

## Machine Id LWN TAILRACE CRANCE Component Gearbox Fluid GEAR OIL SAE 80W90 (--- GAL)

## 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. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL SAE 80W90. Please confirm.

NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

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WEAR

All component wear rates are normal.

## CONTAMINATION

There is no indication of any contamination in the oil.

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

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Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0750947		
Sample Date		Client Info		06 May 2024		
Machine Age	yrs	Client Info		2		
Oil Age	yrs	Client Info		2		
Filter Age	yrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Filter Changed		Client Info		Not Changd		
Sample Status				NORMAL		
PQ		ASTM D8184*		34		
Iron	ppm	ASTM D5185(m)	>200	19		
Chromium	ppm	ASTM D5185(m)	>15	0		
Nickel	ppm	ASTM D5185(m)	>15	0		
Titanium	ppm	ASTM D5185(m)	210	0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum		ASTM D5185(m)	>25	۰ <1		
Lead	ppm	ASTM D5185(m)	>100	<1		
Copper	ppm	ASTM D5185(m)	>200	<1 <1		
Tin	ppm	ASTM D5185(m)	>25	0		
Vanadium	ppm	ASTM D5185(m)	>20	0		
White Metal	ppm scalar	Visual*	NONE	VLITE		
Yellow Metal	scalar	Visual*	NONE	NONE		
	Scalar	visual				
Silicon	ppm	ASTM D5185(m)	>50	<1		
Potassium	ppm	ASTM D5185(m)	>20	<1		
Water		WC Method	>0.2	NEG		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	1.12 1.4				
	304141	Visual*	NORML	NORML		
Odor	scalar	Visual* Visual*	NORML NORML	NORML NORML		
Odor Emulsified Water						
Emulsified Water	scalar scalar	Visual* Visual*	NORML >0.2	NORML		
Emulsified Water Sodium	scalar scalar ppm	Visual* Visual* ASTM D5185(m)	NORML >0.2 >170	NORML NEG 2		
Emulsified Water Sodium Boron	scalar scalar ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m)	NORML >0.2 >170 400	NORML NEG 2 145		
Emulsified Water Sodium Boron Barium	scalar scalar ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML >0.2 >170 400 200	NORML NEG 2 145 1		   
Emulsified Water Sodium Boron Barium Molybdenum	scalar scalar ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML >0.2 >170 400	NORML NEG 2 145 1 0		
Emulsified Water Sodium Boron Barium Molybdenum Manganese	scalar scalar ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML >0.2 >170 400 200 12	NORML NEG 2 145 1 0 <1		
Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	scalar scalar ppm ppm ppm ppm ppm	Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	NORML >0.2 >170 400 200 12 12	NORML NEG 2 145 1 0 <1 <1		
Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	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) ASTM D5185(m)	NORML >0.2 >170 400 200 12 12 12 150	NORML NEG 2 145 1 0 <1 <1 <1 52		
Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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) ASTM D5185(m)	NORML >0.2 >170 400 200 12 12 150 150 1650	NORML NEG 2 145 1 0 <1 <1 <1 52 974		
Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	scalar scalar ppm 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) ASTM D5185(m) ASTM D5185(m)	NORML >0.2 >170 400 200 12 12 12 150 1650 125	NORML NEG 2 145 1 0 <1 <1 52 974 36		
Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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) ASTM D5185(m)	NORML >0.2 >170 400 200 12 12 150 150 1650	NORML NEG 2 145 1 0 <1 <1 <1 52 974		

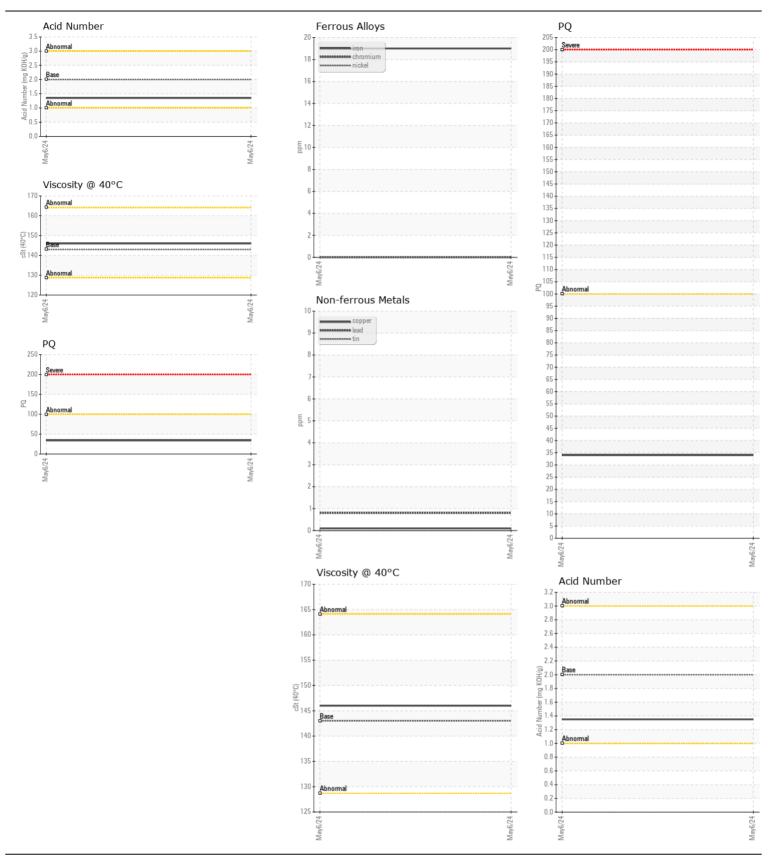
Visc @ 40°C

cSt

ASTM D7279(m) 143

Contact/Location: Aaron Brammer - ONTNEW

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Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Ontario Power Generation** CALA Sample No. DYMOND WORK CENTRE, R.R. # 1, HWY #65 W : WC0750947 Received : 13 May 2024 Lab Number : 02635063 Tested : 14 May 2024 NEW LISKEARD, ON ISO 17025:2017 Accredited : 14 May 2024 - Wes Davis CA P0J 1P0 Unique Number : 5776216 Diagnosed Laboratory Test Package : IND 2 (Additional Tests: TAN Man) Contact: Aaron Brammer To discuss this sample report, contact Customer Service at 1-800-268-2131. aaron.brammer@opg.com Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (705)648-6106 F: (705)647-7613 Validity of results and interpretation are based on the sample and information as supplied.

Contact/Location: Aaron Brammer - ONTNEW Page 2 of 2