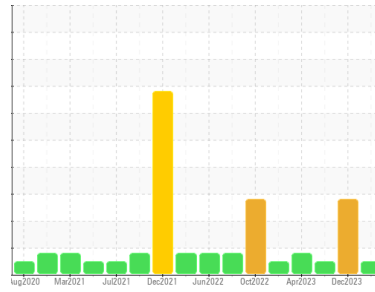




COOLANT REPORT

Sample Rating Trend



NORMAL



Area

Canton

Machine Id

[Canton] Coolant - Starboard Main Engine (Jacket)

Component

Coolant

Fluid

CATERPILLAR ELC (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The fluid is suitable for further service.

Corrosion

All metal levels are normal indicating no corrosion in the cooling system.

Contaminants

There is no indication of any contamination in the coolant.

Coolant Condition

Carboxylate test failed. Glycol and nitrite levels are acceptable. The pH level of this fluid is within the acceptable limits.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0805415	WC0769502	WC0735378
Sample Date	Client Info	22 Apr 2024	29 Dec 2023	24 May 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	ABNORMAL	NORMAL

PHYSICAL TEST RESULTS

method	limit/base	current	history1	history2
Glycol Type	FT-IR	---	---	---
Specific Gravity	*ASTM D1298	1.067	1.039	1.074
pH	Scale 0-14	ASTM D1287	8.32	8.45
Nitrites	ppm	AP-053:2009	864	524
Reserve Alkalinity	Scale 0-20	*ASTM D1121	---	---
Percentage Glycol	%	ASTM D3321	49.6	29.6
Freezing Point	°F	ASTM D3321	-33	5
Total Dissolved Solids			312.5	237.0
Carboxylate			fail	fail

CORROSION INHIBITORS

method	limit/base	current	history1	history2
Silicon	ppm	ASTM D6130	0	10
Phosphorus	ppm	ASTM D6130	0	0
Boron	ppm	ASTM D6130	0	0
Molybdenum	ppm	ASTM D6130	950	106

CORROSION

method	limit/base	current	history1	history2
Iron	ppm	ASTM D6130	>15	0
Aluminum	ppm	ASTM D6130	>10	0
Copper	ppm	ASTM D6130	>10	<1
Lead	ppm	ASTM D6130	>10	0
Tin	ppm	ASTM D6130	>10	0
Zinc	ppm	ASTM D6130		0

CONTAMINANTS

method	limit/base	current	history1	history2
Chlorine	ppm	ASTM D6130		61

CARRIER SALTS

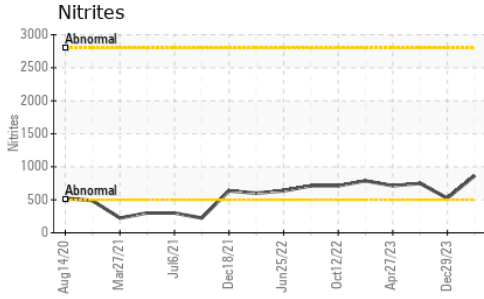
method	limit/base	current	history1	history2
Sodium	ppm	ASTM D6130		4409
Potassium	ppm	ASTM D6130		9

SCALE POTENTIAL

method	limit/base	current	history1	history2
Calcium	ppm	ASTM D6130		29
Magnesium	ppm	ASTM D6130		8

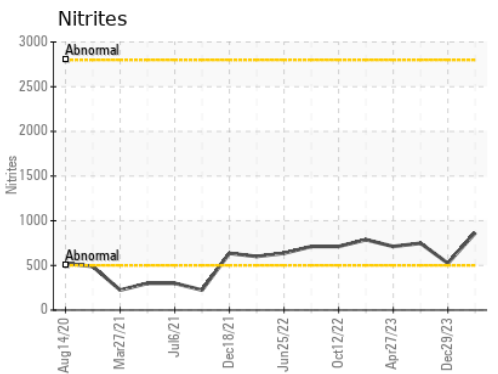
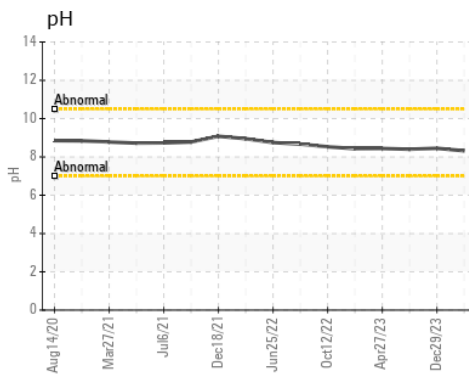
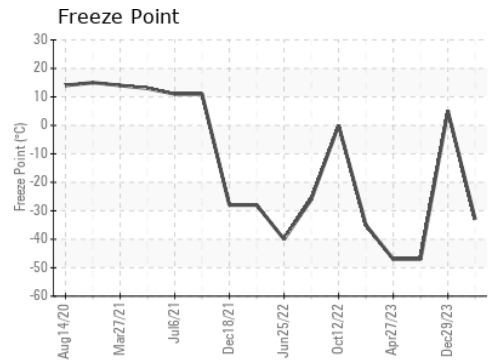
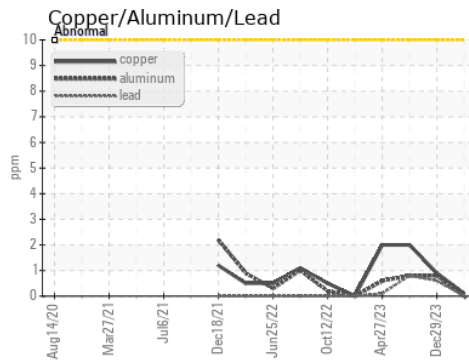
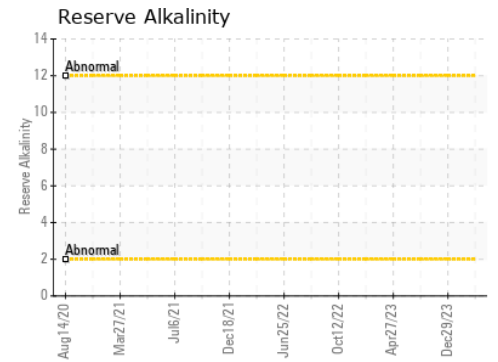
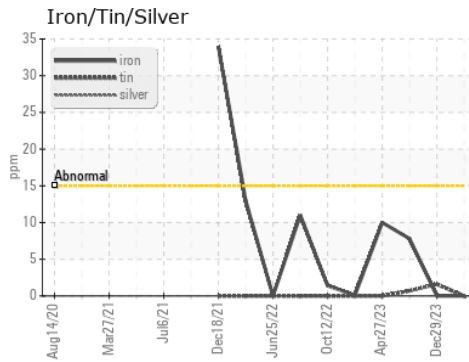


COOLANT REPORT



VISUAL	method	limit/base	current	history1	history2
Coolant Color	*Visual		Red	Red	Red
Coolant Appearance	*Visual	Clear	normal	normal	hazy
Color					
Bottom					

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0805415

Lab Number : 06181903

Unique Number : 11033229

Test Package : COOL- (Additional Tests: BoilingPoint, COOL, GlycolType, ICP, KF)

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)

Received : 16 May 2024

Tested : 24 May 2024

Diagnosed : 24 May 2024 - Jonathan Hester

MARATHON PETROLEUM CO.

101 12TH ST

CATLETTSBURG, KY

US 41169

Contact: M/V CANTON

mvcanton@marathonpetroleum.com

T:

F: