



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

Area  
**[05W46818]**

Machine Id  
**HITACHI 245LC-6 HCMDFD60P00700165**

Component  
**Hydraulic System**

Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (34 GAL)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. 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>JR0217791</b>	JR0183767	JR0146566
Sample Date		Client Info		<b>24 May 2024</b>	08 Sep 2023	27 Sep 2022
Machine Age	hrs	Client Info		<b>4461</b>	4461	3937
Oil Age	hrs	Client Info		<b>5000</b>	4461	3937
Filter Age	hrs	Client Info		<b>1000</b>	0	1000
Oil Changed		Client Info		<b>Changed</b>	N/A	Not Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

The iron level is abnormal. All other component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	<b>▲ 31</b>	▲ 36	▲ 31
Chromium	ppm	ASTM D5185m	>10	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m		<b>1</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>1</b>	0	<1
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>75	<b>6</b>	4	3
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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 no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

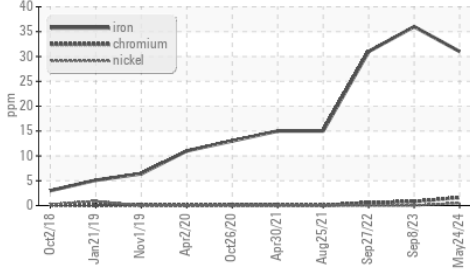
Silicon	ppm	ASTM D5185m	>20	<b>6</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>2907</b>	3277	● 6966
Particles >6µm		ASTM D7647	>1300	<b>236</b>	816	343
Particles >14µm		ASTM D7647	>160	<b>9</b>	83	18
Particles >21µm		ASTM D7647	>40	<b>2</b>	19	5
Particles >38µm		ASTM D7647	>10	<b>0</b>	0	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>19/15/10</b>	19/17/14	● 20/16/11
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	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

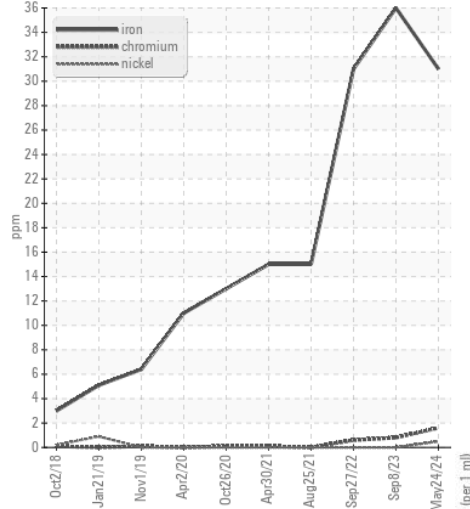
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	1	1
Boron	ppm	ASTM D5185m		<b>1</b>	<1	2
Barium	ppm	ASTM D5185m		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>2</b>	0	2
Calcium	ppm	ASTM D5185m		<b>105</b>	145	153
Phosphorus	ppm	ASTM D5185m	827	<b>473</b>	498	478
Zinc	ppm	ASTM D5185m	0	<b>118</b>	102	112
Sulfur	ppm	ASTM D5185m	13	<b>504</b>	460	445
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	<b>0.27</b>	0.20	0.14
Visc @ 40°C	cSt	ASTM D445	47	<b>44.4</b>	45.7	46.5

