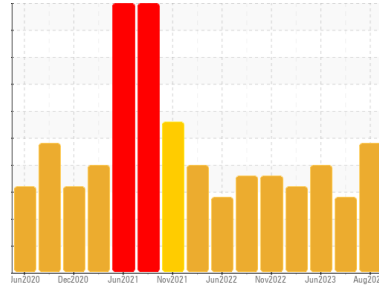




PROBLEM SUMMARY

Sample Rating Trend

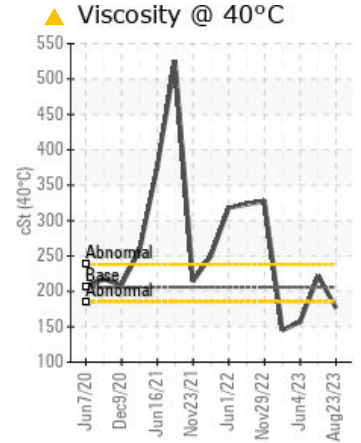
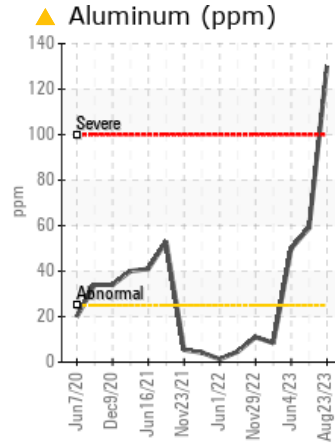
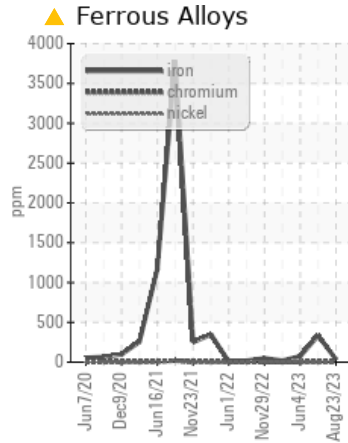
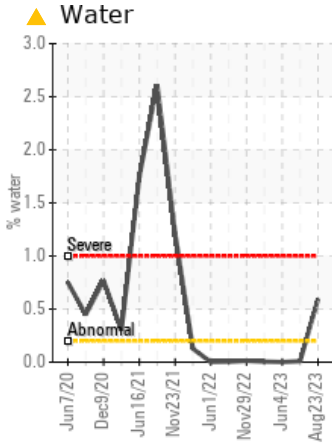


WATER



Machine Id
CRYOVAC 8600-14CS LINE 8 (S/N CK3357U00145)
 Component
Gearbox
 Fluid
PETRO CANADA PURITY FG EP GEAR OIL 220 (--- QTS)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of water entry. We recommend you service the filters on this component if applicable. 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.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>200	▲ 334	34	75
Aluminum	ppm	ASTM D5185m	>25	▲ 59	▲ 130	▲ 50
Water	%	ASTM D6304	>0.2	▲ 0.594	0.009	0.00
ppm Water	ppm	ASTM D6304	>2000	▲ 5940	96.9	0.00
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT	NONE
Appearance	scalar	*Visual	NORML	▲ MILKY	▲ HAZY	▲ HAZY
Visc @ 40°C	cSt	ASTM D445	205.8	▲ 177	222	▲ 157

Customer Id: SMIMID
 Sample No.: USP0000517
 Lab Number: 05933720
 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
Change Filter	---	---	?	We recommend you service the filters on this component if applicable.
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.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

23 Aug 2023 Diag: Doug Bogart

WEAR



Resample at the next service interval to monitor. The aluminum level is abnormal. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



04 Jun 2023 Diag: Doug Bogart

WEAR



We recommend an early resample to monitor this condition. The aluminum level is abnormal. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand or type of oil. Confirmed. The AN level is acceptable for this fluid.

[view report](#)



08 Mar 2023 Diag: Doug Bogart

CONTAMINANT



Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand or type of oil. Confirmed. The AN level is acceptable for this fluid.

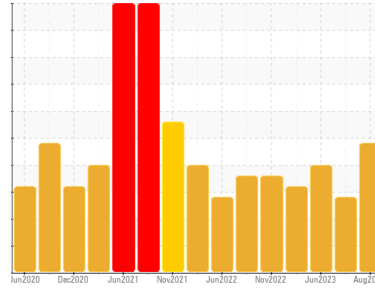
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
CRYOVAC 8600-14CS LINE 8 (S/N CK3357U00145)

Component

Gearbox

Fluid

PETRO CANADA PURITY FG EP GEAR OIL 220 (--- QTS)

DIAGNOSIS

▲ Recommendation

We advise that you check for the source of water entry. We recommend you service the filters on this component if applicable. 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.

▲ Wear

Gear wear is indicated.

▲ Contamination

Moderate concentration of visible dirt/debris present in the oil. There is a moderate concentration of water present in the oil.

▲ Fluid Condition

The oil viscosity is lower than normal. Confirmed. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		USP0000517	USP0000499	USP243480
Sample Date	Client Info		23 Aug 2023	23 Aug 2023	04 Jun 2023
Machine Age	mls	Client Info	0	0	0
Oil Age	mls	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	▲ 334	34	75
Chromium	ppm	ASTM D5185m >15	3	0	0
Nickel	ppm	ASTM D5185m >15	<1	0	0
Titanium	ppm	ASTM D5185m	1	3	1
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	▲ 59	▲ 130	▲ 50
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	8	2	10
Tin	ppm	ASTM D5185m >25	0	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	5	8	15
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	6
Manganese	ppm	ASTM D5185m	2	<1	<1
Magnesium	ppm	ASTM D5185m	2	4	2
Calcium	ppm	ASTM D5185m	268	494	▲ 436
Phosphorus	ppm	ASTM D5185m	171	251	▲ 149
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m	734	896	1585

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	7	8	4
Sodium	ppm	ASTM D5185m	22	51	19
Potassium	ppm	ASTM D5185m >20	0	0	<1
Water	%	ASTM D6304 >0.2	▲ 0.594	0.009	0.00
ppm Water	ppm	ASTM D6304 >2000	▲ 5940	96.9	0.00

FLUID CLEANLINESS

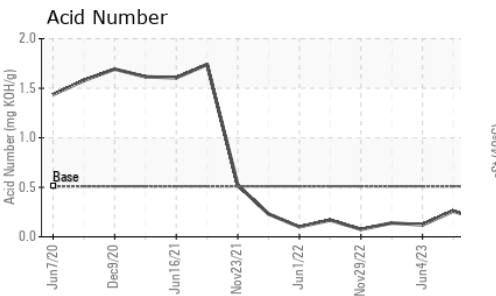
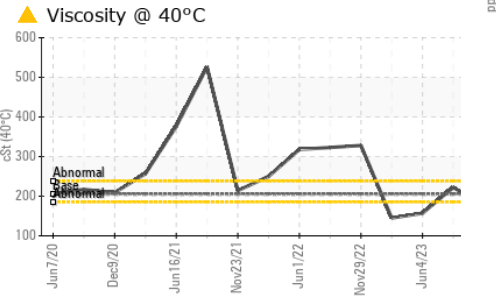
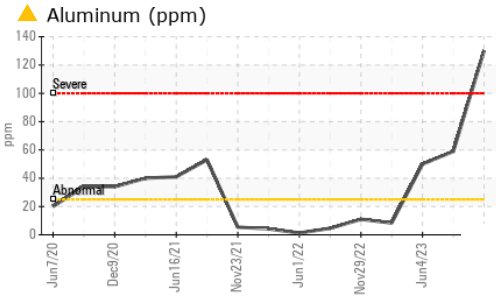
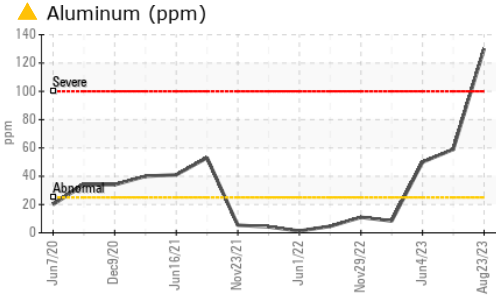
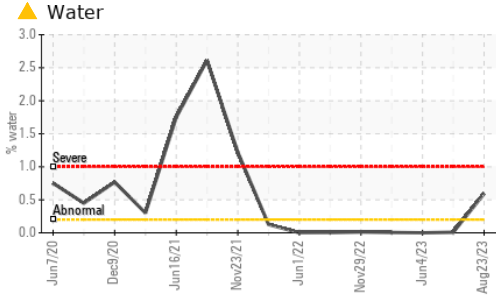
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	---	▲ 120967	▲ 141915
Particles >6µm	ASTM D7647	>5000	---	▲ 27049	▲ 45277
Particles >14µm	ASTM D7647	>640	---	462	393
Particles >21µm	ASTM D7647	>160	---	83	73
Particles >38µm	ASTM D7647	>40	---	1	12
Particles >71µm	ASTM D7647	>10	---	0	3
Oil Cleanliness	ISO 4406 (c)	>21/19/16	---	▲ 24/22/16	▲ 24/23/16

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.51	0.16	0.26	0.12



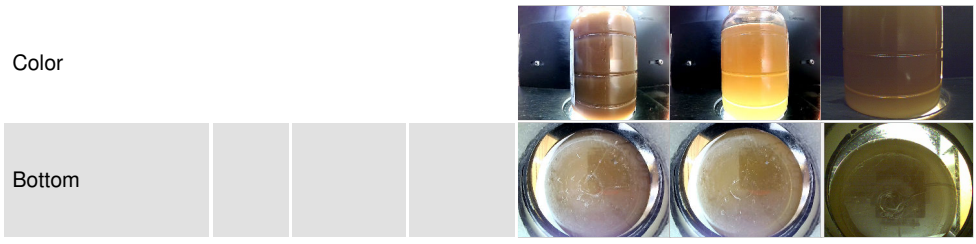
OIL ANALYSIS REPORT



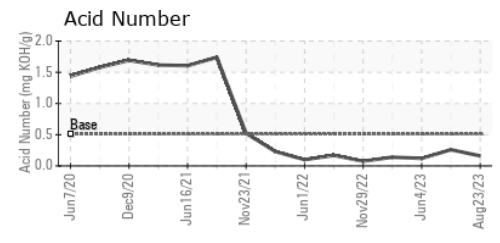
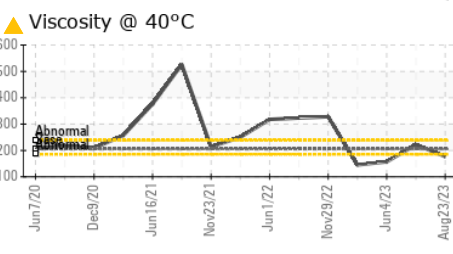
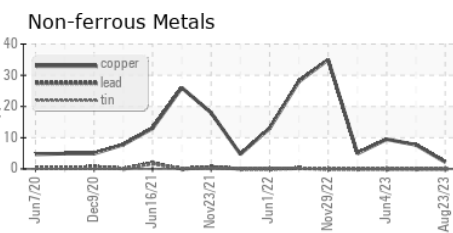
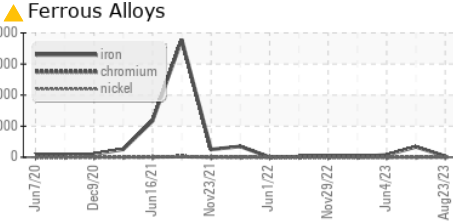
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	▲ MODER	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	205.8	▲ 177	222

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP0000517 **Received** : 24 Aug 2023
Lab Number : 05933720 **Diagnosed** : 28 Aug 2023
Unique Number : 10618991 **Diagnostician** : Doug Bogart
Test Package : IND 2

SMITHFIELD FOODS-MIDDLESBORO
 MIDDLESBORO, KY
 US
 Contact: SERVICE MANAGER

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)