

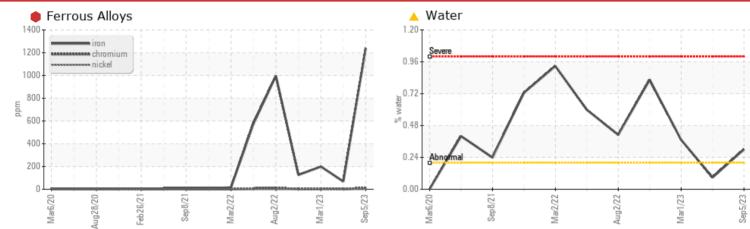
# **PROBLEM SUMMARY**

#### Area [98405826] Machine Id KR-GR-002490 - INCLINE AUGER 6A (S/N GRIND A - 11513017) Component Gearbox Fluid

# PETRO CANADA 220 (17 QTS)

## COMPONENT CONDITION SUMMARY





### RECOMMENDATION

We advise that you check for the source of water entry. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS							
Sample Status				SEVERE	SEVERE	SEVERE	
Iron	ppm	ASTM D5185m	>200	🛑 1240	68	199	
Chromium	ppm	ASTM D5185m	>15	<u> </u>	<1	2	
Water	%	ASTM D6304	>0.2	<b>A</b> 0.301	0.089	<b>0.373</b>	
ppm Water	ppm	ASTM D6304	>2000	<b>A</b> 3010	890	<b>A</b> 3730	
Silt	scalar	*Visual	NONE	🔺 HEAVY	MODER	NONE	
Debris	scalar	*Visual	NONE	🔺 MODER	🔺 MODER	NONE	
Appearance	scalar	*Visual	NORML	🔺 MILKY	NORML	🔺 MILKY	

Customer Id: KRAKIR Sample No.: PCA0102548 Lab Number: 05945705 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@wearcheckusa.com

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

RECOMMENDED	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.				
Check Water Access			?	We advise that you check for the source of water entry.				

### HISTORICAL DIAGNOSIS



WATER

### 29 May 2023 Diag: Jonathan Hester

We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition.All component wear rates are normal. Excessive free water present. Moderate concentration of visible dirt/debris present in the oil. Viscosity of sample indicates oil is within ISO 100 range, advise investigate. Confirm oil type.



view report

### 01 Mar 2023 Diag: Don Baldridge

We advise that you check for the source of water entry. 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.All component wear rates are normal. There is a light concentration of water present in the oil. Excessive free water present. The oil is no longer serviceable due to the presence of contaminants.





We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition.All component wear rates are normal. Appearance is milky. There is a moderate concentration of water present in the oil. Free water present. The condition of the oil is acceptable for the time in service.





# **OIL ANALYSIS REPORT**

#### Area [98405826] Machine Id KR-GR-002490 - INCLINE AUGER 6A (S/N GRIND A - 11513017) Component

Gearbox

Fluid PETRO CANADA 220 (17 QTS)

### DIAGNOSIS

### Recommendation

We advise that you check for the source of water entry. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### 🛑 Wear

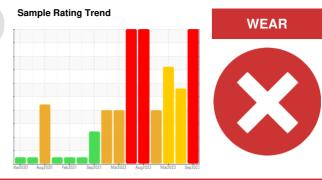
Gear wear is indicated.

### Contamination

Appearance is milky. There is a light concentration of water present in the oil. There is a high amount of visible silt present in the sample. Moderate concentration of visible dirt/debris present in the oil.

### Fluid Condition

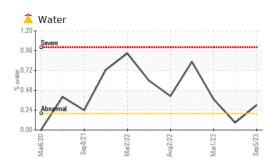
The AN level is acceptable for this fluid.

