

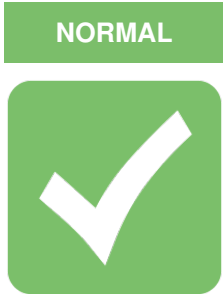
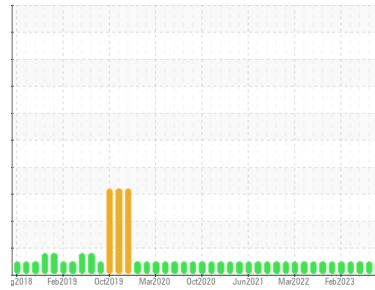


# OIL ANALYSIS REPORT



Machine Id  
**CATERPILLAR D10T 15105050 (S/N CATOD10TCRJG01497)**  
 Component  
**Diesel Engine**  
 Fluid  
**ROYAL PURPLE MOTOR OIL 15W40 (--- GAL)**

Sample Rating Trend



## DIAGNOSIS

**Recommendation**  
 Resample at the next service interval to monitor.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 There is no indication of any contamination in the oil.

**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	<b>RP0033697</b>	RP0032891	RP0032897
Sample Date	Client Info	<b>13 Jul 2023</b>	14 Jun 2023	09 May 2023
Machine Age	hrs	<b>74726</b>	74413	74017
Oil Age	hrs	<b>1218</b>	905	509
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>39</b>	28	19
Chromium	ppm ASTM D5185m >20	<b>1</b>	1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	<1	0
Titanium	ppm ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>2</b>	<1	0
Lead	ppm ASTM D5185m >40	<b>6</b>	4	3
Copper	ppm ASTM D5185m >330	<b>11</b>	7	4
Tin	ppm ASTM D5185m >15	<b>1</b>	0	1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>2</b>	1	2
Barium	ppm ASTM D5185m 0	<b>&lt;1</b>	0	11
Molybdenum	ppm ASTM D5185m 100	<b>110</b>	97	95
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 60	<b>20</b>	17	35
Calcium	ppm ASTM D5185m 3050	<b>2969</b>	2759	2655
Phosphorus	ppm ASTM D5185m 1050	<b>1037</b>	995	931
Zinc	ppm ASTM D5185m 1200	<b>1253</b>	1246	1051

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	5	5
Sodium	ppm ASTM D5185m	<b>2</b>	2	1
Potassium	ppm ASTM D5185m >20	<b>1</b>	3	<1

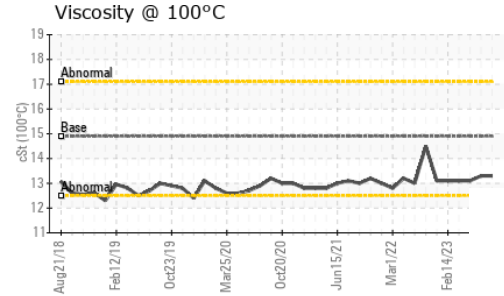
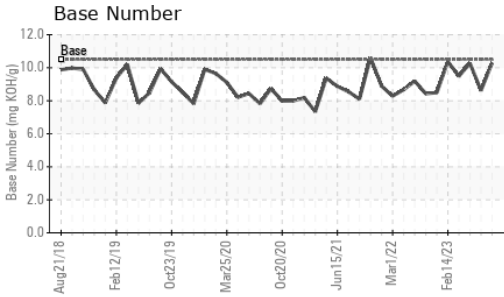
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>1.6</b>	1.2	0.8
Nitration	Abs/cm *ASTM D7624 >20	<b>9.4</b>	8.4	7.5
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>27.9</b>	26.4	25.0

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.6</b>	17.4	15.8
Base Number (BN)	mg KOH/g ASTM D2896 10.5	<b>10.28</b>	8.62	10.27

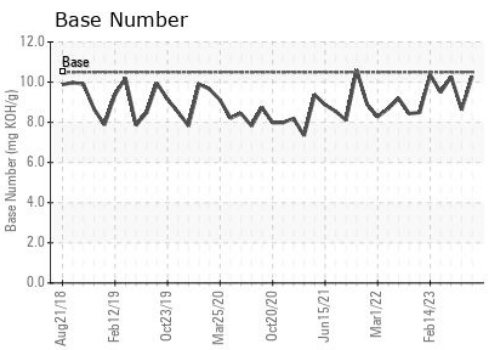
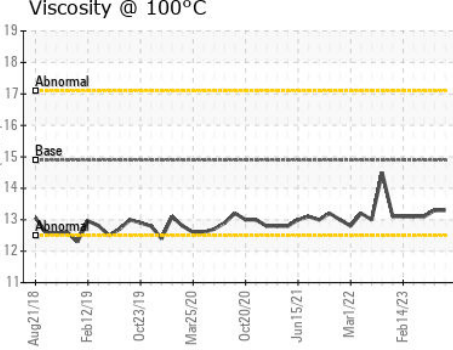
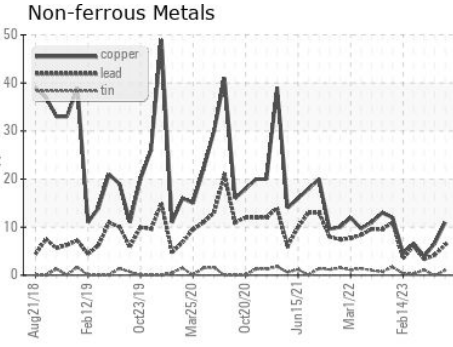
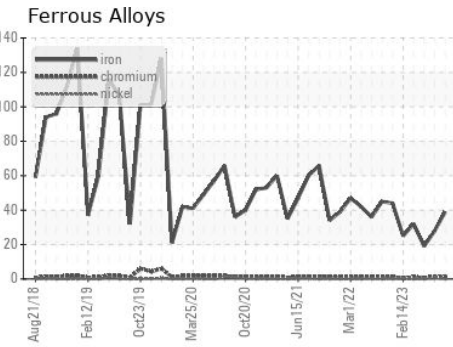
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.3</b>	13.3

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0033697 **Received** : 24 Jul 2023  
**Lab Number** : **05905665** **Diagnosed** : 25 Jul 2023  
**Unique Number** : 10567021 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: FT-IR, KV100, TBN )

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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