



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		MW0066010	MW0061533	MW0061528
Sample Date		Client Info		03 May 2024	07 Jan 2024	01 Dec 2023
Machine Age	hrs	Client Info		61657	61504	61443
Oil Age	hrs	Client Info		42116	41963	41902
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	4	6
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	16	16	15
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>50	2	5	5
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

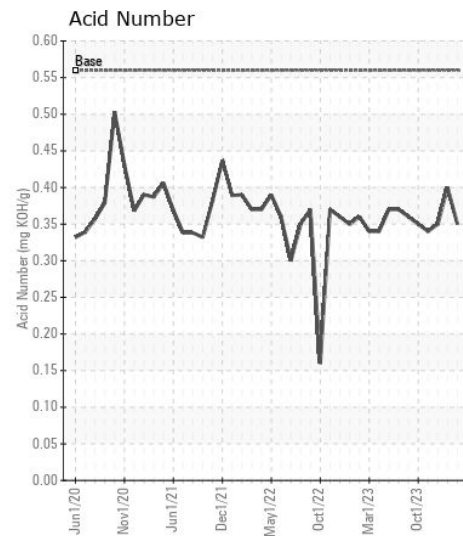
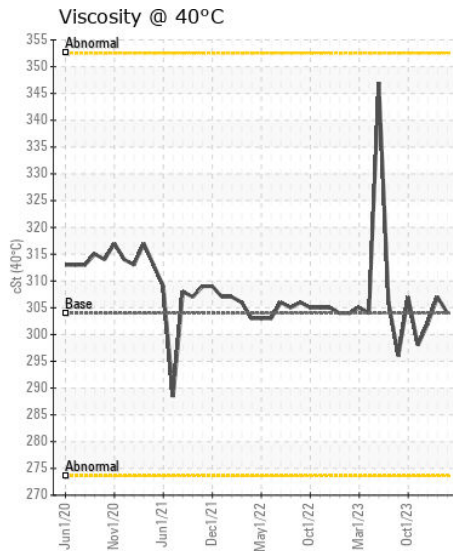
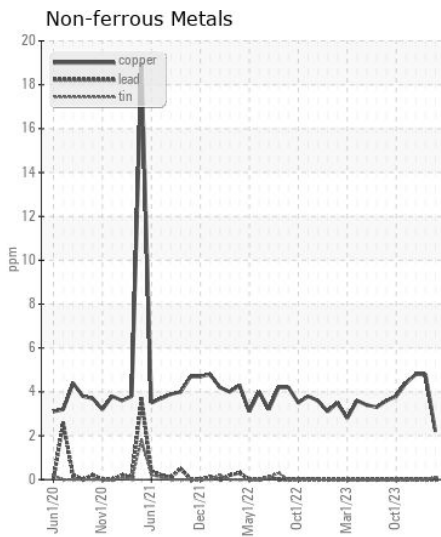
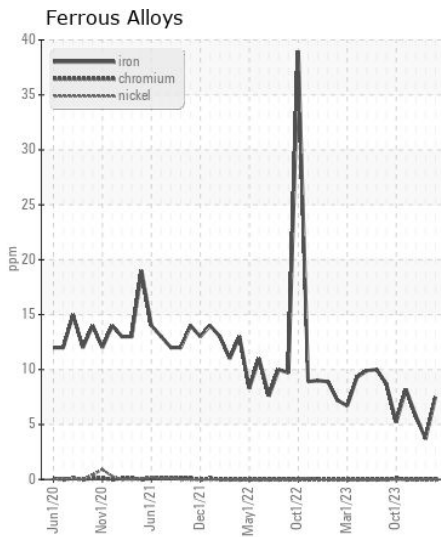
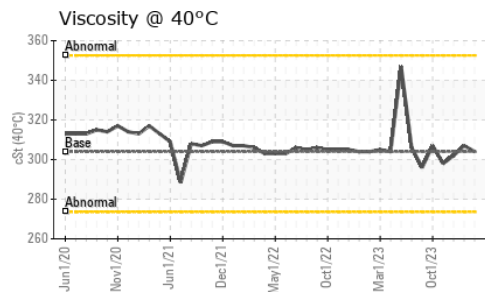
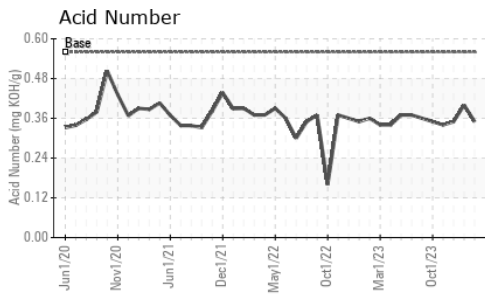
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	2	1	2
Potassium	ppm	ASTM D5185m	>20	0	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		3	0	4
Boron	ppm	ASTM D5185m	20	13	7	13
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m	0	33	31	29
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		6	8	6
Calcium	ppm	ASTM D5185m	25	146	155	150
Phosphorus	ppm	ASTM D5185m	235	260	236	234
Zinc	ppm	ASTM D5185m		26	33	11
Sulfur	ppm	ASTM D5185m		7969	6164	6401
Acid Number (AN)	mg KOH/g	ASTM D8045	0.56	0.35	0.40	0.35
Visc @ 40°C	cSt	ASTM D445	304	304	307	302



Certificate L2367

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

Sample No. : MW0066010

Lab Number : 06176176

Unique Number : 11022229

Test Package : MAR 2

Received : 10 May 2024

Tested : 13 May 2024

Diagnosed : 14 May 2024 - Sean Felton

INGRAM BARGE

900 S 3RD ST

PADUCAH, KY

US 42003

Contact: ALLEN WILLHELM

allen.willhelm@ingrambarga.com

T: (270)415-4467

F: (615)695-3697

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)