

## **OIL ANALYSIS REPORT**

#### Area BUILDING 51 - CEREAL PRODUCTS Machine Id PREMIX CONVEYOR GEARBOX C5 (S/N 51C5-GB) Component

Gearbox

Fluid

LUBRICATION ENG DUOLEC 1604 ISO 150 (1 LTR)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

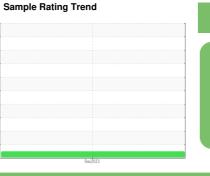
All component wear rates are normal.

#### Contamination

ISO Cleanliness Code (ISO 4406:1999): 22/19/15; Cumulative particle counts  $>4\mu$ m = 23631,  $>6\mu$ m = 3886,  $>14\mu$ m = 244,  $>21\mu$ m = 62,  $>38\mu$ m = 4,  $>71\mu$ m = 0. 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.





NORMAL

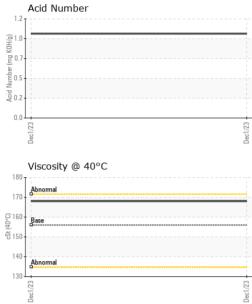
				Dec2023		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0865421		
Sample Date		Client Info		01 Dec 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINATION	I	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>200	37		
Chromium	ppm	ASTM D5185(m)	>15	<1		
Nickel	ppm	ASTM D5185(m)	>15	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)	>25	<1		
Lead	ppm	ASTM D5185(m)	>100	<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)		17		
Barium	ppm	ASTM D5185(m)		<1		
Molybdenum	ppm	ASTM D5185(m)		0		
Manganese	ppm	ASTM D5185(m)		0		
Magnesium	ppm	ASTM D5185(m)		0		
Calcium	ppm	ASTM D5185(m)		2		
Phosphorus	ppm	ASTM D5185(m)		434		
Zinc	ppm	ASTM D5185(m)		2		
Sulfur	ppm	ASTM D5185(m)		4697		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	<1		
Sodium	ppm	ASTM D5185(m)		<1		
Potassium	ppm	ASTM D5185(m)	>20	0		
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	23631		
Particles >6µm		ASTM D7647	>5000	3886		
Particles >14µm		ASTM D7647	>640	244		
Particles >21µm		ASTM D7647	>160	62		
Particles >38µm		ASTM D7647	>40	4		
Particles >71µm		ASTM D7647		0		
Oil Cleanliness		ISO 4406 (c)	>21/19/16	22/19/15		
				<b>A A A A</b>		

Contact/Location: Matt Morand - HIRWIN



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FLUID DEGRADATION



1.02		ASTM D974*	mg KOH/g	Acid Number (AN)	
mit/base current history1 history2	limit/base	method		VISUAL	
DNE NONE	NONE	Visual*	scalar	White Metal	
	NONE	Visual*	scalar	Yellow Metal	
	NONE	Visual*	scalar	Precipitate	
	NONE	Visual*	scalar	Silt	23
	NONE	Visual*	scalar	Debris	Dec1/23
	NONE	Visual*	scalar	Sand/Dirt	
	NORML	Visual*	scalar	Appearance	
	NORML	Visual*	scalar	Odor	
	>0.2	Visual*	scalar	Emulsified Water	
NEG	20.L	Visual*	scalar	Free Water	
	11 11 11				
	limit/base	method		FLUID PROPERT	
6 <b>168</b>	156	ASTM D7279(m)	cSt	Visc @ 40°C	
mit/base current history1 history2	limit/base	method	3	SAMPLE IMAGES	Dec1/23
no image no image				Color	-
no image no image				Bottom	
				GRAPHS	
Particle Count				Ferrous Alloys	
491,520 Severe	491,520			40 iron	
122,880	122,880			30 - chromium	
30,720 Abnormal +22	30.720			20 nickel	
20 T	Dec1/23			0ec1/23	
T T 7.680 -20   1.920 -18 -16 -16   1.920 -112 -112 -112	a l.920			Dec	
480 16			s	Non-ferrous Metal	
14 120	je 120			<sup>10</sup> T	
	mpe			Leadersee lead	_
<sup>∉</sup> 30-	≅ 30			5 tin	lag
8 + +10	8				
	53				
	Dec1			Dec1	
	L			Viscosity @ 40°C	
Acid Number	S19			180-	1
H H H H H H H H H H H H H H H H H H H	KOH				1
	Ĕ 1.0			160 - Base	(40°C
聲 0.5-	qu 0.5				
				130	
Dec1/23 A	c1/23			c1/23	
	De			De	
on, ON L7L 5H9 HIRAM WALKER & SONS 2023 2072 RIVERSIDE DRIVE EAST, BOX	(0,10,10,10,10,10,10,10,10,10,10,10,10,10	:06 l ed::07 l	75 Apple Received Diagnose Diagnost	Viscosity @ 40°C	cst (40°C)

To discuss this sample rep 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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CALA

ISO 17025:2017 Accredited Laboratory

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