MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Machine Id
LOUISIANA TRANSPORTER
Component
Starboard Steering
Fluid
CHEVRON RANDO HD 32 (40 GAL)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

CONTAMINATION

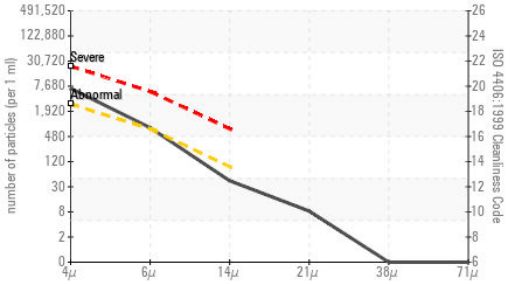
There is a high amount of silt (particulates < 14 microns in size) present in the fluid.

FLUID CONDITION

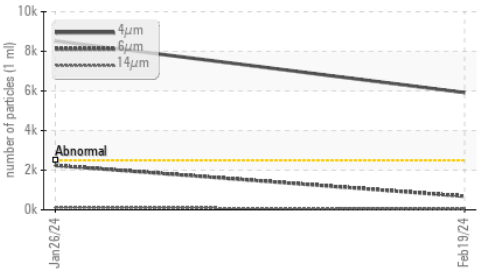
The fluid viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0057242	MW0042841	---
Sample Date		Client Info		19 Feb 2024	26 Jan 2024	---
Machine Age	hrs	Client Info		0	0	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	ABNORMAL	---
Iron	ppm	ASTM D5185m	>50	3	<1	---
Chromium	ppm	ASTM D5185m	>15	<1	0	---
Nickel	ppm	ASTM D5185m	>5	<1	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>5	<1	0	---
Lead	ppm	ASTM D5185m	>10	0	0	---
Copper	ppm	ASTM D5185m	>50	1	<1	---
Tin	ppm	ASTM D5185m	>5	<1	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>15	2	9	---
Potassium	ppm	ASTM D5185m	>20	<1	0	---
Water		WC Method	>0.2	NEG	NEG	---
Particles >4µm		ASTM D7647	>2500	▲ 5917	▲ 8525	---
Particles >6µm		ASTM D7647	>640	● 682	▲ 2238	---
Particles >14µm		ASTM D7647	>80	37	▲ 122	---
Particles >21µm		ASTM D7647	>20	7	▲ 27	---
Particles >38µm		ASTM D7647	>4	0	1	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ 20/17/12	▲ 20/18/14	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---
Sodium	ppm	ASTM D5185m		0	0	---
Boron	ppm	ASTM D5185m		0	0	---
Barium	ppm	ASTM D5185m		0	<1	---
Molybdenum	ppm	ASTM D5185m		<1	0	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		20	19	---
Calcium	ppm	ASTM D5185m		47	51	---
Phosphorus	ppm	ASTM D5185m		220	205	---
Zinc	ppm	ASTM D5185m		290	275	---
Sulfur	ppm	ASTM D5185m		920	792	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.32	0.55	---
Visc @ 40°C	cSt	ASTM D445	30.4	● 59.4	● 59.8	---

Particle Count

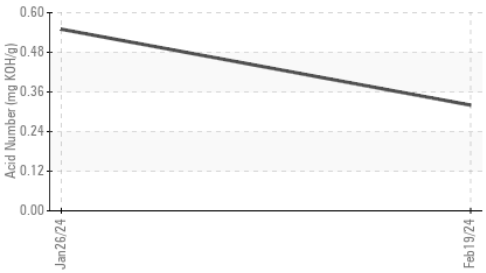


Particle Trend

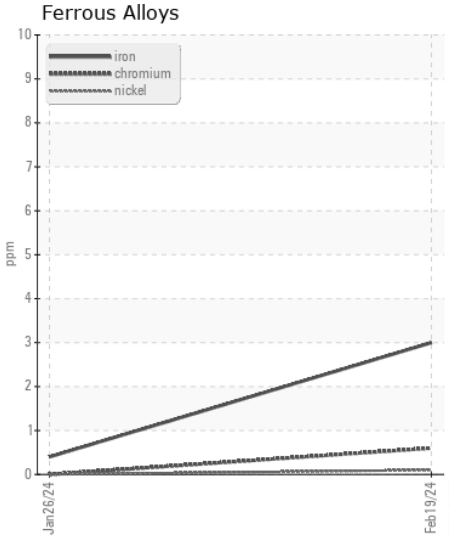


Viscosity @ 40°C

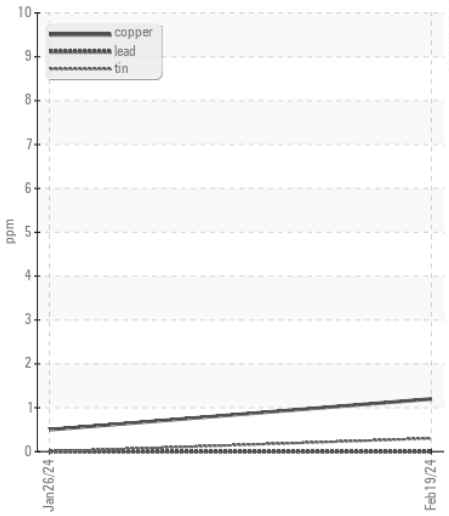
Acid Number



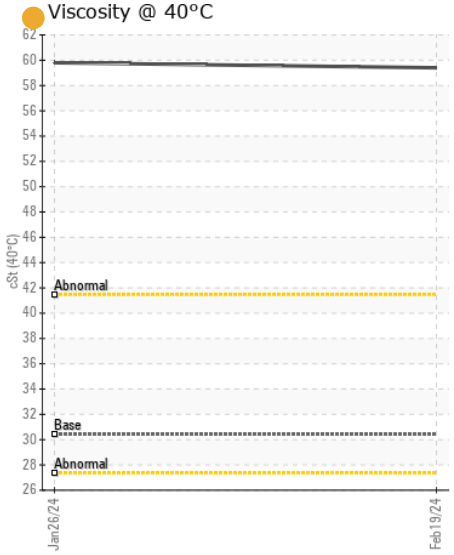
Ferrous Alloys



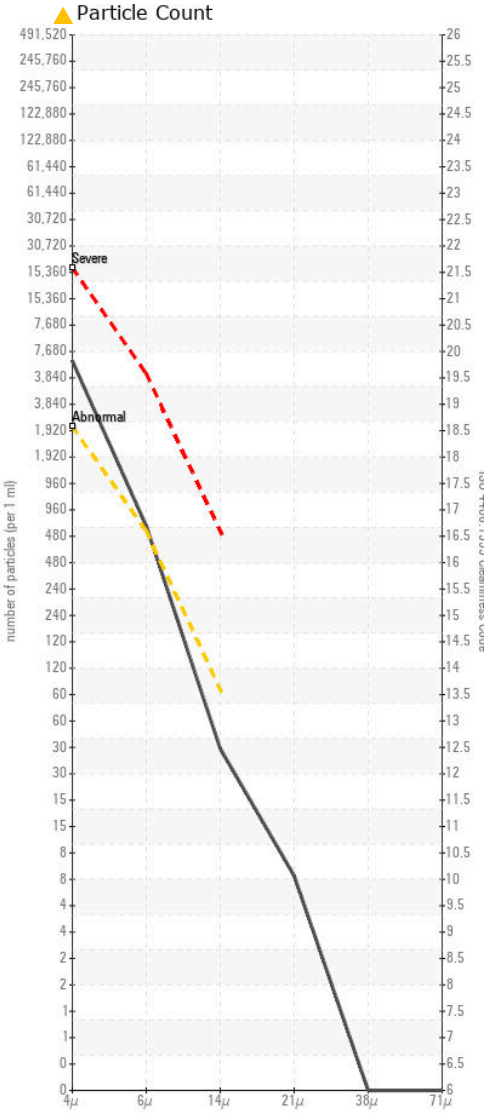
Non-ferrous Metals



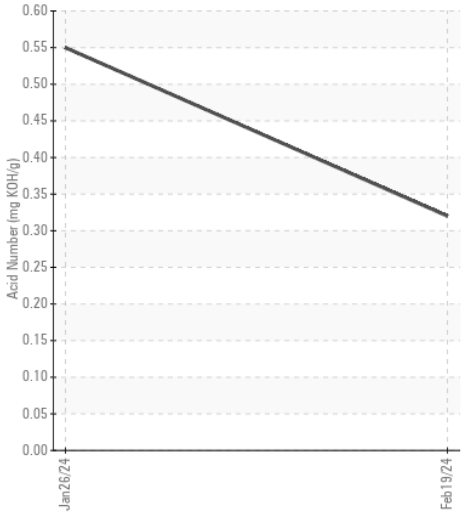
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0057242
Lab Number : 06104276
Unique Number : 10902506
Test Package : MAR 2 (Additional Tests: PrtCount)

Received : 29 Feb 2024
Tested : 01 Mar 2024
Diagnosed : 02 Mar 2024 - Don Baldridge

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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