James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
HITACHI 470LC-6 HCMJAG60T00060492
Component
Hydraulic System
Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

CONTAMINATION

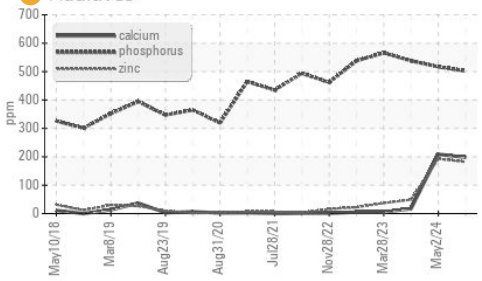
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

FLUID CONDITION

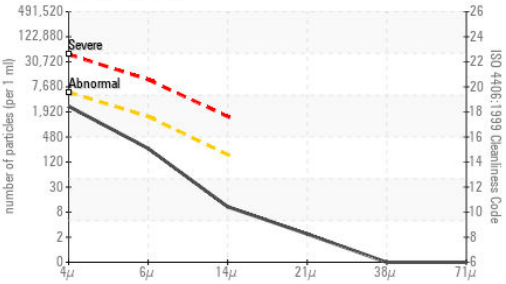
Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type. The AN level is acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0224395	JR0211458	JR0200507
Sample Date		Client Info		14 Jul 2024	02 May 2024	22 Feb 2024
Machine Age	hrs	Client Info		8033	7501	7013
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ATTENTION	ABNORMAL	NORMAL
PQ		ASTM D8184		15	15	10
Iron	ppm	ASTM D5185m	>20	4	1	<1
Chromium	ppm	ASTM D5185m	>10	0	<1	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	<1	0	0
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	3	2	2
Tin	ppm	ASTM D5185m	>10	0	<1	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	3	3	<1
Potassium	ppm	ASTM D5185m	>20	4	3	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	2295	▲ 13956	4417
Particles >6µm		ASTM D7647	>1300	224	779	287
Particles >14µm		ASTM D7647	>160	9	28	6
Particles >21µm		ASTM D7647	>40	2	7	1
Particles >38µm		ASTM D7647	>10	0	3	0
Particles >71µm		ASTM D7647	>3	0	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/15/10	▲ 21/17/12	19/15/10
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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		3	1	<1
Boron	ppm	ASTM D5185m		8	10	0
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		5	7	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		● 30	● 29	7
Calcium	ppm	ASTM D5185m		● 198	● 209	17
Phosphorus	ppm	ASTM D5185m	827	502	517	538
Zinc	ppm	ASTM D5185m	0	● 182	● 193	49
Sulfur	ppm	ASTM D5185m	13	● 1389	● 1412	583
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.30	0.32	0.22
Visc @ 40°C	cSt	ASTM D445	47	42.6	43.5	45.4

