MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KATHY AZLIN
Component
Port Main Engine
Fluid
CHEVRON DELO 400 SDE SAE 15W40 (165 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

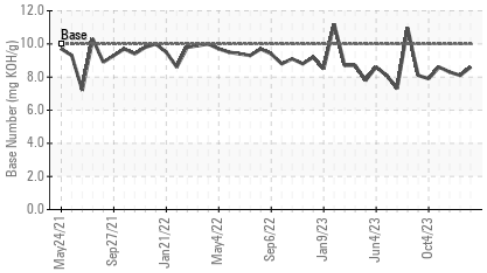
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

FLUID CONDITION

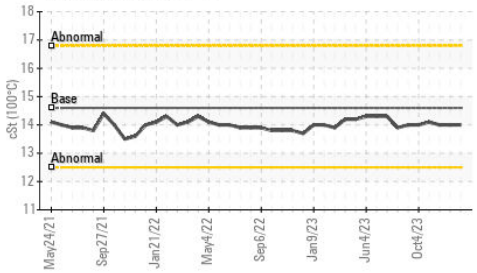
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0057950	MW0057964	MW0057962
Sample Date		Client Info		03 Feb 2024	01 Jan 2024	05 Dec 2023
Machine Age	hrs	Client Info		61438	60971	60482
Oil Age	hrs	Client Info		467	1439	985
Filter Age	hrs	Client Info		467	699	216
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	3	5	4
Chromium	ppm	ASTM D5185m	>8	<1	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>3	13	8	8
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	1	1
Lead	ppm	ASTM D5185m	>18	<1	0	0
Copper	ppm	ASTM D5185m	>80	2	4	3
Tin	ppm	ASTM D5185m	>14	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	4	4	4
Potassium	ppm	ASTM D5185m	>20	3	2	3
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.9	7.3	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	19.1	18.5
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
Sodium	ppm	ASTM D5185m	>75	0	4	3
Boron	ppm	ASTM D5185m		200	224	238
Barium	ppm	ASTM D5185m		13	0	0
Molybdenum	ppm	ASTM D5185m		40	46	44
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		533	453	397
Calcium	ppm	ASTM D5185m		1928	2246	2182
Phosphorus	ppm	ASTM D5185m	760	766	820	783
Zinc	ppm	ASTM D5185m	800	894	972	923
Sulfur	ppm	ASTM D5185m	3000	3447	3212	3432
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.0	12.5	11.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	8.6	8.1	8.3
Visc @ 100°C	cSt	ASTM D445	14.6	14.0	14.0	14.0

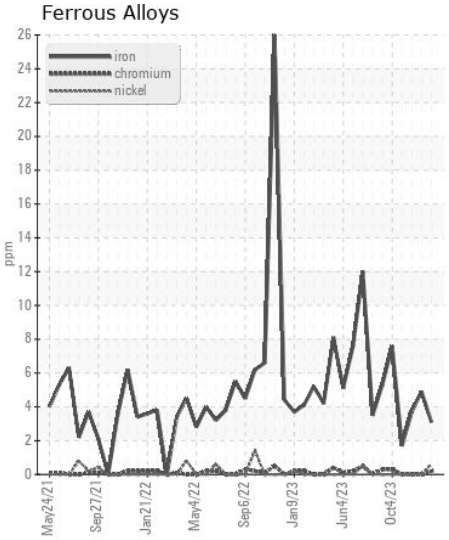
Base Number



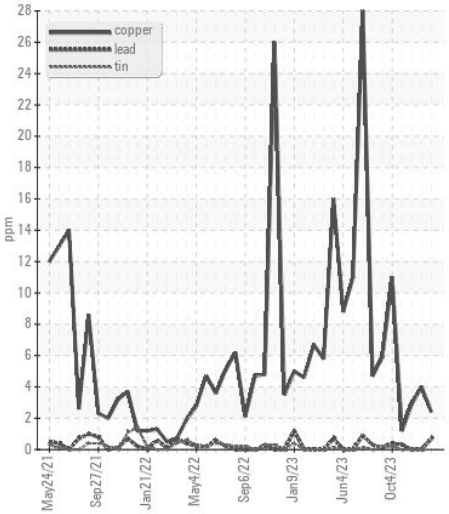
Viscosity @ 100°C



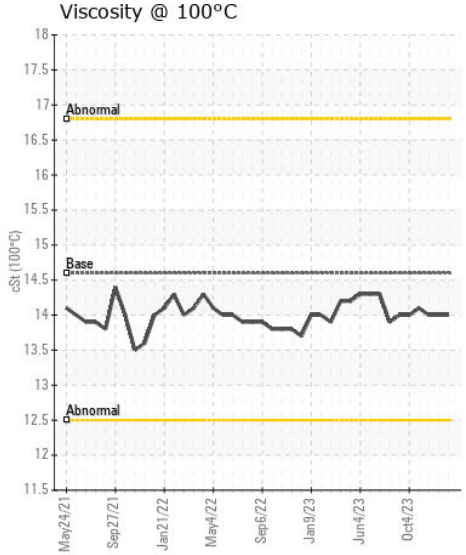
Ferrous Alloys



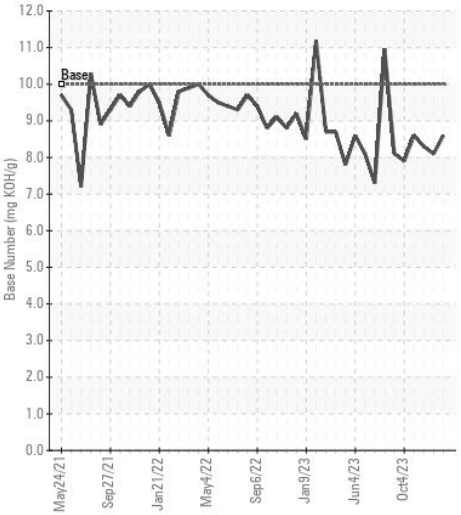
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0057950
Lab Number : 06086610
Unique Number : 10874055
Test Package : MAR 2

Received : 12 Feb 2024
Tested : 13 Feb 2024
Diagnosed : 13 Feb 2024 - Wes Davis

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)

MAGNOLIA MARINE TRANSPORT
697 HAINING ROAD
VICKSBURG, MS
US 39183
Contact: MMT MAINTENANCE PLANNERS
mmtmaintenanceplanners@ergon.com
T: x:
F: (601)638-8028