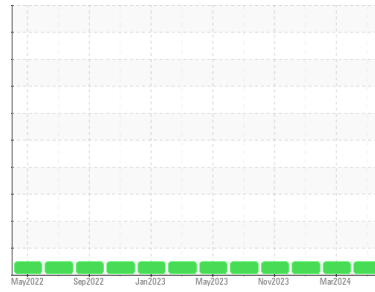




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
SANDY LOU

Component
Port Genset

Fluid
CHEVRON DELO 400 SDE SAE 15W40 (3 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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	MW0047376	MW0047380	MW0047396
Sample Date	Client Info	15 Apr 2024	13 Mar 2024	30 Jan 2024
Machine Age	hrs	32403	32035	31827
Oil Age	hrs	368	208	645
Oil Changed	Client Info	Not Chngd	Not Chngd	Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >4.0	<1.0	<1.0	<1.0
Water	WC Method >0.1	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >50	4	6	5
Chromium	ppm ASTM D5185m >4	0	<1	0
Nickel	ppm ASTM D5185m >2	0	<1	0
Titanium	ppm ASTM D5185m	14	19	14
Silver	ppm ASTM D5185m >5	0	0	0
Aluminum	ppm ASTM D5185m >12	1	4	2
Lead	ppm ASTM D5185m >17	0	<1	<1
Copper	ppm ASTM D5185m >70	<1	0	0
Tin	ppm ASTM D5185m >15	0	<1	<1
Vanadium	ppm ASTM D5185m	<1	<1	<1
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	89	141	104
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	35	53	49
Manganese	ppm ASTM D5185m	<1	<1	<1
Magnesium	ppm ASTM D5185m	655	993	742
Calcium	ppm ASTM D5185m	1471	2067	1574
Phosphorus	ppm ASTM D5185m 760	640	1064	753
Zinc	ppm ASTM D5185m 800	744	1190	864
Sulfur	ppm ASTM D5185m 3000	3197	4804	3054

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	6	4
Sodium	ppm ASTM D5185m	3	7	3
Potassium	ppm ASTM D5185m >20	2	7	3

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	9.5	9.1	10.2
Sulfation	Abs/.1mm *ASTM D7415 >30	19.5	18.8	21.5

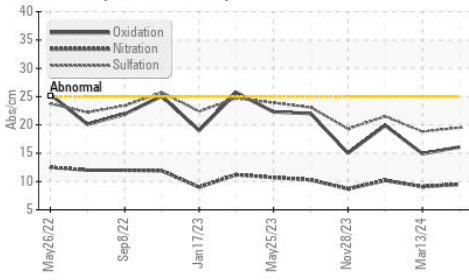
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	16.1	14.9	19.9
Base Number (BN)	mg KOH/g ASTM D2896 10	7.3	7.5	6.6

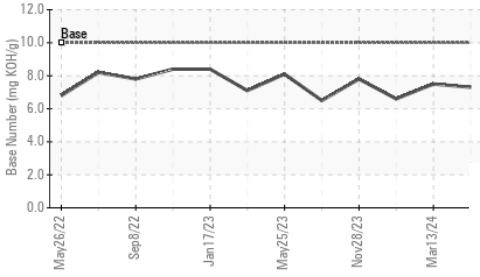


OIL ANALYSIS REPORT

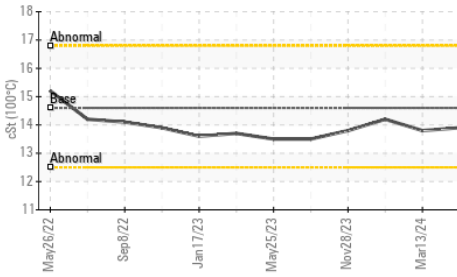
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

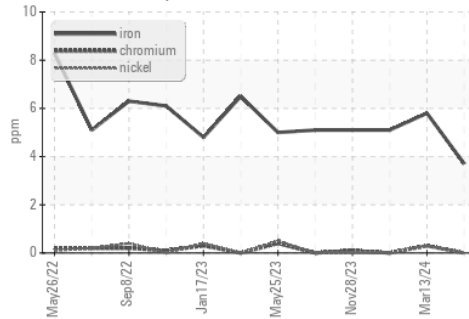


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

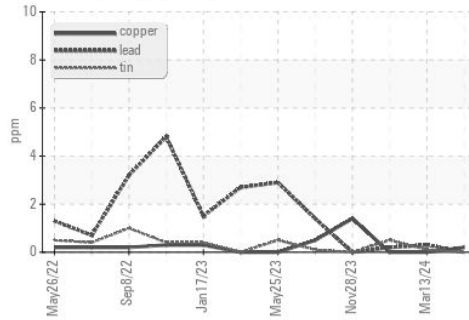
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.6	13.9	13.8

GRAPHS

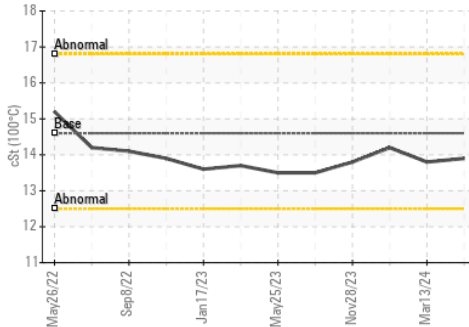
Ferrous Alloys



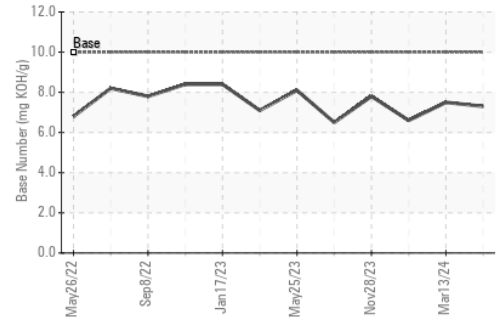
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MW0047376

Lab Number : 06155585

Unique Number : 10991008

Test Package : MAR 2

Received : 22 Apr 2024

Tested : 23 Apr 2024

Diagnosed : 23 Apr 2024 - Wes Davis

OSAGE MARINE

750 E DAVIS ST

ST LOUIS, MO

US 63111

Contact: MIKE KESSLER

mike.kessler@osagemarine.com

T:

F:

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)