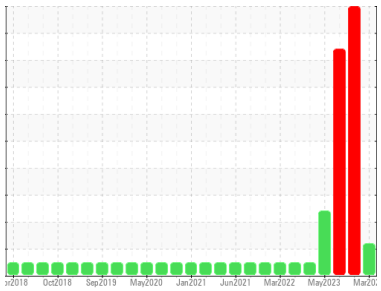
OIL ANALYSIS REPORT

Area
OKLAHOMA/102/EG - DOZER
Machine Id
35.102L [OKLAHOMA^102^EG - DOZER]
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

Sample Rating Trend



GLYCOL

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Sodium and/or potassium levels remain elevated. 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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0873906**	WC0873938	WC0821838
Sample Date		Client Info		**21 Mar 2024**	07 Nov 2023	05 Jul 2023
Machine Age	hrs	Client Info		**8261**	7971	7590
Oil Age	hrs	Client Info		**290**	263	130
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ATTENTION**	SEVERE	SEVERE

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**26**	75	12
Chromium	ppm	ASTM D5185m	>20	**3**	10	<1
Nickel	ppm	ASTM D5185m	>2	**1**	2	0
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**6**	16	4
Lead	ppm	ASTM D5185m	>40	**<1**	1	<1
Copper	ppm	ASTM D5185m	>330	**8**	38	15
Tin	ppm	ASTM D5185m	>15	**1**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	<1	<1
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**42**	33	41
Barium	ppm	ASTM D5185m	0	**0**	<1	0
Molybdenum	ppm	ASTM D5185m	0	**53**	151	277
Manganese	ppm	ASTM D5185m		**1**	2	<1
Magnesium	ppm	ASTM D5185m	0	**502**	538	459
Calcium	ppm	ASTM D5185m		**1661**	1798	1575
Phosphorus	ppm	ASTM D5185m		**770**	800	723
Zinc	ppm	ASTM D5185m		**939**	1002	844
Sulfur	ppm	ASTM D5185m		**2634**	2706	2981

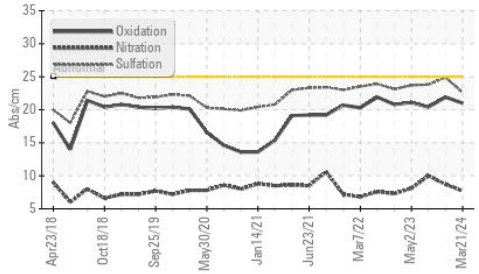
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**11**	▲ 49	10
Sodium	ppm	ASTM D5185m		**85**	▲ 585	▲ 1476
Potassium	ppm	ASTM D5185m	>20	**9**	▲ 62	▲ 175
Glycol	%	*ASTM D2982		**NEG**	▲ 0.10	▲ 0.20

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**7.7**	8.7	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.6**	24.9	23.8

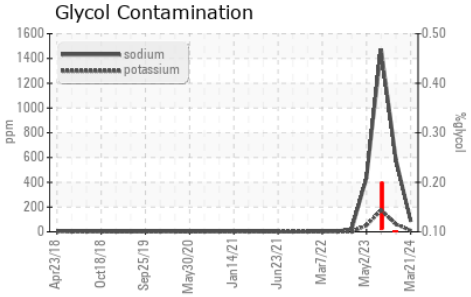
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**21.0**	21.9	20.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	**9.8**	10.7	18.0

OIL ANALYSIS REPORT

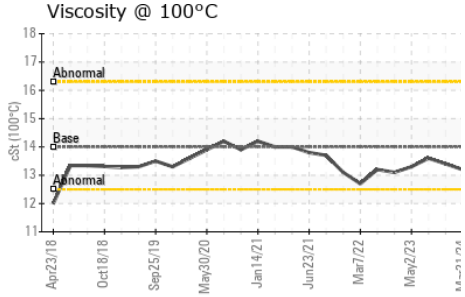
FT-IR (Direct Trend)



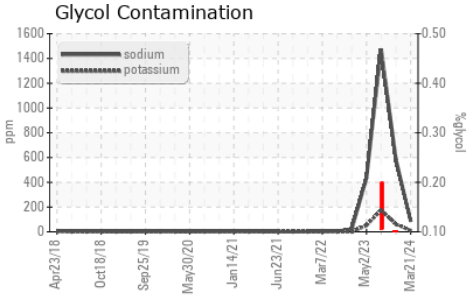
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

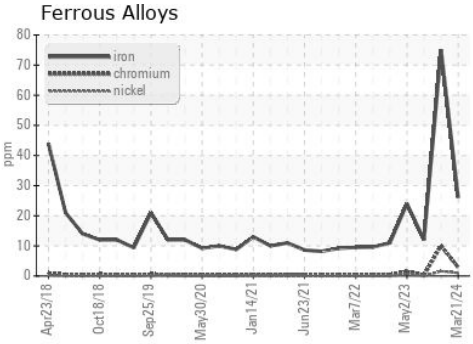


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

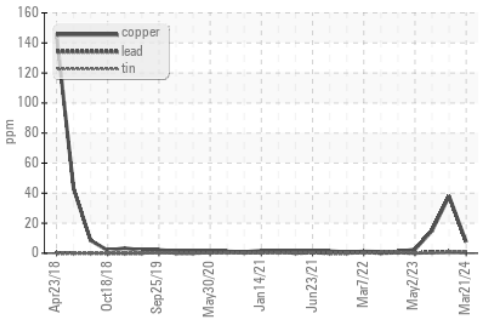
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	**13.2**	13.4	13.6

GRAPHS

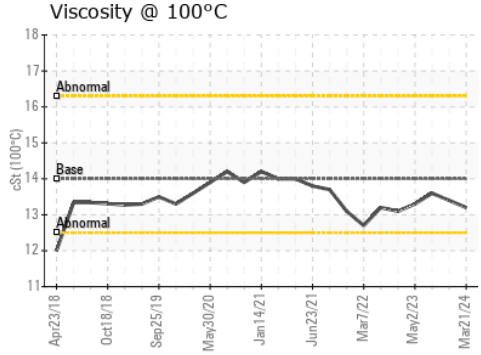
Ferrous Alloys



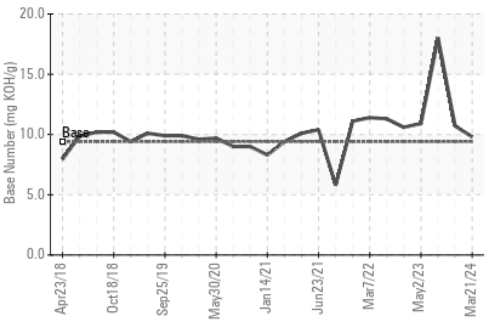
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0873906
Lab Number : 06139468
Unique Number : 10964276
Test Package : CONST (Additional Tests: TBN)

Received : 05 Apr 2024
Tested : 09 Apr 2024
Diagnosed : 09 Apr 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] 06139468 (Generated: 04/09/2024 19:09:44) Rev: 1

Submitted By: RUSTY RILEY