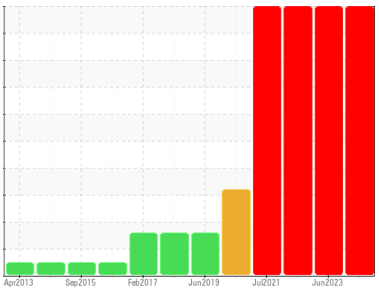
OIL DIAGNOSTICS

PROBLEM SUMMARY

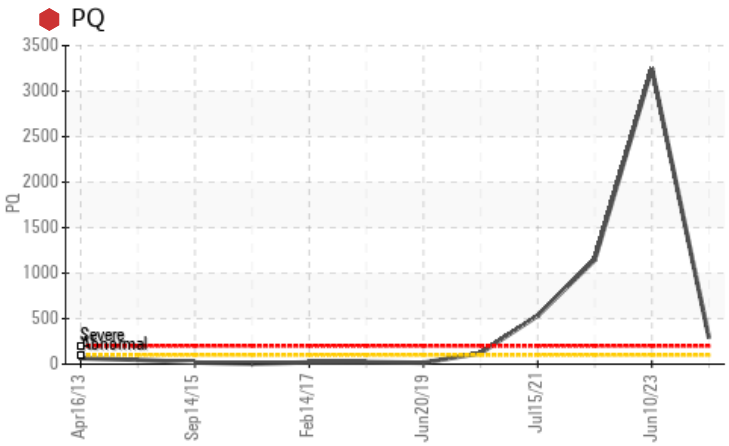
Sample Rating Trend

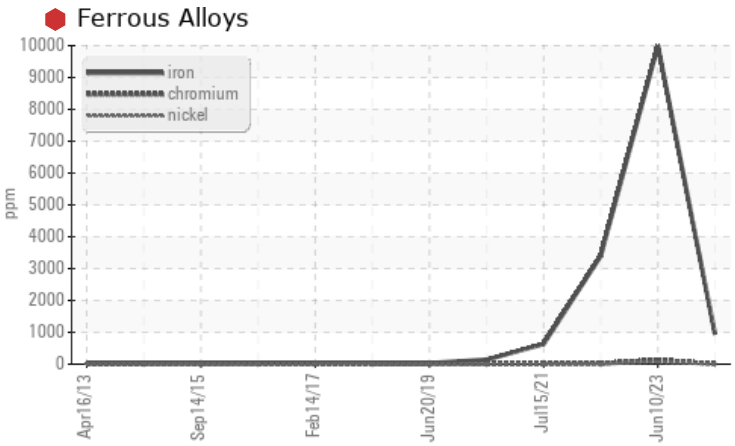


VISUAL METAL

Area
LINE 7
Machine Id
[LINE 7] L7 TK-44000 L7 TK-44000
Component
Gearbox
Fluid
PETRO CANADA PURITY FG SYNTH EP GEAR FLUID 460 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for data entry updates.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
PQ		ASTM D8184		**288**	3249	1146
Iron	ppm	ASTM D5185m	>50	**943**	10000	3398
Yellow Metal	scalar	*Visual	NONE	**MODER**	NONE	NONE
Silt	scalar	*Visual	NONE	**MODER**	NONE	NONE

Customer Id: HERHER
Sample No.: PCA0102804
Lab Number: 05923523
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@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.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

10 Jun 2023 Diag: Jonathan Hester

WEAR

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a light concentration of water present in the oil. The oil viscosity is higher than normal. The AN level is at the top-end of the recommended limit. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

01 Feb 2022 Diag: Jonathan Hester

WEAR

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.Gear wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring. Appearance is hazy. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

15 Jul 2021 Diag: Angela Borella

WEAR

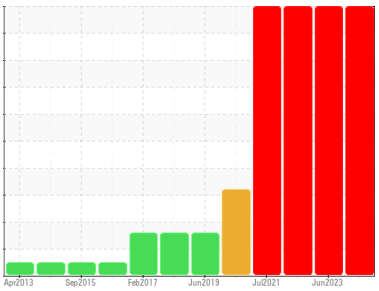
We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. NOTE: Performing ferrography analysis may provide us with more detailed information regarding this units wear condition.The iron level is abnormal. The very high ferrous density (PQ) index indicates that severe wear is occurring. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL

Area
LINE 7
Machine Id
[LINE 7] L7 TK-44000 L7 TK-44000
Component
Gearbox
Fluid
PETRO CANADA PURITY FG SYNTH EP GEAR FLUID 460 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for data entry updates.

Wear

The iron level is abnormal. Moderate concentration of visible metal present. The high ferrous density (PQ) index indicates that severe wear is occurring.

Contamination

There is a moderate amount of visible silt present in the sample.

Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0102804**	PCA0089002	PCAI24408
Sample Date		Client Info		**08 Aug 2023**	10 Jun 2023	01 Feb 2022
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	3000
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**288**	3249	1146
Iron	ppm	ASTM D5185m	>50	**943**	10000	3398
Chromium	ppm	ASTM D5185m	>10	**7**	136	19
Nickel	ppm	ASTM D5185m		**2**	56	8
Titanium	ppm	ASTM D5185m		**0**	1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**1**	39	7
Lead	ppm	ASTM D5185m	>25	**0**	2	<1
Copper	ppm	ASTM D5185m	>50	**2**	36	6
Tin	ppm	ASTM D5185m	>15	**0**	4	<1
Antimony	ppm	ASTM D5185m		**---**	---	<1
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	2	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**0**	0	4
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	15	2
Manganese	ppm	ASTM D5185m		**9**	177	26
Magnesium	ppm	ASTM D5185m	0	**0**	8	1
Calcium	ppm	ASTM D5185m	0	**0**	9	14
Phosphorus	ppm	ASTM D5185m	600	**401**	701	247
Zinc	ppm	ASTM D5185m	0	**0**	15	14
Sulfur	ppm	ASTM D5185m	500	**731**	373	138

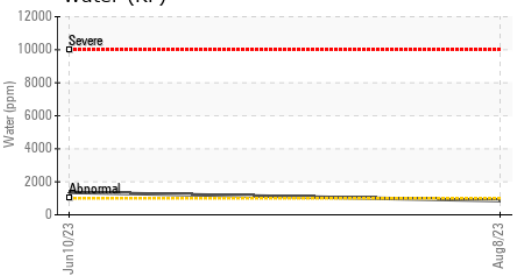
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**14**	99	34
Sodium	ppm	ASTM D5185m		**<1**	16	3
Potassium	ppm	ASTM D5185m	>20	**0**	<1	0
Water	%	ASTM D6304	>0.1	**0.086**	0.136	---
ppm Water	ppm	ASTM D6304	>1000	**860**	1360	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.57**	1.50	0.44

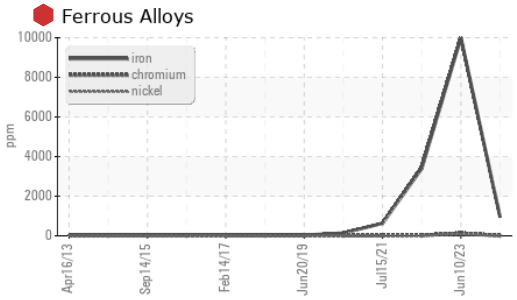
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

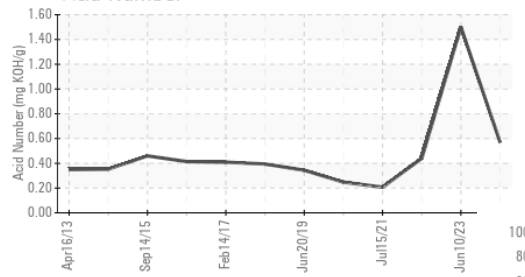
Water (KF)



