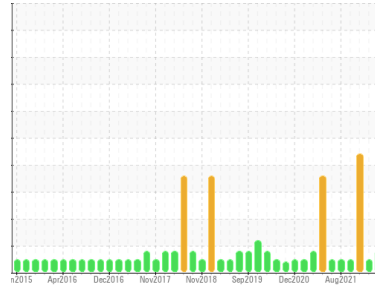


PROBLEM SUMMARY

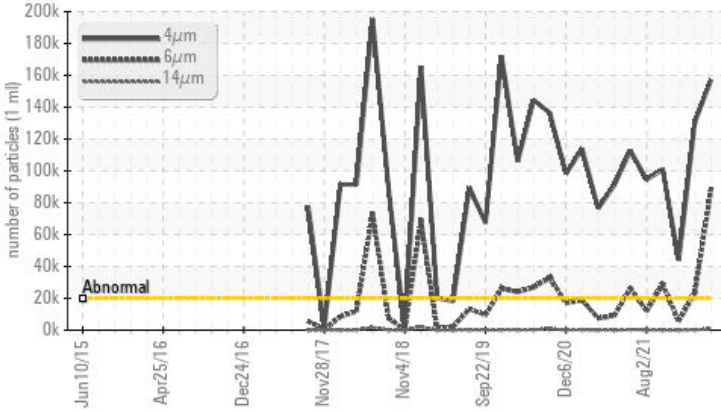
Area
Cranes
Machine Id
Crane - Mid Ship Slewing Gearbox #3 (S/N Sample Tag MA-04002-S9)
Component
Gearbox
Fluid
PETRO CANADA GEARLUBE TOS 80W90 (33 LTR)

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	NORMAL	SEVERE
Particles >14µm	ASTM D7647 >640	▲ 783	231	25
Oil Cleanliness	ISO 4406 (c) >21/19/16	▲ 24/24/17	24/22/15	▲ 23/20/12

Customer Id: TERHAM
Sample No.: PC0052595
Lab Number: 02582286
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

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
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

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



02 May 2023 Diag: Kevin Marson

DEGRADATION



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The high AN level of the oil indicates the presence of oxi-polymerized products. The AN level is much higher than the recommended limit. The oil is no longer serviceable.

view report



05 Oct 2021 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Area

Cranes

Machine Id

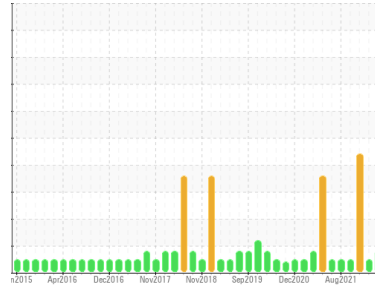
Crane - Mid Ship Slewing Gearbox #3 (S/N Sample Tag MA-04002-S9)

Component

Gearbox

Fluid

PETRO CANADA GEARLUBE TOS 80W90 (33 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	PC0052595	PC0052199	PC0052002
Sample Date	Client Info	12 Aug 2023	14 Jun 2023	02 May 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ATTENTION	NORMAL	SEVERE

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	0	3	0
Iron	ppm	18	19	3
Chromium	ppm	0	0	0
Nickel	ppm	<1	0	0
Titanium	ppm	0	0	0
Silver	ppm	0	0	0
Aluminum	ppm	<1	<1	0
Lead	ppm	0	0	0
Copper	ppm	3	4	<1
Tin	ppm	<1	<1	0
Antimony	ppm	0	0	<1
Vanadium	ppm	0	0	0
Beryllium	ppm	0	0	0
Cadmium	ppm	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm	230	232	184
Barium	ppm	<1	<1	1
Molybdenum	ppm	<1	<1	<1
Manganese	ppm	<1	<1	0
Magnesium	ppm	1	2	2
Calcium	ppm	49	50	88
Phosphorus	ppm	1009	954	902
Zinc	ppm	33	28	54
Sulfur	ppm	17963	16988	16549
Lithium	ppm	<1	<1	<1

