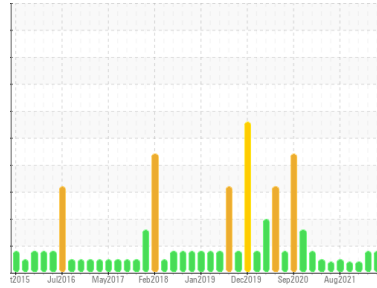


# PROBLEM SUMMARY

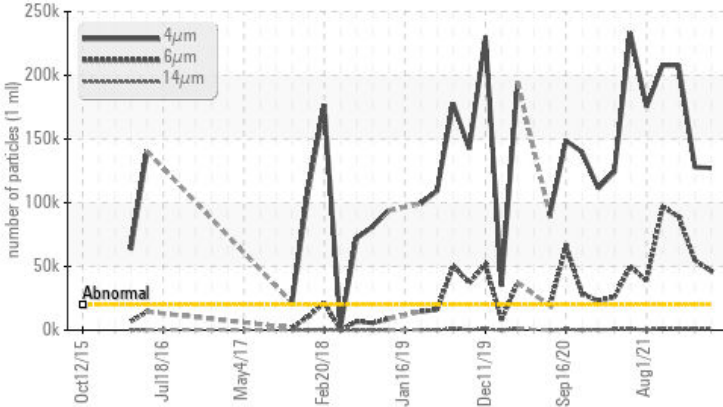
Area  
**Cranes**  
Machine Id  
**Crane - Aft - Hoisting Winch (S/N Sample Tag MA-04001-S5)**  
Component  
**Winch**  
Fluid  
**PETRO CANADA GEARLUBE TOS 80W90 (8 LTR)**

Sample Rating Trend



## COMPONENT CONDITION SUMMARY

▲ Particle Trend



### RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

### PROBLEMATIC TEST RESULTS

Sample Status		ATTENTION	ATTENTION	ATTENTION
Particles >14µm	ASTM D7647 >640	▲ 1130	▲ 1042	▲ 1032
Oil Cleanliness	ISO 4406 (c) >21/19/16	▲ 24/23/17	▲ 24/23/17	▲ 25/24/17

Customer Id: TERHAM  
Sample No.: PC0039817  
Lab Number: 02576420  
Test Package: MAR 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Kevin Marson +1 (289)291-4644 x4644  
[Kevin.Marson@wearcheck.com](mailto:Kevin.Marson@wearcheck.com)

To change component or sample information:  
Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.

## HISTORICAL DIAGNOSIS

### 14 Jun 2023 Diag: Kevin Marson

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 29 Nov 2021 Diag: Kevin Marson

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 20 Sep 2021 Diag: Kevin Marson

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Particles >14µm are abnormally high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Area

**Cranes**

Machine Id

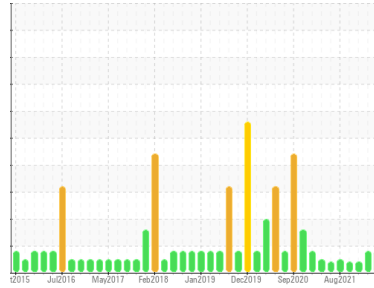
**Crane - Aft - Hoisting Winch (S/N Sample Tag MA-04001-S5)**

Component

**Winch**

Fluid

**PETRO CANADA GEARLUBE TOS 80W90 (8 LTR)**



**DIAGNOSIS**

**Recommendation**

We recommend you service the filters on this component. Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

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

**Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

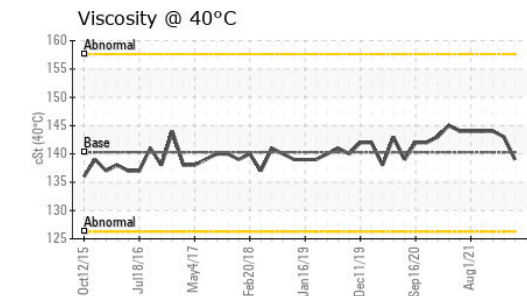
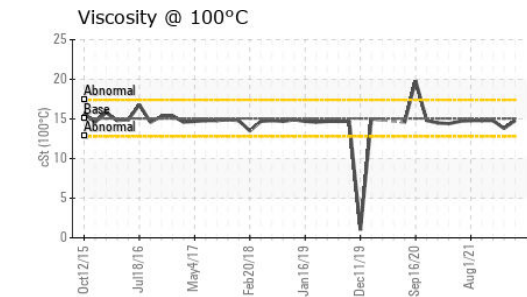
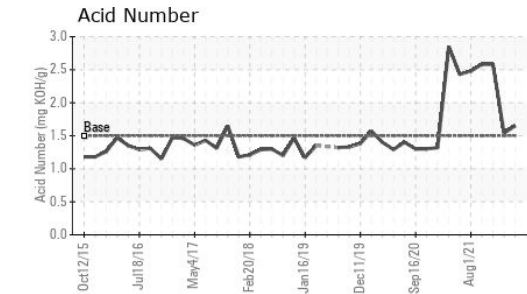
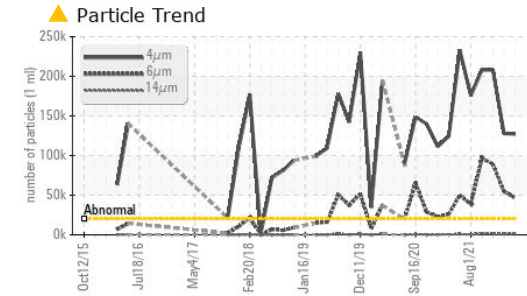
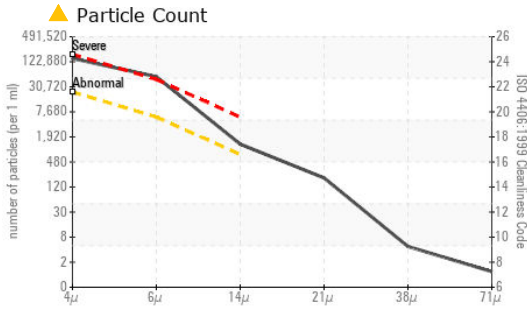
SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PC0039817</b>	PC0052194	PC0039829
Sample Date	Client Info		<b>16 Aug 2023</b>	14 Jun 2023	29 Nov 2021
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ATTENTION</b>	ATTENTION	ATTENTION

WEAR METALS	method	limit/base	current	history1	history2
PQ	ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m) >30	<b>8</b>	6	12
Chromium	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m) >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m) >2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m) >5	<b>2</b>	<1	7
Lead	ppm	ASTM D5185(m) >70	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185(m) >65	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m) >9	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m) >5	<b>0</b>	0	<1
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>	<1	0

ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 240	<b>224</b>	199	157
Barium	ppm	ASTM D5185(m) 1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 0.0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 2	<b>1</b>	2	<1
Calcium	ppm	ASTM D5185(m) 6	<b>5</b>	4	10
Phosphorus	ppm	ASTM D5185(m) 1000	<b>1018</b>	1020	915
Zinc	ppm	ASTM D5185(m) 3	<b>59</b>	20	80
Sulfur	ppm	ASTM D5185(m) 19400	<b>17018</b>	18958	17837
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >30	<b>2</b>	4	5
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	1	2
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	8

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>127212</b>	127861	207919
Particles >6µm	ASTM D7647	>5000	<b>46489</b>	54810	89180
Particles >14µm	ASTM D7647	>640	<b>▲ 1130</b>	▲ 1042	▲ 1032
Particles >21µm	ASTM D7647	>160	<b>175</b>	79	106
Particles >38µm	ASTM D7647	>40	<b>4</b>	0	0
Particles >71µm	ASTM D7647	>10	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>▲ 24/23/17</b>	▲ 24/23/17	▲ 25/24/17



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0039817 **Received** : 17 Aug 2023  
**Lab Number** : **02576420** **Diagnosed** : 23 Aug 2023  
**Unique Number** : 5629480 **Diagnostician** : Kevin Marson  
**Test Package** : MAR 2 ( Additional Tests: KV100, PQ, PrtCount, TAN MAN, VI )

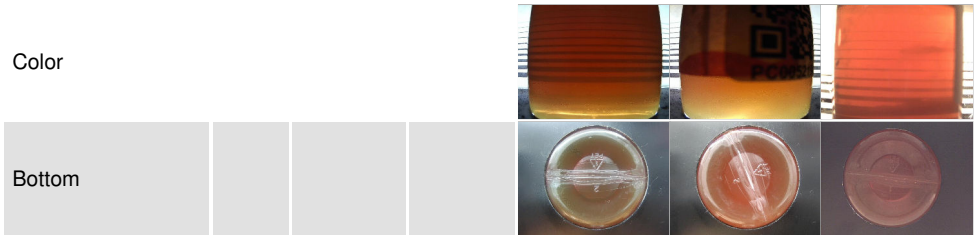
To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.5	<b>1.65</b>	1.54	2.58

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>VLITE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<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)	140.3	<b>139</b>	143	144
Visc @ 100°C	cSt	ASTM D7279(m)	15.05	<b>14.8</b>	13.8	14.8
Viscosity Index (VI)	Scale	ASTM D2270*	109	<b>106</b>	91	102

SAMPLE IMAGES		method	limit/base	current	history1	history2
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