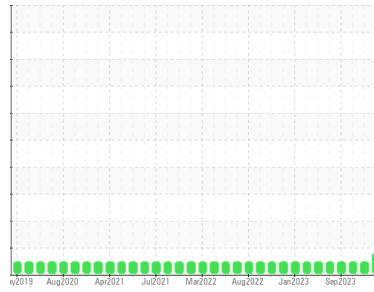




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area

**Marathon**

Machine Id

**[Marathon] Oil - Port Reduction Gear**

Component

**Port Reduction Gear**

Fluid

**Reduction Gear Oil (35 GAL)**

## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. ( Customer Sample Comment: Chris Comuzie )

### ▲ Wear

Gear wear is indicated. 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>WC0846116</b>	WC0846098	WC0846101
Sample Date	Client Info		<b>31 Mar 2024</b>	12 Feb 2024	13 Dec 2023
Machine Age	hrs	Client Info	<b>6776</b>	6030	4903
Oil Age	hrs	Client Info	<b>6776</b>	6030	4903
Oil Changed	Client Info		<b>Filtered</b>	Filtered	Filtered
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	<b>▲ 156</b>	132	120
Chromium	ppm	ASTM D5185m >10	<b>1</b>	1	1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	<1
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	1
Lead	ppm	ASTM D5185m >100	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >50	<b>16</b>	18	16
Tin	ppm	ASTM D5185m >10	<b>1</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>8</b>	6	9
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>52</b>	50	52
Manganese	ppm	ASTM D5185m	<b>1</b>	<1	1
Magnesium	ppm	ASTM D5185m	<b>717</b>	681	716
Calcium	ppm	ASTM D5185m	<b>1037</b>	1023	981
Phosphorus	ppm	ASTM D5185m	<b>865</b>	820	874
Zinc	ppm	ASTM D5185m	<b>982</b>	926	972
Sulfur	ppm	ASTM D5185m	<b>3068</b>	2545	2649

## CONTAMINANTS

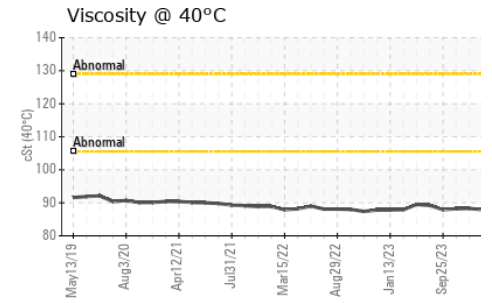
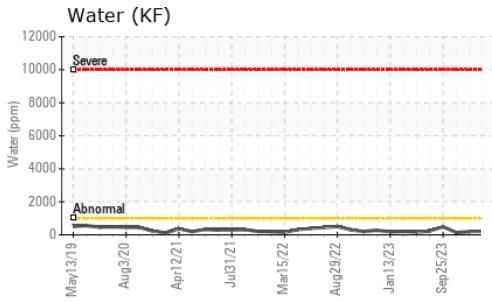
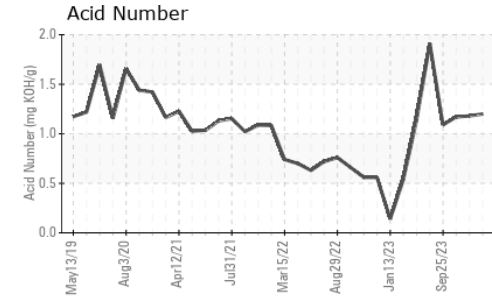
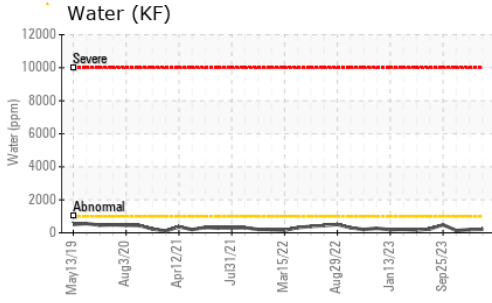
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>3</b>	2	3
Sodium	ppm	ASTM D5185m	<b>3</b>	3	4
Potassium	ppm	ASTM D5185m >20	<b>3</b>	2	4
Water	%	ASTM D6304 >0.1	<b>0.021</b>	0.019	0.013
ppm Water	ppm	ASTM D6304 >1000	<b>216</b>	193	140

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.20</b>	1.18	1.17



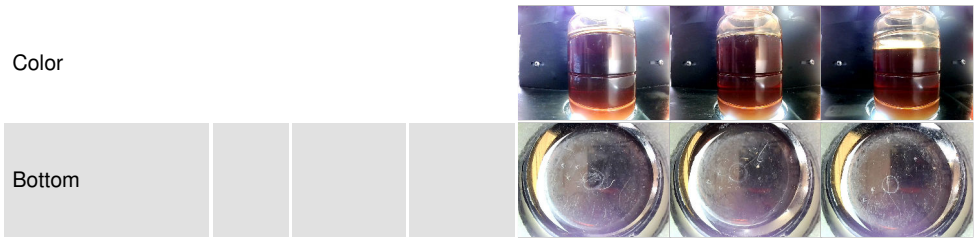
# OIL ANALYSIS REPORT



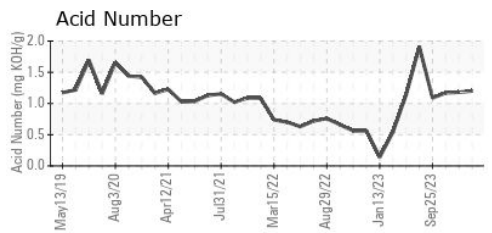
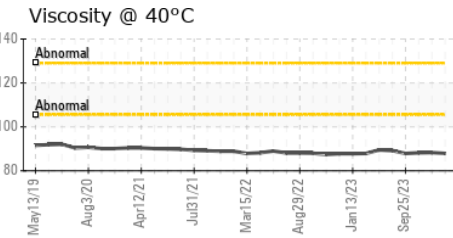
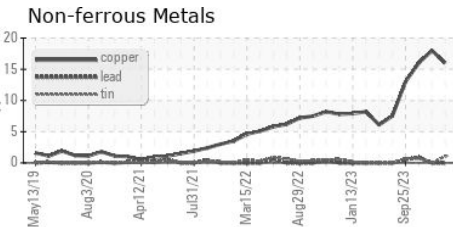
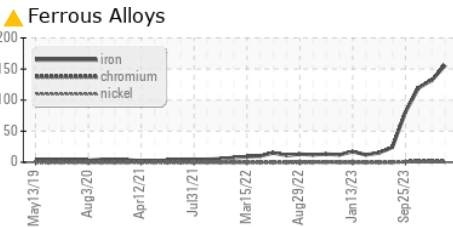
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	87.9	88.3	88.2

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0846116 **Received** : 23 Apr 2024  
**Lab Number** : 06157774 **Tested** : 24 Apr 2024  
**Unique Number** : 10993197 **Diagnosed** : 25 Apr 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

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: