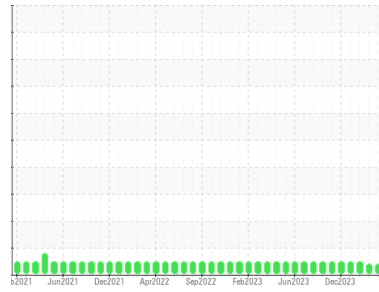




# OIL ANALYSIS REPORT

## Sample Rating Trend



## VISCOSITY



Area

**Louisville**

Machine Id

**[Louisville] Oil - Starboard Reduction Gear**

Component

**Starboard Reduction Gear**

Fluid

**SAE 30W (35 GAL)**

### DIAGNOSIS

#### Recommendation

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 oil viscosity is lower than normal. The AN level is acceptable for this fluid.

### SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0898522</b>	WC0874762	WC0804849
Sample Date	Client Info		<b>29 May 2024</b>	28 Apr 2024	30 Jan 2024
Machine Age	hrs	Client Info	<b>1355</b>	950	24785
Oil Age	hrs	Client Info	<b>355</b>	950	9535
Oil Changed	Client Info		<b>Not Changed</b>	Not Changd	Not Changed
Sample Status			<b>ATTENTION</b>	ATTENTION	NORMAL

### WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	<b>2</b>	4	7
Chromium	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >25	<b>&lt;1</b>	1	0
Lead	ppm	ASTM D5185m >100	<b>1</b>	2	0
Copper	ppm	ASTM D5185m >50	<b>6</b>	11	4
Tin	ppm	ASTM D5185m >10	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>5</b>	9	20
Barium	ppm	ASTM D5185m	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	<b>46</b>	45	39
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	<b>711</b>	681	624
Calcium	ppm	ASTM D5185m	<b>816</b>	785	742
Phosphorus	ppm	ASTM D5185m	<b>839</b>	801	749
Zinc	ppm	ASTM D5185m	<b>918</b>	894	785
Sulfur	ppm	ASTM D5185m	<b>2855</b>	2728	3556

### CONTAMINANTS

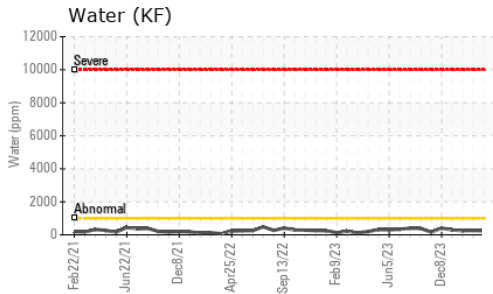
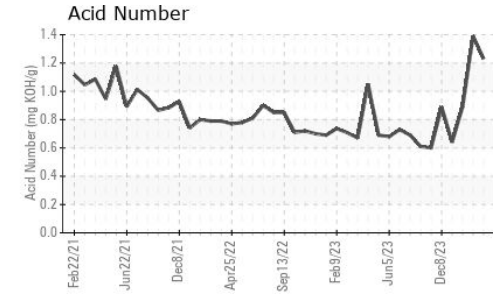
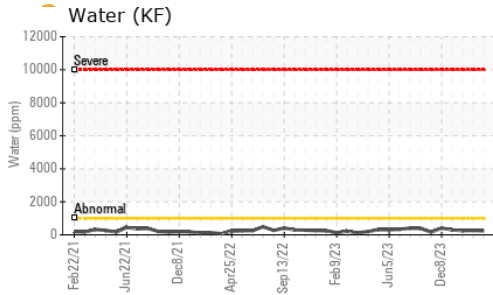
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>2</b>	5	2
Sodium	ppm	ASTM D5185m	<b>3</b>	2	1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	0
Water	%	ASTM D6304 >0.1	<b>0.024</b>	0.026	0.025
ppm Water	ppm	ASTM D6304 >1000	<b>240</b>	263	253

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.23</b>	1.39	0.89



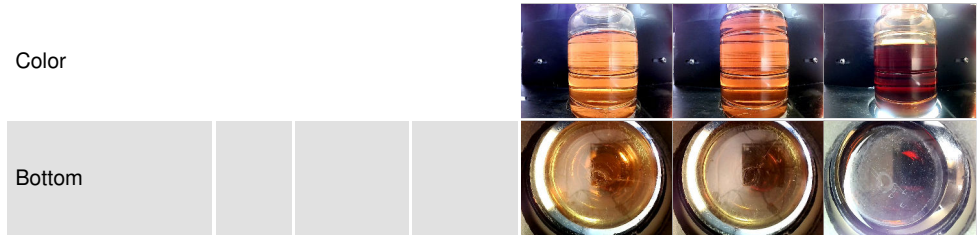
# OIL ANALYSIS REPORT



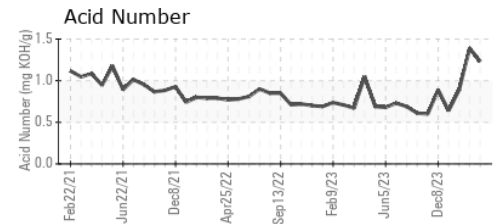
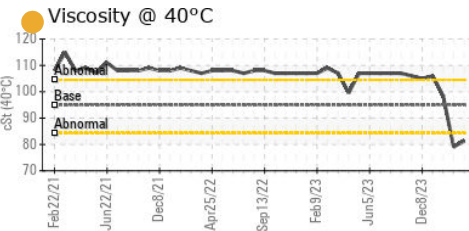
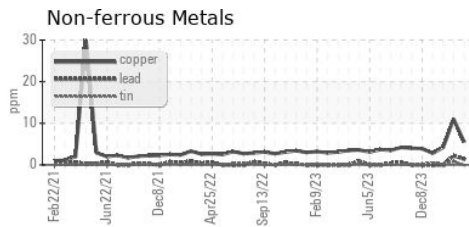
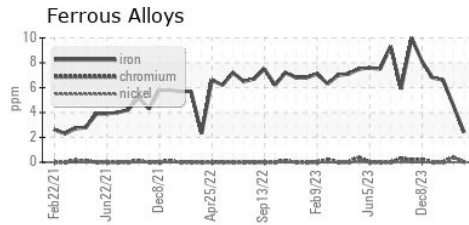
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 @ 40°C	cSt	ASTM D445	95.0	81.3	79.07	98.4

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0898522 **Received** : 10 Jun 2024  
**Lab Number** : 06204779 **Tested** : 12 Jun 2024  
**Unique Number** : 11072240 **Diagnosed** : 12 Jun 2024 - Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF )

**MARATHON PETROLEUM CO.**  
 101 12TH ST  
 CATLETTSBURG, KY  
 US 41169

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Contact: CORY GUMBERT  
cagumbert@marathonpetroleum.com

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

T: (606)585-3950

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: x: