MAR II

WEAR CHECK
Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PAUL F BROTZGE
Component
Starboard Reduction Gear
Fluid
CHEVRON MEROPA 220 (220 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

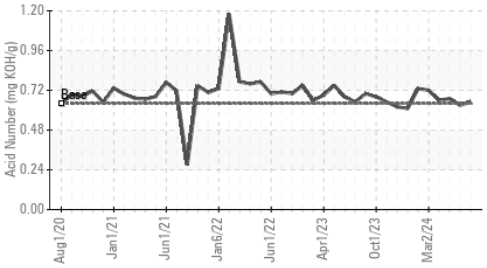
There is no indication of any contamination in the oil.

FLUID CONDITION

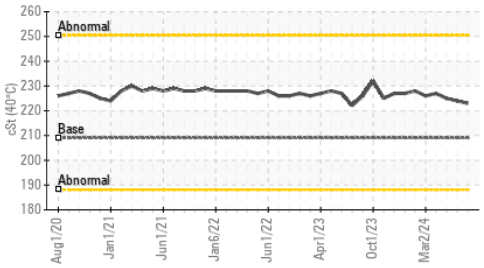
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0066348	MW0053161	MW0069289
Sample Date		Client Info		06 Jul 2024	01 Jun 2024	01 May 2024
Machine Age	hrs	Client Info		64976	64260	63561
Oil Age	hrs	Client Info		64976	64260	63561
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		None	None	None
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>150	36	38	31
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	1	<1
Silver	ppm	ASTM D5185m		0	<1	<1
Aluminum	ppm	ASTM D5185m	>25	3	3	3
Lead	ppm	ASTM D5185m	>100	1	2	2
Copper	ppm	ASTM D5185m	>50	5	6	7
Tin	ppm	ASTM D5185m	>10	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>50	12	10	4
Potassium	ppm	ASTM D5185m	>20	5	6	4
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	LIGHT
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
Sodium	ppm	ASTM D5185m		3	4	5
Boron	ppm	ASTM D5185m	40	4	4	3
Barium	ppm	ASTM D5185m		1	2	0
Molybdenum	ppm	ASTM D5185m		1	<1	<1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		2	2	1
Calcium	ppm	ASTM D5185m		10	18	17
Phosphorus	ppm	ASTM D5185m	270	223	258	131
Zinc	ppm	ASTM D5185m		11	12	3
Sulfur	ppm	ASTM D5185m	8600	5167	5461	3813
Acid Number (AN)	mg KOH/g	ASTM D8045	0.64	0.65	0.63	0.67
Visc @ 40°C	cSt	ASTM D445	209	223	224	225

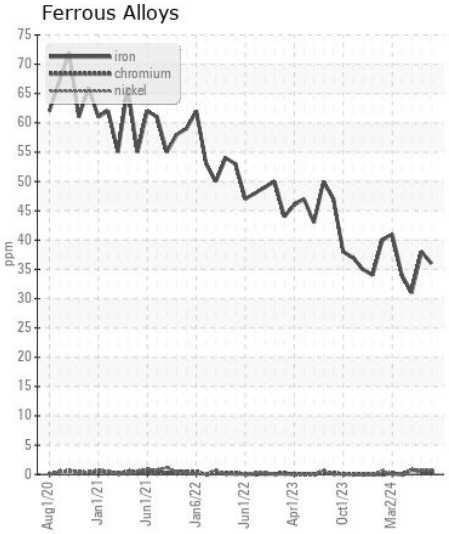
Acid Number



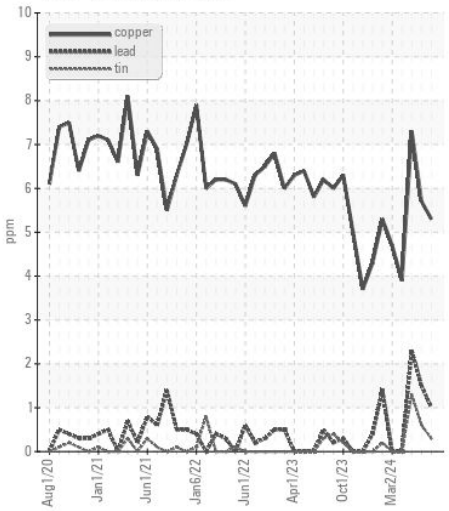
Viscosity @ 40°C



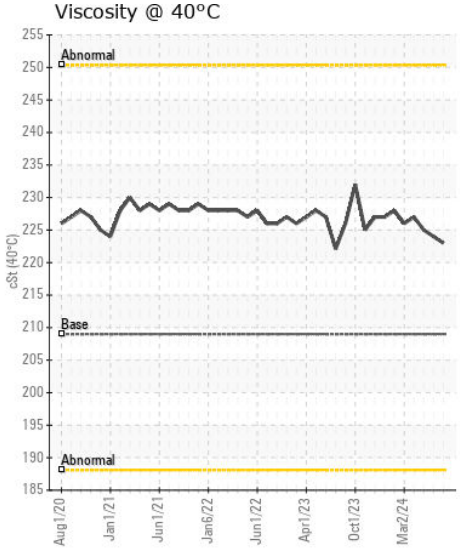
Ferrous Alloys



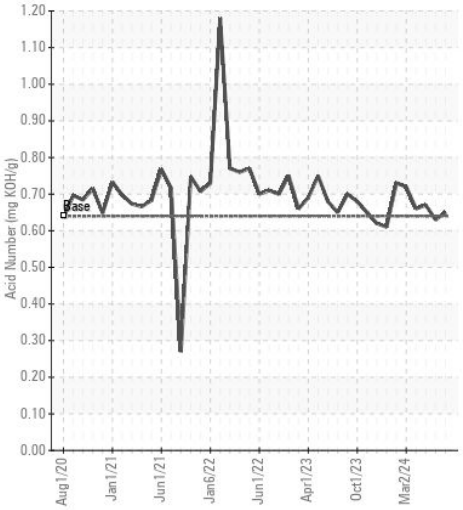
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0066348
Lab Number : 06239295
Unique Number : 11128129
Test Package : MAR 2

Received : 17 Jul 2024
Tested : 18 Jul 2024
Diagnosed : 18 Jul 2024 - Wes Davis

Certificate L2367

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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)