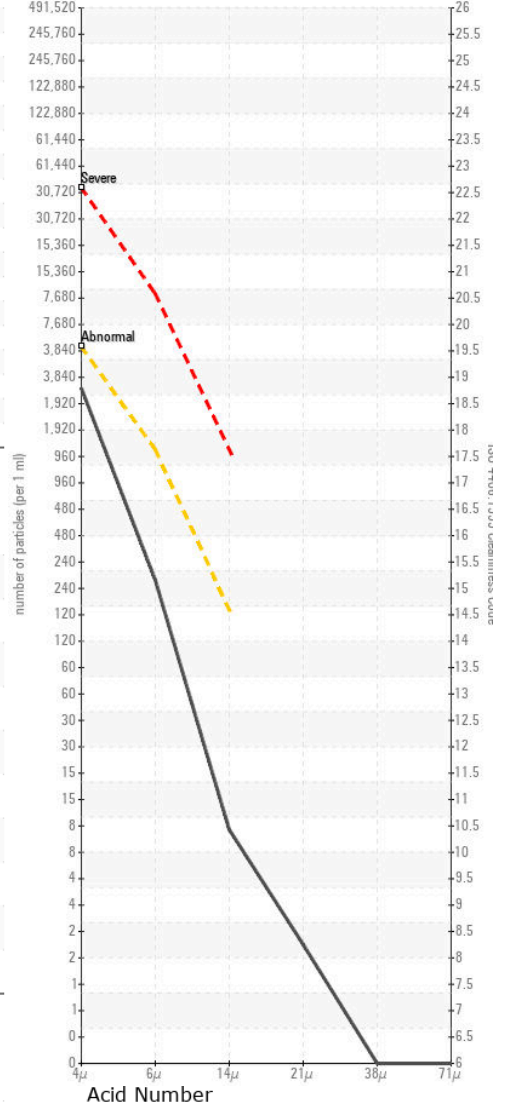
**▲ Ferrous Alloys**



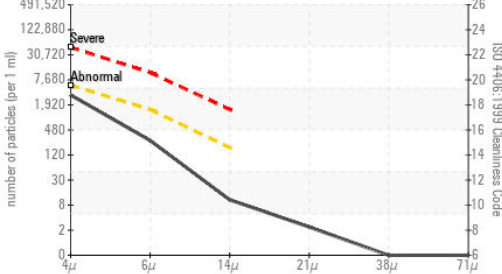
**▲ Ferrous Alloys**



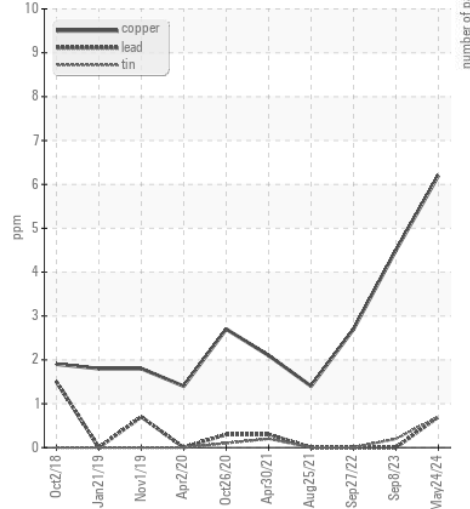
**Particle Count**



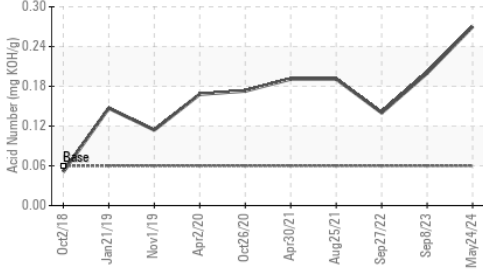
**Particle Count**



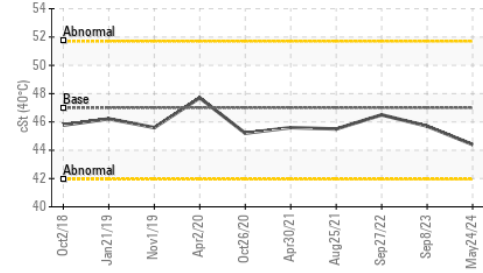
**Non-ferrous Metals**



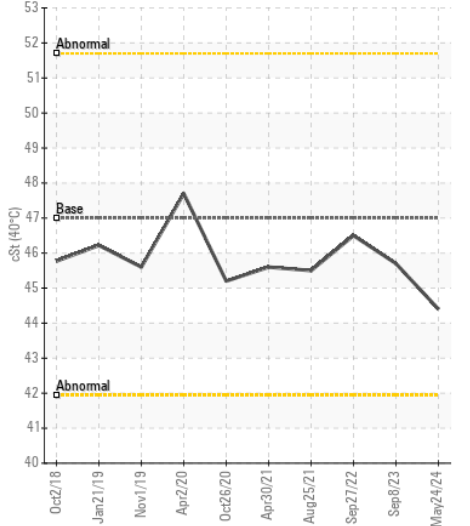
**Acid Number**



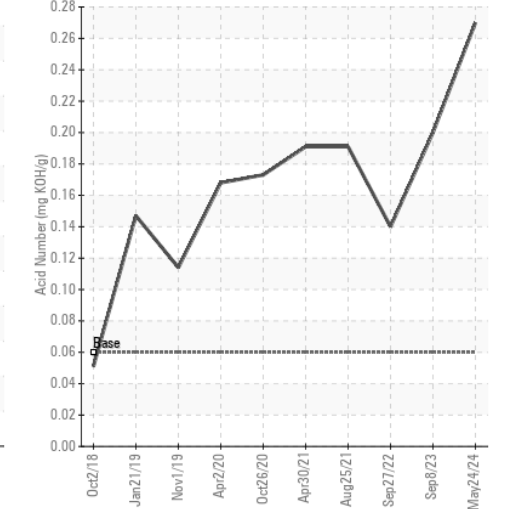
**Viscosity @ 40°C**



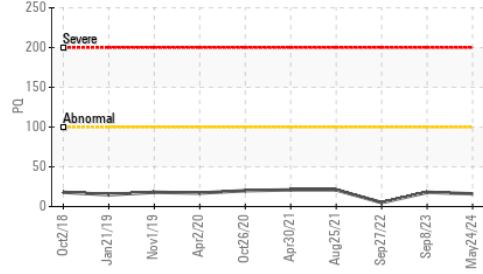
**Viscosity @ 40°C**



**Acid Number**



**PQ**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0217791 **Received** : 29 May 2024  
**Lab Number** : 06194606 **Tested** : 30 May 2024  
**Unique Number** : 11056729 **Diagnosed** : 31 May 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: PQ )

**JRE - MANASSAS PARK**  
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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)