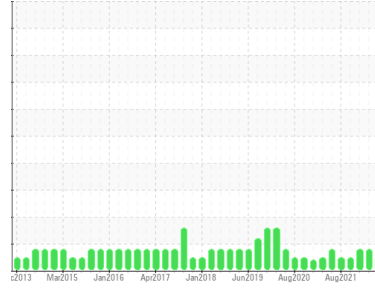


Area  
**Cranes**  
Machine Id  
**Crane - Mid Ship Distribution Gearbox (S/N Sample Tag MA-04002-S11)**  
Component  
**Gearbox**  
Fluid  
**PETRO CANADA TRAXON 80W90 (6 LTR)**



**DIAGNOSIS**

**Recommendation**

Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

**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>PC0040543</b>	PC0052192	PC0052677
Sample Date	Client Info	<b>12 Aug 2023</b>	14 Jun 2023	02 May 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	ABNORMAL	ABNORMAL

**WEAR METALS**

method	limit/base	current	history1	history2	
PQ	ASTM D8184*	<b>0</b>	0	0	
Iron	ppm	ASTM D5185(m) >150	<b>4</b>	8	7
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >5	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185(m) >65	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m) >80	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m) >8	<b>0</b>	0	<1
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>	0	0

**ADDITIVES**

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m) 243	<b>251</b>	210	217
Barium	ppm	ASTM D5185(m) 1	<b>&lt;1</b>	2	1
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m) 2	<b>&lt;1</b>	1	1
Calcium	ppm	ASTM D5185(m) 6	<b>6</b>	15	12
Phosphorus	ppm	ASTM D5185(m) 987	<b>1071</b>	865	932
Zinc	ppm	ASTM D5185(m) 1	<b>16</b>	42	34
Sulfur	ppm	ASTM D5185(m) 21530	<b>17824</b>	16443	18252
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

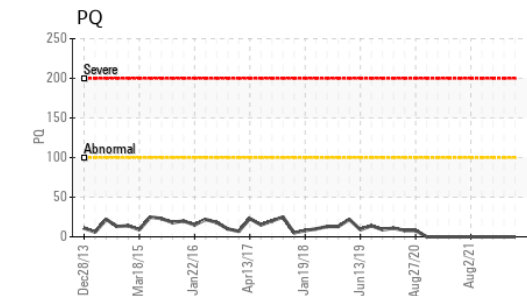
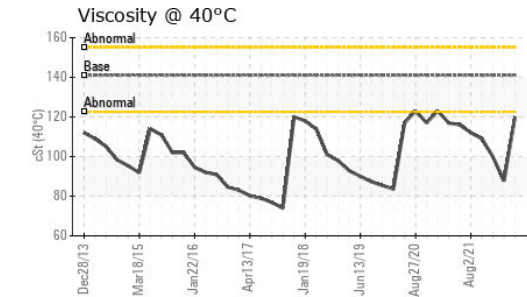
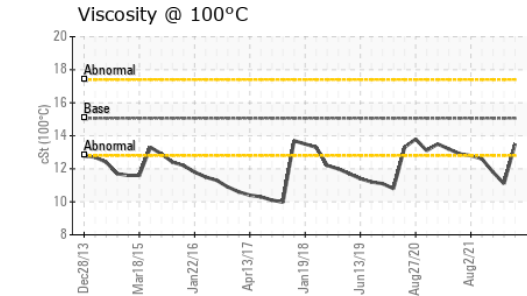
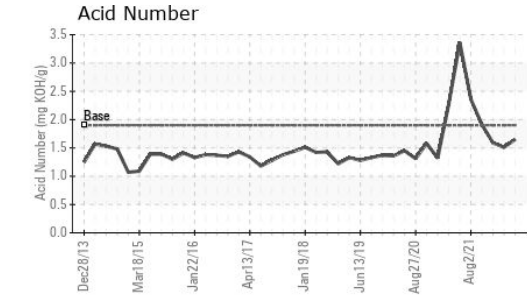
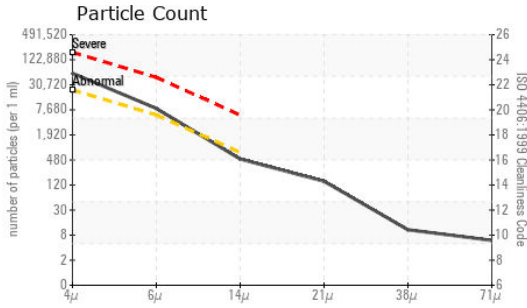
**CONTAMINANTS**

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >20	<b>3</b>	2	3
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	2
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	1

**FLUID CLEANLINESS**

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>20000	<b>50363</b>	58245	61158
Particles >6µm	ASTM D7647	>5000	<b>7242</b>	5889	6725
Particles >14µm	ASTM D7647	>640	<b>444</b>	109	266
Particles >21µm	ASTM D7647	>160	<b>130</b>	35	56
Particles >38µm	ASTM D7647	>40	<b>9</b>	2	1
Particles >71µm	ASTM D7647	>10	<b>5</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>23/20/16</b>	23/20/14	23/20/15

# OIL ANALYSIS REPORT

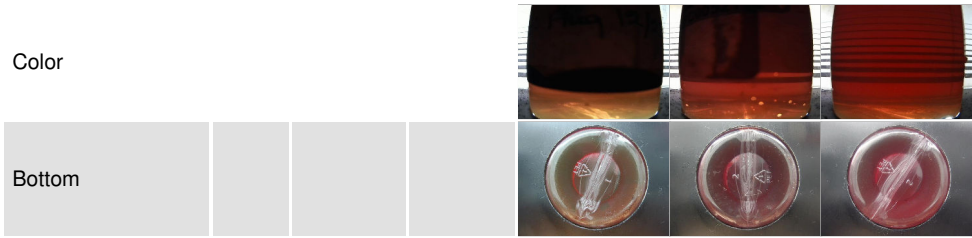


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.9	<b>1.65</b>	1.51	1.59

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)	141.0	<b>120</b>	▲ 87.7	▲ 99.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.06	<b>13.5</b>	▲ 11.1	▲ 11.8
Viscosity Index (VI)	Scale	ASTM D2270*	108	<b>108</b>	113	107

## SAMPLE IMAGES



Color

Bottom



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0040543  
**Lab Number** : **02582292**  
**Unique Number** : 5643357  
**Test Package** : MAR 2 ( Additional Tests: KV100, PQ, PrtCount, TAN Man, VI )

**Received** : 13 Sep 2023  
**Diagnosed** : 14 Sep 2023  
**Diagnostician** : Kevin Marson

**Suncor - Terra Nova Projects**  
 Scotia Centre, 235 Water Strret  
 St. John's, NL  
 CA A1C 1B6  
 Contact: Josh Hynes  
 joshynes@suncor.com  
 T: (709)778-3575  
 F: (709)724-2835

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.