



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area  
**MV Canadian Joye**  
Machine Id  
**Com. Fishing Vessel MV Canadian Joye**  
Component  
**Hydraulic System**  
Fluid  
**PETRO CANADA ENVIRON AW 32 (2300 LTR)**

## RECOMMENDATION

Check seals and/or filters for points of contaminant entry. We advise that you check all areas where contaminants can enter the system. We advise that you follow the water drain-off procedure for this component, and use off-line filtration to improve the cleanliness of the system fluid. 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. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. The fluid was specified as PETRO CANADA ENVIRON AW 32, however, a fluid match indicates that this fluid is ISO 46 AW Hydraulic Oil. Please confirm the oil type and grade on your next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid. ( Customer Sample Comment: G2F put into service after sample was taken. )

## WEAR

Component wear rates appear to be normal (unconfirmed).

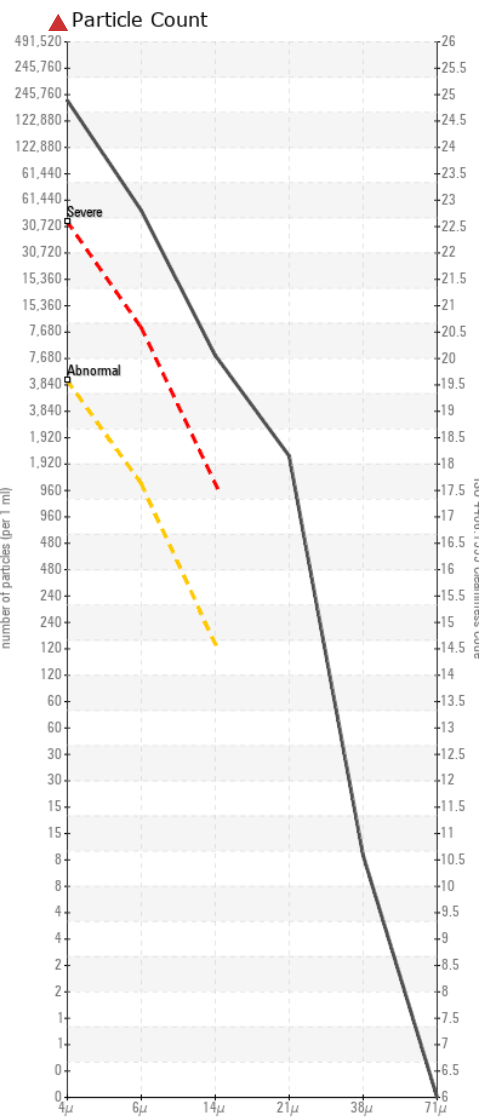
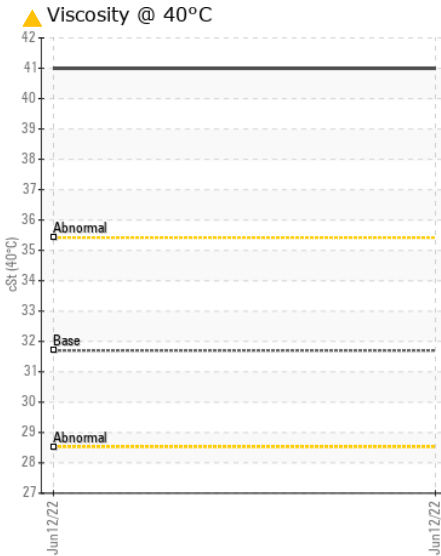
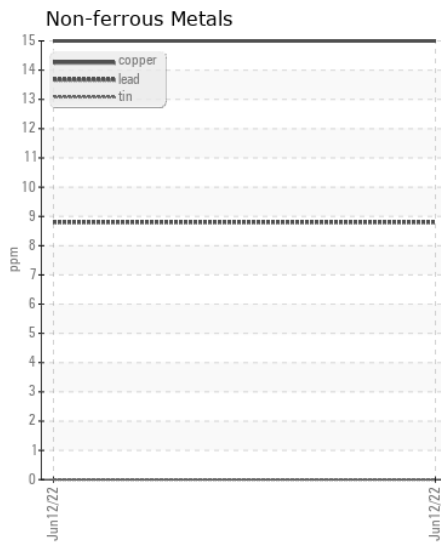
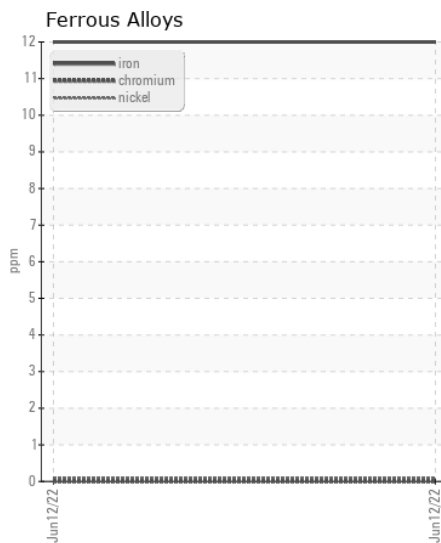
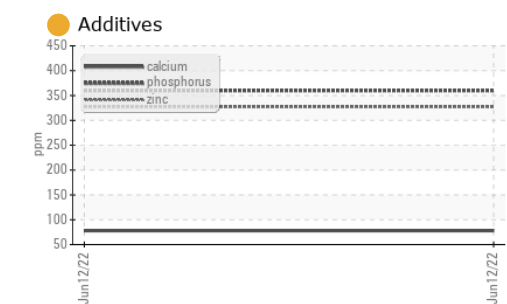
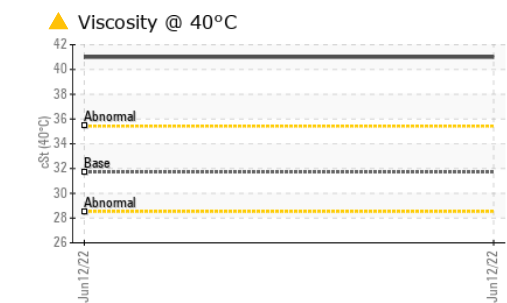
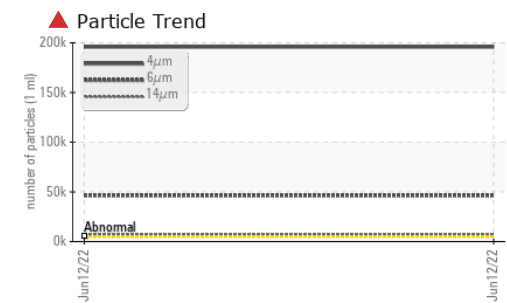
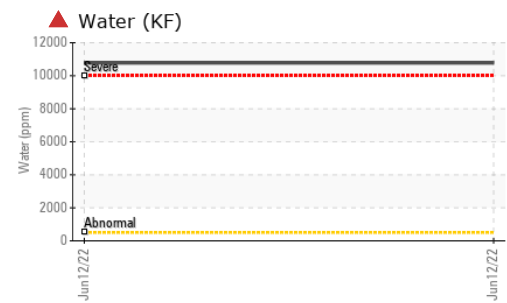
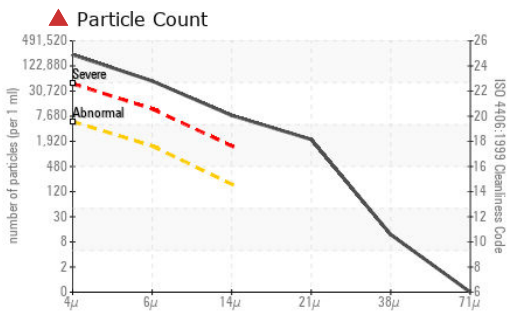
## CONTAMINATION

Water and ppm water contamination levels are severe. Particles >14µm are severely high. Particles >21µm are severely high. Particles >6µm are severely high. Particles >4µm are severely high. Oil Cleanliness are severely high. There is a high concentration of water present in the oil. Free water present. Elemental level of calcium (Ca) indicates contamination with brine (salt water).

## FLUID CONDITION

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>OF0000579</b>	---	---
Sample Date		Client Info		<b>12 Jun 2022</b>	---	---
Machine Age	hrs	Client Info		<b>4500</b>	---	---
Oil Age	hrs	Client Info		<b>2000</b>	---	---
Filter Age	hrs	Client Info		<b>1000</b>	---	---
Oil Changed		Client Info		<b>Not Chngd</b>	---	---
Filter Changed		Client Info		<b>Not Chngd</b>	---	---
Sample Status				<b>SEVERE</b>	---	---
Iron	ppm	ASTM D5185(m)	>20	<b>12</b>	---	---
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	---	---
Nickel	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>10	<b>1</b>	---	---
Lead	ppm	ASTM D5185(m)	>20	<b>9</b>	---	---
Copper	ppm	ASTM D5185(m)	>20	<b>15</b>	---	---
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Silicon	ppm	ASTM D5185(m)	>15	<b>5</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	---	---
Water	%	ASTM D6304*	>0.05	<b>▲ 1.077</b>	---	---
ppm Water	ppm	ASTM D6304*	>500	<b>▲ 10774.0</b>	---	---
Particles >4µm		ASTM D7647	>5000	<b>▲ 195799</b>	---	---
Particles >6µm		ASTM D7647	>1300	<b>▲ 46365</b>	---	---
Particles >14µm		ASTM D7647	>160	<b>▲ 6970</b>	---	---
Particles >21µm		ASTM D7647	>40	<b>▲ 1863</b>	---	---
Particles >38µm		ASTM D7647	>10	<b>10</b>	---	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 25/23/20</b>	---	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>VLITE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>▲ MILKY</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	Visual*	>0.05	<b>▲ .5%</b>	---	---
Sodium	ppm	ASTM D5185(m)		<b>16</b>	---	---
Boron	ppm	ASTM D5185(m)	0	<b>3</b>	---	---
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	---	---
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185(m)	0	<b>3</b>	---	---
Calcium	ppm	ASTM D5185(m)	0	<b>● 78</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	650	<b>● 360</b>	---	---
Zinc	ppm	ASTM D5185(m)	0	<b>● 327</b>	---	---
Sulfur	ppm	ASTM D5185(m)	1280	<b>1808</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	31.7	<b>▲ 41.0</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : OF0000579 **Received** : 12 Dec 2022  
**Lab Number** : 02528274 **Tested** : 13 Dec 2022  
**Unique Number** : 5501272 **Diagnosed** : 13 Dec 2022 - 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.