



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
HITACHI 470LC HCMJAG60K00061628

Component
Hydraulic System

Fluid
{not provided} (--- GAL)

RECOMMENDATION

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0198251	JR0188803	JR0171836
Sample Date		Client Info		07 Feb 2024	08 Nov 2023	12 Jul 2023
Machine Age	hrs	Client Info		3072	2700	2065
Oil Age	hrs	Client Info		1837	2100	1465
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	8	0	8
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	<1	0
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	0	<1	<1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	▲ MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

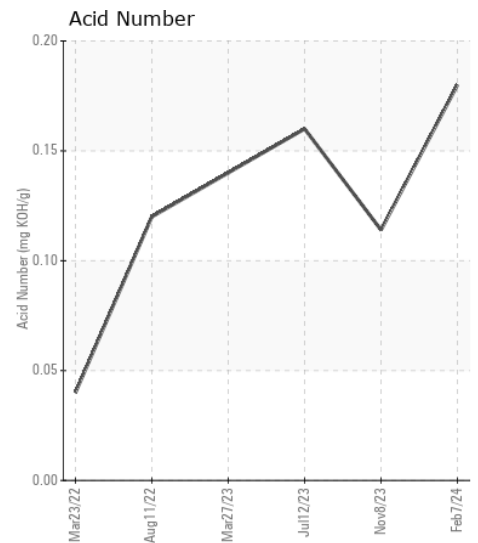
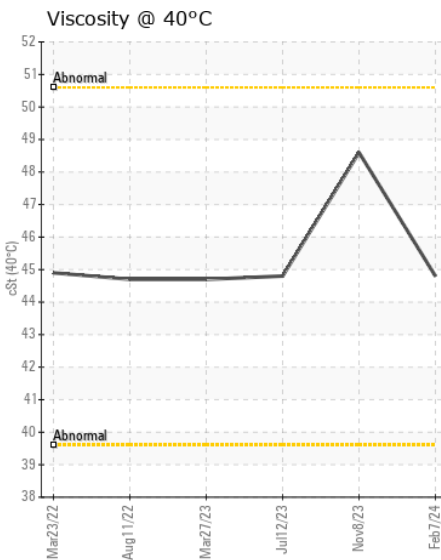
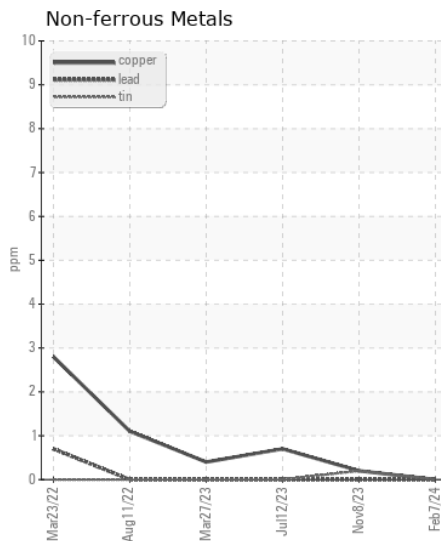
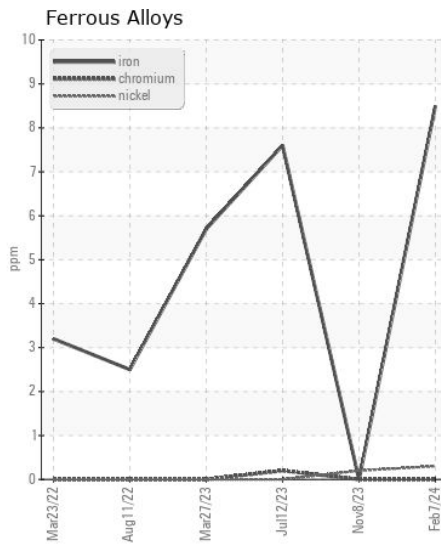
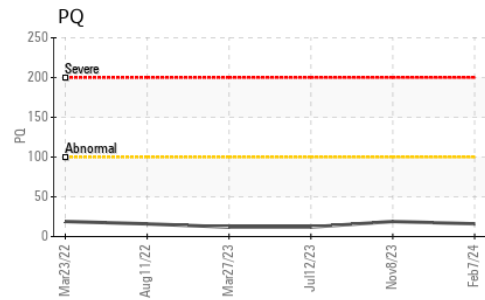
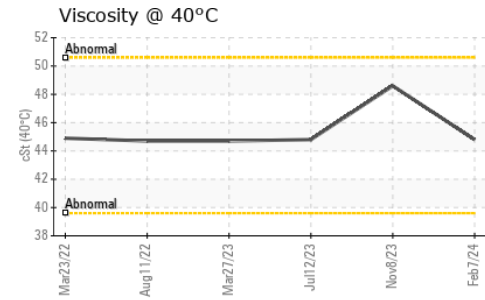
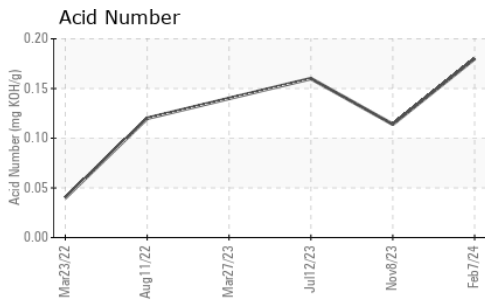
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>20	3	2	2
Potassium	ppm	ASTM D5185m	>20	0	<1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	---	🔴 130318	---
Particles >6µm		ASTM D7647	>1300	---	🔴 43495	---
Particles >14µm		ASTM D7647	>160	---	🔴 4092	---
Particles >21µm		ASTM D7647	>40	---	🔴 1079	---
Particles >38µm		ASTM D7647	>10	---	▲ 24	---
Particles >71µm		ASTM D7647	>3	---	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	🔴 24/23/19	---
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	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

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	2	1
Boron	ppm	ASTM D5185m		0	<1	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		9	8	9
Calcium	ppm	ASTM D5185m		4	16	3
Phosphorus	ppm	ASTM D5185m		351	682	340
Zinc	ppm	ASTM D5185m		40	5	34
Sulfur	ppm	ASTM D5185m		2387	49	2612
Acid Number (AN)	mg KOH/g	ASTM D8045		0.18	0.114	0.16
Visc @ 40°C	cSt	ASTM D445		44.8	48.6	44.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0198251 **Received** : 14 Feb 2024
Lab Number : 06088680 **Tested** : 15 Feb 2024
Unique Number : 10876125 **Diagnosed** : 15 Feb 2024 - Jonathan Hester
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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