



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
HYSTER MUELL GWA

Component
Diesel Engine

Fluid
XTRA REV 15W40 (--- LTR)

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013468	---	---
Sample Date		Client Info		26 Jan 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		135	---	---
Filter Age	hrs	Client Info		135	---	---
Oil Changed		Client Info		Not Chngd	---	---
Filter Changed		Client Info		Not Chngd	---	---
Sample Status				ABNORMAL	---	---

WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>100	▲ 142	---	---
Chromium	ppm	ASTM D5185m	>20	5	---	---
Nickel	ppm	ASTM D5185m	>4	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	▲ 28	---	---
Lead	ppm	ASTM D5185m	>40	0	---	---
Copper	ppm	ASTM D5185m	>330	6	---	---
Tin	ppm	ASTM D5185m	>15	1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

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.

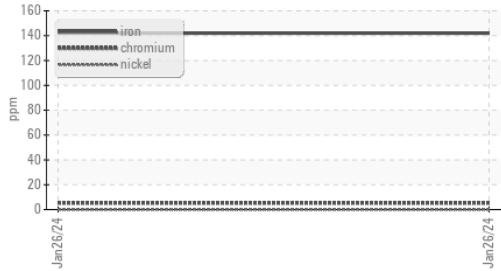
Silicon	ppm	ASTM D5185m	>25	▲ 69	---	---
Potassium	ppm	ASTM D5185m	>20	9	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.7	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.9	---	---
Particles >4µm		ASTM D7647		10570	---	---
Particles >6µm		ASTM D7647	>5000	▲ 5758	---	---
Particles >14µm		ASTM D7647	>640	▲ 980	---	---
Particles >21µm		ASTM D7647	>160	▲ 330	---	---
Particles >38µm		ASTM D7647	>40	▲ 51	---	---
Particles >71µm		ASTM D7647	>10	5	---	---
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ 20/17	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	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		9	---	---
Boron	ppm	ASTM D5185m		89	---	---
Barium	ppm	ASTM D5185m		1	---	---
Molybdenum	ppm	ASTM D5185m		48	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		307	---	---
Calcium	ppm	ASTM D5185m		2196	---	---
Phosphorus	ppm	ASTM D5185m		1058	---	---
Zinc	ppm	ASTM D5185m		1211	---	---
Sulfur	ppm	ASTM D5185m		3797	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		9.95	---	---
Visc @ 100°C	cSt	ASTM D445		12.6	---	---

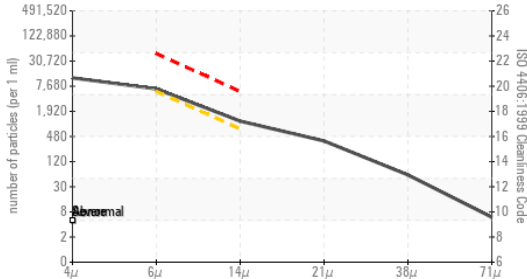
▲ Ferrous Alloys



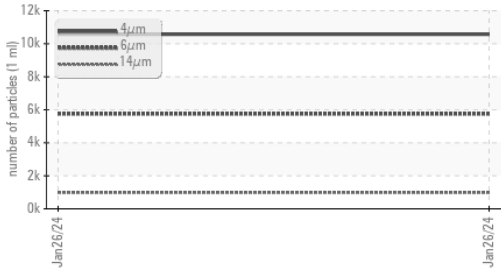
▲ Silicon (ppm)



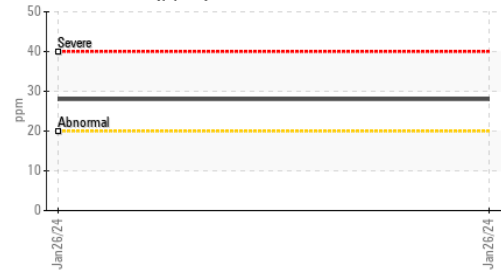
▲ Particle Count



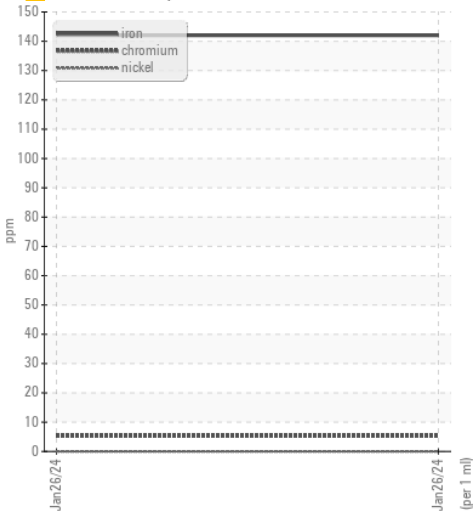
▲ Particle Trend



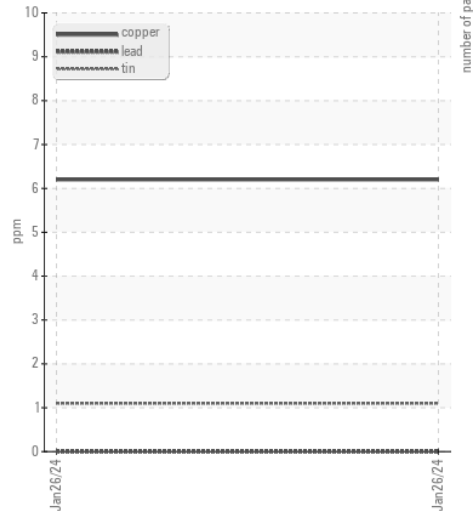
▲ Aluminum (ppm)



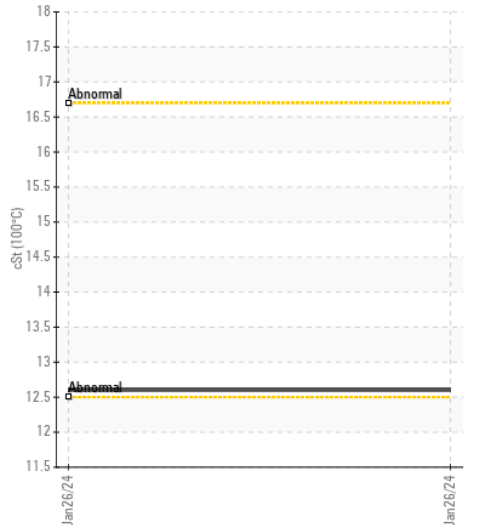
▲ Ferrous Alloys



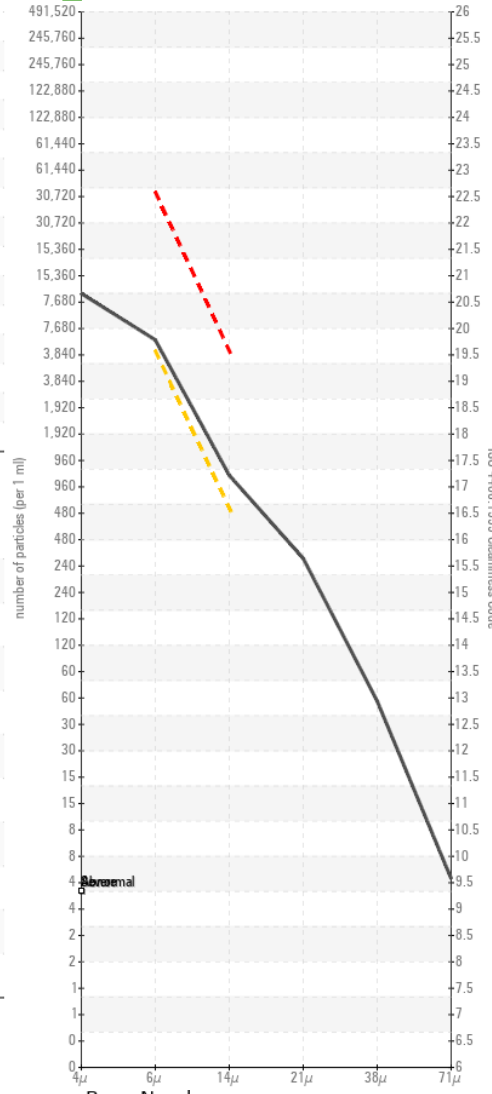
Non-ferrous Metals



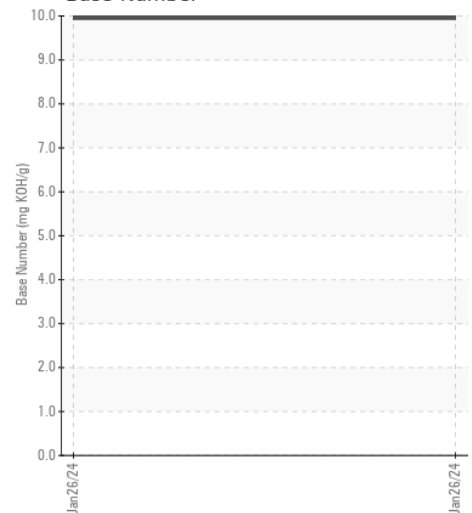
Viscosity @ 100°C



▲ Particle Count



Base Number



Certificate L2367

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)

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)

CONOR
 JUAREZ 348
 HERMOSILLO,
 MX 83140

Contact: EDUARDO GARCIA
 egarcia.comsa@gmail.com

T: (526)622-1581 x:81

F: x: