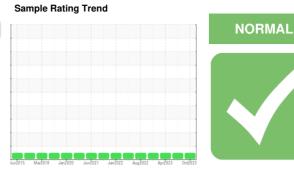


## **OIL ANALYSIS REPORT**





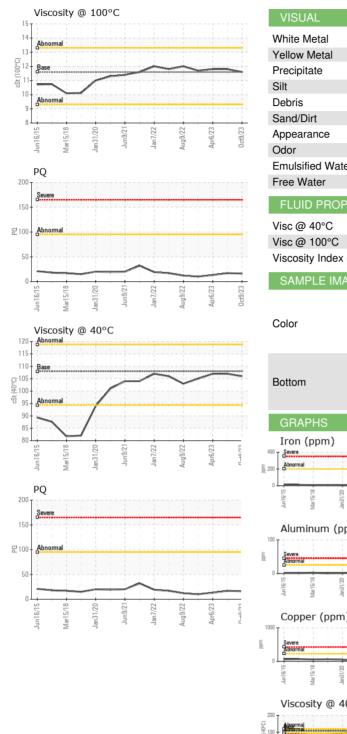


Machine Id CATERPILLAR 775D HAUL TRUCK 6451 (S/N 6KR00212) Component Transmission (Manual) Fluid TULCO LUBSOIL TO-4 30 (--- GAL)

DIAGNOSIS	SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Recommendation	Sample Number		Client Info		TO10002753	TO10002363	TO10002146
Resample at the next service interval to monitor.	Sample Date		Client Info		09 Oct 2023	05 Jul 2023	06 Apr 2023
Vear	Machine Age	hrs	Client Info		42649	42147	41665
Il component wear rates are normal.	Oil Age	hrs	Client Info		502	998	516
ontamination	Oil Changed		Client Info		Not Changd	Changed	Not Changd
here is no indication of any contamination in the	Sample Status				NORMAL	NORMAL	NORMAL
iid.	CONTAMINATIO	N	method	limit/base	current	history1	history2
luid Condition he AN level is acceptable for this fluid. The	Water		WC Method	>0.1	NEG	NEG	NEG
condition of the fluid is suitable for further service.	WEAR METALS		method	limit/base	current	history1	history2
	PQ		ASTM D8184	>95	16	17	13
	Iron	ppm	ASTM D5185m	>200	3	3	3
	Chromium	ppm	ASTM D5185m	>5	0	0	0
	Nickel	ppm	ASTM D5185m	>5	0	1	0
	Titanium	ppm	ASTM D5185m		0	<1	0
	Silver	ppm	ASTM D5185m	>7	0	0	0
	Aluminum	ppm	ASTM D5185m	>25	1	1	0
	Lead	ppm	ASTM D5185m	>45	26	22	16
	Copper	ppm	ASTM D5185m	>225	19	22	17
	Tin	ppm	ASTM D5185m	>10	<1	<1	<1
	Vanadium	ppm	ASTM D5185m		0	0	0
	Cadmium	ppm	ASTM D5185m		0	0	0
	ADDITIVES		method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m		0	0	0
	Barium	ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m		0	0	0
	Manganese	ppm	ASTM D5185m		0	0	<1
	Magnesium	ppm	ASTM D5185m	9	0	15	10
	Calcium	ppm	ASTM D5185m	4500	3210	2886	2999
	Phosphorus	ppm	ASTM D5185m	1150	992	853	904
	Zinc	ppm	ASTM D5185m	1250	1284	1085	1125
	Sulfur	ppm	ASTM D5185m	4500	4652	4668	4211
	CONTAMINANTS	;	method	limit/base	current	history1	history2
	Silicon	ppm	ASTM D5185m	>125	9	10	10
	Sodium	ppm	ASTM D5185m		3	3	2
	Potassium	ppm	ASTM D5185m	>20	<1	0	1
	FLUID DEGRADA		method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.28	0.85	0.89	0.89



## **OIL ANALYSIS REPORT**



	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
m m	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Apr6/23 0ct9/23	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPERT	IES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	108	106	107	107
	Visc @ 100°C	cSt	ASTM D445	11.6	11.6	11.8	11.8
	Viscosity Index (VI)	Scale	ASTM D2270	94	96	98	98
23	SAMPLE IMAGES		method	limit/base	current	history1	history2
Apr6/23 0ct9/23	Color				no image	no image	no image
	Bottom				no image	no image	no image
	GRAPHS						
<u> </u>	Iron (ppm)				Lead (ppm)		
Apr6/23	8. 200 - Abnormal			100	0		
	§ 200 - 0			B. 50	Abnormal		
	Jun 16/15	lan7/22	Aug9/22 . Apr6/23 .	0ct3/23	Jun16/15	Jung/21 -	Aug9/22 - Apr6/23 -
		,	4 1				4 7 0
	Aluminum (ppm)			21	Chromium (pr	om)	
	E Severe Abnormal			<u>6</u> 10	Severe Abnormal		
	MartStrath	lan7/22	Aug9/22 -	0ct9/23	Jun16/15	Jung/21	Aug9/22 Apr6/23 Oct9/23
Apr6/23		)	A, A,	0			A A
Apr6/	Copper (ppm)			40			
	E Severe			튤. 20	Severe Abnormal		
		22	22	53		21	3 3 3
	Jun16/15 Mar15/18 Jan31/20	Jan7/22	Aug9/22 Apr6/23	0ct3/23	Jun 16/15 Mar 15/18 Jan 31/20	Jung/21 Jan7/22	Aug9/22 Apr6/23 Oct9/23
	Viscosity @ 40°C			ī.	Acid Number		
	200 -			Ho 1.0		$\sim$	
				and U.S.	Base		
	15/15 -	n7/22	g9/22 r6/23	Acid P	15/15	n9/21	Aug9/22 - Apr6/23 - Oct9/23 -
	/ -	Madiso Recei Teste Diagn	ved : 16 d : 17 osed : 17	, NC 27513 Oct 2023 Oct 2023 Oct 2023 - W	Lighting Clipping	CHOR STONE	

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)

Report Id: ANCTUL [WUSCAR] 05980540 (Generated: 06/11/2024 14:26:29) Rev: 1

Certificate 12367

Submitted By: SKIP SAENGERHAUSEN

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