

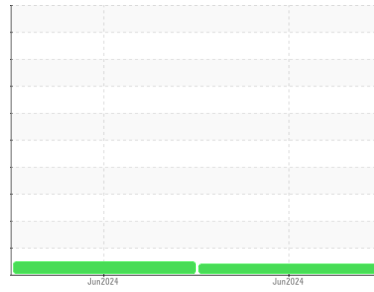


OIL ANALYSIS REPORT



Area
MINING
Machine Id
ME-015 CATERPILLAR 773G JWS00457
Component
Diesel Engine
Fluid
SHELL RIMULA SUPER SAE 15W40 (--- GAL)

Sample Rating Trend



VISCOSITY



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0941664	WC0941664	---
Sample Date	Client Info		13 Jun 2024	10 Jun 2024	---
Machine Age	hrs	Client Info	61056	6156	---
Oil Age	hrs	Client Info	61056	0	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	6	---	---
Chromium	ppm	ASTM D5185(m) >20	<1	---	---
Nickel	ppm	ASTM D5185(m) >2	<1	---	---
Titanium	ppm	ASTM D5185(m) >2	0	---	---
Silver	ppm	ASTM D5185(m) >2	0	---	---
Aluminum	ppm	ASTM D5185(m) >25	2	---	---
Lead	ppm	ASTM D5185(m) >40	1	---	---
Copper	ppm	ASTM D5185(m) >330	50	---	---
Tin	ppm	ASTM D5185(m) >15	<1	---	---
Antimony	ppm	ASTM D5185(m)	0	---	---
Vanadium	ppm	ASTM D5185(m)	0	---	---
Beryllium	ppm	ASTM D5185(m)	0	---	---
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	17	---	---
Barium	ppm	ASTM D5185(m)	0	---	---
Molybdenum	ppm	ASTM D5185(m)	14	---	---
Manganese	ppm	ASTM D5185(m)	<1	---	---
Magnesium	ppm	ASTM D5185(m)	90	---	---
Calcium	ppm	ASTM D5185(m) 2840	2172	---	---
Phosphorus	ppm	ASTM D5185(m) 1150	884	---	---
Zinc	ppm	ASTM D5185(m) 1270	1028	---	---
Sulfur	ppm	ASTM D5185(m) 2829	2930	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS

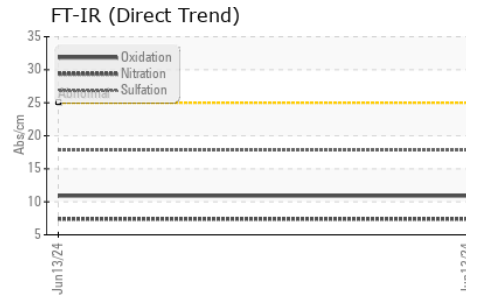
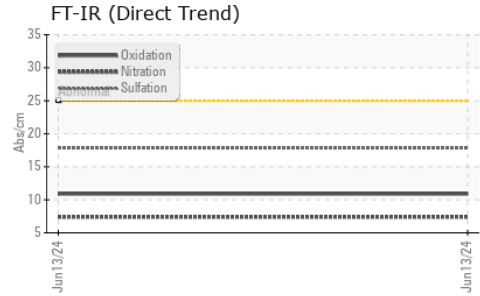
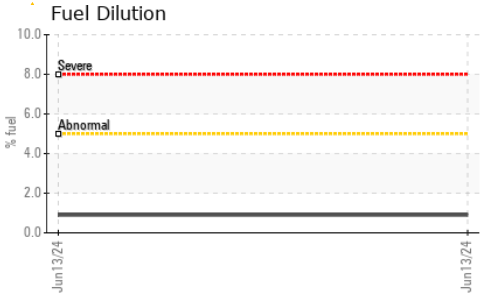
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	2	---	---
Sodium	ppm	ASTM D5185(m)	1	---	---
Potassium	ppm	ASTM D5185(m) >20	<1	---	---
Fuel	%	ASTM D7593* >5	0.9	<1.0	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0	---	---
Nitration	Abs/cm	ASTM D7624* >20	7.4	---	---
Sulfation	Abs./1mm	ASTM D7415* >30	17.8	---	---



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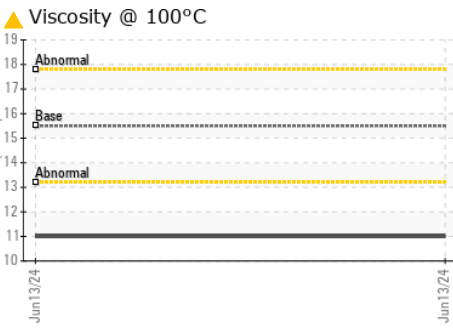
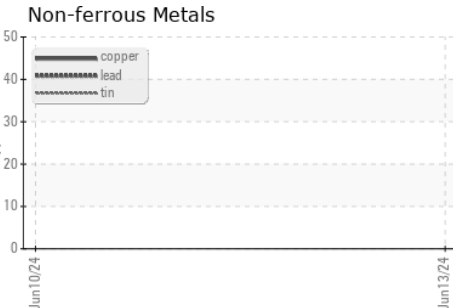
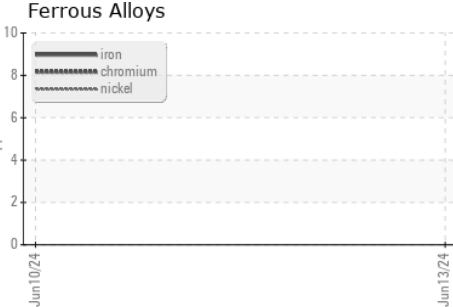


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	10.9	---	---

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	VLITE	---	---
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	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	▲ 11.0	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0941664 **Received** : 21 Jun 2024
Lab Number : **02643316** **Tested** : 24 Jun 2024
Unique Number : 5800855 **Diagnosed** : 24 Jun 2024 - Kevin Marson
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, Visual)

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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.