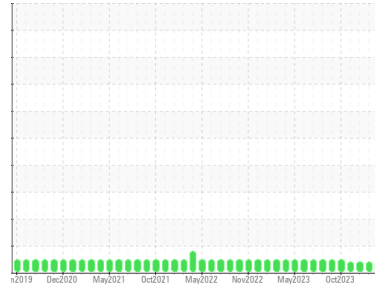




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area

Kentucky

Machine Id

[Kentucky] Oil - Port Reduction Gear

Component

Port Reduction Gear

Fluid

SAE 30W (26 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

The water content is negligible. There is no indication of any contamination in the oil.

● Fluid Condition

The oil viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0859846	WC0845733	WC0845735
Sample Date	Client Info		16 Feb 2024	20 Jan 2024	24 Dec 2023
Machine Age	hrs	Client Info	12942	12458	11965
Oil Age	hrs	Client Info	1653	1168	676
Oil Changed	Client Info		N/A	Not Changd	Not Changd
Sample Status			ATTENTION	ATTENTION	ATTENTION

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	4	3	1
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m >10	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	<1	<1
Lead	ppm	ASTM D5185m >100	0	<1	<1
Copper	ppm	ASTM D5185m >50	4	3	5
Tin	ppm	ASTM D5185m >10	0	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	54	53	50
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	22	24	22
Manganese	ppm	ASTM D5185m	0	0	<1
Magnesium	ppm	ASTM D5185m	343	377	373
Calcium	ppm	ASTM D5185m	676	714	664
Phosphorus	ppm	ASTM D5185m	819	889	845
Zinc	ppm	ASTM D5185m	564	642	606
Sulfur	ppm	ASTM D5185m	8892	9830	8790

CONTAMINANTS

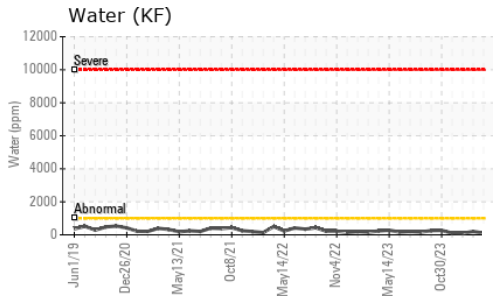
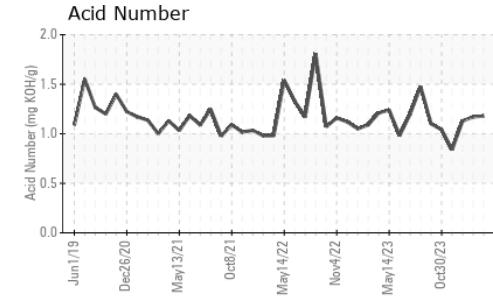
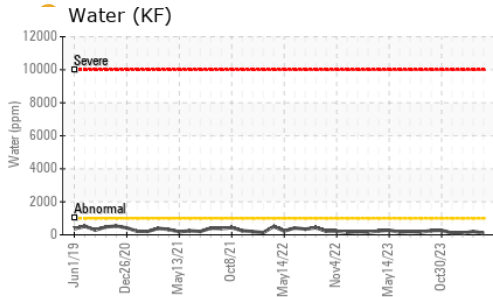
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	1	2	1
Sodium	ppm	ASTM D5185m	1	<1	2
Potassium	ppm	ASTM D5185m >20	0	1	0
Water	%	ASTM D6304 >0.1	0.010	0.020	0.008
ppm Water	ppm	ASTM D6304 >1000	100	208	87

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.18	1.17	1.13



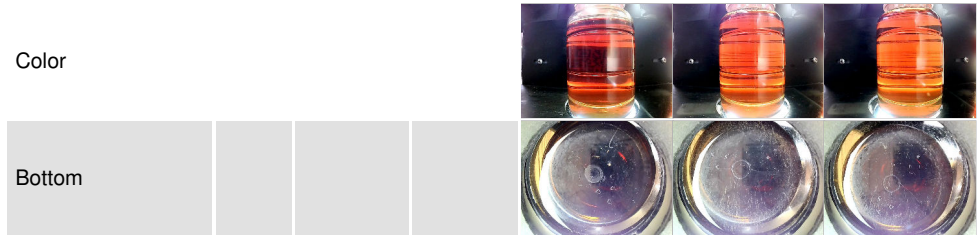
OIL ANALYSIS REPORT



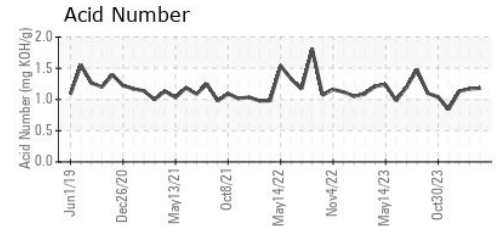
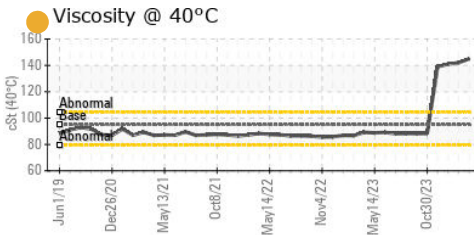
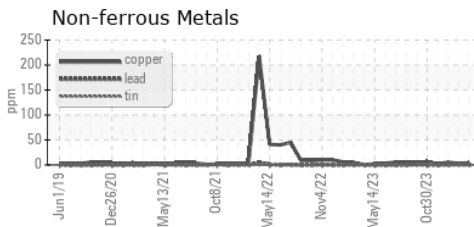
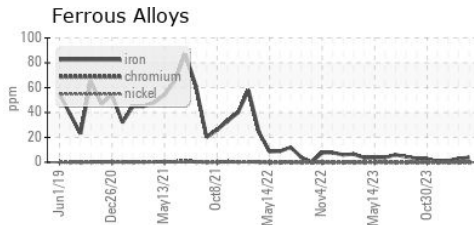
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	95.0 ● 145	● 142	● 141

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0859846 Received : 27 Feb 2024
 Lab Number : 06101729 Tested : 28 Feb 2024
 Unique Number : 10899959 Diagnosed : 29 Feb 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
 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)