

COOLANT REPORT

Sample Rating Trend



Canton

[Canton] Coolant - Starboard Main Engine (Jacket)

Coolant

CATERPILLAR ELC (--- GAL)

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.

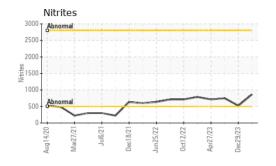
		NUBZOZO MIAI	021 Jul2021 Dec2021	OUNEVEZ OUZUZZ APIEVES		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0805415	WC0769502	WC0735378
Sample Date		Client Info		22 Apr 2024	29 Dec 2023	24 May 2023
Machine Age	hrs	Client Info		0	0	10781
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL
PHYSICAL TEST F	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	8.40
Nitrites	ppm	AP-053:2009		864	524	748
Reserve Alkalinity	Scale 0-20	*ASTM D1121				
Percentage Glycol	%	ASTM D3321		49.6	△ 29.6	55.5
Freezing Point	°F	ASTM D3321		-33	5	-47
Total Dissolved Solids				312.5	237.0	378.0
Carboxylate				fail	fail	pass
CORROSION INH	IBITORS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D6130	0	10	30	34
	le le	71011111 00100	•		00	0-1
Phosphorus	ppm	ASTM D6130	0	0	0	0
Phosphorus Boron			0	0	0 <1	0
•	ppm	ASTM D6130	0	0	0	0
Boron	ppm ppm	ASTM D6130 ASTM D6130	0	0	0 <1	0
Boron Molybdenum	ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130	0 0 950	0 0 106	0 <1 426	0 11 120
Boron Molybdenum CORROSION	ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method	0 0 950 limit/base	0 0 106 current	0 <1 426 history1	0 11 120 history2
Boron Molybdenum CORROSION Iron	ppm ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method ASTM D6130	0 0 950 limit/base >15	0 0 106 current	0 <1 426 history1 0	0 11 120 history2
Boron Molybdenum CORROSION Iron Aluminum	ppm ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method ASTM D6130 ASTM D6130	0 0 950 limit/base >15 >10	0 0 106 current 0	0 <1 426 history1 0 <1	0 11 120 history2 8 <1
Boron Molybdenum CORROSION Iron Aluminum Copper	ppm ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method ASTM D6130 ASTM D6130 ASTM D6130	0 0 950 limit/base >15 >10 >10	0 0 106 current 0 0	0 <1 426 history1 0 <1 <1 <1	0 11 120 history2 8 <1 2
Boron Molybdenum CORROSION Iron Aluminum Copper Lead	ppm ppm ppm ppm ppm ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method ASTM D6130 ASTM D6130 ASTM D6130 ASTM D6130	0 0 950 limit/base >15 >10 >10	0 0 106 current 0 0 <1	0 <1 426 history1 0 <1 <1 <1 <1	0 11 120 history2 8 <1 2
Boron Molybdenum CORROSION Iron Aluminum Copper Lead Tin	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method ASTM D6130 ASTM D6130 ASTM D6130 ASTM D6130 ASTM D6130	0 0 950 limit/base >15 >10 >10	0 0 106 current 0 0 <1	0 <1 426 history1 0 <1 <1 <1 <1 2	0 11 120 history2 8 <1 2 <1 <1
Boron Molybdenum CORROSION Iron Aluminum Copper Lead Tin Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method ASTM D6130 ASTM D6130 ASTM D6130 ASTM D6130 ASTM D6130 ASTM D6130	0 0 950 limit/base >15 >10 >10 >10	0 0 106 current 0 0 <1 0	0 <1 426 history1 0 <1 <1 <1 <1 2 1	0 11 120 history2 8 <1 2 <1 <1 <1
Boron Molybdenum CORROSION Iron Aluminum Copper Lead Tin Zinc CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method ASTM D6130	0 0 950 limit/base >15 >10 >10 >10	0 0 106 current 0 0 <1 0 0 current	0 <1 426 history1 0 <1 <1 <1 <1 <1 2 1 history1	0 11 120 history2 8 <1 2 <1 <1 <1 <1
Boron Molybdenum CORROSION Iron Aluminum Copper Lead Tin Zinc CONTAMINANTS Chlorine	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method ASTM D6130	0 0 950 limit/base >15 >10 >10 >10 >10	0 0 106 current 0 0 <1 0 0 current	0 <1 426 history1 0 <1 <1 <1 <2 1	0 11 120 history2 8 <1 2 <1 <1 <1 history2 123
Boron Molybdenum CORROSION Iron Aluminum Copper Lead Tin Zinc CONTAMINANTS Chlorine CARRIER SALTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D6130 ASTM D6130 Method ASTM D6130 Method ASTM D6130 Method ASTM D6130 Method	0 0 950 limit/base >15 >10 >10 >10 >10	0 0 106 current 0 0 0 <1 0 0 0 current 61	0 <1 426 history1 0 <1 <1 <1 <2 1	0 11 120 history2 8 <1 2 <1 <1 <1 <1 history2 123 history2
Boron Molybdenum CORROSION Iron Aluminum Copper Lead Tin Zinc CONTAMINANTS Chlorine CARRIER SALTS Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D6130 ASTM D6130 ASTM D6130 method ASTM D6130	0 0 950 limit/base >15 >10 >10 >10 >10	0 0 106 current 0 0 0 <1 0 0 0 current 61 current 4409	0 <1 426 history1 0 <1 <1 <1 2 1 history1 25 history1 2620	0 11 120 history2 8 <1 2 <1 <1 <1 <1 history2 123 history2 7037

Magnesium

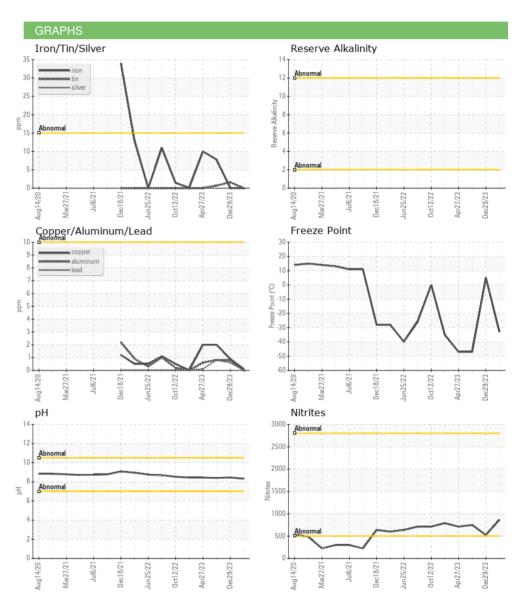
ppm ASTM D6130



COOLANT REPORT



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







Certificate 12367

Laboratory Sample No.

: WC0805415 Lab Number : 06181903 Unique Number : 11033229

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

: 16 May 2024 : 24 May 2024 Diagnosed

: 24 May 2024 - Jonathan Hester Test Package : COOL- (Additional Tests: BoilingPoint, COOL, GlycolType, ICP, KF)

MARATHON PETROLEUM CO. 101 12TH ST CATLETTSBURG, KY US 41169 Contact: M/V CANTON

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. mvcanton@marathonpetroleum.com T: F:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)