

## **PROBLEM SUMMARY**

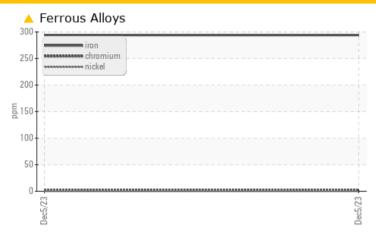
SS 1-6

Component Gearbox

GEAR OIL ISO 150 (--- LTR)

# Sample Rating Trend **WEAR**

#### **COMPONENT CONDITION SUMMARY**



#### RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL ISO 150. Please confirm. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS						
Sample Status				ABNORMAL		
Iron	ppm	ASTM D5185(m)	>200	<b>294</b>		

Customer Id: EMFMIS Sample No.: WC0877658 Lab Number: 02602680 Test Package: IND 1

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 Fluid			?	We recommend that you drain the oil from the component if this has not already been done.	
Resample			?	We recommend an early resample to monitor this condition.	
Alert			?	Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment.	
Information Required			?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.	

# HISTORICAL DIAGNOSIS



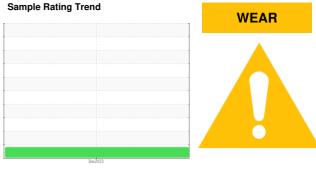
## **OIL ANALYSIS REPORT**

Machine Id **SS 1-6** 

Component

Gearbox

GEAR OIL ISO 150 (--- LTR)



## **DIAGNOSIS**

#### Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL ISO 150. Please confirm. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

#### Wear

Iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

#### Contamination

There is no indication of any contamination in the oil.

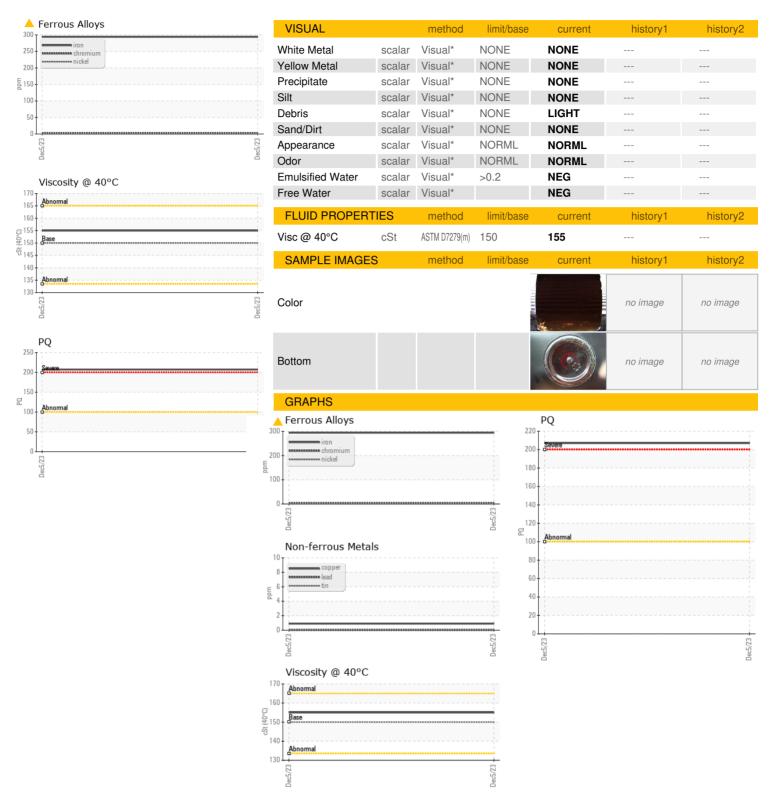
## **Fluid Condition**

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sample Number         Client Info         WC0877658            Sample Date         Client Info         05 Dec 2023            Machine Age         hrs         Client Info         0            Oil Age         hrs         Client Info         0            Oil Changed         Client Info         N/A            Sample Status         ABNORMAL             CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history2           VEAR Agin Metal         ppm					Dec2023		
Sample Date   Client Info   05 Dec 2023	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         0	Sample Number		Client Info		WC0877658		
Oil Age         hrs         Client Info         N/A             Oil Changed         Client Info         N/A             Sample Status         ABNORMAL             CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D5185(m)         >200         294             Iron         ppm         ASTM D5185(m)         >15         3             Nickel         ppm         ASTM D5185(m)         >15         <1             Riliver         ppm         ASTM D5185(m)         >25         <1             Titanium         ppm         ASTM D5185(m)         >25         <1             Aluminum         ppm         ASTM D5185(m)         >20         <1             Copper         ppm	Sample Date		Client Info		05 Dec 2023		
Contained   City   C	Machine Age	hrs	Client Info		0		
Oil Changed Sample Status         Client Info         N/A	Oil Age	hrs	Client Info		0		
Water   WC Method   So.2   NEG   So.2   NEG   So.2   NEG   So.2   NEG   So.2   NEG   So.2   NEG   So.3	Oil Changed		Client Info		N/A		
Water         WC Method         >0.2         NEG            WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D81884*         200         ≥94             Iron         ppm         ASTM D5185(m)         >200         ≥94             Chromium         ppm         ASTM D5185(m)         >15         3             Nickel         ppm         ASTM D5185(m)         >15         <1             Titanium         ppm         ASTM D5185(m)         >15         <1             Astmusium         ppm         ASTM D5185(m)         >25         <1             Aluminum         ppm         ASTM D5185(m)         >200         <1             Aluminum         ppm         ASTM D5185(m)         >00             Copper         ppm         ASTM D5185(m)         >5         0             Copper         ppm         ASTM D5185(m)         0	Sample Status				ABNORMAL		
WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184*         207             Iron         ppm         ASTM D5185(m)         >200         294             Chromium         ppm         ASTM D5185(m)         -15         3             Nickel         ppm         ASTM D5185(m)         0             Titanium         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         >25         <1	CONTAMINATION		method	limit/base	current	history1	history2
PQ	Water		WC Method	>0.2	NEG		
Sam	WEAR METALS		method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185(m)         >15         3             Nickel         ppm         ASTM D5185(m)         >15         <1	PQ		ASTM D8184*		207		
Chromium         ppm         ASTM D5185(m)         >15         3             Nickel         ppm         ASTM D5185(m)         >15         <1             Titanium         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         >25         <1             Aluminum         ppm         ASTM D5185(m)         >25         <1             Lead         ppm         ASTM D5185(m)         >100         0             Copper         ppm         ASTM D5185(m)         >20         <1             Tin         ppm         ASTM D5185(m)         >20              Antimony         ppm         ASTM D5185(m)         5         0             Vanadium         ppm         ASTM D5185(m)         0              Beryllium         ppm         ASTM D5185(m)         0              ADDITIVES         method         limit/base         curre	Iron	ppm	ASTM D5185(m)	>200	<b>^</b> 294		
Nickel	Chromium		( /		3		
Description	Nickel	ppm	ASTM D5185(m)	>15	<1		
Aluminum ppm ASTM D5185(m) > 25 < 1	Titanium		ASTM D5185(m)		0		
Aluminum	Silver	ppm	ASTM D5185(m)		<1		
Copper         ppm         ASTM D5185(m)         >200         <1             Tin         ppm         ASTM D5185(m)         >25         0             Antimony         ppm         ASTM D5185(m)         >5         0             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)         50         20             Barium         ppm         ASTM D5185(m)         15         8             Molybdenum         ppm         ASTM D5185(m)         15         0             Manganese         ppm         ASTM D5185(m)         5             Magnesium         ppm         ASTM D5185(m)         50         12	Aluminum		ASTM D5185(m)	>25	<1		
Tin ppm ASTM D5185(m) >25 0  Antimony ppm ASTM D5185(m) >5 0  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) 50 20  Barium ppm ASTM D5185(m) 15 8  Molybdenum ppm ASTM D5185(m) 15 0  Manganese ppm ASTM D5185(m) 50 <1  Calcium ppm ASTM D5185(m) 50 12  Calcium ppm ASTM D5185(m) 350 311  Zinc ppm ASTM D5185(m) 100 27  Sulfur ppm ASTM D5185(m) 100 27  CONTAMINANTS method limit/base current history1 history2  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185(m) <1  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185(m) >50 3  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185(m) >50 3  CONTAMINANTS method limit/base current history1 history2  Sodium ppm ASTM D5185(m) >50 3  Sodium ppm ASTM D5185(m) >50 3  Sodium ppm ASTM D5185(m) >50 3	Lead	ppm	ASTM D5185(m)	>100	0		
Antimony ppm ASTM D5185(m) >5 0  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) 50 20  Barium ppm ASTM D5185(m) 15 8  Molybdenum ppm ASTM D5185(m) 15 0  Manganese ppm ASTM D5185(m) 50 <1  Calcium ppm ASTM D5185(m) 50 <1  Calcium ppm ASTM D5185(m) 50 12  Phosphorus ppm ASTM D5185(m) 350 311  Zinc ppm ASTM D5185(m) 100 27  Sulfur ppm ASTM D5185(m) 12500 12382  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185(m) >50 3  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185(m) >50 3  Sodium ppm ASTM D5185(m) >50 3  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185(m) >50 3  Sodium ppm ASTM D5185(m) >50 3	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)         50         20             Barium         ppm         ASTM D5185(m)         15         8             Molybdenum         ppm         ASTM D5185(m)         15         0             Magnaese         ppm         ASTM D5185(m)         5             Magnesium         ppm         ASTM D5185(m)         50         12             Calcium         ppm         ASTM D5185(m)         350         311             Phosphorus         ppm         ASTM D5185(m)         100         27             Sulfur         ppm         ASTM D5185(m)         12500         12382 <td< td=""><td>Tin</td><td>ppm</td><td>ASTM D5185(m)</td><td>&gt;25</td><td>0</td><td></td><td></td></td<>	Tin	ppm	ASTM D5185(m)	>25	0		
Beryllium	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)         50         20             Barium         ppm         ASTM D5185(m)         15         8             Molybdenum         ppm         ASTM D5185(m)         15         0             Manganese         ppm         ASTM D5185(m)         5             Magnesium         ppm         ASTM D5185(m)         50         <1	Vanadium	ppm	ASTM D5185(m)		0		
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185(m)         50         20             Barium         ppm         ASTM D5185(m)         15         8             Molybdenum         ppm         ASTM D5185(m)         15         0             Manganese         ppm         ASTM D5185(m)         5             Magnesium         ppm         ASTM D5185(m)         50         <1	Beryllium	ppm	ASTM D5185(m)		0		
Boron         ppm         ASTM D5185(m)         50         20             Barium         ppm         ASTM D5185(m)         15         8             Molybdenum         ppm         ASTM D5185(m)         15         0             Manganese         ppm         ASTM D5185(m)         5             Magnesium         ppm         ASTM D5185(m)         50         <1	Cadmium	ppm	ASTM D5185(m)		0		
