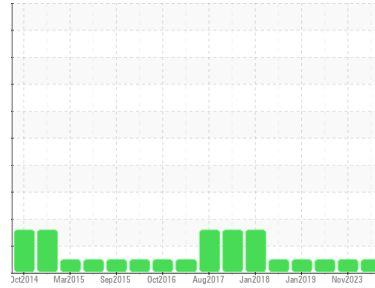




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
SANDY B
 Machine Id
[SANDY B] 001 562531-1
 Component
Port Main Engine
 Fluid
SHELL ROTELLA T 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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			MW0061659	MW0061336	MW0061387
Sample Date	Client Info			02 Jan 2024	30 Nov 2023	01 Nov 2023
Machine Age	hrs	Client Info		7257	6838	6442
Oil Age	hrs	Client Info		203	309	394
Oil Changed	Client Info			Not Chngd	Not Chngd	Not Chngd
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	>75	0	0	1
Chromium	ppm	ASTM D5185m	>8	0	0	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	1	<1	0
Lead	ppm	ASTM D5185m	>18	0	<1	0
Copper	ppm	ASTM D5185m	>80	3	3	5
Tin	ppm	ASTM D5185m	>14	0	<1	0
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	316	185	190	175
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	8	6	9
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	24	43	30	32
Calcium	ppm	ASTM D5185m	2292	2036	2140	2125
Phosphorus	ppm	ASTM D5185m	1064	959	998	1030
Zinc	ppm	ASTM D5185m	1160	1129	1188	1250
Sulfur	ppm	ASTM D5185m	4996	3338	3601	3789

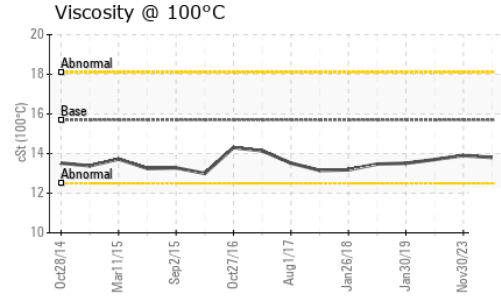
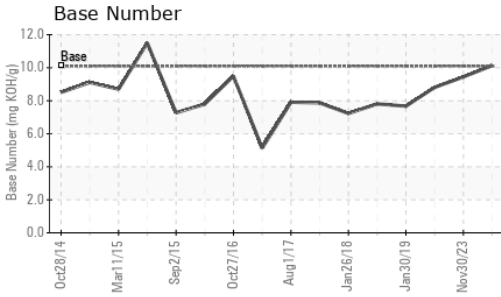
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	2	3	3
Sodium	ppm	ASTM D5185m	>75	0	2	2
Potassium	ppm	ASTM D5185m	>20	5	9	7

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.0	6.4	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	19.8	20.0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	16.2	16.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	10.13	9.44	8.81



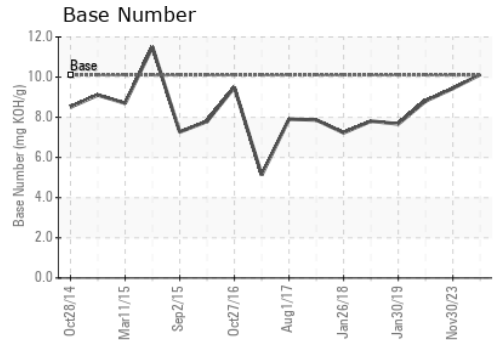
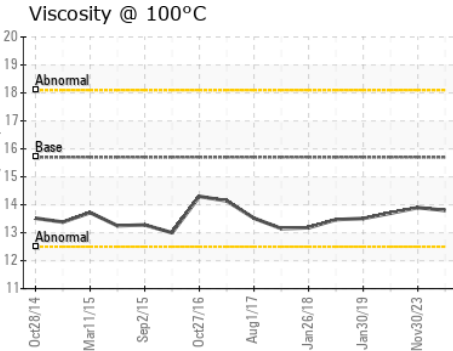
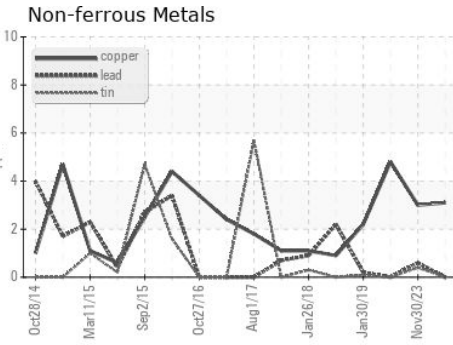
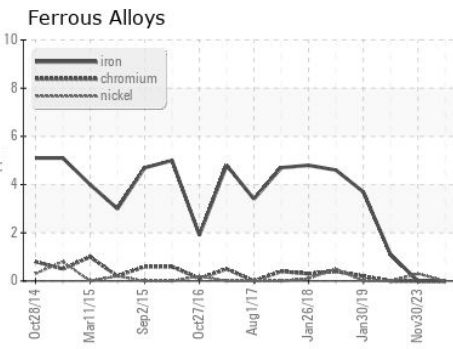
OIL ANALYSIS REPORT



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	15.7	13.8	13.9	13.7

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : MW0061659 Recieved : 16 Jan 2024
 Lab Number : **06062168** Diagnosed : 18 Jan 2024
 Unique Number : 10833550 Diagnostician : Wes Davis
 Test Package : MAR 2

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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