

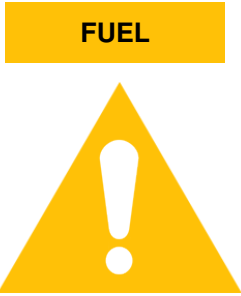
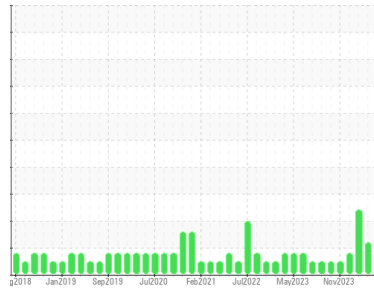


OIL ANALYSIS REPORT



Machine Id
CATERPILLAR D10T 15105048 (S/N CATOD10TCRJG01478)
 Component
Diesel Engine
 Fluid
ROYAL PURPLE MOTOR OIL 15W40 (--- GAL)

Sample Rating Trend



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
 Light fuel dilution occurring.

Fluid Condition
 The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	RP0040751	RP0040781	RP0036868
Sample Date	Client Info	04 Jun 2024	17 May 2024	07 May 2024
Machine Age	hrs	71327	71107	70999
Oil Age	hrs	220	406	298
Oil Changed	Client Info	Not Chngd	Changed	Not Chngd
Sample Status		MARGINAL	ABNORMAL	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >100	22	55	36
Chromium	ppm	ASTM D5185m >20	<1	1	<1
Nickel	ppm	ASTM D5185m >2	0	<1	0
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >25	3	3	<1
Lead	ppm	ASTM D5185m >40	2	5	3
Copper	ppm	ASTM D5185m >330	7	17	17
Tin	ppm	ASTM D5185m >15	1	4	1
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	0	6	0
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 100	114	91	85
Manganese	ppm	ASTM D5185m	<1	2	1
Magnesium	ppm	ASTM D5185m 60	16	78	67
Calcium	ppm	ASTM D5185m 3050	2682	2280	2420
Phosphorus	ppm	ASTM D5185m 1050	954	876	910
Zinc	ppm	ASTM D5185m 1200	1205	1075	1070

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	6	8	7
Sodium	ppm	ASTM D5185m	2	5	5
Potassium	ppm	ASTM D5185m >20	2	<1	0
Fuel	%	ASTM D3524 >5	▲ 2.0	▲ 4.2	▲ 28.3
Water	%	ASTM D6304 >0.2	NEG	NEG	NEG

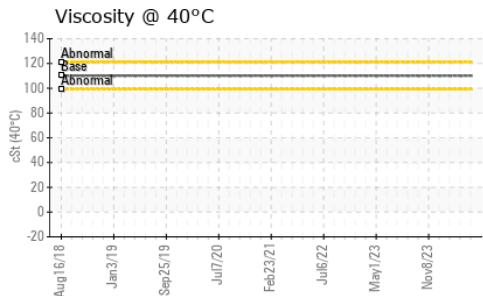
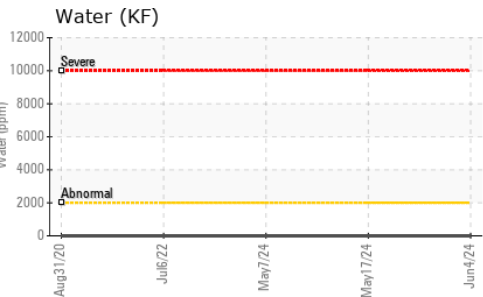
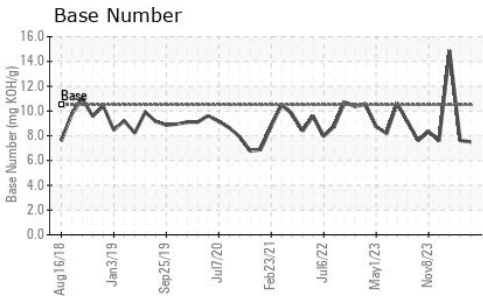
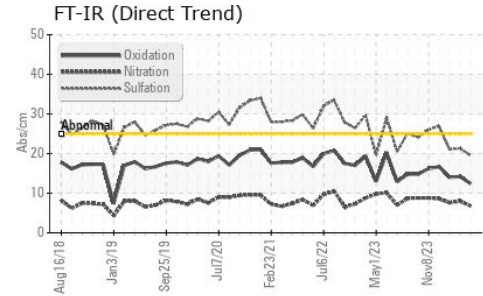
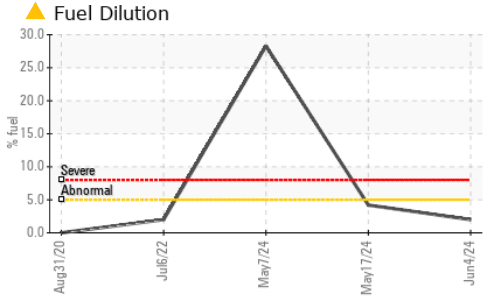
INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	0.3	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	6.8	8.0	7.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.5	21.3	21.0

