



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[KNUDSON]

Machine Id

ONAN C180338824

Component

Genset

Fluid

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA050917	VPA044932	VPA045138
Sample Date		Client Info		19 Jun 2024	19 Sep 2023	13 Jul 2022
Machine Age	hrs	Client Info		1493	672	662
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	N/A	N/A
Filter Changed		Client Info		Not Changd	N/A	N/A
Sample Status				NORMAL	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	5	15	10
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>5	<1	0	<1
Aluminum	ppm	ASTM D5185m	>12	2	3	2
Lead	ppm	ASTM D5185m	>17	0	<1	<1
Copper	ppm	ASTM D5185m	>70	3	7	1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

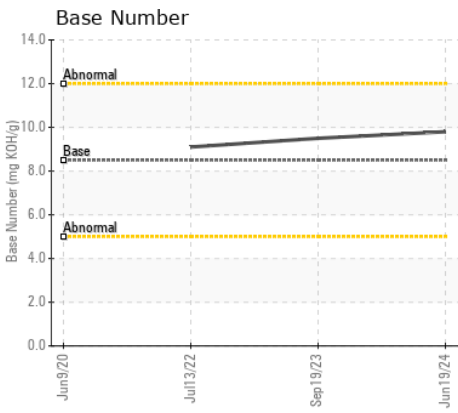
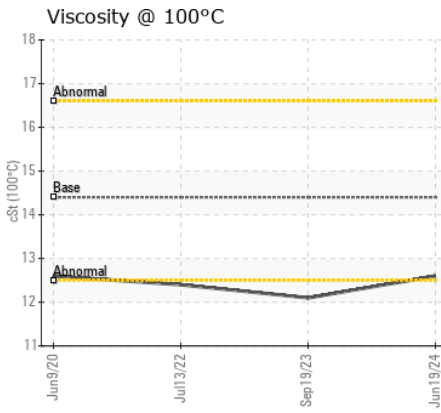
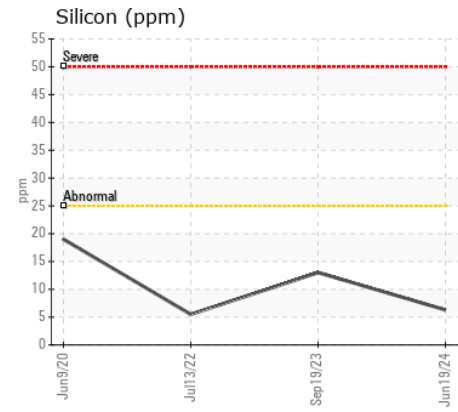
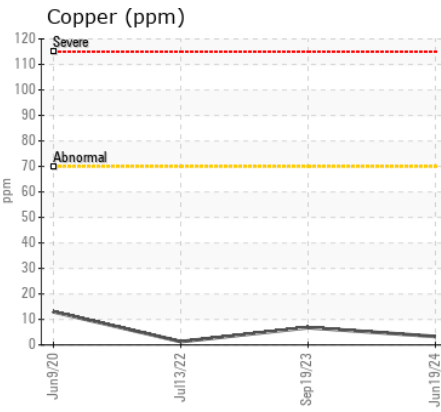
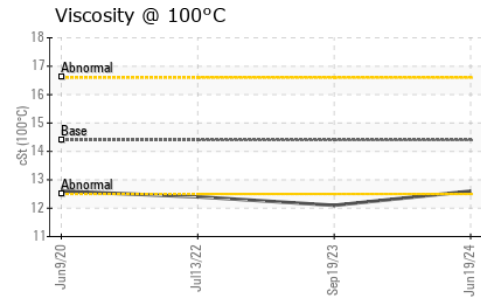
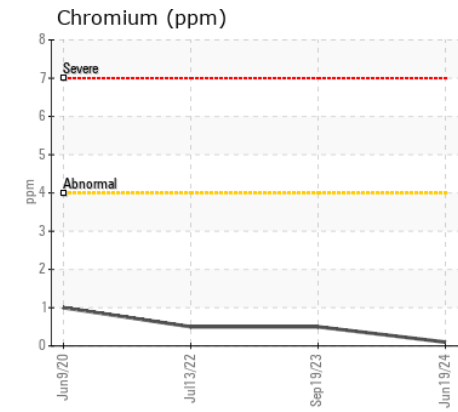
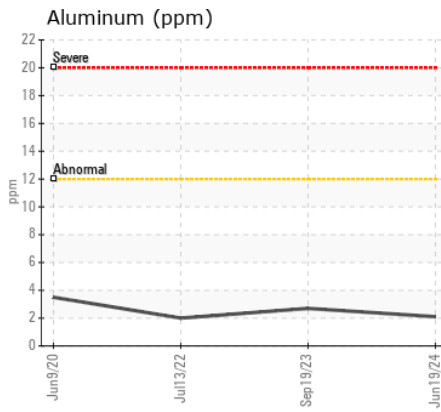
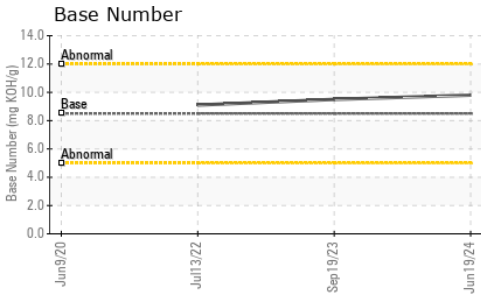
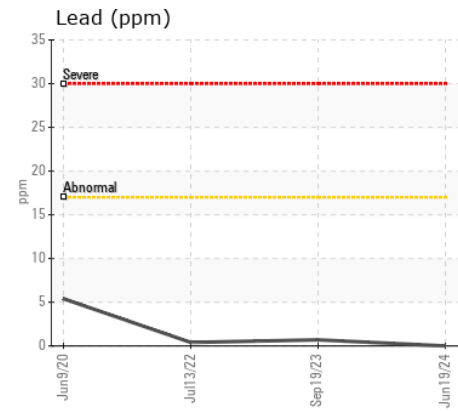
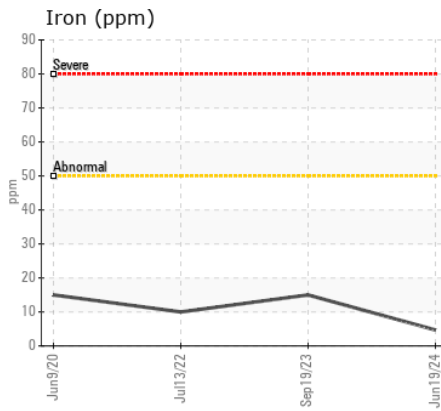
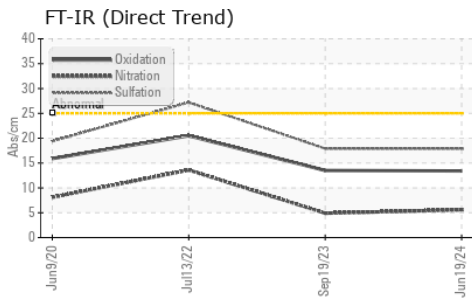
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	13	6
Potassium	ppm	ASTM D5185m	>20	3	3	0
Fuel		WC Method	>4.0	<1.0	1.2	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.1	1.4
Nitration	Abs/cm	*ASTM D7624	>20	5.6	4.9	13.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.9	17.9	27.2
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	>0.1	NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m	>158	1	4	1
Boron	ppm	ASTM D5185m	250	7	288	21
Barium	ppm	ASTM D5185m	10	0	0	4
Molybdenum	ppm	ASTM D5185m	100	60	128	54
Manganese	ppm	ASTM D5185m		<1	2	<1
Magnesium	ppm	ASTM D5185m	450	1003	722	733
Calcium	ppm	ASTM D5185m	3000	1114	1518	1493
Phosphorus	ppm	ASTM D5185m	1150	1077	714	859
Zinc	ppm	ASTM D5185m	1350	1323	853	1093
Sulfur	ppm	ASTM D5185m	4250	3903	2610	3191
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.4	13.5	20.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.8	9.5	9.1
Visc @ 100°C	cSt	ASTM D445	14.4	12.6	12.1	12.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA050917 **Received** : 27 Jun 2024  
**Lab Number** : 06222950 **Tested** : 28 Jun 2024  
**Unique Number** : 11101147 **Diagnosed** : 30 Jun 2024 - Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**SUNCOAST DIESEL MARINE**  
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 SARASOTA, FL  
 US 34240  
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 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)