



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id  
**FISHING VESSEL MV Hearn`s Endeavor**  
 Component  
**Hydraulic System**  
 Fluid  
**AW HYDRAULIC OIL ISO 32 (--- GAL)**

## RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. Resample in 30-45 days to monitor this situation. ( Customer Sample Comment: Water contamination - Before OFS )

## WEAR

All component wear rates are normal.

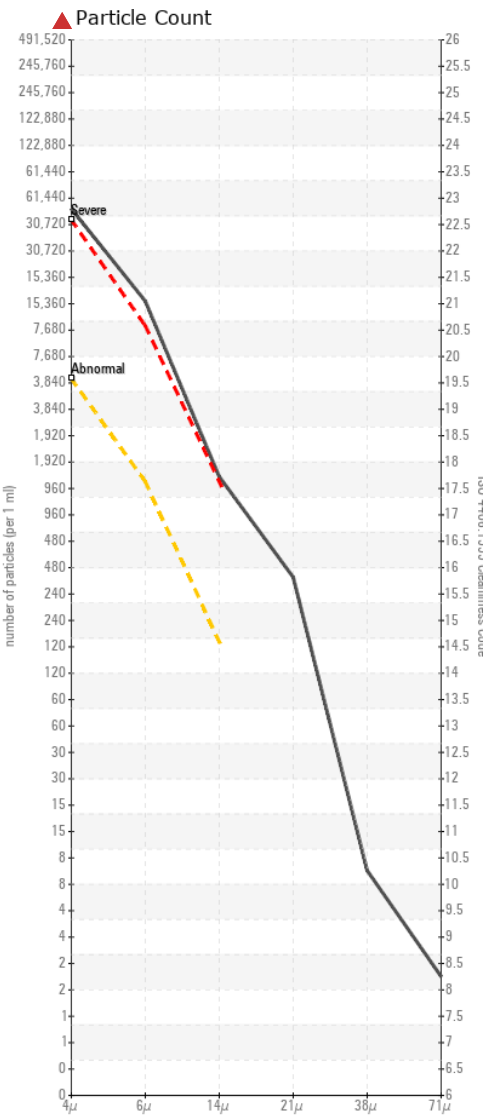
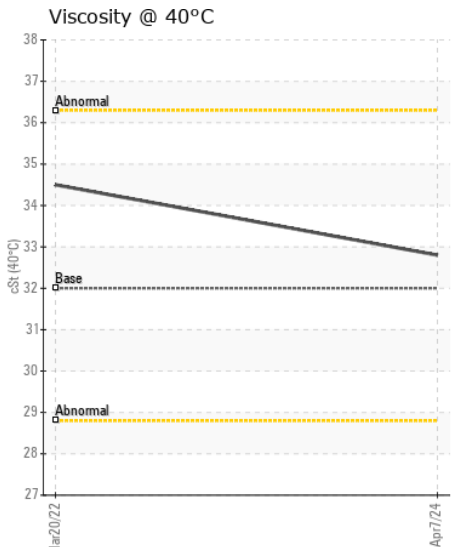
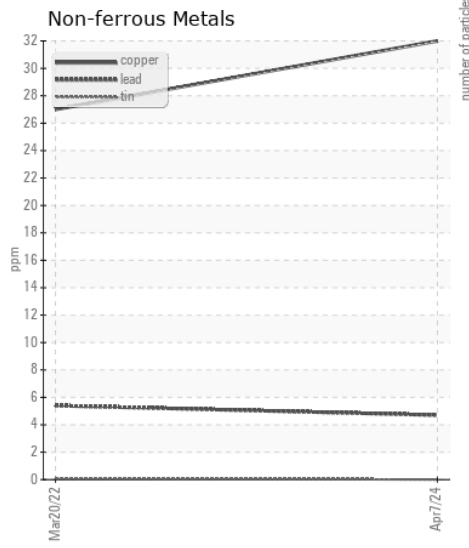
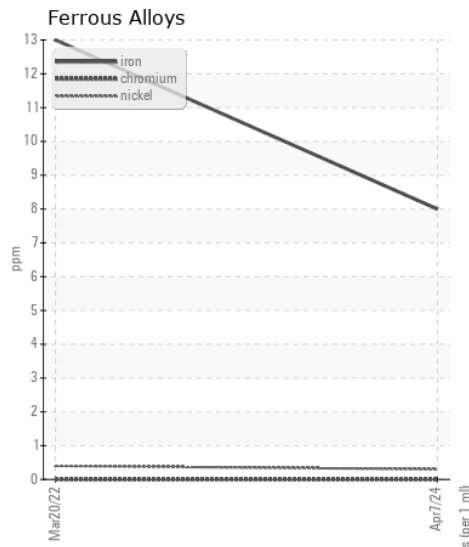
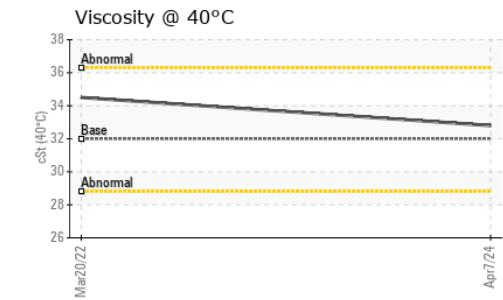
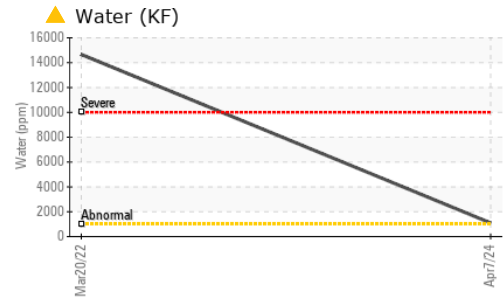
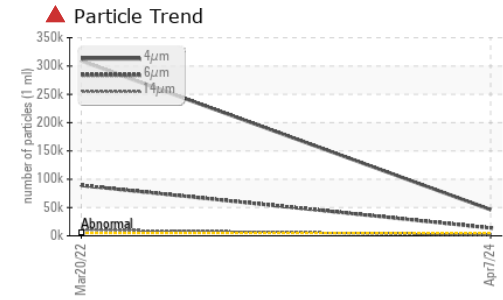
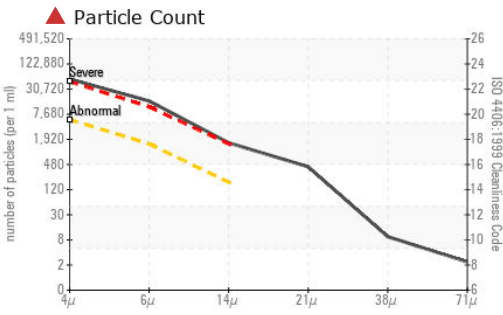
## CONTAMINATION

There is a high amount of particulates (2 to 100 microns in size) present in the oil. There is a moderate concentration of water present in the oil. Free water present.

## FLUID CONDITION

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>OF0000522</b>	OF0000232	---
Sample Date		Client Info		<b>07 Apr 2024</b>	20 Mar 2022	---
Machine Age	hrs	Client Info		<b>2480</b>	0	---
Oil Age	hrs	Client Info		<b>2480</b>	250	---
Filter Age	hrs	Client Info		<b>10</b>	250	---
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	---
Filter Changed		Client Info		<b>Changed</b>	Not Changed	---
Sample Status				<b>SEVERE</b>	SEVERE	---
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Iron	ppm	ASTM D5185(m)	>20	<b>8</b>	13	---
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	---
Nickel	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	1	---
Lead	ppm	ASTM D5185(m)	>10	<b>5</b>	5	---
Copper	ppm	ASTM D5185(m)	>75	<b>32</b>	27	---
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
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Silicon	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	2	---
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	6	---
Water	%	ASTM D6304*	>0.1	<b>▲ 0.109</b>	▲ 1.466	---
ppm Water	ppm	ASTM D6304*	>1000	<b>▲ 1093</b>	▲ 14660.5	---
Particles >4µm		ASTM D7647	>5000	<b>▲ 46189</b>	▲ 309071	---
Particles >6µm		ASTM D7647	>1300	<b>▲ 13812</b>	▲ 89002	---
Particles >14µm		ASTM D7647	>160	<b>▲ 1388</b>	▲ 10580	---
Particles >21µm		ASTM D7647	>40	<b>▲ 372</b>	▲ 3685	---
Particles >38µm		ASTM D7647	>10	<b>8</b>	▲ 194	---
Particles >71µm		ASTM D7647	>3	<b>2</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 23/21/18</b>	▲ 25/24/21	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	Visual*	NONE	<b>VLITE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>▲ HAZY</b>	▲ MILKY	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	Visual*	>0.1	<b>▲ .2%</b>	▲ 1%	---
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Sodium	ppm	ASTM D5185(m)		<b>45</b>	183	---
Boron	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	3	---
Barium	ppm	ASTM D5185(m)	5	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m)	5	<b>0</b>	0	---
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	---
Magnesium	ppm	ASTM D5185(m)	25	<b>4</b>	15	---
Calcium	ppm	ASTM D5185(m)	200	<b>6</b>	6	---
Phosphorus	ppm	ASTM D5185(m)	300	<b>302</b>	336	---
Zinc	ppm	ASTM D5185(m)	370	<b>121</b>	195	---
Sulfur	ppm	ASTM D5185(m)	2500	<b>1731</b>	1954	---
Visc @ 40°C	cSt	ASTM D7279(m)	32	<b>32.8</b>	34.5	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : OF0000522 **Received** : 18 Apr 2024  
**Lab Number** : 02629966 **Tested** : 22 Apr 2024  
**Unique Number** : 5763098 **Diagnosed** : 22 Apr 2024 - Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: KF )

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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.