



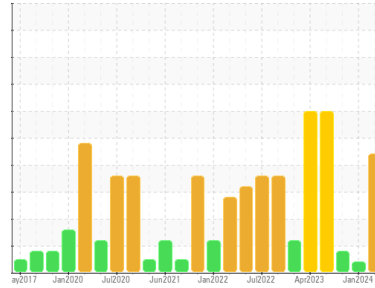
PROBLEM SUMMARY

Sample Rating Trend

ISO

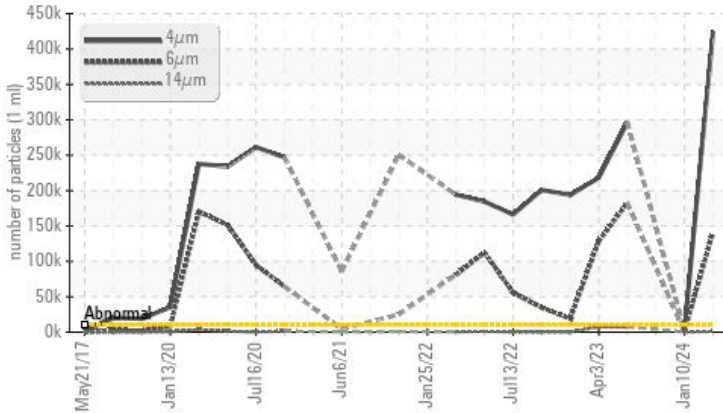


Area
WH-100
 Machine Id
B25970 - STORK GEARBOX #9 (4TH ON CHILL SECTION)
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX WG 680 (--- GAL)



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>10000	▲ 424504	2840	---
Particles >6µm	ASTM D7647	>2500	▲ 140551	715	---
Particles >14µm	ASTM D7647	>320	▲ 1135	95	---
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 26/24/17	19/17/14	---

Customer Id: HORAUS
 Sample No.: WC0894855
 Lab Number: 06124883
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

10 Jan 2024 Diag: Jonathan Hester

VISCOSITY



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

view report



29 Nov 2023 Diag: Jonathan Hester

SEDIMENT



We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. There is a moderate amount of visible silt present in the sample. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



25 Jul 2023 Diag: Wes Davis

ISO



We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

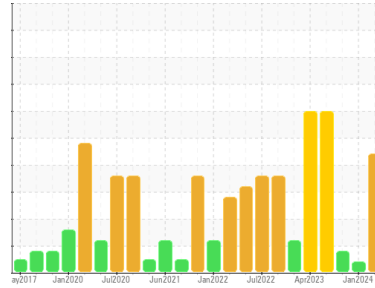
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
WH-100
 Machine Id
B25970 - STORK GEARBOX #9 (4TH ON CHILL SECTION)
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX WG 680 (--- GAL)

DIAGNOSIS

▲ Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0894855	WC0880595	WC0856022
Sample Date	Client Info		06 Mar 2024	10 Jan 2024	29 Nov 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	12	18	7
Chromium	ppm	ASTM D5185m >15	<1	<1	0
Nickel	ppm	ASTM D5185m >15	0	<1	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	2	0
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	9	13	8
Tin	ppm	ASTM D5185m >25	<1	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 1	0	0	0
Barium	ppm	ASTM D5185m 1	0	3	0
Molybdenum	ppm	ASTM D5185m 1	<1	0	0
Manganese	ppm	ASTM D5185m 1	<1	0	<1
Magnesium	ppm	ASTM D5185m 1	0	0	0
Calcium	ppm	ASTM D5185m 1	0	1	4
Phosphorus	ppm	ASTM D5185m 1	0	51	<1
Zinc	ppm	ASTM D5185m 1	4	0	14
Sulfur	ppm	ASTM D5185m 3114	2758	3738	2455

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	1	2	<1
Sodium	ppm	ASTM D5185m	<1	0	1
Potassium	ppm	ASTM D5185m >20	0	<1	0

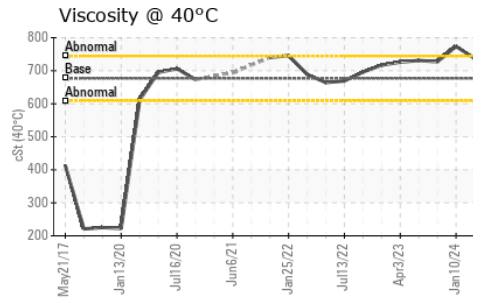
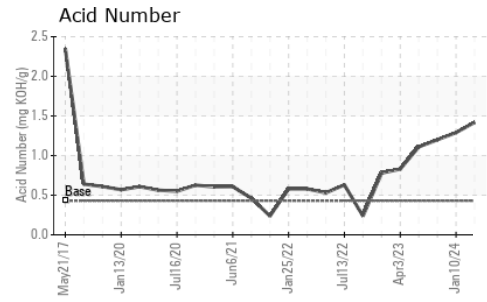
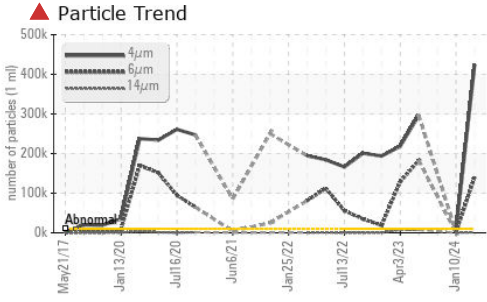
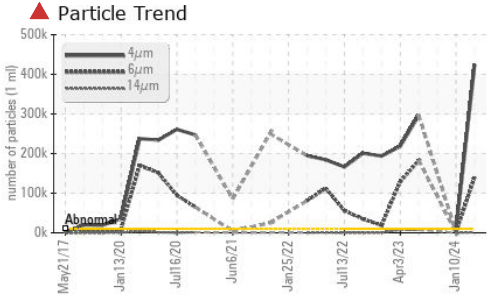
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 424504	2840	---
Particles >6µm	ASTM D7647	>2500	▲ 140551	715	---
Particles >14µm	ASTM D7647	>320	▲ 1135	95	---
Particles >21µm	ASTM D7647	>80	● 153	33	---
Particles >38µm	ASTM D7647	>20	4	4	---
Particles >71µm	ASTM D7647	>4	0	0	---
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 26/24/17	19/17/14	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.43	1.42	1.29	1.20

OIL ANALYSIS REPORT

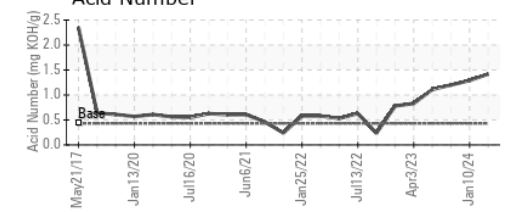
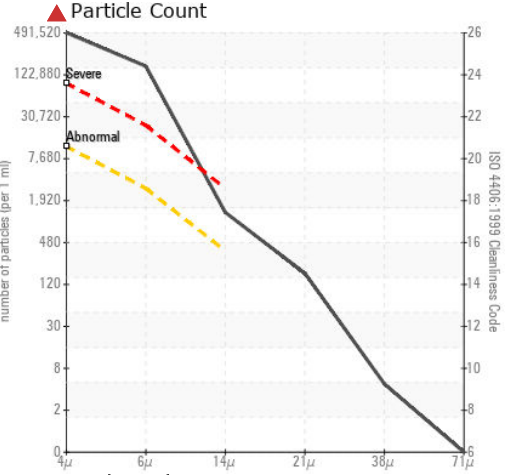
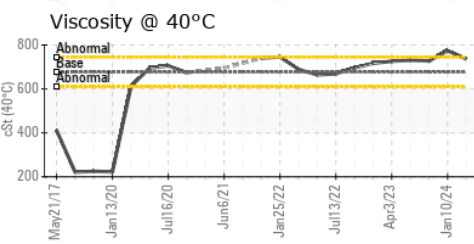
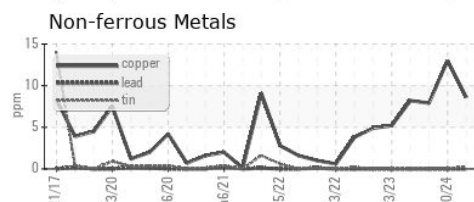
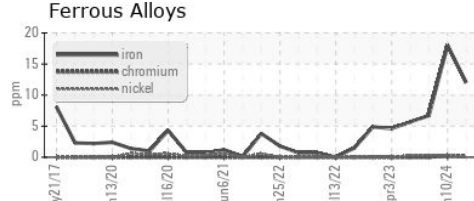


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	▲ MODER
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	676.7	737	▲ 773.7	727

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0894855 **Received** : 21 Mar 2024
Lab Number : 06124883 **Tested** : 22 Mar 2024
Unique Number : 10939034 **Diagnosed** : 22 Mar 2024 - Wes Davis
Test Package : IND 2 (Additional Tests: PrtCount)

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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)