

OIL ANALYSIS REPORT

Area **4 Calender Line 38-0179 Calender**

Bearing

Fluid DOW CHEMICAL UCON CALENDAR OIL 51 (200 GAL)

DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

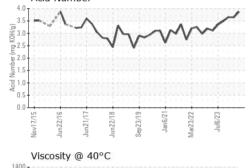


SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0892236	WC0867500	WC0744101
Sample Date		Client Info		06 Jun 2024	20 Mar 2024	03 Jan 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	1	method	limit/base	current	history1	history2
Water		WC Method	>2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	0	0	0
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	0	<1
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>20	0	0	0
Tin	ppm	ASTM D5185(m)	>20	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		0	<1	0
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
				-	0	0
Magnesium	ppm	ASTM D5185(m)		<1	<1	0
Magnesium Calcium	ppm ppm	ASTM D5185(m) ASTM D5185(m)		<1 2		
-		. ,			<1	0
Calcium Phosphorus Zinc	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		2	<1 0 0 <1	0 0 0 <1
Calcium Phosphorus	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		2 <1	<1 0 0	0 0 0
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		2 <1 <1	<1 0 0 <1	0 0 0 <1
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 <1 4	<1 0 0 <1 35	0 0 0 <1 44
Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 <1 4 <1	<1 0 0 <1 35 <1	0 0 <1 44 0
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method		2 <1 <1 4 <1 current	<1 0 0 <1 35 <1 history1	0 0 <1 44 0 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Method ASTM D5185(m)	>15	2 <1 <1 4 <1 current 0	<1 0 0 <1 35 <1 history1 0	0 0 <1 44 0 history2 0
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	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)	>15	2 <1 <1 4 <1 current 0 3	<1 0 0 <1 35 <1 <u>history1</u> 0 <1	0 0 <1 44 0 <u>history2</u> 0 0
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	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)	>15 >20	2 <1 <1 4 <1 current 0 3 0 0 current ▲ 20009	<1 0 0 <1 35 <1 <u>history1</u> 0 <1 0	0 0 <1 44 0 <u>history2</u> 0 0 3
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	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)	>15 >20 limit/base >10000	2 <1 <1 4 <1 current 0 3 0 current	<1 0 0 <1 35 <1 history1 0 <1 0 history1	0 0 <1 44 0 history2 0 0 3 history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	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)	>15 >20 limit/base >10000	2 <1 <1 4 <1 current 0 3 0 0 current ▲ 20009	<1 0 0 <1 35 <1 history1 0 <1 0 <1 0 history1 ▲ 37242	0 0 0 <1 44 0 history2 0 0 0 3 3 history2 ▲ 58764
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	>15 >20 limit/base >10000 >2500 >160	2 <1 <1 4 <1 current 0 3 0 0 current 20009 ▲ 20009	<1 0 0 <1 35 <1 <u>history1</u> 0 <1 0 <1 0 0 <i>history1</i> 0 37242 3284	0 0 0 <1 44 0 history2 0 0 0 3 3 history2 ∧ 58764 ▲ 58764
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	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 D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >10000 >2500 >160	2 <1 <1 4 <1 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<1 0 0 <1 35 <1 history1 0 <1 0 <1 0 history1 0 37242 3284 115	0 0 0 <1 44 0 0 history2 0 0 0 3 3 history2 0 58764 ▲ 58764
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Sodium Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	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 D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >10000 >2500 >160 >40 >10	2 <1 <1 4 <1 <1 0 0 3 0 0 <i>current</i> 20009 ▲ 6071 ▲ 368 ▲ 91	<1 0 0 <1 35 <1 history1 0 <1 0 <1 0 ×1 0 ×1 0 ×1 0 37242 3284 115 27	0 0 0 <1 44 0 0 history2 0 0 0 3 0 3 58764 ▲ 58764 ▲ 6760 147 34



OIL ANALYSIS REPORT

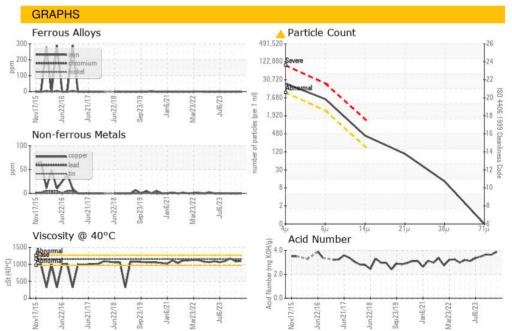
	A Par	ticle	Trend							FLUI
	8004		μm μm 4μm				1			Acid N
number of particles (1 ml)	600k -						A			VISU
sr of pa	400k -						-1'	\mathbf{N}		White I
numbe	200k -					Λ	1	11		Yellow
- Bas		ormals	M		A	M		4	L	Precipi
		2/16	1/17	Jun22/18	Sep23/19 -	Jan6/21	Mar23/22	Jul6/23		Silt
	Nov17/15	Jun22/16	Jun21	Jun2	Sep2	Jar	Mar2	Jul		Debris
	A Dar	ticle	Trend							Sand/E
	Par	ucie	rrenu				Sector			Appear
(je	800k -	4	μm μm				1			Odor
es (1 n			4μm				Λ			Emulsi
particle	600k							A		Free W
number of particles (1 ml)	400k -					٨		\mathcal{N}		FLUI
nu	200k	omah	M		A	A	1	4	5	Visc @
	Nov17/15	Jun22/16	Jun21/17.	Jun22/18	Sep23/19	Jan6/21	Mar23/22	Jul6/23		SAM
	No	Ju	ηr	Ju	Se	10 8 17	M			
	Acio ^{4.0} 1	d Nu	mber							Color



200 - Base				*		
000 Abnormal		7		~~~		~
800-	11					
600-	1					
400-	Y					
200		1	11.11		1111	
Nov17/15	11	Jun22/18 -	Sep23/19 -	Jan6/21-	Mar23/22 -	Jul6/23 -

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		3.87	3.64	3.65
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	1150	1095	1088	1171
SAMPLE IMAGES	6	method	limit/base	current	history1	history2
Color						

Bottom



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CANADIAN GENERAL TOWER LTD. CALA Sample No. : WC0892236 Received : 02 Jul 2024 52 MIDDLETON STREET, P.O. BOX 160 Lab Number : 02644891 Tested : 03 Jul 2024 CAMBRIDGE, ON ISO 17025:2017 Accredited Laboratory : 03 Jul 2024 - Wes Davis Unique Number : 5802430 Diagnosed CA N1S 2R4 Test Package : IND 2 (Additional Tests: TAN Man) Contact: Bob Abell bob.abell@cgtower.com 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. T: (519)623-1630 Validity of results and interpretation are based on the sample and information as supplied. F: (519)623-7018

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Contact/Location: Bob Abell - CAN52CAM

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