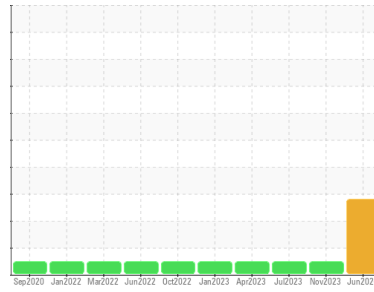




COOLANT REPORT

Sample Rating Trend



OFF SPEC



Area

Findlay

Machine Id

[Findlay] Coolant - Starboard Main Engine (Jacket)

Component

Coolant

Fluid

CATERPILLAR ELC (35 GAL)

DIAGNOSIS

▲ Recommendation

We recommend that you perform a partial drain and top off with straight antifreeze to increase level of glycol.

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. The glycol level is lower than acceptable. The nitrite level is acceptable. The pH level of this fluid is within the acceptable limits.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0874649	WC0804916	WC0769018
Sample Date	Client Info	18 Jun 2024	10 Nov 2023	28 Jul 2023
Machine Age	hrs	14075	9884	7914
Oil Age	hrs	14075	9884	0
Oil Changed	Client Info	Oil Added	N/A	N/A
Sample Status		ABNORMAL	NORMAL	NORMAL

PHYSICAL TEST RESULTS

method	limit/base	current	history1	history2
Glycol Type	FT-IR	---	---	---
Specific Gravity	*ASTM D1298	1.038	1.060	1.062
pH	Scale 0-14	8.43	7.97	8.47
Nitrites	ppm	560	560	712
Reserve Alkalinity	Scale 0-20	---	---	---
Percentage Glycol	%	▲ 28.3	44.1	45.8
Freezing Point	°F	7	-21	-24
Total Dissolved Solids		223.5	284.5	291.0
Carboxylate		fail	fail	fail

CORROSION INHIBITORS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D6130	0	1	11	10
Phosphorus	ppm	ASTM D6130	0	0	5	0
Boron	ppm	ASTM D6130	0	0	0	5
Molybdenum	ppm	ASTM D6130	950	341	442	963

CORROSION

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

CONTAMINANTS

method	limit/base	current	history1	history2		
Chlorine	ppm	ASTM D6130		17	21	14

CARRIER SALTS

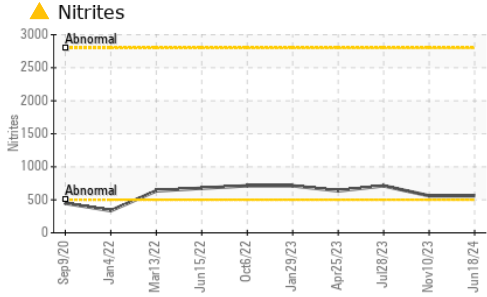
method	limit/base	current	history1	history2		
Sodium	ppm	ASTM D6130		2348	2718	5478
Potassium	ppm	ASTM D6130		4	16	1

SCALE POTENTIAL

method	limit/base	current	history1	history2		
Calcium	ppm	ASTM D6130		14	2	1
Magnesium	ppm	ASTM D6130		6	4	4

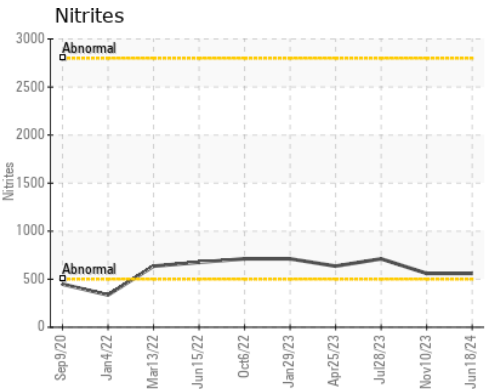
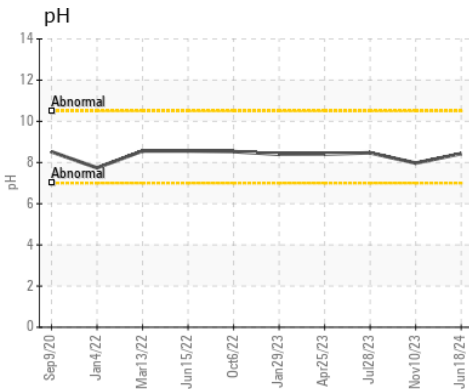
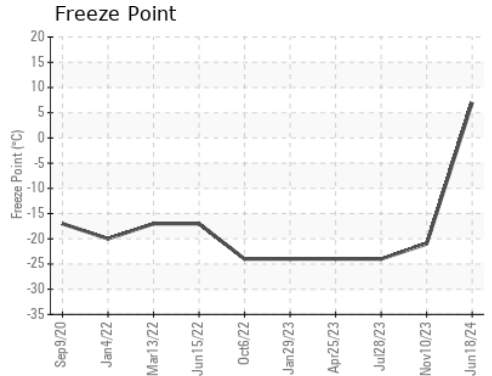
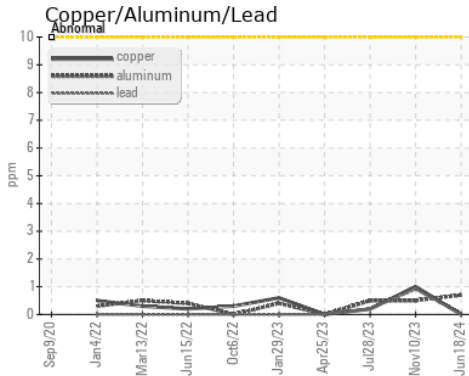
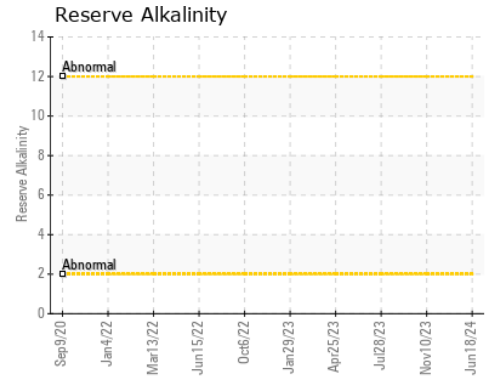
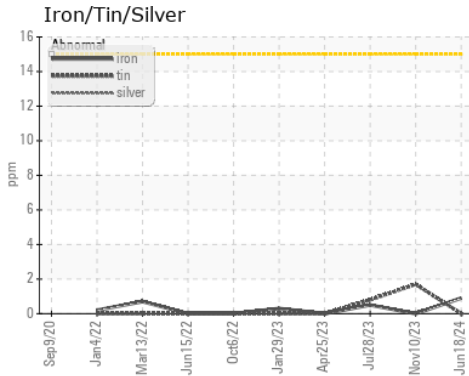


COOLANT REPORT



VISUAL	method	limit/base	current	history1	history2
Coolant Color	*Visual		Red	Red	Red
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. : WC0874649 **Received** : 25 Jun 2024
Lab Number : 06220312 **Tested** : 27 Jun 2024
Unique Number : 11098509 **Diagnosed** : 27 Jun 2024 - Jonathan Hester
Test Package : COOL- (Additional Tests: GlycolType, ICP, KF)

MARATHON PETROLEUM CO.
 101 12TH ST
 CATLETTSBURG, KY
 US 41169
 Contact: SHAWN MCCLASKEY
 stmccaskey@marathonpetroleum.com

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)