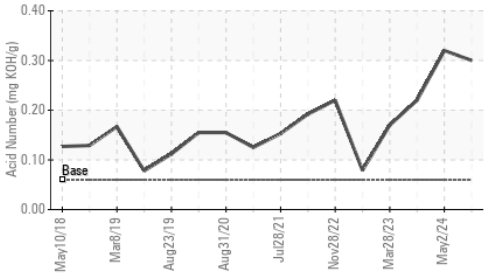
Additives



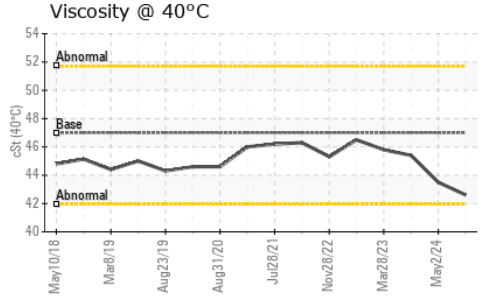
Particle Count



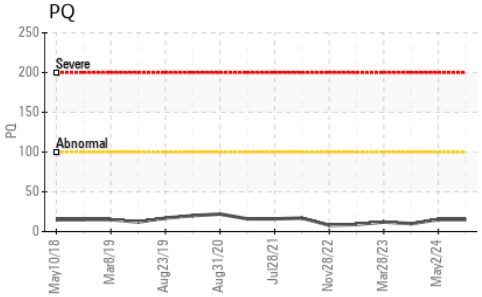
Acid Number



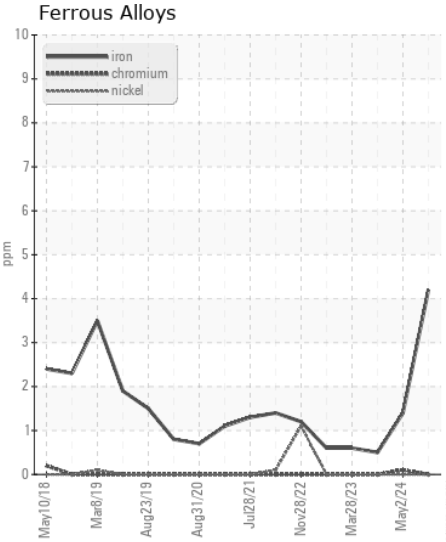
Viscosity @ 40°C



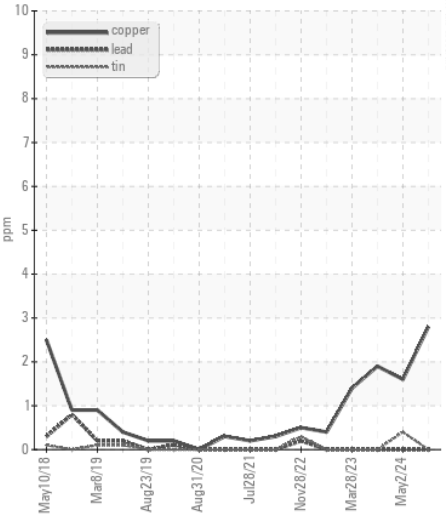
PQ



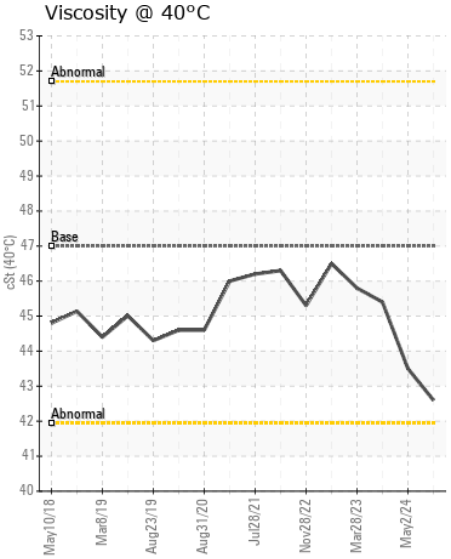
Ferrous Alloys



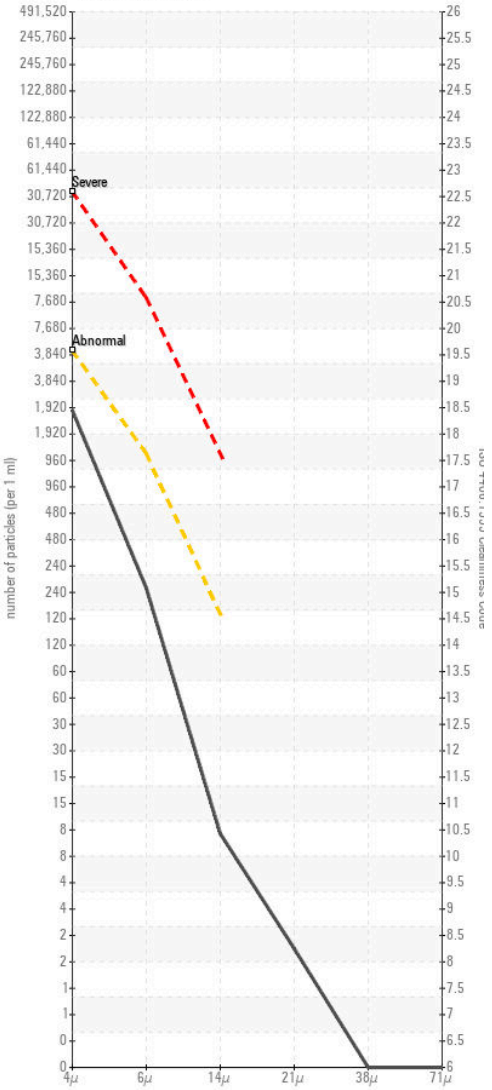
Non-ferrous Metals



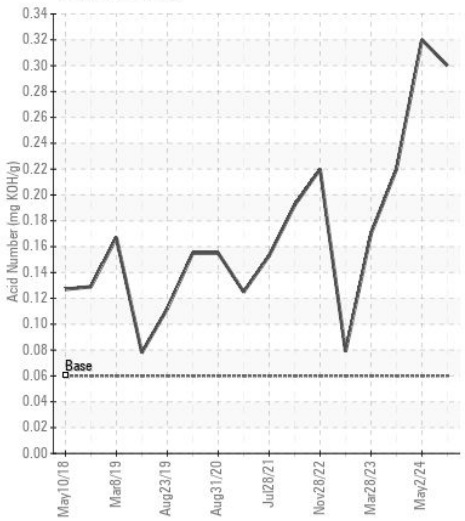
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0224395 **Received** : 17 Jul 2024
Lab Number : 06239070 **Tested** : 18 Jul 2024
Unique Number : 11127904 **Diagnosed** : 19 Jul 2024 - Don Baldridge
Test Package : CONST (Additional Tests: PQ)

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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