



▲ Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0012710 **Received** : 31 Jan 2024  
**Lab Number** : 06075565 **Diagnosed** : 02 Feb 2024  
**Unique Number** : 10857656 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB1+ ( Additional Tests: FuelDilution, PercentFuel )

**RUSH TRUCK LEASING - SALT LAKE CITY IDEALEASE**  
 964 SOUTH 3800 WEST, BLDG B  
 SALT LAKE CITY, UT  
 US 84104  
 Contact: DEBBIE ANDERSON

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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