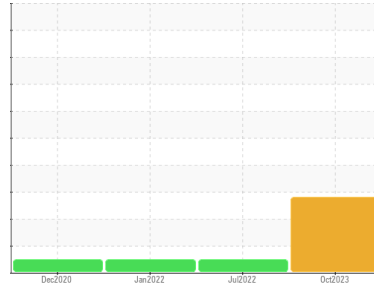




COOLANT REPORT

Sample Rating Trend

OFF SPEC



Area
Texas City
 Machine Id
[Texas City] Coolant - Starboard Main Engine
 Component
Coolant
 Fluid
CONVENTIONAL COOLANT (--- 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 pH level of this fluid is within the acceptable limits.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0735762	WC0659704	WC0621598
Sample Date	Client Info	16 Oct 2023	07 Jul 2022	20 Jan 2022
Machine Age	hrs	10855	6296	10855
Oil Age	hrs	10855	6296	0
Oil Changed	Client Info	N/A	Not Changd	N/A
Sample Status		ABNORMAL	NORMAL	NORMAL

PHYSICAL TEST RESULTS

method	limit/base	current	history1	history2
Specific Gravity	*ASTM D1298	1.000	1.088	---
pH	Scale 0-14 ASTM D1287	7.57	7.29	9.37
Nitrites	ppm AP-053:2009	260	224	1764
Reserve Alkalinity	Scale 0-20 *ASTM D1121	---	---	---
Percentage Glycol	% ASTM D3321	▲ 2.1	68.6	8.7
Freezing Point	°F ASTM D3321	---	-66	26
Total Dissolved Solids		80.0	304.0	321.5
Carboxylate		fail	fail	pass

CORROSION INHIBITORS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D6130	89	106	204
Phosphorus	ppm ASTM D6130	24	332	275
Boron	ppm ASTM D6130	15	781	201
Molybdenum	ppm ASTM D6130	45	17	170

CORROSION

method	limit/base	current	history1	history2
Iron	ppm ASTM D6130 >15	1	0	<1
Aluminum	ppm ASTM D6130 >10	1	0	0
Copper	ppm ASTM D6130 >10	1	12	1
Lead	ppm ASTM D6130 >10	<1	0	<1
Tin	ppm ASTM D6130 >10	<1	<1	0
Zinc	ppm ASTM D6130	0	0	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Chlorine	ppm ASTM D6130	71	31	138

CARRIER SALTS

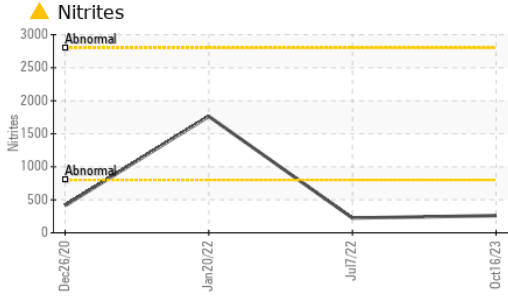
method	limit/base	current	history1	history2
Sodium	ppm ASTM D6130	691	1351	1901
Potassium	ppm ASTM D6130	180	1206	638

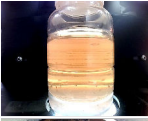
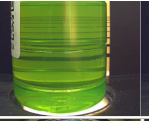
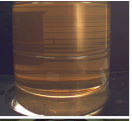



SCALE POTENTIAL

method	limit/base	current	history1	history2
Calcium	ppm ASTM D6130	2	0	1
Magnesium	ppm ASTM D6130	1	<1	<1

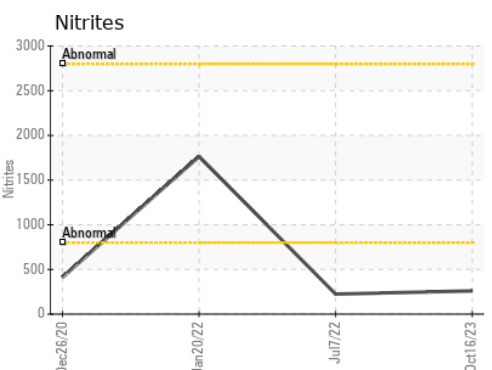
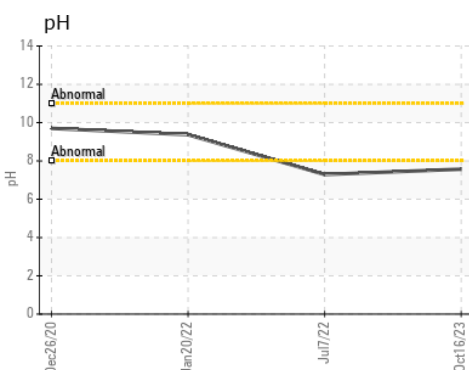
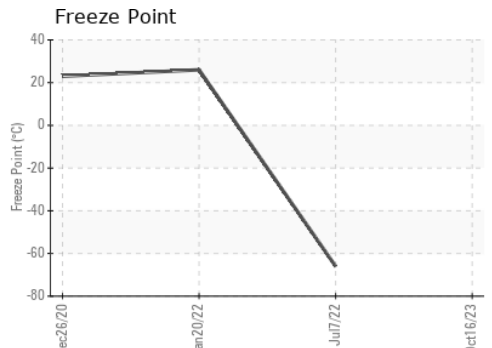
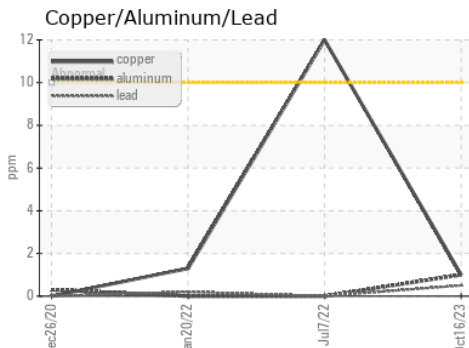
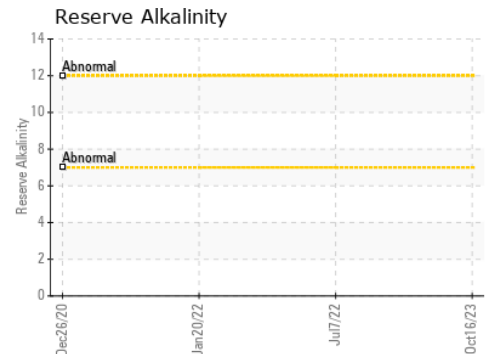
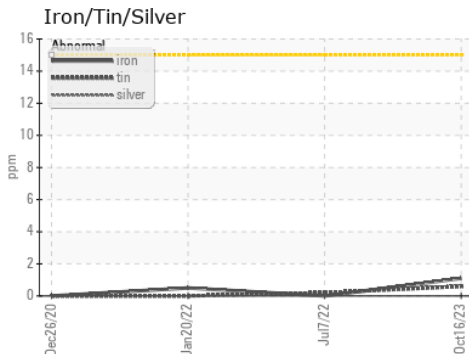


COOLANT REPORT



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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0735762 **Received** : 06 Nov 2023
Lab Number : 05999507 **Diagnosed** : 15 Nov 2023
Unique Number : 10727867 **Diagnostician** : Doug Bogart
Test Package : COOL- (Additional Tests: COOL, ICP, KF)

MARATHON PETROLEUM CO.
 101 12TH ST
 CATLETTSBURG, KY
 US 41169
 Contact: CORY GUMBERT
 cagumbert@marathonpetroleum.com
 T: (606)585-3950
 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)