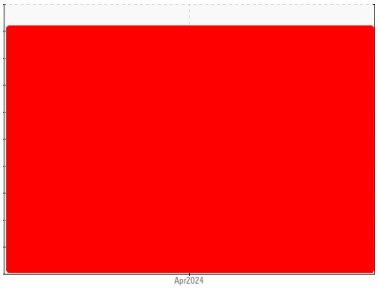
OIL DIAGNOSTICS

PROBLEM SUMMARY

Sample Rating Trend

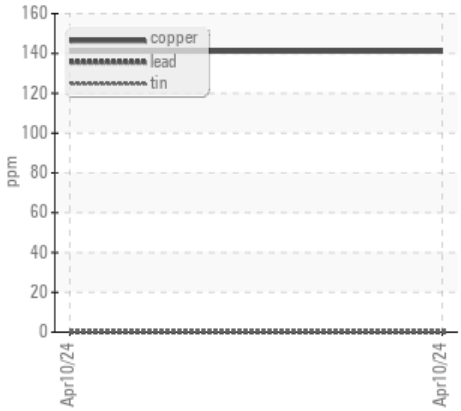


WEAR

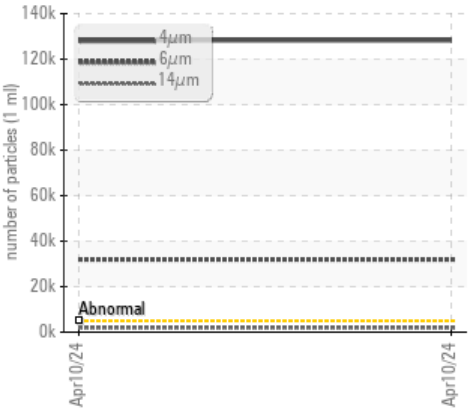
Machine Id
13095
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 220 (--- GAL)

COMPONENT CONDITION SUMMARY

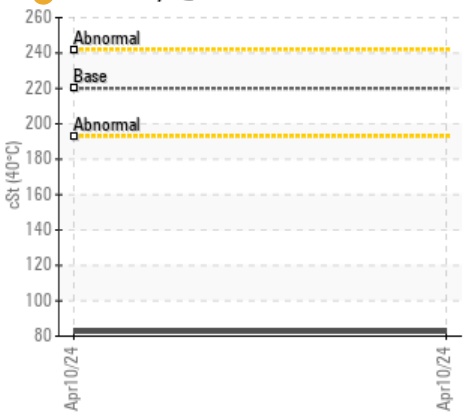
▲ Non-ferrous Metals



▲ Particle Trend



● Viscosity @ 40°C



RECOMMENDATION

We recommend you service the filters on this component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	---	---
Copper	ppm	ASTM D5185m	>20	▲ **141**	---	---
Particles >4µm		ASTM D7647	>5000	▲ **128301**	---	---
Particles >6µm		ASTM D7647	>1300	▲ **31930**	---	---
Particles >14µm		ASTM D7647	>160	▲ **1879**	---	---
Particles >21µm		ASTM D7647	>40	▲ **593**	---	---
Particles >38µm		ASTM D7647	>10	▲ **53**	---	---
Particles >71µm		ASTM D7647	>3	▲ **6**	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **24/22/18**	---	---

Customer Id: RAYCRAIN
Sample No.: PCA0121157
Lab Number: 06150304
Test Package: PLANT

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

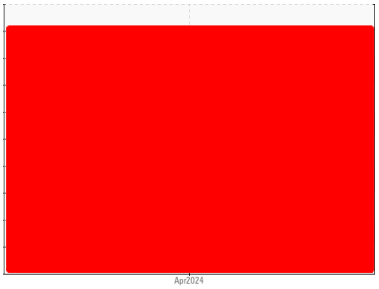
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
13095
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 220 (--- GAL)

DIAGNOSIS

▲ Recommendation
We recommend you service the filters on this component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear
The copper level is severe.

▲ Contamination
There is a high amount of particulates present in the oil.

