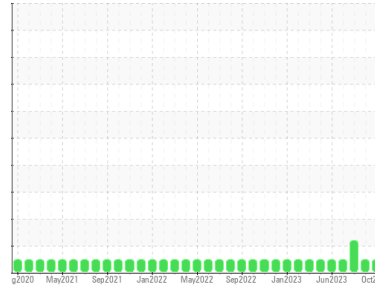




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Kenova
 Machine Id
[Kenova] Oil - Starboard Reduction Gear
 Component
Starboard Reduction Gear
 Fluid
Reduction Gear Oil (35 GAL)

DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor. (Customer Sample Comment: Adam fields)

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		WC0805227	WC0719060	WC0719054
Sample Date	Client Info		24 Oct 2023	26 Sep 2023	30 Aug 2023
Machine Age	hrs	Client Info	37437	36966	36527
Oil Age	hrs	Client Info	247	11148	10708
Oil Changed	Client Info		Changed	Not Changd	N/A
Sample Status			NORMAL	NORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	17	21	22
Chromium	ppm	ASTM D5185m >10	0	<1	<1
Nickel	ppm	ASTM D5185m >10	0	0	0
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m	0	<1	<1
Aluminum	ppm	ASTM D5185m >25	2	<1	<1
Lead	ppm	ASTM D5185m >100	<1	<1	0
Copper	ppm	ASTM D5185m >50	22	3	4
Tin	ppm	ASTM D5185m >10	<1	<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	23	14	14
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	41	21	22
Manganese	ppm	ASTM D5185m	<1	<1	1
Magnesium	ppm	ASTM D5185m	201	223	221
Calcium	ppm	ASTM D5185m	2832	3454	3570
Phosphorus	ppm	ASTM D5185m	774	915	923
Zinc	ppm	ASTM D5185m	836	1027	1019
Sulfur	ppm	ASTM D5185m	6291	8679	10522

CONTAMINANTS

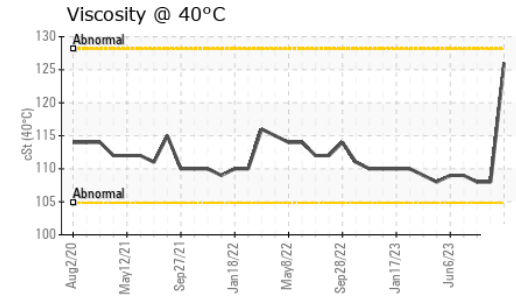
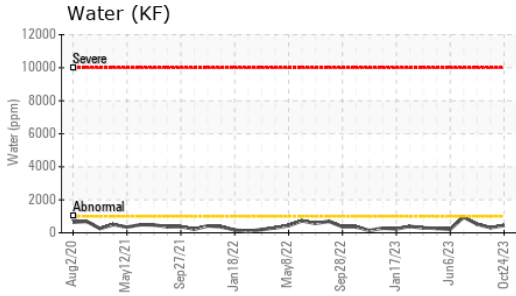
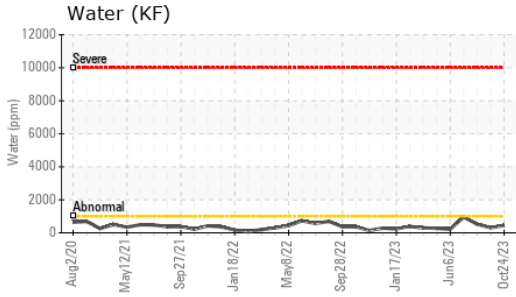
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	5	4	5
Sodium	ppm	ASTM D5185m	7	2	6
Potassium	ppm	ASTM D5185m >20	5	<1	1
Water	%	ASTM D6304 >0.1	0.044	0.031	0.051
ppm Water	ppm	ASTM D6304 >1000	446.9	311.4	519.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.81	1.70	▲ 1.872



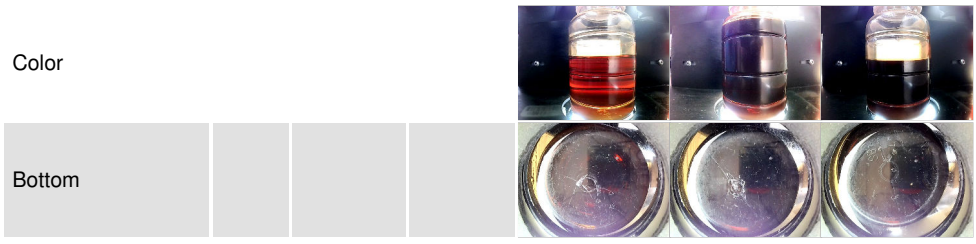
OIL ANALYSIS REPORT



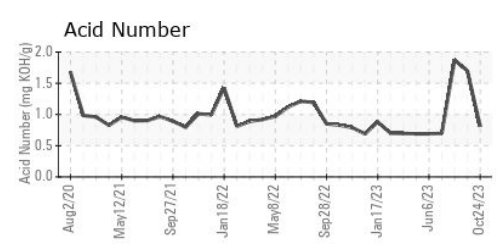
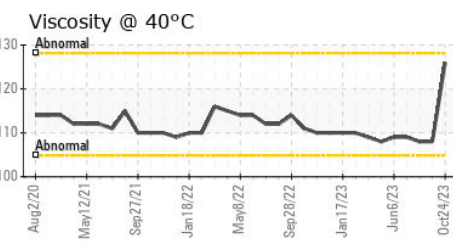
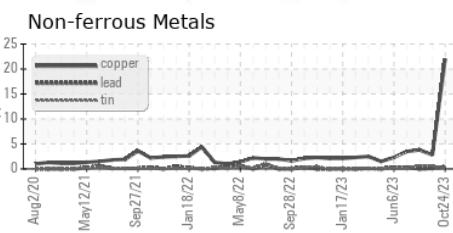
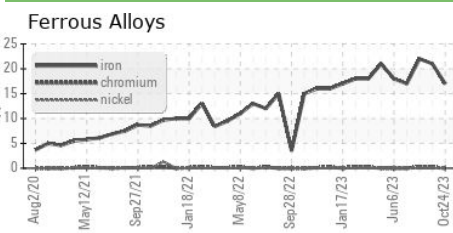
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	126	108	108

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0805227 **Received** : 01 Nov 2023
Lab Number : 05995690 **Diagnosed** : 03 Nov 2023
Unique Number : 10724050 **Diagnostician** : Jonathan Hester
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)