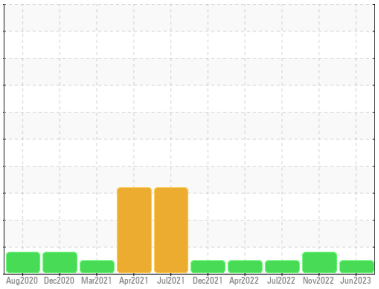
COOLANT REPORT

Sample Rating Trend



NORMAL

Area
Nashville
Machine Id
[Nashville] Coolant - Starboard Main Engine
Component
Coolant
Fluid
CATERPILLAR ELC (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. The fluid is suitable for further service.

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0683262**	WC0683344	RP0016007
Sample Date		Client Info		**13 Jun 2023**	27 Nov 2022	11 Jul 2022
Machine Age	hrs	Client Info		**0**	50768	47998
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**NORMAL**	ABNORMAL	NORMAL

PHYSICAL TEST RESULTS		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		**1.054**	1.054	1.054
pH	Scale 0-14	ASTM D1287		**8.81**	8.87	8.91
Nitrites	ppm	AP-053:2009		**336**	524	412
Reserve Alkalinity	Scale 0-20	*ASTM D1121		**---**	---	---
Percentage Glycol	%	ASTM D3321		**39.9**	40.0	39.4
Freezing Point	°F	ASTM D3321		**-11**	-13	-11
Total Dissolved Solids				**264.0**	265.5	287.5
Carboxylate				**fail**	pass	fail

CORROSION INHIBITORS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D6130	0	**4**	26	18
Phosphorus	ppm	ASTM D6130	0	**0**	0	0
Boron	ppm	ASTM D6130	0	**33**	72	48
Molybdenum	ppm	ASTM D6130	950	**787**	817	812

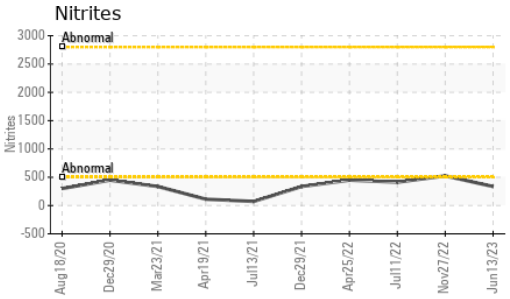
CORROSION		method	limit/base	current	history1	history2
Iron	ppm	ASTM D6130	>15	**0**	2	0
Aluminum	ppm	ASTM D6130	>10	**0**	<1	0
Copper	ppm	ASTM D6130	>10	**<1**	2	1
Lead	ppm	ASTM D6130	>10	**0**	1	0
Tin	ppm	ASTM D6130	>10	**0**	1	0
Zinc	ppm	ASTM D6130		**0**	<1	0

CONTAMINANTS		method	limit/base	current	history1	history2
Chlorine	ppm	ASTM D6130		**0**	46	30

CARRIER SALTS		method	limit/base	current	history1	history2
Sodium	ppm	ASTM D6130		**5081**	5726	2360
Potassium	ppm	ASTM D6130		**0**	19	11

SCALE POTENTIAL		method	limit/base	current	history1	history2
Calcium	ppm	ASTM D6130		**18**	14	13
Magnesium	ppm	ASTM D6130		**3**	4	3

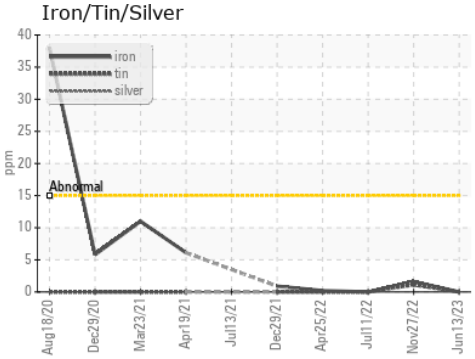
COOLANT REPORT



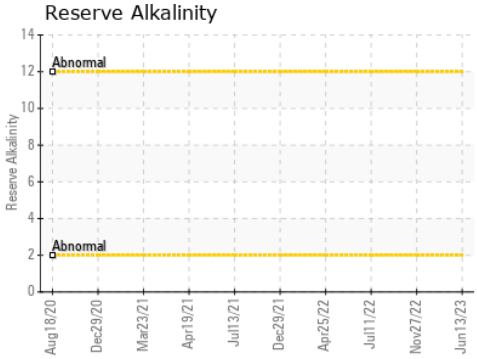
VISUAL		method	limit/base	current	history1	history2
Coolant Color		*Visual		**Red**	Red	Orange
Coolant Appearance		*Visual	Clear	**normal**	▲ oil	normal
Color						
Bottom						

GRAPHS

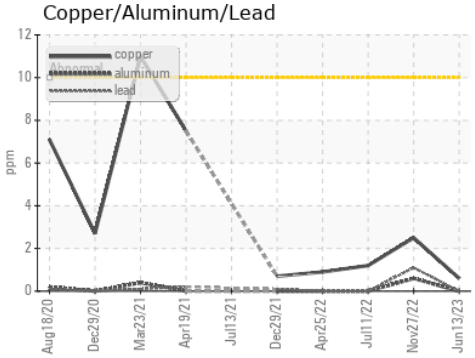
Iron/Tin/Silver



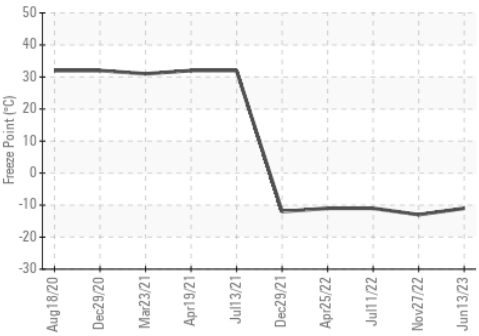
Reserve Alkalinity



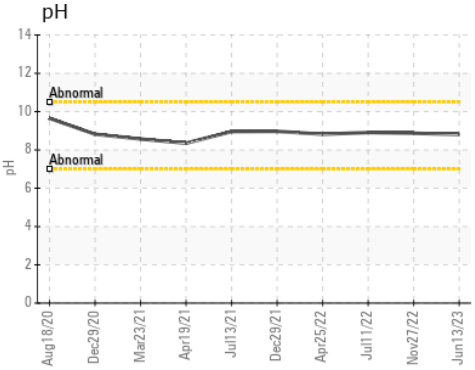
Copper/Aluminum/Lead



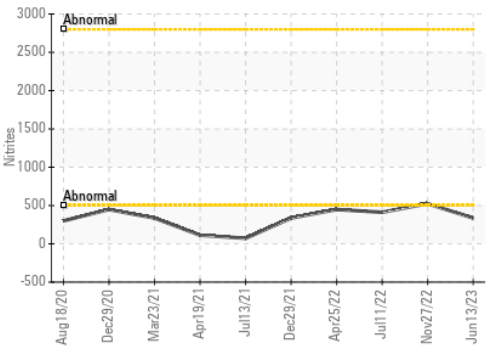
Freeze Point



pH



Nitrites



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0683262 **Received** : 22 Jun 2023
Lab Number : 05881237 **Diagnosed** : 28 Jun 2023
Unique Number : 10526340 **Diagnostician** : Jonathan Hester
Test Package : COOL- (Additional Tests: COOL, ICP)

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)

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Report Id: MARCAT [WUSCAR] 05881237 (Generated: 11/06/2023 10:29:18) Rev: 1

Submitted By: M/V NASHVILLE