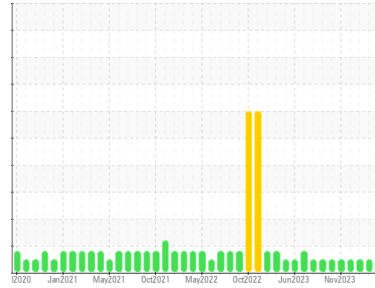




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**Map Runner**  
 Machine Id  
**[Map Runner] Oil - Port Reduction Gear**  
 Component  
**Port Reduction Gear**  
 Fluid  
**SAE 30W (10 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>WC0859919</b>	WC0859833	WC0845754
Sample Date	Client Info	<b>20 Mar 2024</b>	26 Feb 2024	23 Jan 2024
Machine Age	hrs	<b>12820</b>	12289	0
Oil Age	hrs	<b>1721</b>	1191	0
Oil Changed	Client Info	<b>Changed</b>	Oil Added	Not Chngd
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >150	<b>7</b>	4	3
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	<1	1
Lead	ppm	ASTM D5185m >100	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >50	<b>38</b>	28	18
Tin	ppm	ASTM D5185m >10	<b>2</b>	0	1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>45</b>	42	42
Manganese	ppm	ASTM D5185m	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	<b>717</b>	757	717
Calcium	ppm	ASTM D5185m	<b>799</b>	784	755
Phosphorus	ppm	ASTM D5185m	<b>757</b>	775	785
Zinc	ppm	ASTM D5185m	<b>870</b>	850	896
Sulfur	ppm	ASTM D5185m	<b>2231</b>	2577	2368

## CONTAMINANTS

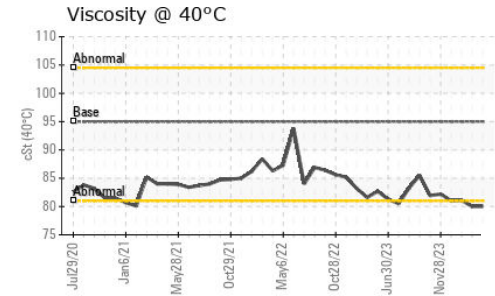
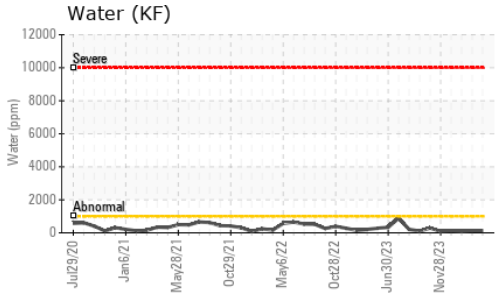
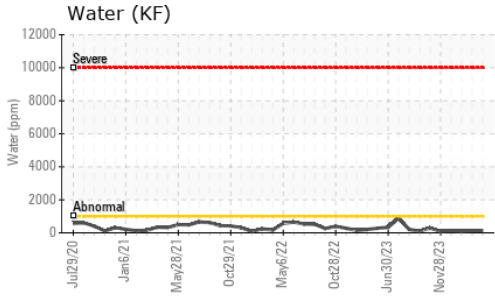
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	<b>2</b>	<1	2
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Potassium	ppm	ASTM D5185m >20	<b>1</b>	0	1
Water	%	ASTM D6304 >0.1	<b>0.013</b>	0.013	0.008
ppm Water	ppm	ASTM D6304 >1000	<b>130</b>	136	89

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.93</b>	1.06	1.01



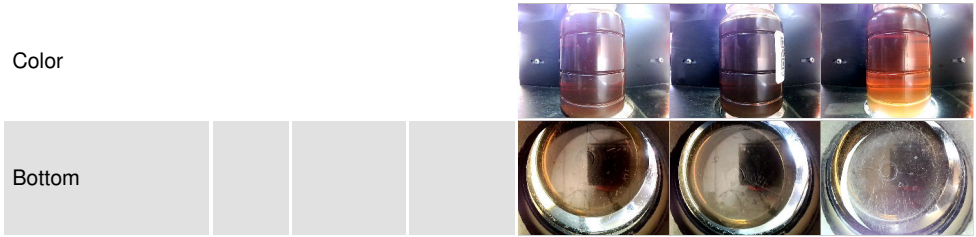
# OIL ANALYSIS REPORT



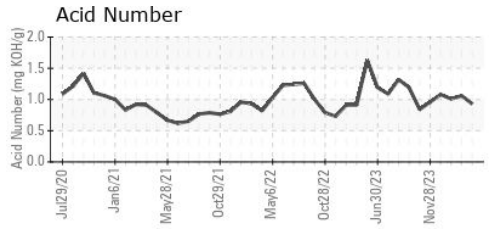
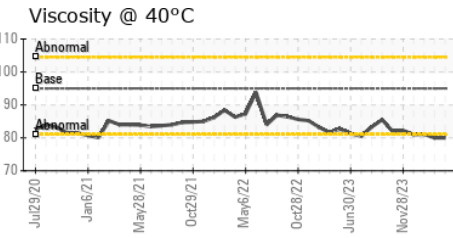
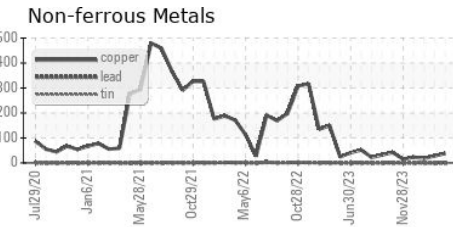
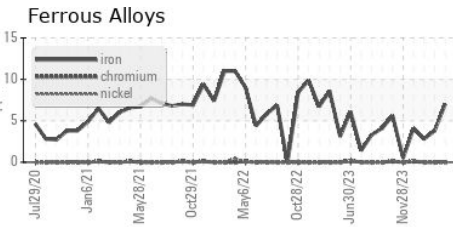
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	<b>80.0</b>	80.0	81.1

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.** : WC0859919      **Received** : 27 Mar 2024  
**Lab Number** : **06130710**      **Tested** : 28 Mar 2024  
**Unique Number** : 10950175      **Diagnosed** : 30 Mar 2024 - Don Baldrige  
**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)