MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
GST
Machine Id
GST
Component
Port Main Engine
Fluid
CHEVRON DELO 710 LS (300 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

Cylinder, crank, or cam shaft wear is indicated.

CONTAMINATION

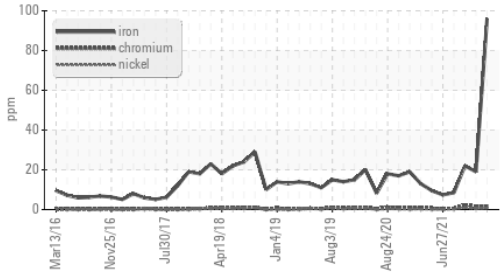
There is no indication of any contamination in the oil.

FLUID CONDITION

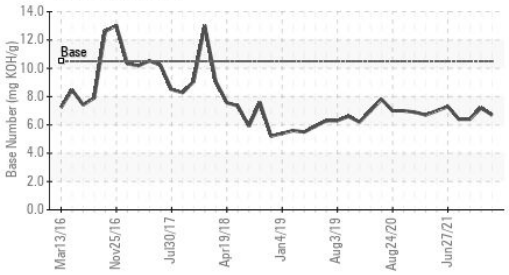
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0054948	MW0054949	MW0022928
Sample Date		Client Info		16 Nov 2023	29 Sep 2023	28 Oct 2021
Machine Age	hrs	Client Info		72572	71493	59668
Oil Age	hrs	Client Info		4691	3612	1634
Filter Age	hrs	Client Info		1293	249	1627
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	▲ 96	19	22
Chromium	ppm	ASTM D5185m	>8	2	2	2
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m	>3	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	2	<1
Lead	ppm	ASTM D5185m	>18	7	7	7
Copper	ppm	ASTM D5185m	>80	15	11	18
Tin	ppm	ASTM D5185m	>14	4	4	12
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	7	6	2
Potassium	ppm	ASTM D5185m	>20	2	2	0
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	>3	0.7	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	8.3	8.4	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.1	17.0	15.4
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	28	23	0
Boron	ppm	ASTM D5185m		36	34	41
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		41	40	45
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		12	13	0
Calcium	ppm	ASTM D5185m		3309	3312	3786
Phosphorus	ppm	ASTM D5185m		4	4	0
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm	ASTM D5185m		2287	2330	1632
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.5	9.0	7.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	6.7	7.2	6.4
Visc @ 100°C	cSt	ASTM D445	15.5	14.6	14.6	14.8

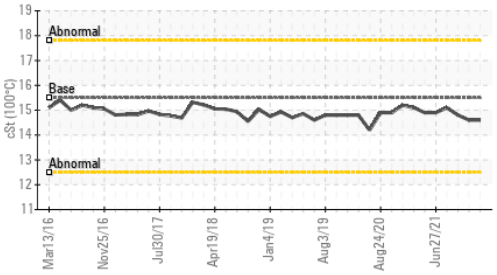
Ferrous Alloys



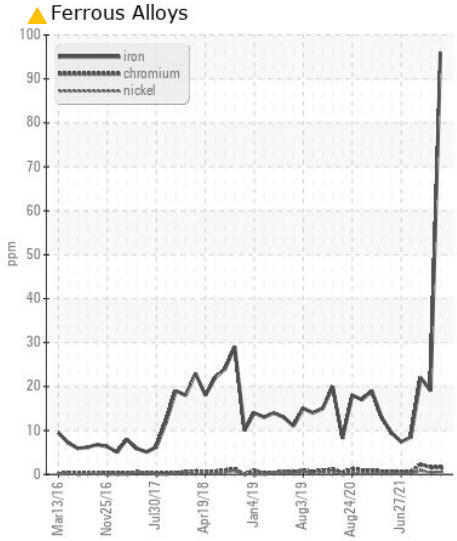
Base Number



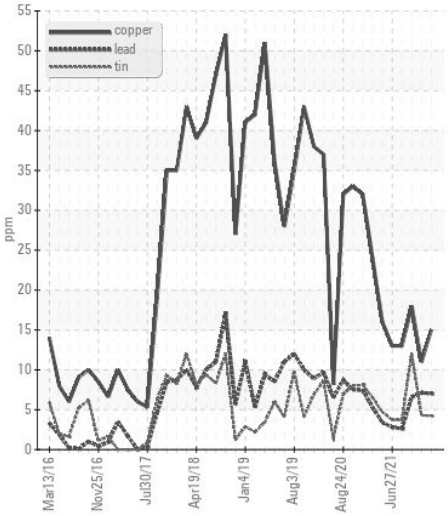
Viscosity @ 100°C



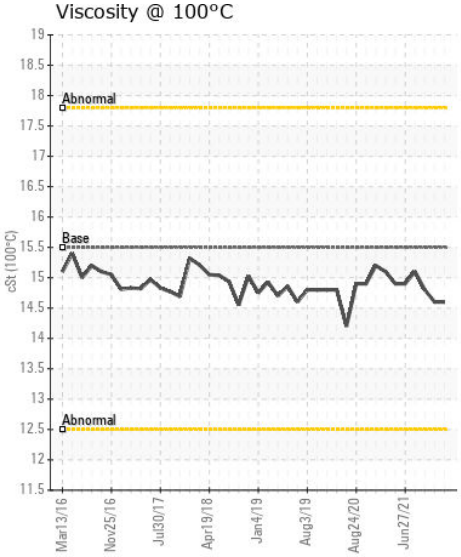
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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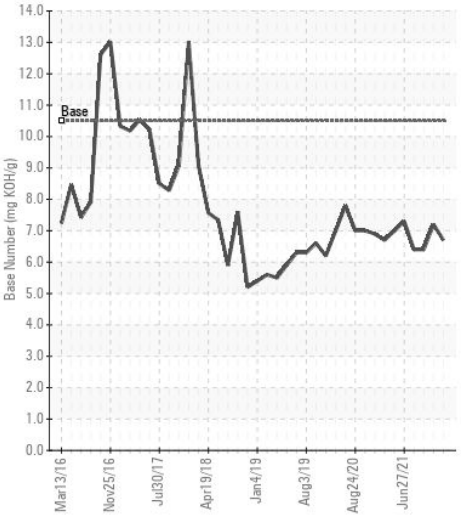

Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: MW0054948	**Recieved**	: 10 Jan 2024
Lab Number	: 06056336	**Diagnosed**	: 11 Jan 2024
Unique Number	: 10822285	**Diagnostician**	: Jonathan Hester
Test Package	: MAR 2		

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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