



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ATTENTION</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**HITACHI HCMDD560E00010035**  
 Component  
**Hydraulic System**  
 Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)**

### RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0212961</b>	JR0197575	JR0163461
Sample Date		Client Info		<b>15 Apr 2024</b>	19 Jan 2024	24 Mar 2023
Machine Age	hrs	Client Info		<b>8043</b>	7983	6044
Oil Age	hrs	Client Info		<b>5147</b>	7026	957
Filter Age	hrs	Client Info		<b>0</b>	0	957
Oil Changed		Client Info		<b>Not Chngd</b>	N/A	Not Chngd
Filter Changed		Client Info		<b>Not Chngd</b>	N/A	Changed
Sample Status				<b>ATTENTION</b>	ABNORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	<b>18</b>	19	22
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	1
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>75	<b>1</b>	2	3
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

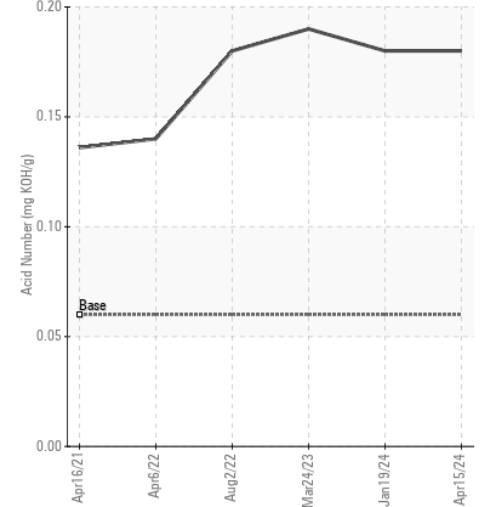
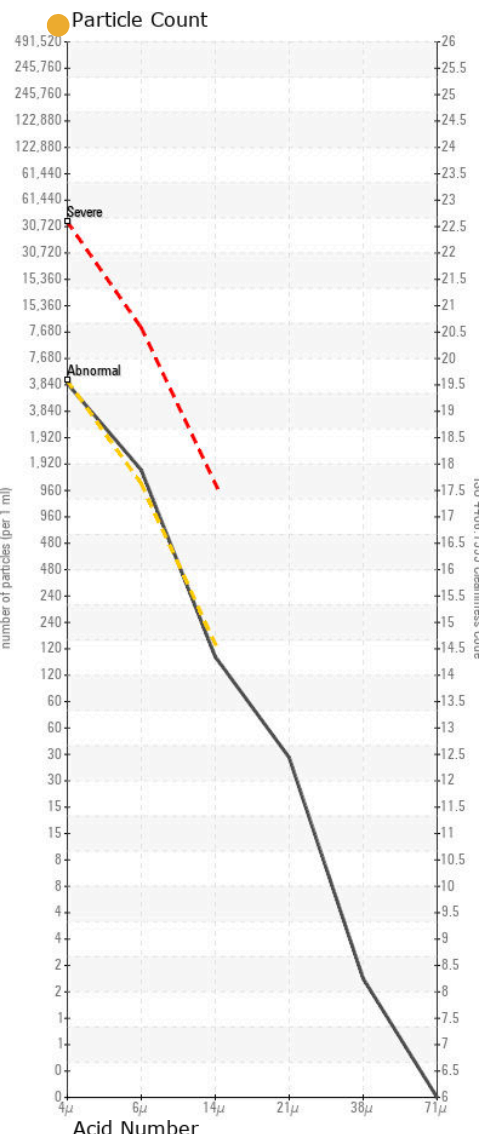
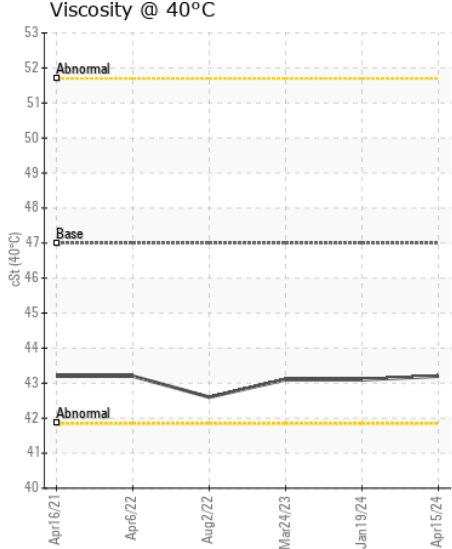
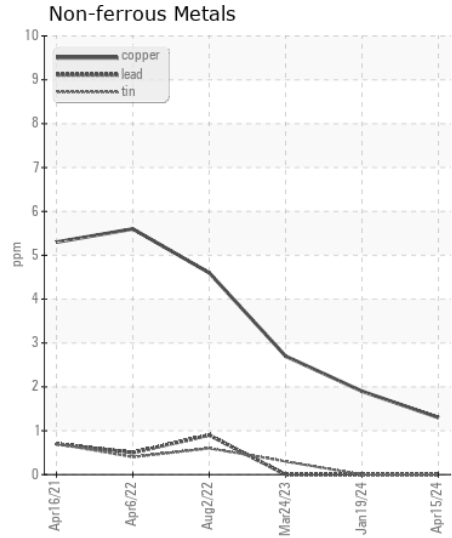
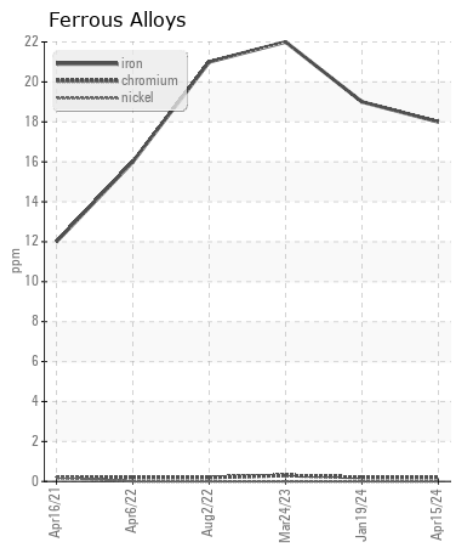
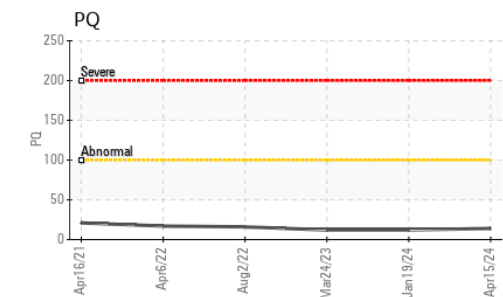
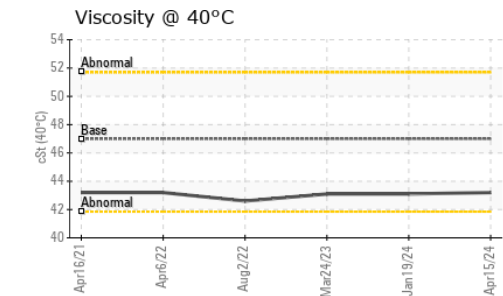
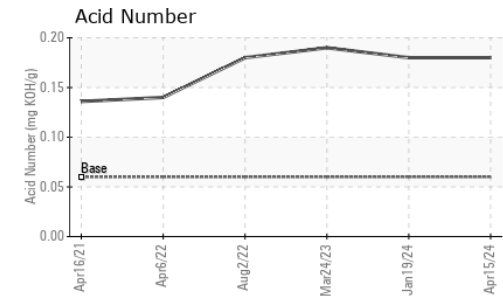
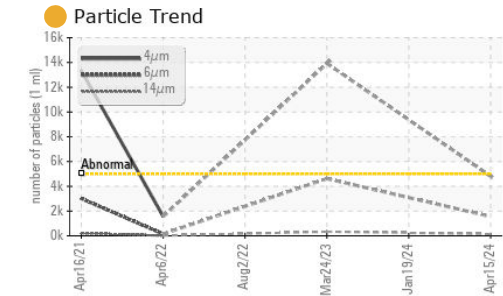
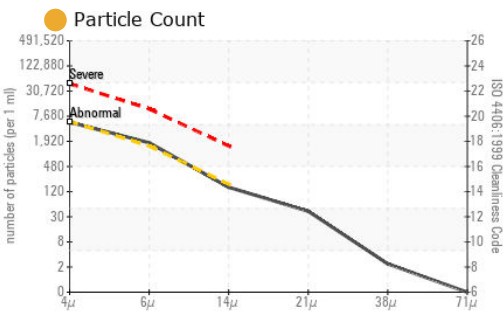
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>1</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>4815</b>	---	▲ 13925
Particles >6µm		ASTM D7647	>1300	<b>1554</b>	---	▲ 4616
Particles >14µm		ASTM D7647	>160	<b>135</b>	---	▲ 332
Particles >21µm		ASTM D7647	>40	<b>36</b>	---	▲ 84
Particles >38µm		ASTM D7647	>10	<b>2</b>	---	2
Particles >71µm		ASTM D7647	>3	<b>0</b>	---	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>19/18/14</b>	---	▲ 21/19/16
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	▲ MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	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		<b>3</b>	1	2
Boron	ppm	ASTM D5185m		<b>0</b>	0	4
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>0</b>	<1	2
Calcium	ppm	ASTM D5185m		<b>3</b>	5	4
Phosphorus	ppm	ASTM D5185m	827	<b>357</b>	332	420
Zinc	ppm	ASTM D5185m	0	<b>52</b>	61	87
Sulfur	ppm	ASTM D5185m	13	<b>637</b>	653	850
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	<b>0.18</b>	0.18	0.19
Visc @ 40°C	cSt	ASTM D445	47	<b>43.2</b>	43.1	43.1



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0212961 **Received** : 17 Apr 2024  
**Lab Number** : 06151890 **Tested** : 18 Apr 2024  
**Unique Number** : 10981968 **Diagnosed** : 19 Apr 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: PQ )

**JRE - GARNER**  
 4161 AUBURN CHURCH RD  
 GARNER, NC  
 US 27529  
 Contact: RALEIGH SHOP  
 sean.betts@jamesriverequipment.com; catherine.anastasio@wearcheck.com  
 T: (919)614-2260  
 F: (919)779-5432

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)