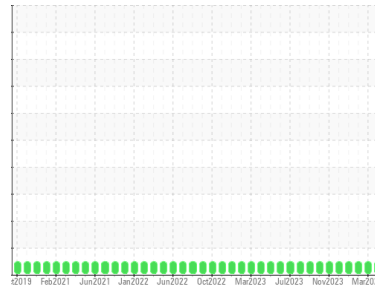




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Nashville

Machine Id

[Nashville] Oil - Port Reduction Gear

Component

Port Reduction Gear

Fluid

GEAR OIL SAE 85W140 (180 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Dparnell)

Wear

All component wear rates are normal.

Contamination

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	WC0874896	WC0874905	WC0846026
Sample Date	Client Info	15 Apr 2024	18 Mar 2024	20 Feb 2024
Machine Age	hrs	Client Info	1961	1502
Oil Age	hrs	Client Info	1961/1961	1502
Oil Changed	Client Info	Filtered	Not Changd	Filtered
Sample Status		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >150	12	14	16
Chromium	ppm	ASTM D5185m >10	<1	0	0
Nickel	ppm	ASTM D5185m >10	0	<1	0
Titanium	ppm	ASTM D5185m	<1	<1	<1
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	1	2	<1
Lead	ppm	ASTM D5185m >100	0	<1	0
Copper	ppm	ASTM D5185m >50	0	<1	1
Tin	ppm	ASTM D5185m >10	<1	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 400	290	256	251
Barium	ppm	ASTM D5185m 200	0	0	0
Molybdenum	ppm	ASTM D5185m 12	0	0	0
Manganese	ppm	ASTM D5185m	<1	<1	0
Magnesium	ppm	ASTM D5185m 12	5	0	<1
Calcium	ppm	ASTM D5185m 150	17	15	16
Phosphorus	ppm	ASTM D5185m 1650	1109	1052	965
Zinc	ppm	ASTM D5185m 125	6	0	0
Sulfur	ppm	ASTM D5185m 22500	21734	21803	17477

CONTAMINANTS

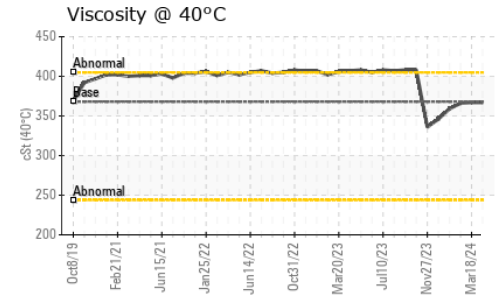
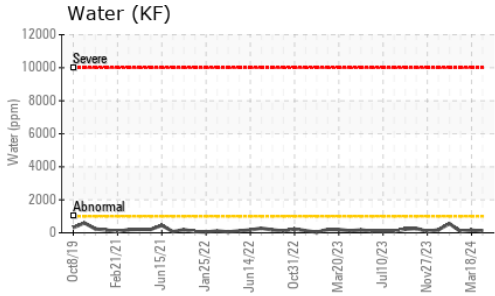
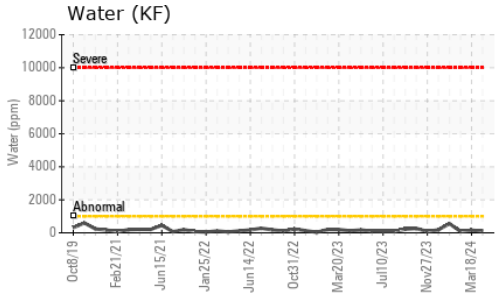
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	3	<1	2
Sodium	ppm	ASTM D5185m	1	2	2
Potassium	ppm	ASTM D5185m >20	2	1	0
Water	%	ASTM D6304 >0.1	0.010	0.015	0.008
ppm Water	ppm	ASTM D6304 >1000	108	159	85

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 2.00	1.73	1.67	1.63



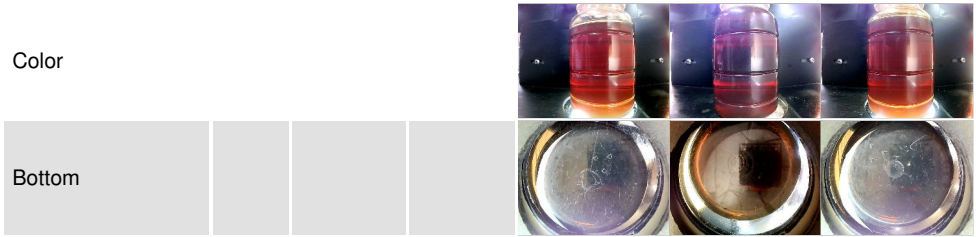
OIL ANALYSIS REPORT



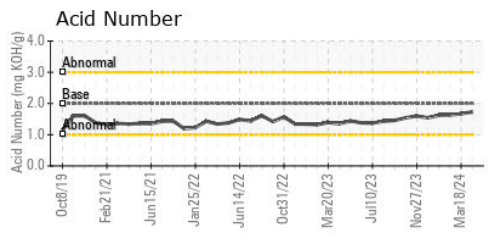
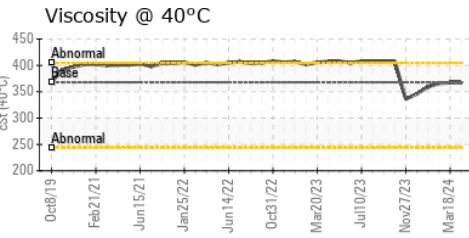
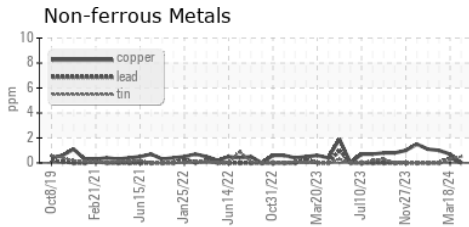
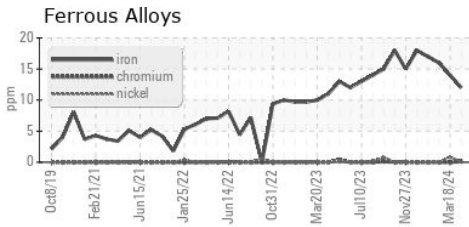
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	368	367	367

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0874896 **Received** : 23 Apr 2024
Lab Number : **06157766** **Tested** : 24 Apr 2024
Unique Number : 10993189 **Diagnosed** : 25 Apr 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)