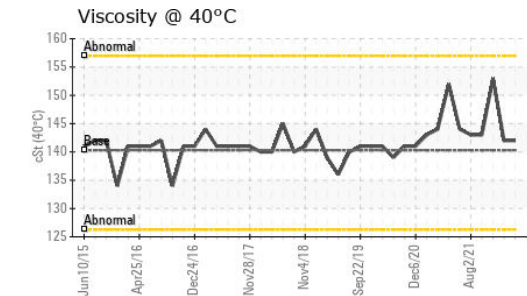
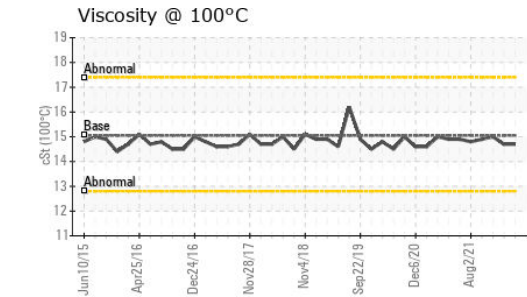
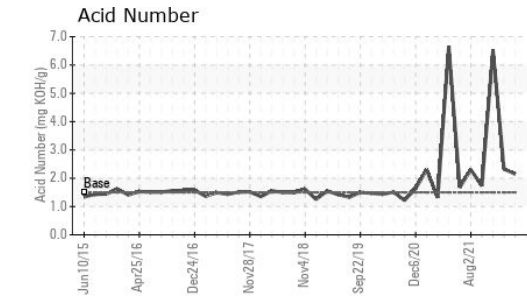
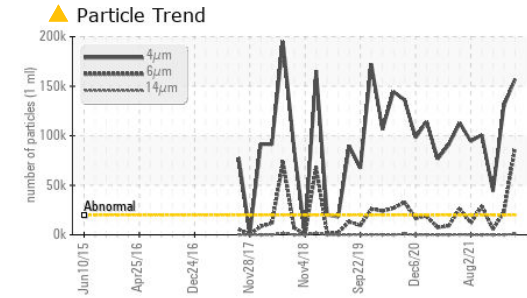
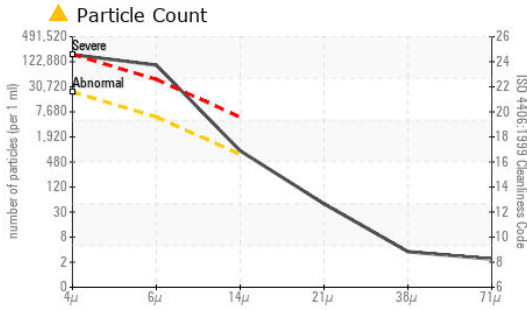
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	6	6	3
Sodium	ppm	<1	<1	<1
Potassium	ppm	<1	<1	0

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	157160	130643	▲ 44091
Particles >6µm	ASTM D7647	88012	23247	▲ 5618
Particles >14µm	ASTM D7647	▲ 783	231	25
Particles >21µm	ASTM D7647	42	45	2
Particles >38µm	ASTM D7647	3	1	0
Particles >71µm	ASTM D7647	2	0	0
Oil Cleanliness	ISO 4406 (c)	▲ 24/24/17	24/22/15	▲ 23/20/12

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0052595 **Received** : 13 Sep 2023
Lab Number : 02582286 **Diagnosed** : 15 Sep 2023
Unique Number : 5643351 **Diagnostician** : Kevin Marson
Test Package : MAR 2 (Additional Tests: KV100, PQ, PrtCount, 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	2.15	2.32	6.52

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	VLITE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	140.3	142	142	153
Visc @ 100°C	cSt	ASTM D7279(m)	15.05	14.7	14.7	15.0
Viscosity Index (VI)	Scale	ASTM D2270*	109	102	102	97

SAMPLE IMAGES

