

OIL ANALYSIS REPORT



Machine Id 420-71 Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

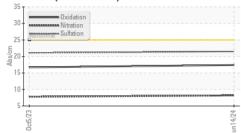
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0935788	WC0851998	
Sample Date		Client Info		14 Jun 2024	05 Oct 2023	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		Changed	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	
Water		WC Method	>0.1	NEG	NEG	
Glycol		WC Method		NEG	0.0	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	3	3	
Chromium	ppm	ASTM D5185(m)	>20	0	0	
Nickel	ppm	ASTM D5185(m)	>5	<1	0	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	>3	0	<1	
Aluminum	ppm	ASTM D5185(m)	>20	1	<1	
Lead	ppm	ASTM D5185(m)	>40	0	<1	
Copper	ppm	ASTM D5185(m)	>30	<1	1	
Tin	ppm	ASTM D5185(m)	>15	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	123	117	
Barium	ppm	ASTM D5185(m)	10	0	<1	
Molybdenum	ppm	ASTM D5185(m)	100	11	3	
Manganese	ppm	ASTM D5185(m)		0	0	
Magnesium	ppm	ASTM D5185(m)	450	66	121	
Calcium	ppm	ASTM D5185(m)	3000	2091	2129	
Phosphorus	ppm	ASTM D5185(m)	1150	898	963	
Zinc	ppm	ASTM D5185(m)	1350	1097	1113	
Sulfur	ppm	ASTM D5185(m)	4250	2850	2858	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	3	6	
Sodium	ppm	ASTM D5185(m)	>216	2	2	
Potassium	ppm	ASTM D5185(m)	>20	6	6	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	0	
Nitration	Abs/cm	ASTM D7624*	>20	8.2	7.8	
Sulfation	Abs/.1mm		>30	21.5	21.1	

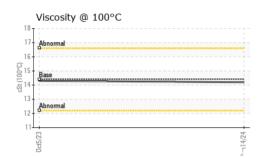


OIL ANALYSIS REPORT

FLUID DEGRADATION method

FT-IR (Direct Trend)





bpm

FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.4	16.7	
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	VLITE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML	NORML	
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	
Free Water	scalar	Visual*		NEG	NEG	
FLUID PROPERT	ΓIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	14.2	14.3	
GRAPHS						
Iron (ppm)			100	Lead (ppm)		
			80	Severe		
Severe						
Abnormal			E 40	Abnormal		
			20			
53			24	23		
0ct5/23			Jun 14/24	0ct5/23		
Aluminum (ppm)			~	Chromium (p	pm)	
			50	Severe		
			40			
Abnormal			³⁰ علي 20	Abnormal		
)-						
J			0			
0ct5/23			Jun 14/24	0ct5/23		
Copper (ppm)			ηr	Silicon (ppm)		
) T -:			40	T		
Abnormal			30	Severe		
			퉙 20	Abnormal		
			10			
			0			
0ct5/23			Jun 14/24	0ct5/23		
			Jur			
Viscosity @ 100°C			6.0	Soot %		
Abnormal				Severe		
Base			2.0	Abnormal		
Abnormal			×2.0	1		
			0.0			
0ct5/23			Jun14/24	0ct5/23		

C.G. EQUIPMENT Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : WC0935788 Received : 20 Jun 2024 7367 Wellington Rd. 30, Unit A Lab Number : 02643171 Tested : 20 Jun 2024 ISO 17025:2017 Accredited Laboratory Unique Number : 5800710 : 20 Jun 2024 - Wes Davis Diagnosed Test Package : MOB 1 (Additional Tests: Visual) Contact: Maureen McDonald To discuss this sample report, contact Customer Service at 1-800-268-2131. mmcdonald@cgequipment.com 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. F: (519)837-2055

Report Id: CGEGUE [WCAMIS] 02643171 (Generated: 06/20/2024 16:22:17) Rev: 1

Contact/Location: Maureen McDonald - CGEGUE Page 2 of 2

Guelph, ON

T:

CA NOM 2TO