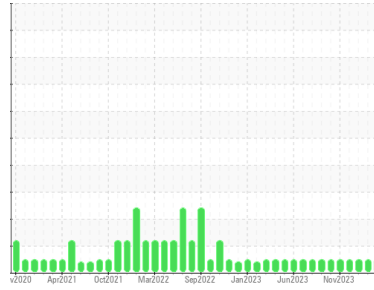




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**Detroit**

Machine Id

**[Detroit] Oil - Port Genset**

Component

**Port Genset**

Fluid

**MOBIL 15W40 (7 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Chris Wray )

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0804783</b>	WC0804772	WC0804824
Sample Date	Client Info			<b>25 Mar 2024</b>	05 Feb 2024	01 Jan 2024
Machine Age	hrs	Client Info		<b>22305</b>	21669	21334
Oil Age	hrs	Client Info		<b>311</b>	335	1
Oil Changed	Client Info			<b>Not Chngd</b>	Not Chngd	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>4.0		<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>5</b>	6	4
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>12	<b>3</b>	2	3
Lead	ppm	ASTM D5185m	>17	<b>0</b>	<1	3
Copper	ppm	ASTM D5185m	>70	<b>3</b>	5	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>81</b>	80	85
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>22</b>	23	22
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>270</b>	268	256
Calcium	ppm	ASTM D5185m		<b>2342</b>	2339	2132
Phosphorus	ppm	ASTM D5185m		<b>440</b>	440	417
Zinc	ppm	ASTM D5185m		<b>533</b>	552	508
Sulfur	ppm	ASTM D5185m		<b>4569</b>	3867	3715

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>7</b>	4	13
Sodium	ppm	ASTM D5185m	>118	<b>2</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	5
Water	%	ASTM D6304	>0.1	<b>NEG</b>	NEG	NEG

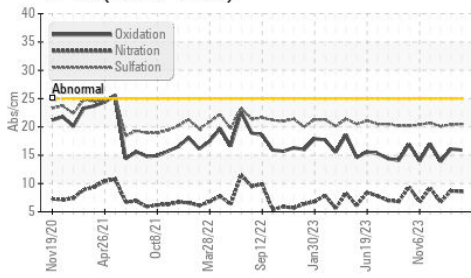
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	8.7	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.5</b>	20.4	20.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.9</b>	16.1	13.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.58</b>	9.29	9.89

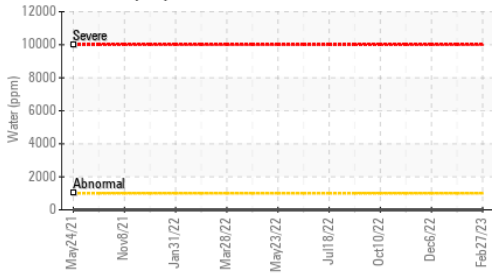


# OIL ANALYSIS REPORT

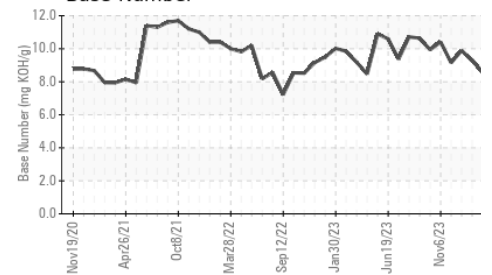
FT-IR (Direct Trend)



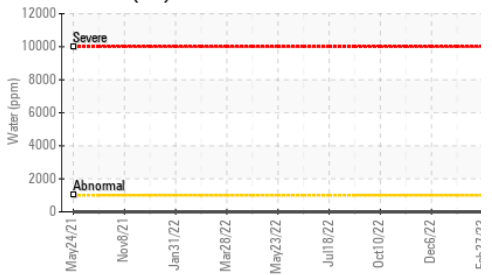
Water (KF)



Base Number



Water (KF)

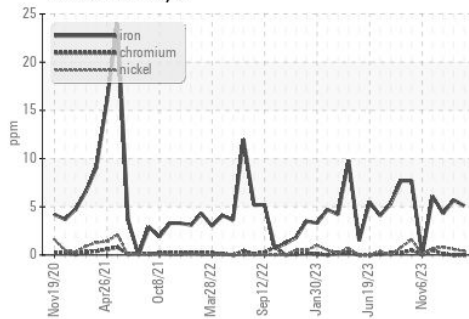


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

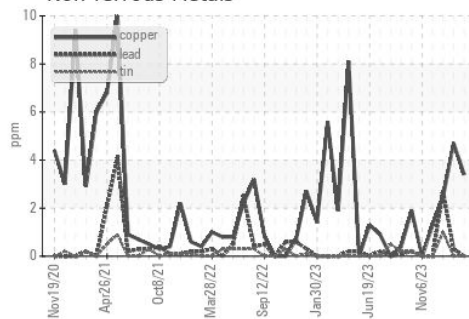
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.4	13.1	13.8

## GRAPHS

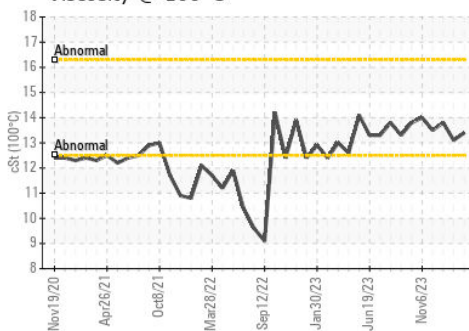
Ferrous Alloys



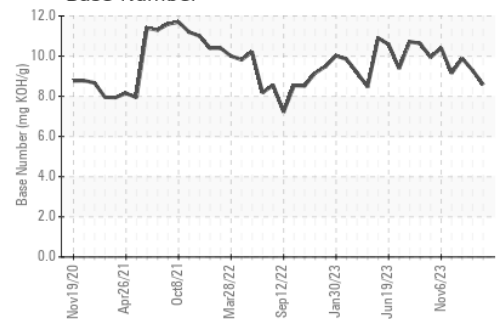
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0804783

Lab Number : 06140127

Unique Number : 10964935

Test Package : IND 2 ( Additional Tests: KF )

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)

Received : 05 Apr 2024

Tested : 09 Apr 2024

Diagnosed : 09 Apr 2024 - Sean Felton

MARATHON PETROLEUM CO.

101 12TH ST

CATLETTSBURG, KY

US 41169

Contact: CORY GUMBERT

cagumbert@marathonpetroleum.com

T: (606)585-3950

F: x: