



WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
HITACHI 210LC-5 E184 (S/N 1FFDCJ70KEE330524)

Component
Hydraulic System

Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

RECOMMENDATION

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0178536	JR0156234	JR0143743
Sample Date		Client Info		10 Jan 2024	28 Mar 2023	12 Sep 2022
Machine Age	hrs	Client Info		9348	8670	8166
Oil Age	hrs	Client Info		4250	504	3068
Filter Age	hrs	Client Info		1182	504	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				ATTENTION	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		12	12	8
Iron	ppm	ASTM D5185m	>20	3	10	15
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>10	1	1	3
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

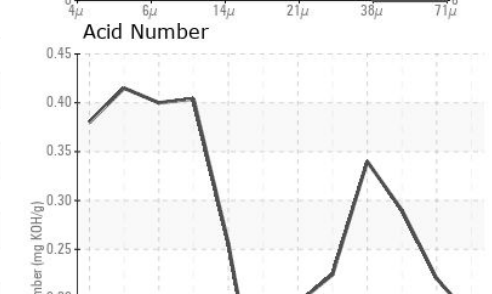
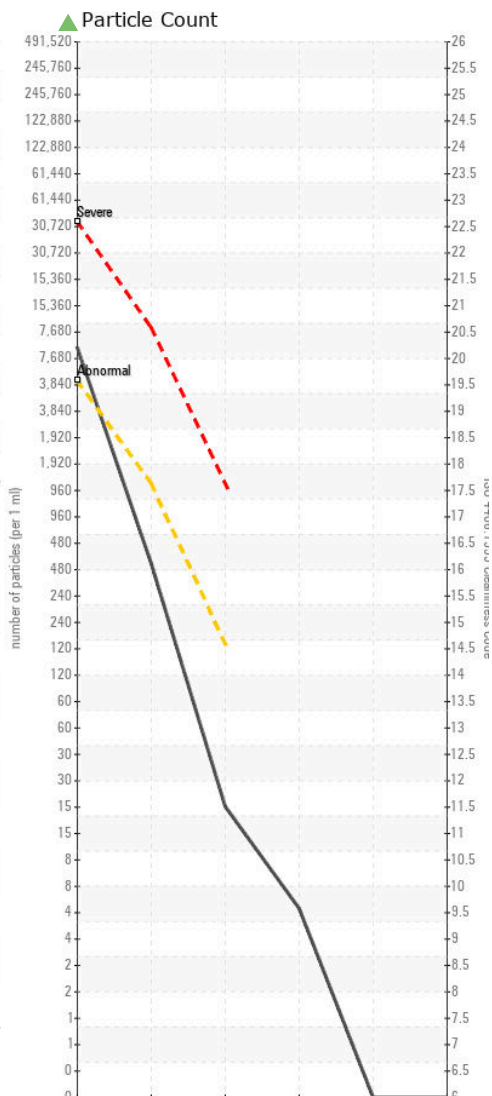
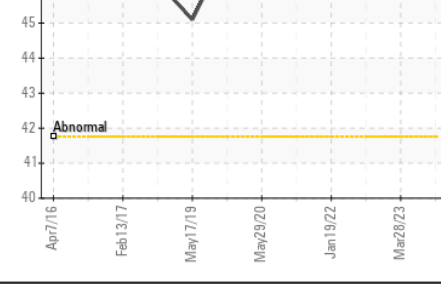
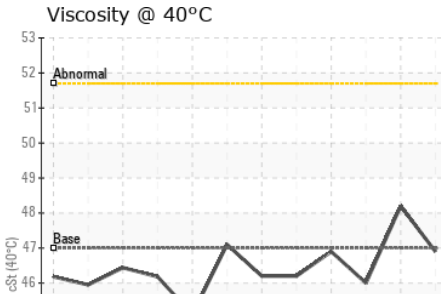
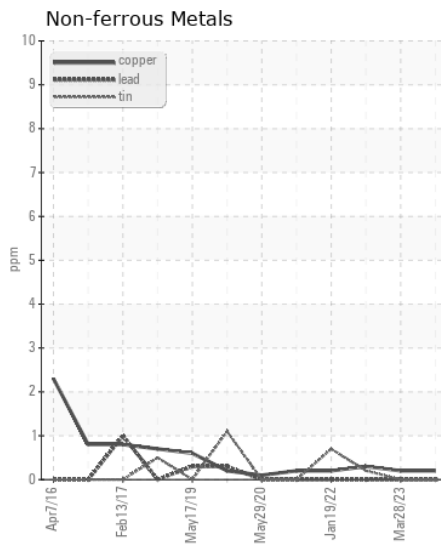
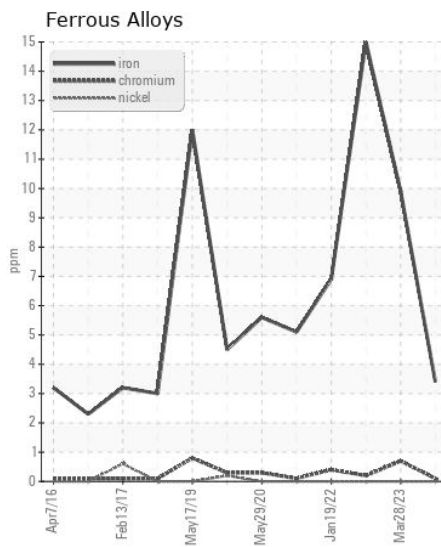
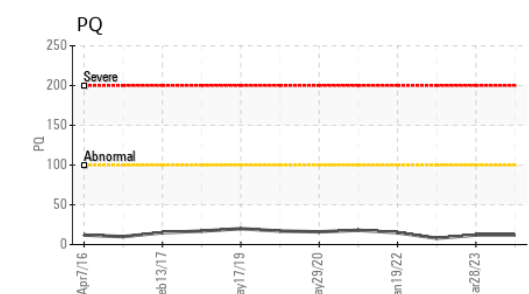
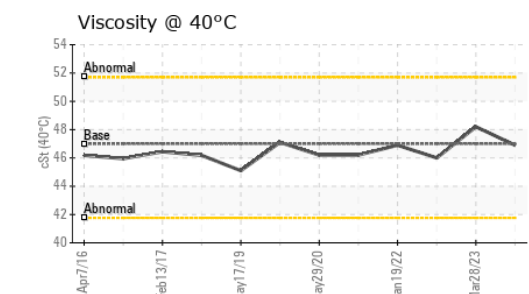
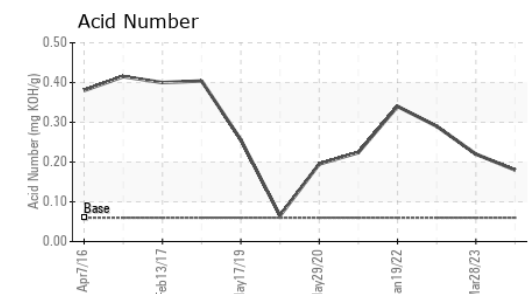
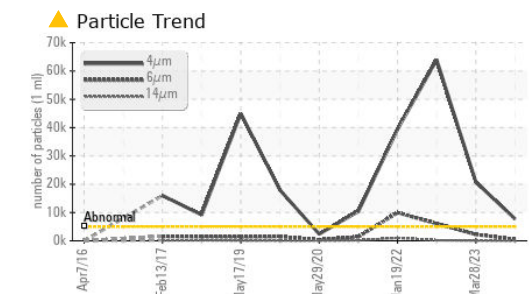
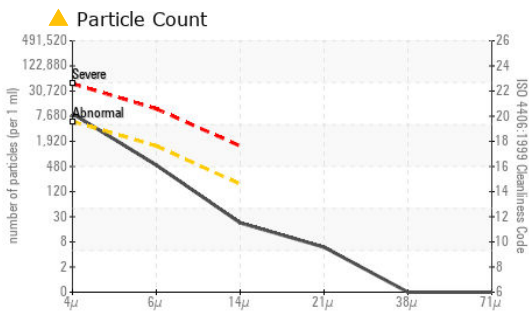
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	<1	<1	<1
Potassium	ppm	ASTM D5185m	>20	<1	0	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 7712	▲ 20731	▲ 63938
Particles >6µm		ASTM D7647	>1300	456	▲ 2235	▲ 6088
Particles >14µm		ASTM D7647	>160	19	82	▲ 182
Particles >21µm		ASTM D7647	>40	5	16	30
Particles >38µm		ASTM D7647	>10	0	1	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 20/16/11	▲ 22/18/14	▲ 23/20/15
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	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 oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	<1	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		<1	3	<1
Calcium	ppm	ASTM D5185m		3	18	4
Phosphorus	ppm	ASTM D5185m	827	566	521	460
Zinc	ppm	ASTM D5185m	0	<1	37	36
Sulfur	ppm	ASTM D5185m	13	0	108	116
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.18	0.22	0.29
Visc @ 40°C	cSt	ASTM D445	47	46.9	48.2	46.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0178536 **Received** : 17 Jan 2024
Lab Number : 06062552 **Diagnosed** : 18 Jan 2024
Unique Number : 10833934 **Diagnostician** : Wes Davis
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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