



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
[W65778]

Machine Id
HITACHI 210LC 1FFDCJ70TDE330390

Component
Hydraulic System

Fluid
HITACHI HYDRAULIC SUPER EX 46HN (30 GAL)

RECOMMENDATION

Recommend drain oil if not already done. Reduce drain interval to 2000 hours or drain and flush and use recommended zinc free oil. (Customer Sample Comment: W65778)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0206052	JR0170864	JR0150515
Sample Date		Client Info		11 Apr 2024	27 Jun 2023	14 Nov 2022
Machine Age	hrs	Client Info		6978	6502	6023
Oil Age	hrs	Client Info		6499	6023	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	5	2	1
Chromium	ppm	ASTM D5185m	>10	6	0	<1
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	1	<1	<1
Lead	ppm	ASTM D5185m	>10	1	<1	0
Copper	ppm	ASTM D5185m	>75	3	2	2
Tin	ppm	ASTM D5185m	>10	1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

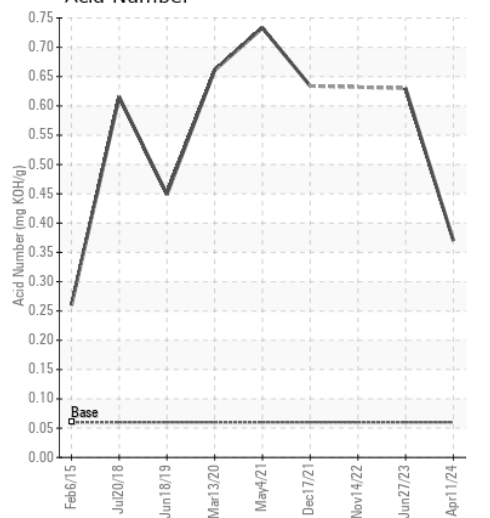
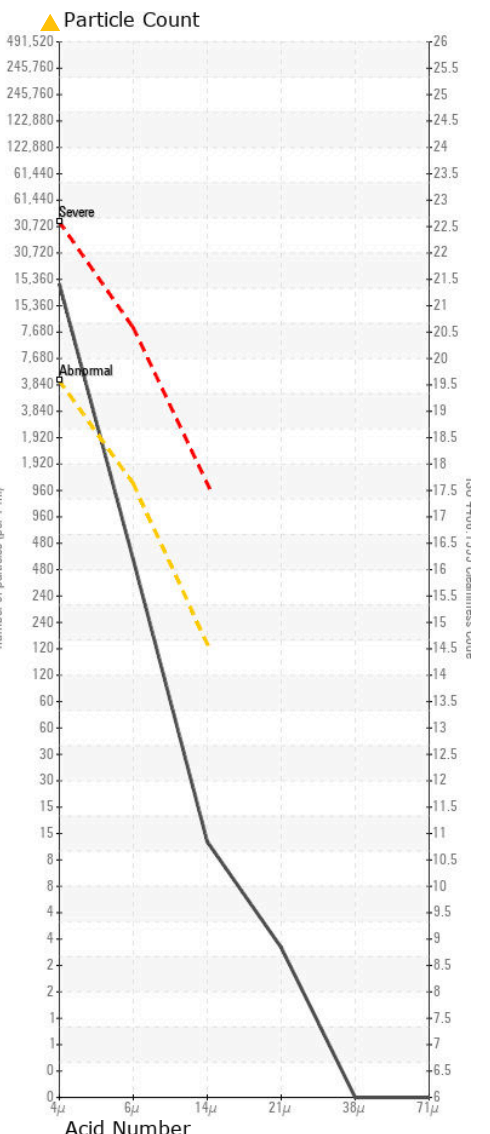
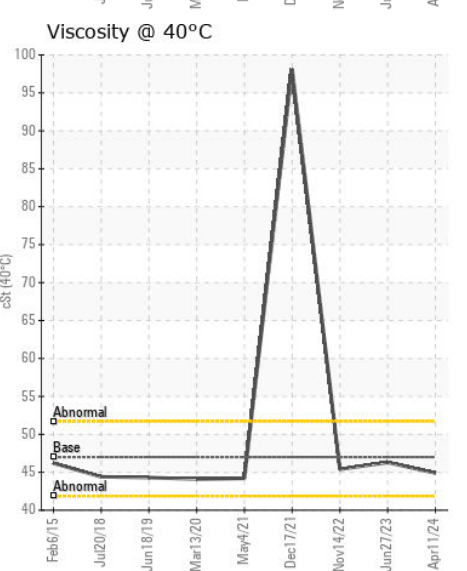
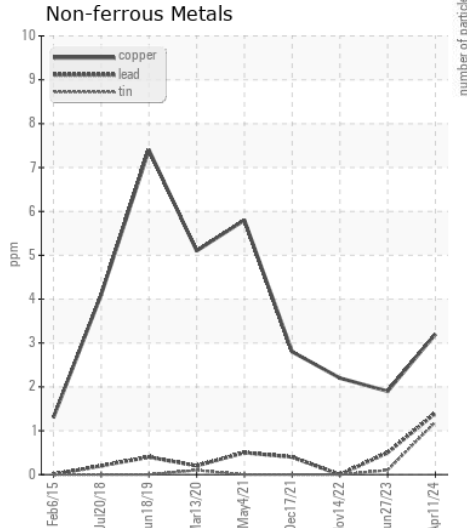
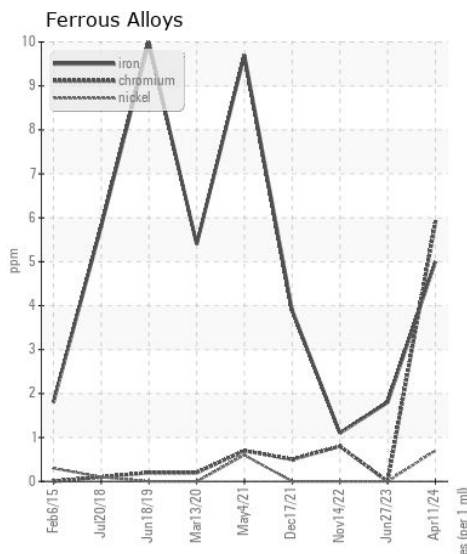
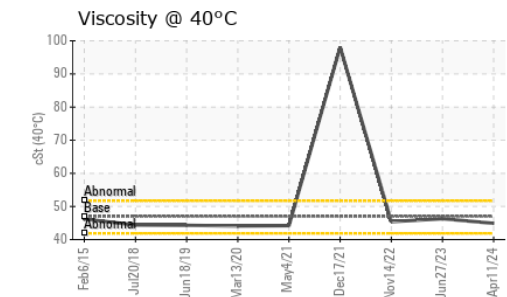
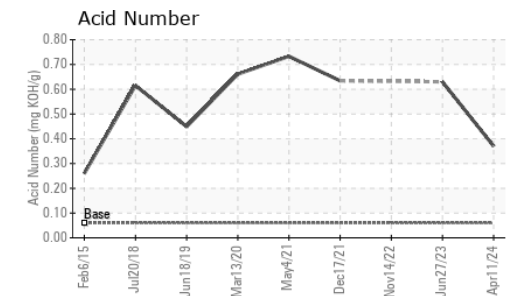
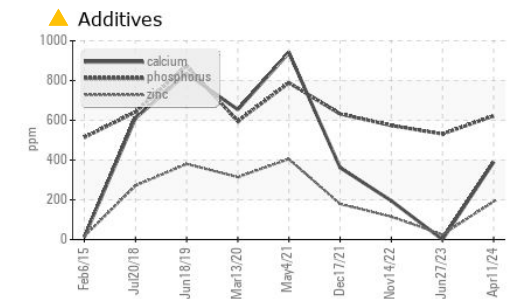
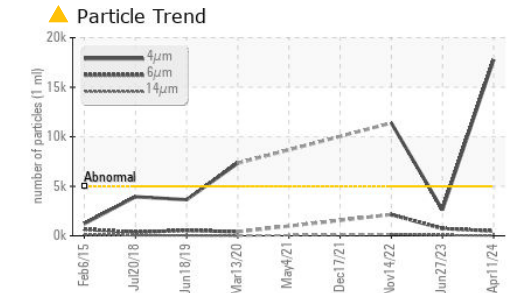
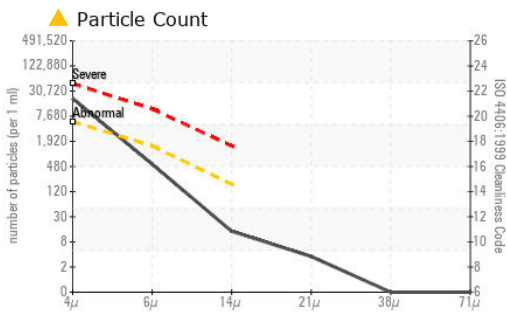
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	3	<1	1
Potassium	ppm	ASTM D5185m	>20	1	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 17772	2614	▲ 11396
Particles >6µm		ASTM D7647	>1300	481	734	▲ 2142
Particles >14µm		ASTM D7647	>160	12	74	▲ 164
Particles >21µm		ASTM D7647	>40	3	20	27
Particles >38µm		ASTM D7647	>10	0	1	2
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/16/11	19/17/13	▲ 21/18/15
Silt	scalar	*Visual	NONE	NONE	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

FLUID CONDITION

Zinc level above manufacturer's recommendations. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		0	0	<1
Boron	ppm	ASTM D5185m		2	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	0	<1
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		4	0	0
Calcium	ppm	ASTM D5185m		390	0	195
Phosphorus	ppm	ASTM D5185m	827	622	531	574
Zinc	ppm	ASTM D5185m	0	▲ 191	25	▲ 115
Sulfur	ppm	ASTM D5185m	13	788	108	541
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.37	0.63	---
Visc @ 40°C	cSt	ASTM D445	47	44.9	46.3	45.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0206052 **Received** : 12 Apr 2024
Lab Number : 06147203 **Tested** : 15 Apr 2024
Unique Number : 10977281 **Diagnosed** : 16 Apr 2024 - Don Baldrige
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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