

# **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL



## Univ. of Manitoba Ch5 [GTT224-369] YORK GMLM103015 Chiller

SAMPLE INFORMATION method

YORK TYPE K (--- GAL)

# 2005 Ap2006 San2009 He2012 Ap2015 Ap2018 Ap2021 Max502



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

The water content is negligible. 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.

		memou	iiiiii/base	Carronic	Thistory I	nistory2
Sample Number		Client Info		GTT0001612	GTT31619	GTT31620
Sample Date		Client Info		28 Mar 2024	06 Apr 2023	13 Apr 2022
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>8	<1	<1	<1
Chromium	ppm	ASTM D5185(m)	>2	0	0	<1
Nickel	ppm	ASTM D5185(m)		0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>2	0		
Aluminum	ppm	ASTM D5185(m)	>3	0	<1	<1
Lead	ppm	ASTM D5185(m)	>2	0	0	<1
Copper	ppm	ASTM D5185(m)	>8	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	<1	<1
Antimony	ppm	ASTM D5185(m)		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
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current <1	history1	history2
	ppm ppm		0			
Boron		ASTM D5185(m)	0	<1		
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0	<1 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	<1 0 0		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0	<1 0 0 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0	<1 0 0 0 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 0 0 5	<1 0 0 0 <1 0	  	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 0 0 5	<1 0 0 <1 0 2	   	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 0 5 0	<1 0 0 <1 0 2 2	    <1	    <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 0 5 0	<1 0 0 <1 0 2 2 53	   <1 	   <1 
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 0 5 0 10	<1 0 0 <1 0 2 2 53 <1	    <1 	   <1 
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 0 5 0 10 10 limit/base	<1 0 0 <1 0 2 2 53 <1	    <1   history1	    <1   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m)	0 0 0 0 0 5 0 10 10 limit/base	<1 0 0 <1 2 2 53 <1 <i>current</i> 3	    <1   history1 	   <1   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m) ASTM D5185(m)	0 0 0 0 0 5 0 10 10 10 <b>limit/base</b> >15 >20	<1 0 0 <1 0 2 2 53 <1 53 <1 0 2 53 <1 53 <1	    <1   history1 	   <1   +istory2 
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 0 0 5 0 10 10 10 <b>limit/base</b> >15 >20	<1 0 0 <1 0 2 2 53 <1 Current 3 <1 <1 <1	    <1   history1  	    <1   history2



# **OIL ANALYSIS REPORT**

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	VLITE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32.0	6.9		
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color					no image	no image
Bottom					no image	no image



Lab Number : 02629081 Tested : 22 Apr 2024 Milwaukee, WI Unique Number : 5762213 Diagnosed : 22 Apr 2024 - Bill Quesnel US 532012012 Test Package : IND 2 (Additional Tests: KV40) Contact: Service Manager To discuss this sample report, contact Customer Service at 1-905-847-9300 Ext 26. Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Damages: Seller shall in no event be liable for special, incidental, or consequential damages, of a commercial nature, resulting from any cause.

: 15 Apr 2024

Received

Report Id: GTT0000249 [WCAMIS] 02629081 (Generated: 04/29/2024 10:16:19) Rev: 1

Sample No. : GTT0001612

Contact/Location: Service Manager - GTT0000249 Page 2 of 2

Johnson Controls- Winnipeg

T:

F:

Accounts Payable A-33, P.O. BOx 2012