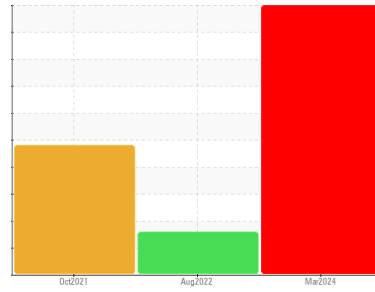




COOLANT REPORT

Sample Rating Trend



WEAR



Area
Catlettsburg
 Machine Id
[Catlettsburg] Coolant - Starboard Main Engine
 Component
Coolant
 Fluid
HYBRID (HOAT) COOLANT (--- GAL)

DIAGNOSIS

▲ Recommendation

We recommend drain/flush system, and refill with 50/50 antifreeze water mixture. We advise that you replenish the supplemental coolant additives (SCAs) and add per manufacturer's recommendations.

▲ Corrosion

The iron level is severe.

▲ Contaminants

There is a moderate concentration of oil present in the coolant.

▲ Coolant Condition

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		WC0769555	WC0683572	RP0020057
Sample Date	Client Info		30 Mar 2024	02 Aug 2022	03 Oct 2021
Machine Age	hrs	Client Info	22339	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Oil Added	N/A	N/A
Sample Status			SEVERE	SEVERE	SEVERE

PHYSICAL TEST RESULTS

	method	limit/base	current	history1	history2
Glycol Type	FT-IR		---	---	---
Specific Gravity	*ASTM D1298		1.000	1.000	---
pH	Scale 0-14 ASTM D1287		9.20	9.69	9.68
Nitrites	ppm AP-053:2009		824	900	712
Reserve Alkalinity	Scale 0-20 *ASTM D1121		---	---	---
Percentage Glycol	% ASTM D3321		▲ 0.0	1.3	▲ 1.0
Freezing Point	°F ASTM D3321		▲ 32	---	▲ +31
Total Dissolved Solids			61.0	258.0	235.5
Carboxylate			fail	pass	fail

CORROSION INHIBITORS

	method	limit/base	current	history1	history2
Silicon	ppm ASTM D6130		69	335	---
Phosphorus	ppm ASTM D6130		<1	0	---
Boron	ppm ASTM D6130		99	1032	---
Molybdenum	ppm ASTM D6130		18	<1	---

CORROSION

	method	limit/base	current	history1	history2
Iron	ppm ASTM D6130	>15	▲ 59	10	---
Aluminum	ppm ASTM D6130	>10	1	<1	---
Copper	ppm ASTM D6130	>10	2	<1	---
Lead	ppm ASTM D6130	>10	2	0	---
Tin	ppm ASTM D6130	>10	<1	0	---
Zinc	ppm ASTM D6130		<1	0	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Chlorine	ppm ASTM D6130		47	128	---

CARRIER SALTS

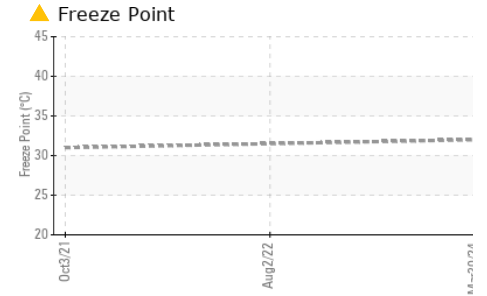
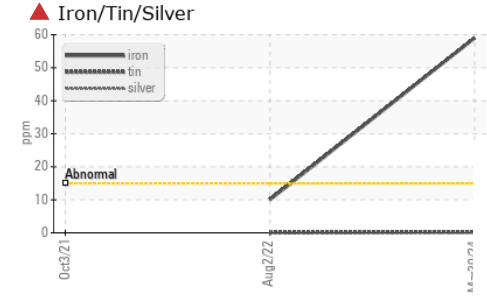
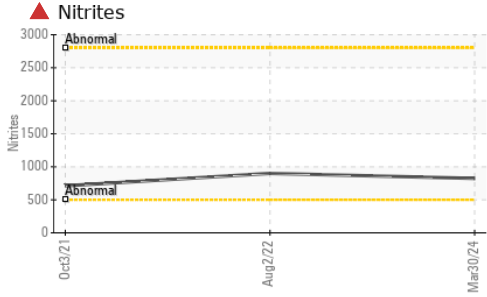
	method	limit/base	current	history1	history2
Sodium	ppm ASTM D6130		699	2464	---
Potassium	ppm ASTM D6130		14	22	---

SCALE POTENTIAL

	method	limit/base	current	history1	history2
Calcium	ppm ASTM D6130		18	30	---
Magnesium	ppm ASTM D6130		10	3	---

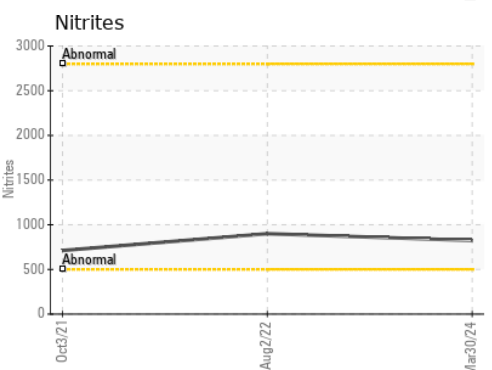
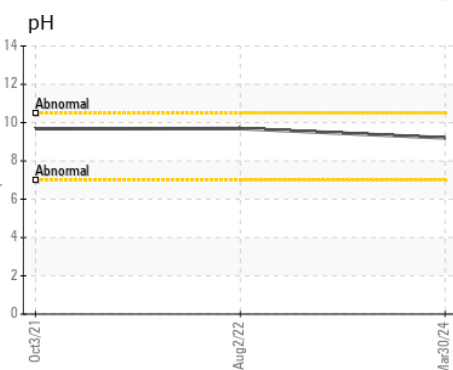
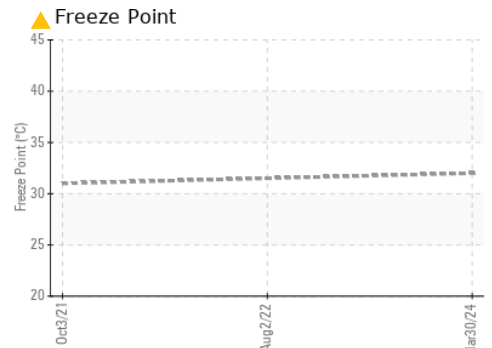
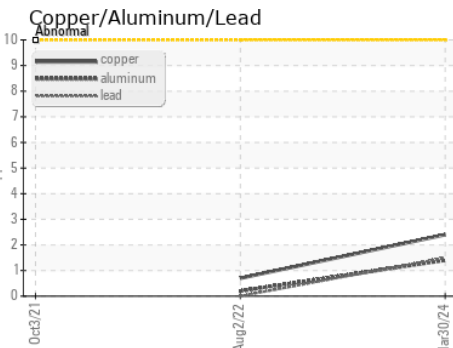
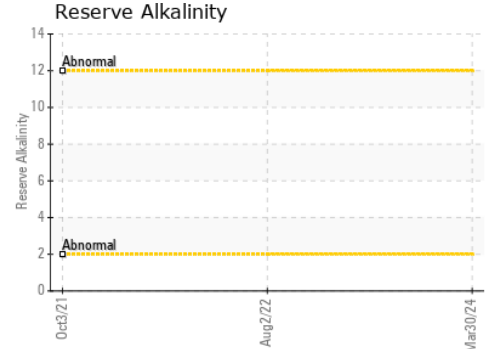
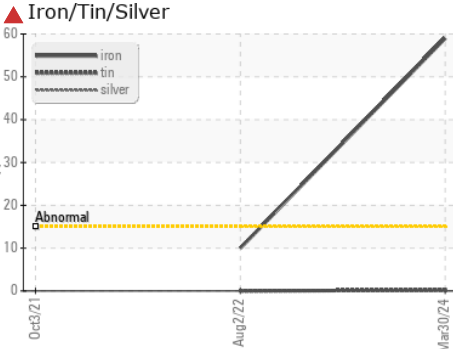


COOLANT REPORT



VISUAL	method	limit/base	current	history1	history2
Coolant Color	*Visual		Brown	Clear	Yellow
Coolant Appearance	*Visual	Clear	▲ oil	▲ sediment	▲ sediment
Color					
Bottom					

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0769555 **Received** : 05 Apr 2024
Lab Number : 06140435 **Tested** : 10 Apr 2024
Unique Number : 10965243 **Diagnosed** : 10 Apr 2024 - Jonathan Hester
Test Package : COOL- (Additional Tests: BoilingPoint, COOL, GlycolType, ICP)

MARATHON PETROLEUM CO.
 101 12TH ST
 CATLETTSBURG, KY
 US 41169
 Contact: Barry Bridges
 babridges@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)