



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

Area  
**[W046747]**  
 Machine Id  
**EPIROC TMG22SED0499**  
 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>JR0197644</b>	JR0186148	JR0185968
Sample Date		Client Info		<b>08 Jan 2024</b>	31 Oct 2023	06 Sep 2023
Machine Age	hrs	Client Info		<b>1272</b>	1016	784
Oil Age	hrs	Client Info		<b>0</b>	1016	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Filter Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
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>3</b>	2	8
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	2
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	0	1
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>75	<b>1</b>	5	31
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

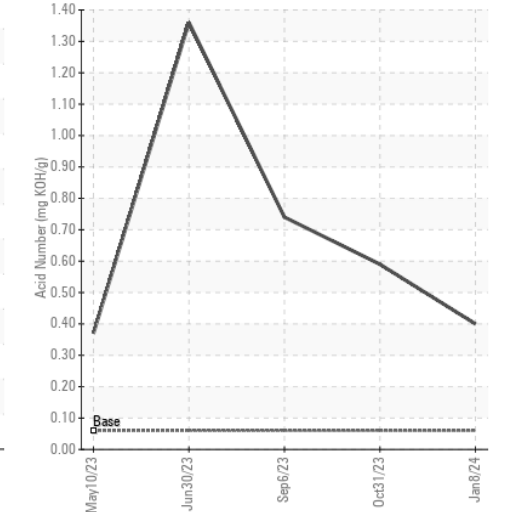
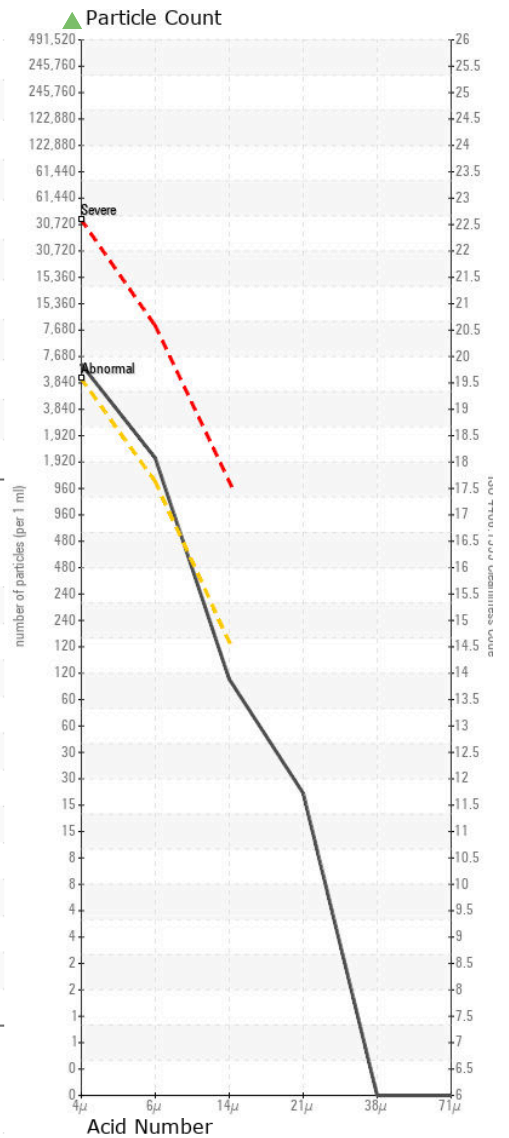
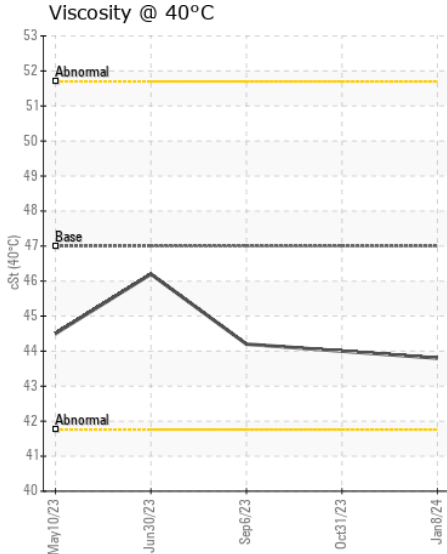
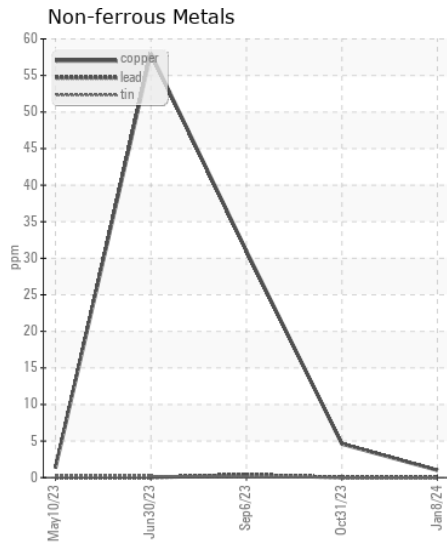
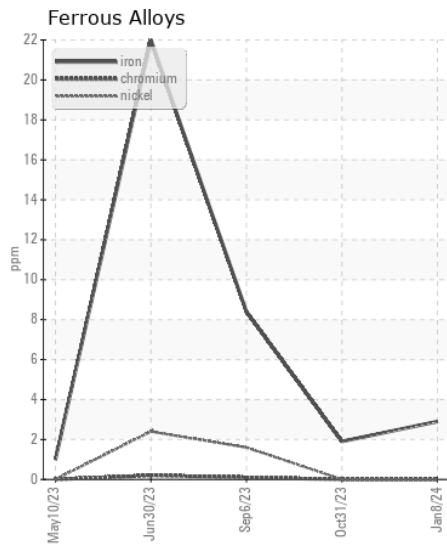
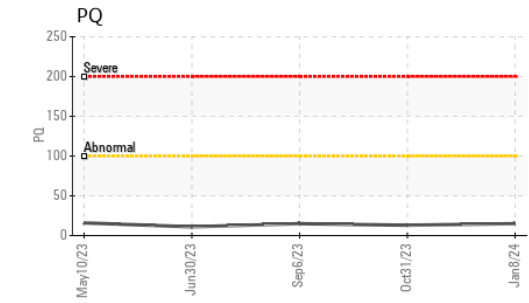
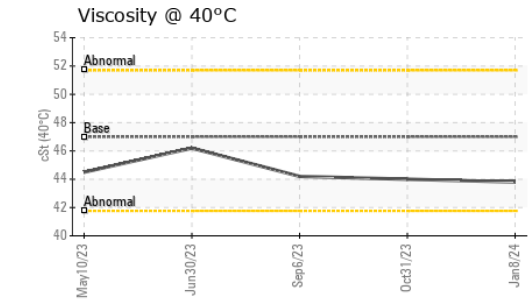
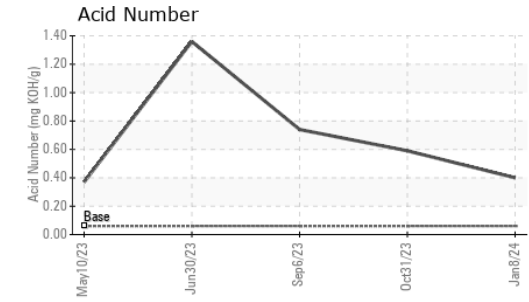
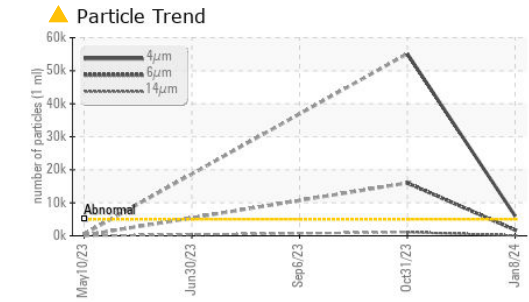
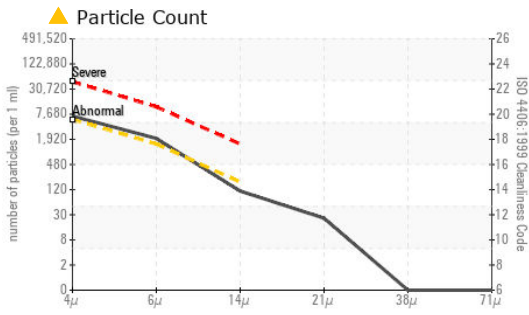
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>▲ 6027</b>	▲ 55125	---
Particles >6µm		ASTM D7647	>1300	<b>▲ 1768</b>	▲ 16003	---
Particles >14µm		ASTM D7647	>160	<b>98</b>	▲ 1103	---
Particles >21µm		ASTM D7647	>40	<b>22</b>	▲ 131	---
Particles >38µm		ASTM D7647	>10	<b>0</b>	3	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 20/18/14</b>	▲ 23/21/17	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	▲ MODER
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	▲ MODER
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	0
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>46</b>	48	38
Calcium	ppm	ASTM D5185m		<b>17</b>	19	20
Phosphorus	ppm	ASTM D5185m	827	<b>287</b>	276	290
Zinc	ppm	ASTM D5185m	0	<b>325</b>	334	426
Sulfur	ppm	ASTM D5185m	13	<b>808</b>	821	946
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	<b>0.40</b>	0.59	0.74
Visc @ 40°C	cSt	ASTM D445	47	<b>43.8</b>	44.0	44.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0197644 **Received** : 12 Jan 2024  
**Lab Number** : 06059193 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830575 **Diagnostician** : Don Baldrige  
**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)

**WAKE STONE CORP**  
 6811 HWY 64 EAST  
 KNIGHTDALE, NC  
 US 27545

Contact: PAUL SPRUILL  
 paulspruill@wakestonecorp.com

T:  
 F: