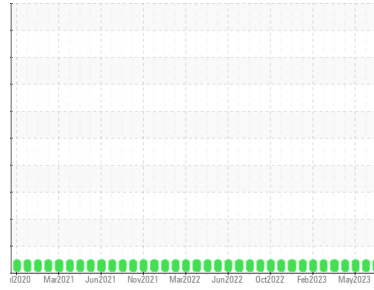




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Louisville
 Machine Id
[Louisville] Oil - Port Reduction Gear
 Component
Port Reduction Gear
 Fluid
SAE 30W (35 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

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 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	WC0769299	WC0735668	WC0735459
Sample Date	Client Info	05 Jul 2023	05 Jun 2023	20 May 2023
Machine Age	hrs Client Info	0	22071	0
Oil Age	hrs Client Info	0	6952	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>150	6	7	7
Chromium ppm ASTM D5185m	>10	0	<1	<1
Nickel ppm ASTM D5185m	>10	0	0	<1
Titanium ppm ASTM D5185m		0	0	<1
Silver ppm ASTM D5185m		0	0	<1
Aluminum ppm ASTM D5185m	>25	<1	0	1
Lead ppm ASTM D5185m	>100	0	0	<1
Copper ppm ASTM D5185m	>50	3	4	4
Tin ppm ASTM D5185m	>10	0	0	<1
Vanadium ppm ASTM D5185m		<1	0	<1
Cadmium ppm ASTM D5185m		0	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185m		20	19	21
Barium ppm ASTM D5185m		0	0	0
Molybdenum ppm ASTM D5185m		43	44	42
Manganese ppm ASTM D5185m		<1	<1	<1
Magnesium ppm ASTM D5185m		723	731	673
Calcium ppm ASTM D5185m		857	853	808
Phosphorus ppm ASTM D5185m		838	872	778
Zinc ppm ASTM D5185m		912	931	837
Sulfur ppm ASTM D5185m		4937	5113	4243

CONTAMINANTS

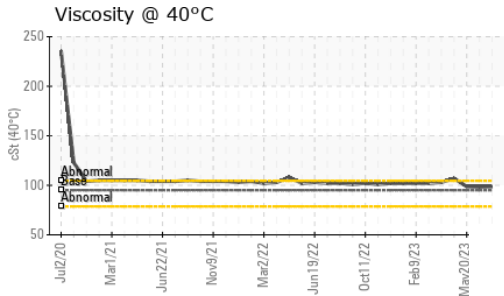
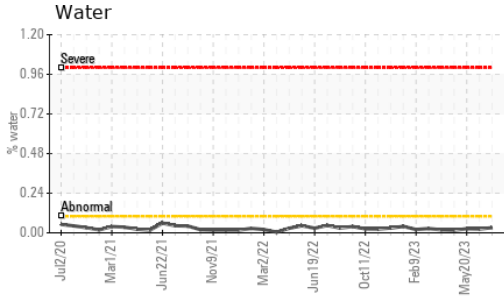
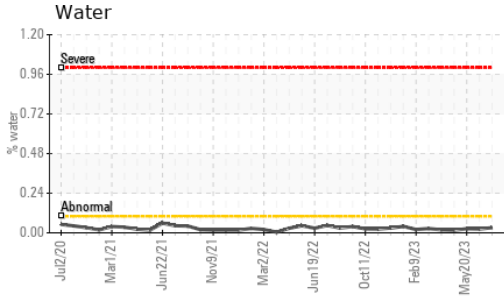
method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m	>50	2	3	3
Sodium ppm ASTM D5185m		<1	1	2
Potassium ppm ASTM D5185m	>20	0	0	0
Water % ASTM D6304	>0.1	0.031	0.023	0.025
ppm Water ppm ASTM D6304	>1000	319.0	239.8	255.6

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045		0.95	0.88	0.92



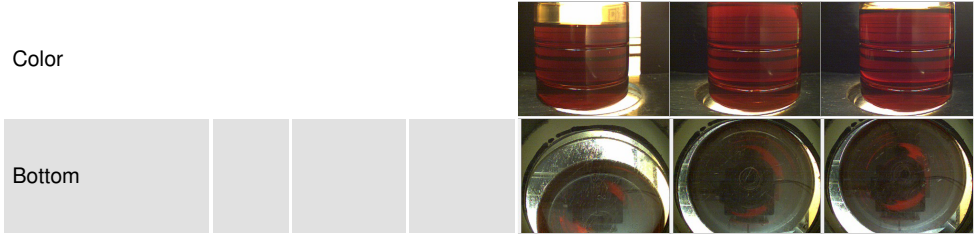
OIL ANALYSIS REPORT



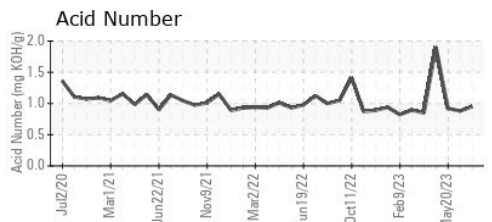
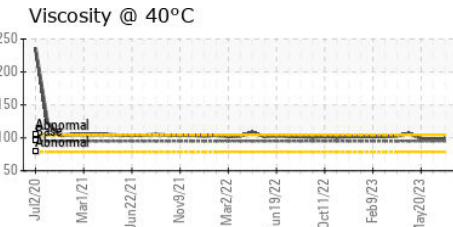
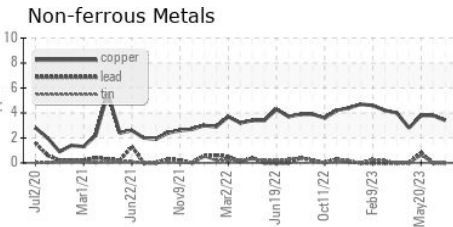
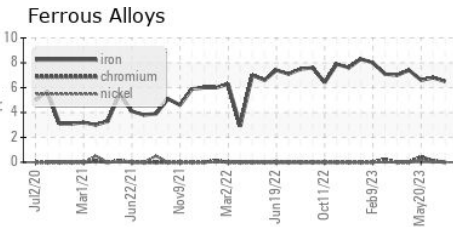
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	98.7	98.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0769299 **Received** : 17 Jul 2023
Lab Number : 05900021 **Diagnosed** : 18 Jul 2023
Unique Number : 10561377 **Diagnostician** : Wes Davis
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)