



**PERFORMANCE  
UNDER  
PRESSURE**

**OIL ANALYSIS REPORT**

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**TM 5**  
Machine Id  
**TM 5 - 7 and 8 VACUUM PUMP**  
Component  
**Pump**  
Fluid  
**GEAR OIL ISO 220 (--- GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RP0038117</b>	RP0023596	RP05263969
Sample Date		Client Info		<b>29 Jan 2024</b>	24 May 2023	25 May 2021
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	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>SEVERE</b>	SEVERE	SEVERE

**WEAR**

All component wear rates are normal.

PQ		ASTM D8184		<b>21</b>	12	---
Iron	ppm	ASTM D5185m	>90	<b>20</b>	4	347
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	4
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	3
Titanium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>7	<b>2</b>	1	4
Lead	ppm	ASTM D5185m	>12	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>30	<b>3</b>	<1	155
Tin	ppm	ASTM D5185m	>9	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

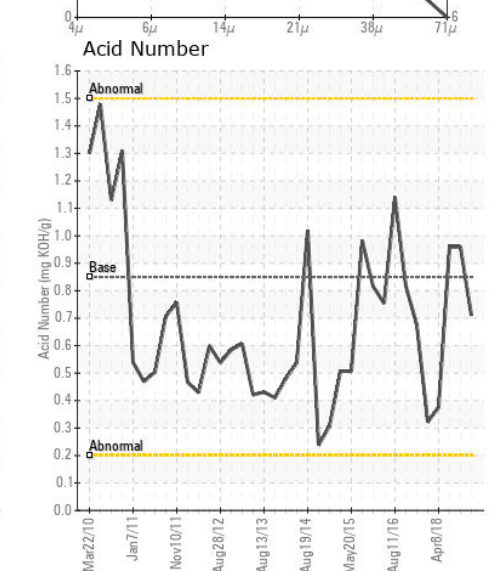
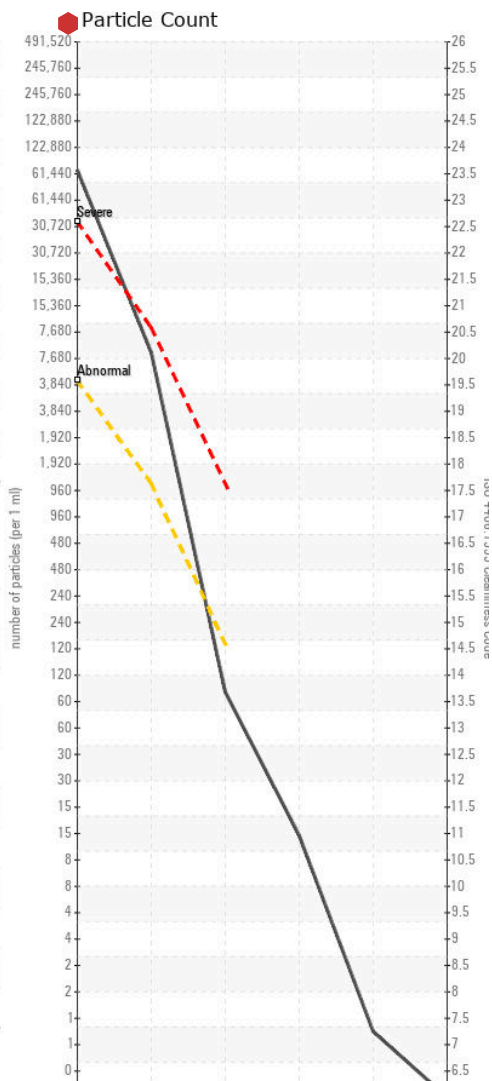
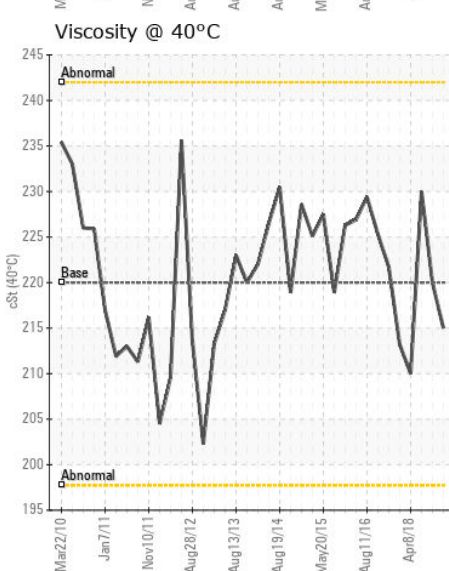
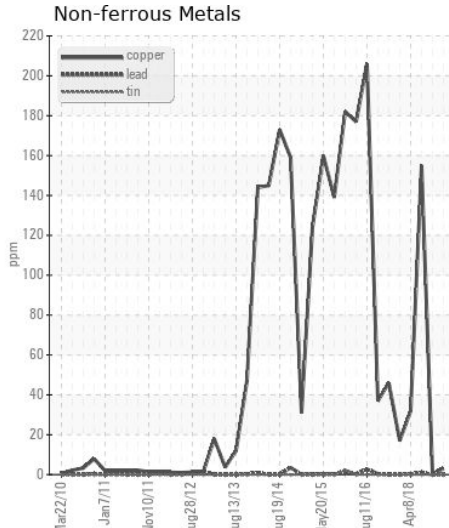
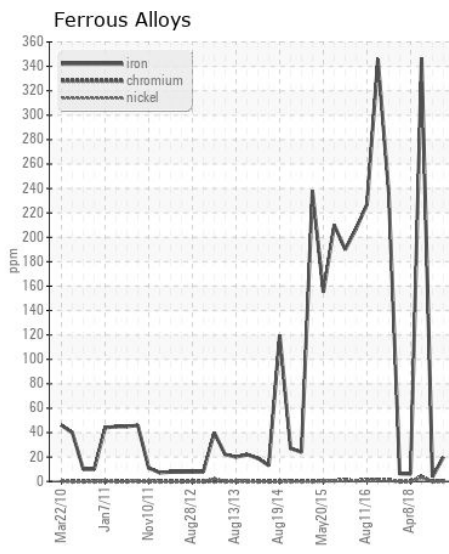
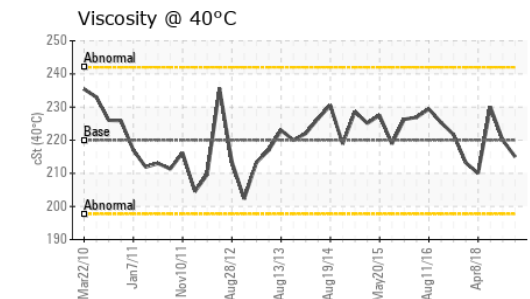
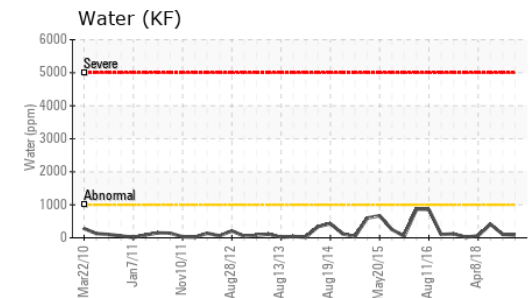
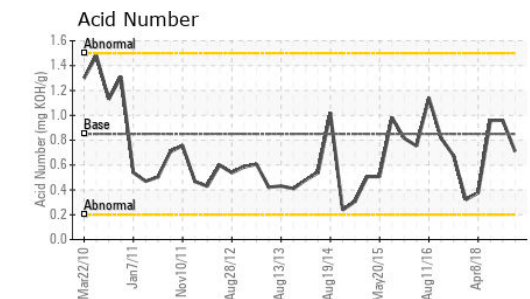
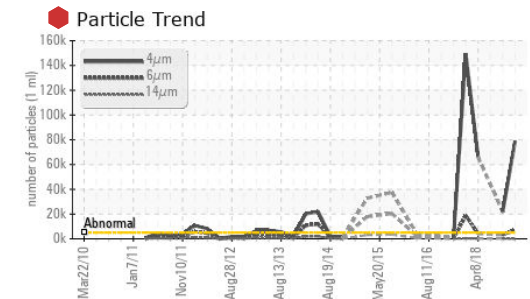
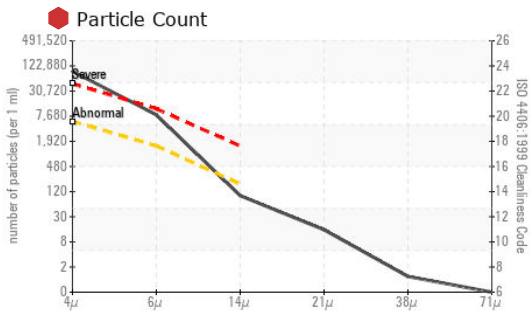
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>60	<b>3</b>	<1	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	4
Water	%	ASTM D6304	>.1	<b>0.008</b>	0.010	0.041
ppm Water	ppm	ASTM D6304	>1000	<b>85</b>	102.8	413.6
Particles >4µm		ASTM D7647	>5000	<b>78788</b>	22113	---
Particles >6µm		ASTM D7647	>1300	<b>7227</b>	3281	---
Particles >14µm		ASTM D7647	>160	<b>85</b>	170	---
Particles >21µm		ASTM D7647	>40	<b>13</b>	34	---
Particles >38µm		ASTM D7647	>10	<b>1</b>	0	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>23/20/14</b>	22/19/15	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	MODER
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	MODER
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	>.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	1	2
Boron	ppm	ASTM D5185m	50	<b>0</b>	0	9
Barium	ppm	ASTM D5185m	15	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	15	<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	3
Magnesium	ppm	ASTM D5185m	50	<b>1</b>	1	1
Calcium	ppm	ASTM D5185m	50	<b>24</b>	<1	14
Phosphorus	ppm	ASTM D5185m	350	<b>386</b>	413	100
Zinc	ppm	ASTM D5185m	100	<b>3</b>	14	74
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	<b>0.71</b>	0.96	0.959
Visc @ 40°C	cSt	ASTM D445	220	<b>215</b>	220	230



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0038117 **Received** : 30 Jan 2024  
**Lab Number** : 06074725 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10856816 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: PQ, PrtCount )

**Kimberly-Clark - Mobile - TM 5**  
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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)