

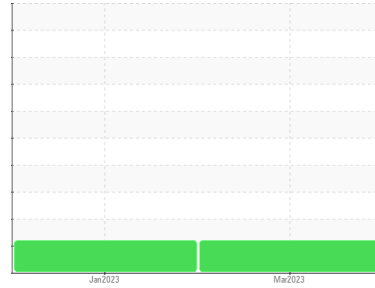


OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION

Area
Coloring
 Machine Id
LN2 Kiln
 Component
Drive End Gearbox
 Fluid
293A (--- GAL)



DIAGNOSIS

▲ Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

▲ Fluid Condition

The AN level is at the top-end of the recommended limit. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0782541	WC0738818	---
Sample Date	Client Info		22 Mar 2023	14 Jan 2023	---
Machine Age	Client Info		0	0	---
Oil Age	Client Info		0	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			ABNORMAL	ABNORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m	>200	2	80	---
Chromium	ppm ASTM D5185m	>15	0	<1	---
Nickel	ppm ASTM D5185m	>15	0	<1	---
Titanium	ppm ASTM D5185m		<1	<1	---
Silver	ppm ASTM D5185m		<1	<1	---
Aluminum	ppm ASTM D5185m	>25	<1	3	---
Lead	ppm ASTM D5185m	>100	0	1	---
Copper	ppm ASTM D5185m	>200	2	12	---
Tin	ppm ASTM D5185m	>25	0	1	---
Vanadium	ppm ASTM D5185m		0	0	---
Cadmium	ppm ASTM D5185m		0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m		133	79	---
Barium	ppm ASTM D5185m		1	0	---
Molybdenum	ppm ASTM D5185m		366	350	---
Manganese	ppm ASTM D5185m		0	1	---
Magnesium	ppm ASTM D5185m		2	2	---
Calcium	ppm ASTM D5185m		10	35	---
Phosphorus	ppm ASTM D5185m		1079	918	---
Zinc	ppm ASTM D5185m		7	28	---
Sulfur	ppm ASTM D5185m		26579	20316	---

CONTAMINANTS

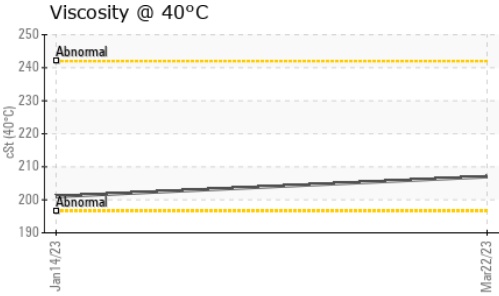
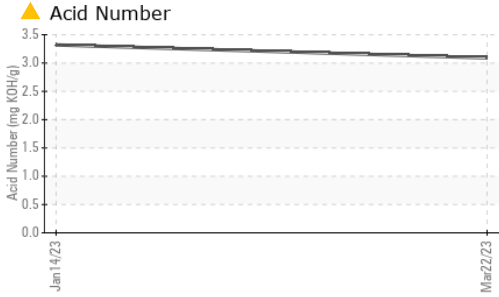
	method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m	>50	8	22	---
Sodium	ppm ASTM D5185m		1	6	---
Potassium	ppm ASTM D5185m	>20	0	0	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045		▲ 3.09	▲ 3.32	---



OIL ANALYSIS REPORT



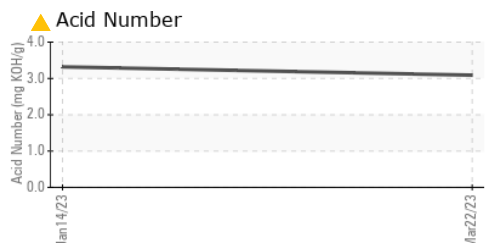
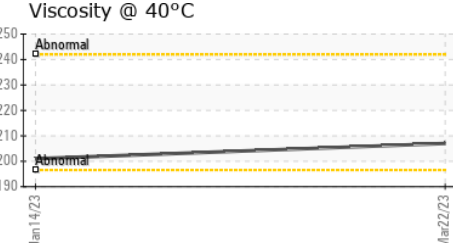
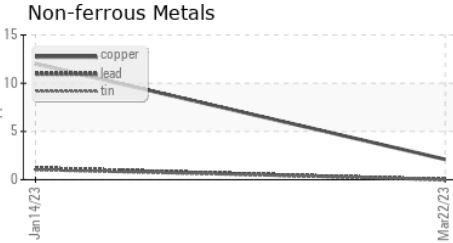
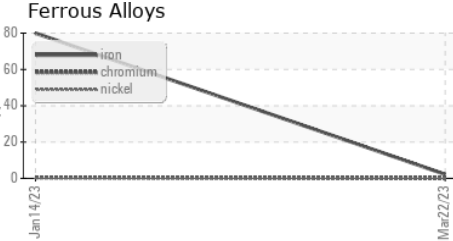
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	207	201	---

SAMPLE IMAGES

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0782541 **Received** : 23 Mar 2023
Lab Number : 05799833 **Diagnosed** : 28 Mar 2023
Unique Number : 10389517 **Diagnostician** : Don Baldrige
Test Package : IND 2

3M - PITTSBORO
 4191 NC 87 S
 MONCURE, NC
 US 27559
 Contact: General Account
 bapoe@mmm.com

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)

T: x:

F: x: