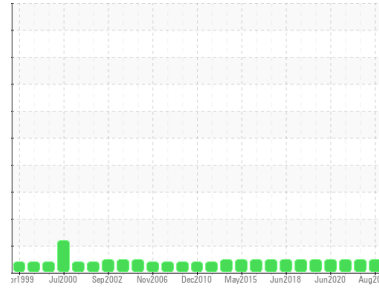




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Four RH
 Machine Id
54P08-TR-E

Component
Reduction Gear
 Fluid
PETRO CANADA ULTIMA EP 220 (60 LTR)

DIAGNOSIS

Recommendation

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition.

Wear

Les taux d'usure de tous les composants sont normaux.

Contamination

Il n'y a aucun indice de contamination dans l'huile.

Fluid Condition

L'état de l'huile est acceptable pour la durée de service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0807559	WC0688662	WC0586198
Sample Date	Client Info		31 Aug 2023	07 Jun 2022	15 Jun 2021
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			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >117	31	33	33
Chromium	ppm	ASTM D5185(m) >2	<1	<1	<1
Nickel	ppm	ASTM D5185(m) >2	0	<1	<1
Titanium	ppm	ASTM D5185(m)	<1	0	<1
Silver	ppm	ASTM D5185(m)	0	<1	<1
Aluminum	ppm	ASTM D5185(m) >11	<1	<1	<1
Lead	ppm	ASTM D5185(m) >10	0	0	<1
Copper	ppm	ASTM D5185(m) >55	<1	<1	<1
Tin	ppm	ASTM D5185(m) >15	0	0	0
Antimony	ppm	ASTM D5185(m) >5	0	0	<1
Vanadium	ppm	ASTM D5185(m)	<1	0	<1
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	46	49	54
Barium	ppm	ASTM D5185(m) 0	<1	<1	<1
Molybdenum	ppm	ASTM D5185(m) 0	0	0	<1
Manganese	ppm	ASTM D5185(m)	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 0	<1	0	<1
Calcium	ppm	ASTM D5185(m) 0	2	2	2
Phosphorus	ppm	ASTM D5185(m) 250	309	304	276
Zinc	ppm	ASTM D5185(m) 0	8	6	6
Sulfur	ppm	ASTM D5185(m) 5300	10952	10882	12019
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >50	13	10	11
Sodium	ppm	ASTM D5185(m)	1	1	2
Potassium	ppm	ASTM D5185(m) >20	2	2	3

INFRA-RED

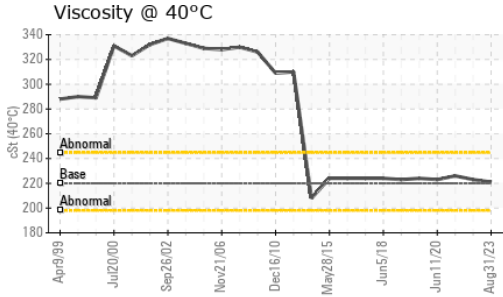
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	0	0	0
Nitration	Abs/cm	ASTM D7624*	3.0	3.1	3.0
Sulfation	Abs/.1mm	ASTM D7415*	18.1	19.0	15.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	8.0	8.3	4.0



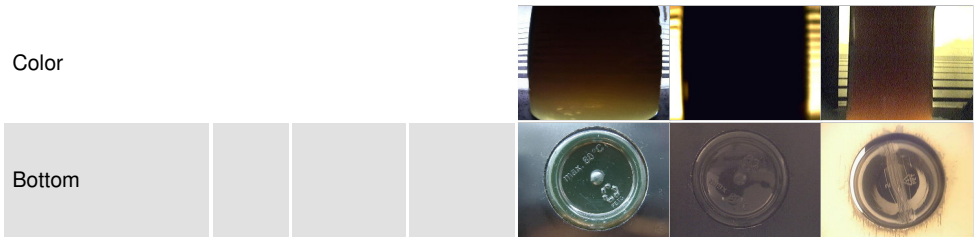
OIL ANALYSIS REPORT



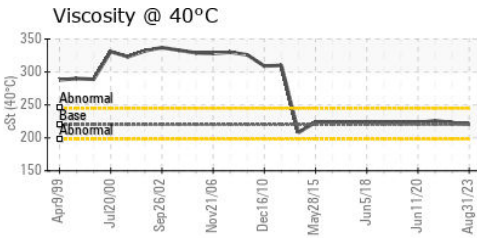
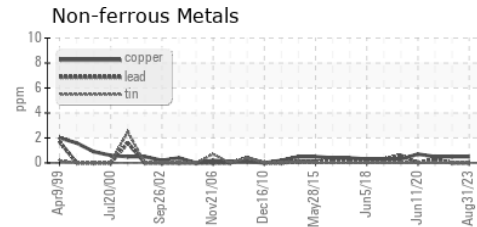
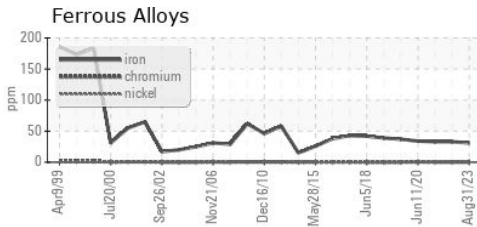
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	220	221	223	226

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0807559 **Received** : 05 Sep 2023
Lab Number : **02580513** **Diagnosed** : 05 Sep 2023
Unique Number : 5633573 **Diagnostician** : Wes Davis
Test Package : IND 1 (Additional Tests: FT-IR)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

RTA - UGB
 C.P. 900
 Ville de la Baie, QC
 CA G7B 4G9
 Contact: Alcan Epc
 mathieu.tremblay2@riotinto.com
 T: (418)697-9568
 F: (418)697-9550