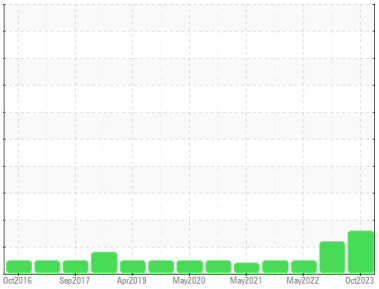
PROBLEM SUMMARY

Sample Rating Trend

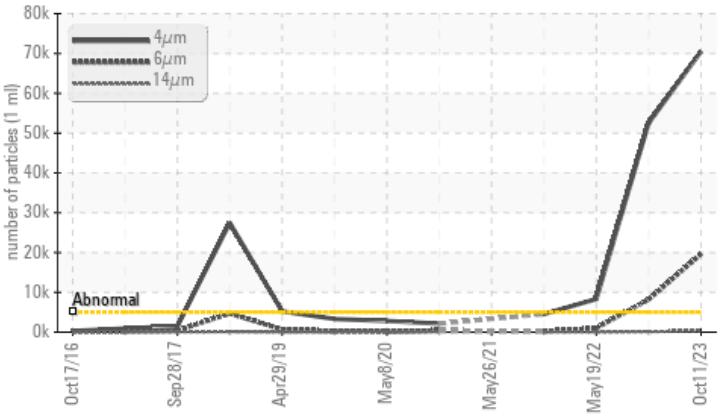


ISO

Machine Id
HITACHI 135 HCMDAF60P00100353
Component
Hydraulic System
Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

COMPONENT CONDITION SUMMARY

Particle Trend



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.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	NORMAL
Particles >4µm		ASTM D7647	>5000	▲ **70504**	▲ 52537	8314
Particles >6µm		ASTM D7647	>1300	▲ **19594**	▲ 8178	988
Particles >14µm		ASTM D7647	>160	▲ **299**	123	22
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **23/21/15**	▲ 23/20/14	20/17/12

Customer Id: JAMASH
Sample No.: JR0179279
Lab Number: 05978190
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

05 Apr 2023 Diag: Don Baldridge

ISO

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.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

19 May 2022 Diag: Don Baldridge

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

11 Nov 2021 Diag: Don Baldridge

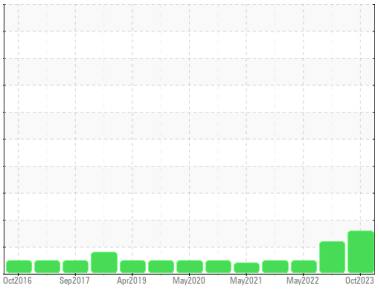
NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
HITACHI 135 HCMDAF60P00100353
Component
Hydraulic System
Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

DIAGNOSIS

▲ 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.

Wear
All component wear rates are normal.

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

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**JR0179279**	JR0164377	JR0124343
Sample Date		Client Info		**11 Oct 2023**	05 Apr 2023	19 May 2022
Machine Age	hrs	Client Info		**6959**	6497	5959
Oil Age	hrs	Client Info		**0**	0	2000
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**17**	21	21
Iron	ppm	ASTM D5185m	>20	**30**	31	24
Chromium	ppm	ASTM D5185m	>10	**4**	5	3
Nickel	ppm	ASTM D5185m	>10	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	**4**	4	3
Lead	ppm	ASTM D5185m	>10	**0**	0	<1
Copper	ppm	ASTM D5185m	>75	**3**	3	3
Tin	ppm	ASTM D5185m	>10	**0**	0	0
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**5**	7	14
Barium	ppm	ASTM D5185m		**1**	0	0
Molybdenum	ppm	ASTM D5185m		**11**	11	11
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m		**37**	37	41
Calcium	ppm	ASTM D5185m		**105**	85	88
Phosphorus	ppm	ASTM D5185m	827	**455**	489	483
Zinc	ppm	ASTM D5185m	0	**215**	193	191
Sulfur	ppm	ASTM D5185m	13	**453**	523	360

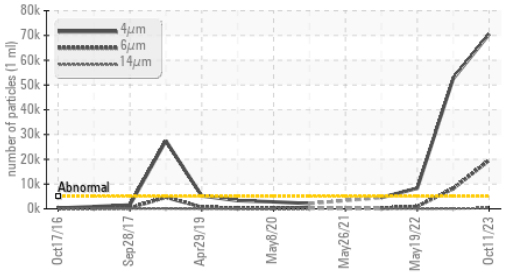
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**9**	8	6
Sodium	ppm	ASTM D5185m		**3**	2	0
Potassium	ppm	ASTM D5185m	>20	**0**	<1	2

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **70504**	▲ 52537	8314
Particles >6µm		ASTM D7647	>1300	▲ **19594**	▲ 8178	988
Particles >14µm		ASTM D7647	>160	▲ **299**	123	22
Particles >21µm		ASTM D7647	>40	**26**	10	3
Particles >38µm		ASTM D7647	>10	**1**	0	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **23/21/15**	▲ 23/20/14	20/17/12

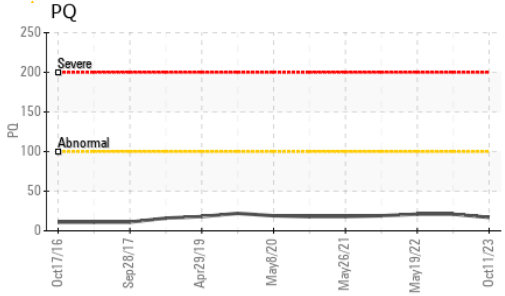
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	**0.32**	0.25	0.39

OIL ANALYSIS REPORT

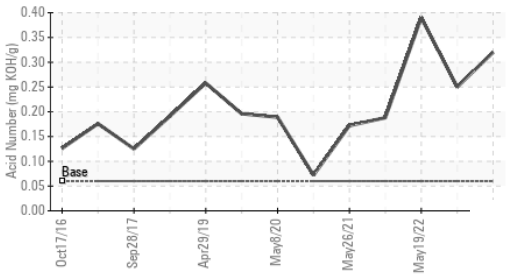
Particle Trend



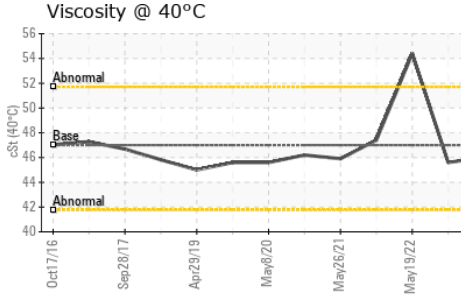
PQ



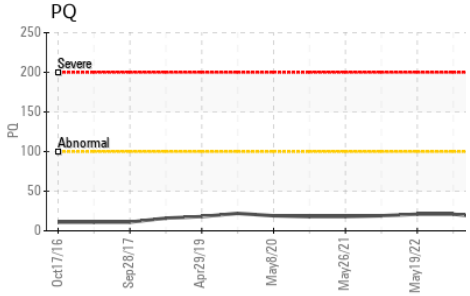
Acid Number



Viscosity @ 40°C

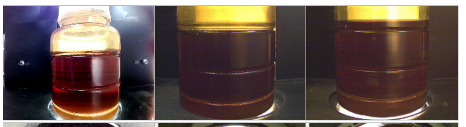
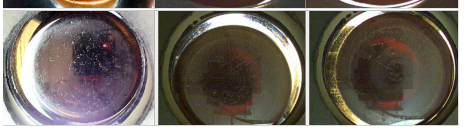


PQ



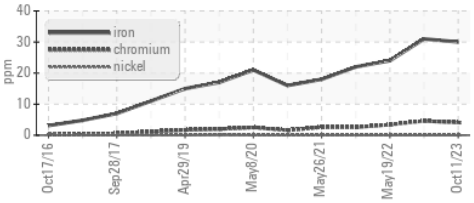
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	47	**46.0**	45.6	54.4

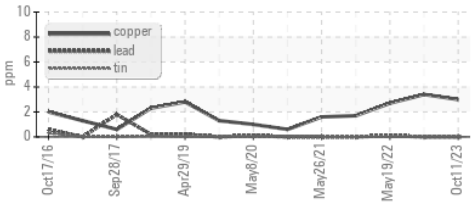
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

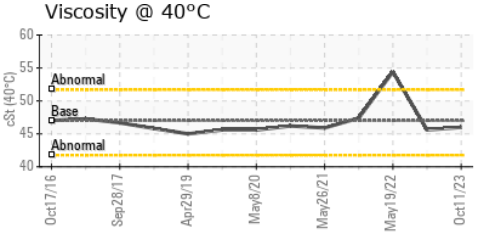
Ferrous Alloys



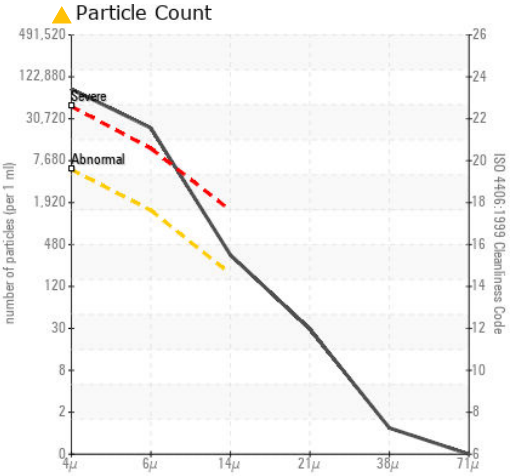
Non-ferrous Metals



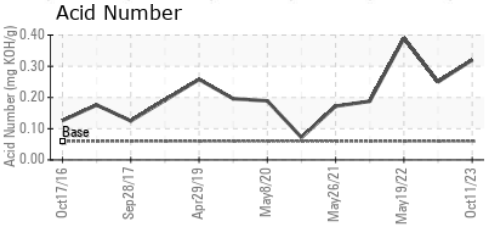
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: JR0179279	**Received**	: 13 Oct 2023
Lab Number	: 05978190	**Diagnosed**	: 17 Oct 2023
Unique Number	: 10695485	**Diagnostician**	: Don Baldridge
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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ASHLAND, VA
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