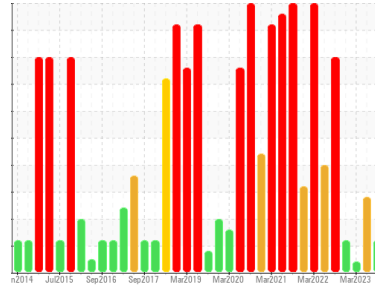




PROBLEM SUMMARY

Sample Rating Trend



CONTAMINANT



Machine Id
CHALLENGE SMIMID MASSAGER 2 (S/N CK3357U00145)

Component
Gearbox

Fluid
PETRO CANADA PURITY FG EP GEAR OIL 220 (--- GAL)

COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

We recommend you service the filters on this component if applicable. 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.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT	▲ MODER
Appearance	scalar	*Visual	NORML	▲ HAZY	NORML	NORML

Customer Id: SMIMID
Sample No.: USP0000501
Lab Number: 05933718
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.
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.

HISTORICAL DIAGNOSIS

04 Jun 2023 Diag: Doug Bogart

WATER



We advise that you follow the water drain-off procedure for this component. 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. Free water present. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



08 Mar 2023 Diag: Doug Bogart

VIS DEBRIS



We recommend you service the filters on this component if applicable. 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. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid.

[view report](#)



29 Nov 2022 Diag: Doug Bogart

CONTAMINANT



We recommend you service the filters on this component if applicable. 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. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid.

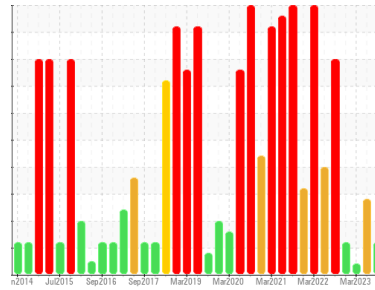
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



CONTAMINANT



Machine Id
CHALLENGE SMIMID MASSAGER 2 (S/N CK3357U00145)

Component

Gearbox

Fluid

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

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component if applicable. 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.

Wear

An increase in the iron level is noted. All component wear rates are normal.

▲ Contamination

Appearance is hazy. Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		USP0000501	USP243484	USP246389
Sample Date	Client Info		23 Aug 2023	04 Jun 2023	08 Mar 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			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	159	28	24
Chromium	ppm	ASTM D5185m >15	1	0	0
Nickel	ppm	ASTM D5185m >15	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	0	0
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	0	<1	0
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	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	<1	<1	0
Magnesium	ppm	ASTM D5185m	<1	0	0
Calcium	ppm	ASTM D5185m	2	<1	<1
Phosphorus	ppm	ASTM D5185m	86	71	94
Zinc	ppm	ASTM D5185m	0	0	<1
Sulfur	ppm	ASTM D5185m	852	819	683

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	5	2	2
Sodium	ppm	ASTM D5185m	<1	<1	0
Potassium	ppm	ASTM D5185m >20	0	<1	0
Water	%	ASTM D6304 >0.2	0.131	0.058	0.009
ppm Water	ppm	ASTM D6304 >2000	1310	580	95.8

FLUID CLEANLINESS

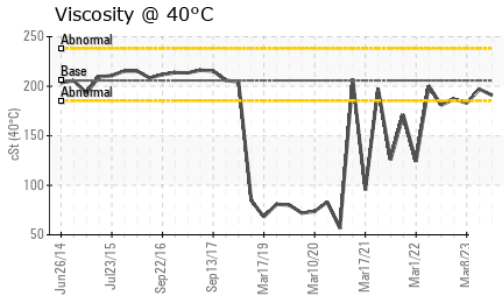
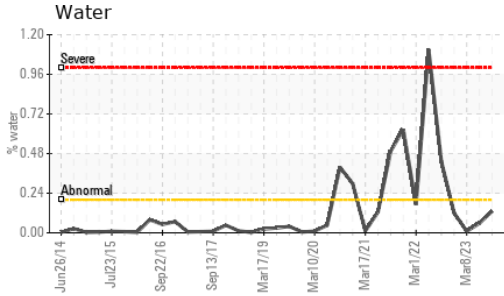
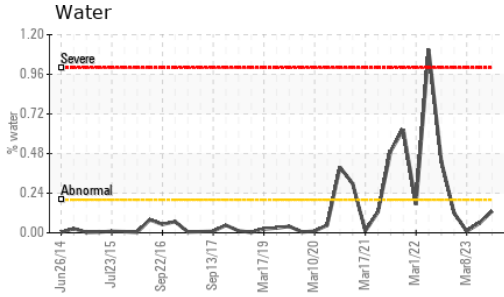
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	---	▲ 135174	---
Particles >6µm	ASTM D7647	>5000	---	▲ 37198	---
Particles >14µm	ASTM D7647	>640	---	636	---
Particles >21µm	ASTM D7647	>160	---	71	---
Particles >38µm	ASTM D7647	>40	---	6	---
Particles >71µm	ASTM D7647	>10	---	2	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	---	▲ 24/22/16	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.51	0.30	0.22	0.36



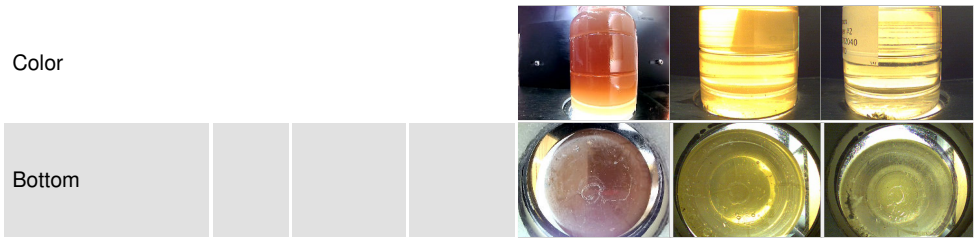
OIL ANALYSIS REPORT



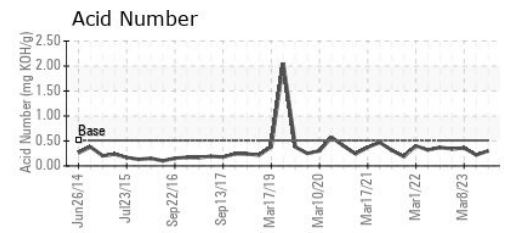
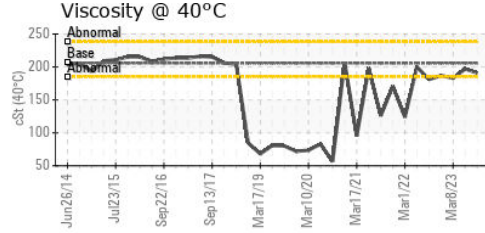
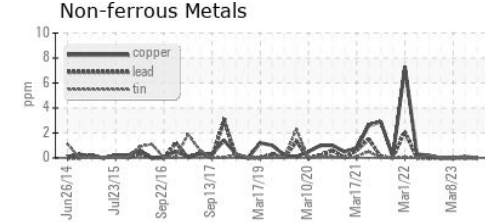
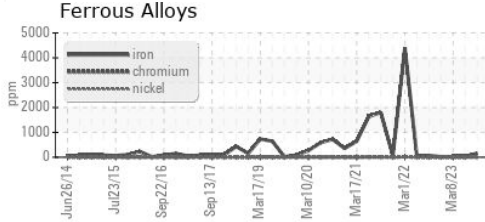
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	LIGHT	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	▲ HAZY	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	0.2%	0.2%	NEG
Free Water	scalar	*Visual		NEG	▲ 1.0	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	205.8	191	197	183

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP0000501 **Received** : 24 Aug 2023
Lab Number : **05933718** **Diagnosed** : 25 Aug 2023
Unique Number : 10618989 **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)