Ferrous Alloys



Acid Number



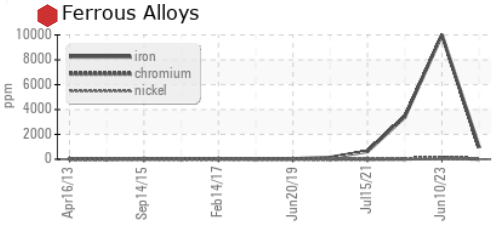
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	**MODER**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**MODER**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**MILKY**	MILKY	HAZY
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**0.2%**	0.2%	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	440	**453**	642.0	463

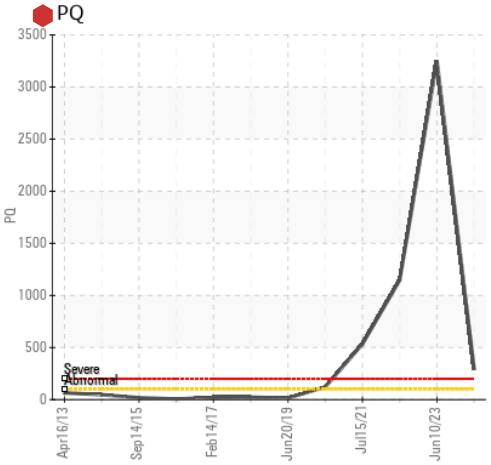
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

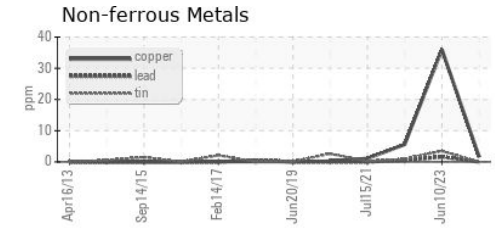
Ferrous Alloys



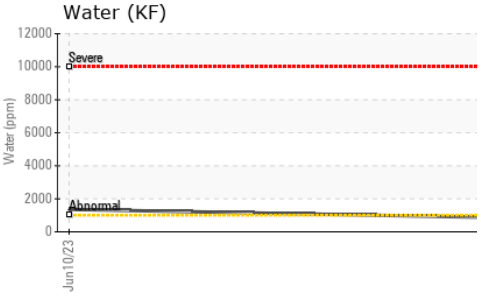
PQ



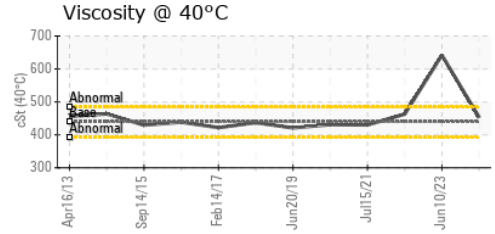
Non-ferrous Metals



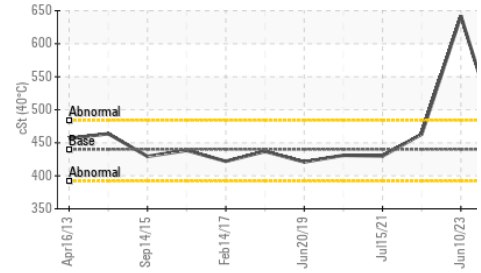
Water (KF)



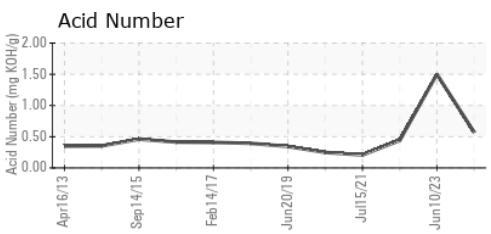
Viscosity @ 40°C



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0102804 **Recieved** : 14 Aug 2023
Lab Number : 05923523 **Diagnosed** : 05 Jan 2024
Unique Number : 10603470 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: KF, PQ)

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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