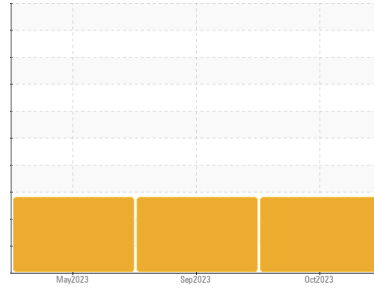




COOLANT REPORT

Sample Rating Trend

OFF SPEC



Area
West Virginia

Machine Id
[West Virginia] Coolant - Starboard Main Engine (Aftercooler)

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. (Customer Sample Comment: Thurman Richardson)

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

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0805459	WC0805327	WC0735416
Sample Date	Client Info		27 Oct 2023	02 Sep 2023	15 May 2023
Machine Age	hrs	Client Info	39066	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

PHYSICAL TEST RESULTS

	method	limit/base	current	history1	history2
Specific Gravity	*ASTM D1298		1.031	1.032	1.031
pH	Scale 0-14	ASTM D1287	8.47	8.44	8.36
Nitrites	ppm	AP-053:2009	900	300	336
Reserve Alkalinity	Scale 0-20	*ASTM D1121	---	---	---
Percentage Glycol	%	ASTM D3321	▲ 24.1	▲ 24.2	▲ 24.1
Freezing Point	°F	ASTM D3321	11	11	11
Total Dissolved Solids			193.0	166.5	172.0
Carboxylate			fail	fail	fail

CORROSION INHIBITORS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D6130	0	1	6
Phosphorus	ppm	ASTM D6130	0	<1	0
Boron	ppm	ASTM D6130	0	0	4
Molybdenum	ppm	ASTM D6130	950	193	383

CORROSION

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

CONTAMINANTS

	method	limit/base	current	history1	history2
Chlorine	ppm	ASTM D6130		41	76

CARRIER SALTS

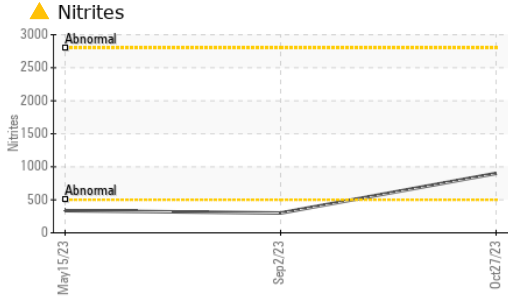
	method	limit/base	current	history1	history2
Sodium	ppm	ASTM D6130		1540	2904
Potassium	ppm	ASTM D6130		917	1914

SCALE POTENTIAL

	method	limit/base	current	history1	history2
Calcium	ppm	ASTM D6130		33	61
Magnesium	ppm	ASTM D6130		8	16

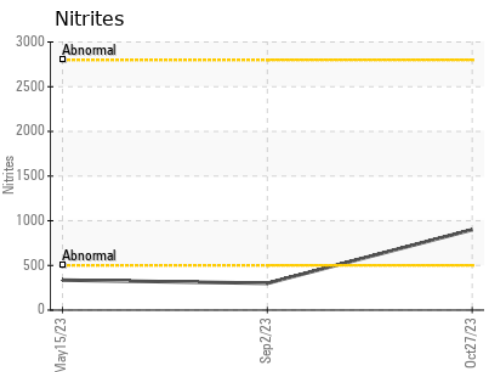
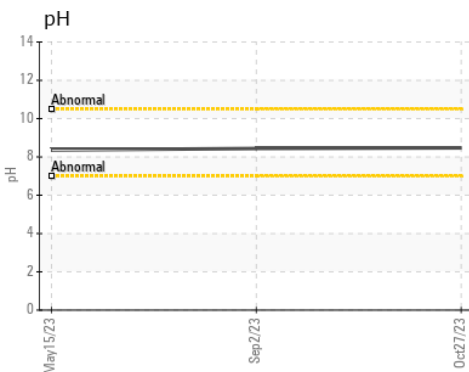
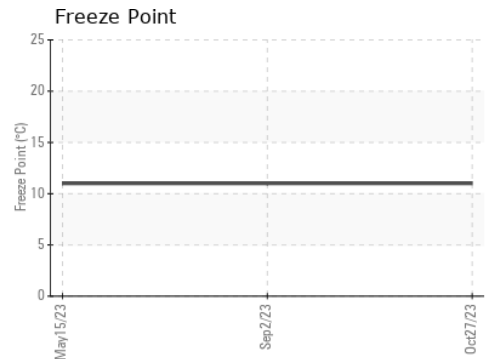
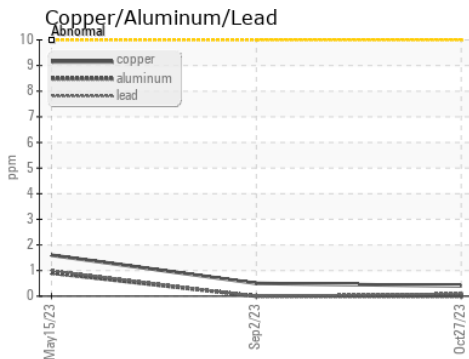
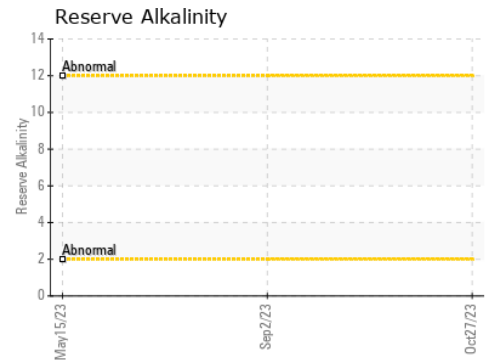
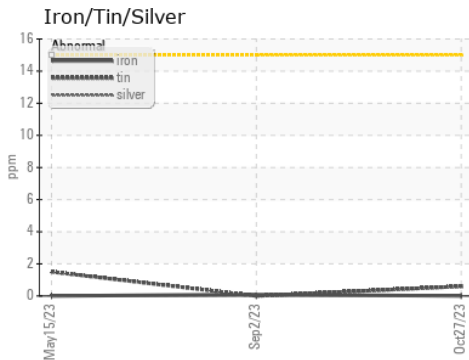


COOLANT REPORT



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

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0805459 **Received** : 01 Nov 2023
Lab Number : 05996134 **Diagnosed** : 06 Nov 2023
Unique Number : 10724494 **Diagnostician** : Jonathan Hester
Test Package : COOL- (Additional Tests: COOL, ICP, KF)

MARATHON PETROLEUM CO.
 101 12TH ST
 CATLETTSBURG, KY
 US 41169
 Contact: SHAWN MCCLASKEY
 stmccclaskey@marathonpetroleum.com
 T: (606)739-2416
 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)