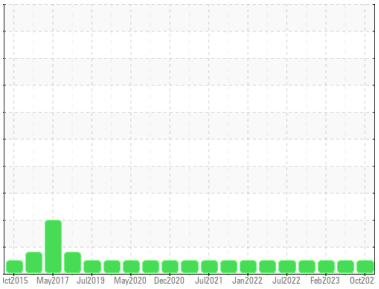
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
CATERPILLAR 775D HAUL TRUCK 6355 (S/N 6KR00297)
Component
Rear Differential
Fluid
TULCO LUBSOIL TO-4 50 (--- GAL)

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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**TO10002756**	TO10002296	TO10001763
Sample Date		Client Info		**09 Oct 2023**	19 May 2023	06 Feb 2023
Machine Age	hrs	Client Info		**48474**	47928	47465
Oil Age	hrs	Client Info		**1503**	957	494
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**45**	17	17
Iron	ppm	ASTM D5185m	>500	**27**	11	11
Chromium	ppm	ASTM D5185m	>3	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>3	**<1**	<1	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>30	**2**	<1	1
Lead	ppm	ASTM D5185m	>13	**<1**	0	<1
Copper	ppm	ASTM D5185m	>103	**<1**	<1	<1
Tin	ppm	ASTM D5185m	>5	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

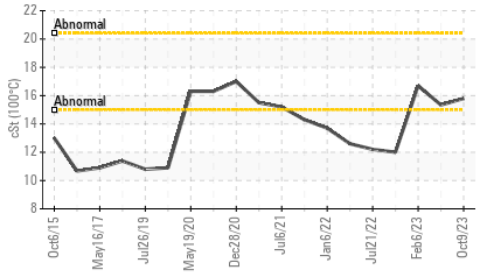
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	<1	<1
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**24**	39	27
Calcium	ppm	ASTM D5185m		**3066**	2810	3036
Phosphorus	ppm	ASTM D5185m		**1047**	923	904
Zinc	ppm	ASTM D5185m		**1359**	1165	1110
Sulfur	ppm	ASTM D5185m		**5250**	5498	5431

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>100	**20**	13	13
Sodium	ppm	ASTM D5185m		**4**	4	4
Potassium	ppm	ASTM D5185m	>20	**<1**	<1	0

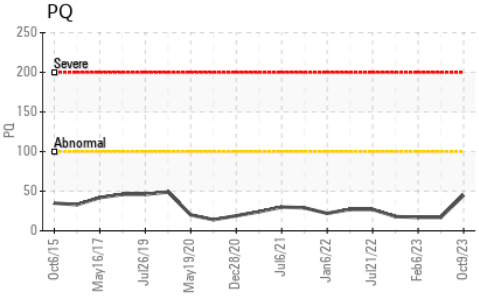
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.967**	0.95	1.16

OIL ANALYSIS REPORT

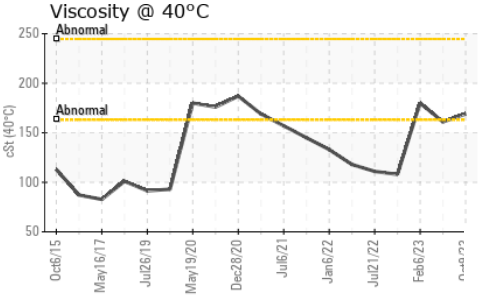
Viscosity @ 100°C



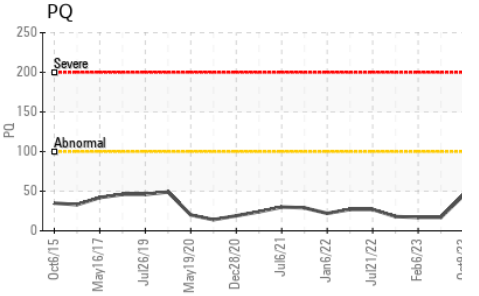
PQ



Viscosity @ 40°C



PQ



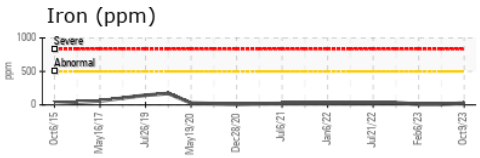
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**169**	161	180
Visc @ 100°C	cSt	ASTM D445		**15.8**	15.34	16.7
Viscosity Index (VI)	Scale	ASTM D2270		**95**	95	97

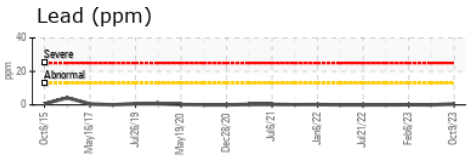
SAMPLE IMAGES				current	history1	history2
Color				*no image*	*no image*	*no image*
Bottom				*no image*	*no image*	*no image*

GRAPHS

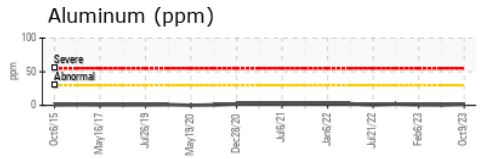
Iron (ppm)



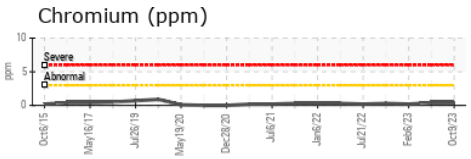
Lead (ppm)



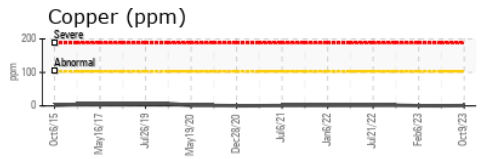
Aluminum (ppm)



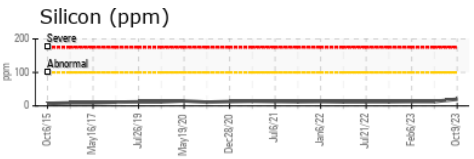
Chromium (ppm)



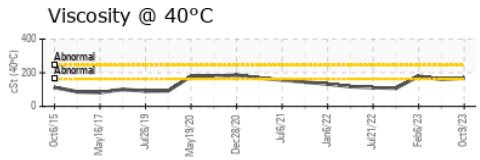
Copper (ppm)



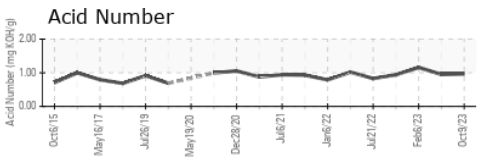
Silicon (ppm)



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10002756
Lab Number : 05980536
Unique Number : 10697831
Test Package : MOB 2 (Additional Tests: KV100, PQ, VI)

Received : 16 Oct 2023
Tested : 17 Oct 2023
Diagnosed : 17 Oct 2023 - Wes Davis

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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Report Id: ANCTUL [WUSCAR] 05980536 (Generated: 03/01/2024 14:06:48) Rev: 1

Submitted By: SKIP SAENGERHAUSEN