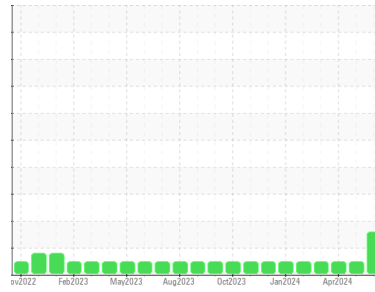




# OIL ANALYSIS REPORT

Sample Rating Trend



**WATER**



Area

**West Virginia**

Machine Id

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

Component

**Port Reduction Gear**

Fluid

**MARATHON 40W (35 GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for the source of water entry. Resample at the next service interval to monitor. ( Customer Sample Comment: Thurman Richardson )

### Wear

All component wear rates are normal.

### Contamination

There is a light concentration of water present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0731873</b>	WC0874549	WC0769386
Sample Date	Client Info		<b>09 Jun 2024</b>	13 May 2024	16 Apr 2024
Machine Age	hrs	Client Info	<b>43852</b>	43306	42747
Oil Age	hrs	Client Info	<b>110</b>	1457	898
Oil Changed		Client Info	<b>N/A</b>	Not Changd	N/A
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	<b>4</b>	3	2
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>3</b>	<1	<1
Lead	ppm	ASTM D5185m >100	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >50	<b>12</b>	14	12
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>20</b>	17	13
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>104</b>	88	87
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	<b>361</b>	246	243
Calcium	ppm	ASTM D5185m	<b>2648</b>	2303	2200
Phosphorus	ppm	ASTM D5185m	<b>1098</b>	934	909
Zinc	ppm	ASTM D5185m	<b>1308</b>	1005	1017
Sulfur	ppm	ASTM D5185m	<b>6608</b>	5311	5365

## CONTAMINANTS

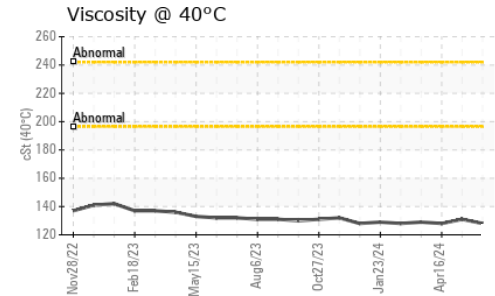
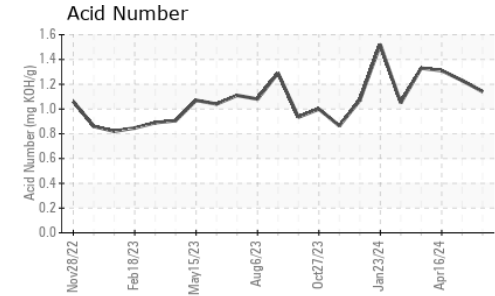
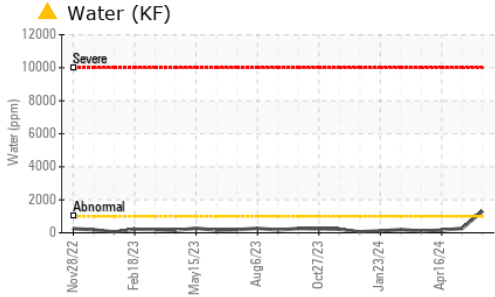
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>5</b>	0	2
Sodium	ppm	ASTM D5185m	<b>4</b>	3	3
Potassium	ppm	ASTM D5185m >20	<b>4</b>	0	<1
Water	%	ASTM D6304 >0.1	<b>▲ 0.132</b>	0.026	0.016
ppm Water	ppm	ASTM D6304 >1000	<b>▲ 1320</b>	267	163

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.14</b>	1.23	1.31



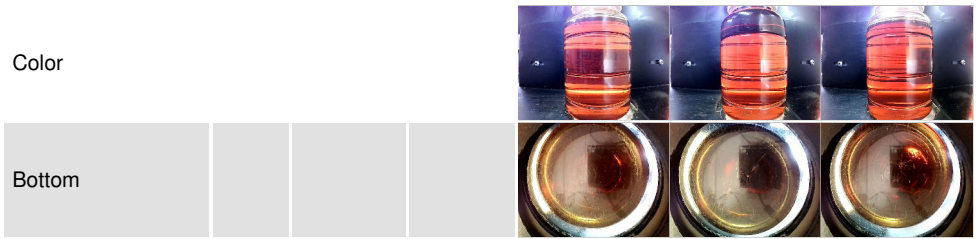
# OIL ANALYSIS REPORT



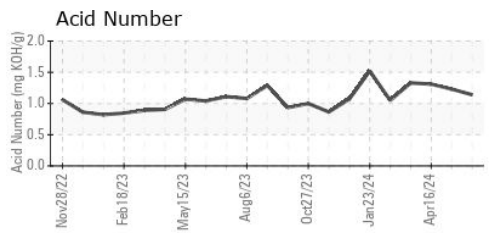
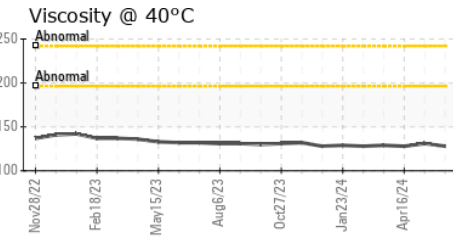
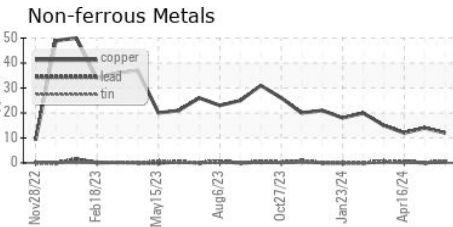
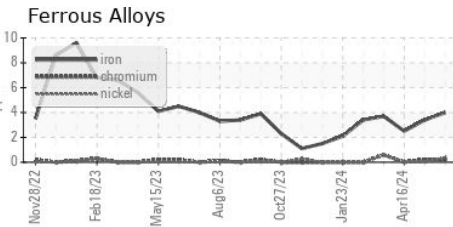
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

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

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0731873      **Received** : 14 Jun 2024  
**Lab Number** : 06210212      **Tested** : 18 Jun 2024  
**Unique Number** : 11083076      **Diagnosed** : 18 Jun 2024 - 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

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: