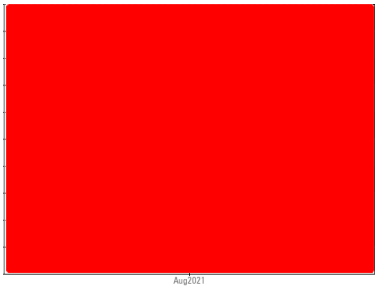
PROBLEM SUMMARY

Sample Rating Trend



WEAR PARTICLES

Machine Id
USED OB #12
Component
Grease
Fluid
MOBIL MOBILITH SHC SERIES 100 (--- GAL)

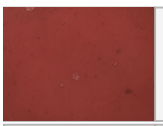
COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

We recommend that you purge the grease from the component and re-grease if this has not already been done. We recommend an early resample to monitor this condition. Diagnostician`s Note: The grease anti-oxidants are almost like the original grease. The oil bleed has decreased by 24%. The coarse dirt present in the grease is likely no longer present in the sample because it is embedded in the bearing (and is the reason for the cutting wear observed in the ferrogram). The bearing wear is a combination of low and high alloy steel (see photo 4). This bearing likely requires replacement as the cutting and fatigue wear will continue at an elevated rate.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	---	---
Ferrous Cutting	Scale 0-10	ASTM D7684		**3**		
Ferrous Rolling	Scale 0-10	ASTM D7684		**3**		
Ferrous Corrosive	Scale 0-10	ASTM D7684		**3**		
Oil Separation (Bleed)	%	SKF Method	>+/-25%	**-24.2**	---	---
PrtFilter					*no image*	*no image*
Filter Image 1				*no image*	*no image*	*no image*
Filter Image 2				*no image*	*no image*	*no image*

Customer Id: CUSANY
Sample No.: WC1234567
Lab Number: 01234567
Test Package: GRS 3

To manage this report scan the QR code

To discuss the diagnosis or test data:
Bill Quesnel CLS,OMA II,MLA-III,LLA-I +1 (905)569-8600 x4641
Bill.Quesnel@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (905)569-8600 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

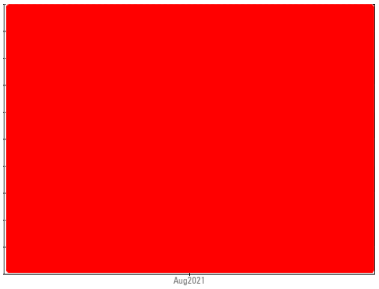
Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the grease from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

AINSWORTH
Technical Experts Coast to Coast

GREASE ANALYSIS

Sample Rating Trend



WEAR PARTICLES

Machine Id
USED OB #12
Component
Grease
Fluid
MOBIL MOBILITH SHC SERIES 100 (--- GAL)

DIAGNOSIS

Recommendation

We recommend that you purge the grease from the component and re-grease if this has not already been done. We recommend an early resample to monitor this condition. Diagnostician`s Note: The grease anti-oxidants are almost like the original grease. The oil bleed has decreased by 24%. The coarse dirt present in the grease is likely no longer present in the sample because it is embedded in the bearing (and is the reason for the cutting wear observed in the ferrogram). The bearing wear is a combination of low and high alloy steel (see photo 4). This bearing likely requires replacement as the cutting and fatigue wear will continue at an elevated rate.

Wear

Wear particle analysis indicates that the ferrous cutting and ferrous rolling particles are severe. Wear particle analysis indicates that the ferrous corrosive particles are abnormal.

Grease Condition

The oil bleed has decreased by 24% from the original grease. Linear Sweep Voltammetry (RULER – ASTM D6971) testing indicates normal levels of anti-oxidants present in the oil. The grease is no longer serviceable as a result of the abnormal and/or severe wear.

Contaminants

There is no indication of any contamination in the grease.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number				**AW0003935**	---	---
Sample Date				**27 Aug 2021**	---	---
Machine Age	hrs			**2**	---	---
Grease Age	hrs			**0**	---	---
Grease Serviced				**N/A**	---	---
Sample Status				**SEVERE**	---	---

WEAR METALS		method	limit/base	current	history 1	history 2
PQ		ASTM D8184	>200	**40**	---	---
Iron	ppm	ASTM D5185(m)	>250	**28**	---	---
Chromium	ppm	ASTM D5185(m)	>10	**<1**	---	---
Nickel	ppm	ASTM D5185(m)	>5	**<1**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Lead	ppm	ASTM D5185(m)	>25	**0**	---	---
Copper	ppm	ASTM D5185(m)	>75	**<1**	---	---
Tin	ppm	ASTM D5185(m)	>5	**0**	---	---
Silver	ppm	ASTM D5185(m)	>5	**<1**	---	---

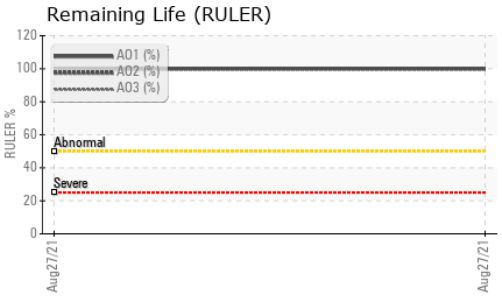
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m)	0	**<1**	---	---
Magnesium	ppm	ASTM D5185(m)	0	**<1**	---	---
Manganese	ppm	ASTM D5185(m)	0	**<1**	---	---
Molybdenum	ppm	ASTM D5185(m)	0	**0**	---	---
Phosphorus	ppm	ASTM D5185(m)	200	**188**	---	---
Zinc	ppm	ASTM D5185(m)	250	**258**	---	---
Antimony	ppm	ASTM D5185(m)	0	**<1**	---	---

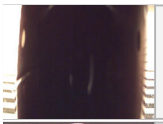
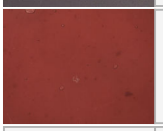
THICKENER/SOAP		method	limit/base	current	history 1	history 2
Aluminum	ppm	ASTM D5185(m)	0	**<1**	---	---
Barium	ppm	ASTM D5185(m)	0	**<1**	---	---
Calcium	ppm	ASTM D5185(m)	0	**5**	---	---
Sodium	ppm	ASTM D5185(m)	2	**3**	---	---
Lithium	ppm	ASTM D5185(m)	400	**500**	---	---
Sulfur	ppm	ASTM D5185(m)	750	**734**	---	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>150	**1**	---	---
Potassium	ppm	ASTM D5185(m)		**<1**	---	---
Water	%	ASTM D6304	>0.1	**0.085**	---	---
ppm Water	ppm	ASTM D6304	>1000	**857.6**	---	---

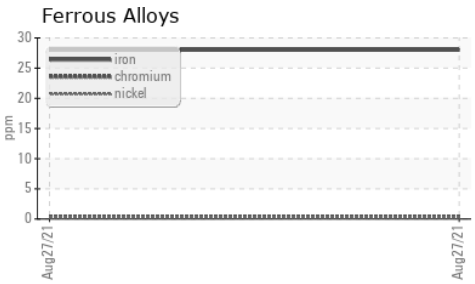
GREASE CONDITION		method	limit/base	current	history 1	history 2
Grease Color		Visual	red	**Burgundy**	---	---
Texture		In-house		**Short fiber**	---	---
NLGI Consistency	NLGI Scale	SKF Method	2	**3**	---	---
Oil Separation (Bleed)	%	SKF Method	>+/-25%	**-24.2**	---	---
Anti-Oxidant 1	%	ASTM D6971	<25%	**100**	---	---
Anti-Oxidant 2	%	ASTM D6971	<25%	**100**	---	---

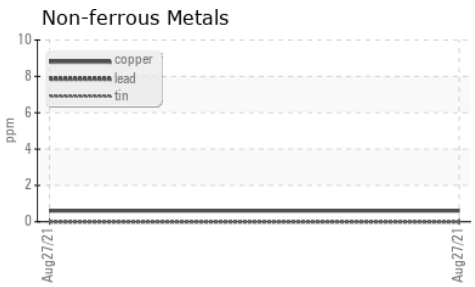
GREASE ANALYSIS

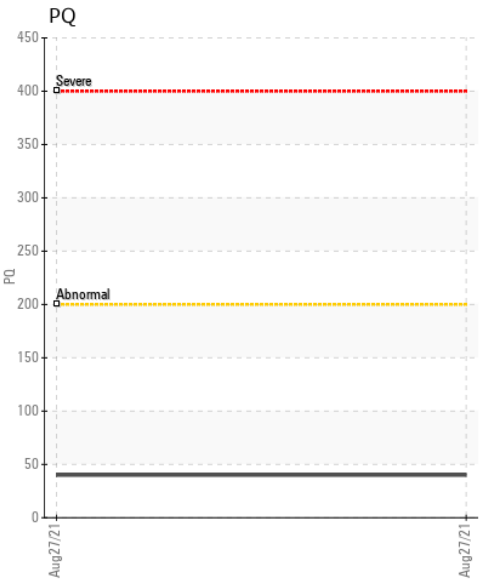


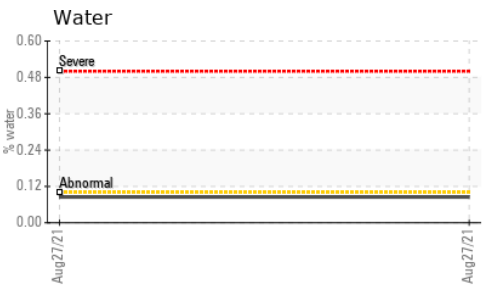
SAMPLE IMAGES	method	limit/base		current	history 1	history 2
Color					no image	no image
Bottom					no image	no image
PrtFilter					no image	no image
Filter Image 1				no image	no image	no image
Filter Image 2				no image	no image	no image

GRAPHS









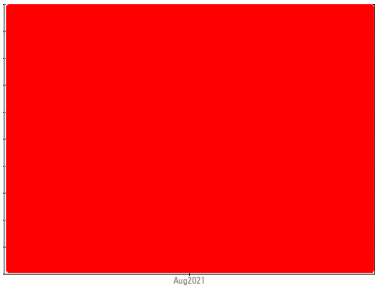
Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC1234567 **Received** : 22 Oct 2021
Lab Number : 01234567 **Diagnosed** : 02 Nov 2021
Unique Number : 12345678 **Diagnostician** : Bill Quesnel
Test Package : GRS 3 (Additional Tests: BottomAnalysis)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
(m) Denotes a modified test method, (e) Denotes a test conducted using an external laboratory.

Cusany Logistics Inc.
1212 Industrial Place
Centerville, OH
USA 75900
Contact: Jim Leduc
jim.leduc@cusanylogisticsinc.com
T: (305)555-1212
F: (305)555-1222

FERROGRAPHY REPORT

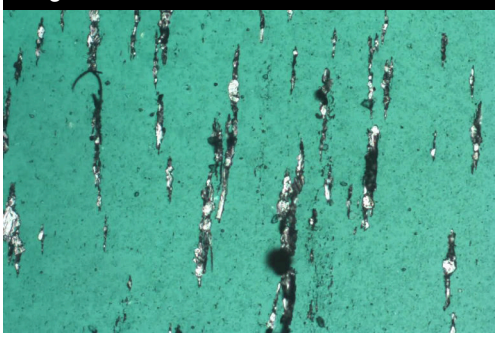
Sample Rating Trend



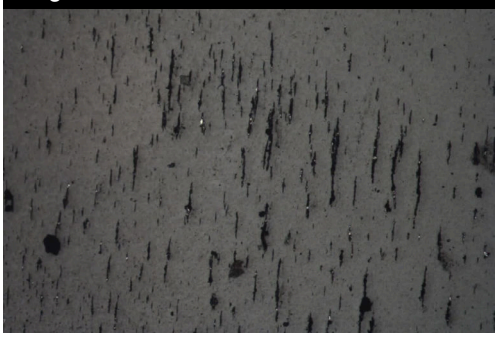
WEAR PARTICLES

Machine Id
USED OB #12
Component
Grease
Fluid
MOBIL MOBILITH SHC SERIES 100 (--- GAL)

Magn: 200x Illum: BC

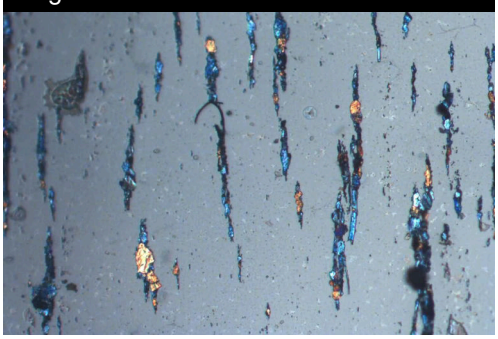


Magn: 50x Illum: RW



Magn: 100x Illum: RW

Magn: 200x Illum: RW



FERROGRAPHY		method	limit/base	current	history 1	history 2
Ferrous Rubbing	Scale 0-10	ASTM D7684		3		
Ferrous Sliding	Scale 0-10	ASTM D7684		1		
Ferrous Cutting	Scale 0-10	ASTM D7684		3		
Ferrous Rolling	Scale 0-10	ASTM D7684		3		
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		2		
Fibres	Scale 0-10	ASTM D7684				
Spheres	Scale 0-10	ASTM D7684				
Other	Scale 0-10	ASTM D7684				

WEAR

Wear particle analysis indicates that the ferrous cutting and ferrous rolling particles are severe. Wear particle analysis indicates that the ferrous corrosive particles are abnormal.

This page left intentionally blank