CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
HITACHI 002144
Component
Hydraulic System
Fluid
CASTROL DUAL RANGE HV HYD OIL ISO 46 (53 GAL)

RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. The filter change at the time of sampling has been noted. Resample in 30-45 days to monitor this situation.

WEAR

All component wear rates are normal.

CONTAMINATION

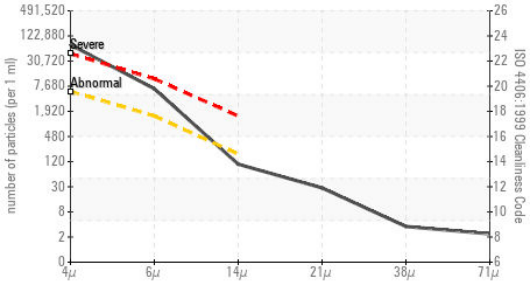
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

FLUID CONDITION

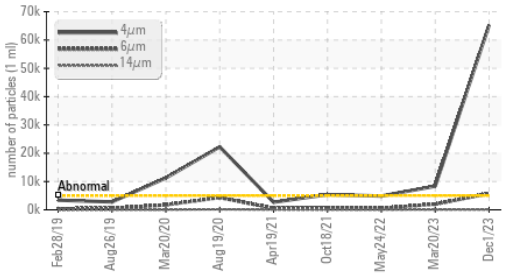
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0800524**	WC0758062	WC0664761
Sample Date		Client Info		**01 Dec 2023**	20 Mar 2023	24 May 2022
Machine Age	hrs	Client Info		**4938**	4331	3785
Oil Age	hrs	Client Info		**1500**	546	1500
Filter Age	hrs	Client Info		**607**	546	549
Oil Changed		Client Info		**Changed**	Not Changd	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>20	**14**	9	6
Chromium	ppm	ASTM D5185m	>10	**<1**	0	0
Nickel	ppm	ASTM D5185m	>10	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	**2**	<1	1
Lead	ppm	ASTM D5185m	>10	**0**	0	0
Copper	ppm	ASTM D5185m	>75	**5**	3	4
Tin	ppm	ASTM D5185m	>10	**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	**2**	1	<1
Potassium	ppm	ASTM D5185m	>20	**2**	2	0
Water		WC Method	>0.1	**NEG**	NEG	NEG
Particles >4µm		ASTM D7647	>5000	**65271**	▲ 8353	4868
Particles >6µm		ASTM D7647	>1300	**5807**	▲ 2002	544
Particles >14µm		ASTM D7647	>160	**92**	73	27
Particles >21µm		ASTM D7647	>40	**25**	11	6
Particles >38µm		ASTM D7647	>10	**3**	0	0
Particles >71µm		ASTM D7647	>3	**2**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**23/20/14**	▲ 20/18/13	19/16/12
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		**0**	0	1
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**1**	2	<1
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m		**26**	18	9
Calcium	ppm	ASTM D5185m		**121**	102	83
Phosphorus	ppm	ASTM D5185m		**470**	430	415
Zinc	ppm	ASTM D5185m		**291**	279	237
Sulfur	ppm	ASTM D5185m		**694**	476	697
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.40**	0.38	0.45
Visc @ 40°C	cSt	ASTM D445	46.5	**46.8**	43.3	43.2

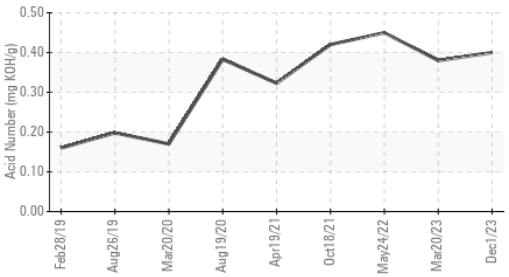
Particle Count



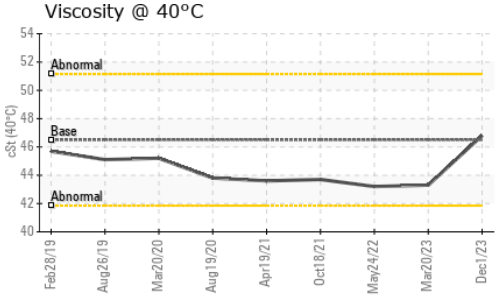
Particle Trend



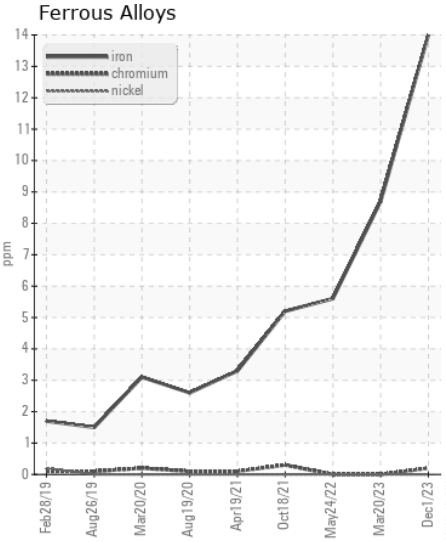
Acid Number



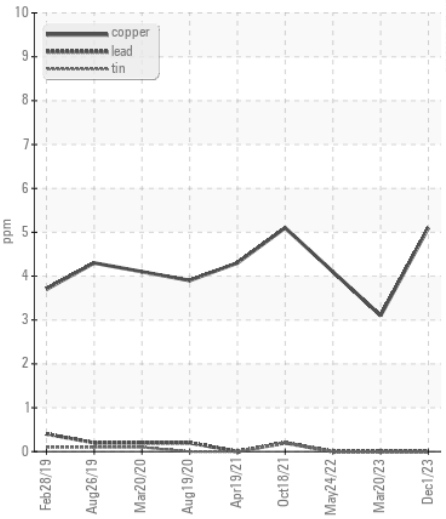
Viscosity @ 40°C



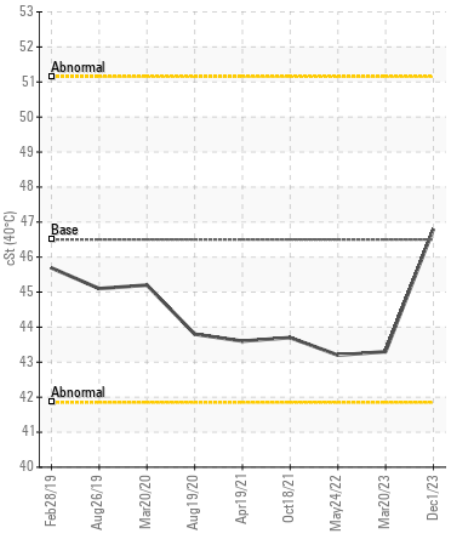
Ferrous Alloys



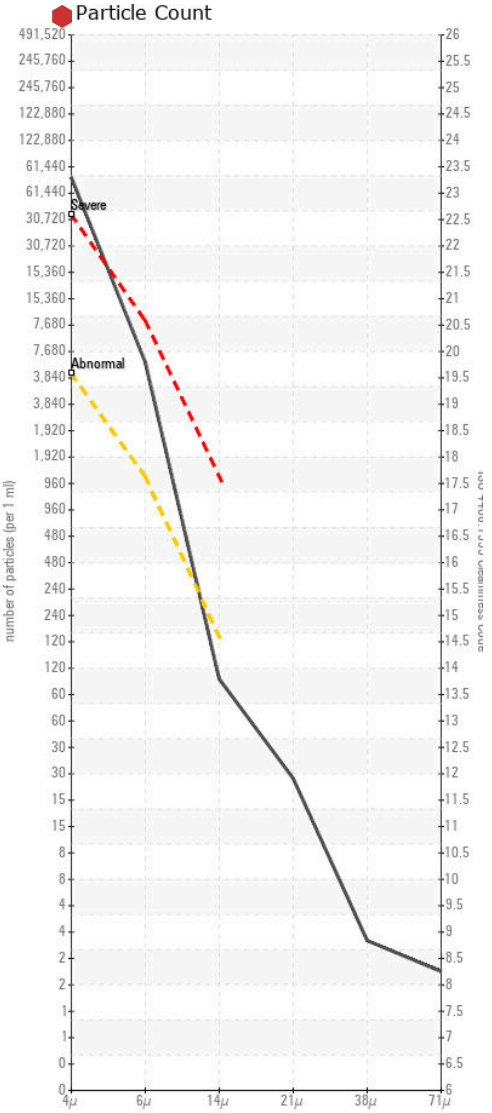
Non-ferrous Metals



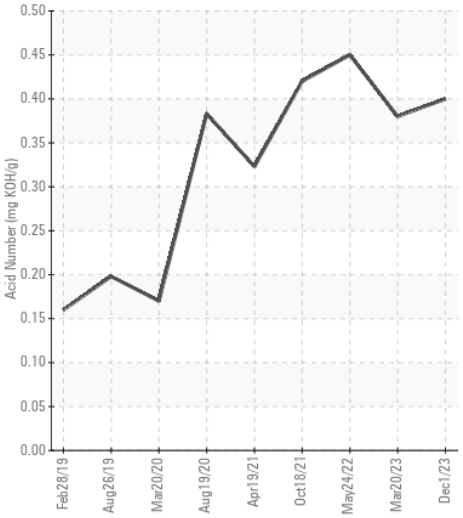
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0800524 **Recieved** : 12 Jan 2024
Lab Number : 06060174 **Diagnosed** : 16 Jan 2024
Unique Number : 10831556 **Diagnostician** : Wes Davis
Test Package : CONST

Certificate L2367

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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