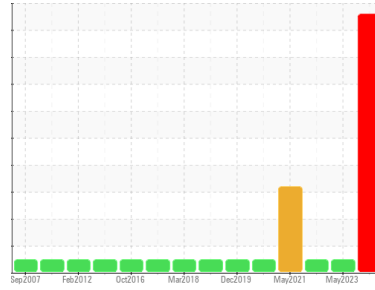
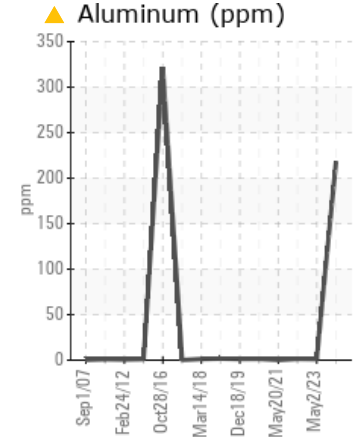
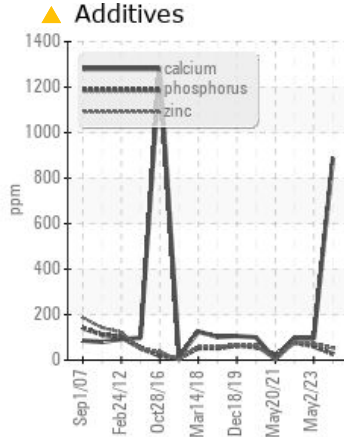
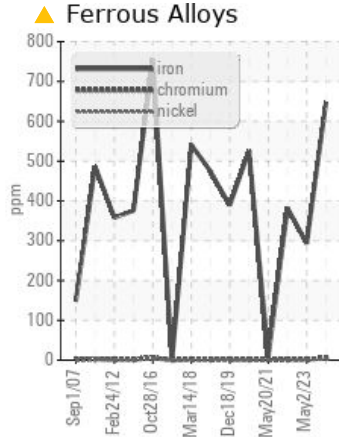
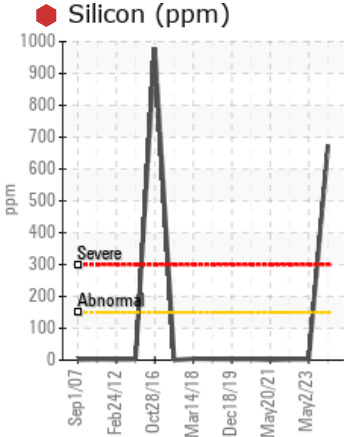


Area
Cranes
Machine Id
Crane - Mid Ship Slew Brg Grease (S/N Sample Tag MA-04002)
Component
Aft Grease
Fluid
PETRO CANADA PRECISION XL EP2 (--- LTR)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you re-grease the component if this has not already been done. Confirm the source of the grease being utilized for re-greasing. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m) >250	▲ 648	382	293
Chromium	ppm	ASTM D5185(m) >10	▲ 7	1	1
Nickel	ppm	ASTM D5185(m) >5	▲ 2	<1	<1
Magnesium	ppm	ASTM D5185(m)	▲ 42	5	2
Molybdenum	ppm	ASTM D5185(m)	▲ 122	62	51
Aluminum	ppm	ASTM D5185(m)	▲ 218	1	1
Calcium	ppm	ASTM D5185(m)	▲ 889	94	95
Lithium	ppm	ASTM D5185(m)	▲ 45	189	179
Silicon	ppm	ASTM D5185(m) >150	◆ 675	3	3

PrtFilter



Customer Id: TERHAM
Sample No.: PC0061563
Lab Number: 02582372
Test Package: GRS 1



To manage this report scan the QR code

To discuss the diagnosis or test data:
Bill Quesnel CLS, OMA II, MLA-III, LLA-I +1
(289)291-4641 x4641
Bill.Quesnel@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
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.

HISTORICAL DIAGNOSIS

02 May 2023 Diag: Bill Quesnel

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the grease. The condition of the grease is acceptable for the time in service.

view report



02 May 2023 Diag: Bill Quesnel

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the grease. The condition of the grease is acceptable for the time in service.

view report



20 May 2021 Diag: Bill Quesnel

WEAR



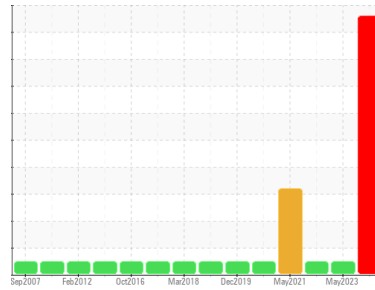
We recommend that you re-grease the component if this has not already been done. Confirm the source of the grease being utilized for top-up/fill. We recommend an early resample to monitor this condition. PQ levels are abnormal. The high ferrous density (PQ) index indicates that abnormal wear is occurring. There is no indication of any contamination in the grease. Additive levels indicate the addition of a different brand, or type of grease. The grease is no longer serviceable as a result of the abnormal and/or severe wear.

view report



GREASE ANALYSIS

Sample Rating Trend



DIRT



Area
Cranes
Machine Id
Crane - Mid Ship Slew Brg Grease (S/N Sample Tag MA-04002)
Component
Aft Grease
Fluid
PETRO CANADA PRECISION XL EP2 (--- LTR)

DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. We recommend that you re-grease the component if this has not already been done. Confirm the source of the grease being utilized for re-greasing. We recommend an early resample to monitor this condition.

Wear

Iron and nickel and chromium ppm levels are abnormal. Aluminum ppm levels are noted.

Grease Condition

Additive levels indicate the addition of a different brand, or type of grease. The grease is no longer serviceable as a result of the abnormal and/or severe wear.

Contaminants

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component.

Particle Filter (Magn: 10 x)



SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PC0061563	PC0052676	PC0052672
Sample Date	Client Info	12 Aug 2023	02 May 2023	02 May 2023
Machine Age	hrs	0	0	0
Grease Age	hrs	0	0	0
Grease Serviced	Client Info	N/A	N/A	N/A
Sample Status		SEVERE	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2		
PQ	ASTM D8184*	>200	390	4150	2300	
Iron	ppm	ASTM D5185(m)	>250	648	382	293
Chromium	ppm	ASTM D5185(m)	>10	7	1	1
Nickel	ppm	ASTM D5185(m)	>5	2	<1	<1
Cadmium	ppm	ASTM D5185(m)		0	0	0
Titanium	ppm	ASTM D5185(m)		4	<1	<1
Vanadium	ppm	ASTM D5185(m)		<1	0	0
Lead	ppm	ASTM D5185(m)	>25	2	<1	<1
Copper	ppm	ASTM D5185(m)	>75	2	<1	<1
Tin	ppm	ASTM D5185(m)	>5	1	0	0
Silver	ppm	ASTM D5185(m)	>5	0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185(m)		2	<1	<1
Magnesium	ppm	ASTM D5185(m)		42	5	2
Manganese	ppm	ASTM D5185(m)		5	5	4
Molybdenum	ppm	ASTM D5185(m)		122	62	51
Phosphorus	ppm	ASTM D5185(m)		27	61	77
Zinc	ppm	ASTM D5185(m)		54	73	78
Antimony	ppm	ASTM D5185(m)		9	15	13

THICKENER/SOAP

method	limit/base	current	history1	history2		
Aluminum	ppm	ASTM D5185(m)		218	1	1
Barium	ppm	ASTM D5185(m)		6	<1	1
Calcium	ppm	ASTM D5185(m)		889	94	95
Sodium	ppm	ASTM D5185(m)		21	24	17
Lithium	ppm	ASTM D5185(m)		45	189	179
Sulfur	ppm	ASTM D5185(m)		664	675	667

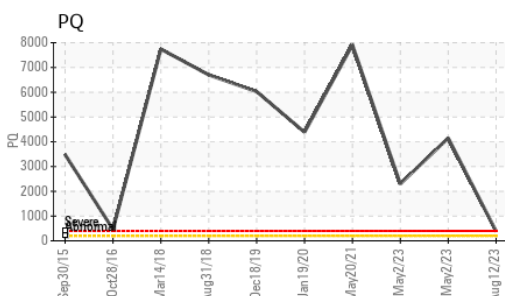
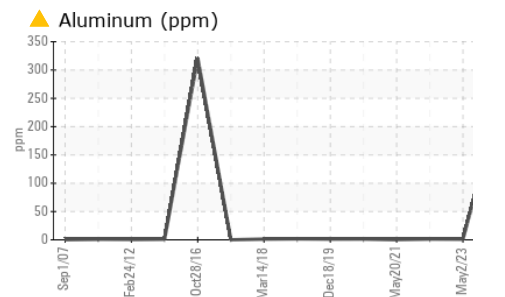
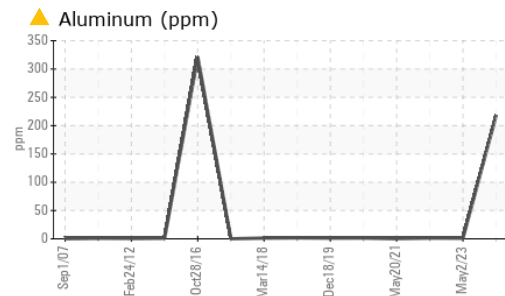
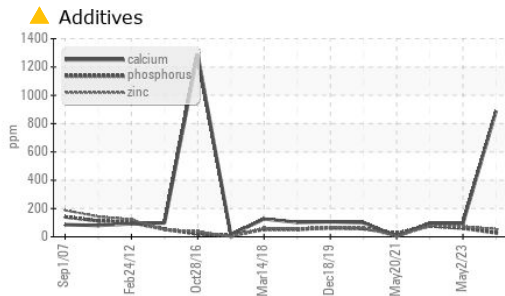
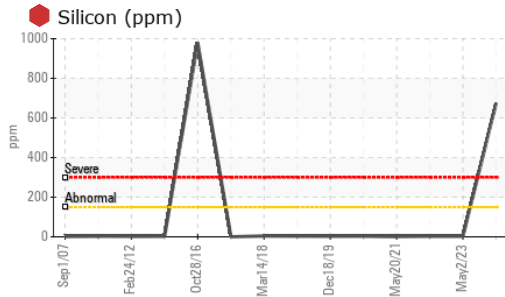
CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>150	675	3	3
Potassium	ppm	ASTM D5185(m)		5	6	2

GREASE CONDITION

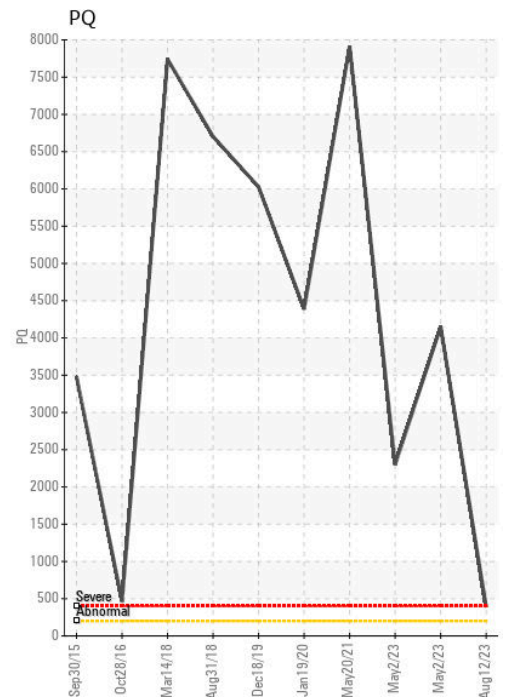
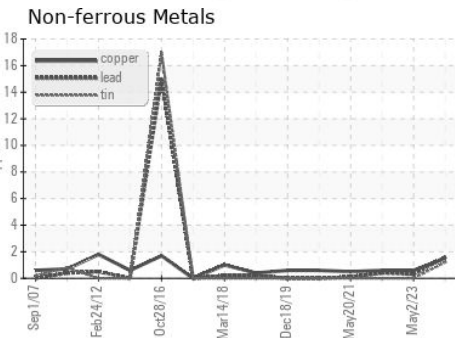
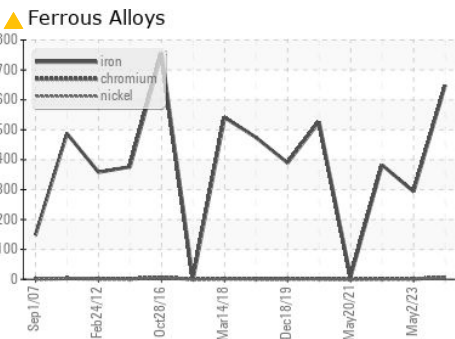
method	limit/base	current	history1	history2	
Grease Color	Visual*	Brown	Black	Black	Black
Texture	In-house*	Stringy	Stringy	Stringy	Stringy
NLGI Consistency	NLGI Scale SKF Method*	2	2	3	2

GREASE ANALYSIS



SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						
PrtFilter						

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0061563
Lab Number : 02582372
Unique Number : 5643437
Test Package : GRS 1 (Additional Tests: BottomAnalysis, PrtCount, PrtFilter)

Received : 13 Sep 2023
Diagnosed : 26 Sep 2023
Diagnostician : Bill Quesnel

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.

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