MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
MICHEAL J GRAINGER
Machine Id
007
Component
Port Genset
Fluid
CHEVRON DELO 400 LE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

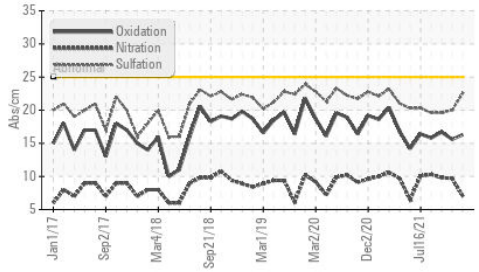
There is no indication of any contamination in the oil.

FLUID CONDITION

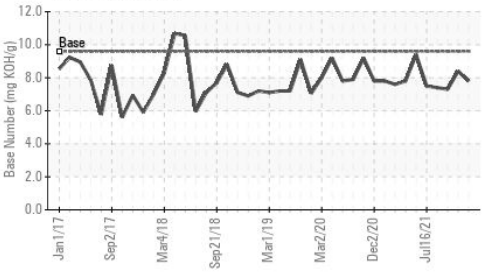
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0068272	MW0017871	MW0005789
Sample Date		Client Info		11 Jul 2024	01 Mar 2022	02 Nov 2021
Machine Age	hrs	Client Info		9831	4837	4153
Oil Age	hrs	Client Info		304	261	407
Filter Age	hrs	Client Info		0	261	0
Oil Changed		Client Info		N/A	Not Changd	N/A
Filter Changed		Client Info		N/A	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>50	9	6	9
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	16	16
Silver	ppm	ASTM D5185m	>5	0	0	<1
Aluminum	ppm	ASTM D5185m	>12	2	1	2
Lead	ppm	ASTM D5185m	>17	0	0	<1
Copper	ppm	ASTM D5185m	>70	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	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	>25	4	4	4
Potassium	ppm	ASTM D5185m	>20	2	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		0.3	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.1	9.7	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	20.0	19.6
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		2	2	1
Boron	ppm	ASTM D5185m		347	130	85
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		94	32	30
Manganese	ppm	ASTM D5185m		5	<1	<1
Magnesium	ppm	ASTM D5185m		448	765	727
Calcium	ppm	ASTM D5185m		1624	1683	1671
Phosphorus	ppm	ASTM D5185m	1200	1026	833	772
Zinc	ppm	ASTM D5185m	1300	1257	883	913
Sulfur	ppm	ASTM D5185m	3200	3756	2850	2912
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	15.6	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	7.8	8.4	7.3
Visc @ 100°C	cSt	ASTM D445	15.7	13.4	12.7	12.7

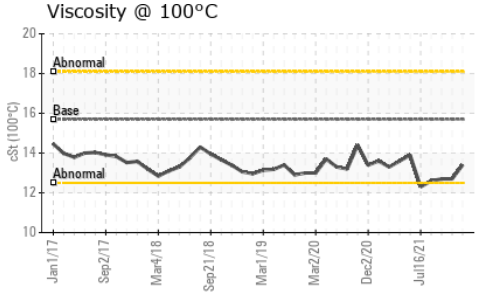
FT-IR (Direct Trend)



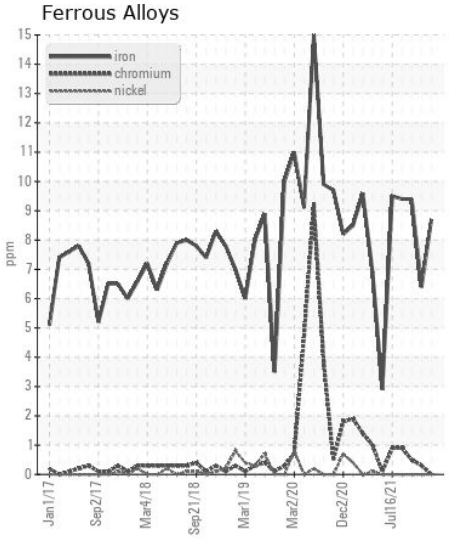
Base Number



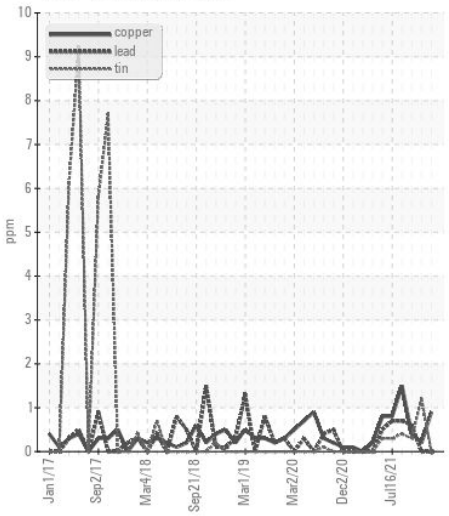
Viscosity @ 100°C



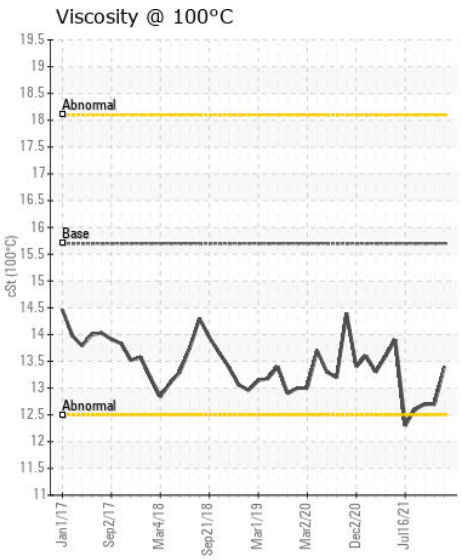
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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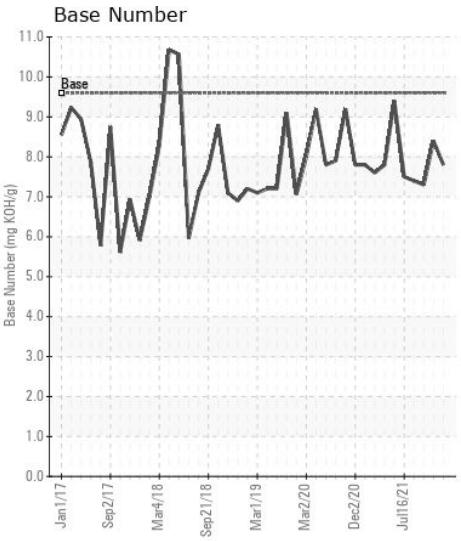

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0068272
Lab Number : 06234332
Unique Number : 11123166
Test Package : MAR 2

Received : 11 Jul 2024
Tested : 12 Jul 2024
Diagnosed : 14 Jul 2024 - Don Baldridge

INGRAM SOLD VESSELS
UNUSED COMPONENTS
,
US
Contact:

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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