



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
HITACHI HCMDAT60V00200473
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0217729	JR0195902	JR0174912
Sample Date		Client Info		29 May 2024	15 Dec 2023	26 May 2023
Machine Age	hrs	Client Info		3472	2985	2468
Oil Age	hrs	Client Info		3472	2985	2468
Filter Age	hrs	Client Info		3472	0	2468
Oil Changed		Client Info		Not Chngd	N/A	Not Chngd
Filter Changed		Client Info		Not Chngd	N/A	Not Chngd
Sample Status				ABNORMAL	ABNORMAL	ATTENTION

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		12	15	11
Iron	ppm	ASTM D5185m	>20	8	8	6
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	<1	0
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>75	3	4	4
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

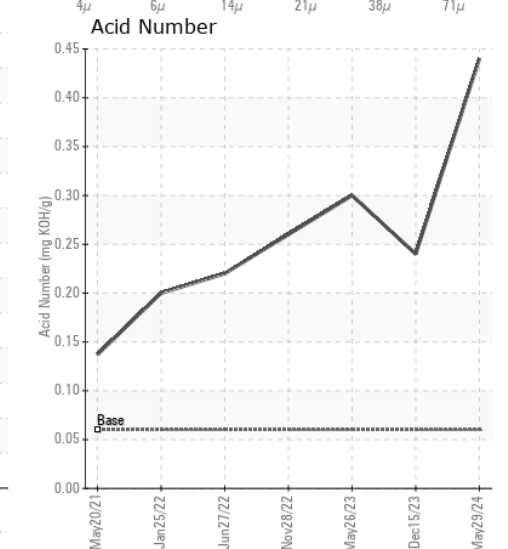
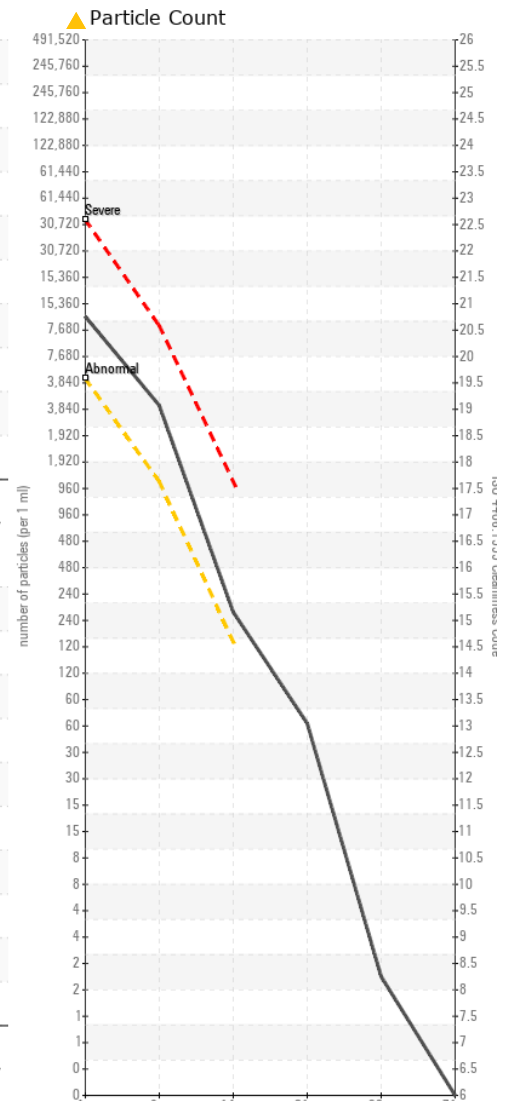
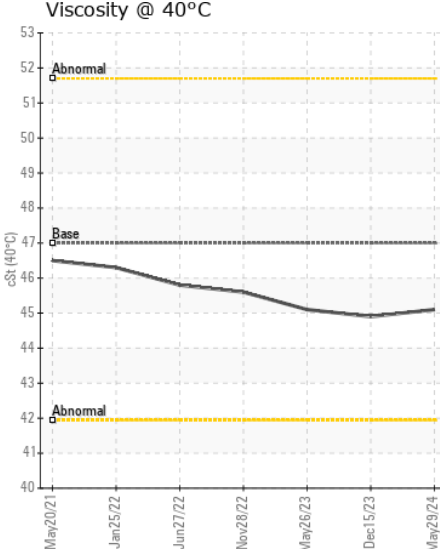
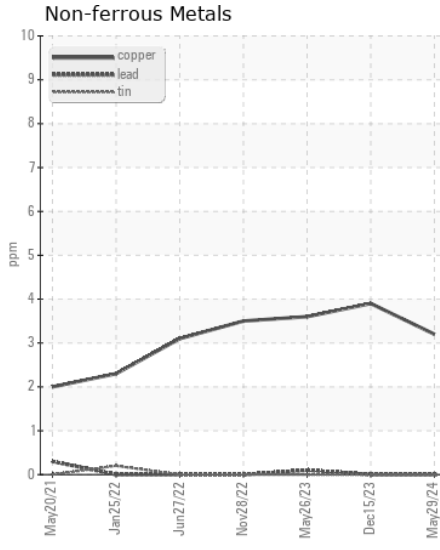
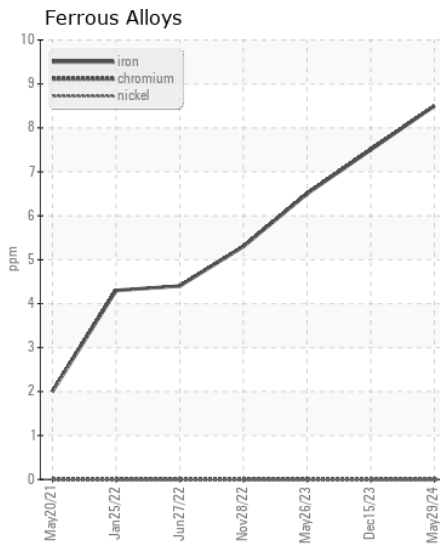
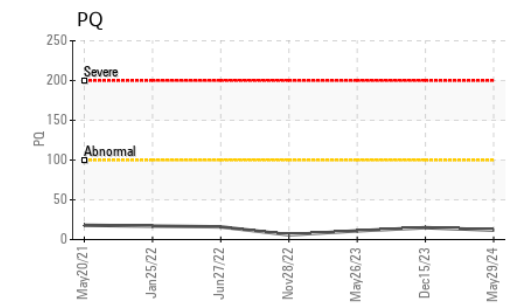
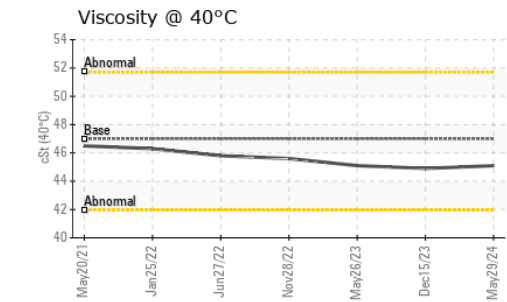
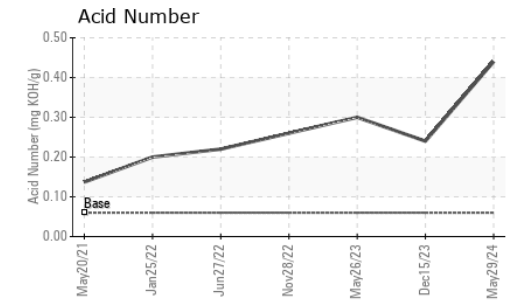
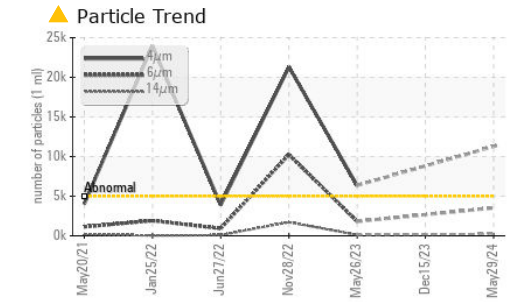
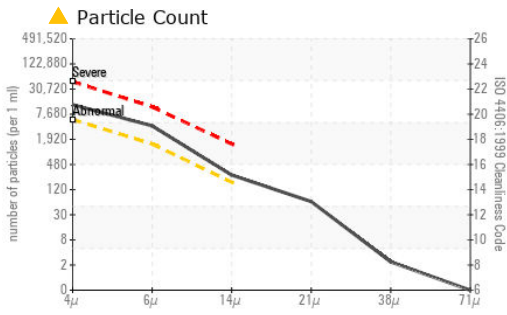
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>20	2	3	2
Potassium	ppm	ASTM D5185m	>20	0	0	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 11279	---	● 6361
Particles >6µm		ASTM D7647	>1300	▲ 3523	---	● 1814
Particles >14µm		ASTM D7647	>160	▲ 236	---	107
Particles >21µm		ASTM D7647	>40	▲ 55	---	22
Particles >38µm		ASTM D7647	>10	2	---	1
Particles >71µm		ASTM D7647	>3	0	---	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/19/15	---	● 20/18/14
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER	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

The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

Sodium	ppm	ASTM D5185m		1	1	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		1	<1	1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		4	0	5
Calcium	ppm	ASTM D5185m		58	43	44
Phosphorus	ppm	ASTM D5185m	827	417	432	429
Zinc	ppm	ASTM D5185m	0	237	194	197
Sulfur	ppm	ASTM D5185m	13	572	401	469
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.44	0.24	0.30
Visc @ 40°C	cSt	ASTM D445	47	45.1	44.9	45.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0217729 **Received** : 31 May 2024
Lab Number : 06196569 **Tested** : 03 Jun 2024
Unique Number : 11058692 **Diagnosed** : 03 Jun 2024 - Don Baldrige
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)