



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
HITACHI 470 HCMJAA70C00030815
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. 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		JR0212025	JR0199892	JR0179624
Sample Date		Client Info		20 Jun 2024	26 Feb 2024	27 Nov 2023
Machine Age	hrs	Client Info		17963	17465	17018
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Not Changed	Not Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		21	11	12
Iron	ppm	ASTM D5185m	>20	0	10	2
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	2	1
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	9	7	0
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

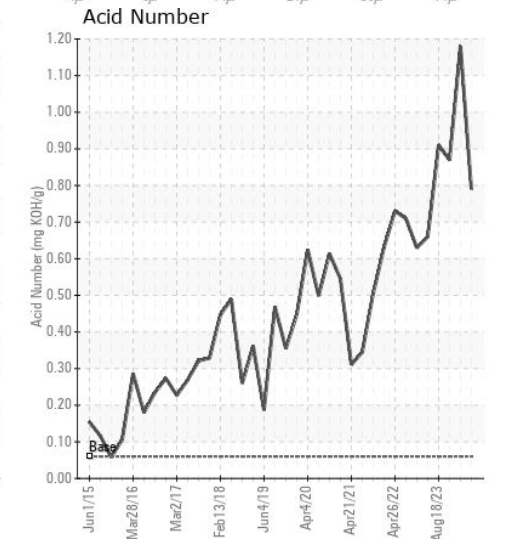
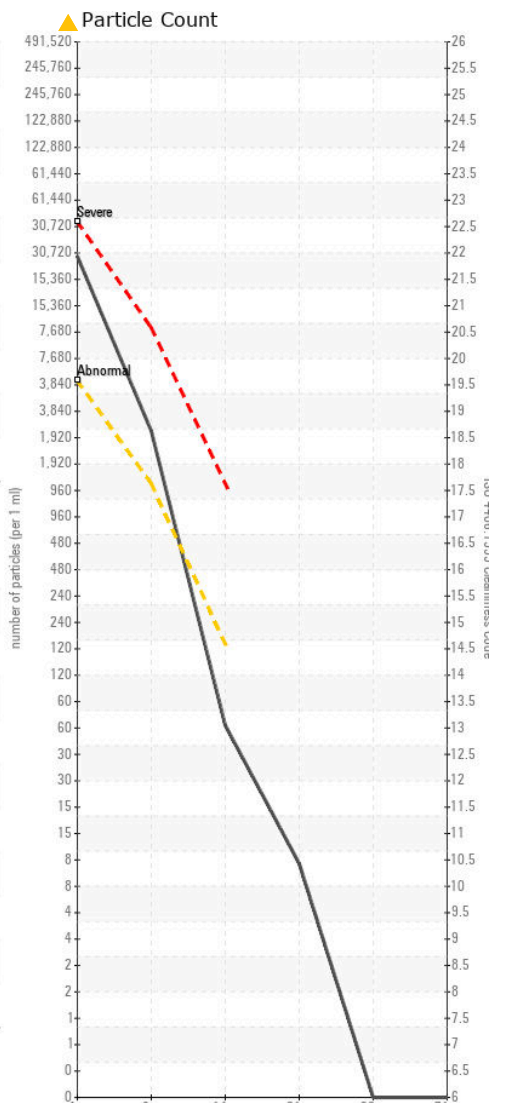
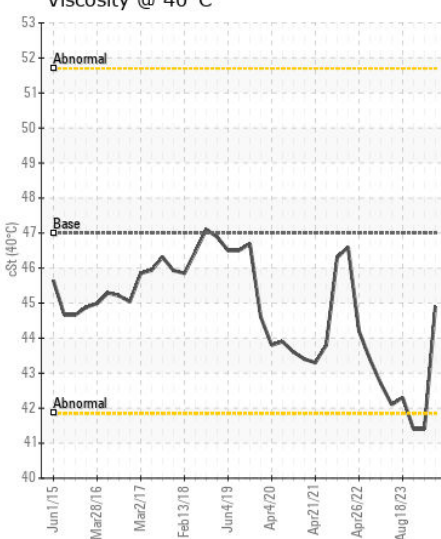
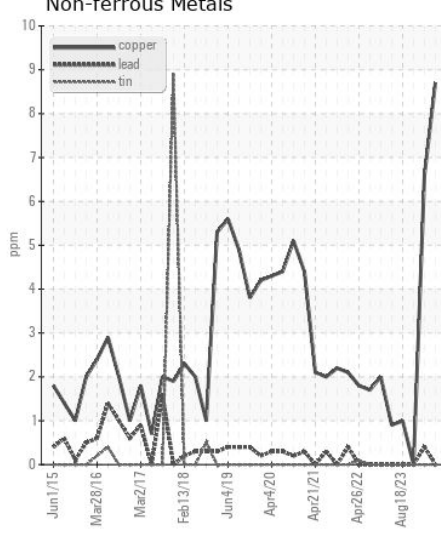
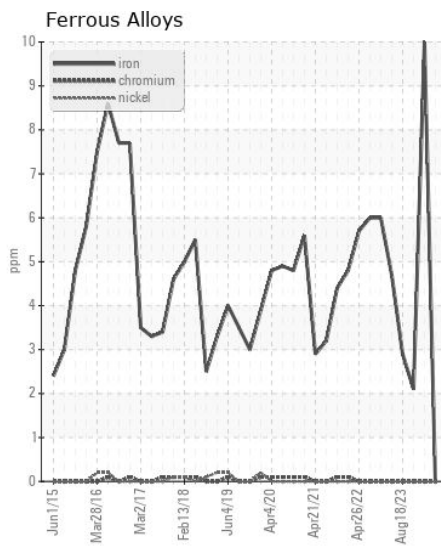
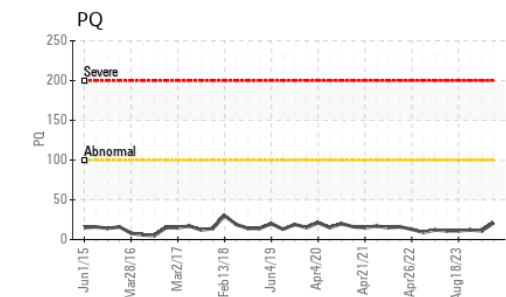
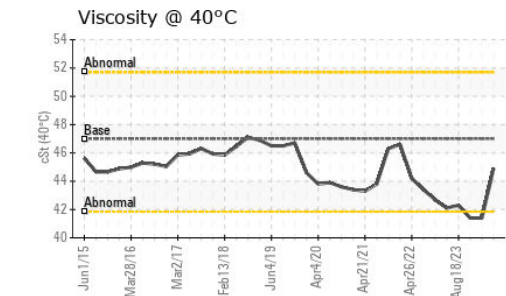
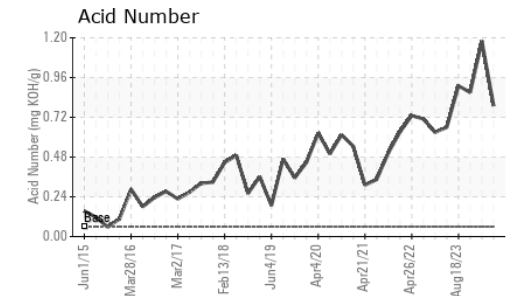
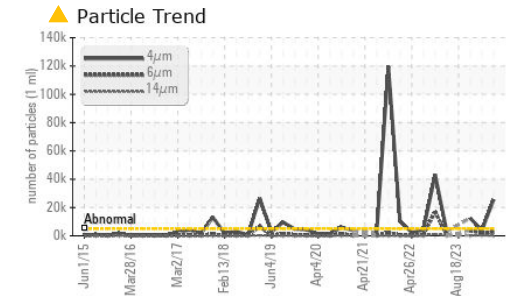
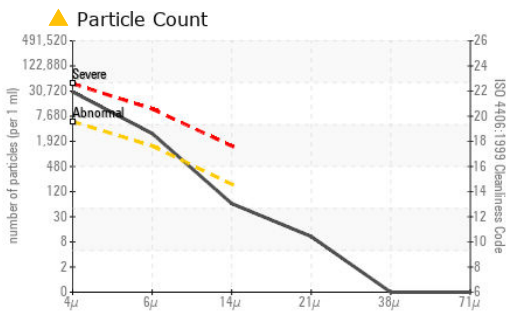
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>20	2	5	3
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 25495	3758	▲ 12518
Particles >6µm		ASTM D7647	>1300	▲ 2591	▲ 2047	▲ 3368
Particles >14µm		ASTM D7647	>160	55	▲ 348	▲ 183
Particles >21µm		ASTM D7647	>40	9	▲ 117	34
Particles >38µm		ASTM D7647	>10	0	▲ 18	2
Particles >71µm		ASTM D7647	>3	0	2	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 22/19/13	▲ 19/18/16	▲ 21/19/15
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	0.2%	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		2	2	0
Boron	ppm	ASTM D5185m		0	<1	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		<1	7	7
Calcium	ppm	ASTM D5185m		1008	1398	1543
Phosphorus	ppm	ASTM D5185m	827	651	956	899
Zinc	ppm	ASTM D5185m	0	538	748	689
Sulfur	ppm	ASTM D5185m	13	1584	1996	1733
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.79	1.18	0.87
Visc @ 40°C	cSt	ASTM D445	47	44.9	41.4	41.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0212025 **Received** : 25 Jun 2024
Lab Number : 06219591 **Tested** : 26 Jun 2024
Unique Number : 11097788 **Diagnosed** : 26 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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Certificate L2367
 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)