MOB II

TULCO OILS
001 - Tulsa Division

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

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

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

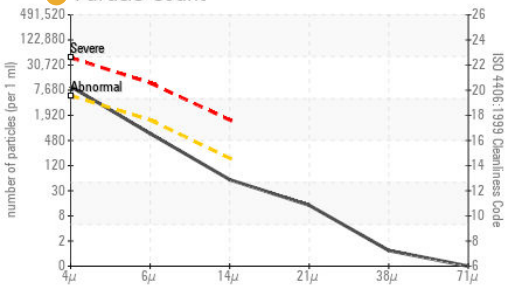
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

FLUID CONDITION

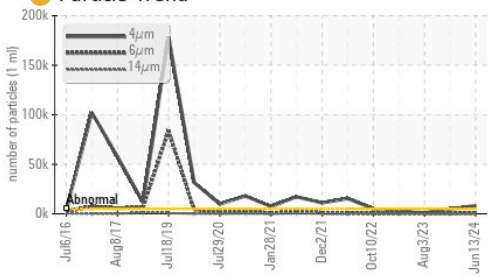
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	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
Filter Age	hrs	Client Info		417	110	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Changed	Not Changd	N/A
Sample Status				ATTENTION	NORMAL	NORMAL
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
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	3	<1	1
Potassium	ppm	ASTM D5185m	>20	2	0	<1
Water	%	ASTM D6304	>0.1	NEG	NEG	NEG
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
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	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		<1	3	1
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
Acid Number (AN)	mg KOH/g	ASTM D8045		0.78	0.92	1.00
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

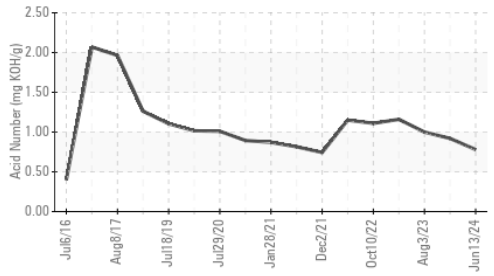
Particle Count



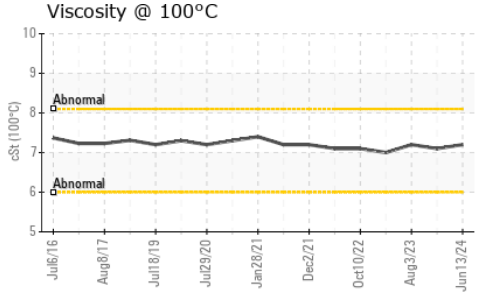
Particle Trend



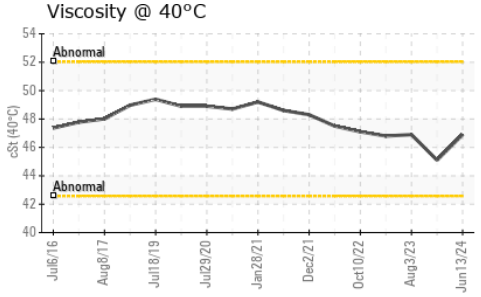
Acid Number



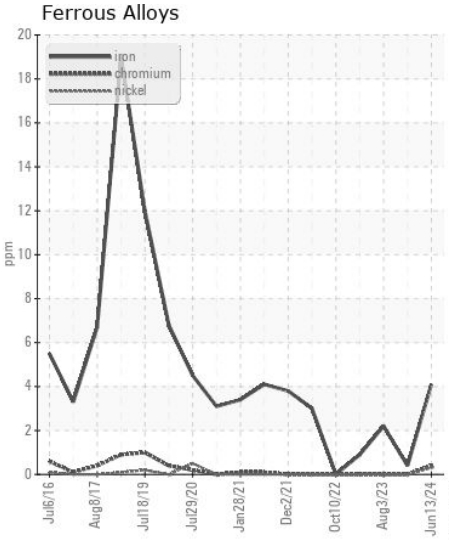
Viscosity @ 100°C



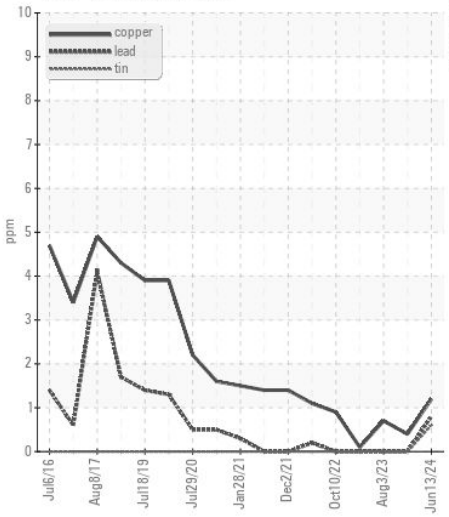
Viscosity @ 40°C



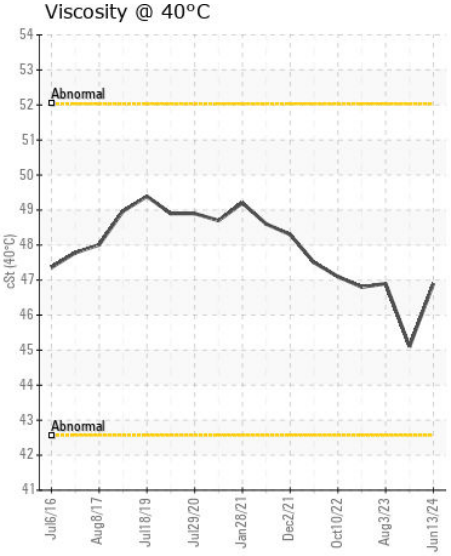
Ferrous Alloys



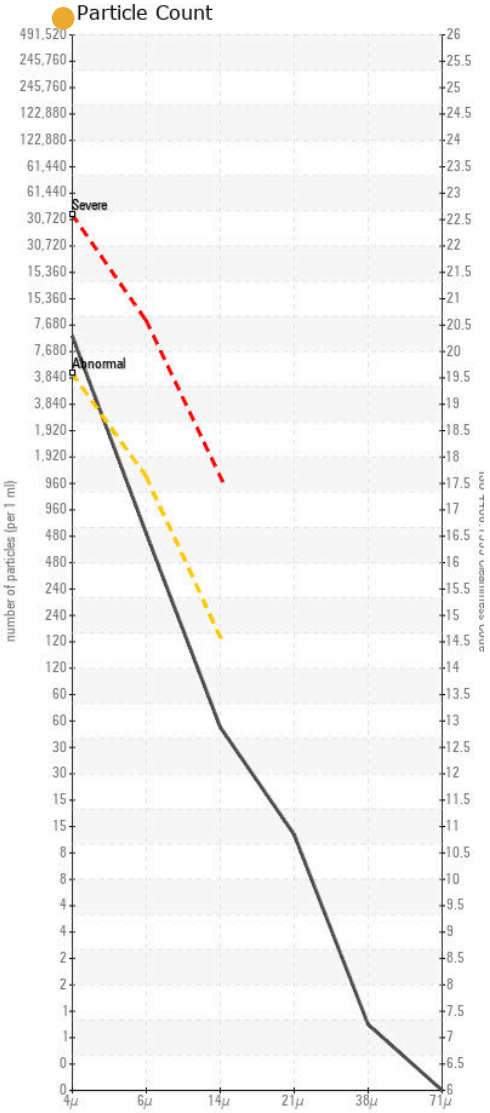
Non-ferrous Metals



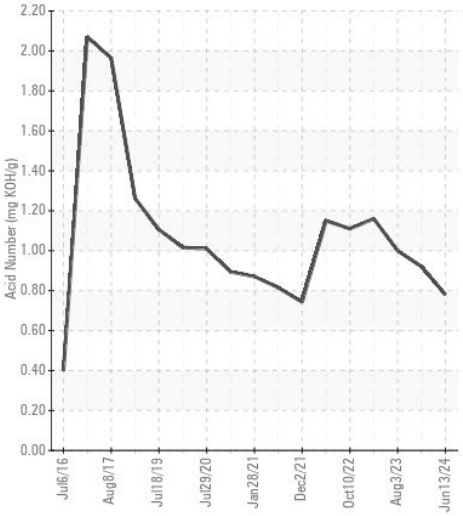
Viscosity @ 40°C



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)

Certificate L2367

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

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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