Barium         ppm         ASTM D5185(m)         15         8             Molybdenum         ppm         ASTM D5185(m)         15         0             Manganese         ppm         ASTM D5185(m)         50              Magnesium         ppm         ASTM D5185(m)         50         12             Calcium         ppm         ASTM D5185(m)         350         311             Phosphorus         ppm         ASTM D5185(m)         100         27             Sulfur         ppm         ASTM D5185(m)         12500         12382             Lithium         ppm         ASTM D5185(m)         <1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         3             Sodium         ppm         ASTM D5185(m)         2	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185(m)         15         0             Manganese         ppm         ASTM D5185(m)         5             Magnesium         ppm         ASTM D5185(m)         50         <1             Calcium         ppm         ASTM D5185(m)         50         12             Phosphorus         ppm         ASTM D5185(m)         350         311             Zinc         ppm         ASTM D5185(m)         100         27             Sulfur         ppm         ASTM D5185(m)         12500         12382             Lithium         ppm         ASTM D5185(m)         <1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         3             Sodium         ppm         ASTM D5185(m)         2	Boron	ppm	ASTM D5185(m)	50	20		
Manganese         ppm         ASTM D5185(m)         5             Magnesium         ppm         ASTM D5185(m)         50         <1	Barium	ppm	ASTM D5185(m)	15	8		
Magnesium         ppm         ASTM D5185(m)         50         <1             Calcium         ppm         ASTM D5185(m)         50         12             Phosphorus         ppm         ASTM D5185(m)         350         311             Zinc         ppm         ASTM D5185(m)         100         27             Sulfur         ppm         ASTM D5185(m)         12500         12382             Lithium         ppm         ASTM D5185(m)         <1	Molybdenum	ppm	ASTM D5185(m)	15	0		
Calcium         ppm         ASTM D5185(m)         50         12             Phosphorus         ppm         ASTM D5185(m)         350         311             Zinc         ppm         ASTM D5185(m)         100         27             Sulfur         ppm         ASTM D5185(m)         12500         12382             Lithium         ppm         ASTM D5185(m)         <1	Manganese	ppm	ASTM D5185(m)		5		
Phosphorus         ppm         ASTM D5185(m)         350         311             Zinc         ppm         ASTM D5185(m)         100         27             Sulfur         ppm         ASTM D5185(m)         12500         12382             Lithium         ppm         ASTM D5185(m)         <1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         3             Sodium         ppm         ASTM D5185(m)         2	Magnesium	ppm	ASTM D5185(m)	50	<1		
Zinc         ppm         ASTM D5185(m)         1 0 0         27             Sulfur         ppm         ASTM D5185(m)         1 2500         12382             Lithium         ppm         ASTM D5185(m)         <1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         3             Sodium         ppm         ASTM D5185(m)         2	Calcium	ppm	ASTM D5185(m)	50	12		
Sulfur         ppm         ASTM D5185(m)         12500         12382             Lithium         ppm         ASTM D5185(m)         <1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         3             Sodium         ppm         ASTM D5185(m)         2	Phosphorus	ppm	ASTM D5185(m)	350	311		
Lithium         ppm         ASTM D5185(m)         <1             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         3             Sodium         ppm         ASTM D5185(m)         2	Zinc	ppm	ASTM D5185(m)	100	27		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185(m)         >50         3             Sodium         ppm         ASTM D5185(m)         2	Sulfur	ppm	ASTM D5185(m)	12500	12382		
Silicon         ppm         ASTM D5185(m)         >50         3             Sodium         ppm         ASTM D5185(m)         2	Lithium	ppm	ASTM D5185(m)		<1		
Sodium         ppm         ASTM D5185(m)         2	CONTAMINANTS		method	limit/base	current	history1	history2
[P]	Silicon	ppm	ASTM D5185(m)	>50	3		
Potassium ppm ASTM D5185(m) >20 <b>1</b>	Sodium	ppm	ASTM D5185(m)		2		
	Potassium	ppm	ASTM D5185(m)	>20	1		



## OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number

: WC0877658

: 02602680

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received

Diagnosed

: 12 Dec 2023

: 12 Dec 2023

Diagnostician : Kevin Marson

: 5695765 Test Package : IND 1 (Additional Tests: PQ) 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.

**EMF ELECTRICAL SERVICES** 

2690 SLOUGH STREET MISSISSAUGA, ON **CA L4T 1G3** Contact: Wilson Wilson@emfelectrical.ca T: (905)405-8836

Contact/Location: Wilson ? - EMFMIS