



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**HIAWATHA**  
Component  
**Hydraulic System**

Fluid  
**AW HYDRAULIC OIL ISO 32 (--- 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>BB0000198</b>	---	---
Sample Date		Client Info		<b>17 Dec 2023</b>	---	---
Machine Age	hrs	Client Info		<b>0</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Filter Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>N/A</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Nickel	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m		<b>0</b>	---	---
Silver	ppm	ASTM D5185m		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Lead	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Copper	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Tin	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	---	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---

**CONTAMINATION**

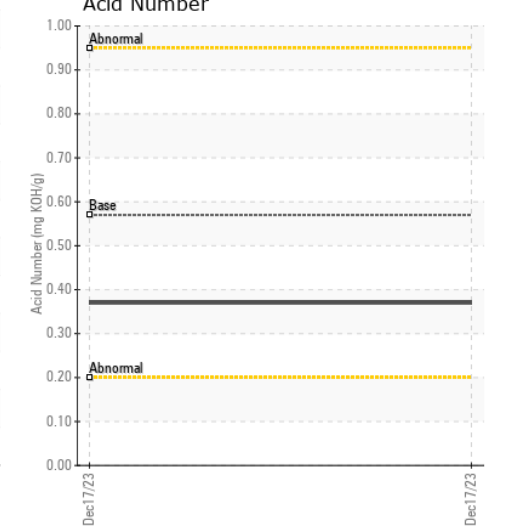
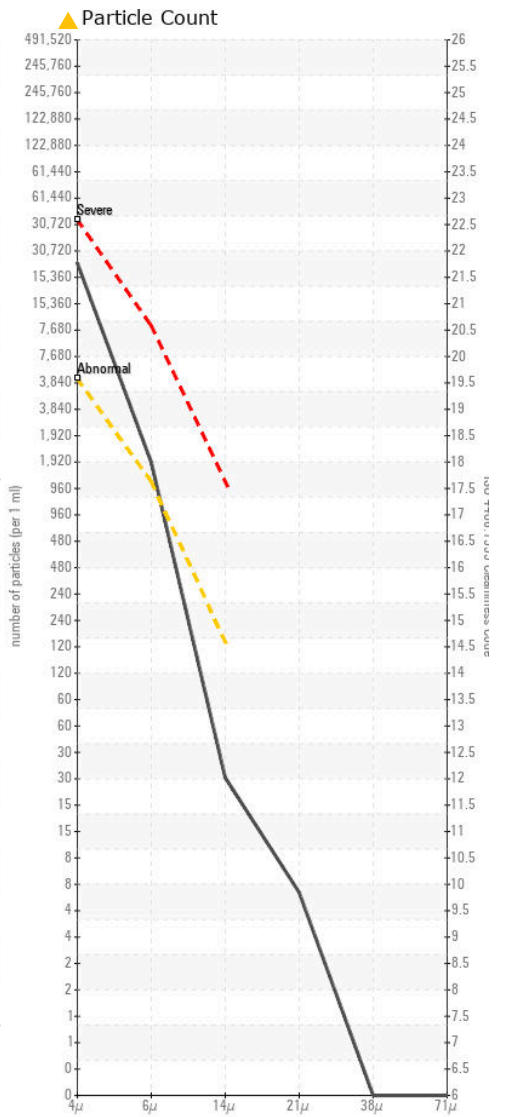
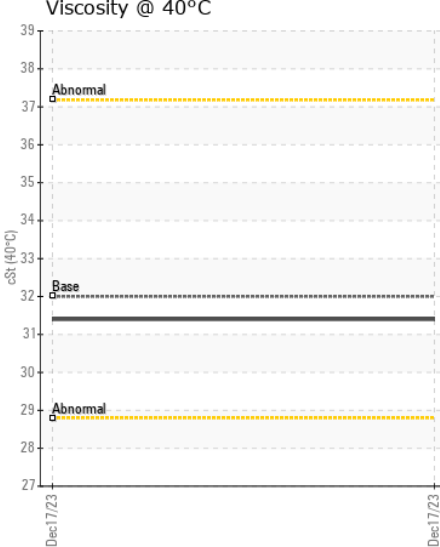
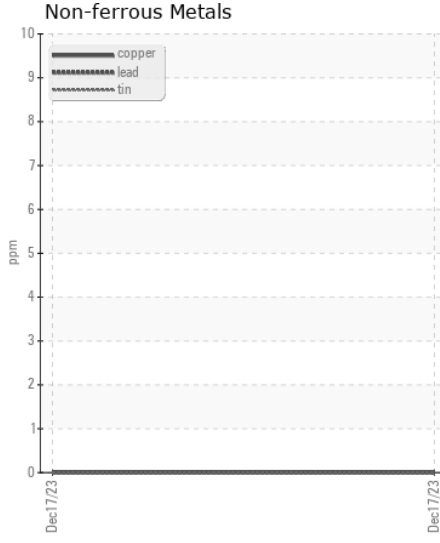
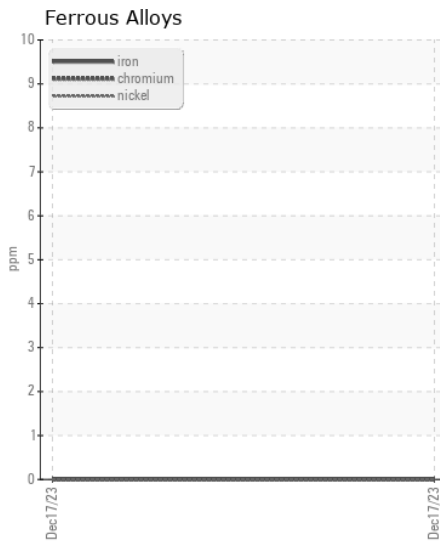
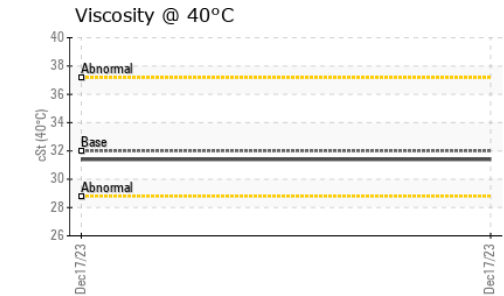
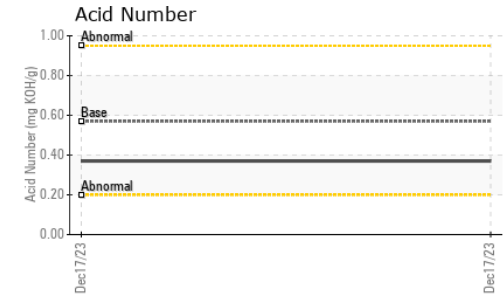
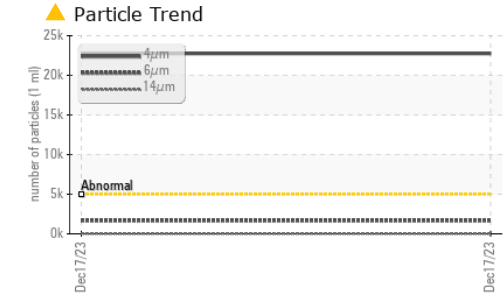
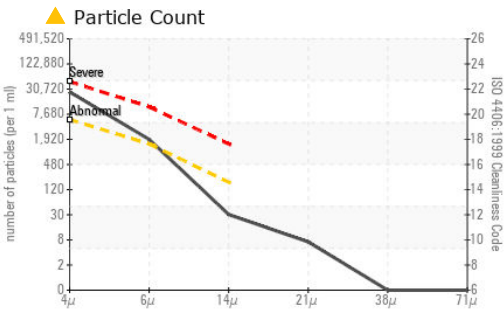
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>15	<b>2</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	---	---
Water	%	ASTM D6304	>0.05	<b>NEG</b>	---	---
Particles >4µm		ASTM D7647	>5000	<b>▲ 22746</b>	---	---
Particles >6µm		ASTM D7647	>1300	<b>● 1671</b>	---	---
Particles >14µm		ASTM D7647	>160	<b>27</b>	---	---
Particles >21µm		ASTM D7647	>40	<b>6</b>	---	---
Particles >38µm		ASTM D7647	>10	<b>0</b>	---	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 22/18/12</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.05	<b>NEG</b>	---	---

**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>2</b>	---	---
Boron	ppm	ASTM D5185m	5	<b>0</b>	---	---
Barium	ppm	ASTM D5185m	5	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	5	<b>0</b>	---	---
Manganese	ppm	ASTM D5185m		<b>0</b>	---	---
Magnesium	ppm	ASTM D5185m	25	<b>0</b>	---	---
Calcium	ppm	ASTM D5185m	200	<b>34</b>	---	---
Phosphorus	ppm	ASTM D5185m	300	<b>356</b>	---	---
Zinc	ppm	ASTM D5185m	370	<b>415</b>	---	---
Sulfur	ppm	ASTM D5185m	2500	<b>757</b>	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.37</b>	---	---
Visc @ 40°C	cSt	ASTM D445	32	<b>31.4</b>	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : BB0000198  
**Lab Number** : 06037753  
**Unique Number** : 10792982  
**Test Package** : PLANT

**Received** : 18 Dec 2023  
**Tested** : 20 Dec 2023  
**Diagnosed** : 20 Dec 2023 - Don Baldrige

**TK Elevator - Kirkland**  
 12530 135th Ave NE  
 Kirkland, WA  
 US 98034  
 Contact: Chuck Rife  
 chuck.rife@tkelevator.com

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)

T:  
F: