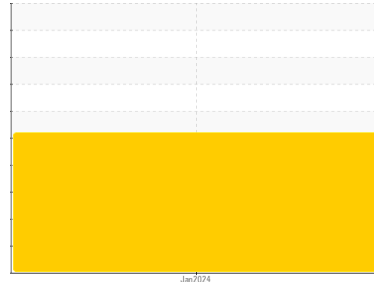




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Machine Id  
**HYSTER MUELL GWA**

Component  
**Diesel Engine**

Fluid  
**XTRA REV 15W40 (--- LTR)**

## DIAGNOSIS

### ▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

### ▲ Wear

Cylinder, crank, or cam shaft wear is indicated.

### ▲ Contamination

There is a moderate amount of particulates present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>KL0013468</b>	---	---
Sample Date	Client Info		<b>26 Jan 2024</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---	---
Oil Age	hrs	Client Info	<b>135</b>	---	---
Oil Changed	Client Info		<b>Not Chngd</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>▲ 142</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>5</b>	---	---
Nickel	ppm	ASTM D5185m >4	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >20	<b>▲ 28</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>0</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>6</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>89</b>	---	---
Barium	ppm	ASTM D5185m	<b>1</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>48</b>	---	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>307</b>	---	---
Calcium	ppm	ASTM D5185m	<b>2196</b>	---	---
Phosphorus	ppm	ASTM D5185m	<b>1058</b>	---	---
Zinc	ppm	ASTM D5185m	<b>1211</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>3797</b>	---	---

## CONTAMINANTS

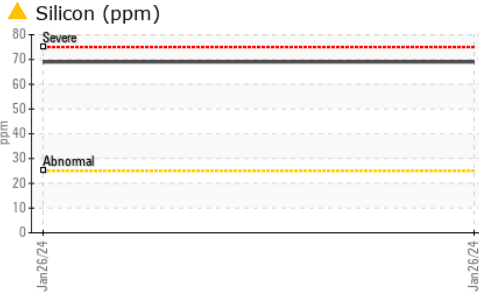
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>▲ 69</b>	---	---
Sodium	ppm	ASTM D5185m	<b>9</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>9</b>	---	---

## INFRA-RED

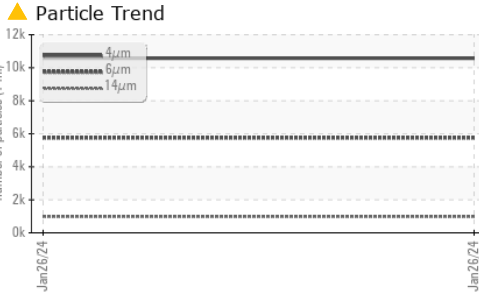
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.7</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.9</b>	---	---



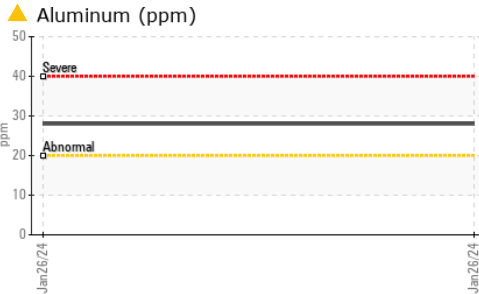
# OIL ANALYSIS REPORT



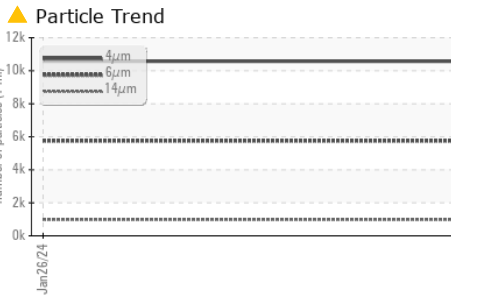
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>10570</b>	---	---
Particles >6µm	ASTM D7647	>5000	<b>▲ 5758</b>	---	---
Particles >14µm	ASTM D7647	>640	<b>▲ 980</b>	---	---
Particles >21µm	ASTM D7647	>160	<b>▲ 330</b>	---	---
Particles >38µm	ASTM D7647	>40	<b>▲ 51</b>	---	---
Particles >71µm	ASTM D7647	>10	<b>5</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>19/16	<b>▲ 20/17</b>	---	---



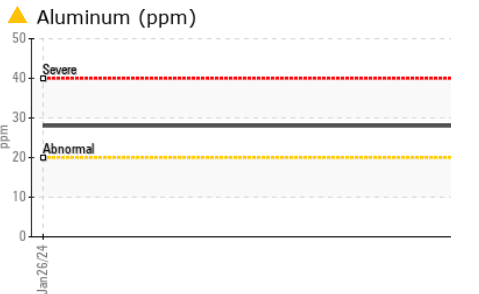
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414	>25	<b>14.4</b>	---	---
Base Number (BN)	mg KOH/g ASTM D2896		<b>9.95</b>	---	---



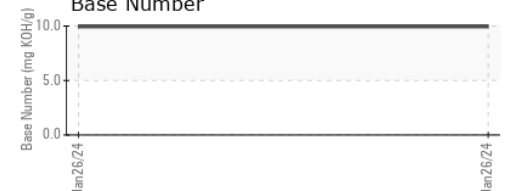
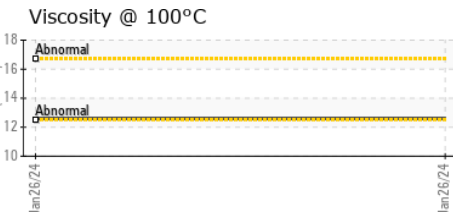
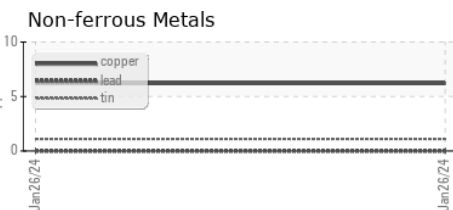
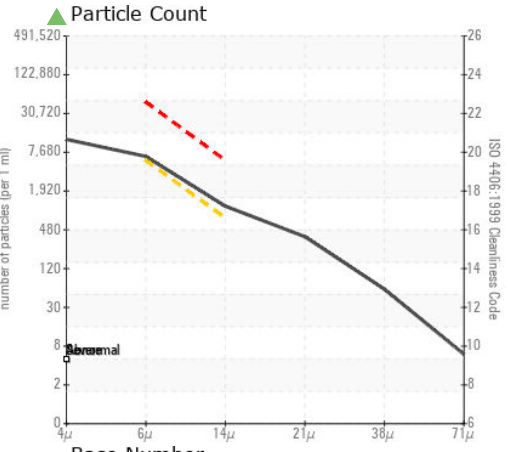
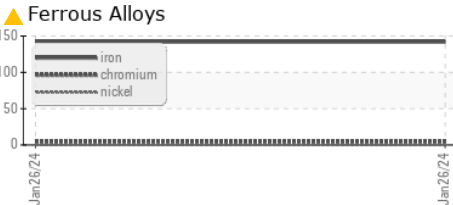
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar *Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar *Visual	NONE	<b>NONE</b>	---	---
Precipitate	scalar *Visual	NONE	<b>NONE</b>	---	---
Silt	scalar *Visual	NONE	<b>NONE</b>	---	---
Debris	scalar *Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	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>	---	---
Free Water	scalar *Visual		<b>NEG</b>	---	---



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445		<b>12.6</b>	---	---



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0013468 **Received** : 30 Jan 2024  
**Lab Number** : 06074990 **Diagnosed** : 02 Feb 2024  
**Unique Number** : 10857081 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

**CONOR**  
 JUAREZ 348  
 HERMOSILLO,  
 MX 83140  
 Contact: EDUARDO GARCIA  
 egarcia.comsa@gmail.com  
 T: (526)622-1581 x:81  
 F: x:

Certificate L2367  
 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)