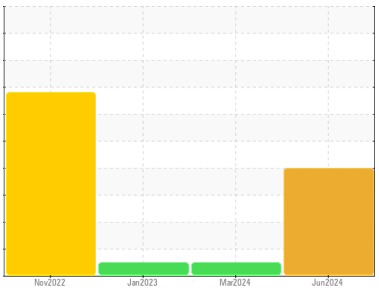
COOLANT REPORT

Sample Rating Trend



OFF SPEC

Area
Detroit
Machine Id
[Detroit] Coolant - Port Main Engine (Jacket)
Component
Coolant
Fluid
CATERPILLAR ELC (--- GAL)

DIAGNOSIS

Recommendation
We recommend drain/flush system, and refill with 50/50 antifreeze water mixture. We advise an early resample to confirm this situation.

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 pH is low indicating a high acidity of the fluid. The glycol level is lower than acceptable. Confirm coolant type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0804769**	WC0804782	WC0731924
Sample Date		Client Info		**03 Jun 2024**	25 Mar 2024	30 Jan 2023
Machine Age	hrs	Client Info		**20920**	19472	0
Oil Age	hrs	Client Info		**0**	19472	0
Oil Changed		Client Info		**Not Changd**	Not Changd	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

PHYSICAL TEST RESULTS		method	limit/base	current	history1	history2
Glycol Type		FT-IR		**---**	---	---
Specific Gravity		*ASTM D1298		**1.000**	1.048	1.043
pH	Scale 0-14	ASTM D1287		▲ **6.50**	8.60	9.13
Nitrites	ppm	AP-053:2009		**412**	524	300
Reserve Alkalinity	Scale 0-20	*ASTM D1121		**---**	---	---
Percentage Glycol	%	ASTM D3321		▲ **3.7**	35.1	31.9
Freezing Point	°F	ASTM D3321		**30**	-3	3
Total Dissolved Solids				**43.0**	266.5	208.5
Carboxylate				**fail**	fail	fail

CORROSION INHIBITORS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D6130	0	**3**	16	58
Phosphorus	ppm	ASTM D6130	0	**0**	3	30
Boron	ppm	ASTM D6130	0	**0**	7	23
Molybdenum	ppm	ASTM D6130	950	**0**	548	596

CORROSION		method	limit/base	current	history1	history2
Iron	ppm	ASTM D6130	>15	**7**	10	13
Aluminum	ppm	ASTM D6130	>10	**0**	<1	1
Copper	ppm	ASTM D6130	>10	**0**	1	1
Lead	ppm	ASTM D6130	>10	**0**	<1	1
Tin	ppm	ASTM D6130	>10	**0**	<1	1
Zinc	ppm	ASTM D6130		**0**	0	1

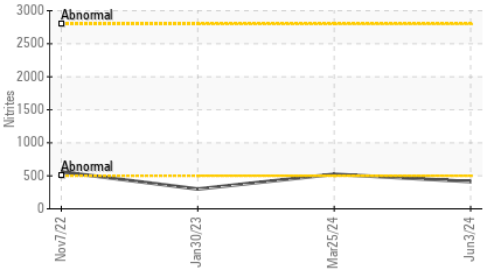
CONTAMINANTS		method	limit/base	current	history1	history2
Chlorine	ppm	ASTM D6130		**31**	16	57

CARRIER SALTS		method	limit/base	current	history1	history2
Sodium	ppm	ASTM D6130		**352**	3467	5389
Potassium	ppm	ASTM D6130		**11**	246	359

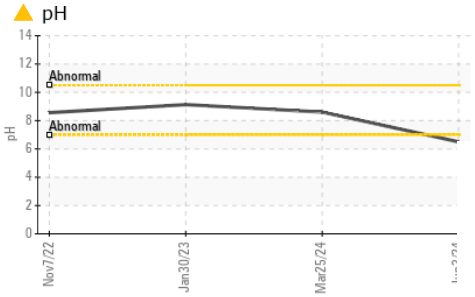
SCALE POTENTIAL		method	limit/base	current	history1	history2
Calcium	ppm	ASTM D6130		**57**	25	10
Magnesium	ppm	ASTM D6130		**9**	5	3

