



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Machine Id
CATERPILLAR 815F 434 (S/N 0815FJBKL00951)
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0189992	---	---
Sample Date		Client Info		08 Jul 2024	---	---
Machine Age	hrs	Client Info		15359	---	---
Oil Age	hrs	Client Info		304	---	---
Filter Age	hrs	Client Info		304	---	---
Oil Changed		Client Info		Not Chngd	---	---
Filter Changed		Client Info		Not Chngd	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	5	---	---
Chromium	ppm	ASTM D5185m	>20	0	---	---
Nickel	ppm	ASTM D5185m	>2	0	---	---
Titanium	ppm	ASTM D5185m	>2	0	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>25	<1	---	---
Lead	ppm	ASTM D5185m	>40	0	---	---
Copper	ppm	ASTM D5185m	>330	<1	---	---
Tin	ppm	ASTM D5185m	>15	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

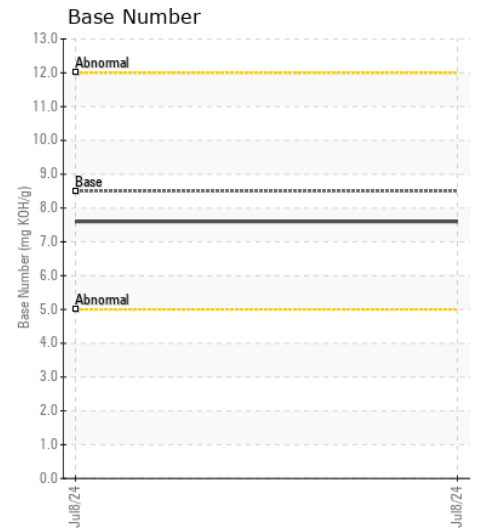
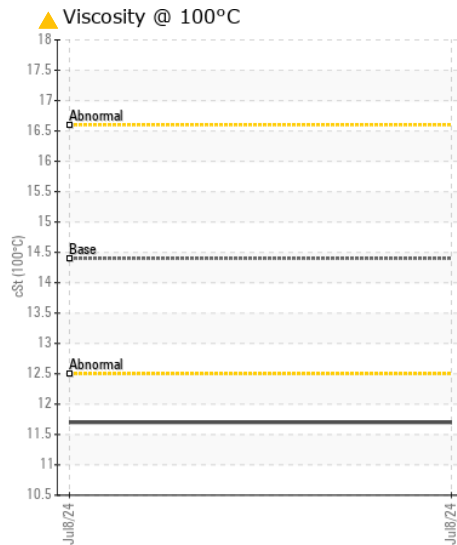
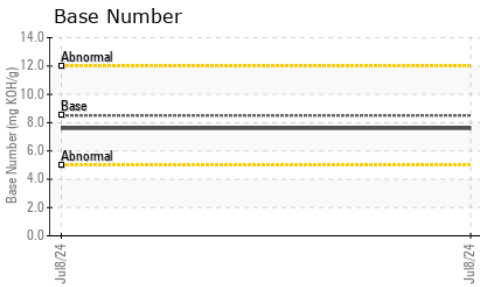
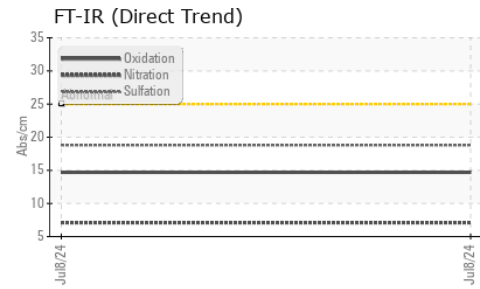
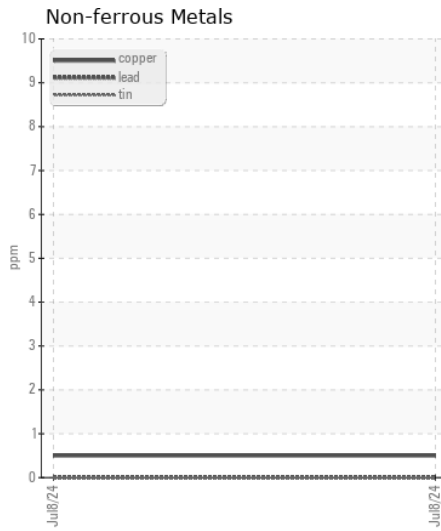
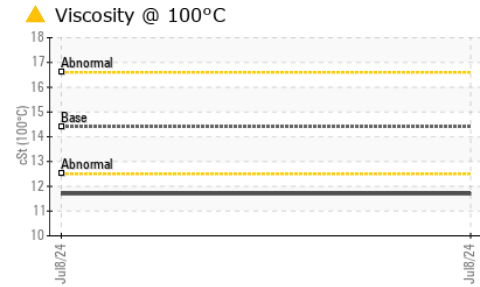
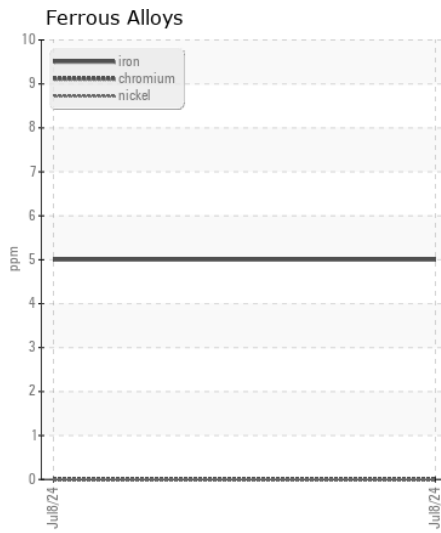
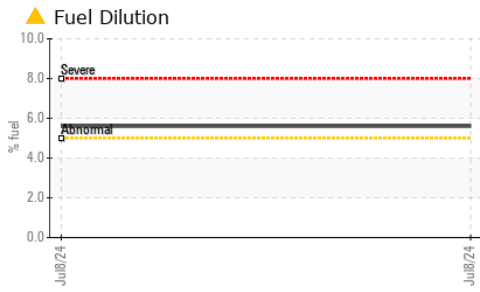
There is a moderate amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>25	7	---	---
Potassium	ppm	ASTM D5185m	>20	4	---	---
Fuel	%	ASTM D3524	>5	▲ 5.6	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	7.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	---	---
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	---	---

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>158	6	---	---
Boron	ppm	ASTM D5185m	250	97	---	---
Barium	ppm	ASTM D5185m	10	0	---	---
Molybdenum	ppm	ASTM D5185m	100	31	---	---
Manganese	ppm	ASTM D5185m		0	---	---
Magnesium	ppm	ASTM D5185m	450	227	---	---
Calcium	ppm	ASTM D5185m	3000	1920	---	---
Phosphorus	ppm	ASTM D5185m	1150	957	---	---
Zinc	ppm	ASTM D5185m	1350	1110	---	---
Sulfur	ppm	ASTM D5185m	4250	3574	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.6	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 11.7	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0189992 **Received** : 09 Jul 2024
Lab Number : 06231365 **Tested** : 11 Jul 2024
Unique Number : 11114858 **Diagnosed** : 11 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

TOTAL DEVELOPMENT SOLUTIONS LLC
 7805 PROGRESS CT
 GAINESVILLE, VA
 US 20155
 Contact: JOE SEALE

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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