



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

DE Samples - CAT LAB

Machine Id

CATERPILLAR 775D HAUL TRUCK 6451 (S/N 6KR00212)

Component

Diesel Engine

Fluid

TULCO LUBSOIL DT CI-4 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10002088	TO1006651	TO1005460
Sample Date		Client Info		13 Jun 2024	12 Jul 2019	31 Oct 2016
Machine Age	hrs	Client Info		43445	36307	34222
Oil Age	hrs	Client Info		796	350	300
Filter Age	hrs	Client Info		796	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	53	20	25
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>25	<1	1	2
Lead	ppm	ASTM D5185m	>40	0	<1	7
Copper	ppm	ASTM D5185m	>330	2	1	2
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

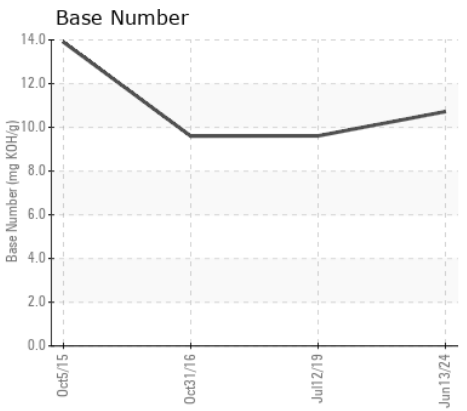
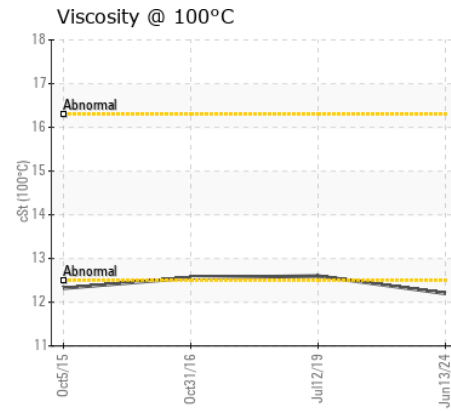
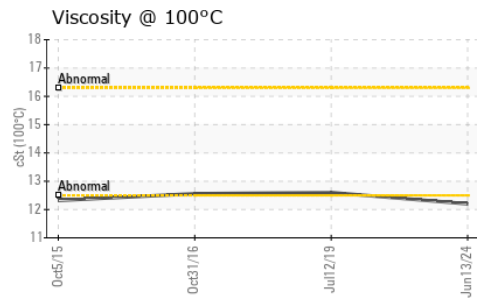
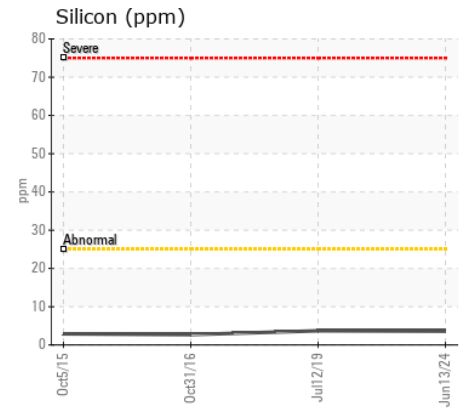
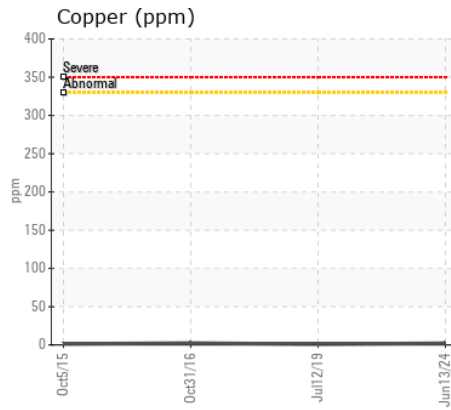
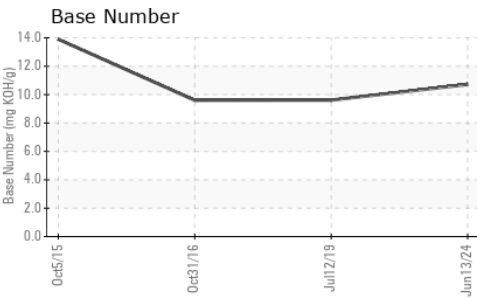
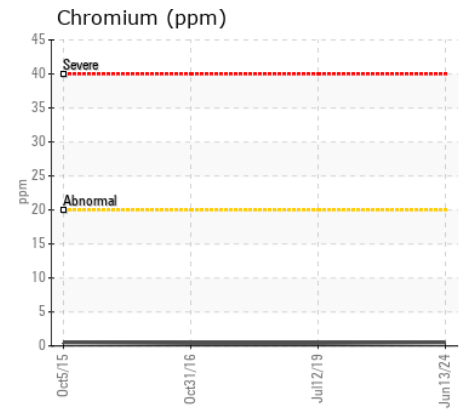
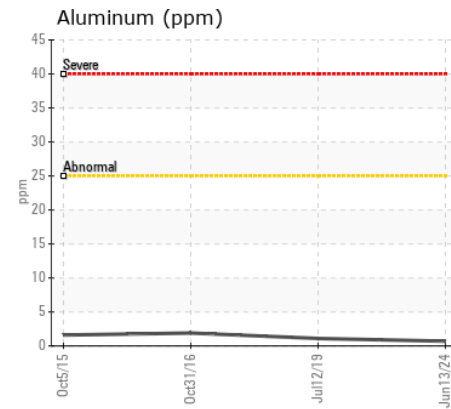
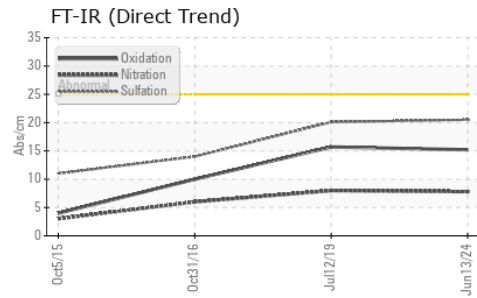
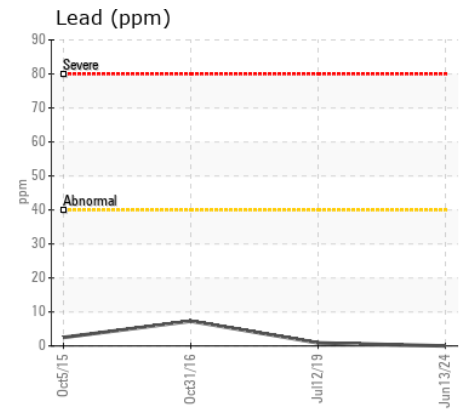
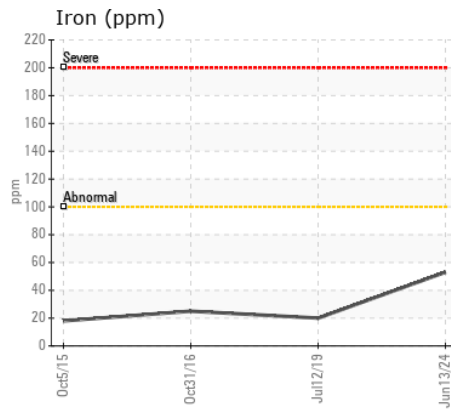
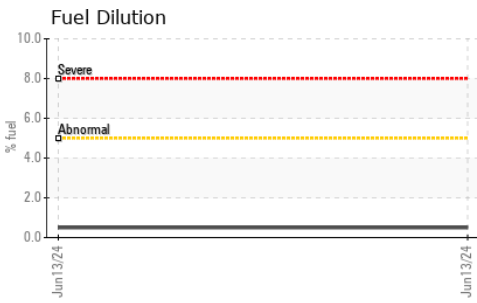
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	4	3
Potassium	ppm	ASTM D5185m	>20	0	19	<1
Fuel	%	ASTM D3524	>5	0.5	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.8	8	6.
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	20.1	14.
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	>0.2	NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m		2	2	2
Boron	ppm	ASTM D5185m		4	16	3
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		66	64	62
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1101	942	962
Calcium	ppm	ASTM D5185m		1330	1287	1061
Phosphorus	ppm	ASTM D5185m		1162	1020	957
Zinc	ppm	ASTM D5185m		1396	1228	1094
Sulfur	ppm	ASTM D5185m		4258	2874	3419
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	15.7	10.
Base Number (BN)	mg KOH/g	ASTM D2896		10.72	9.61	9.60
Visc @ 100°C	cSt	ASTM D445		12.2	12.6	12.56
Viscosity Index (VI)	Scale	ASTM D2270		125	133	139



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10002088
Lab Number : 06213663
Unique Number : 11086527
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel, VI)

Received : 18 Jun 2024
Tested : 20 Jun 2024
Diagnosed : 20 Jun 2024 - Sean Felton

ANCHOR STONE TULSA ROCK
 TULSA ROCK QUARRY, 66TH ST N 145TH AVENUE
 TULSA, OK
 US 74137

Contact: DAVID MORRIS
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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)

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