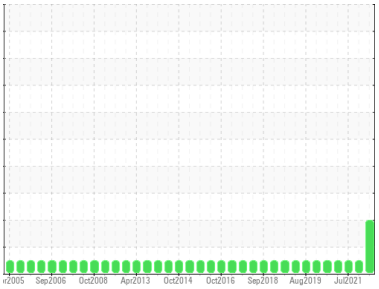
PROBLEM SUMMARY

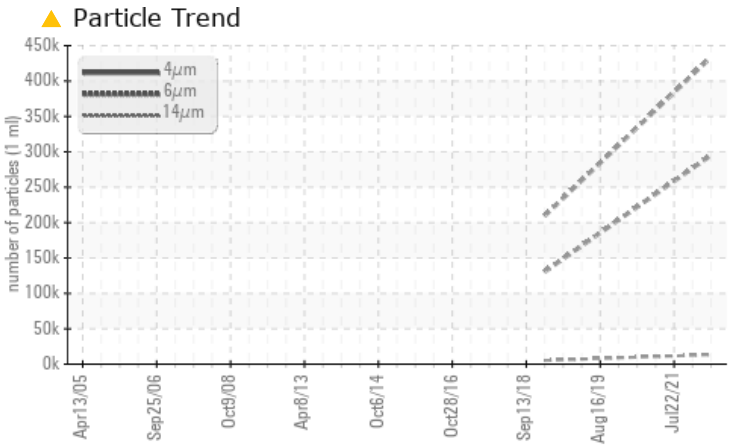
Sample Rating Trend



WEAR PARTICLES

Area
Four pechiney
Machine Id
54P12 PI
Component
Winch
Fluid
MOBIL MOBILGEAR SHC 220 (--- LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Nous recommandons le remplacement des filtres de ce composant. Nous vous recommandons d`échantillonner de nouveau dès que possible afin de contrôler la situation. À NOTER: S.V.P. inclure, avec le prochain échantillon, des détails de la capacité du réservoir et le type et le degré de filtration.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Ferrous Rubbing	Scale 0-10	ASTM D7684*		▲ 8		
Particles >6µm		ASTM D7647	>40000	▲ **295237**	---	---
Particles >14µm		ASTM D7647	>10000	▲ **13441**	---	---
Oil Cleanliness		ISO 4406 (c)	>--/22/20	▲ **26/25/21**	---	---

Customer Id: ALCBAI
Sample No.: WC0693111
Lab Number: 02522633
Test Package: IND 3

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	SKIPPED	Nov 21 2022	?	We recommend you service the filters on this component.
Resample	SKIPPED	Nov 21 2022	?	We recommend an early resample to monitor this condition.
Information Required	MISSED	Apr 26 2023	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Other Action (see Note)	DONE	Nov 21 2022	?	No recommended actions

HISTORICAL DIAGNOSIS

24 Feb 2022 Diag: Kevin Marson

NORMAL

Échantillonner de nouveau l`équipement au prochain intervalle de vidange afin d`en surveiller la condition. À NOTER: S.V.P. inclure, avec le prochain échantillon, des détails de la capacité du réservoir et le type et le degré de filtration. Veuillez préciser la marque, le type et la viscosité de l`huile lors de votre prochain échantillon.Les taux d`usure de tous les composants sont normaux. Il n`y a aucun indice de contamination dans le l`huile. L`état de l`huile est acceptable pour la durée de service.

view report

22 Jul 2021 Diag: Kevin Marson

NORMAL

Échantillonner de nouveau l`équipement au prochain intervalle de vidange afin d`en surveiller la condition. À NOTER: S.V.P. inclure, avec le prochain échantillon, des détails de la capacité du réservoir et le type et le degré de filtration. Veuillez préciser la marque, le type et la viscosité de l`huile lors de votre prochain échantillon.Les taux d`usure de tous les composants sont normaux. Il n`y a aucun indice de contamination dans le l`huile. L`état de l`huile est acceptable pour la durée de service.

view report

02 Nov 2020 Diag: Kevin Marson

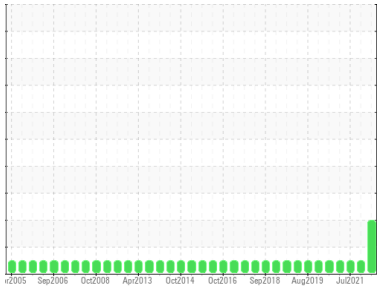
NORMAL

Échantillonner de nouveau l`équipement au prochain intervalle de vidange afin d`en surveiller la condition. À NOTER: S.V.P. inclure, avec le prochain échantillon, des détails de la capacité du réservoir et le type et le degré de filtration. Veuillez préciser la marque, le type et la viscosité de l`huile lors de votre prochain échantillon.Les taux d`usure de tous les composants sont normaux. Il n`y a aucun indice de contamination dans le l`huile. L`état de l`huile est acceptable pour la durée de service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR PARTICLES

Area
Four pechiney
Machine Id
54P12 PI
Component
Winch
Fluid
MOBIL MOBILGEAR SHC 220 (--- LTR)

DIAGNOSIS

Recommendation

Nous recommandons le remplacement des filtres de ce composant. Nous vous recommandons d`échantillonner de nouveau dès que possible afin de contrôler la situation. À NOTER: S.V.P. inclure, avec le prochain échantillon, des détails de la capacité du réservoir et le type et le degré de filtration.

Wear

Usure des engrenages.

Contaminants

Il y a une quantité modérée de particules (de 4 à 14 microns) dans l`huile. La teneur en eau est négligeable. La propreté du système est supérieure à la limite acceptable pour votre objectif de propreté ISO 4406.

Oil Condition

Le AN est acceptable pour ce fluide. l`huile n'est plus en état de service en raison d'une usure anomale et/ou sévère.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0693111**	WC0635240	WC0577731
Sample Date		Client Info		**10 Nov 2022**	24 Feb 2022	22 Jul 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				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**105**	132	---
Iron	ppm	ASTM D5185(m)	>150	**145**	150	129
Chromium	ppm	ASTM D5185(m)	>10	**<1**	1	<1
Nickel	ppm	ASTM D5185(m)	>10	**2**	2	2
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>25	**0**	<1	0
Lead	ppm	ASTM D5185(m)	>100	**7**	7	6
Copper	ppm	ASTM D5185(m)	>50	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>10	**0**	0	0
Antimony	ppm	ASTM D5185(m)	>5	**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

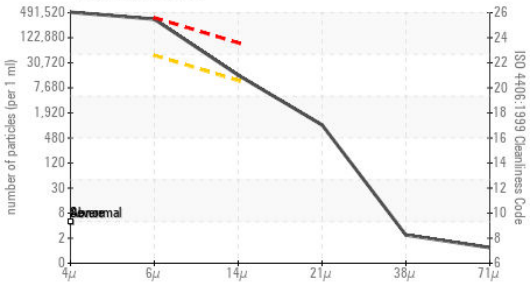
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**7**	7	9
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**<1**	<1	<1
Manganese	ppm	ASTM D5185(m)		**2**	1	1
Magnesium	ppm	ASTM D5185(m)		**0**	0	0
Calcium	ppm	ASTM D5185(m)		**<1**	<1	1
Phosphorus	ppm	ASTM D5185(m)		**457**	428	447
Zinc	ppm	ASTM D5185(m)		**5**	6	5
Sulfur	ppm	ASTM D5185(m)		**4811**	4493	4630
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	**20**	21	21
Sodium	ppm	ASTM D5185(m)		**0**	0	0
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Water	%	ASTM D6304*	>0.1	**0.004**	---	---
ppm Water	ppm	ASTM D6304*	>1000	**44.0**	---	---

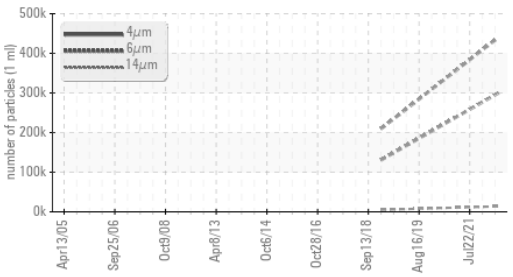
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	0
Nitration	Abs/cm	ASTM D7624*		**2.7**	2.6	3.1
Sulfation	Abs/.1mm	ASTM D7415*		**22.7**	21.3	41.7

