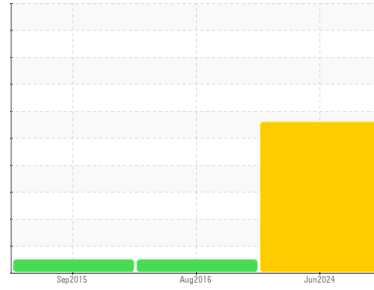




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id

## BROWNING 220 9 SCREW

Component

**Gearbox**

Fluid

**MOBIL MOBILGEAR SHC 220 (9 LTR)**

### DIAGNOSIS

#### Recommendation

We advise that you check for visible metal particles in the oil. We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition.

#### Wear

PQ PQ levels are abnormal. Iron ppm levels are abnormal. Moderate concentration of visible metal present. Gear wear is indicated. The high ferrous density (PQ) index indicates that abnormal wear is occurring.

#### Contamination

There is a moderate concentration of dirt present in the oil. High amount of ingressed dirt has caused abrasive wear to the component.

#### Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

### SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>WC0951872</b>	WC939807	WC938367
Sample Date	Client Info	<b>19 Jun 2024</b>	29 Aug 2016	16 Sep 2015
Machine Age	hrs	<b>0</b>	47000	43603
Oil Age	hrs	<b>0</b>	6000	2601
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status		<b>ABNORMAL</b>	NORMAL	NORMAL

### CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG

### WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	<b>▲ 538</b>	27	24
Iron	ppm ASTM D5185(m) >200	<b>▲ 262</b>	39	38
Chromium	ppm ASTM D5185(m) >15	<b>1</b>	<1	<1
Nickel	ppm ASTM D5185(m) >15	<b>&lt;1</b>	<1	<1
Titanium	ppm ASTM D5185(m)	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185(m)	<b>0</b>	0	0
Aluminum	ppm ASTM D5185(m) >25	<b>1</b>	<1	<1
Lead	ppm ASTM D5185(m) >100	<b>0</b>	0	0
Copper	ppm ASTM D5185(m) >200	<b>1</b>	<1	<1
Tin	ppm ASTM D5185(m) >25	<b>0</b>	0	0
Antimony	ppm ASTM D5185(m) >5	<b>0</b>	0	<1
Vanadium	ppm ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm ASTM D5185(m)	<b>0</b>	0	<1

### ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	1
Barium	ppm ASTM D5185(m)	<b>&lt;1</b>	0	0
Molybdenum	ppm ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm ASTM D5185(m)	<b>2</b>	<1	<1
Magnesium	ppm ASTM D5185(m)	<b>1</b>	<1	1
Calcium	ppm ASTM D5185(m)	<b>21</b>	33	26
Phosphorus	ppm ASTM D5185(m)	<b>426</b>	387	416
Zinc	ppm ASTM D5185(m)	<b>3</b>	2	2
Sulfur	ppm ASTM D5185(m)	<b>1740</b>	1621	1996
Lithium	ppm ASTM D5185(m)	<b>2</b>	<1	<1

### CONTAMINANTS

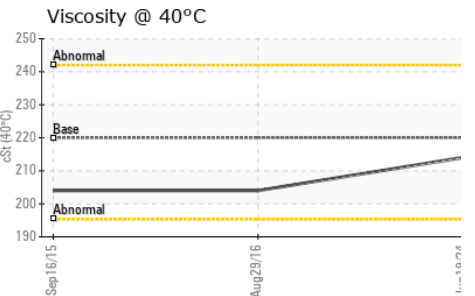
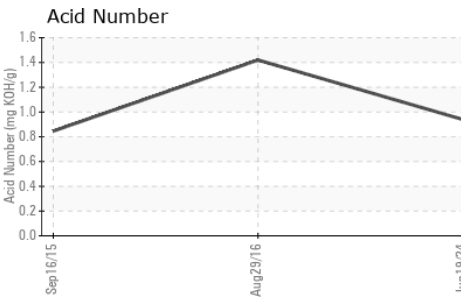
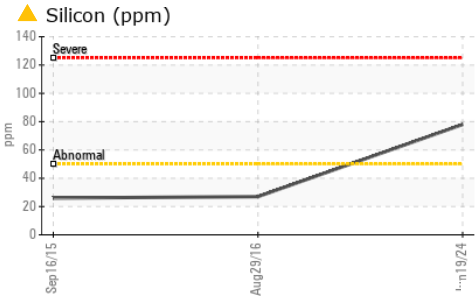
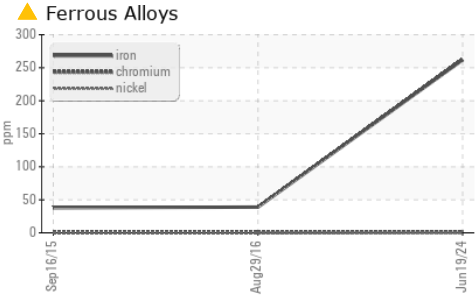
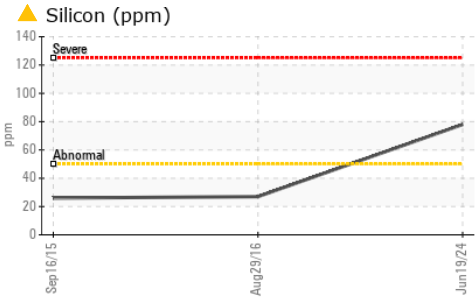
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >50	<b>▲ 78</b>	27	26
Sodium	ppm ASTM D5185(m)	<b>0</b>	0	0
Potassium	ppm ASTM D5185(m) >20	<b>&lt;1</b>	0	<1

### FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	<b>0.94</b>	1.42	0.846



# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	220	214	204

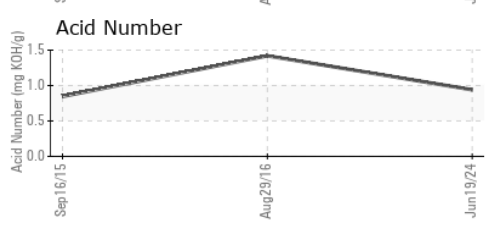
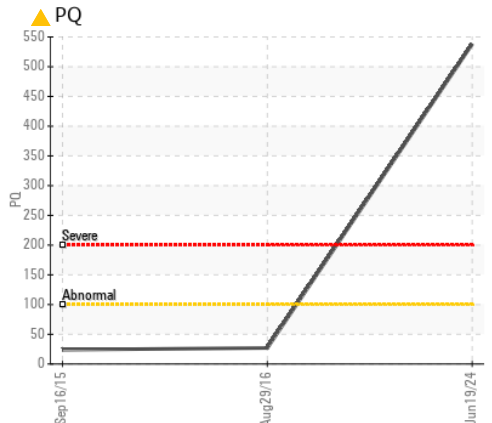
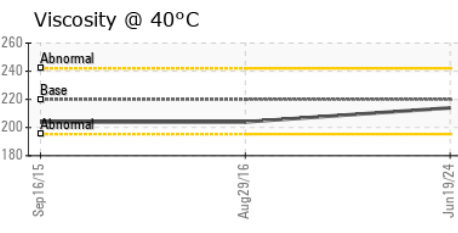
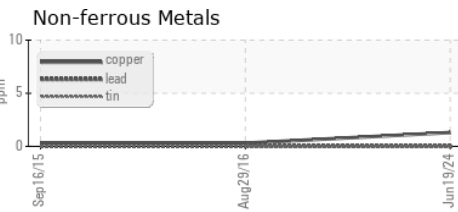
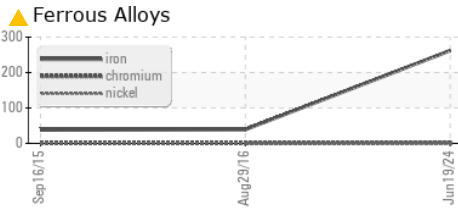
SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

Bottom

PrtFilter

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0951872  
**Lab Number** : 02643494  
**Unique Number** : 5801033  
**Test Package** : IND 2 ( Additional Tests: Bottom, BottomAnalysis, FilterPatch, TAN Man )

**CARMEUSE LIME CANADA LTD.**  
 BOX 1690., HWY 17 EAST  
 BLIND RIVER, ON  
 CA P0R 1B0

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.

Received : 21 Jun 2024  
 Tested : 26 Jun 2024  
 Diagnosed : 26 Jun 2024 - Kevin Marson

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