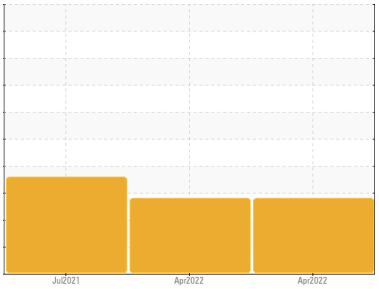
OIL ANALYSIS REPORT

Area
PORTABLE
Machine Id
CATERPILLAR AP-G-70110 CAT 800KW Generator
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (26 GAL)

Sample Rating Trend



DIRT

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

Contamination
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0469443**	WC0552824	WC05301801
Sample Date		Client Info		**22 Apr 2022**	10 Apr 2022	06 Jul 2021
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	476	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	1.7	▲ 3.2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**35**	31	18
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**0**	0	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	0	<1
Silver	ppm	ASTM D5185m	>2	**<1**	1	<1
Aluminum	ppm	ASTM D5185m	>25	**2**	2	0
Lead	ppm	ASTM D5185m	>40	**14**	14	8
Copper	ppm	ASTM D5185m	>330	▲ **582**	▲ 522	▲ 540
Tin	ppm	ASTM D5185m	>15	**3**	3	2
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**21**	21	55
Barium	ppm	ASTM D5185m	10	**0**	0	2
Molybdenum	ppm	ASTM D5185m	100	**32**	30	34
Manganese	ppm	ASTM D5185m		**3**	3	3
Magnesium	ppm	ASTM D5185m	450	**551**	544	527
Calcium	ppm	ASTM D5185m	3000	**1075**	977	989
Phosphorus	ppm	ASTM D5185m	1150	**692**	673	651
Zinc	ppm	ASTM D5185m	1350	**832**	648	780
Sulfur	ppm	ASTM D5185m	4250	**1879**	1777	1920

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **48**	▲ 43	▲ 43
Sodium	ppm	ASTM D5185m	>44	**40**	37	41
Potassium	ppm	ASTM D5185m	>20	**2**	0	1
Glycol	%	*ASTM D2982		**NEG**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.2**	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**9.4**	9.8	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**26.0**	25.9	23.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**26.3**	26.2	23.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**8.67**	5.90	7.15

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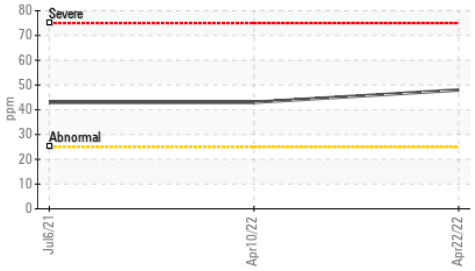
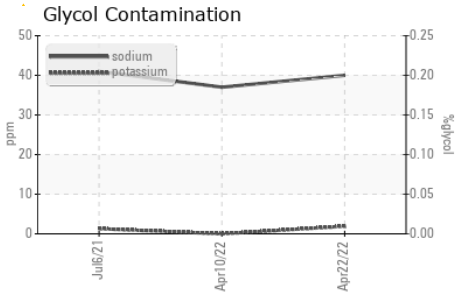
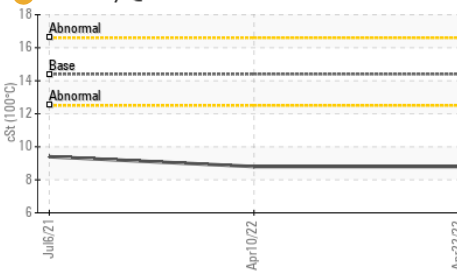
Silicon (ppm)



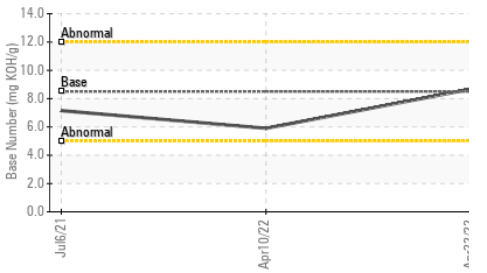
Glycol Contamination



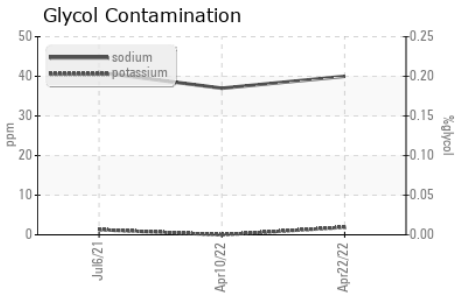
Viscosity @ 100°C



Base Number



Glycol Contamination

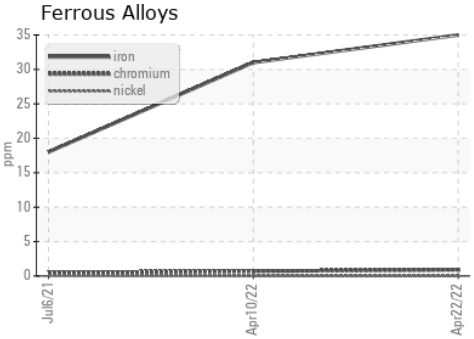


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

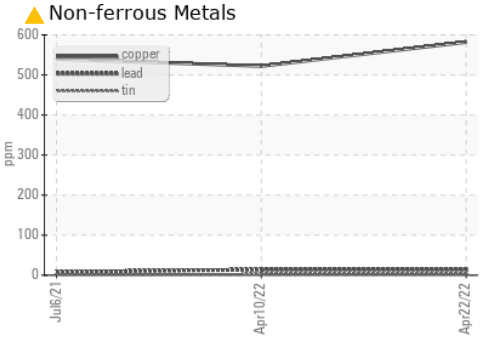
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	**8.8**	8.8	9.4

GRAPHS

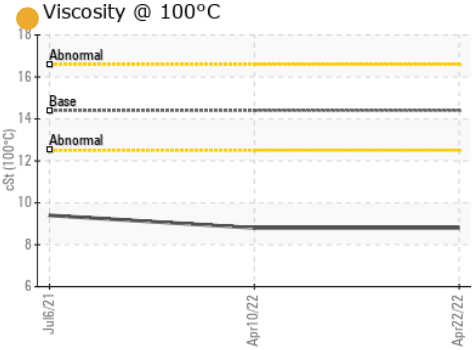
Ferrous Alloys



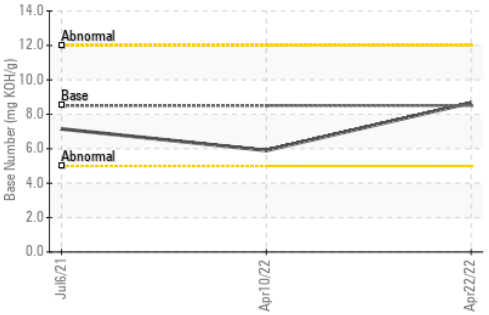
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0469443 **Received** : 27 Apr 2022
Lab Number : 05530566 **Tested** : 29 Apr 2022
Unique Number : 9954855 **Diagnosed** : 29 Apr 2022 - Jonathan Hester
Test Package : IND 2 (Additional Tests: Glycol, PrtCount)

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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