OIL ANALYSIS REPORT

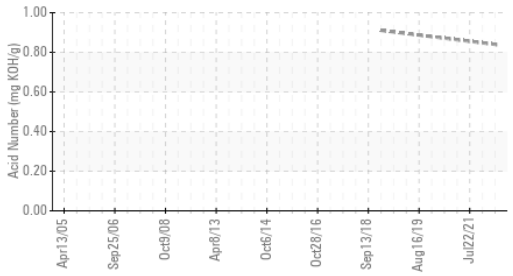
Particle Count



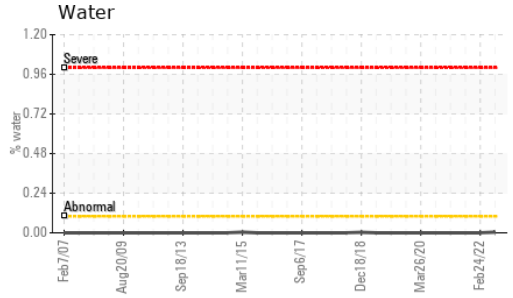
Particle Trend



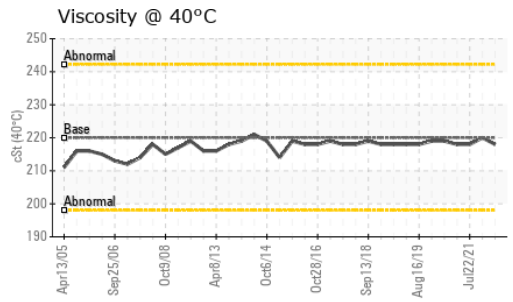
Acid Number



Water



Viscosity @ 40°C



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**433840**	---	---
Particles >6µm		ASTM D7647	>40000	▲ **295237**	---	---
Particles >14µm		ASTM D7647	>10000	▲ **13441**	---	---
Particles >21µm		ASTM D7647	>2500	**866**	---	---
Particles >38µm		ASTM D7647	>640	**2**	---	---
Particles >71µm		ASTM D7647	>160	**1**	---	---
Oil Cleanliness		ISO 4406 (c)	>--/22/20	▲ **26/25/21**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		**18.4**	17.3	47.5
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.84**	---	---

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	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	220	**218**	220	218

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0693111 **Received** : 14 Nov 2022
Lab Number : 02522633 **Diagnosed** : 18 Nov 2022
Unique Number : 5487614 **Diagnostician** : Kevin Marson
Test Package : IND 3 (Additional Tests: FT-IR, KF, PrtCount)

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.

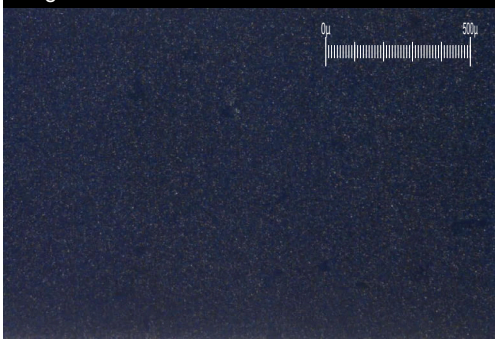
RTA - UGB
C.P. 900
Ville de la Baie, QC
CA G7B 4G9
Contact: Alcan Epc
mathieu.tremblay2@riotinto.com
T: (418)697-9568
F: (418)697-9550

FERROGRAPHY REPORT

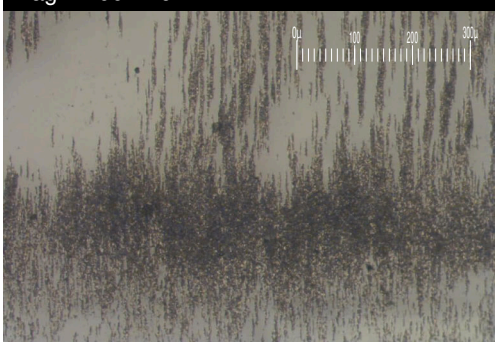
Area
Four pechiney
Machine Id
54P12 PI
Component
Winch
Fluid
MOBIL MOBILGEAR SHC 220 (--- LTR)

Magn: 200x Illum: BC

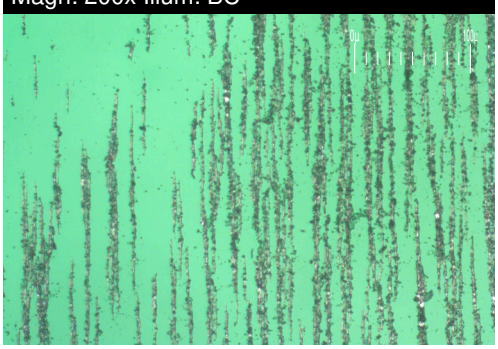
Magn: 50x Illum: RW



Magn: 100x Illum: RW



Magn: 200x Illum: BC

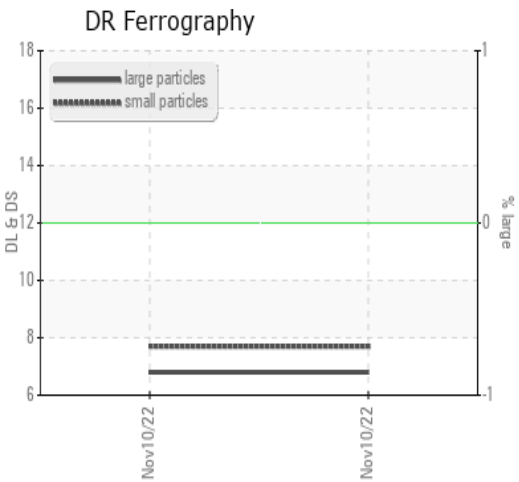


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		6.8	---	---
Small Particles		DR-Ferr*		7.7	---	---
Total Particles		DR-Ferr*	>---	14.5	---	---
Large Particles Percentage	%	DR-Ferr*		0	---	---
Severity Index		DR-Ferr*		6	---	---

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		▲		
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		4		
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*				
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*		3		
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Lubricant Degradation	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		1		
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		2		

WEAR

Usure des engrenages.



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