



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

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		MW0066235	MW0066010	MW0061533
Sample Date		Client Info		01 Jun 2024	03 May 2024	07 Jan 2024
Machine Age	hrs	Client Info		62352	61657	61504
Oil Age	hrs	Client Info		42811	42116	41963
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	8	8	4
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>25	14	16	16
Lead	ppm	ASTM D5185m	>100	<1	0	0
Copper	ppm	ASTM D5185m	>50	5	2	5
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

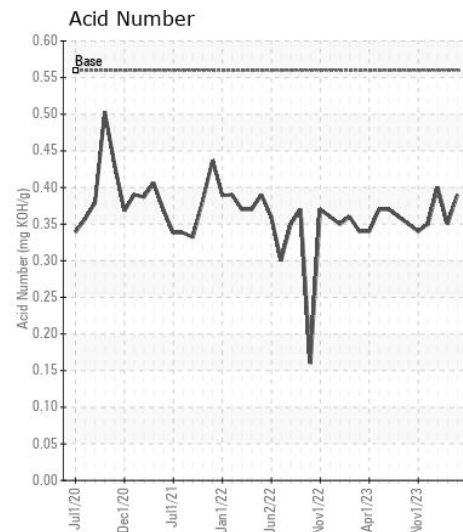
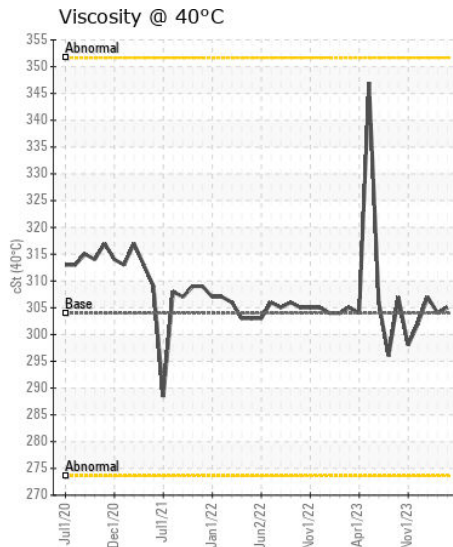
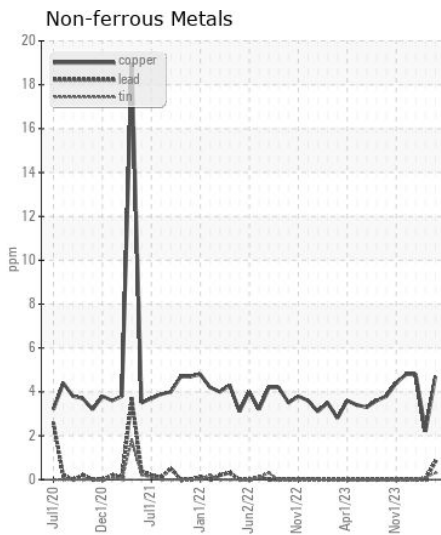
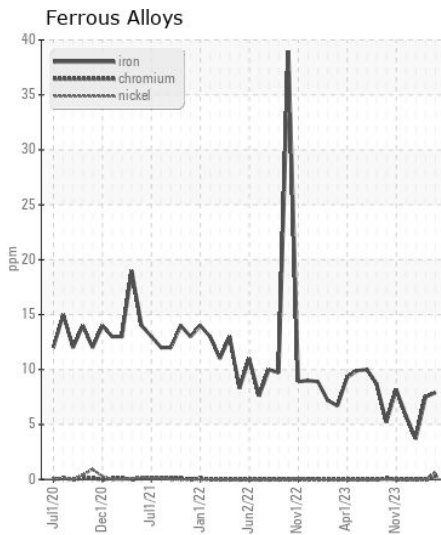
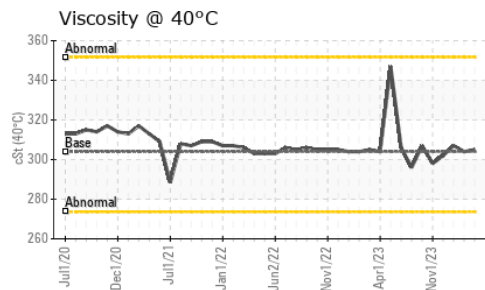
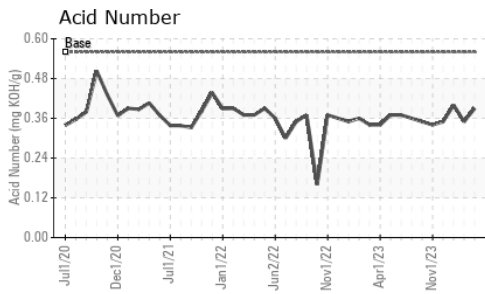
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	3	2	1
Potassium	ppm	ASTM D5185m	>20	1	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	3	0
Boron	ppm	ASTM D5185m	20	11	13	7
Barium	ppm	ASTM D5185m		1	<1	0
Molybdenum	ppm	ASTM D5185m	0	31	33	31
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		7	6	8
Calcium	ppm	ASTM D5185m	25	135	146	155
Phosphorus	ppm	ASTM D5185m	235	272	260	236
Zinc	ppm	ASTM D5185m		29	26	33
Sulfur	ppm	ASTM D5185m		7174	7969	6164
Acid Number (AN)	mg KOH/g	ASTM D8045	0.56	0.39	0.35	0.40
Visc @ 40°C	cSt	ASTM D445	304	305	304	307



Certificate L2367

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

Sample No. : MW0066235

Lab Number : 06218866

Unique Number : 11097063

Test Package : MAR 2

Received : 24 Jun 2024

Tested : 25 Jun 2024

Diagnosed : 26 Jun 2024 - Sean Felton

INGRAM BARGE

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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)