MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
SAR
Machine Id
SAR (S/N 09-01-1031)
Component
Port Main Engine
Fluid
CHEVRON DELO 710 LS (400 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

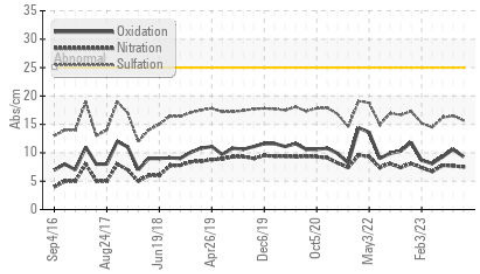
There is no indication of any contamination in the oil.

FLUID CONDITION

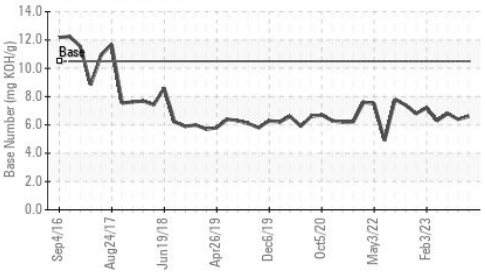
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0060919	MW0060833	MW0050833
Sample Date		Client Info		31 Mar 2024	13 Dec 2023	23 Sep 2023
Machine Age	hrs	Client Info		114960	17402	15112
Oil Age	hrs	Client Info		6685	4276	6987
Filter Age	hrs	Client Info		1112	1180	1274
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	7	7	7
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>3	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>15	2	1	2
Lead	ppm	ASTM D5185m	>18	2	1	1
Copper	ppm	ASTM D5185m	>80	3	5	5
Tin	ppm	ASTM D5185m	>14	2	2	2
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	2	2	3
Potassium	ppm	ASTM D5185m	>20	<1	<1	2
Fuel	%	ASTM D3524	>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	>3	0.3	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.5	7.7	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.7	16.5	16.2
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	2	1	2
Boron	ppm	ASTM D5185m		41	40	39
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		44	44	43
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		8	11	0
Calcium	ppm	ASTM D5185m		3442	3475	3274
Phosphorus	ppm	ASTM D5185m		2	4	0
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm	ASTM D5185m		2446	2212	1769
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.3	10.6	9.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	6.6	6.4	6.8
Visc @ 100°C	cSt	ASTM D445	15.5	14.69	14.6	14.4

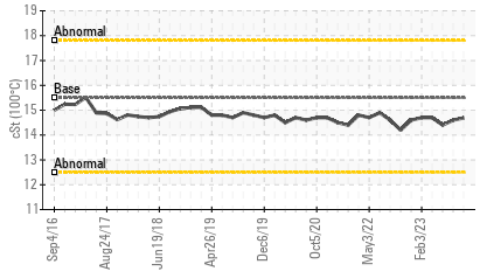
FT-IR (Direct Trend)



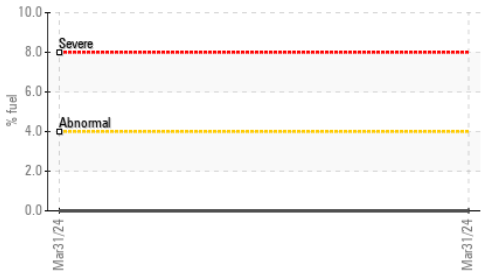
Base Number



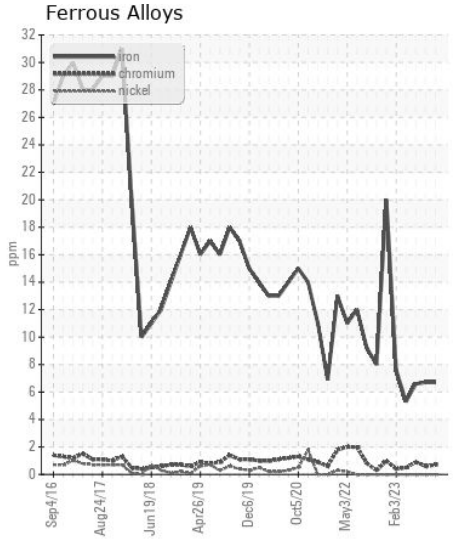
Viscosity @ 100°C



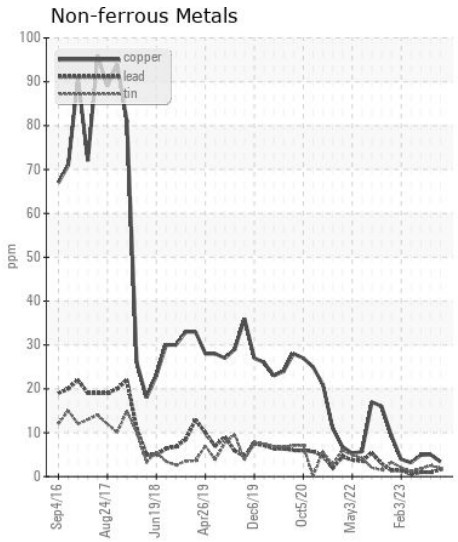
Fuel Dilution



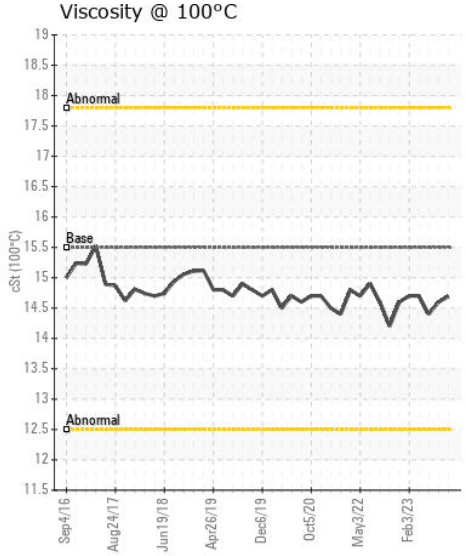
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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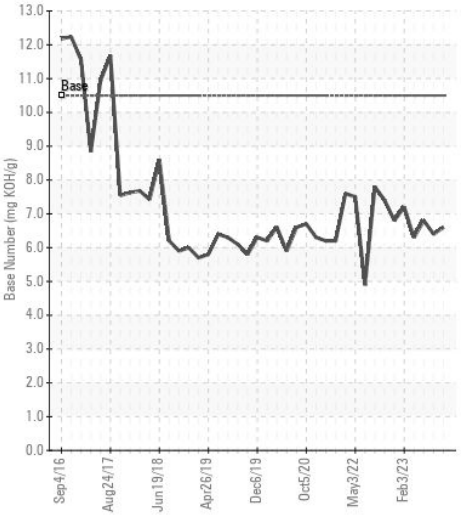

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0060919
Lab Number : 06194790
Unique Number : 11056913
Test Package : MAR 2 (Additional Tests: FuelDilution, PercentFuel)

Received : 29 May 2024
Tested : 03 Jun 2024
Diagnosed : 03 Jun 2024 - Jonathan Hester

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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