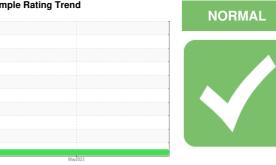


# **OIL ANALYSIS REPORT**

Sample Rating Trend



# DWGCWLECAM1010072

Component

**Diesel Engine** 

**DOOSAN 15W40 (--- GAL)** 

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

### **Fluid Condition**

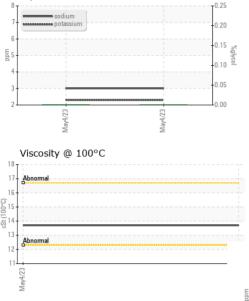
The condition of the oil is acceptable for the time in service.

			ı	May2023		
SAMPLE INFORM	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		WC0811277		
Sample Date		Client Info		04 May 2023		
Machine Age	hrs	Client Info		1041		
Oil Age	hrs	Client Info		500		
Oil Changed	0	Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATION	٧	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0		
WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m)	>50	6		
Chromium	ppm	ASTM D5185(m)		0		
Nickel	ppm	ASTM D5185(m)	>5	0		
Titanium		ASTM D5185(III)	/	υ <1		
Silver	ppm	ASTM D5185(III) ASTM D5185(m)	>3	0		
Aluminum	ppm	. ,	>3	2		
	ppm	ASTM D5185(m)	>20	_		
Lead	ppm	ASTM D5185(m)		13		
Copper	ppm	ASTM D5185(m)	>30	496		
Tin	ppm	ASTM D5185(m)	>15	1		
Antimony	ppm	ASTM D5185(m)		<1		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m)		70		
Barium	ppm	ASTM D5185(m)		0		
Molybdenum	ppm	ASTM D5185(m)		3		
Manganese	ppm	ASTM D5185(m)		<1		
Magnesium	ppm	ASTM D5185(m)				
Coloium		. ,		665		
	ppm	ASTM D5185(m)				
	ppm ppm	ASTM D5185(m) ASTM D5185(m)		665 1481 797		
Phosphorus		ASTM D5185(m)		665 1481		
Phosphorus Zinc	ppm	ASTM D5185(m) ASTM D5185(m)		665 1481 797		
Phosphorus Zinc Sulfur	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		665 1481 797 824		
Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	665 1481 797 824 2490		
Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		665 1481 797 824 2490 <1	   	
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		665 1481 797 824 2490 <1	    history 1	    history 2
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  MSTM D5185(m)  Method  ASTM D5185(m)		665 1481 797 824 2490 <1 current	    history 1	    history 2
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	>15	665 1481 797 824 2490 <1 current 8 3	   history 1	    history 2
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	>15	665 1481 797 824 2490 <1 current 8 3	   history 1	   history 2
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method  ASTM D5185(m)	>15 >20	665 1481 797 824 2490 <1 current 8 3 2 0.0	history 1	history 2
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	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)  Method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7922*	>15 >20 limit/base	665 1481 797 824 2490 <1 current 8 3 2 0.0 current	history 1 history 1	history 2 history 2
Silicon Sodium Potassium Glycol	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)  METHOD  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7922*  METHOD  ASTM D7844*	>15 >20 limit/base >3	665 1481 797 824 2490 <1 current 8 3 2 0.0 current 0	history 1 history 1	history 2 history 2
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7822*  METHOD  ASTM D7824* ASTM D7624*	>15 >20 limit/base >3 >20	665 1481 797 824 2490 <1 current 8 3 2 0.0 current 0 8.5	history 1 history 1	history 2



Glycol Contamination

## **OIL ANALYSIS REPORT**



VISUAL		method	limit/base	current	history 1	history 2
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	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
<b>Emulsified Water</b>	scalar	Visual*	>0.1	NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPERT	IES	method	limit/base	current	history 1	history 2

	FLUID PROPE	RTIES	method	limit/base	current	history 1	history 2
	Visc @ 100°C	cSt	ASTM D7279(m)		13.7		
	GRAPHS						
1 udd	Abnormal (1975)			100 80 60 udd 40 20	Lead (ppm) Severe Abnormal		May4/23
	Aluminum (ppm	n)		50 <del>-</del>	Chromium (p	pm)	
mdd	Severe  Abnormal  EZIVE			40- 30- 20- 10- 0-	Abnormal		May4,23
6	Copper (ppm)			40 <del>-</del>	Silicon (ppm)		
50 40 Ed. 30 20 10	00 00 00 00 00 00 00 00 00 00 00 00 00			30- 	Abnormal CZ/h-le W		May4/23
	Viscosity @ 100	°C			Soot %		
cSt (100°C)	Abnormal  Abnormal  EVENTAGE OF THE PROPERTY O			6.0 5.0 4.0 28 53.0 2.0 1.0 0.0 4.0 53.0 0.0 1.0 0.0	Abnormal		May423



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5577098

: WC0811277 : 02556058

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received

Diagnosed

: 09 May 2023 : 09 May 2023

Diagnostician : Kevin Marson Test Package : MOB 1 ( Additional Tests: Glycol, Visual )

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.

C.G. EQUIPMENT

7367 Wellington Rd. 30, Unit A Guelph, ON CA NOM 2TO

Contact: Maureen McDonald mmcdonald@cgequipment.com T:

F: (519)837-2055