



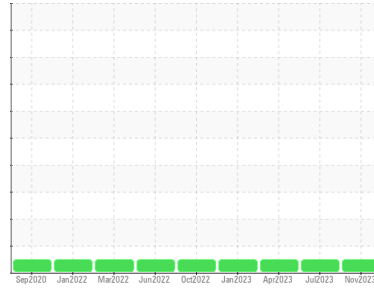
COOLANT REPORT

Sample Rating Trend

NORMAL



Area
Findlay
 Machine Id
[Findlay] 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		WC0804916	WC0769018	WC0735502
Sample Date	Client Info		10 Nov 2023	28 Jul 2023	25 Apr 2023
Machine Age	hrs	Client Info	9884	7914	6214
Oil Age	hrs	Client Info	9884	0	6214
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

PHYSICAL TEST RESULTS

	method	limit/base	current	history1	history2
Specific Gravity	*ASTM D1298		1.060	1.062	1.062
pH	Scale 0-14	ASTM D1287	7.97	8.47	8.41
Nitrites	ppm	AP-053:2009	560	712	636
Reserve Alkalinity	Scale 0-20	*ASTM D1121	---	---	---
Percentage Glycol	%	ASTM D3321	44.1	45.8	45.6
Freezing Point	°F	ASTM D3321	-21	-24	-24
Total Dissolved Solids			284.5	291.0	320.5
Carboxylate			fail	fail	pass

CORROSION INHIBITORS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D6130	0	11	10	6
Phosphorus	ppm	ASTM D6130	0	5	0	0
Boron	ppm	ASTM D6130	0	0	5	0
Molybdenum	ppm	ASTM D6130	950	442	963	1112

CORROSION

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D6130	>15	0	<1	0
Aluminum	ppm	ASTM D6130	>10	<1	<1	0
Copper	ppm	ASTM D6130	>10	1	<1	0
Lead	ppm	ASTM D6130	>10	<1	<1	0
Tin	ppm	ASTM D6130	>10	2	<1	0
Zinc	ppm	ASTM D6130		1	0	0

CONTAMINANTS

	method	limit/base	current	history1	history2	
Chlorine	ppm	ASTM D6130		21	14	5

CARRIER SALTS

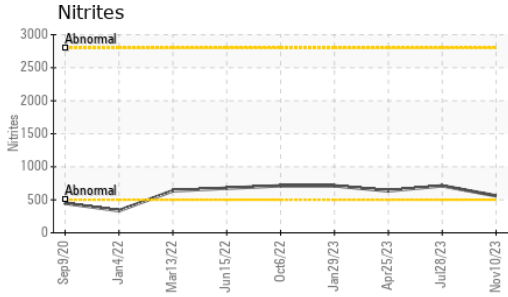
	method	limit/base	current	history1	history2	
Sodium	ppm	ASTM D6130		2718	5478	5841
Potassium	ppm	ASTM D6130		16	1	0

SCALE POTENTIAL

	method	limit/base	current	history1	history2	
Calcium	ppm	ASTM D6130		2	1	2
Magnesium	ppm	ASTM D6130		4	4	5

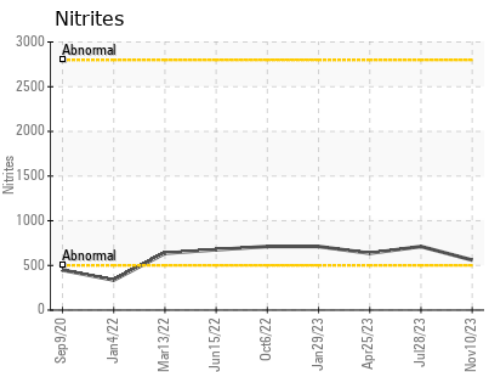
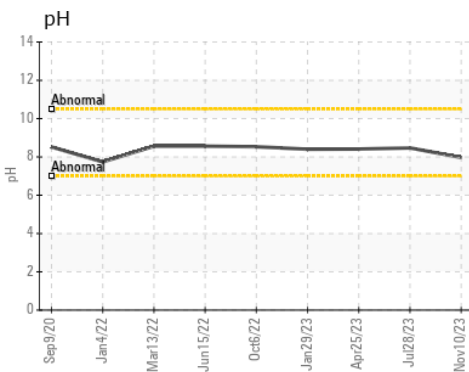
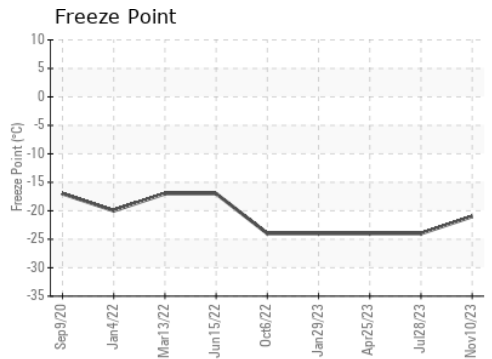
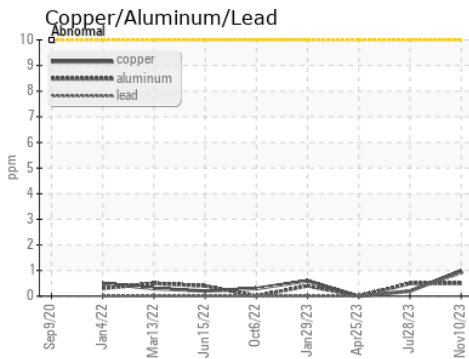
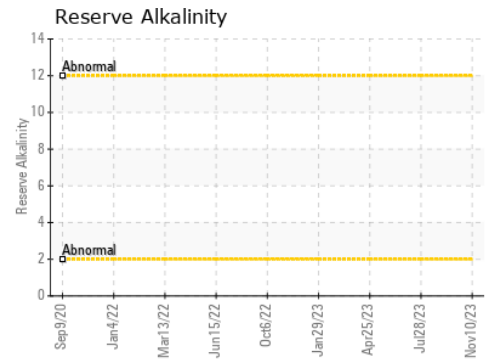
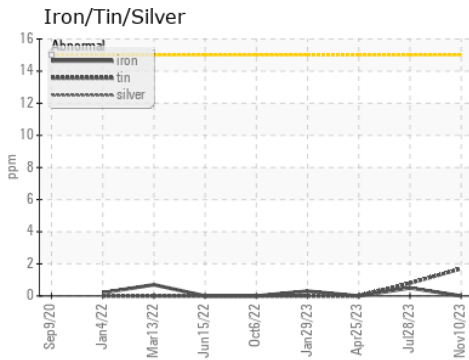


COOLANT REPORT



VISUAL	method	limit/base	current	history1	history2
Coolant Color	*Visual		Red	Red	LtRed
Coolant Appearance	*Visual	Clear	normal	normal	normal
Color				no image	
Bottom				no image	

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0804916 **Received** : 15 Nov 2023
Lab Number : 06008780 **Diagnosed** : 05 Dec 2023
Unique Number : 10742542 **Diagnostician** : Doug Bogart
Test Package : COOL- (Additional Tests: COOL, ICP, KF)

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 US 41169
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 stmccclaskey@marathonpetroleum.com
 T: (606)739-2416
 F: x:

Certificate L2367
 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)