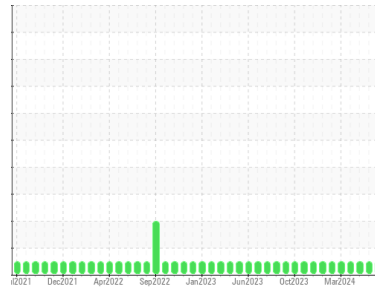




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**Martinsville**

Machine Id

**[Martinsville] Oil - Starboard Reduction Gear**

Component

**Starboard Reduction Gear**

Fluid

**MOBIL DELVAC 1640 (28 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: George Willis )

### 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>WC0735246</b>	WC0845893	WC0898355
Sample Date	Client Info		<b>06 Jul 2024</b>	07 Jun 2024	11 May 2024
Machine Age	hrs	Client Info	<b>25910</b>	25478	24769
Oil Age	hrs	Client Info	<b>2036</b>	1604	994
Oil Changed	Client Info		<b>Not Chngd</b>	Filtered	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>	7	7
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >25	<b>&lt;1</b>	2	1
Lead	ppm	ASTM D5185m >100	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >50	<b>13</b>	14	14
Tin	ppm	ASTM D5185m >10	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>11</b>	13	12
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>37</b>	42	40
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>537</b>	619	581
Calcium	ppm	ASTM D5185m	<b>1188</b>	1321	1274
Phosphorus	ppm	ASTM D5185m	<b>819</b>	902	940
Zinc	ppm	ASTM D5185m	<b>916</b>	1044	987
Sulfur	ppm	ASTM D5185m	<b>3271</b>	3566	3534

## CONTAMINANTS

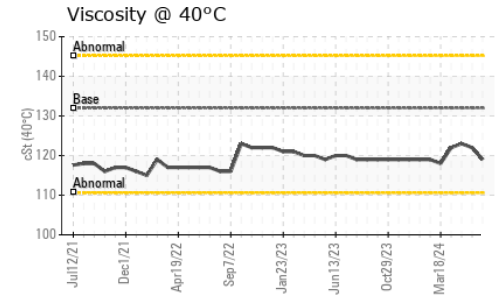
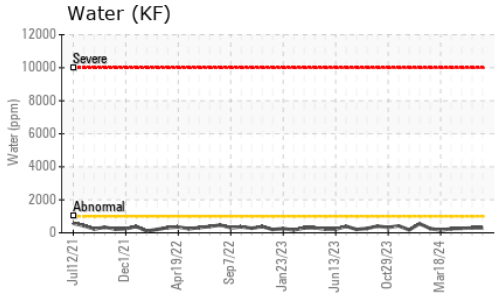
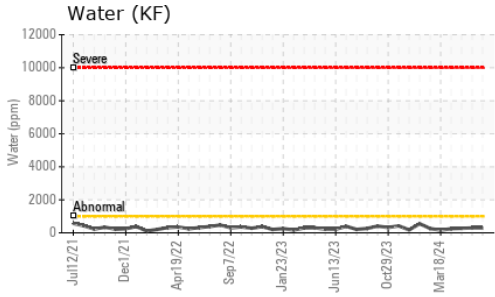
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>2</b>	3	4
Sodium	ppm	ASTM D5185m	<b>3</b>	3	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	3	2
Water	%	ASTM D6304 >0.1	<b>0.029</b>	0.029	0.027
ppm Water	ppm	ASTM D6304 >1000	<b>291</b>	295	272

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.13</b>	1.13	1.04



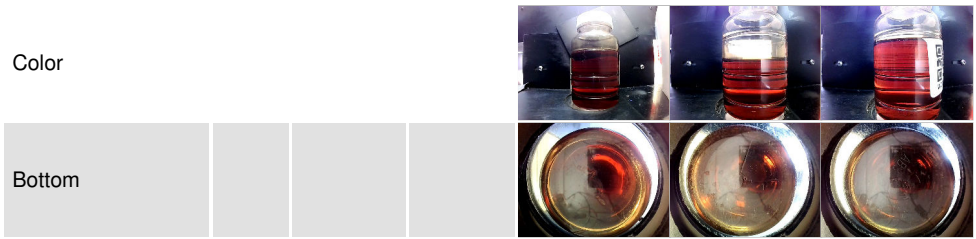
# OIL ANALYSIS REPORT



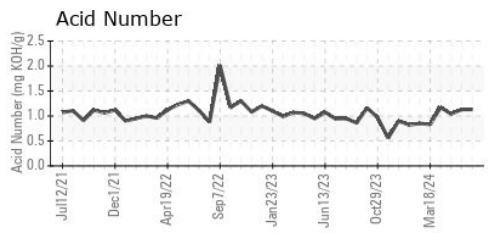
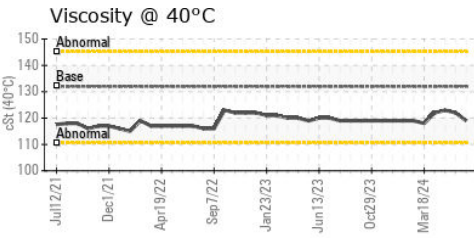
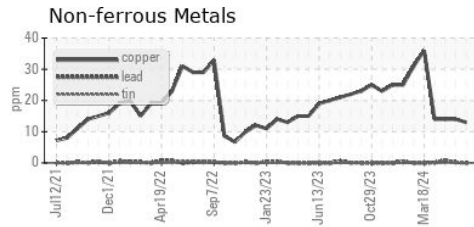
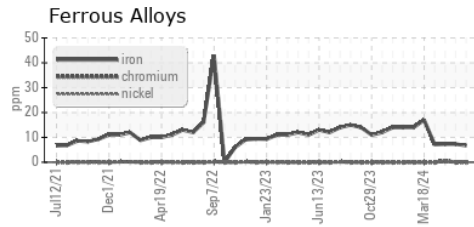
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 132	<b>119</b>	122	123

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0735246      **Received** : 15 Jul 2024  
**Lab Number** : **06236088**      **Tested** : 16 Jul 2024  
**Unique Number** : 11124922      **Diagnosed** : 17 Jul 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)