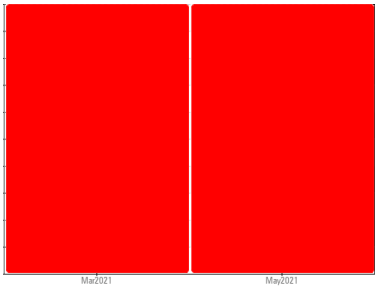
OIL DIAGNOSTICS

PROBLEM SUMMARY

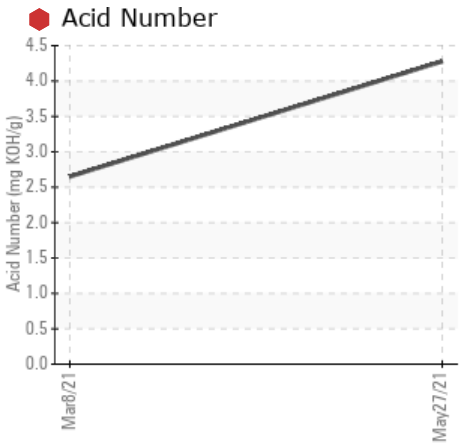
Sample Rating Trend

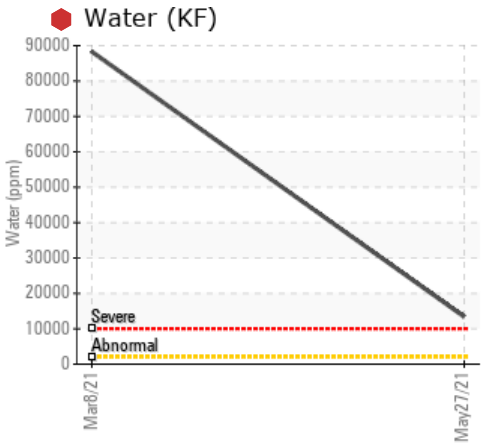


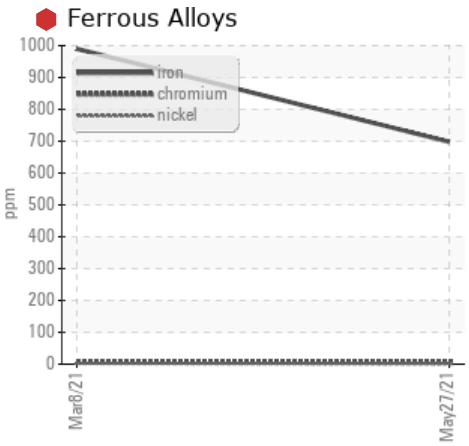
WEAR

Machine Id
KRONES LN2LBA (S/N K019-350)
Component
Gearbox
Fluid
PETRO CANADA 220 (8 GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample. NOTE: Performing ferrography analysis may provide us with more detailed information regarding this units wear condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	---
Iron	ppm	ASTM D5185m	>200	**698**	990	---
Water	%	ASTM D6304	>0.2	**1.34**	8.83	---
ppm Water	ppm	ASTM D6304	>2000	**13400**	88300	---
Acid Number (AN)	mg KOH/g	ASTM D8045		**4.279**	2.651	---
Debris	scalar	*Visual	NONE	**MODER**	MODER	---
Appearance	scalar	*Visual	NORML	**MILKY**	MILKY	---
Free Water	scalar	*Visual		**10.0**	NEG	---

Customer Id: ARMFRE
Sample No.: PCA0030818
Lab Number: 05277586
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.

HISTORICAL DIAGNOSIS

WEAR

08 Mar 2021 Diag: Jonathan Hester

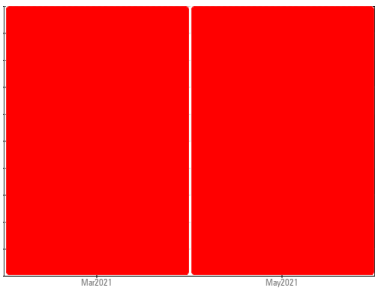
We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample.Gear wear is indicated. Appearance is milky. There is a high concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil. The AN level is above the recommended limit. The oil is no longer serviceable due to the presence of contaminants.

view report

OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
KRONES LN2LBA (S/N K019-350)
Component
Gearbox
Fluid
PETRO CANADA 220 (8 GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample. NOTE: Performing ferrography analysis may provide us with more detailed information regarding this units wear condition.

Wear

Gear wear is indicated.

Contamination

Appearance is milky. There is a high concentration of water present in the oil. Excessive free water present. Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

The AN level is above the recommended limit. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0030818**	PCA0030808	---
Sample Date		Client Info		**27 May 2021**	08 Mar 2021	---
Machine Age	mths	Client Info		**0**	18	---
Oil Age	mths	Client Info		**0**	2	---
Oil Changed		Client Info		**Changed**	Changed	---
Sample Status				**SEVERE**	SEVERE	---

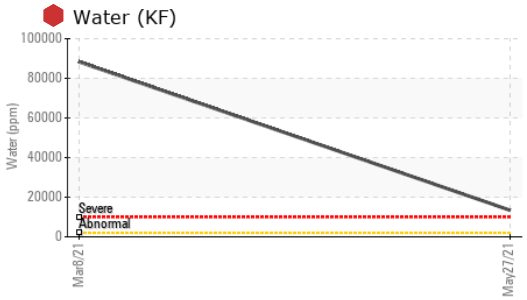
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**698**	990	---
Chromium	ppm	ASTM D5185m	>15	**5**	5	---
Nickel	ppm	ASTM D5185m	>15	**<1**	2	---
Titanium	ppm	ASTM D5185m		**<1**	<1	---
Silver	ppm	ASTM D5185m		**<1**	0	---
Aluminum	ppm	ASTM D5185m	>25	**7**	12	---
Lead	ppm	ASTM D5185m	>100	**<1**	2	---
Copper	ppm	ASTM D5185m	>200	**2**	6	---
Tin	ppm	ASTM D5185m	>25	**<1**	2	---
Antimony	ppm	ASTM D5185m		**0**	<1	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**<1**	<1	---

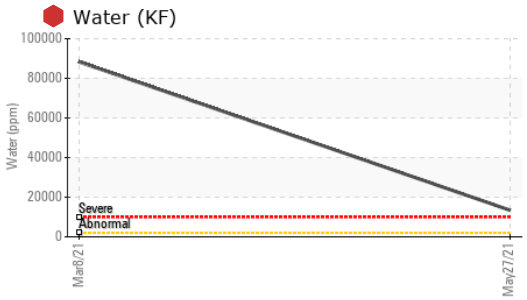
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**2**	14	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**0**	<1	---
Manganese	ppm	ASTM D5185m		**<1**	1	---
Magnesium	ppm	ASTM D5185m		**<1**	2	---
Calcium	ppm	ASTM D5185m		**5**	17	---
Phosphorus	ppm	ASTM D5185m		**415**	444	---
Zinc	ppm	ASTM D5185m		**<1**	1	---
Sulfur	ppm	ASTM D5185m		**952**	1047	---

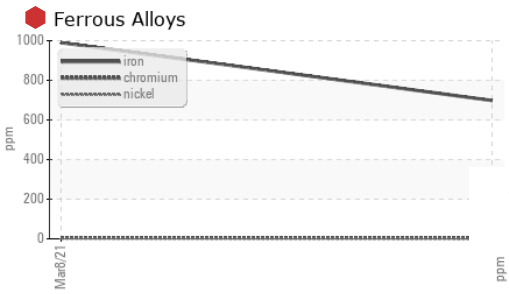
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**8**	32	---
Sodium	ppm	ASTM D5185m		**2**	35	---
Potassium	ppm	ASTM D5185m	>20	**4**	15	---
Water	%	ASTM D6304	>0.2	**1.34**	8.83	---
ppm Water	ppm	ASTM D6304	>2000	**13400**	88300	---

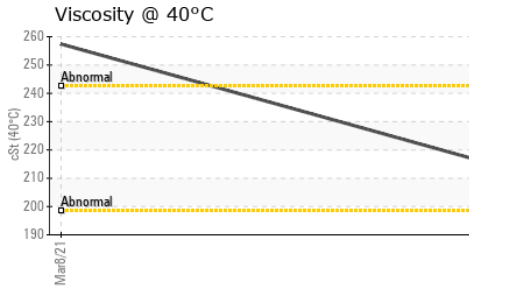
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**4.279**	2.651	---

OIL ANALYSIS REPORT



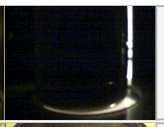
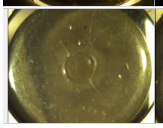




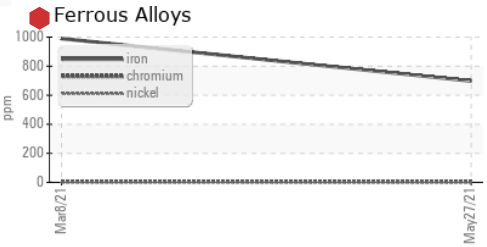


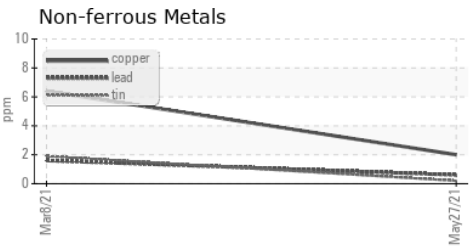
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**MODER**	NONE	---
Debris	scalar	*Visual	NONE	▲ **MODER**	▲ MODER	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	▲ **MILKY**	▲ MILKY	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	⬢ 0.2%	---
Free Water	scalar	*Visual		⬢ **10.0**	NEG	---

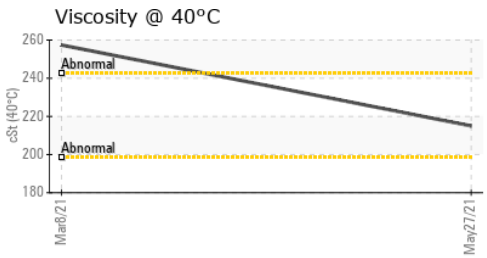
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**215**	257.4	---

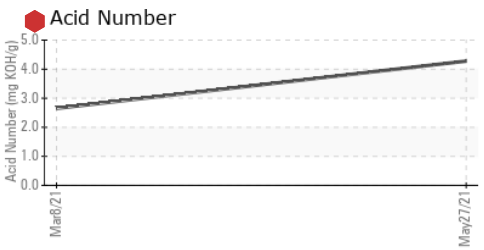
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0030818 **Received** : 11 Jun 2021
Lab Number : 05277586 **Diagnosed** : 14 Jun 2021
Unique Number : 9541519 **Diagnostician** : Angela Borella
Test Package : IND 2 (Additional Tests: KF, PrtCount)

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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