

NORMAL WEAR CONTAMINATION NORMAL **FLUID CONDITION** NORMAL

[153245]

1859 G2 Component **Diesel Engine**

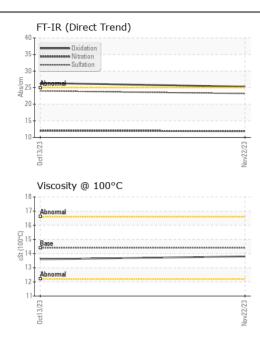
DIESEL ENGINE OIL SAE 5W40 (--- GAL)

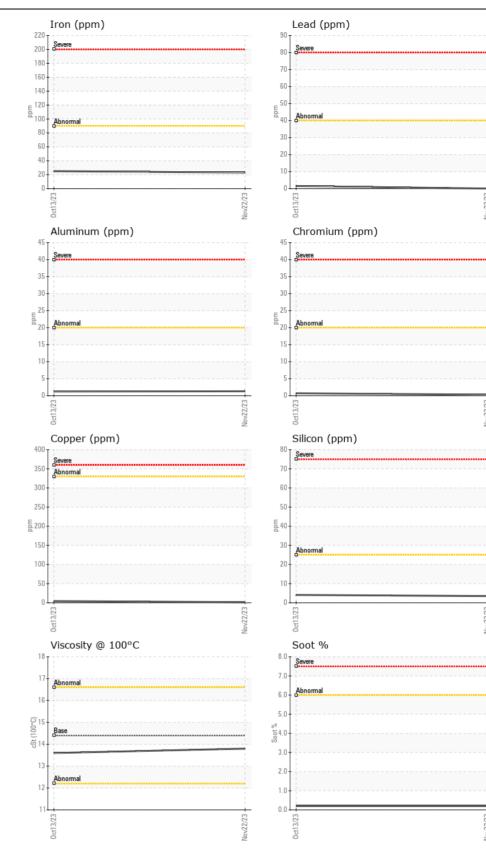
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		CU0022760	CU0021439	
	Sample Date		Client Info		22 Nov 2023	13 Oct 2023	
	Machine Age	hrs	Client Info		3072	2253	
	Oil Age	hrs	Client Info		0	0	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	NORMAL	
WEAR	Iron	ppm	ASTM D5185(m)	>90	23	25	
All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)	>20	<1	<1	
	Nickel	ppm	ASTM D5185(m)		<1	<1	
	Titanium	ppm	ASTM D5185(m)		0	0	
	Silver	ppm	ASTM D5185(m)		0	<1	
	Aluminum	ppm	ASTM D5185(m)		1	1	
	Lead	ppm	ASTM D5185(m)		0	2	
	Copper	ppm	ASTM D5185(m)		1	4	
	Tin	ppm	ASTM D5185(m)		0	<1	
	Vanadium	ppm	ASTM D5185(m)		0	0	
	White Metal	scalar	Visual*	NONE	VLITE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185(m)		4	4	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)		0	<1	
	Fuel		WC Method		<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method	-	NEG	NEG	
	Soot %	%	ASTM D7844*		0.2	0.2	
	Nitration	Abs/cm	ASTM D7624*	>20	11.9	12.0	
	Sulfation	Abs/.1mm	ASTM D7415*	>30	23.2	24.0	
	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	NORML	
	Emulsified Water	scalar	visual	>0.2	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)	>44	4	5	
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)	250	36	31	
	Barium	ppm	ASTM D5185(m)	10	0	0	
	Molybdenum	ppm	ASTM D5185(m)	100	67	67	
	Manganese	ppm	ASTM D5185(m)		<1	0	
	Magnesium	ppm	ASTM D5185(m)	450	1113	1076	
	Calcium	ppm	ASTM D5185(m)	3000	918	1010	
	Phosphorus	ppm	ASTM D5185(m)	1150	982	978	
	Zinc	ppm	ASTM D5185(m)	1350	1210	1210	
	Sulfur	ppm	ASTM D5185(m)	4250	2620	2620	
	Oxidation	Abs/.1mm	ASTM D7414*	>25	25.3	26.4	

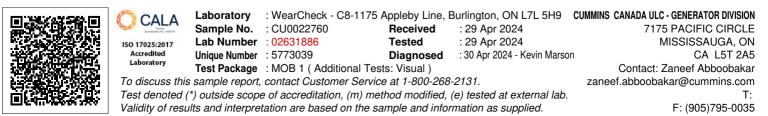
13.8

13.6

Visc @ 100°C cSt ASTM D7279(m) 14.4







Contact/Location: Zaneef Abboobakar - CUMMISGEN Page 2 of 2