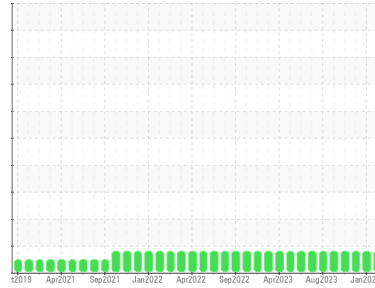




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**Patoka**  
 Machine Id  
**[Patoka] Oil - Port Reduction Gear**  
 Component  
**Port Reduction Gear**  
 Fluid  
**{not provided} (35 GAL)**

## DIAGNOSIS

### ▲ Recommendation

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

### ▲ Wear

The copper level is abnormal. All other 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>WC0805575</b>	WC0859903	WC0804864
Sample Date	Client Info		<b>26 Feb 2024</b>	13 Jan 2024	18 Nov 2023
Machine Age	hrs	Client Info	<b>0</b>	42510	41430
Oil Age	hrs	Client Info	<b>0</b>	8796	7716
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	<b>13</b>	11	11
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>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185m >100	<b>2</b>	4	2
Copper	ppm	ASTM D5185m >50	<b>▲ 322</b>	<b>▲ 303</b>	<b>▲ 300</b>
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	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>16</b>	16	15
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>46</b>	48	50
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	<b>570</b>	596	636
Calcium	ppm	ASTM D5185m	<b>1112</b>	1115	1213
Phosphorus	ppm	ASTM D5185m	<b>814</b>	870	919
Zinc	ppm	ASTM D5185m	<b>900</b>	976	1124
Sulfur	ppm	ASTM D5185m	<b>2797</b>	3013	3055

## CONTAMINANTS

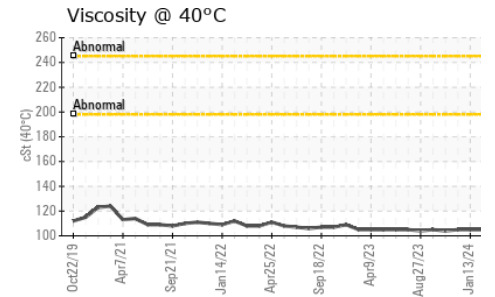
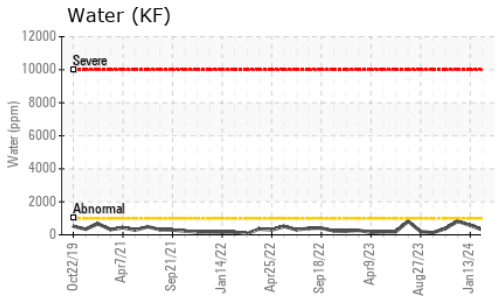
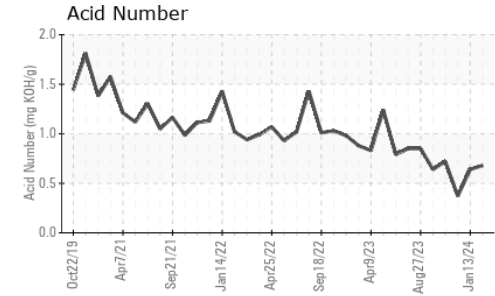
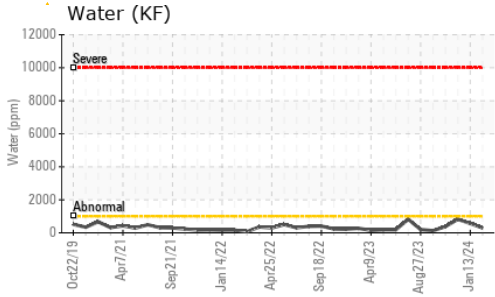
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>3</b>	3	2
Sodium	ppm	ASTM D5185m	<b>3</b>	3	2
Potassium	ppm	ASTM D5185m >20	<b>0</b>	1	0
Water	%	ASTM D6304 >0.1	<b>0.029</b>	0.057	0.081
ppm Water	ppm	ASTM D6304 >1000	<b>293</b>	570	820

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.68</b>	0.64	0.37



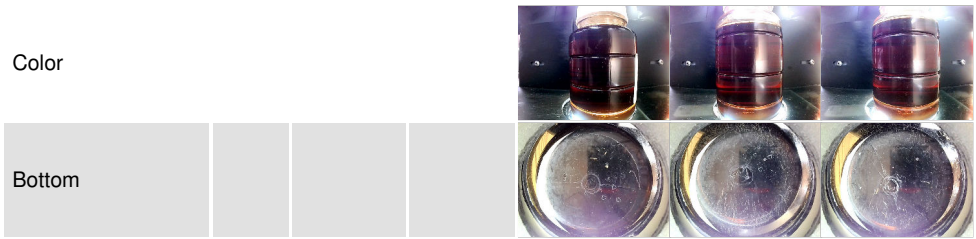
# OIL ANALYSIS REPORT



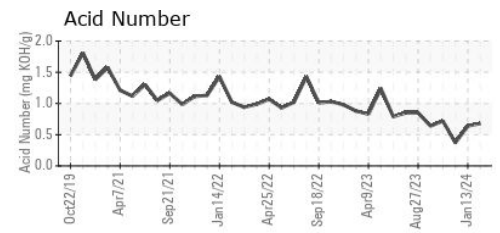
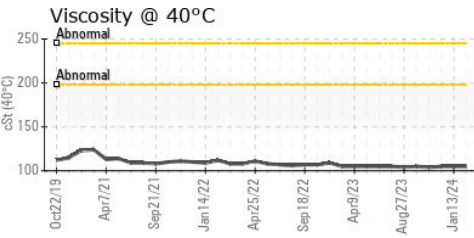
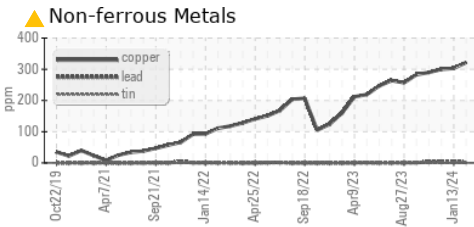
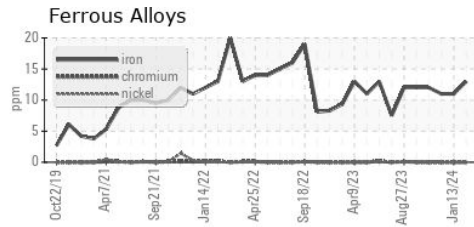
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	105	105	105

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0805575 **Received** : 27 Feb 2024  
**Lab Number** : 06101733 **Tested** : 28 Feb 2024  
**Unique Number** : 10899963 **Diagnosed** : 29 Feb 2024 - Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF )

**MARATHON PETROLEUM CO.**  
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 US 41169  
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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)