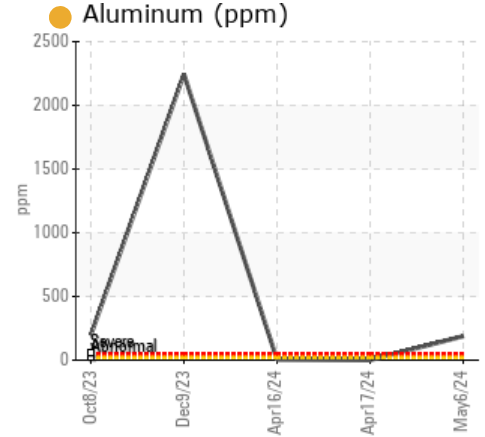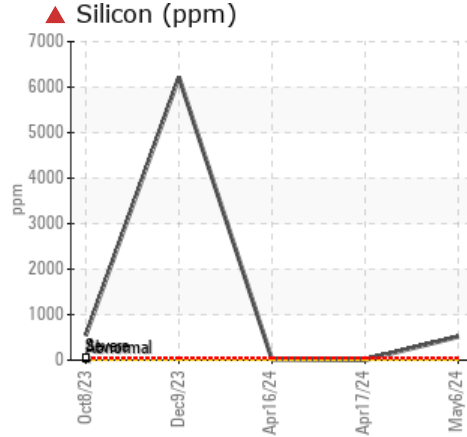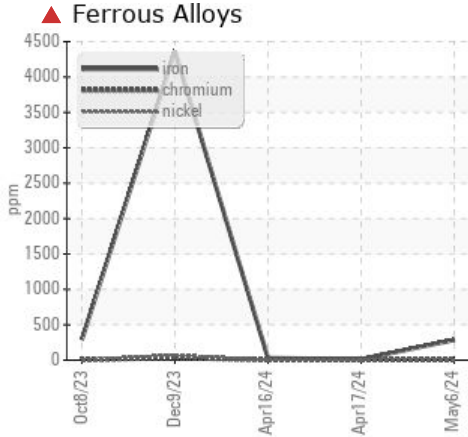# PROBLEM SUMMARY

WearCheck

WEAR

Area
Building 12
Machine Id
Roll Crusher 3
Component
Northwest Bearing
Fluid
MOBIL MOBILGEAR 600 XP ISO 68 (3 GAL)

Sample Rating Trend

Oct2023 | Dec2023 | Apr2024 | Apr2024 | May2024
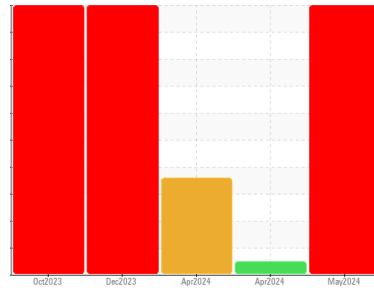
COMPONENT CONDITION SUMMARY

▲ Ferrous Alloys
iron
chromium
nickel

▲ Silicon (ppm)

● Aluminum (ppm)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status					SEVERE	NORMAL	ABNORMAL
Iron		ppm	ASTM D5185m	>20	▲ **286**	12	▲ 28
Silicon		ppm	ASTM D5185m	>15	▲ **517**	5	▲ 17
Silt		scalar	*Visual	NONE	▲ **MODER**	NONE	NONE

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.

HISTORICAL DIAGNOSIS

NORMAL ✓

17 Apr 2024 Diag: Sean Felton
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

DIRT ⚠

16 Apr 2024 Diag: Don Baldridge
We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.The iron level has decreased, but is still abnormal. All other component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil viscosity is lower than normal. The AN level is acceptable for this fluid.

view report

WEAR ✕

09 Dec 2023 Diag: Jonathan Hester
We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The AN level is acceptable for this fluid. The oil is no longer serviceable due to the presence of contaminants.
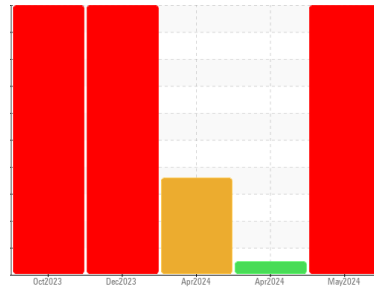
view report

WEAR

Sample Rating Trend

Area
Building 12
Machine Id
Roll Crusher 3
Component
Northwest Bearing
Fluid
MOBIL MOBILGEAR 600 XP ISO 68 (3 GAL)

DIAGNOSIS

▲ **Recommendation**
We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ **Wear**
Gear wear is indicated.

▲ **Contamination**
There is a moderate amount of visible silt present in the sample. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition
The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0936868**	WC0901942	WC0901941
Sample Date		Client Info		**06 May 2024**	17 Apr 2024	16 Apr 2024
Machine Age	hrs	Client Info		**2170**	2170	2170
Oil Age	hrs	Client Info		**2170**	2170	2170
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	▲ **286**	12	▲ 28
Chromium	ppm	ASTM D5185m	>20	**1**	<1	0
Nickel	ppm	ASTM D5185m	>20	**3**	<1	<1
Titanium	ppm	ASTM D5185m		**14**	<1	<1
Silver	ppm	ASTM D5185m		**0**	<1	<1
Aluminum	ppm	ASTM D5185m	>20	● **188**	1	● 5
Lead	ppm	ASTM D5185m	>20	**5**	0	0
Copper	ppm	ASTM D5185m	>20	**20**	<1	<1
Tin	ppm	ASTM D5185m	>20	**3**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	<1	0
Cadmium	ppm	ASTM D5185m		**<1**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**34**	36	30
Barium	ppm	ASTM D5185m		**<1**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	0	0
Manganese	ppm	ASTM D5185m		**5**	0	<1
Magnesium	ppm	ASTM D5185m		**78**	<1	2
Calcium	ppm	ASTM D5185m		**91**	4	5
Phosphorus	ppm	ASTM D5185m		**343**	352	318
Zinc	ppm	ASTM D5185m		**2**	0	0
Sulfur	ppm	ASTM D5185m		**9651**	8948	9001

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	▲ **517**	5	▲ 17
Sodium	ppm	ASTM D5185m		**57**	<1	5
Potassium	ppm	ASTM D5185m	>20	**20**	2	3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.75**	0.83	0.72

OIL ANALYSIS REPORT

Silicon (ppm) ▲

(graph: Oct8/23 – Dec9/23 – Apr16/24 – Apr17/24 – May6/24; Abnormal)

Aluminum (ppm) ●

(graph: Oct8/23 – Dec9/23 – Apr16/24 – Apr17/24 – May6/24; Abnormal)

Aluminum (ppm) ●

(graph: Oct8/23 – Dec9/23 – Apr16/24 – Apr17/24 – May6/24; Abnormal)

Acid Number

(graph: Acid Number (mg KOH/g); Oct8/23 – Dec9/23 – Apr16/24 – Apr17/24)

Viscosity @ 40°C

(graph: cSt (40°C); Abnormal / Base / Abnormal; Oct8/23 – Dec9/23 – Apr16/24 – Apr17/24)
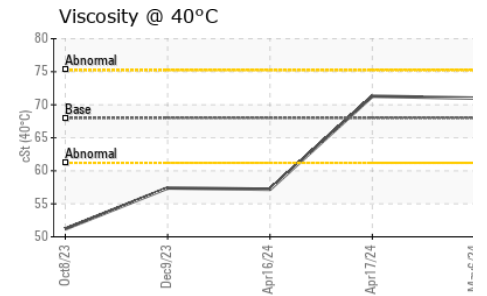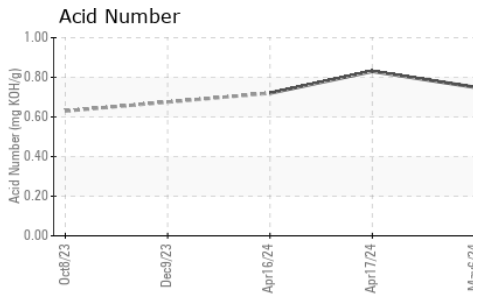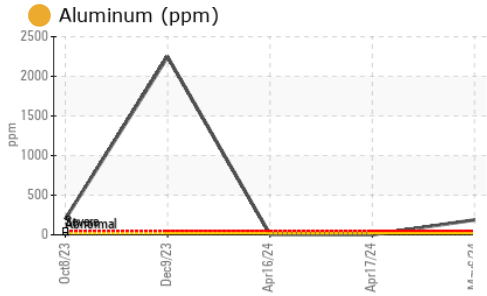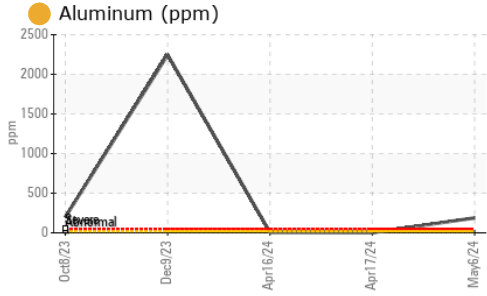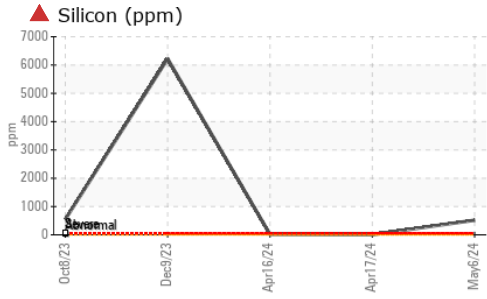
VISUAL	method		limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	▲ **MODER**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	68	**71.0**	71.3	● 57.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
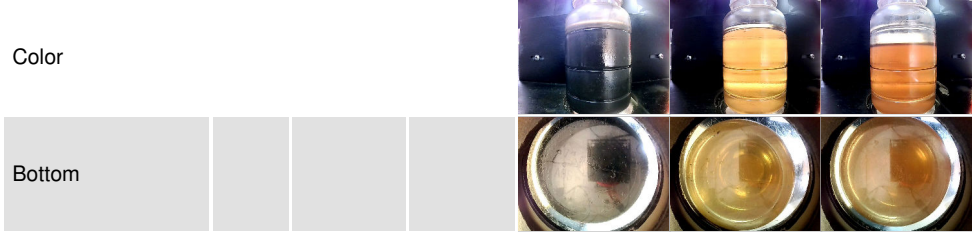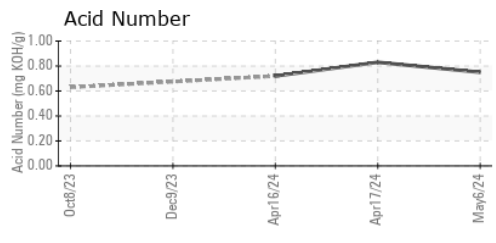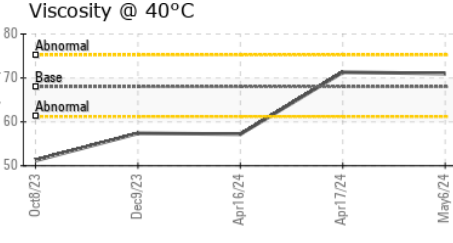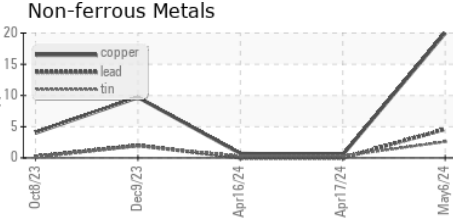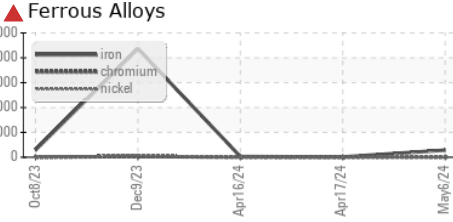
GRAPHS

Ferrous Alloys ▲

(graph legend: iron, chromium, nickel; Oct8/23 – Dec9/23 – Apr16/24 – Apr17/24 – May6/24)

Non-ferrous Metals

(graph legend: copper, lead, tin; Oct8/23 – Dec9/23 – Apr16/24 – Apr17/24 – May6/24)

Viscosity @ 40°C

(graph: cSt (40°C); Abnormal / Base / Abnormal; Oct8/23 – Dec9/23 – Apr16/24 – Apr17/24 – May6/24)

Acid Number

(graph: Acid Number (mg KOH/g); Oct8/23 – Dec9/23 – Apr16/24 – Apr17/24 – May6/24)

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)