MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
MARK C
Machine Id
[MARK C] 001 543154-1
Component
Port Main Engine
Fluid
CHEVRON DELO 400 LE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

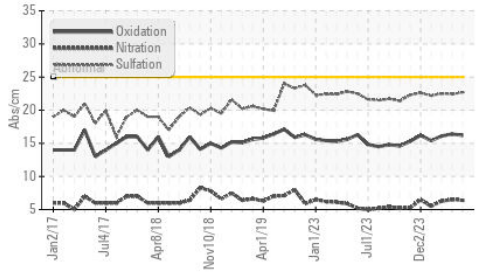
There is no indication of any contamination in the oil.

FLUID CONDITION

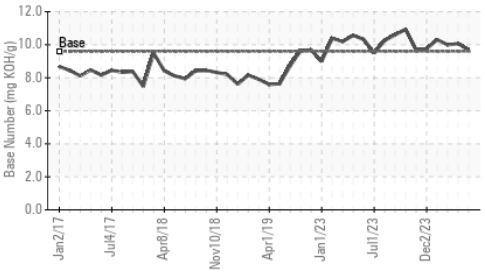
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**MW0065912**	MW0067835	MW0065909
Sample Date		Client Info		**03 Apr 2024**	04 Mar 2024	02 Feb 2024
Machine Age	hrs	Client Info		**21440**	20723	19964
Oil Age	hrs	Client Info		**668**	660	682
Filter Age	hrs	Client Info		**668**	660	682
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
Iron	ppm	ASTM D5185m	>75	**4**	1	1
Chromium	ppm	ASTM D5185m	>8	**<1**	0	0
Nickel	ppm	ASTM D5185m	>2	**1**	0	<1
Titanium	ppm	ASTM D5185m	>3	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>15	**3**	3	4
Lead	ppm	ASTM D5185m	>18	**2**	0	0
Copper	ppm	ASTM D5185m	>80	**4**	<1	0
Tin	ppm	ASTM D5185m	>14	**1**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	**6**	4	5
Potassium	ppm	ASTM D5185m	>20	**1**	0	<1
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**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**6.4**	6.5	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.7**	22.4	22.5
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	**<1**	1	<1
Boron	ppm	ASTM D5185m		**375**	330	332
Barium	ppm	ASTM D5185m		**<1**	0	0
Molybdenum	ppm	ASTM D5185m		**131**	114	118
Manganese	ppm	ASTM D5185m		**2**	<1	<1
Magnesium	ppm	ASTM D5185m		**572**	602	638
Calcium	ppm	ASTM D5185m		**1588**	1535	1510
Phosphorus	ppm	ASTM D5185m	1200	**626**	654	686
Zinc	ppm	ASTM D5185m	1300	**706**	746	808
Sulfur	ppm	ASTM D5185m	3200	**2319**	2765	2576
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.2**	16.4	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	**9.69**	10.07	9.99
Visc @ 100°C	cSt	ASTM D445	15.7	**13.3**	13.4	13.3

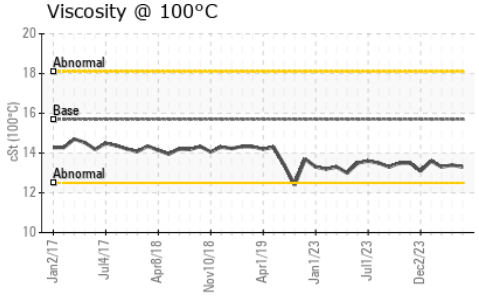
FT-IR (Direct Trend)



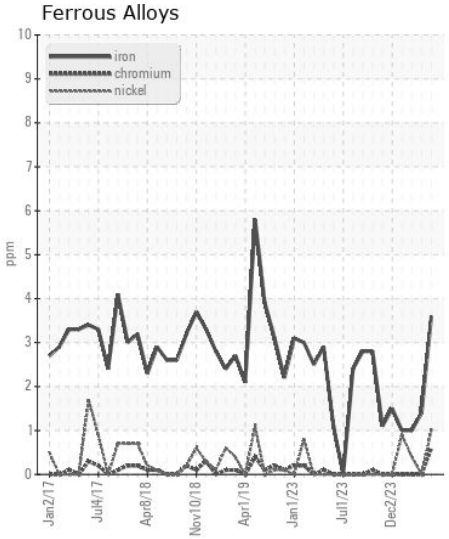
Base Number



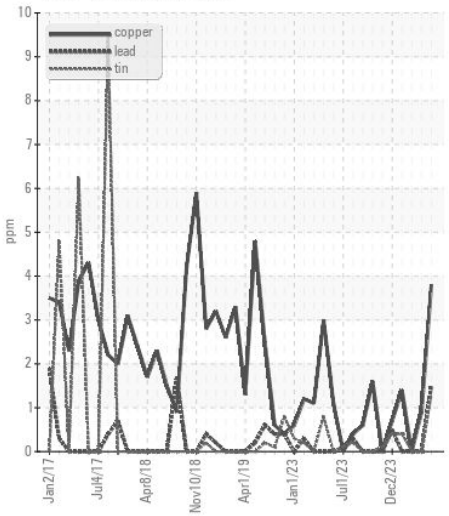
Viscosity @ 100°C



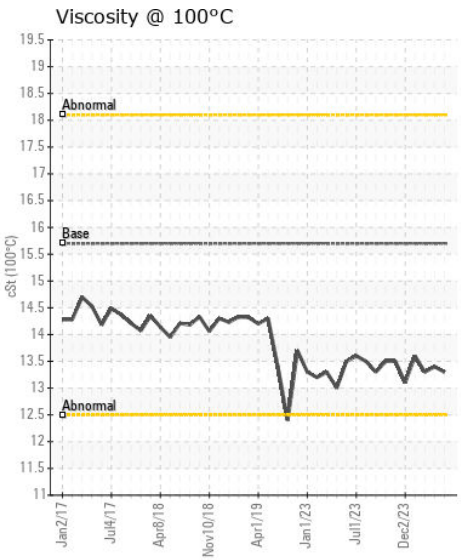
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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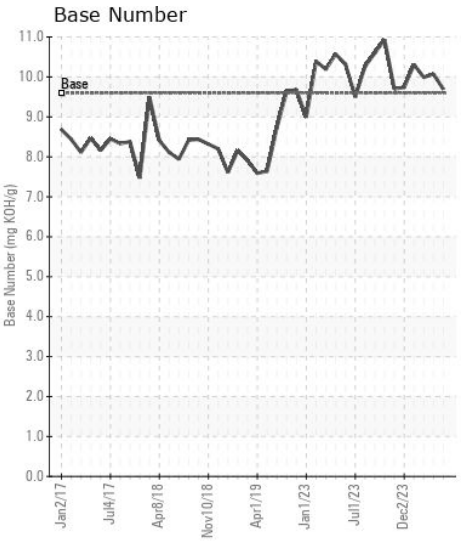

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0065912
Lab Number : 06146703
Unique Number : 10976781
Test Package : MAR 2

Received : 11 Apr 2024
Tested : 12 Apr 2024
Diagnosed : 15 Apr 2024 - Sean Felton

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)

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