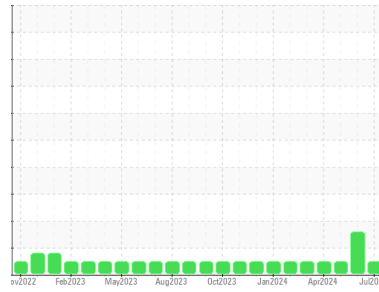




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**West Virginia**

Machine Id

**[West Virginia] Oil - Port Reduction Gear**

Component

**Port Reduction Gear**

Fluid

**MARATHON 40W (35 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

The water content is negligible. 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>WC0859985</b>	WC0731873	WC0874549
Sample Date	Client Info		<b>06 Jul 2024</b>	09 Jun 2024	13 May 2024
Machine Age	hrs	Client Info	<b>44378</b>	43852	43306
Oil Age	hrs	Client Info	<b>636</b>	110	1457
Oil Changed	Client Info		<b>Not Changed</b>	N/A	Not Changed
Sample Status			<b>NORMAL</b>	ABNORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	<b>3</b>	4	3
Chromium	ppm	ASTM D5185m >10	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>&lt;1</b>	3	<1
Lead	ppm	ASTM D5185m >100	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >50	<b>10</b>	12	14
Tin	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>16</b>	20	17
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>83</b>	104	88
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>258</b>	361	246
Calcium	ppm	ASTM D5185m	<b>2099</b>	2648	2303
Phosphorus	ppm	ASTM D5185m	<b>879</b>	1098	934
Zinc	ppm	ASTM D5185m	<b>964</b>	1308	1005
Sulfur	ppm	ASTM D5185m	<b>4952</b>	6608	5311

## CONTAMINANTS

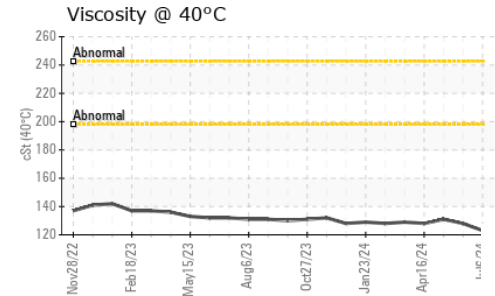
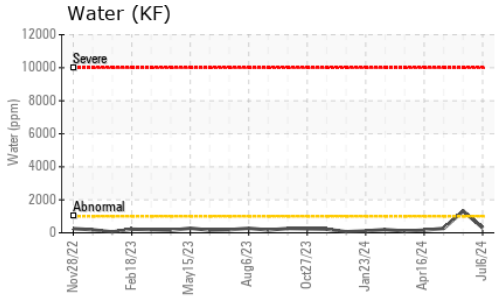
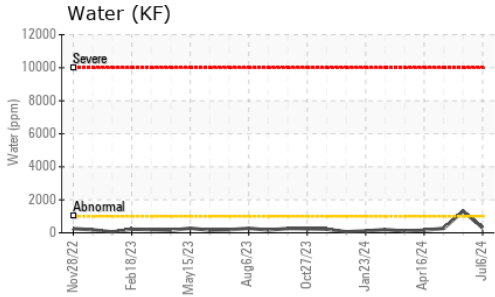
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>3</b>	5	0
Sodium	ppm	ASTM D5185m	<b>3</b>	4	3
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	4	0
Water	%	ASTM D6304 >0.1	<b>0.030</b>	▲ 0.132	0.026
ppm Water	ppm	ASTM D6304 >1000	<b>303</b>	▲ 1320	267

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.26</b>	1.14	1.23



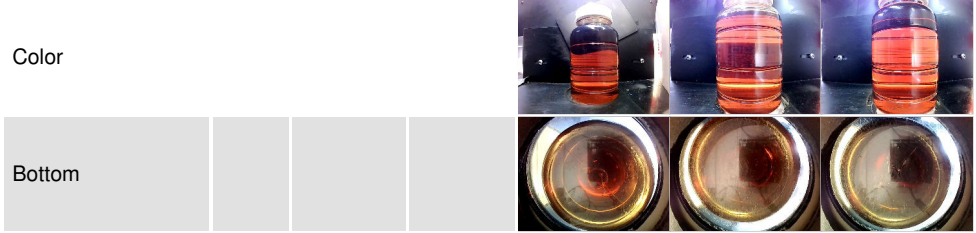
# OIL ANALYSIS REPORT



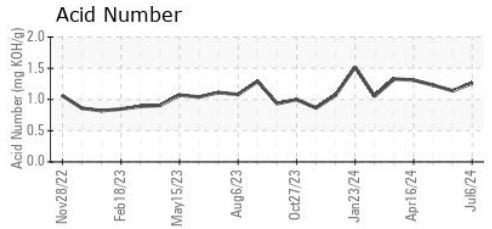
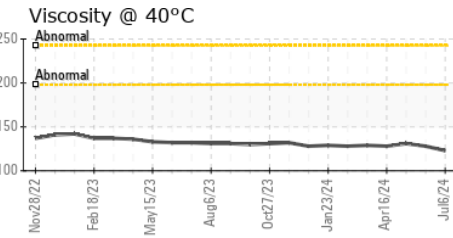
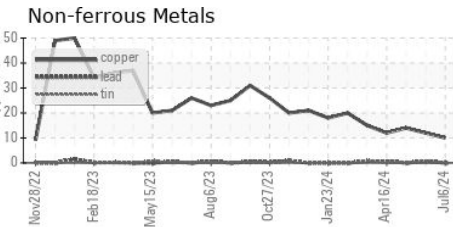
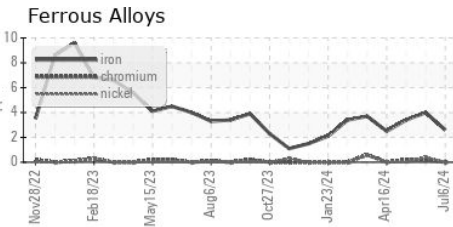
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	0.2%
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	123	128	131

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0859985 **Received** : 15 Jul 2024  
**Lab Number** : 06236094 **Tested** : 16 Jul 2024  
**Unique Number** : 11124928 **Diagnosed** : 16 Jul 2024 - Wes Davis  
**Test Package** : IND 2 ( Additional Tests: KF )

**MARATHON PETROLEUM CO.**  
 101 12TH ST  
 CATLETTSBURG, KY  
 US 41169  
 Contact: CORY GUMBERT  
 cagumbert@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)

T: (606)585-3950

F: x: