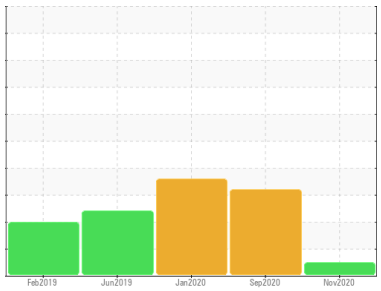
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
Mobile Fleet
Machine Id
5107 5107
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (11 GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

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		**WC0523044**	WC0499556	WC0434019
Sample Date		Client Info		**12 Nov 2020**	11 Sep 2020	31 Jan 2020
Machine Age	hrs	Client Info		**6424**	6328	5719
Oil Age	hrs	Client Info		**96**	609	736
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**NORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.21	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	**6**	16	23
Chromium	ppm	ASTM D5185m	>11	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**0**	0	1
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>31	**1**	4	8
Lead	ppm	ASTM D5185m	>26	**0**	<1	6
Copper	ppm	ASTM D5185m	>26	**3**	8	9
Tin	ppm	ASTM D5185m	>4	**0**	0	2
Antimony	ppm	ASTM D5185m		**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

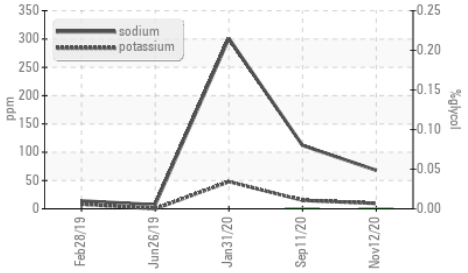
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**88**	75	13
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**8**	20	56
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**720**	681	430
Calcium	ppm	ASTM D5185m		**1320**	1472	1441
Phosphorus	ppm	ASTM D5185m		**730**	● 1009	621
Zinc	ppm	ASTM D5185m		**787**	● 1147	734
Sulfur	ppm	ASTM D5185m		**2401**	● 3072	2656

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	**5**	9	11
Sodium	ppm	ASTM D5185m	>31	**68**	● 112	▲ 301
Potassium	ppm	ASTM D5185m	>20	**10**	15	▲ 48
Fuel	%	ASTM D3524	>2.1	**1.0**	▲ 2.5	▲ 6.9
Glycol	%	*ASTM D2982		**0.0**	0.0	NEG

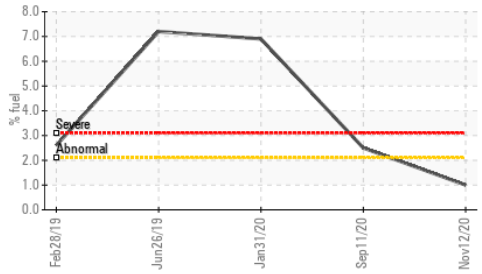
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.1**	0.1	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**6.7**	7.3	11
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.1**	19.7	21.8

OIL ANALYSIS REPORT

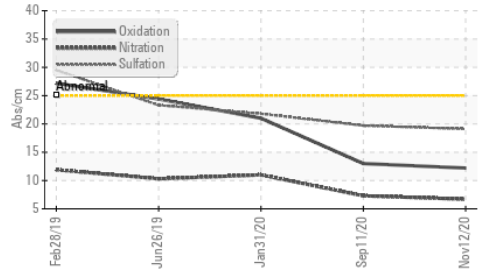
Glycol Contamination



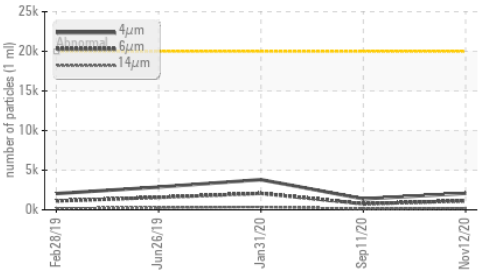
Fuel Dilution



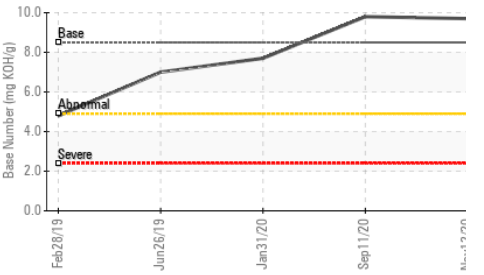
FT-IR (Direct Trend)



Particle Trend



Base Number



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**2079**	1386	3807
Particles >6µm		ASTM D7647	>5000	**1133**	755	2074
Particles >14µm		ASTM D7647	>640	**193**	129	353
Particles >21µm		ASTM D7647	>160	**65**	43	119
Particles >38µm		ASTM D7647	>40	**10**	7	18
Particles >71µm		ASTM D7647	>10	**1**	1	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**18/17/15**	18/17/14	19/18/16

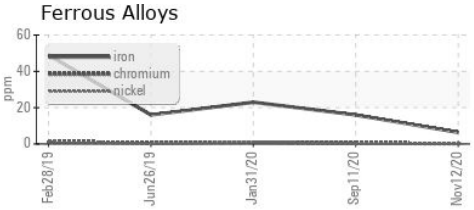
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**12.2**	13	21
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**9.7**	9.8	7.7

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	>0.21	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

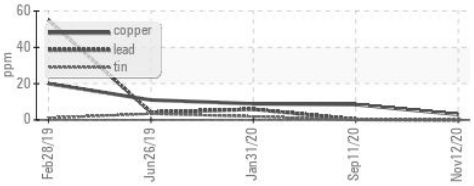
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.0	**13.0**	13.3	▲ 10.6

GRAPHS

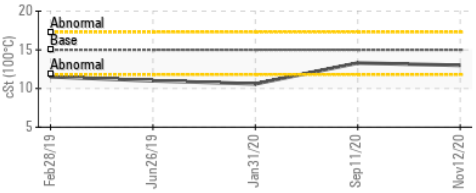
Ferrous Alloys



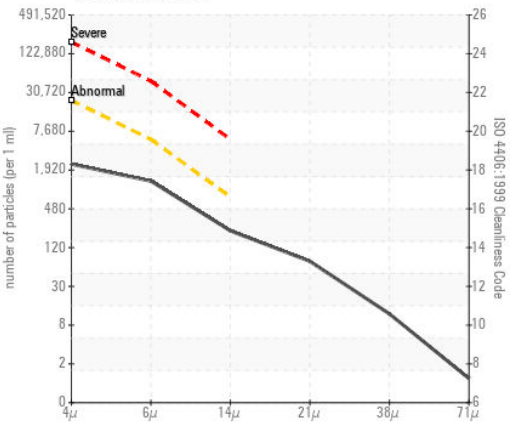
Non-ferrous Metals



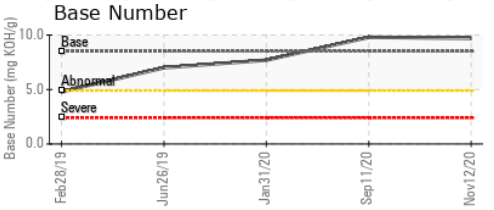
Viscosity @ 100°C



Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0523044 **Received** : 04 Dec 2020
Lab Number : 05130368 **Tested** : 08 Dec 2020
Unique Number : 9280638 **Diagnosed** : 08 Dec 2020 - Jonathan Hester
Test Package : MOBCE (Additional Tests: Glycol, PercentFuel, PrtCount, TBN)

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)

CAROLINA SUNROCK
PO BOX 25
BUTNER, NC
US 27509
Contact: Leigh Dennis
rdennis@thesunrockgroup.com
T: (919)575-4505
F: (919)575-0162