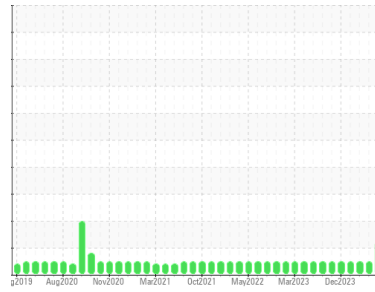




# OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL



Area  
**Canton**  
 Machine Id  
**[Canton] Oil - Port Genset**  
 Component  
**Port Genset**  
 Fluid  
**MARATHON 15W40 (35 GAL)**

## DIAGNOSIS

### Recommendation

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

### Wear

Moderate concentration of visible metal present. 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>WC0874843</b>	WC0805423	WC0805430
Sample Date	Client Info		<b>22 Apr 2024</b>	28 Mar 2024	27 Feb 2024
Machine Age	hrs	Client Info	<b>0</b>	17830	0
Oil Age	hrs	Client Info	<b>0</b>	3672	0
Oil Changed	Client Info		<b>N/A</b>	Oil Added	N/A
Sample Status			<b>ABNORMAL</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>10</b>	8	11
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>3</b>	4	1
Lead	ppm	ASTM D5185m	>17	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>70	<b>1</b>	0	0
Tin	ppm	ASTM D5185m	>15	<b>1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>135</b>	141	137
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>118</b>	117	112
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>683</b>	696	751
Calcium	ppm	ASTM D5185m		<b>1414</b>	1488	1516
Phosphorus	ppm	ASTM D5185m		<b>739</b>	759	697
Zinc	ppm	ASTM D5185m		<b>894</b>	921	883
Sulfur	ppm	ASTM D5185m		<b>2772</b>	3117	3209

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	4
Sodium	ppm	ASTM D5185m		<b>8</b>	8	7
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	0
Water	%	ASTM D6304	>0.1	<b>NEG</b>	NEG	NEG

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.5</b>	11.0	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.9</b>	22.0	21.6

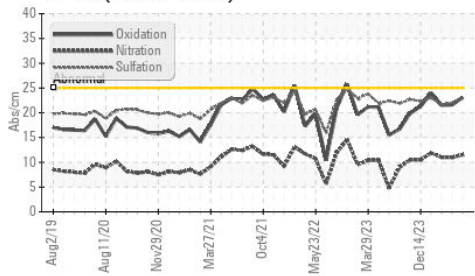
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.1</b>	21.6	21.5
Base Number (BN)	mg KOH/g	ASTM D2896		<b>13.16</b>	8.45	8.72

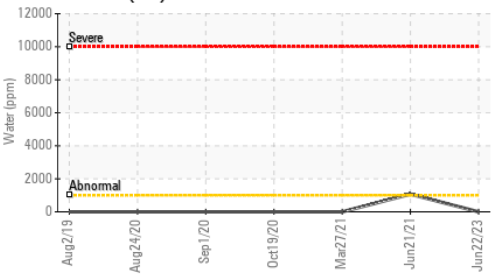


# OIL ANALYSIS REPORT

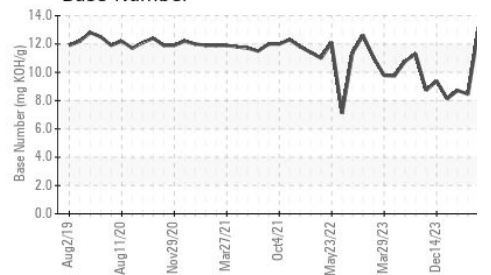
FT-IR (Direct Trend)



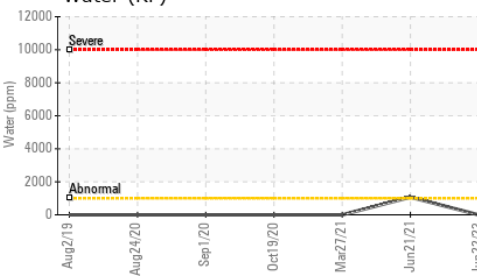
Water (KF)



Base Number



Water (KF)

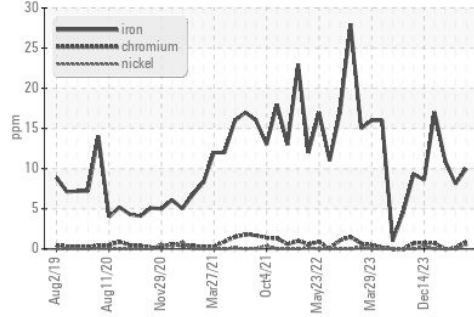


VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	▲ MODER	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

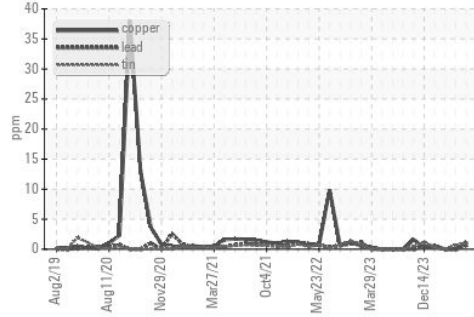
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.5	12.6	12.7

**GRAPHS**

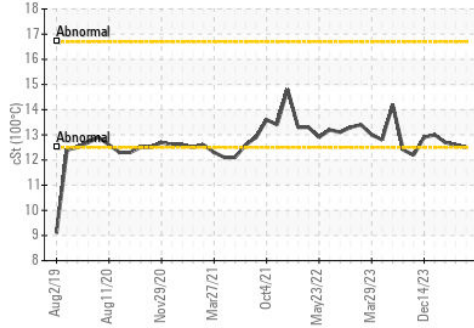
Ferrous Alloys



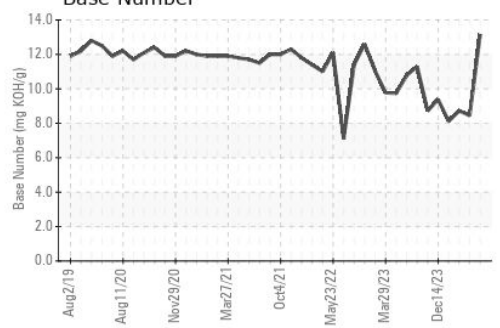
Non-ferrous Metals



Viscosity @ 100°C



Base Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0874843      **Received** : 16 May 2024  
**Lab Number** : 06181575      **Tested** : 20 May 2024  
**Unique Number** : 11032901      **Diagnosed** : 20 May 2024 - Sean Felton  
**Test Package** : IND 2 ( Additional Tests: KF )

**MARATHON PETROLEUM CO.**  
 101 12TH ST  
 CATLETTSBURG, KY  
 US 41169  
 Contact: M/V CANTON  
 mvcanton@marathonpetroleum.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)