CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
GRADALL 001810
Component
Hydraulic System
Fluid
CASTROL DUAL RANGE HV HYD OIL ISO 46 (75 GAL)

RECOMMENDATION

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

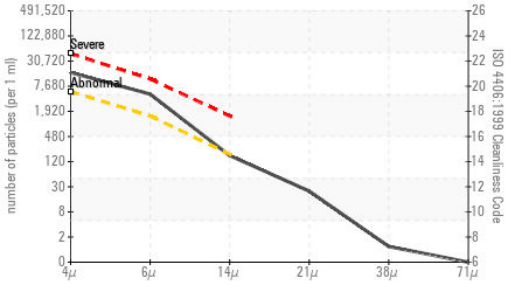
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

FLUID CONDITION

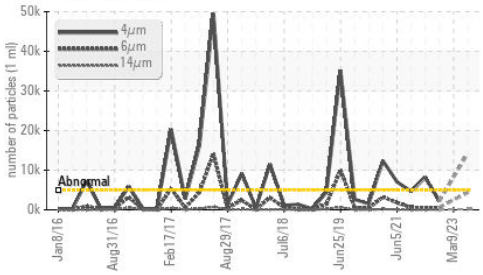
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0856159	WC0758054	WC0701045
Sample Date		Client Info		06 Jun 2024	09 Mar 2023	21 Nov 2022
Machine Age	hrs	Client Info		14912	13680	13503
Oil Age	hrs	Client Info		1232	1000	500
Filter Age	hrs	Client Info		600	177	500
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>20	3	1	<1
Chromium	ppm	ASTM D5185m	>10	2	<1	<1
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	2	1	<1
Lead	ppm	ASTM D5185m	>10	<1	0	0
Copper	ppm	ASTM D5185m	>75	1	0	<1
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	▲ MODER	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	2	2	0
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 14139	---	2182
Particles >6µm		ASTM D7647	>1300	▲ 4331	---	587
Particles >14µm		ASTM D7647	>160	148	---	31
Particles >21µm		ASTM D7647	>40	21	---	5
Particles >38µm		ASTM D7647	>10	1	---	0
Particles >71µm		ASTM D7647	>3	0	---	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/19/14	---	18/16/12
Silt	scalar	*Visual	NONE	LIGHT	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
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		0	0	<1
Boron	ppm	ASTM D5185m		4	3	3
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		4	3	3
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		45	52	43
Calcium	ppm	ASTM D5185m		235	240	237
Phosphorus	ppm	ASTM D5185m		345	351	335
Zinc	ppm	ASTM D5185m		423	426	385
Sulfur	ppm	ASTM D5185m		1001	946	1152
Acid Number (AN)	mg KOH/g	ASTM D8045		0.36	0.33	0.30
Visc @ 40°C	cSt	ASTM D445	46.5	44.5	44.2	44.3

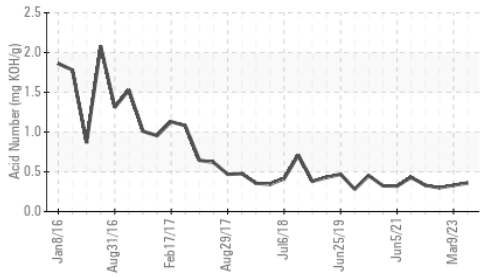
Particle Count



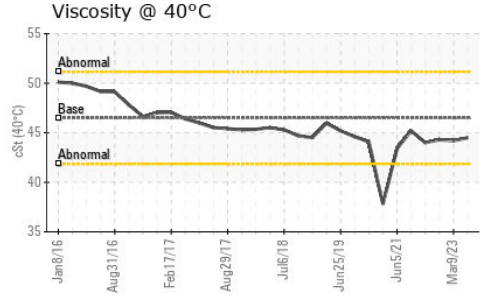
Particle Trend



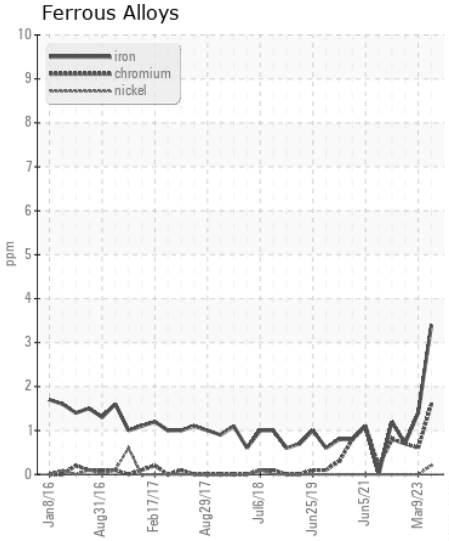
Acid Number



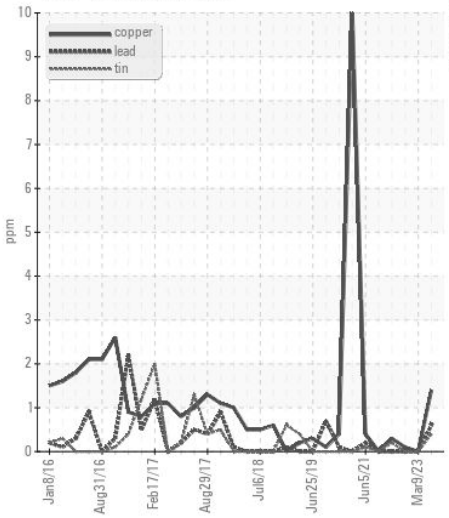
Viscosity @ 40°C



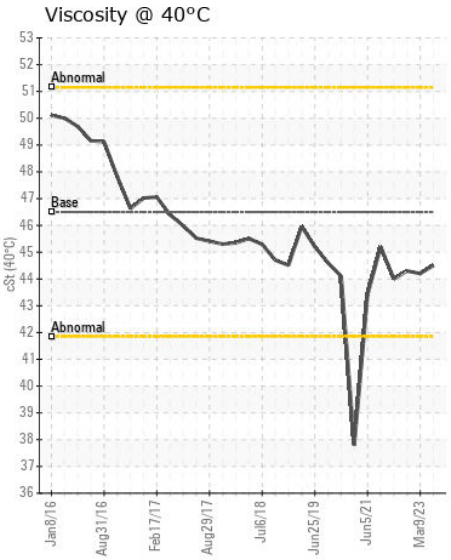
Ferrous Alloys



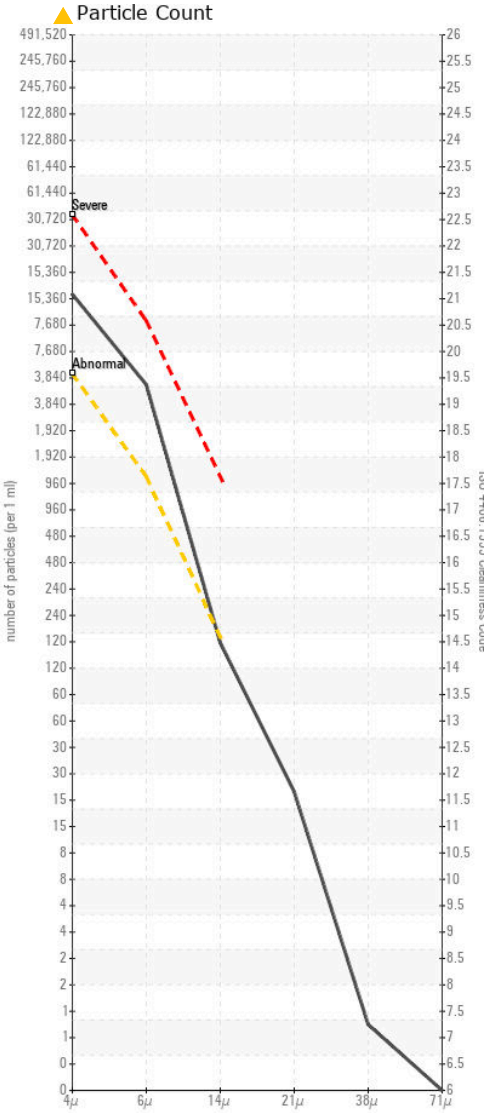
Non-ferrous Metals



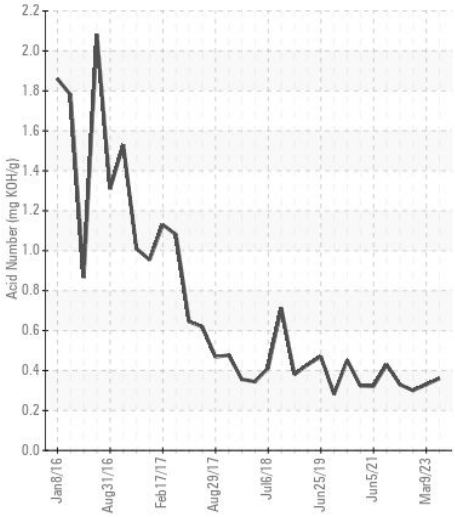
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0856159
Lab Number : 06231447
Unique Number : 11114940
Test Package : CONST

Received : 09 Jul 2024
Tested : 10 Jul 2024
Diagnosed : 10 Jul 2024 - 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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