



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**JOHN R OPERLE**  
Machine Id  
**[JOHN R OPERLE] 006 630998-6**  
Component  
**Starboard Reduction Gear**  
Fluid  
**CHEVRON MEROPA 320 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0061533</b>	MW0061528	MW0061749
Sample Date		Client Info		<b>07 Jan 2024</b>	01 Dec 2023	01 Nov 2023
Machine Age	hrs	Client Info		<b>61504</b>	61443	60725
Oil Age	hrs	Client Info		<b>41963</b>	41902	41184
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	<b>4</b>	6	8
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>16</b>	15	14
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>5</b>	5	4
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

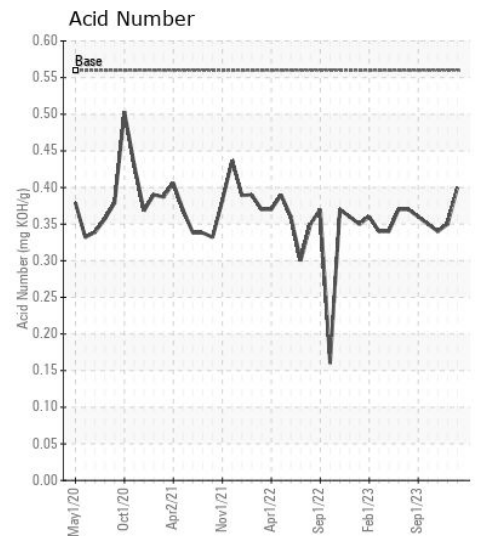
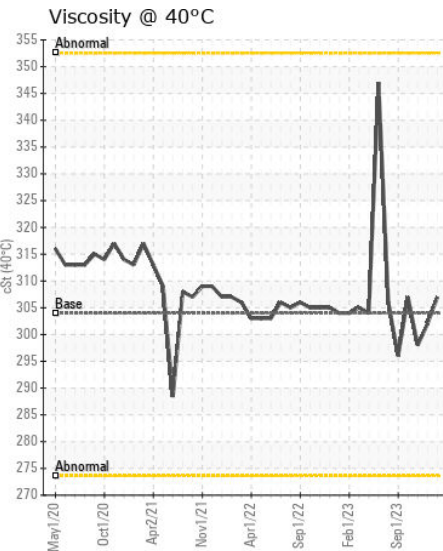
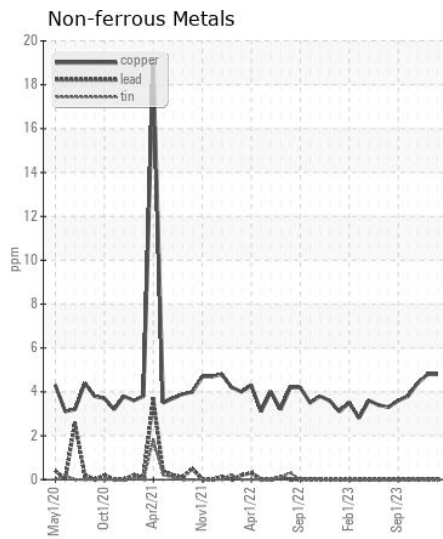
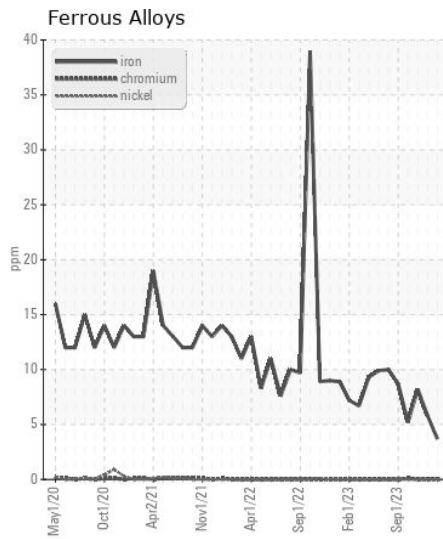
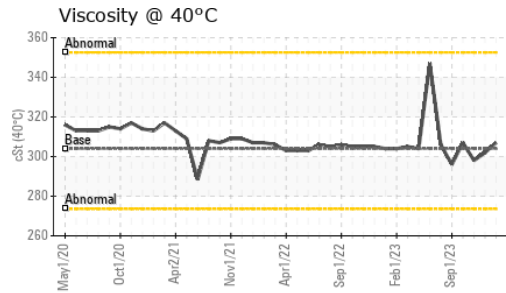
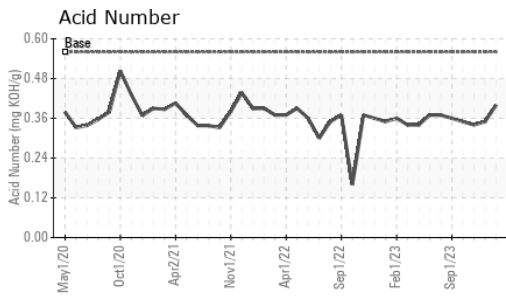
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>1</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	4	0
Boron	ppm	ASTM D5185m	20	<b>7</b>	13	14
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>31</b>	29	32
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>8</b>	6	7
Calcium	ppm	ASTM D5185m	25	<b>155</b>	150	157
Phosphorus	ppm	ASTM D5185m	235	<b>236</b>	234	271
Zinc	ppm	ASTM D5185m		<b>33</b>	11	17
Sulfur	ppm	ASTM D5185m		<b>6164</b>	6401	7017
Acid Number (AN)	mg KOH/g	ASTM D8045	0.56	<b>0.40</b>	0.35	0.34
Visc @ 40°C	cSt	ASTM D445	304	<b>307</b>	302	298



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0061533 **Received** : 16 Jan 2024  
**Lab Number** : 06062117 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10833499 **Diagnostician** : Don Baldrige  
**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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