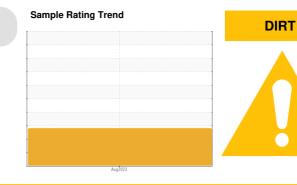


PROBLEM SUMMARY

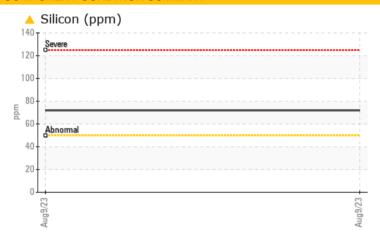
A.R.B. DRIVE

Component Gearbox

MOBIL MOBILGEAR SHC 220 (--- GAL)



COMPONENT CONDITION SUMMARY





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 either performing an oil change or oil filtration. We cannot recommend specific action as we have limited information with regards to reservoir capacity and/or lubricant type. 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. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL		
Silicon	ppm	ASTM D5185(m)	>50	^ 72		
White Metal	scalar	Visual*	NONE	LIGHT		
PrtFilter					no image	no image

Customer Id: REIBLI **Sample No.:** WC0795492 Lab Number: 02575459 Test Package: IND 2



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		
Resample			?	We recommend an early resample to monitor this condition.		
Information Required			?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.		
Check Breathers			?	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.		
Check Dirt Access			?	We advise that you check all areas where dirt can enter the system.		
Check Fluid Source			?	Confirm the source of the lubricant being utilized for top-up/fill.		
Check For Visual Metal			?	We advise that you check for visible metal particles in the oil.		
Filter Fluid			?	We recommend either performing an oil change or oil filtration. We cannot recommend specific action as we have limited information with regards to reservoir capacity and/or lubricant type.		



OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id A.R.B. DRIVE

Component

Gearbox

MOBIL MOBILGEAR SHC 220 (--- GAL)

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 either performing an oil change or oil filtration. We cannot recommend specific action as we have limited information with regards to reservoir capacity and/or lubricant type. 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. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

Light concentration of visible metal present. Gear wear is indicated.

