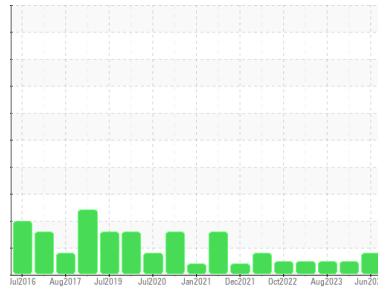


OIL ANALYSIS REPORT



Machine Id
CATERPILLAR 980 H LOADER 6737 (S/N JMS01810)
Component
Hydraulic System
Fluid
TULCO LUBSOIL SUPER HYDRAULIC HZ 46 (--- GAL)

Sample Rating Trend



ISO



DIAGNOSIS

Recommendation
No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of silt (particulates < 14 microns in size) present 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		TO10003623	TO10003006	TO100002421
Sample Date	Client Info		13 Jun 2024	15 Dec 2023	03 Aug 2023
Machine Age	hrs	Client Info	31038	30731	0
Oil Age	hrs	Client Info	417	110	0
Oil Changed	Client Info		Not Chngd	Not Chngd	N/A
Sample Status			ATTENTION	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	4	<1	2
Chromium	ppm	ASTM D5185m >10	<1	0	0
Nickel	ppm	ASTM D5185m >10	<1	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	<1	0	0
Aluminum	ppm	ASTM D5185m >10	3	0	<1
Lead	ppm	ASTM D5185m >10	<1	0	0
Copper	ppm	ASTM D5185m >75	1	<1	<1
Tin	ppm	ASTM D5185m >10	<1	0	0
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	1	0	0
Molybdenum	ppm	ASTM D5185m	<1	0	0
Manganese	ppm	ASTM D5185m	<1	0	0
Magnesium	ppm	ASTM D5185m	211	188	143
Calcium	ppm	ASTM D5185m	199	164	147
Phosphorus	ppm	ASTM D5185m	794	738	814
Zinc	ppm	ASTM D5185m	1012	900	1038
Sulfur	ppm	ASTM D5185m	3046	2769	3347

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	3	<1	1
Sodium	ppm	ASTM D5185m	<1	3	1
Potassium	ppm	ASTM D5185m >20	2	0	<1
Water	%	ASTM D6304 >0.1	NEG	NEG	NEG

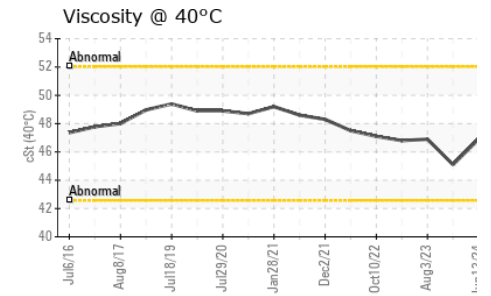
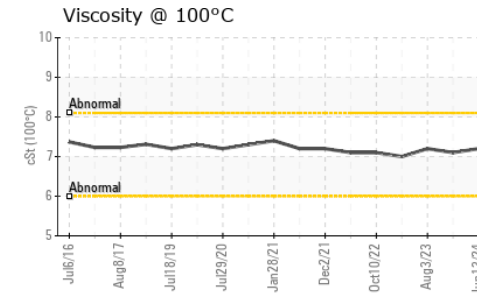
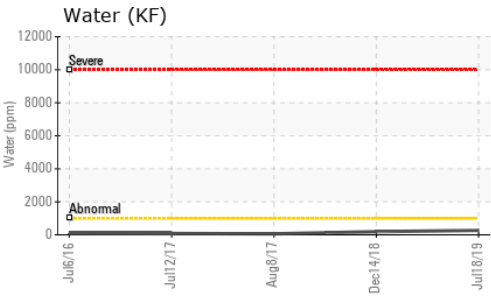
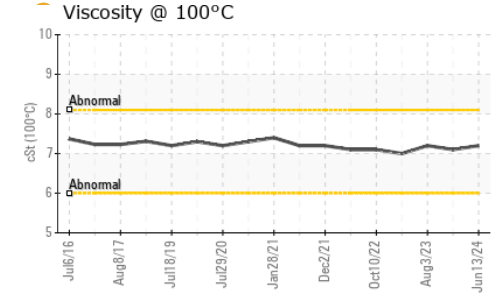
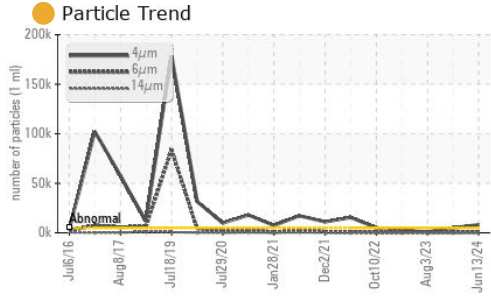
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	8205	4970	949
Particles >6µm	ASTM D7647	>1300	619	436	348
Particles >14µm	ASTM D7647	>160	49	33	28
Particles >21µm	ASTM D7647	>40	12	10	4
Particles >38µm	ASTM D7647	>10	1	1	1
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	20/16/13	19/16/12	17/16/12

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.78	0.92	1.00

OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.9	45.1	46.9
Visc @ 100°C	cSt	ASTM D445	7.2	7.1	7.2
Viscosity Index (VI)	Scale	ASTM D2270	113	116	113

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

Ferrous Alloys

Non-ferrous Metals

Viscosity @ 40°C

Particle Count

Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003623
Lab Number : 06217272
Unique Number : 11090136
Test Package : MOB 2 (Additional Tests: KF, KV100, VI)

Received : 21 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Don Baldrige

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

Contact: MIKE SNYDER
 msnyder@anchorstoneco.com
 T: (417)850-9635
 F: _____

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)