



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
HITACHI 210-6 1ffdc571jmf341002
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0182606	JR0174228	JR0141459
Sample Date		Client Info		23 Aug 2023	23 May 2023	13 Oct 2022
Machine Age	hrs	Client Info		2007	1686	869
Oil Age	hrs	Client Info		0	0	869
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Not Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	14	10	7
Iron	ppm	ASTM D5185m	>32	2	2	4
Chromium	ppm	ASTM D5185m	>9	0	<1	0
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	0	<1	<1
Lead	ppm	ASTM D5185m	>28	0	0	0
Copper	ppm	ASTM D5185m	>50	<1	1	2
Tin	ppm	ASTM D5185m	>5	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	▲ MODER	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

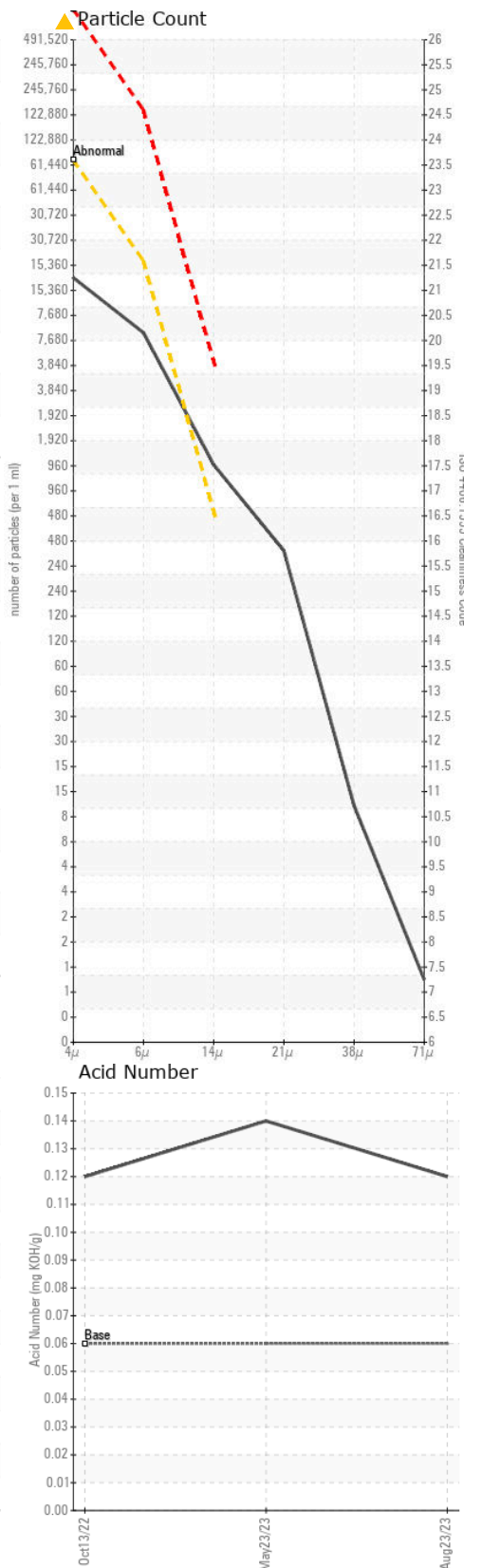
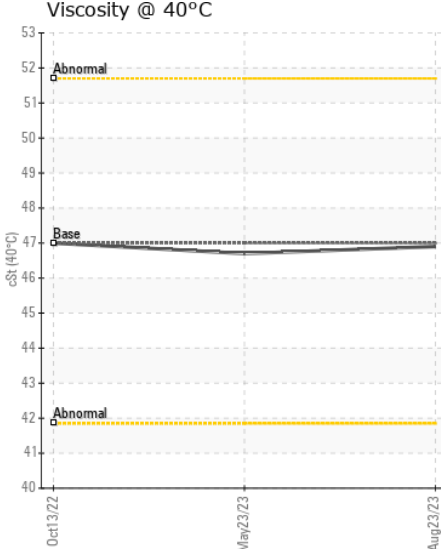
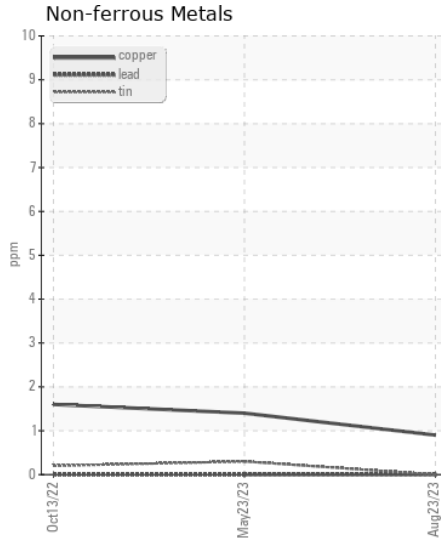
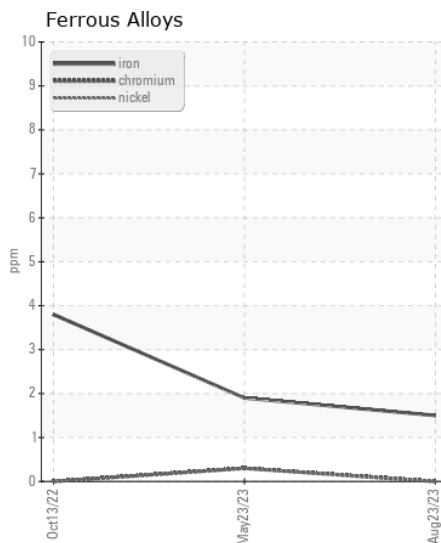
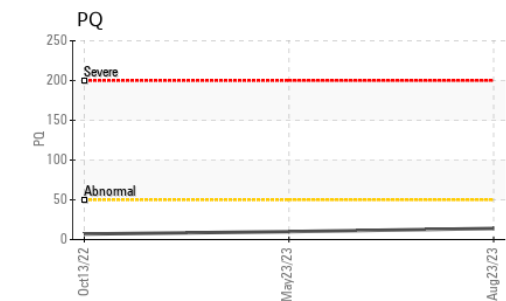
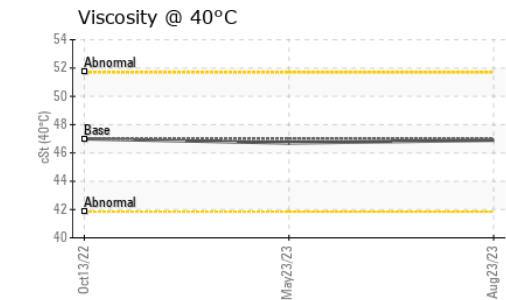
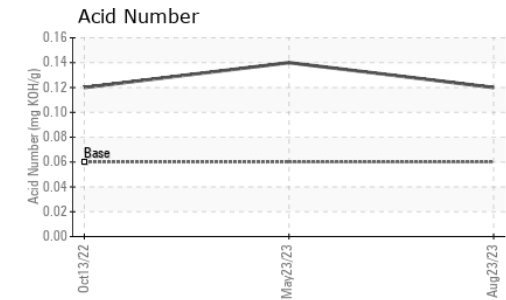
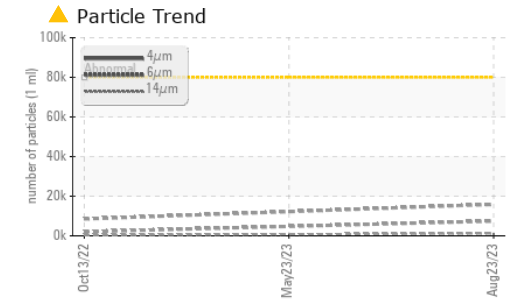
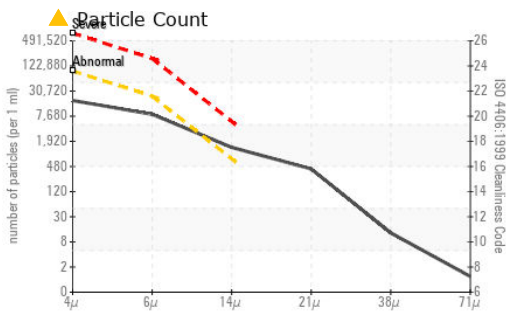
There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>11	<1	<1	<1
Potassium	ppm	ASTM D5185m	>20	<1	1	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	15864	---	8534
Particles >6µm		ASTM D7647	>20000	7430	---	2083
Particles >14µm		ASTM D7647	>640	● 1207	---	315
Particles >21µm		ASTM D7647	>160	▲ 369	---	118
Particles >38µm		ASTM D7647	>40	11	---	4
Particles >71µm		ASTM D7647	>10	1	---	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	● 21/20/17	---	20/18/15
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	>0.075	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	>21	0	<1	0
Boron	ppm	ASTM D5185m		0	1	0
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		0	2	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		0	19	<1
Calcium	ppm	ASTM D5185m		0	117	0
Phosphorus	ppm	ASTM D5185m	827	520	513	519
Zinc	ppm	ASTM D5185m	0	11	56	22
Sulfur	ppm	ASTM D5185m	13	0	97	126
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.12	0.14	0.12
Visc @ 40°C	cSt	ASTM D445	47	46.9	46.7	47.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0182606 **Received** : 24 Aug 2023
Lab Number : 05933422 **Tested** : 25 Aug 2023
Unique Number : 10618693 **Diagnosed** : 25 Aug 2023 - Wes Davis
Test Package : CONST (Additional Tests: PQ)

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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)