MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
BIG EASY
Component
4 Main Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

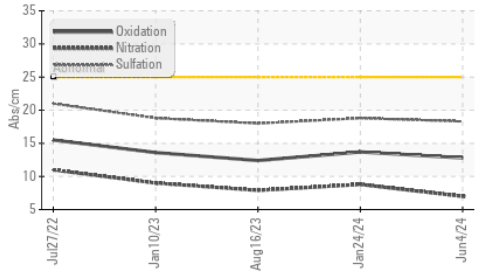
There is no indication of any contamination in the oil.

FLUID CONDITION

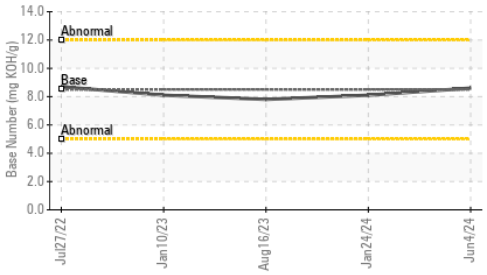
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0064868	MW0064905	MW0057160
Sample Date		Client Info		04 Jun 2024	24 Jan 2024	16 Aug 2023
Machine Age	hrs	Client Info		13893	12292	11406
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	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	>75	4	0	5
Chromium	ppm	ASTM D5185m	>8	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>3	13	13	15
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	1	<1
Lead	ppm	ASTM D5185m	>18	0	1	<1
Copper	ppm	ASTM D5185m	>80	0	0	<1
Tin	ppm	ASTM D5185m	>14	0	<1	<1
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	4	0	3
Potassium	ppm	ASTM D5185m	>20	4	3	4
Fuel		WC Method	>4.0	<1.0	1.7	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	7.0	8.8	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.3	18.8	18.0
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	>158	3	3	2
Boron	ppm	ASTM D5185m	250	97	84	99
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	25	25	32
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	641	638	685
Calcium	ppm	ASTM D5185m	3000	1479	1404	1583
Phosphorus	ppm	ASTM D5185m	1150	751	659	721
Zinc	ppm	ASTM D5185m	1350	826	770	839
Sulfur	ppm	ASTM D5185m	4250	2965	2831	3054
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.8	13.7	12.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.6	8.1	7.8
Visc @ 100°C	cSt	ASTM D445	14.4	13.8	12.3	13.0

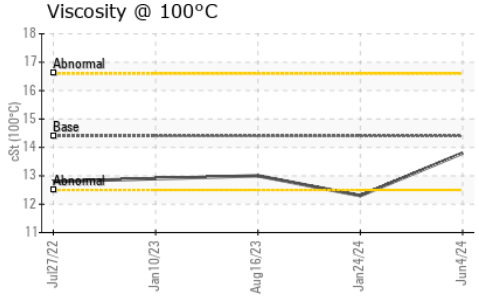
FT-IR (Direct Trend)



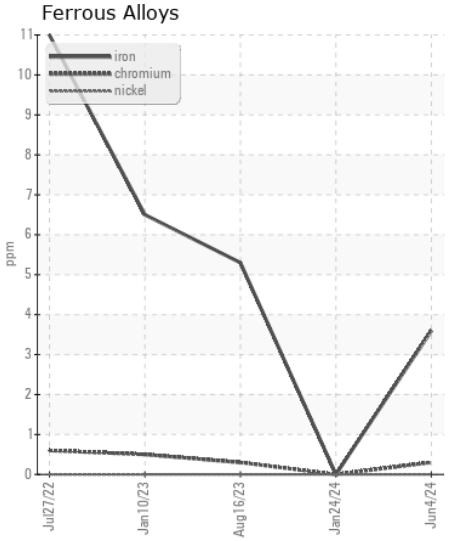
Base Number



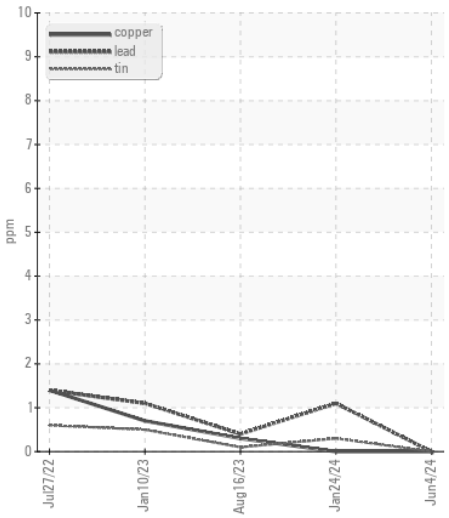
Viscosity @ 100°C



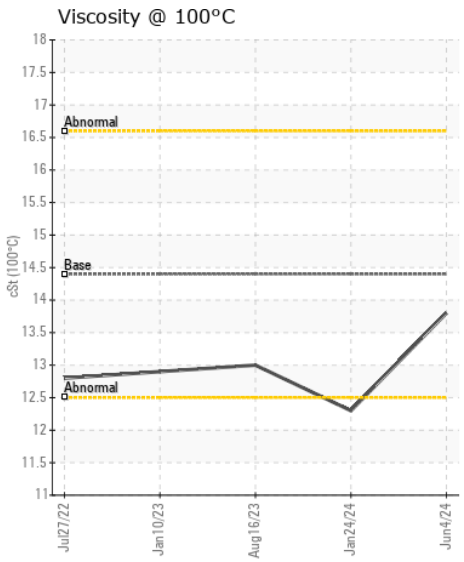
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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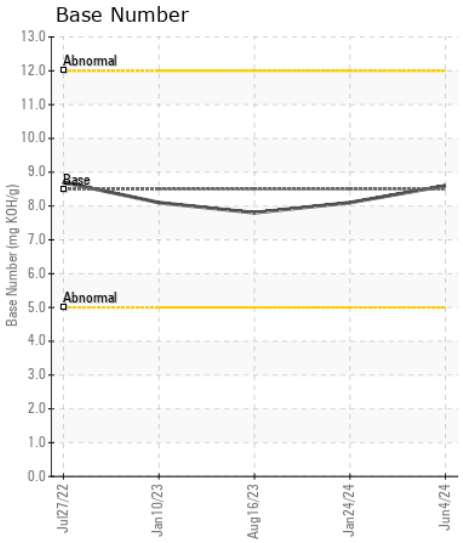

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0064868
Lab Number : 06214211
Unique Number : 11087075
Test Package : MAR 2

Received : 19 Jun 2024
Tested : 20 Jun 2024
Diagnosed : 20 Jun 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)

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