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	12.4	14.2	14.0
Base Number (BN)	mg KOH/g	ASTM D2896 10.5	7.50	7.62	14.86

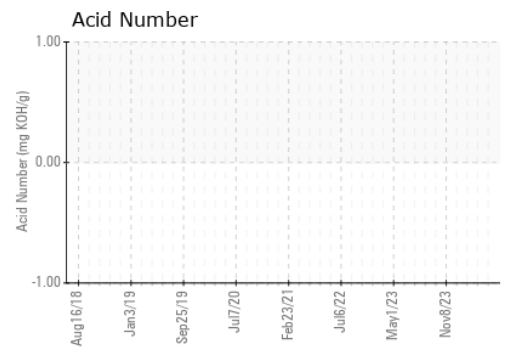
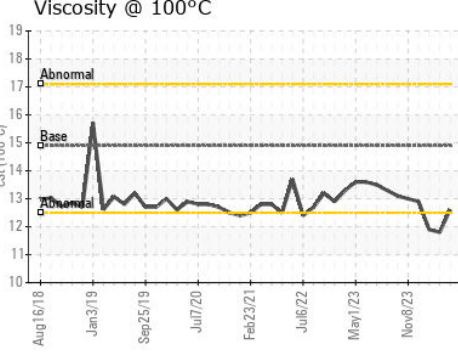
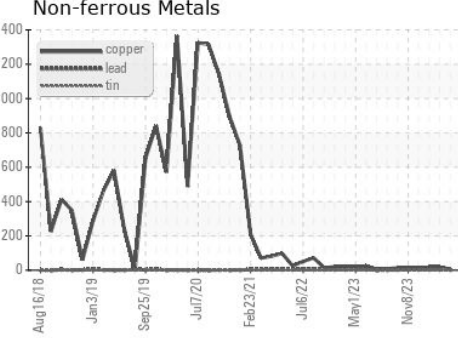
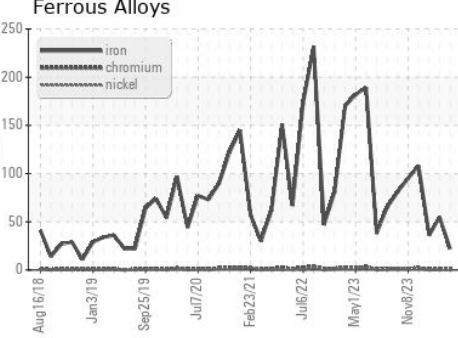
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.9	12.6	▲ 11.8 ▲ 11.9

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0040751 **Received** : 11 Jun 2024
Lab Number : 06206764 **Tested** : 18 Jun 2024
Unique Number : 11074225 **Diagnosed** : 18 Jun 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: FT-IR, KV100, PercentFuel, TBN)

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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)