



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		MW0066227	MW0066235	MW0066010
Sample Date		Client Info		01 Jul 2024	01 Jun 2024	03 May 2024
Machine Age	hrs	Client Info		63065	62352	61657
Oil Age	hrs	Client Info		43524	42811	42116
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	7	8	8
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>25	13	14	16
Lead	ppm	ASTM D5185m	>100	0	<1	0
Copper	ppm	ASTM D5185m	>50	4	5	2
Tin	ppm	ASTM D5185m	>10	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

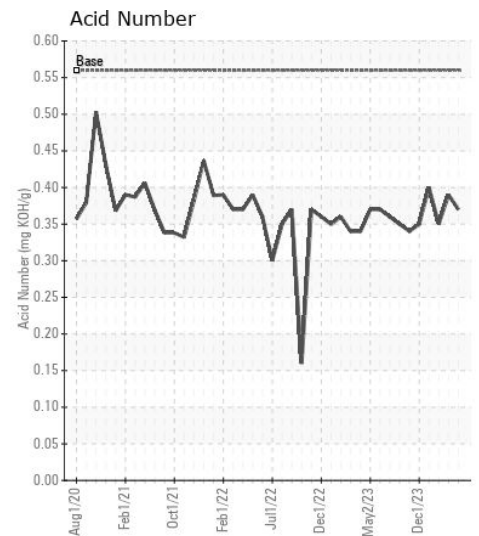
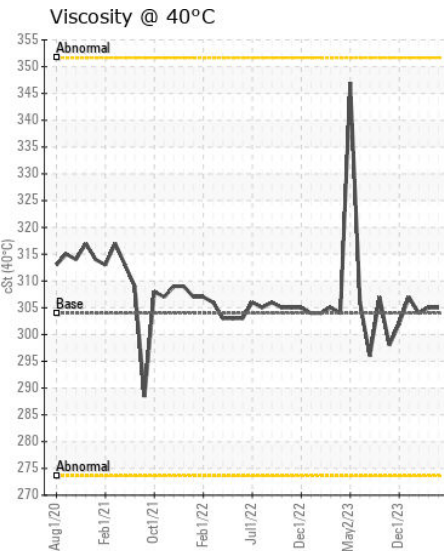
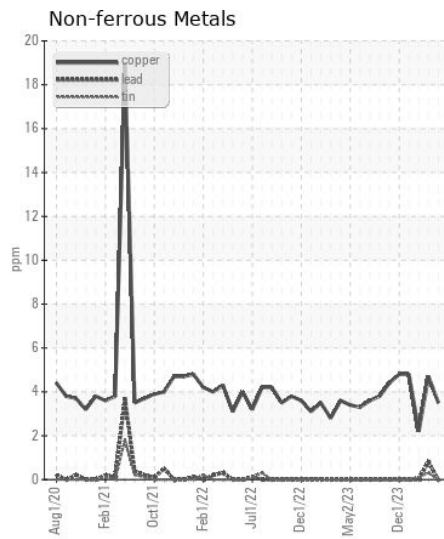
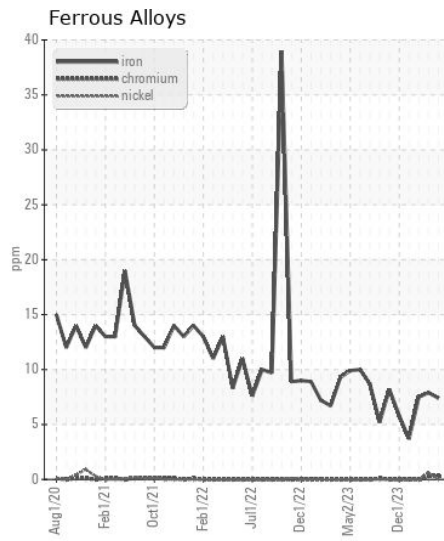
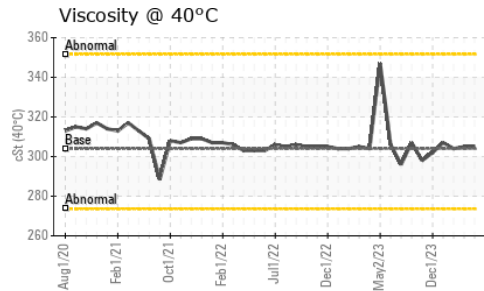
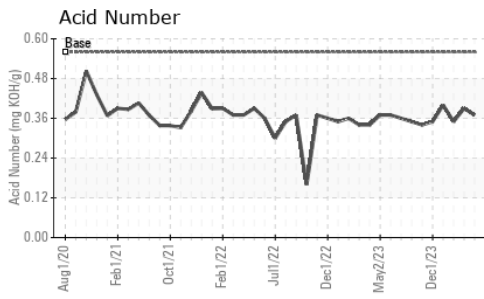
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	2	3	2
Potassium	ppm	ASTM D5185m	>20	<1	1	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		2	<1	3
Boron	ppm	ASTM D5185m	20	11	11	13
Barium	ppm	ASTM D5185m		0	1	<1
Molybdenum	ppm	ASTM D5185m	0	28	31	33
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		7	7	6
Calcium	ppm	ASTM D5185m	25	119	135	146
Phosphorus	ppm	ASTM D5185m	235	230	272	260
Zinc	ppm	ASTM D5185m		27	29	26
Sulfur	ppm	ASTM D5185m		6004	7174	7969
Acid Number (AN)	mg KOH/g	ASTM D8045	0.56	0.37	0.39	0.35
Visc @ 40°C	cSt	ASTM D445	304	305	305	304



Certificate L2367

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

Sample No. : MW0066227

Lab Number : 06227665

Unique Number : 11111158

Test Package : MAR 2

Received : 03 Jul 2024

Tested : 05 Jul 2024

Diagnosed : 06 Jul 2024 - Don Baldrige

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)