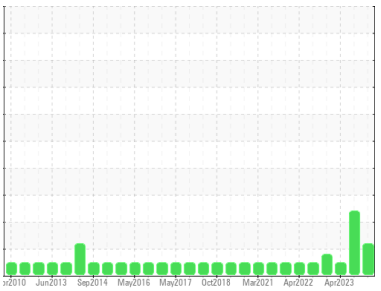
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Area
OKLAHOMA/102/EG - CRANE
Machine Id
22.65L [OKLAHOMA^102^EG - CRANE]
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: 11537 hours)

Wear
All component wear rates are normal.

Contamination
Sodium and/or potassium levels remain high. Test for glycol is negative.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0925191**	WC0857418	WC0746783
Sample Date		Client Info		**06 Jul 2024**	26 Oct 2023	03 Apr 2023
Machine Age	hrs	Client Info		**11537**	1297	10998
Oil Age	hrs	Client Info		**277**	299	10721
Oil Changed		Client Info		**N/A**	Changed	N/A
Sample Status				**ATTENTION**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**4**	7	10
Chromium	ppm	ASTM D5185m	>20	**2**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**<1**	<1	<1
Lead	ppm	ASTM D5185m	>40	**12**	17	<1
Copper	ppm	ASTM D5185m	>330	**52**	63	0
Tin	ppm	ASTM D5185m	>15	**0**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**24**	21	59
Barium	ppm	ASTM D5185m	0	**0**	0	2
Molybdenum	ppm	ASTM D5185m	0	**70**	72	39
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**485**	461	458
Calcium	ppm	ASTM D5185m		**1788**	1461	1574
Phosphorus	ppm	ASTM D5185m		**815**	645	731
Zinc	ppm	ASTM D5185m		**906**	823	874
Sulfur	ppm	ASTM D5185m		**3053**	2259	2533

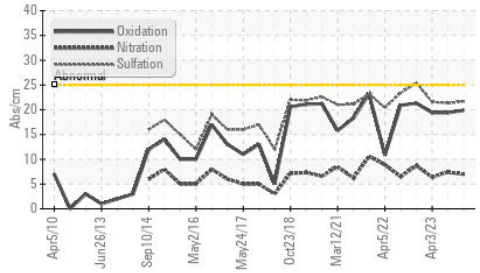
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**4**	5	3
Sodium	ppm	ASTM D5185m		● **148**	▲ 178	4
Potassium	ppm	ASTM D5185m	>20	**18**	17	<1
Fuel	%	ASTM D3524	>5	**<1.0**	▲ 2.2	<1.0
Glycol	%	*ASTM D2982		**NEG**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.1**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**7.0**	7.4	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.7**	21.3	21.6

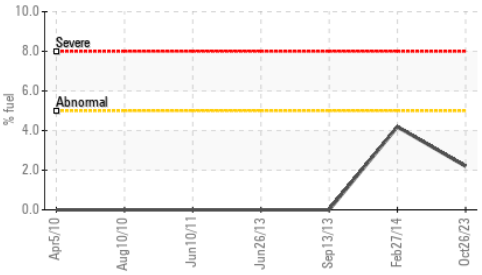
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.9**	19.4	19.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	**10.6**	10.9	10.0

OIL ANALYSIS REPORT

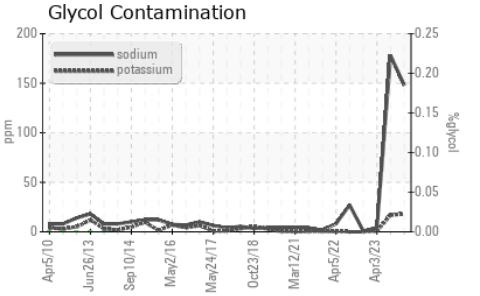
FT-IR (Direct Trend)



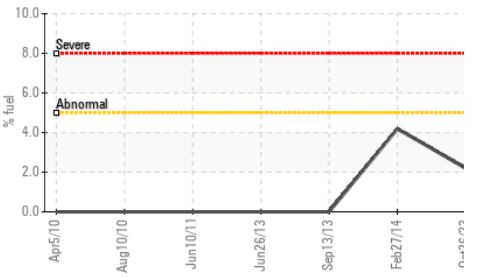
Fuel Dilution



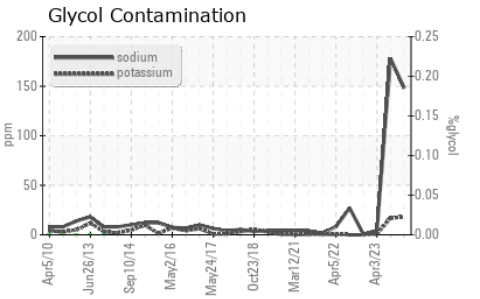
Glycol Contamination



Fuel Dilution



Glycol Contamination

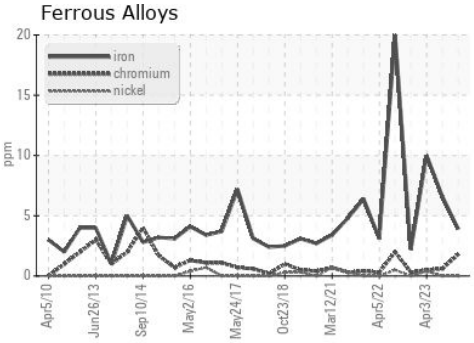


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

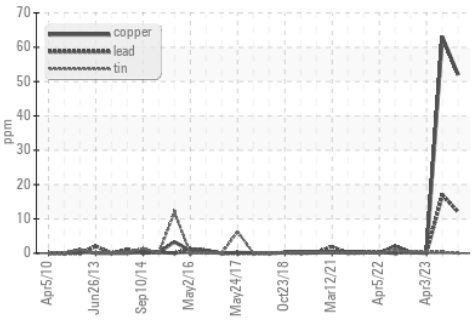
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	**12.4**	12.1	12.5

GRAPHS

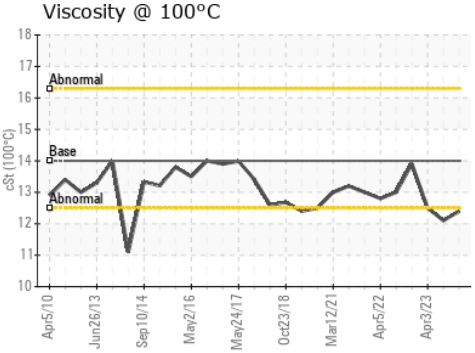
Ferrous Alloys



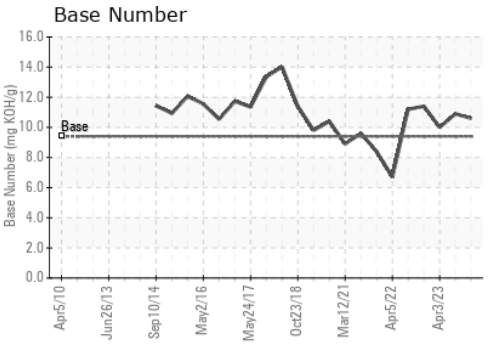
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0925191
Lab Number : 06237434
Unique Number : 11126268
Test Package : CONST (Additional Tests: FuelDilution, Glycol, TBN)

Received : 15 Jul 2024
Tested : 16 Jul 2024
Diagnosed : 16 Jul 2024 - Jonathan Hester

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: SHEWIC [WUSCAR] 06237434 (Generated: 07/16/2024 16:39:06) Rev: 1

Submitted By: LOUIS BRESHEARS