



WEAR

NORMAL

CONTAMINATION

ATTENTION

FLUID CONDITION

ABNORMAL

Area
[W66405]

Machine Id

HITACHI ZX210 1FFDC571PKF340622

Component

Hydraulic System

Fluid

HITACHI HYDRAULIC SUPER EX 46HN (--- 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. The filter change at the time of sampling has been noted.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0205886	JR0080930	JR0112336
Sample Date		Client Info		17 Apr 2024	04 Dec 2022	11 Nov 2021
Machine Age	hrs	Client Info		2977	2088	454
Oil Age	hrs	Client Info		0	0	454
Filter Age	hrs	Client Info		0	0	454
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	N/A	Not Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	5	2	4
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>10	<1	1	0
Lead	ppm	ASTM D5185m	>10	0	1	0
Copper	ppm	ASTM D5185m	>75	4	<1	1
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

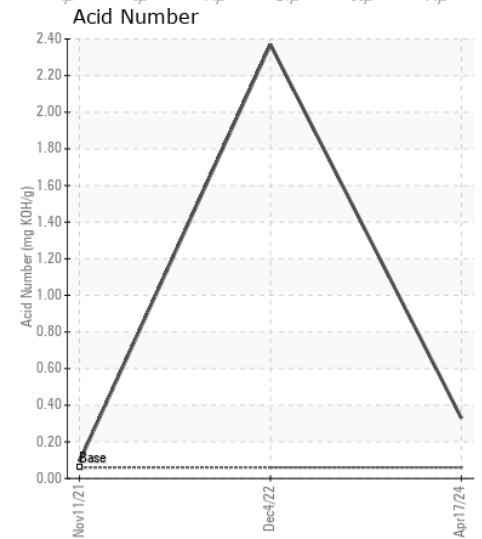
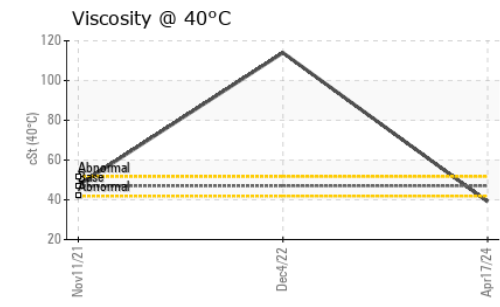
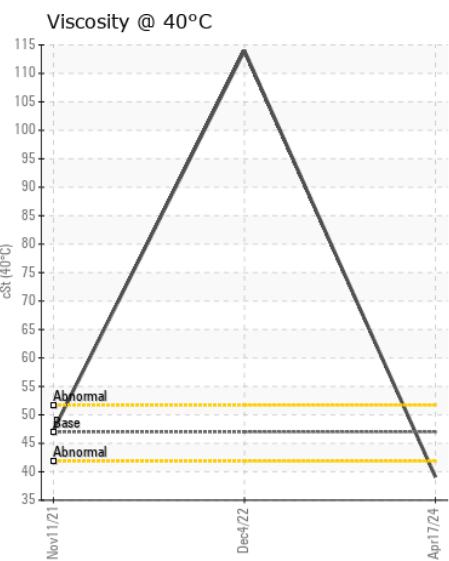
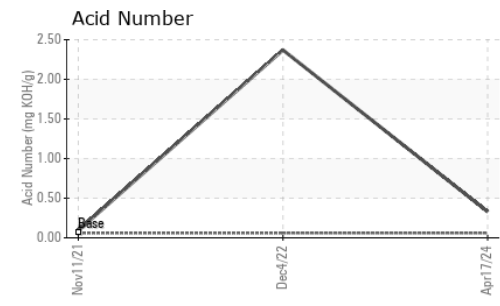
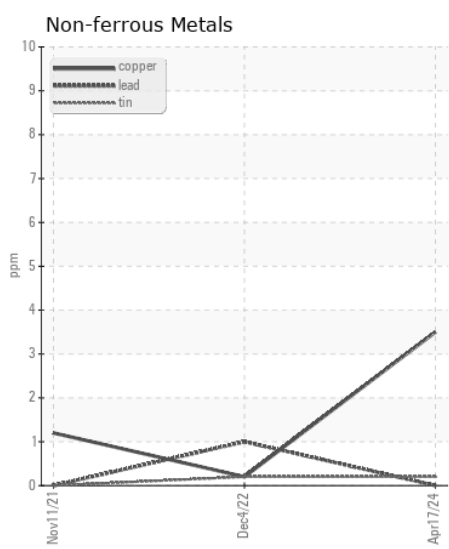
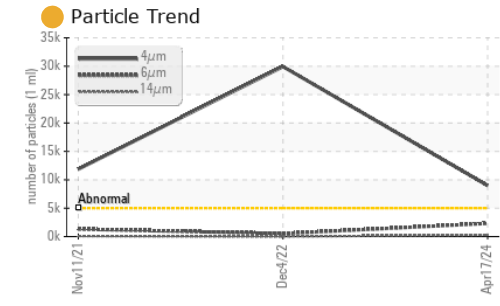
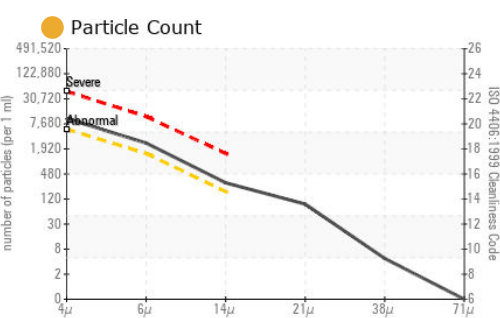
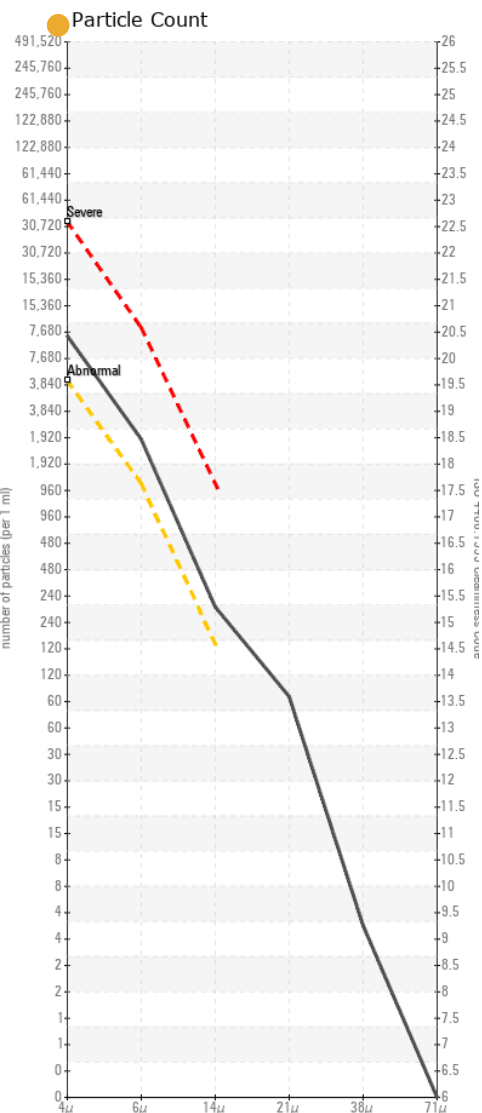
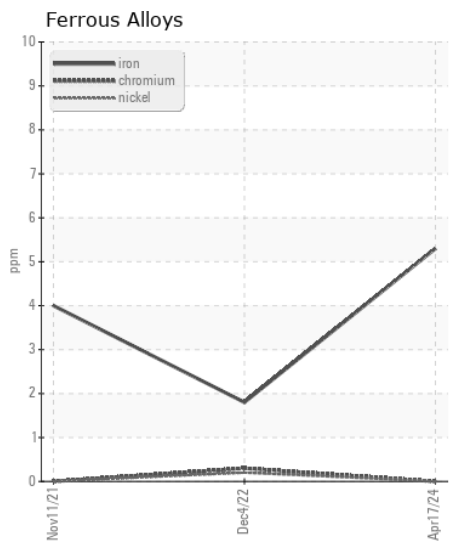
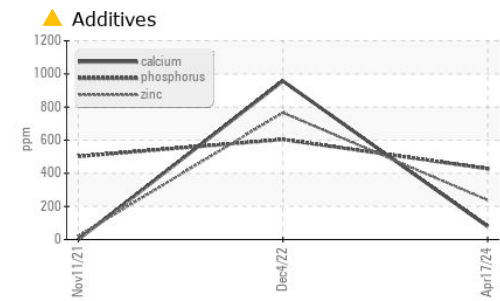
There is a moderate amount of particulates present in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185m	>20	6	5	0
Potassium	ppm	ASTM D5185m	>20	2	8	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	8990	29932	11868
Particles >6µm		ASTM D7647	>1300	2320	516	1316
Particles >14µm		ASTM D7647	>160	259	7	83
Particles >21µm		ASTM D7647	>40	80	1	23
Particles >38µm		ASTM D7647	>10	4	1	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	20/18/15	22/16/10	21/18/14
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

FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sodium	ppm	ASTM D5185m		2	2	<1
Boron	ppm	ASTM D5185m		0	204	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	154	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		8	665	0
Calcium	ppm	ASTM D5185m		79	957	<1
Phosphorus	ppm	ASTM D5185m	827	428	604	502
Zinc	ppm	ASTM D5185m	0	238	766	20
Sulfur	ppm	ASTM D5185m	13	1727	2392	83
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.33	2.37	0.092
Visc @ 40°C	cSt	ASTM D445	47	39.1	114	47.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0205886 **Received** : 19 Apr 2024
Lab Number : 06154235 **Tested** : 23 Apr 2024
Unique Number : 10989658 **Diagnosed** : 23 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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