Contamination

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

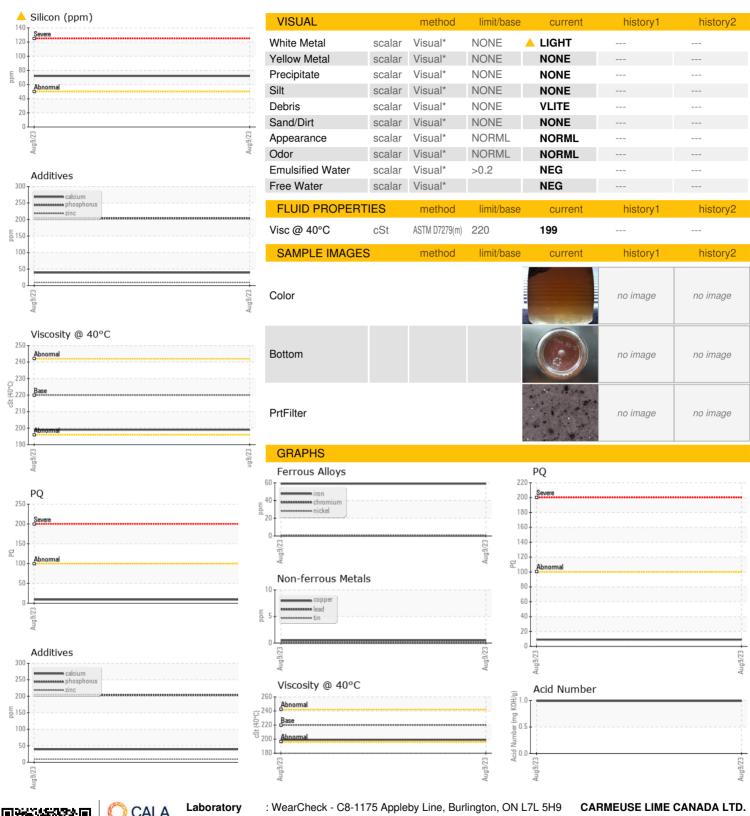
Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. 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					Aug 2023		
Client Info	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0	Sample Number		Client Info		WC0795492		
Oil Age hrs Client Info Not Changd	Sample Date		Client Info		09 Aug 2023		
Cilient Info	Machine Age	hrs	Client Info		0		
WEAR METALS method limit/base current history1 history2 PQ ASTM D8184* 9 Iron ppm ASTM D5185(m) >200 59 Chromium ppm ASTM D5185(m) >15 <1	Oil Age	hrs	Client Info		0		
WEAR METALS method limit/base current history1 history2 PQ ASTM D8184* 9 Iron ppm ASTM D8185(m) >200 59 Chromium ppm ASTM D8185(m) >15 <1	Oil Changed		Client Info		Not Changd		
PQ	Sample Status				ABNORMAL		
ASTM DS185(m) >200 599	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185(m) >15 <1 Nickel ppm ASTM D5185(m) >15 <1	PQ		ASTM D8184*		9		
Nickel	Iron	ppm	ASTM D5185(m)	>200	59		
Titanium	Chromium	ppm	ASTM D5185(m)	>15	<1		
Silver	Nickel	ppm	ASTM D5185(m)	>15	<1		
Aluminum	Titanium	ppm	ASTM D5185(m)		0		
Lead	Silver		ASTM D5185(m)		0		
ASTM D5185(m) >100 0	Aluminum	ppm	ASTM D5185(m)	>25	2		
Tin	Lead	ppm	ASTM D5185(m)	>100	0		
Ast Dot Dot	Copper	ppm	ASTM D5185(m)	>200	<1		
Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 6 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 0 Manganese ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 2 Calcium ppm ASTM D5185(m) 39 Phosphorus ppm ASTM D5185(m) 203 Sulfur ppm ASTM D5185(m) 3584 Lithium ppm ASTM D5185(m) <1		ppm	ASTM D5185(m)	>25	0		
Description	Antimony	ppm	ASTM D5185(m)	>5	0		
Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 6 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 2 Manganese ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 39 Calcium ppm ASTM D5185(m) 203 Phosphorus ppm ASTM D5185(m) 203 Zinc ppm ASTM D5185(m) 3584 Sulfur ppm ASTM D5185(m) <1 Lithium ppm ASTM D5185(m) >50 72 CONTAMINANTS method limit/base curr	Vanadium	ppm	ASTM D5185(m)		0		
Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 6 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 2 Manganese ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 39 Calcium ppm ASTM D5185(m) 203 Phosphorus ppm ASTM D5185(m) 10 Zinc ppm ASTM D5185(m) 3584 Sulfur ppm ASTM D5185(m) <1	Beryllium	ppm	ASTM D5185(m)		0		
Boron ppm ASTM D5185(m) 0	Cadmium		ASTM D5185(m)		0		
Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 0 Manganese ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 39 Calcium ppm ASTM D5185(m) 203 Phosphorus ppm ASTM D5185(m) 10 Zinc ppm ASTM D5185(m) 3584 Sulfur ppm ASTM D5185(m) <1	ADDITIVES		method	limit/base	current	history1	history2
Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 0 Manganese ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 39 Calcium ppm ASTM D5185(m) 203 Phosphorus ppm ASTM D5185(m) 10 Zinc ppm ASTM D5185(m) 3584 Sulfur ppm ASTM D5185(m) <1	Boron	ppm	ASTM D5185(m)		6		
Molybdenum ppm ASTM D5185(m) 0 Manganese ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 2 Calcium ppm ASTM D5185(m) 39 Phosphorus ppm ASTM D5185(m) 203 Zinc ppm ASTM D5185(m) 10 Sulfur ppm ASTM D5185(m) 3584 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Solicon ppm ASTM D5185(m) >50 72 Sodium ppm ASTM D5185(m) >20 0 FLUID DEGRADATION method limit/base current history1 history2	Barium		ASTM D5185(m)		0		
Manganese ppm ASTM D5185(m) 2 Magnesium ppm ASTM D5185(m) 2 Calcium ppm ASTM D5185(m) 39 Phosphorus ppm ASTM D5185(m) 203 Zinc ppm ASTM D5185(m) 10 Sulfur ppm ASTM D5185(m) 3584 Lithium ppm ASTM D5185(m) <1	Molybdenum		ASTM D5185(m)		0		
Magnesium ppm ASTM D5185(m) 2 Calcium ppm ASTM D5185(m) 39 Phosphorus ppm ASTM D5185(m) 203 Zinc ppm ASTM D5185(m) 10 Sulfur ppm ASTM D5185(m) 3584 Lithium ppm ASTM D5185(m) <1	•		ASTM D5185(m)		2		
Calcium ppm ASTM D5185(m) 39 Phosphorus ppm ASTM D5185(m) 203 Zinc ppm ASTM D5185(m) 10 Sulfur ppm ASTM D5185(m) 3584 Lithium ppm ASTM D5185(m) <1	•				2		
Phosphorus ppm ASTM D5185(m) 203 Zinc ppm ASTM D5185(m) 10 Sulfur ppm ASTM D5185(m) 3584 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 72 Sodium ppm ASTM D5185(m) 0 Potassium ppm ASTM D5185(m) >20 0 FLUID DEGRADATION method limit/base current history1 history2			. ,				
Zinc ppm ASTM D5185(m) 10 Sulfur ppm ASTM D5185(m) 3584 Lithium ppm ASTM D5185(m) <1			. ,				
Sulfur ppm ASTM D5185(m) 3584 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 72 Sodium ppm ASTM D5185(m) 0 Potassium ppm ASTM D5185(m) >20 0 FLUID DEGRADATION method limit/base current history1 history2			. ,		10		
Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 72 Sodium ppm ASTM D5185(m) 0 Potassium ppm ASTM D5185(m) >20 0 FLUID DEGRADATION method limit/base current history1 history2	Sulfur		(/		3584		
Silicon ppm ASTM D5185(m) >50 ▲ 72 Sodium ppm ASTM D5185(m) 0 Potassium ppm ASTM D5185(m) >20 0 FLUID DEGRADATION method limit/base current history1 history2	Lithium		ASTM D5185(m)		<1		
Sodium ppm ASTM D5185(m) 0 Potassium ppm ASTM D5185(m) >20 0 FLUID DEGRADATION method limit/base current history1 history2	CONTAMINANTS	3	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185(m) 0 Potassium ppm ASTM D5185(m) >20 0 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185(m)	>50	72		
Potassium ppm ASTM D5185(m) >20 0 FLUID DEGRADATION method limit/base current history1 history2	Sodium		ASTM D5185(m)		0		
	Potassium		ASTM D5185(m)	>20	0		
Acid Number (AN) mg KOH/g ASTM D974* 0.99	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D974*		0.99		



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited

Laboratory

Sample No. Lab Number **Unique Number**

: WC0795492

: 02575459 : 5620510

Received : 11 Aug 2023 : 15 Aug 2023 Diagnosed Diagnostician : Kevin Marson BOX 1690,, HWY 17 EAST BLIND RIVER, ON

CA POR 1B0

Test Package : IND 2 (Additional Tests: BottomAnalysis, FILTERPATCH, TAN Man) To discuss this sample report, contact Customer Service at 1-800-268-2131.

Contact: Jeffrey Mooney jeffrey.mooney@carmeusena.com

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.

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