

## WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

## Machine Id **PETERBILT 432457** Component **Diesel Engine**

SHELL 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		WC0720871	WC0720879	
	Sample Date		Client Info		20 Feb 2024	15 Sep 2022	
	Machine Age	kms	Client Info		2343773	2235209	
	Oil Age	kms	Client Info		24000	31044	
	Filter Age	kms	Client Info		24000	31044	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	NORMAL	
WEAR	Iron	ppm	ASTM D5185(m)	>110	13	12	
All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)	>4	<1	<1	
	Nickel	ppm	ASTM D5185(m)	>2	0	<1	
	Titanium	ppm	ASTM D5185(m)		0	<1	
	Silver	ppm	ASTM D5185(m)	>2	0	0	
	Aluminum	ppm	ASTM D5185(m)		3	2	
	Lead	ppm	ASTM D5185(m)		0	<1	
	Copper	ppm	ASTM D5185(m)	>85	3	3	
	Tin	ppm	ASTM D5185(m)		0	<1	
	Vanadium	ppm	ASTM D5185(m)		0	0	
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
	0''''				•	0	
CONTAMINATION	Silicon	ppm	ASTM D5185(m)		3	8	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)		5	5	
	Fuel		WC Method		<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol	0/	WC Method	0	NEG	NEG	
	Soot %	%	ASTM D7844*		0	0	
	Nitration	Abs/cm		>20	7.2	7.4	
	Sulfation		ASTM D7415*	>30	21.3	22.4	
	Silt	scalar	Visual*	NONE	NONE		
	Debris	scalar	Visual*	NONE	NONE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance		Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML	NORML	
	Emulsified Water	scalar	visual	>0.2	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)	>150	2	3	
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)		119	102	
	Barium	ppm	ASTM D5185(m)		0	0	
	Molybdenum	ppm	ASTM D5185(m)		7	9	
	Manganese	ppm	ASTM D5185(m)		0	<1	
	Magnesium	ppm	ASTM D5185(m)		170	90	
	Calcium	ppm	ASTM D5185(m)		1969	2081	
	Phosphorus	ppm	ASTM D5185(m)		890	956	
	Zinc	ppm	ASTM D5185(m)		1027	1043	
	Sulfur	ppm	ASTM D5185(m)		2794	2761	
	Ovidation	Al / d		. 05	17.6	10.0	

Oxidation

Abs/.1mm ASTM D7414\* >25

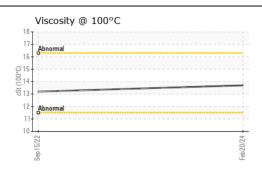
Visc @ 100°C cSt ASTM D7279(m)

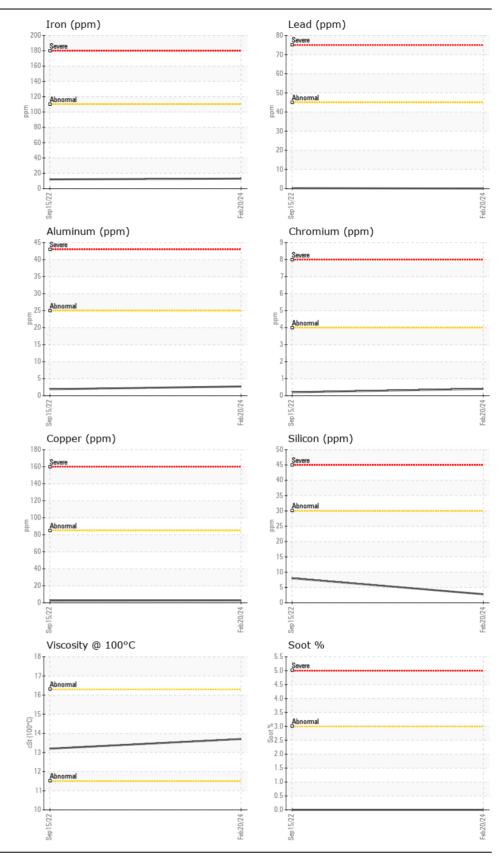
18.2

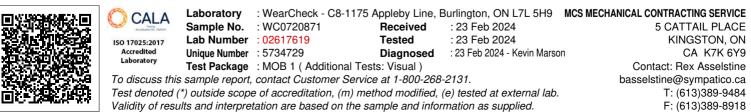
13.2

17.6

13.7







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