MAR II

WEAR CHECK
Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	SEVERE

Machine Id
MWP
Component
Port Genset
Fluid
CHEVRON URSA SUPER PLUS 40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you change the oil at the next available stoppage or outage. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

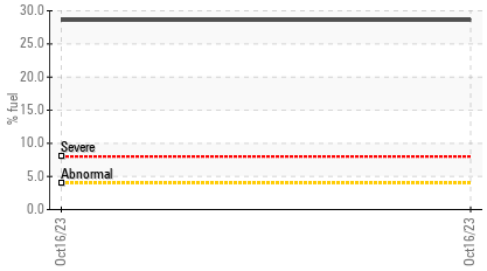
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

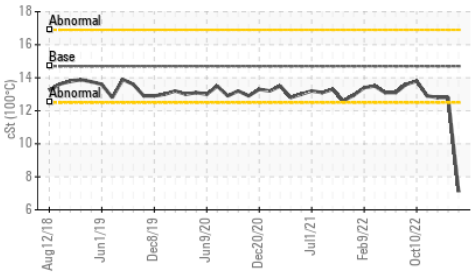
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**MW05981743**	MW05745142	MW05718167
Sample Date		Client Info		**16 Oct 2023**	19 Jan 2023	14 Dec 2022
Machine Age	hrs	Client Info		**22127**	22071	21686
Oil Age	hrs	Client Info		**56**	395	534
Filter Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Filter Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>50	**2**	<1	4
Chromium	ppm	ASTM D5185m	>4	**<1**	0	0
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	<1
Silver	ppm	ASTM D5185m	>5	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>12	**2**	2	2
Lead	ppm	ASTM D5185m	>17	**0**	0	1
Copper	ppm	ASTM D5185m	>70	**<1**	0	<1
Tin	ppm	ASTM D5185m	>15	**<1**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**4**	3	2
Potassium	ppm	ASTM D5185m	>20	**2**	0	1
Fuel	%	ASTM D3524	>4.0	▲ **28.6**	<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	**4.8**	6.4	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.4**	22.2	23.1
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		**0**	0	0
Boron	ppm	ASTM D5185m		**304**	377	303
Barium	ppm	ASTM D5185m		**10**	0	0
Molybdenum	ppm	ASTM D5185m		**73**	91	97
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m		**344**	446	465
Calcium	ppm	ASTM D5185m		**1008**	1305	1480
Phosphorus	ppm	ASTM D5185m	1000	**596**	706	819
Zinc	ppm	ASTM D5185m	1090	**678**	822	985
Sulfur	ppm	ASTM D5185m		**1986**	2731	3310
Oxidation	Abs/.1mm	*ASTM D7414	>25	**21.9**	17.2	18.2
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	**6.1**	7.9	7.4
Visc @ 100°C	cSt	ASTM D445	14.7	▲ **7.1**	12.8	12.8

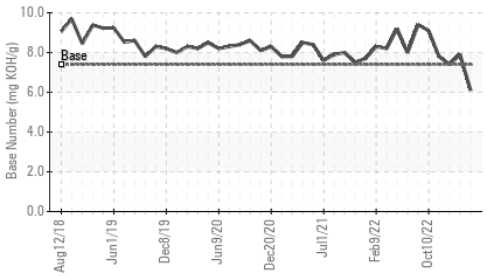
Fuel Dilution



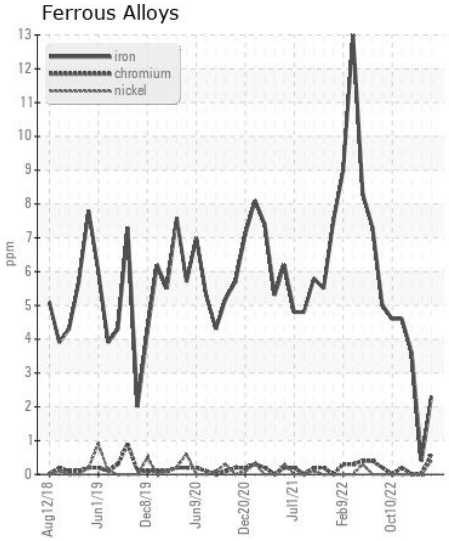
Viscosity @ 100°C



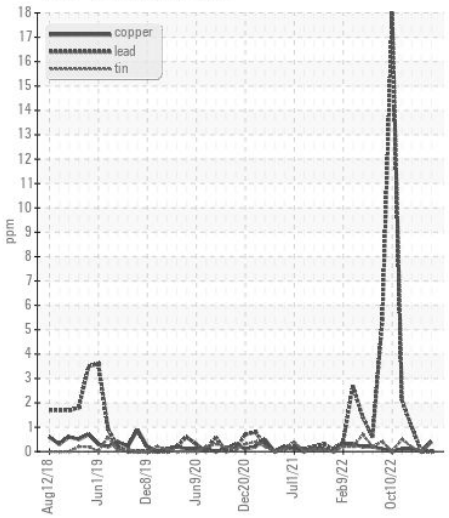
Base Number



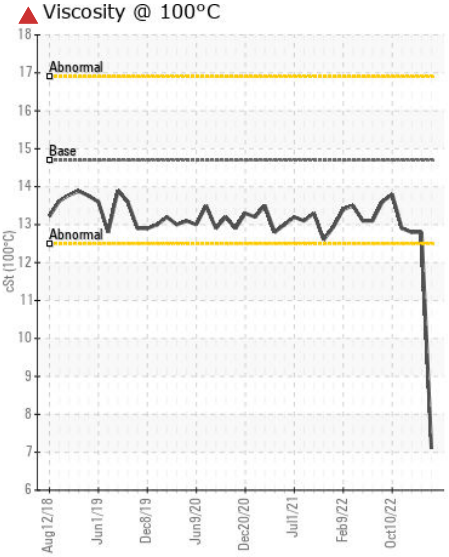
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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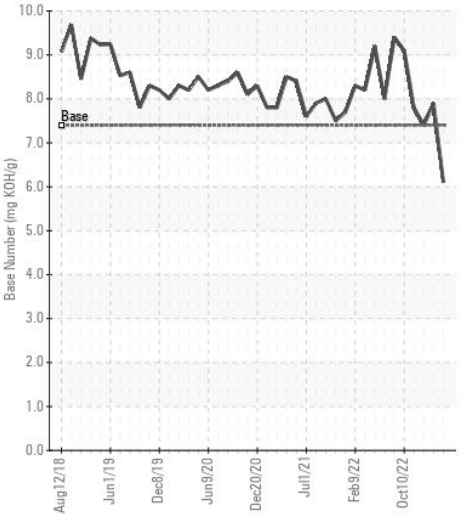

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW05981743 **Received** : 17 Oct 2023
Lab Number : 05981743 **Tested** : 18 Oct 2023
Unique Number : 10699038 **Diagnosed** : 18 Oct 2023 - Wes Davis
Test Package : MAR 2 (Additional Tests: FuelDilution, PercentFuel)

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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