WEAR
CONTAMINATION
FLUID CONDITION

Limit/Abn

Current

CB0031829

17 Jun 2024

History1

UOM

Test

Sample Number

Sample Date

Method

Client Info

Client Info

NORMAL NORMAL ABNORMAL

History2

{UNASSIGNED}
MB1 (S/N 0000)
Component

Assembly

{not provided} (--- GAL)

DEOO	MMFND	ATION
RECO	MIMENI)	Δ II()N

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 advise that you check all areas where contaminants can enter the system. 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. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample

WEAR

All component wear rates are normal.

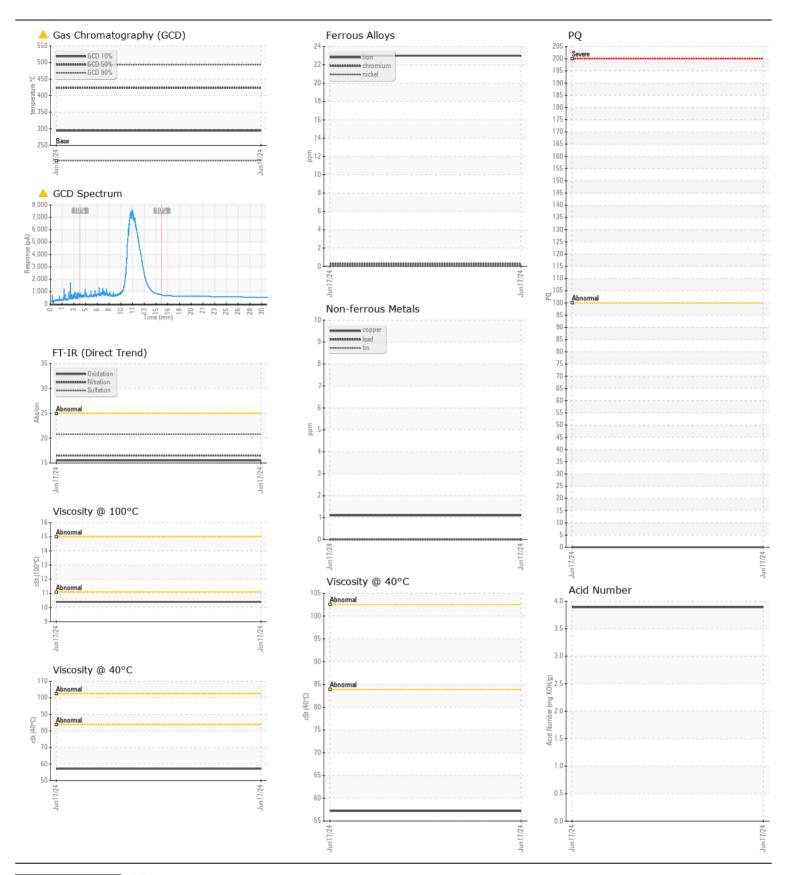
CONTAMINATION

The odor of the sample indicates contamination with a solvent. Gas Chromatography indicates the presence of a low boiling point products present in the sample.

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 0W30 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

Sample Date	In one	Client Into		17 Jun 2024	
Machine Age	hrs	Client Info		0	
Oil Age	hrs	Client Info		0	
Filter Age	hrs	Client Info		0	
Oil Changed		Client Info		N/A	
Filter Changed		Client Info		N/A	
Sample Status				ABNORMAL	
PQ		ASTM D8184*		0	
Iron	ppm	ASTM D5185(m)		23	
Chromium		ASTM D5185(m)		-	
	ppm			<1	
Nickel	ppm	ASTM D5185(m)		<1	
Titanium	ppm	ASTM D5185(m)		0	
Silver	ppm	ASTM D5185(m)		0	
Aluminum	ppm	ASTM D5185(m)		4	
Lead	ppm	ASTM D5185(m)		0	
Copper	ppm	ASTM D5185(m)		1	
Tin	ppm	ASTM D5185(m)		0	
Vanadium	ppm	ASTM D5185(m)		0	
White Metal	scalar	Visual*	NONE	NONE	
Yellow Metal	scalar	Visual*	NONE	NONE	
				14014	
Silicon	ppm	ASTM D5185(m)		8	
Potassium	ppm	ASTM D5185(III)	>20	o <1	
Water	ppili	WC Method	220	NEG	
Soot %	%	ASTM D7844*		0	
		ASTM D7644*		-	
Nitration	Abs/cm			16.5	
Sulfation		ASTM D7415*	NIONIE	20.8	
Silt	scalar	Visual*	NONE	NONE	
Debris		Visual*	NONE	NONE	
Sand/Dirt	scalar	Visual*	NONE	NONE	
Appearance	scalar		NORML	NORML	
Odor	scalar	Visual*	NORML	NORML	
	scalar	Visual*			
Odor Emulsified Water	scalar	Visual* Visual*		NORML NEG	
Odor Emulsified Water Sodium	scalar	Visual* Visual* ASTM D5185(m)		NORML NEG 4	
Odor Emulsified Water	scalar scalar	Visual* Visual*		NORML NEG 4 54	
Odor Emulsified Water Sodium Boron Barium	scalar scalar ppm	Visual* Visual* ASTM D5185(m)		NORML NEG 4 54 0	
Odor Emulsified Water Sodium Boron	scalar scalar ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m)		NORML NEG 4 54 0 53	
Odor Emulsified Water Sodium Boron Barium	scalar scalar ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		NORML NEG 4 54 0 53 3	
Odor Emulsified Water Sodium Boron Barium Molybdenum	scalar scalar ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		NORML NEG 4 54 0 53	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	scalar scalar ppm ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		NORML NEG 4 54 0 53 3	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	scalar scalar ppm ppm ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		NORML NEG 4 54 0 53 3 769	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m)		NORML NEG 4 54 0 53 3 769 1374	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	scalar scalar ppm ppm ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m)		NORML NEG 4 54 0 53 3 769 1374 770	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m)		NORML NEG 4 54 0 53 3 769 1374 770 859	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414*	NORML	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN)	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D974*	NORML	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D7474(m)	NORML	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D7414* ASTM D7279(m) ASTM D7279(m)	NORML	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C Viscosity Index (VI)	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D7414* ASTM D7279(m) ASTM D7279(m) ASTM D7279(m) ASTM D7270*	NORML	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Viscosity Index (VI) (GCD) % < 335°C	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7185(m) ASTM D7414* ASTM D7414* ASTM D7279(m) ASTM D7279(m) ASTM D7279(m) ASTM D2270* ASTM D2287*	NORML	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 10°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7185(m) ASTM D7414* ASTM D7414* ASTM D7279(m) ASTM D7279(m) ASTM D7279(m) ASTM D2287* ASTM D2887*	NORML	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 5% Distillation Point	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D974* ASTM D7279(m) ASTM D7279(m) ASTM D7279(m) ASTM D7270* ASTM D2887* ASTM D2887* ASTM D2887*	NORML 122	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 5% Distillation Point (GCD) 10% Distillation Point (GCD) 10% Distillation Point	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D974* ASTM D7279(m)	NORML	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 294.2	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 5% Distillation Point (GCD) 20% Distillation Point (GCD) 20% Distillation Point (GCD) 20% Distillation Point	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D974* ASTM D7279(m)	NORML 122	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 294.2 391.8	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 5% Distillation Point (GCD) 20% Distillation Point (GCD) 20% Distillation Point (GCD) 30% Distillation Point (GCD) 30% Distillation Point (GCD) 30% Distillation Point	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D7414* ASTM D7479(m) ASTM D747474(m) ASTM D7479(m) ASTM D747474(m) ASTM D7479(m) ASTM D747474(m) ASTM D7479(m) ASTM D7479(NORML 122	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 294.2 391.8 406.3	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 5% Distillation Point (GCD) 20% Distillation Point (GCD) 30% Distillation Point (GCD) 40% Distillation Point (GCD) 40% Distillation Point (GCD) 40% Distillation Point (GCD) 40% Distillation Point	scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D7414* ASTM D7479(m) AST	122 157	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 294.2 391.8 406.3 415.0	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 5% Distillation Point (GCD) 20% Distillation Point (GCD) 30% Distillation Point (GCD) 40% Distillation Point (GCD) 50% Distillation Point	scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D7414* ASTM D7414* ASTM D7279(m) ASTM D7279	NORML 122	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 △ 294.2 391.8 406.3 415.0 △ 423.3	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 5% Distillation Point (GCD) 20% Distillation Point (GCD) 40% Distillation Point (GCD) 40% Distillation Point (GCD) 50% Distillation Point (GCD) 60% Distillation Point	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D974* ASTM D7279(m) ASTM D7279(m) ASTM D2870* ASTM D2887*	122 157	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 294.2 391.8 406.3 415.0 423.3 432.3	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 20% Distillation Point (GCD) 20% Distillation Point (GCD) 30% Distillation Point (GCD) 50% Distillation Point (GCD) 60% Distillation Point (GCD) 60% Distillation Point (GCD) 60% Distillation Point (GCD) 70% Distillation Point	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm p	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D974* ASTM D7279(m) ASTM D7279(m) ASTM D7279(m) ASTM D7279(m) ASTM D2887*	122 157	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 294.2 391.8 406.3 415.0 423.3 443.0	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 20% Distillation Point (GCD) 20% Distillation Point (GCD) 40% Distillation Point (GCD) 50% Distillation Point (GCD) 50% Distillation Point (GCD) 80% Distillation Point	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm p	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D974* ASTM D7414* ASTM D779(m) ASTM D779(m) ASTM D779(m) ASTM D779(m) ASTM D2887*	122 157	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 294.2 391.8 406.3 415.0 423.3 432.3 443.0 457.5	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Viscosity Index (VI) (GCD) % < 335°C (GCD) Initial Boiling Point (GCD) 5% Distillation Point (GCD) 20% Distillation Point (GCD) 30% Distillation Point (GCD) 50% Distillation Point	scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D974* ASTM D7279(m) ASTM D7279(m) ASTM D7279(m) ASTM D7279(m) ASTM D2887*	122 157	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 294.2 391.8 406.3 415.0 423.3 432.3 443.0 457.5 493.3	
Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation Acid Number (AN) Visc @ 40°C Visc @ 100°C Visc @ 10°C	scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm p	Visual* Visual* ASTM D5185(m) ASTM D7414* ASTM D974* ASTM D7414* ASTM D779(m) ASTM D779(m) ASTM D779(m) ASTM D779(m) ASTM D2887*	122 157	NORML NEG 4 54 0 53 3 769 1374 770 859 1804 15.5 3.89 57.2 10.4 173 13.29 139.9 228.6 294.2 391.8 406.3 415.0 423.3 432.3 443.0 457.5	





ISO 17025:2017
Accredited
Laboratory

Laboratory: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Sample No.**: CB0031829 **Received**: 18 Jun 2024

 Sample No.
 : CB0031829
 Received
 : 18 Jun 2024

 Lab Number
 : 02642570
 Tested
 : 25 Jun 2024

 Unique Number
 : 5800109
 Diagnosed
 : 25 Jun 2024 - Kevin Marson

Test Package : IND 2 (Additional Tests: FT-IR, GCD, KV100, TAN Man, VI)

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.

Owens Corning Celfortec LP

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