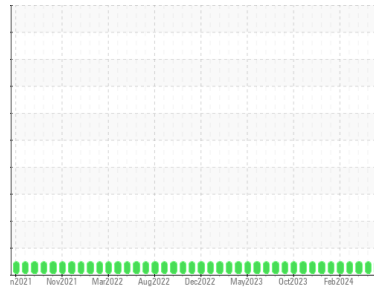




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Findlay

Machine Id

[Findlay] Oil - Starboard Reduction Gear

Component

Starboard Reduction Gear

Fluid

MARATHON SAE 40 (80 GAL)

DIAGNOSIS

Recommendation

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 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		WC0874698	WC0874645	WC0874732
Sample Date	Client Info		18 Jun 2024	14 May 2024	23 Apr 2024
Machine Age	hrs	Client Info	28114	27778	27355
Oil Age	hrs	Client Info	15895	15559	25136
Oil Changed	Client Info		Filtered	Filtered	Not Chngd
Sample Status			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	26	26	16
Chromium	ppm	ASTM D5185m >10	0	<1	0
Nickel	ppm	ASTM D5185m >10	<1	0	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m	0	<1	0
Aluminum	ppm	ASTM D5185m >25	1	<1	<1
Lead	ppm	ASTM D5185m >100	0	0	<1
Copper	ppm	ASTM D5185m >50	3	3	6
Tin	ppm	ASTM D5185m >10	0	0	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	20	20	17
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	50	49	47
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	767	727	706
Calcium	ppm	ASTM D5185m	896	899	837
Phosphorus	ppm	ASTM D5185m	887	849	828
Zinc	ppm	ASTM D5185m	980	933	923
Sulfur	ppm	ASTM D5185m	2999	2911	2830

CONTAMINANTS

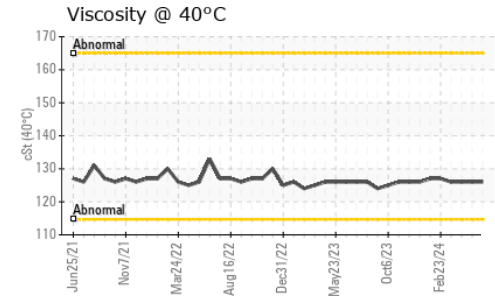
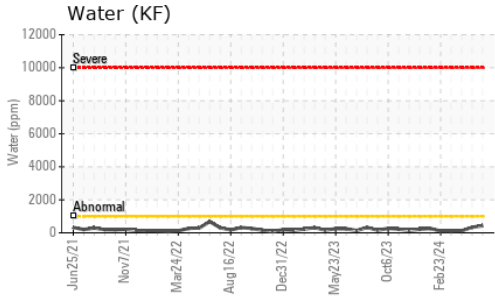
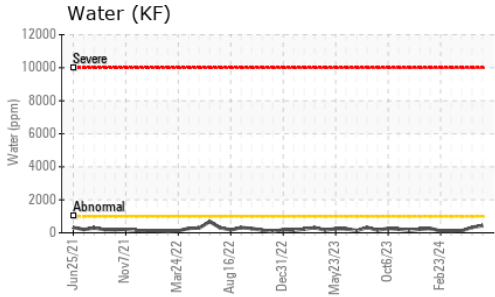
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	3	3	2
Sodium	ppm	ASTM D5185m	5	4	5
Potassium	ppm	ASTM D5185m >20	2	2	<1
Water	%	ASTM D6304 >0.1	0.043	0.033	0.012
ppm Water	ppm	ASTM D6304 >1000	432	333	123

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.74	0.63	0.54



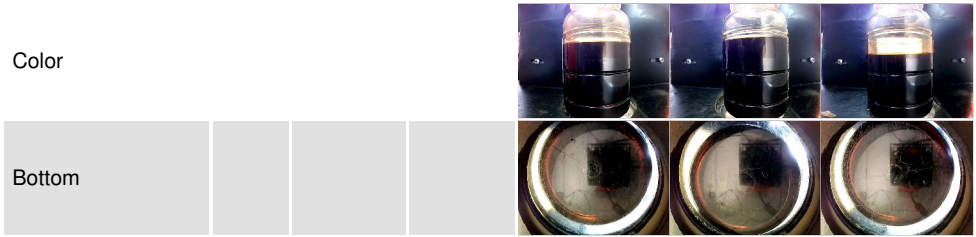
OIL ANALYSIS REPORT



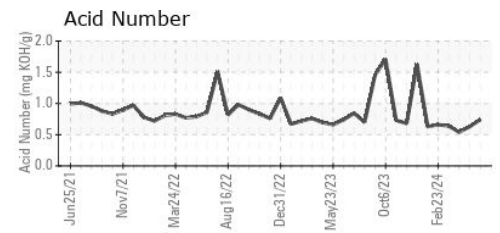
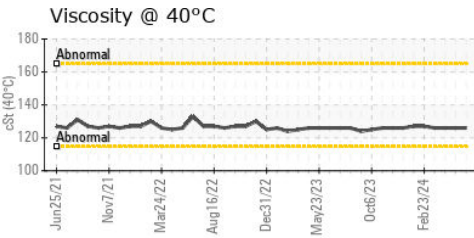
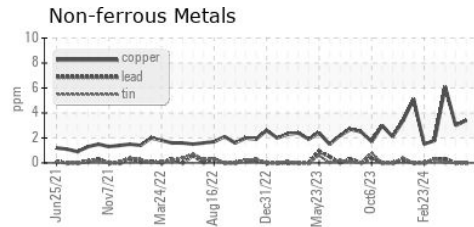
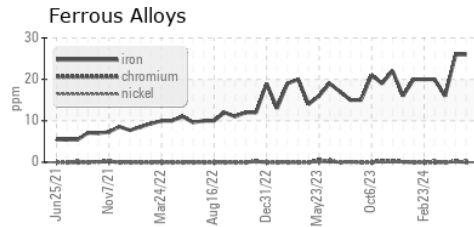
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	126	126	126

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0874698 **Received** : 25 Jun 2024
Lab Number : **06219787** **Tested** : 26 Jun 2024
Unique Number : 11097984 **Diagnosed** : 26 Jun 2024 - Wes Davis
Test Package : IND 2 (Additional Tests: KF)

MARATHON PETROLEUM CO.
 101 12TH ST
 CATLETTSBURG, KY
 US 41169
 Contact: SHAWN MCCLASKEY
 stmccclaskey@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)