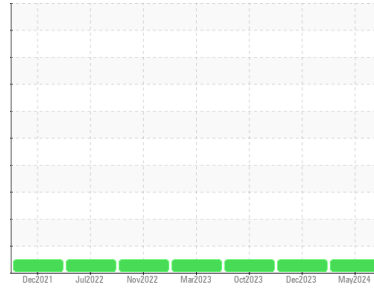


# OIL ANALYSIS REPORT

Area  
**Vessel**  
 Machine Id  
**KAT 012 (Main Engine)**  
 Component  
**Main Engine**  
 Fluid  
**PETRO CANADA CM MHP 153 (1000 LTR)**

Sample Rating Trend



## DIAGNOSIS

**Recommendation**  
 Resample at the next service interval to monitor.

**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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PC0080258</b>	PC0080264	PC0018595
Sample Date	Client Info			<b>17 May 2024</b>	07 Dec 2023	18 Oct 2023
Machine Age	hrs	Client Info		<b>193009</b>	191564	188528
Oil Age	hrs	Client Info		<b>4000</b>	191564	188528
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>4.0		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.1		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

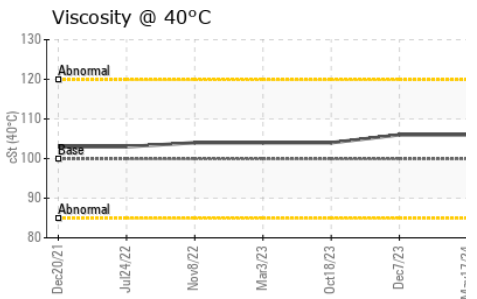
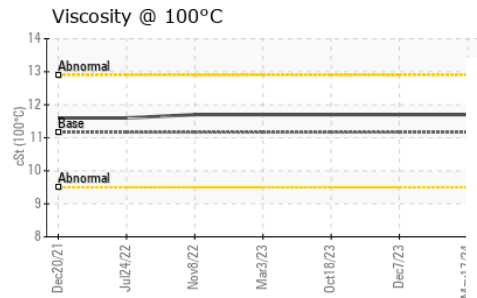
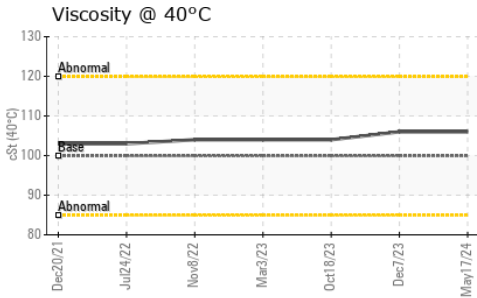
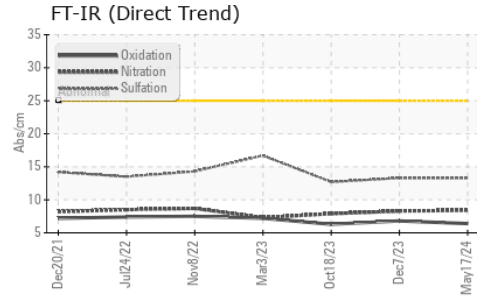
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>25	<b>4</b>	4	5
Chromium	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>10	<b>1</b>	2	1
Lead	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>3</b>	3	3
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)		<b>2</b>	2	2
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>43</b>	44	55
Calcium	ppm	ASTM D5185(m)		<b>5335</b>	5283	5343
Phosphorus	ppm	ASTM D5185(m)		<b>888</b>	857	869
Zinc	ppm	ASTM D5185(m)	1090	<b>977</b>	972	991
Sulfur	ppm	ASTM D5185(m)		<b>9028</b>	9331	9374
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	<b>5</b>	6	9
Sodium	ppm	ASTM D5185(m)	>75	<b>2</b>	1	1
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>2	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.4</b>	8.3	7.9
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>13.3</b>	13.3	12.7

# OIL ANALYSIS REPORT

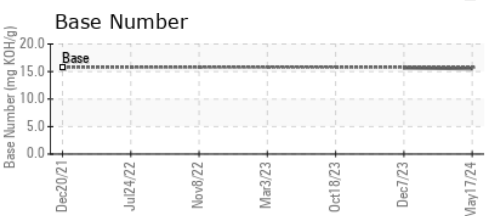
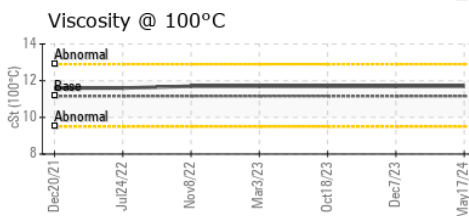
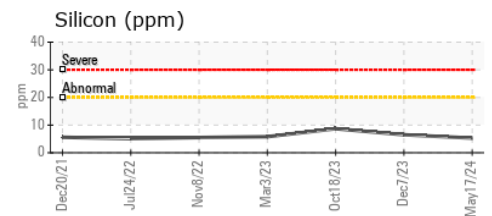
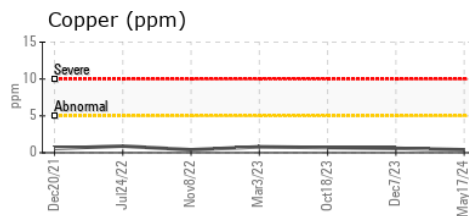
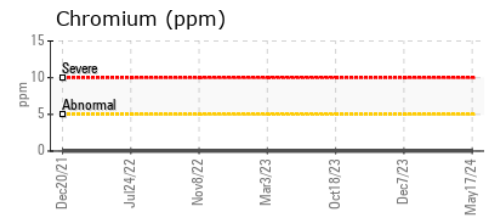
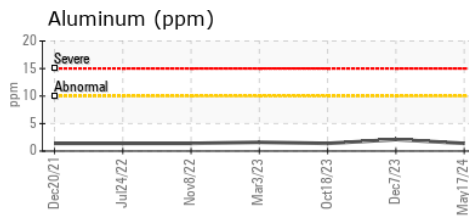
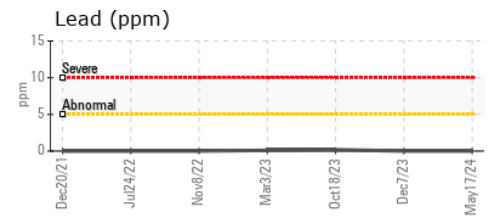
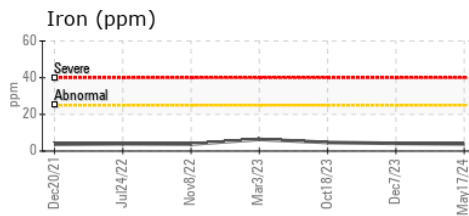


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>6.4</b>	6.8	6.3
Base Number (BN)	mg KOH/g	ASTM D2896*	15.77	<b>15.52</b>	15.69	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>VLITE</b>	NONE	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	99.91	<b>106</b>	106	104
Visc @ 100°C	cSt	ASTM D7279(m)	11.16	<b>11.7</b>	11.7	11.7
Viscosity Index (VI)	Scale	ASTM D2270*	102	<b>97</b>	97	100

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0080258  
**Lab Number** : **02637892**  
**Unique Number** : 5787054  
**Test Package** : MOB 2 ( Additional Tests: KV40, VI, Visual )

**Ocean Choice International - Katsheshuk II**  
 1315 Topsail Rd, P.O. Box 8190  
 St. John's, NL  
 CA A1B 3N4  
 Contact: Chief Engineer  
 katengine@oceanchoice.com

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.