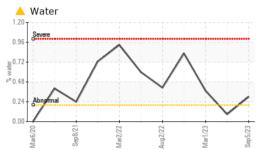


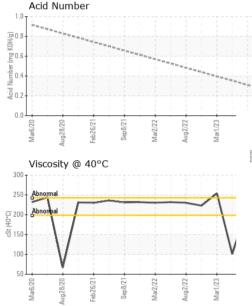
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0102548	PCA0097834	PCA0080620
Sample Date		Client Info		05 Sep 2023	29 May 2023	01 Mar 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	SEVERE
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	• 1240	68	199
Chromium	ppm	ASTM D5185m	>15	<u> </u>	<1	2
Nickel	ppm	ASTM D5185m	>15	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	0	<1
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>200	<1	<1	<1
Tin	ppm	ASTM D5185m	>25	0	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 0
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	0	0	0
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 4 0	0 0 <1 <1	0 0 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 4 0 0	0 0 <1 <1 1	0 0 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 4 0 0 434	0 0 <1 <1 1 634	0 0 <1 <1 6 386
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 4 0 0 434 0	0 0 <1 <1 1 634 3	0 0 <1 <1 6 386 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 4 0 0 434	0 0 <1 <1 1 634	0 0 <1 <1 6 386
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 4 0 0 434 0 1291 current	0 0 <1 <1 1 634 3 1849 history1	0 0 <1 <1 6 386 3 977 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 4 0 0 434 0 1291	0 0 <1 <1 1 634 3 1849 history1 5	0 0 <1 <1 6 386 3 977
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 4 0 0 434 0 1291 current	0 0 <1 <1 1 634 3 1849 history1	0 0 0 <1 <1 6 386 3 86 3 977 history2 6 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur <b>CONTAMINAN</b> Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >50 >20	0 0 4 0 0 434 0 1291 <b>current</b> 6 <1 0	0 0 2 3 1 3 1849 history1 5 0 2 1	0 0 0 <1 <1 6 386 3 86 3 977 history2 6 <1 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base	0 0 4 0 0 434 0 1291 <b>current</b> 6 <	0 0 0 <1 <1 634 3 1849 history1 5 0	0 0 0 <1 <1 6 386 3 86 3 977 history2 6 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur <b>CONTAMINAN</b> Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >50 >20	0 0 4 0 0 434 0 1291 <b>current</b> 6 <1 0	0 0 2 3 1 3 1849 history1 5 0 2 1	0 0 0 <1 <1 6 386 3 86 3 977 <b>history2</b> 6 <1 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm ppm ppm %	ASTM D5185m ASTM D5304	limit/base >50 >20 >0.2	0 0 4 0 0 434 0 1291 <u>current</u> 6 <1 0 0 .301	0 0 2 3 1 634 3 1849 history1 5 0 <1 0.089	0 0 0 <1 <1 6 386 3 977 history2 6 6 <1 2 2 ▲ 0.373



# **OIL ANALYSIS REPORT**



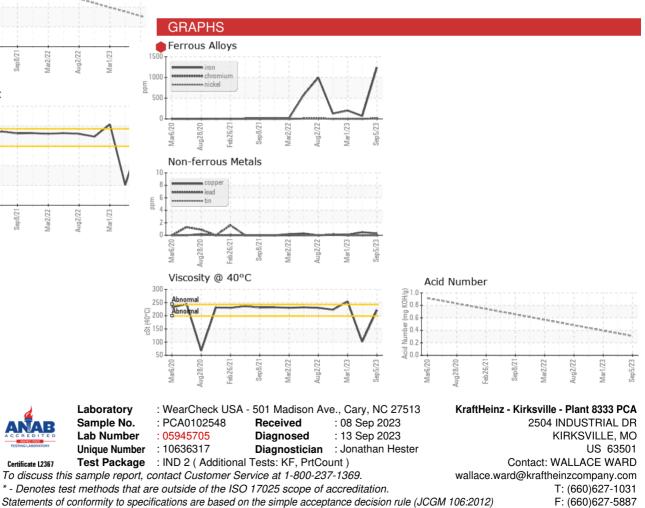




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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	🔺 HEAVY	MODER	NONE
Debris	scalar	*Visual	NONE	A MODER	🔺 MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	🔺 MILKY	NORML	🔺 MILKY
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	0.2%	0.2%	▲ 0.2%
Free Water	scalar	*Visual		NEG	• 10.0	● >10%
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		221	<b>▲</b> 101	254
SAMPLE IMAG	iES	method	limit/base	current	history1	history2
Color						
				1		

Bottom



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