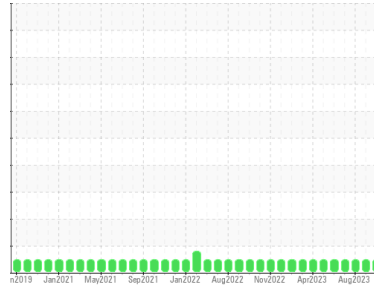




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**Kentucky**  
 Machine Id  
**[Kentucky] 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0805483</b>	WC0769069	WC0769176
Sample Date	Client Info		<b>30 Oct 2023</b>	03 Oct 2023	24 Aug 2023
Machine Age	hrs	Client Info	<b>10966</b>	10432	9750
Oil Age	hrs	Client Info	<b>1988</b>	1454	772
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	<b>5</b>	5	5
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >25	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185m >100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >50	<b>4</b>	2	3
Tin	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>3</b>	5	4
Barium	ppm	ASTM D5185m	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	<b>33</b>	34	34
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	<b>465</b>	530	490
Calcium	ppm	ASTM D5185m	<b>982</b>	1009	1005
Phosphorus	ppm	ASTM D5185m	<b>690</b>	783	720
Zinc	ppm	ASTM D5185m	<b>774</b>	873	845
Sulfur	ppm	ASTM D5185m	<b>2337</b>	2693	2838

## CONTAMINANTS

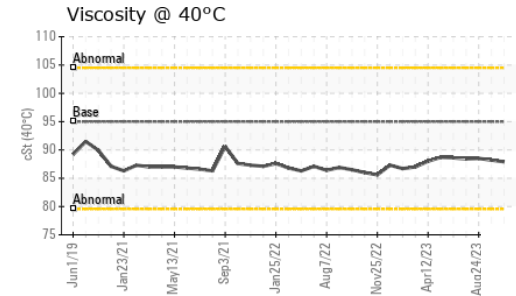
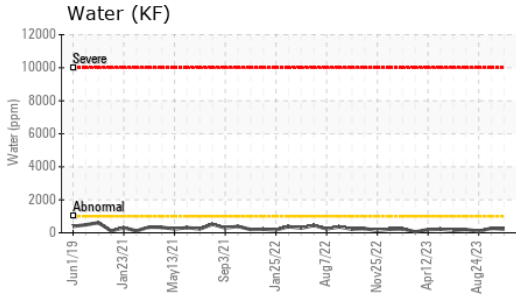
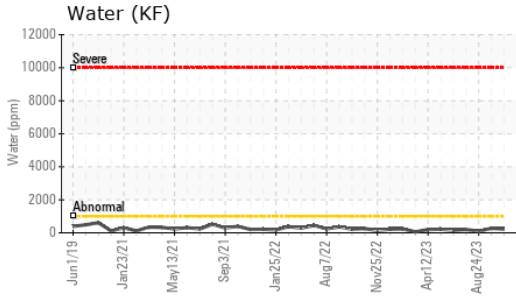
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>1</b>	2	2
Sodium	ppm	ASTM D5185m	<b>1</b>	2	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	1
Water	%	ASTM D6304 >0.1	<b>0.023</b>	0.027	0.010
ppm Water	ppm	ASTM D6304 >1000	<b>230.6</b>	272.8	100.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.03</b>	0.80	1.434



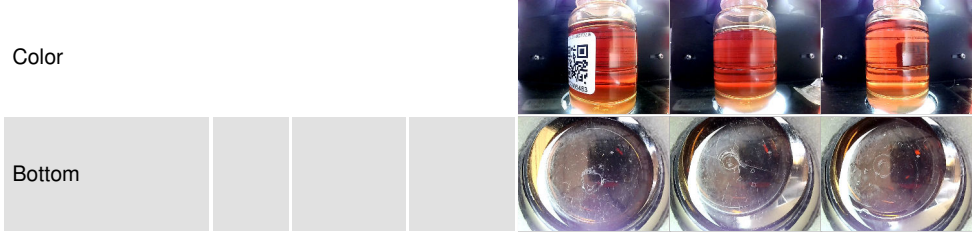
# OIL ANALYSIS REPORT



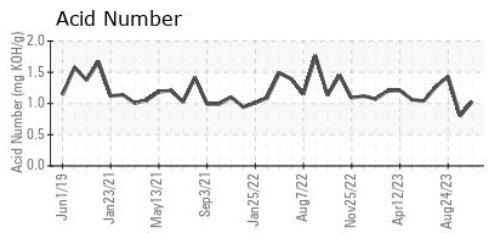
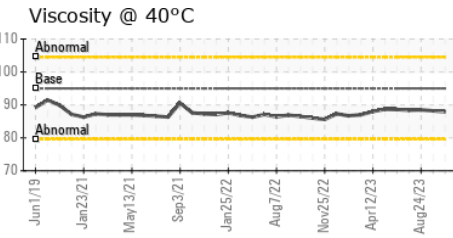
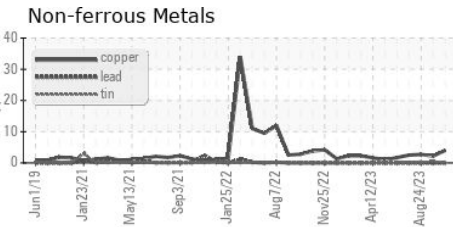
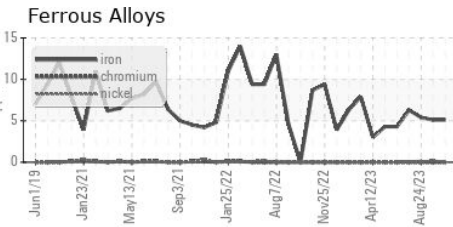
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	<b>LIGHT</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	95.0	<b>87.9</b>	88.2	88.5

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0805483 **Received** : 06 Nov 2023  
**Lab Number** : 05999089 **Diagnosed** : 07 Nov 2023  
**Unique Number** : 10727449 **Diagnostician** : Angela Borella  
**Test Package** : IND 2 ( Additional Tests: KF )

**MARATHON PETROLEUM CO.**  
 101 12TH ST  
 CATLETTSBURG, KY  
 US 41169  
 Contact: CORY GUMBERT  
 cagumbert@marathonpetroleum.com  
 T: (606)585-3950  
 F: x:

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)