



# WEAR CHECK

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**27253**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 40 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0013215</b>	KL0011998	KLM2339312
Sample Date		Client Info		<b>30 Jan 2024</b>	26 Jul 2023	11 Apr 2023
Machine Age	mls	Client Info		<b>909211</b>	909211	87675
Oil Age	mls	Client Info		<b>909211</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>39</b>	49	30
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	2	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	5	4
Lead	ppm	ASTM D5185m	>40	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	6	1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

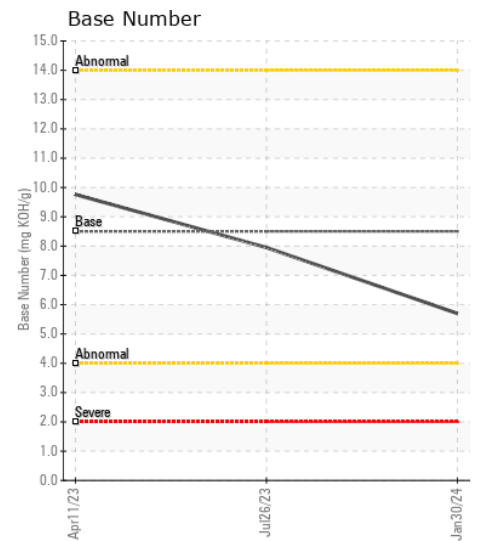
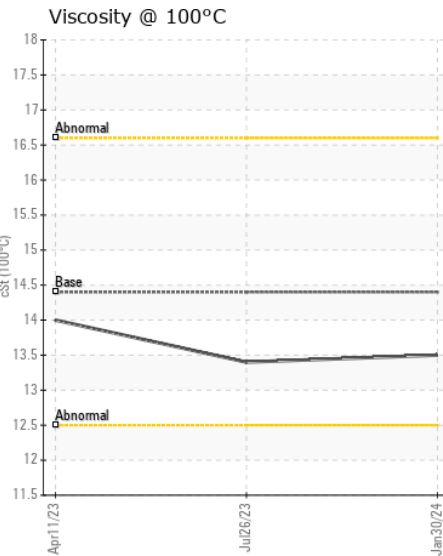
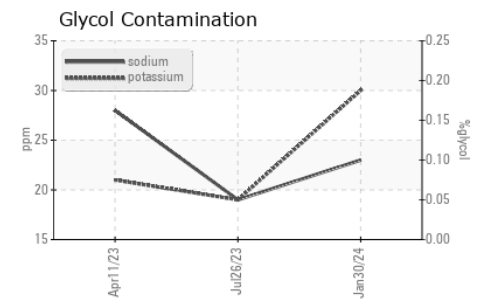
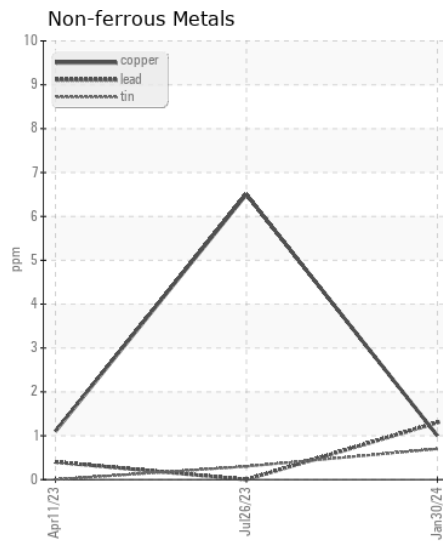
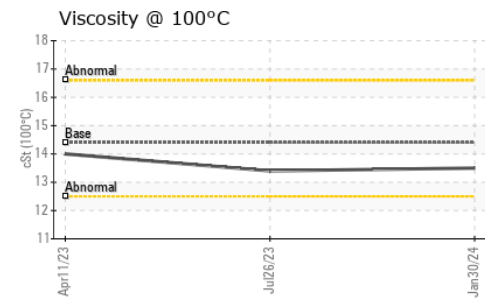
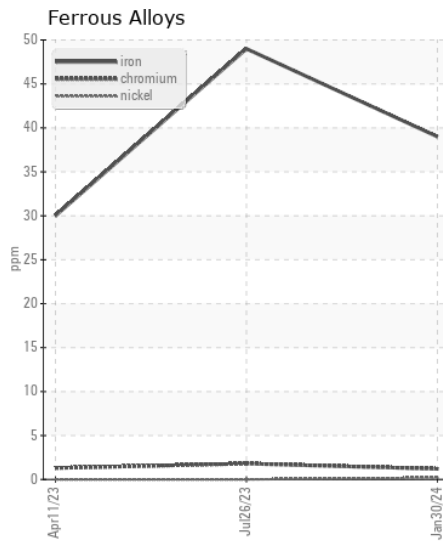
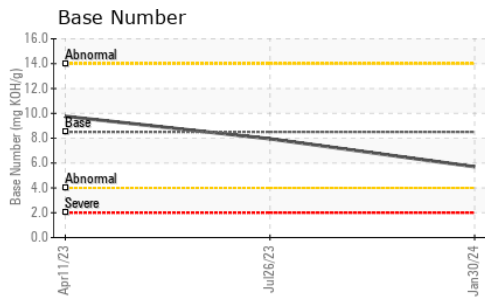
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	9	11
Potassium	ppm	ASTM D5185m	>20	<b>30</b>	19	21
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	0.9	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.1</b>	12.6	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>28.7</b>	27.8	24.9
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	>216	<b>23</b>	19	28
Boron	ppm	ASTM D5185m	250	<b>25</b>	36	43
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>53</b>	63	65
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>864</b>	1037	1113
Calcium	ppm	ASTM D5185m	3000	<b>1001</b>	1275	1128
Phosphorus	ppm	ASTM D5185m	1150	<b>910</b>	1055	1061
Zinc	ppm	ASTM D5185m	1350	<b>1103</b>	1294	1325
Sulfur	ppm	ASTM D5185m	4250	<b>2884</b>	4013	4120
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>29.3</b>	28.3	23.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>5.7</b>	7.95	9.76
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.5</b>	13.4	14.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0013215 **Received** : 14 Feb 2024  
**Lab Number** : 06089446 **Tested** : 16 Feb 2024  
**Unique Number** : 10876891 **Diagnosed** : 16 Feb 2024 - Don Baldrige  
**Test Package** : FLEET ( Additional Tests: Glycol )

**CITY & COUNTY HONOLULU**  
 99-999 IWAENA RD  
 AIEA, HI  
 US 96701  
 Contact: CLYDE OMIJA  
 comija@honolulu.gov  
 T: (575)623-9952  
 F:

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)