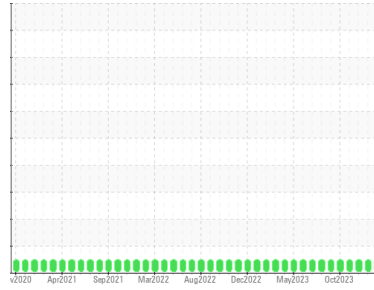




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Ohio Valley
 Machine Id
[Ohio Valley] Oil - Starboard Reduction Gear
 Component
Starboard Reduction Gear
 Fluid
GEAR OIL SAE 85W140 (180 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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	WC0845997	WC0845950	WC0621918	
Sample Date	Client Info	16 Feb 2024	22 Jan 2024	22 Dec 2023	
Machine Age	hrs	Client Info	25107	24785	24337
Oil Age	hrs	Client Info	25107	24799	24337
Oil Changed	Client Info	Not Changed	N/A	Not Changed	
Sample Status		NORMAL	NORMAL	NORMAL	

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >150	54	49	46
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m >10	0	0	0
Titanium	ppm	ASTM D5185m	<1	<1	<1
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	7	8	7
Lead	ppm	ASTM D5185m >100	0	<1	0
Copper	ppm	ASTM D5185m >50	4	5	4
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 400	16	18	16
Barium	ppm	ASTM D5185m 200	0	<1	0
Molybdenum	ppm	ASTM D5185m 12	1	0	<1
Manganese	ppm	ASTM D5185m	<1	1	<1
Magnesium	ppm	ASTM D5185m 12	20	4	24
Calcium	ppm	ASTM D5185m 150	58	37	61
Phosphorus	ppm	ASTM D5185m 1650	874	800	865
Zinc	ppm	ASTM D5185m 125	34	24	46
Sulfur	ppm	ASTM D5185m 22500	13680	13266	13288

CONTAMINANTS

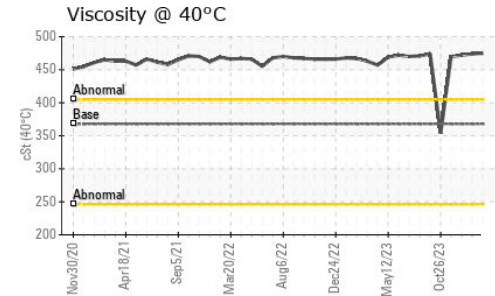
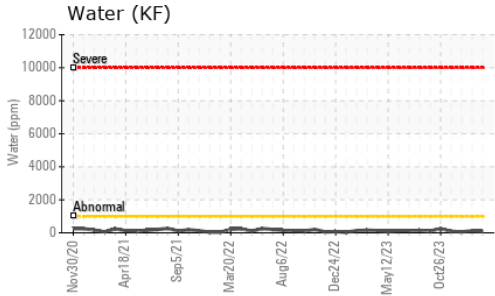
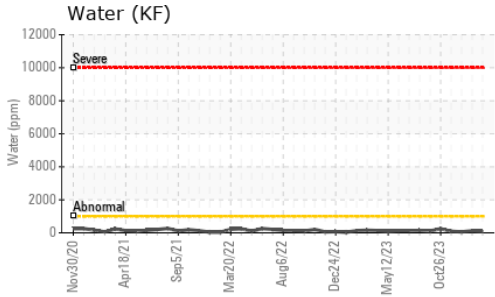
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	8	8	8
Sodium	ppm	ASTM D5185m	2	3	3
Potassium	ppm	ASTM D5185m >20	31	34	30
Water	%	ASTM D6304 >0.1	0.007	0.012	0.005
ppm Water	ppm	ASTM D6304 >1000	72	126	57

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 2.00	2.07	0.62	1.78



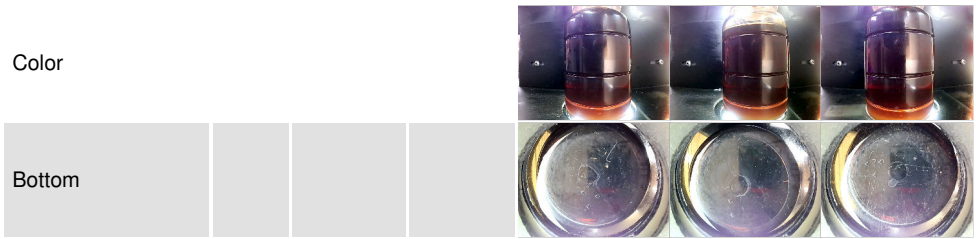
OIL ANALYSIS REPORT



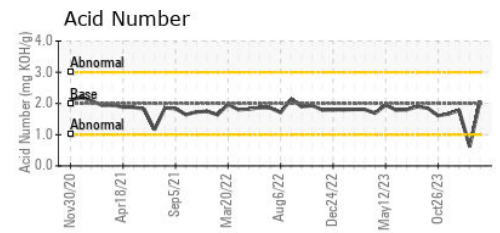
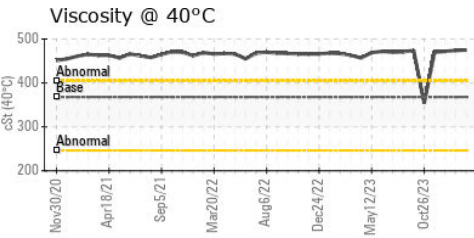
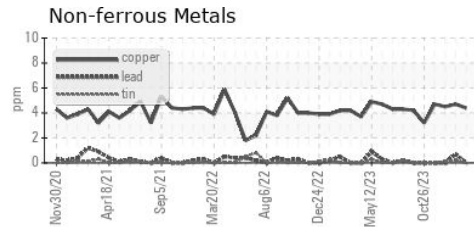
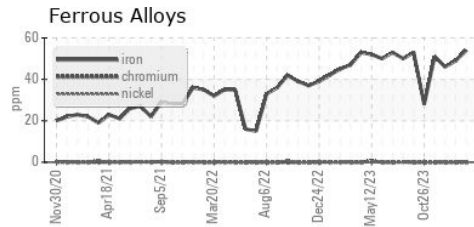
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	LIGHT	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 368	475	474	472

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0845997 **Received** : 27 Feb 2024
Lab Number : **06101732** **Tested** : 28 Feb 2024
Unique Number : 10899962 **Diagnosed** : 29 Feb 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF)

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 CATLETTSBURG, KY
 US 41169
 Contact: CORY GUMBERT
 cagumbert@marathonpetroleum.com
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 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)