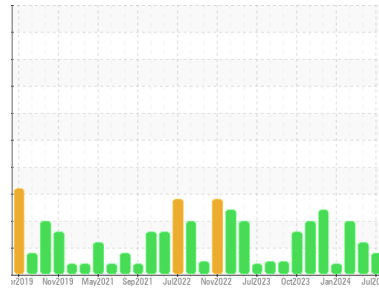




OIL ANALYSIS REPORT

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

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) 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		WC0845823	WC0719258	WC0719262
Sample Date	Client Info		09 Jul 2024	14 May 2024	14 Apr 2024
Machine Age	hrs	Client Info	0	6595	6050
Oil Age	hrs	Client Info	0	6595	6050
Oil Changed	Client Info		N/A	N/A	Not Changd
Sample Status			ATTENTION	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	3	3	4
Chromium	ppm	ASTM D5185m >20	0	0	<1
Nickel	ppm	ASTM D5185m >20	0	0	<1
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >20	0	0	2
Lead	ppm	ASTM D5185m >20	0	<1	0
Copper	ppm	ASTM D5185m >20	<1	0	<1
Tin	ppm	ASTM D5185m >20	0	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	<1	0	<1

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	0	<1	<1
Manganese	ppm	ASTM D5185m	0	<1	0
Magnesium	ppm	ASTM D5185m 5	0	0	<1
Calcium	ppm	ASTM D5185m 5	9	8	7
Phosphorus	ppm	ASTM D5185m 100	82	75	65
Zinc	ppm	ASTM D5185m 25	78	79	85
Sulfur	ppm	ASTM D5185m 1500	264	246	177

CONTAMINANTS

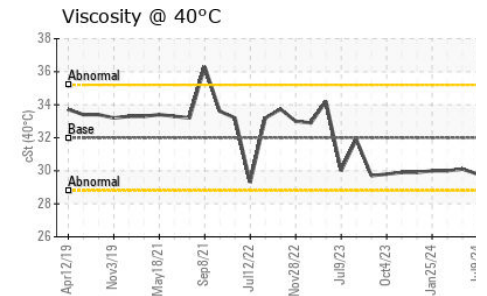
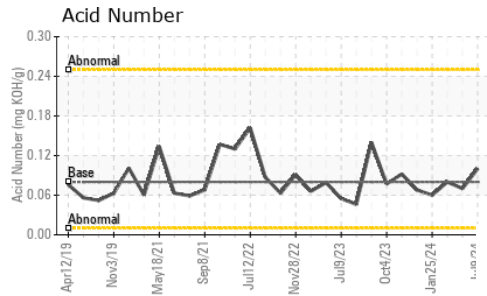
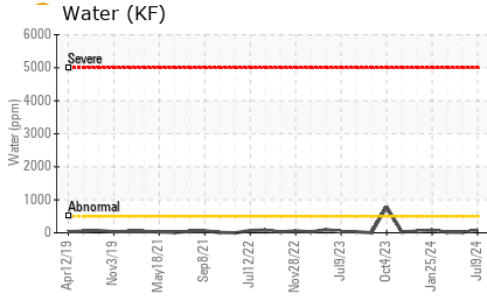
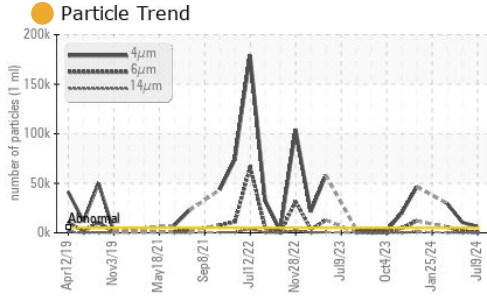
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<1	<1	<1
Sodium	ppm	ASTM D5185m	<1	<1	0
Potassium	ppm	ASTM D5185m >20	0	0	1
Water	%	ASTM D6304 >0.05	0.007	0.001	0.002
ppm Water	ppm	ASTM D6304 >500	80	15	19

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	6364	10367	29446
Particles >6µm	ASTM D7647	>1300	453	1593	5840
Particles >14µm	ASTM D7647	>160	7	89	312
Particles >21µm	ASTM D7647	>40	2	22	75
Particles >38µm	ASTM D7647	>10	0	1	3
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	20/16/10	21/18/14	22/20/15

FLUID DEGRADATION

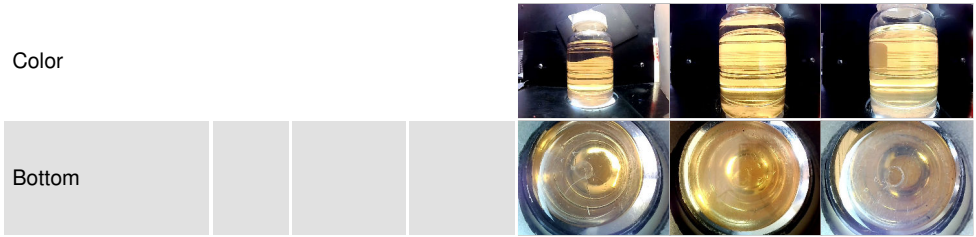
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.08	0.10	0.07	0.08



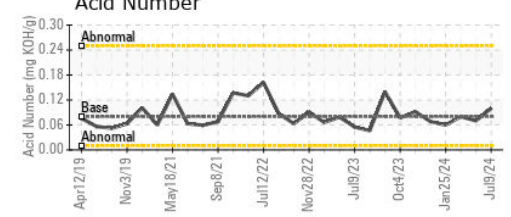
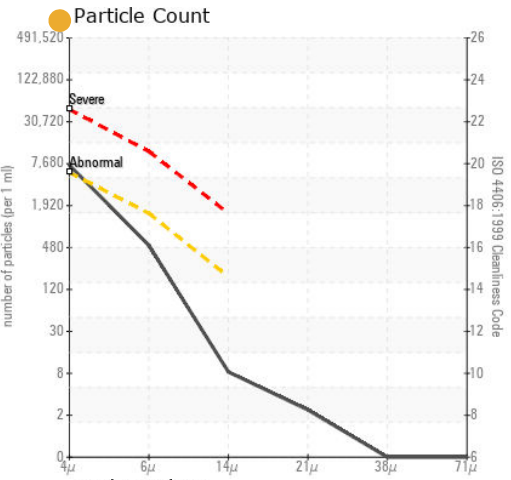
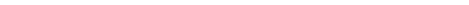
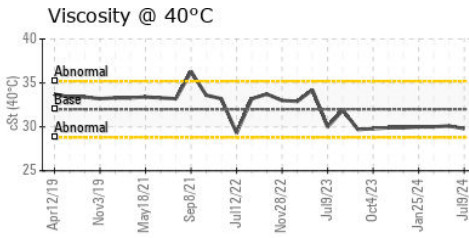
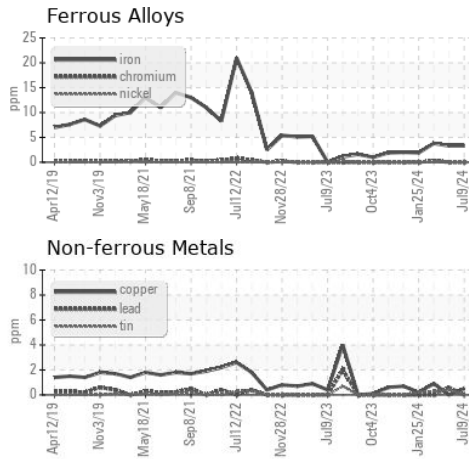
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	29.8	30.1

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0845823 **Received** : 17 Jul 2024
Lab Number : 06239144 **Tested** : 18 Jul 2024
Unique Number : 11127978 **Diagnosed** : 19 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)