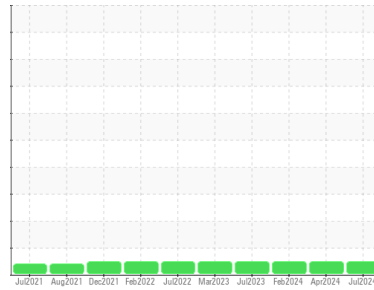




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**Speedway**

Machine Id

**[Speedway] Hydraulic - Flanking**

Component

**Hydraulic System**

Fluid

**R&O OIL ISO 32 (75 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Hours of steering oil holding tank unknown )

### Wear

All component wear rates are normal.

### Contamination

The amount and size of particulates present in the system are acceptable. 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>WC0874686</b>	WC0860106	WC0860049
Sample Date	Client Info	<b>08 Jul 2024</b>	05 Apr 2024	21 Feb 2024
Machine Age	hrs Client Info	<b>0</b>	0	0
Oil Age	hrs Client Info	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	Not Changd
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >20	<b>18</b>	19	14
Chromium	ppm ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm ASTM D5185m >20	<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 >20	<b>0</b>	2	0
Lead	ppm ASTM D5185m >20	<b>0</b>	<1	<1
Copper	ppm ASTM D5185m >20	<b>14</b>	13	11
Tin	ppm ASTM D5185m >20	<b>&lt;1</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 5	<b>0</b>	0	0
Barium	ppm ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 5	<b>0</b>	<1	0
Manganese	ppm ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 5	<b>0</b>	<1	1
Calcium	ppm ASTM D5185m 5	<b>0</b>	13	18
Phosphorus	ppm ASTM D5185m 100	<b>51</b>	57	59
Zinc	ppm ASTM D5185m 25	<b>33</b>	59	52
Sulfur	ppm ASTM D5185m 1500	<b>387</b>	348	366

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >15	<b>1</b>	2	<1
Sodium	ppm ASTM D5185m	<b>4</b>	2	0
Potassium	ppm ASTM D5185m >20	<b>&lt;1</b>	1	0
Water	% ASTM D6304 >0.05	<b>0.004</b>	0.002	0.003
ppm Water	ppm ASTM D6304 >500	<b>43</b>	24	27

## FLUID CLEANLINESS

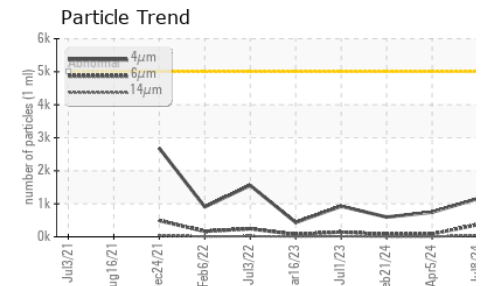
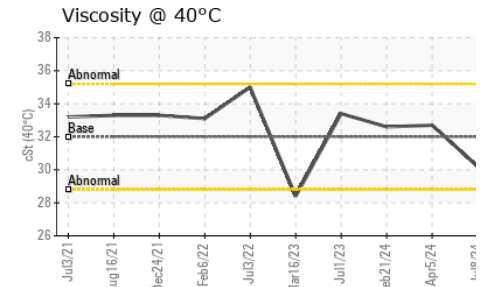
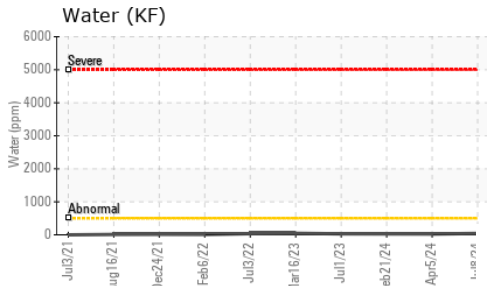
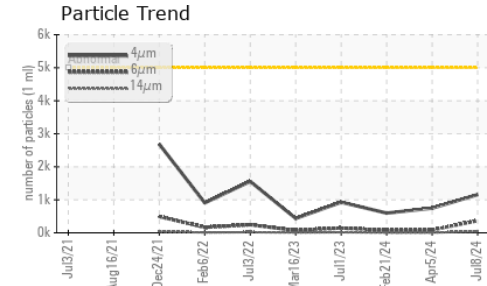
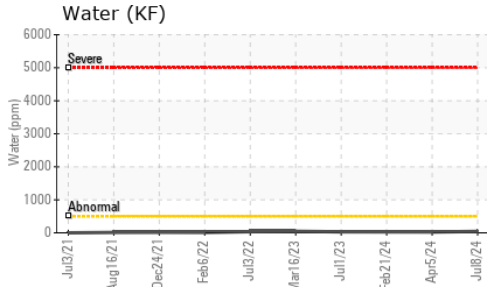
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>1157</b>	746	597
Particles >6µm	ASTM D7647 >1300	<b>367</b>	84	74
Particles >14µm	ASTM D7647 >160	<b>40</b>	6	4
Particles >21µm	ASTM D7647 >40	<b>15</b>	1	1
Particles >38µm	ASTM D7647 >10	<b>2</b>	0	0
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>17/16/12</b>	17/14/10	16/13/9

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045 0.08	<b>0.06</b>	0.09	0.10



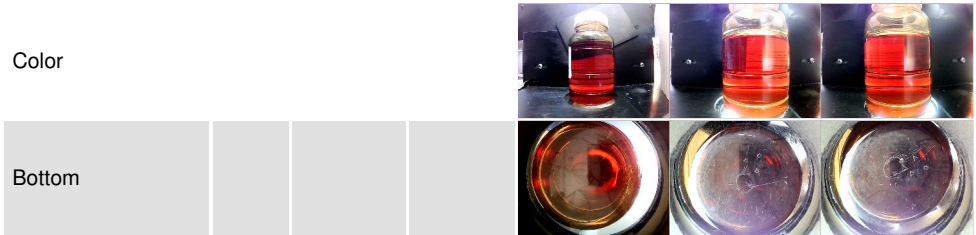
# OIL ANALYSIS REPORT



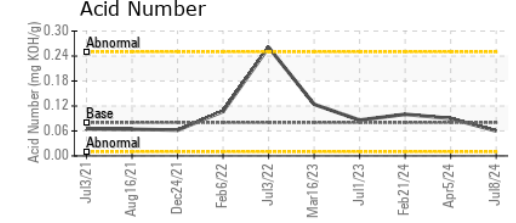
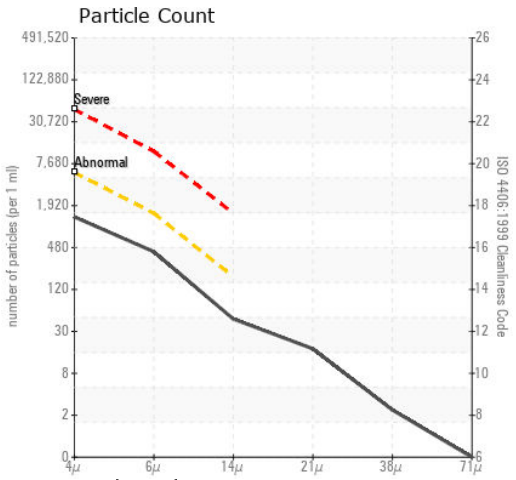
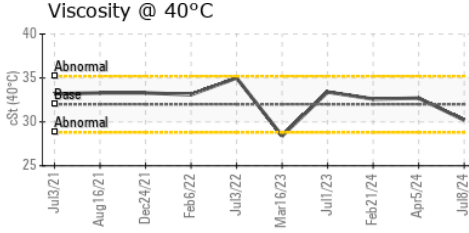
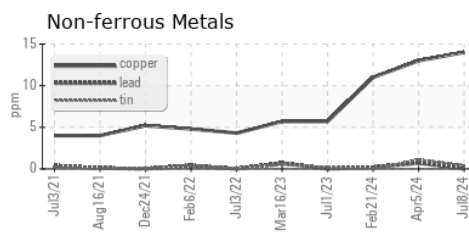
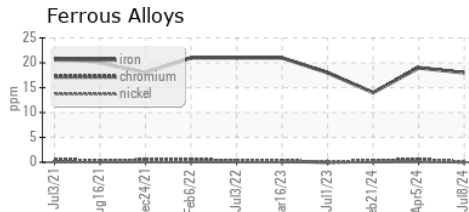
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	30.2	32.7

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0874686 **Received** : 15 Jul 2024  
**Lab Number** : 06235948 **Tested** : 16 Jul 2024  
**Unique Number** : 11124782 **Diagnosed** : 16 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)