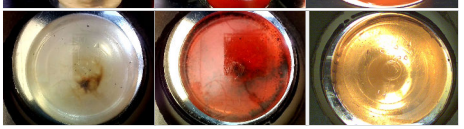
COOLANT REPORT

Nitrites



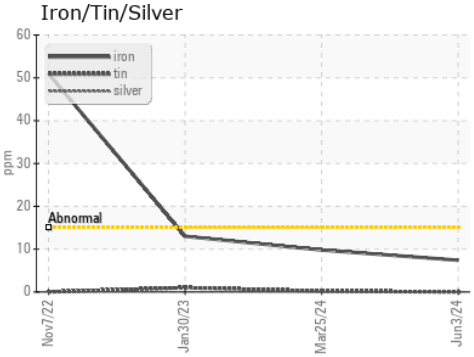
pH



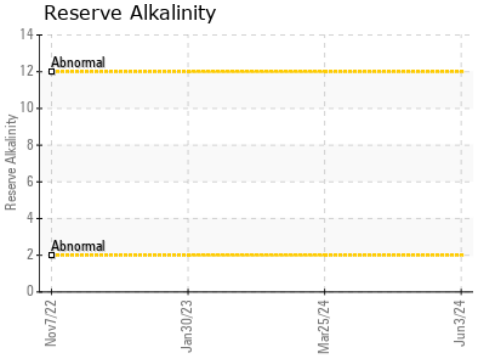
VISUAL		method	limit/base	current	history1	history2
Coolant Color		*Visual		**Clear**	Red	Orange
Coolant Appearance		*Visual	Clear	**normal**	normal	normal
Color						
Bottom						

GRAPHS

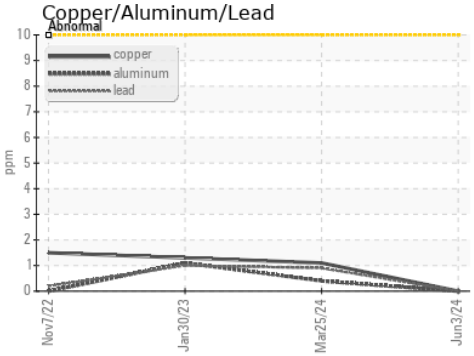
Iron/Tin/Silver



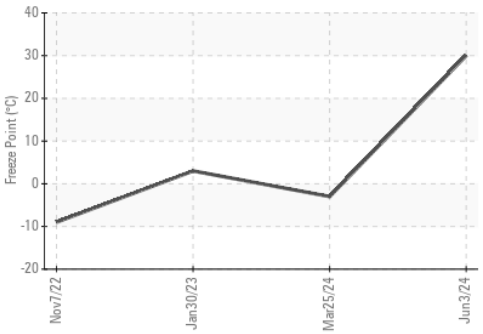
Reserve Alkalinity



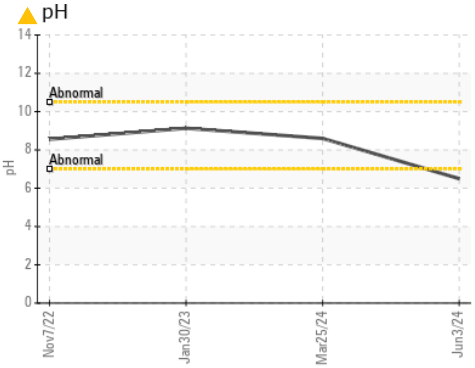
Copper/Aluminum/Lead



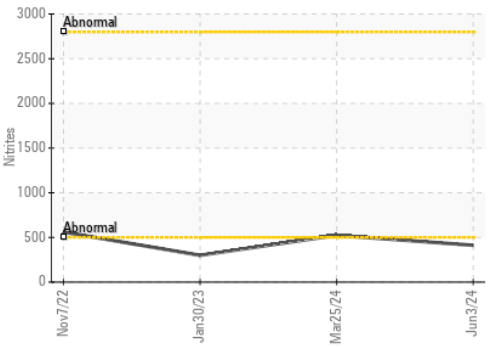
Freeze Point



pH



Nitrites



ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0804769
Lab Number : 06220315
Unique Number : 11098512
Test Package : COOL- (Additional Tests: GlycolType, ICP, KF)

Received : 25 Jun 2024
Tested : 16 Jul 2024
Diagnosed : 16 Jul 2024 - Doug Bogart

MARATHON PETROLEUM CO.
101 12TH ST
CATLETTSBURG, KY
US 41169
Contact: CORY GUMBERT
cagumbert@marathonpetroleum.com
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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)

Report Id: MARCAT [WUSCAR] 06220315 (Generated: 07/16/2024 14:49:45) Rev: 1

Submitted By: M/V DETROIT