



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

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

Machine Id  
**HANSON**  
 Component  
**Gearbox**  
 Fluid  
**TRC MOLY ULTRA-TEC GEAR OIL 80W90 (5 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>TR06211918</b>	TR06169124	---
Sample Date		Client Info		<b>09 Jun 2024</b>	26 Apr 2024	---
Machine Age	hrs	Client Info		<b>0</b>	0	---
Oil Age	hrs	Client Info		<b>140</b>	51	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	---
Filter Changed		Client Info		<b>Not Changed</b>	Not Changed	---
Sample Status				<b>ABNORMAL</b>	ABNORMAL	---

**WEAR**

Gear wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	<b>▲ 261</b>	▲ 201	---
Chromium	ppm	ASTM D5185m	>10	<b>4</b>	2	---
Nickel	ppm	ASTM D5185m	>10	<b>2</b>	0	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>25	<b>4</b>	2	---
Lead	ppm	ASTM D5185m	>50	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>200	<b>2</b>	1	---
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

There is no indication of any contamination in the oil.

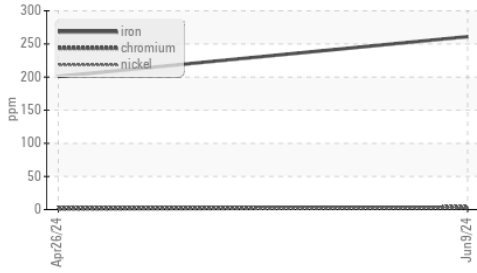
Silicon	ppm	ASTM D5185m	>50	<b>9</b>	6	---
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	1	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	---

**FLUID CONDITION**

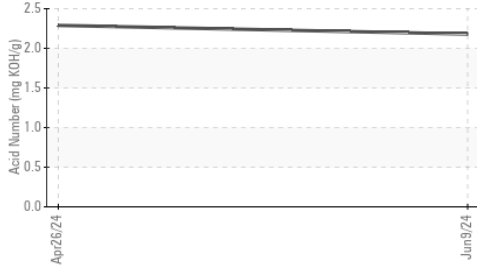
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>5</b>	3	---
Boron	ppm	ASTM D5185m		<b>109</b>	135	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	---
Manganese	ppm	ASTM D5185m		<b>2</b>	1	---
Magnesium	ppm	ASTM D5185m		<b>4</b>	3	---
Calcium	ppm	ASTM D5185m		<b>13</b>	47	---
Phosphorus	ppm	ASTM D5185m		<b>913</b>	915	---
Zinc	ppm	ASTM D5185m		<b>11</b>	16	---
Sulfur	ppm	ASTM D5185m		<b>24126</b>	23696	---
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>2.18</b>	2.29	---
Visc @ 40°C	cSt	ASTM D445	186	<b>151</b>	151	---
Visc @ 100°C	cSt	ASTM D445	19.3	<b>16.3</b>	16.4	---
Viscosity Index (VI)	Scale	ASTM D2270	125	<b>113</b>	114	---

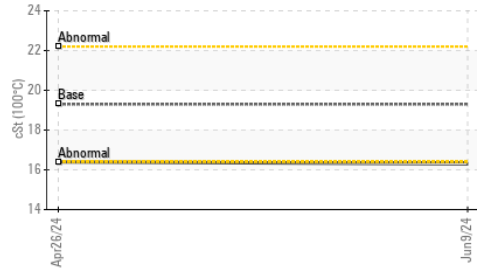
▲ Ferrous Alloys



Acid Number



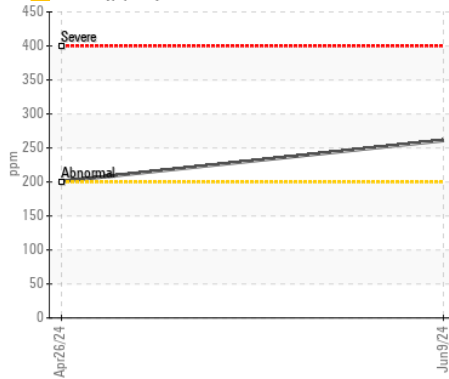
Viscosity @ 100°C



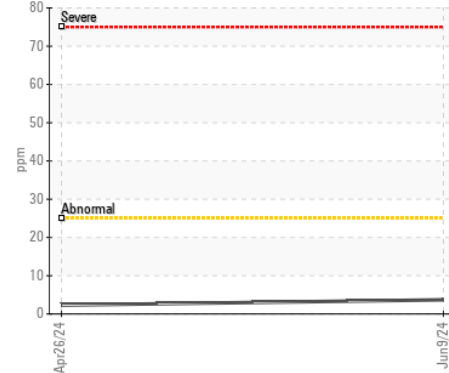
Viscosity @ 40°C



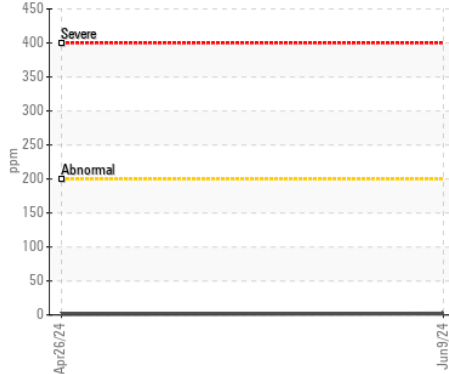
▲ Iron (ppm)



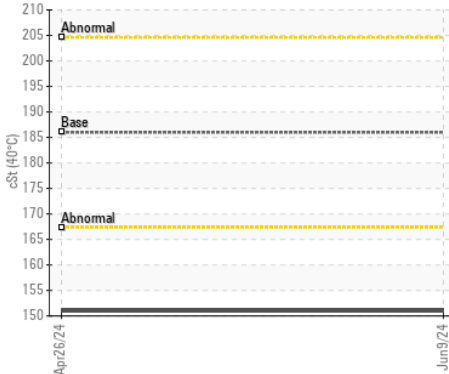
Aluminum (ppm)



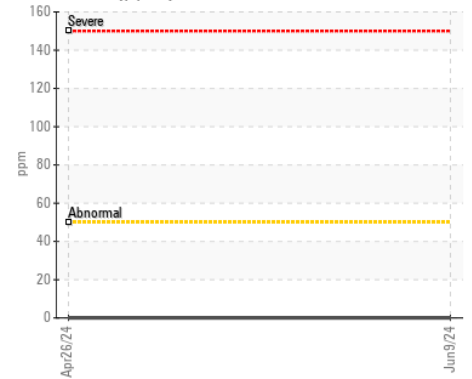
Copper (ppm)



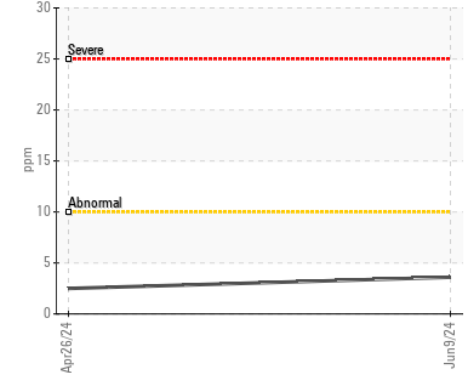
Viscosity @ 40°C



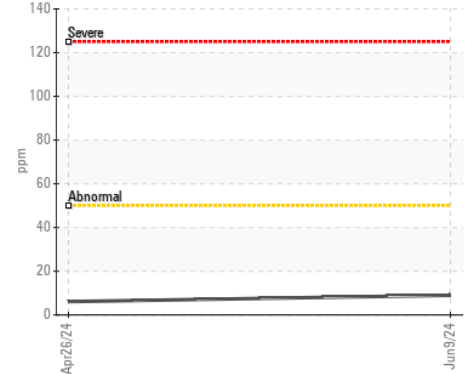
Lead (ppm)



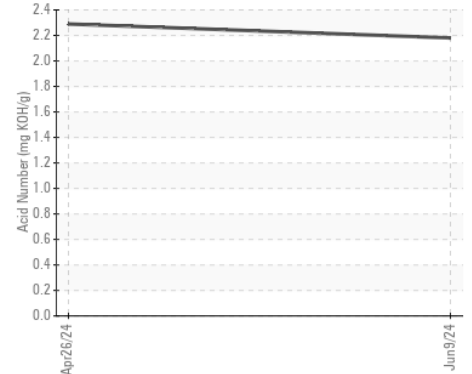
Chromium (ppm)



Silicon (ppm)



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : TR06211918 Received : 17 Jun 2024  
 Lab Number : 06211918 Tested : 18 Jun 2024  
 Unique Number : 11084782 Diagnosed : 19 Jun 2024 - Don Baldrige  
 Test Package : MOB 2 ( Additional Tests: KV100, VI )

**WALLOWA LAKE TRAMWAY**  
 59919 WALLOWA LAKE HWY  
 JOSEPH, OR  
 US 97846  
 Contact: RON GROGAN

To discuss this sample report, contact Customer Service at 1-800-827-0711.

\* - 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: