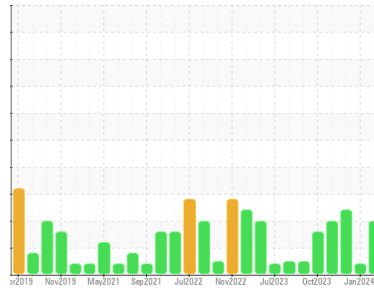




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

Paul G. Blazer

Machine Id

[Paul G. Blazer] Hydraulic - Flanking

Component

Hydraulic System

Fluid

R&O OIL ISO 32 (150 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. (Customer Sample Comment: Kirk James)

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present 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		WC0719262	WC0845769	WC0845847
Sample Date	Client Info		14 Apr 2024	25 Jan 2024	21 Dec 2023
Machine Age	hrs	Client Info	6050	4464	3864
Oil Age	hrs	Client Info	6050	4464	3864
Oil Changed	Client Info		Not Chngd	N/A	Not Chngd
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	4	2	2
Chromium	ppm	ASTM D5185m >20	<1	0	0
Nickel	ppm	ASTM D5185m >20	<1	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	0	0
Lead	ppm	ASTM D5185m >20	0	0	0
Copper	ppm	ASTM D5185m >20	<1	<1	<1
Tin	ppm	ASTM D5185m >20	<1	<1	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	0	0	0
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 5	<1	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 5	<1	0	0
Calcium	ppm	ASTM D5185m 5	7	4	9
Phosphorus	ppm	ASTM D5185m 100	65	59	59
Zinc	ppm	ASTM D5185m 25	85	70	67
Sulfur	ppm	ASTM D5185m 1500	177	188	181

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<1	<1	0
Sodium	ppm	ASTM D5185m	0	0	0
Potassium	ppm	ASTM D5185m >20	1	<1	0
Water	%	ASTM D6304 >0.05	0.002	0.007	0.004
ppm Water	ppm	ASTM D6304 >500	19	80	49

FLUID CLEANLINESS

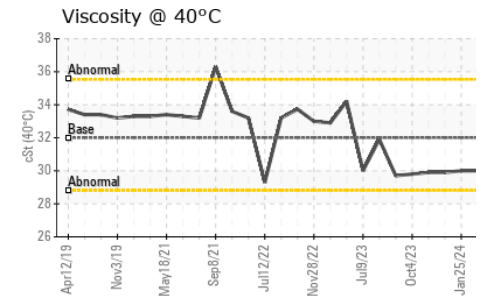
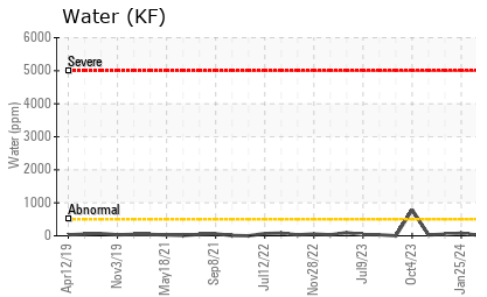
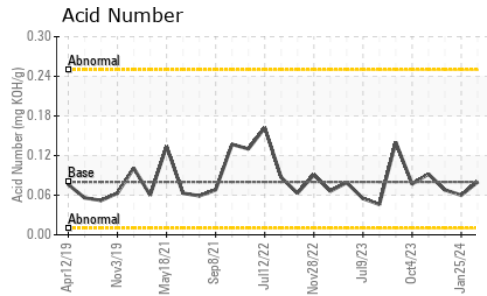
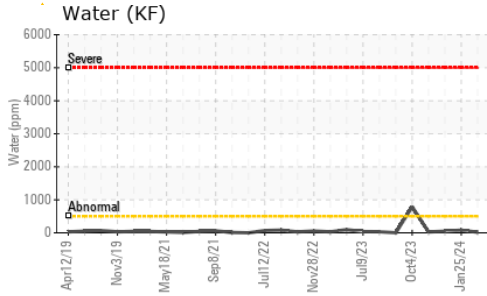
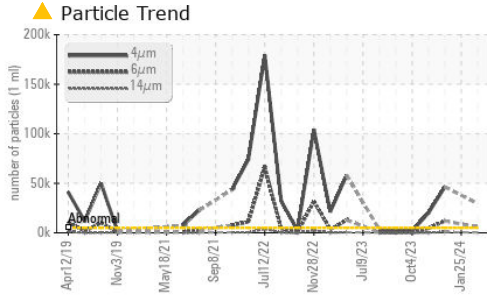
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 29446	---	▲ 46322
Particles >6µm	ASTM D7647	>1300	▲ 5840	---	▲ 11918
Particles >14µm	ASTM D7647	>160	▲ 312	---	▲ 751
Particles >21µm	ASTM D7647	>40	▲ 75	---	▲ 193
Particles >38µm	ASTM D7647	>10	3	---	▲ 11
Particles >71µm	ASTM D7647	>3	0	---	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 22/20/15	---	▲ 23/21/17

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.08	0.08	0.06	0.068



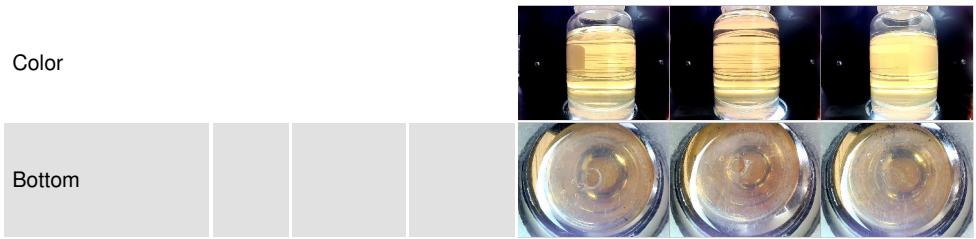
OIL ANALYSIS REPORT



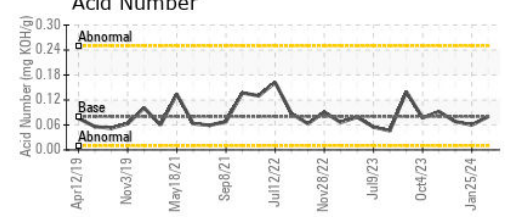
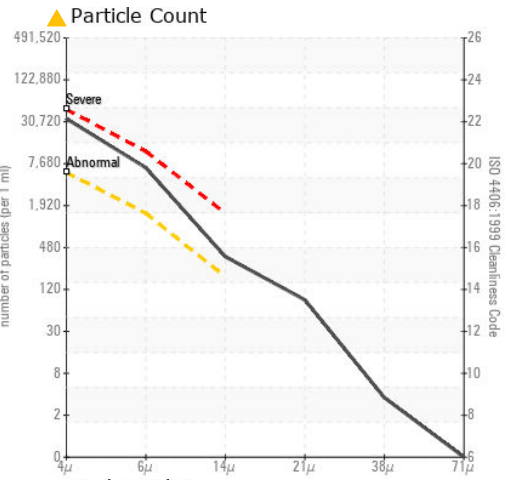
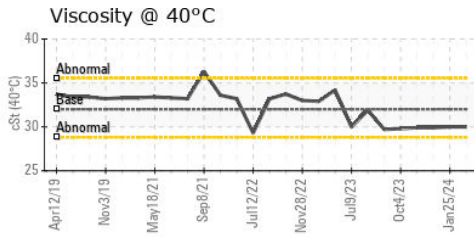
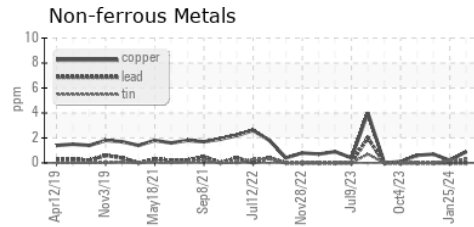
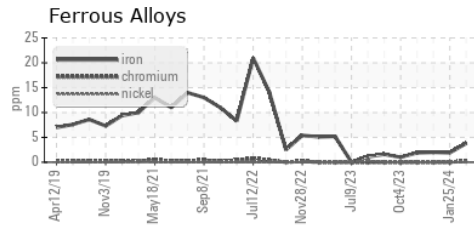
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	30.0	29.9

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0719262 **Received** : 23 Apr 2024
Lab Number : 06157688 **Tested** : 24 Apr 2024
Unique Number : 10993111 **Diagnosed** : 25 Apr 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: KF)

MARATHON PETROLEUM CO.
 101 12TH ST
 CATLETTSBURG, KY
 US 41169
 Contact: CORY GUMBERT
 cagumbert@marathonpetroleum.com
 T: (606)585-3950
 F: x:

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)