● Fluid Condition
The oil viscosity is lower than normal. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0121157**	---	---
Sample Date		Client Info		**10 Apr 2024**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**SEVERE**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**13**	---	---
Chromium	ppm	ASTM D5185m	>20	**0**	---	---
Nickel	ppm	ASTM D5185m	>20	**0**	---	---
Titanium	ppm	ASTM D5185m		**0**	---	---
Silver	ppm	ASTM D5185m		**0**	---	---
Aluminum	ppm	ASTM D5185m	>20	**0**	---	---
Lead	ppm	ASTM D5185m	>20	**0**	---	---
Copper	ppm	ASTM D5185m	>20	▲ **141**	---	---
Tin	ppm	ASTM D5185m	>20	**<1**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	**0**	---	---
Barium	ppm	ASTM D5185m	5	**0**	---	---
Molybdenum	ppm	ASTM D5185m	5	**0**	---	---
Manganese	ppm	ASTM D5185m		**0**	---	---
Magnesium	ppm	ASTM D5185m	25	**0**	---	---
Calcium	ppm	ASTM D5185m	200	**11**	---	---
Phosphorus	ppm	ASTM D5185m	300	**287**	---	---
Zinc	ppm	ASTM D5185m	370	**159**	---	---
Sulfur	ppm	ASTM D5185m	2500	**1589**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**<1**	---	---
Sodium	ppm	ASTM D5185m		**1**	---	---
Potassium	ppm	ASTM D5185m	>20	**0**	---	---
Water	%	ASTM D6304	>0.05	**NEG**	---	---

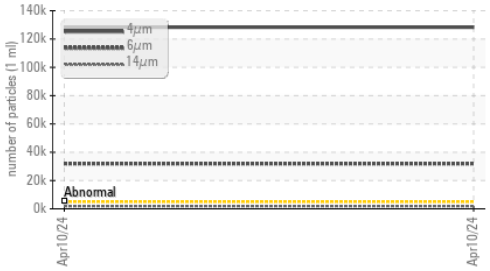
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **128301**	---	---
Particles >6µm		ASTM D7647	>1300	▲ **31930**	---	---
Particles >14µm		ASTM D7647	>160	▲ **1879**	---	---
Particles >21µm		ASTM D7647	>40	▲ **593**	---	---
Particles >38µm		ASTM D7647	>10	▲ **53**	---	---
Particles >71µm		ASTM D7647	>3	▲ **6**	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **24/22/18**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	**0.26**	---	---

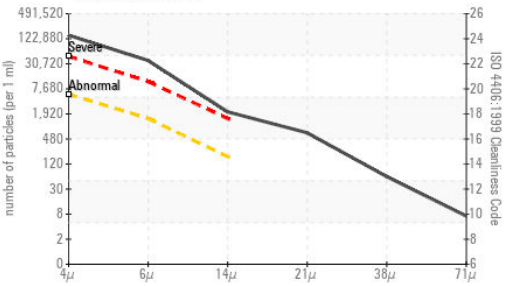
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

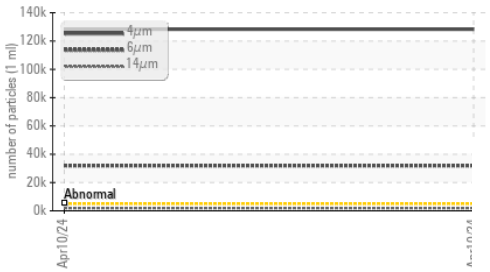
Particle Trend



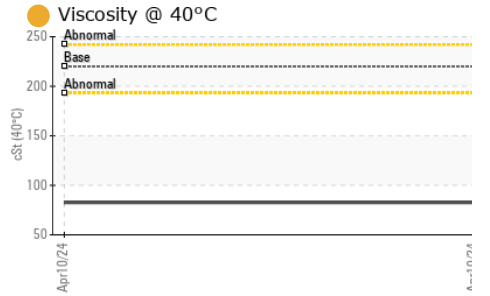
Particle Count



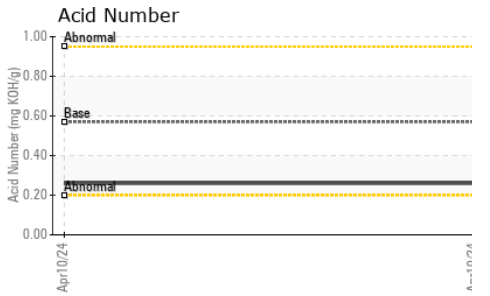
Particle Trend



Viscosity @ 40°C



Acid Number



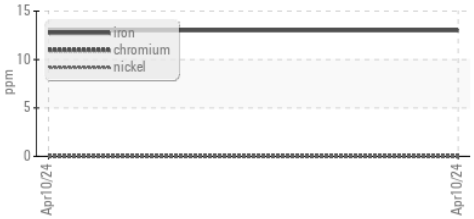
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**LIGHT**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>0.05	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	**82.6**	---	---

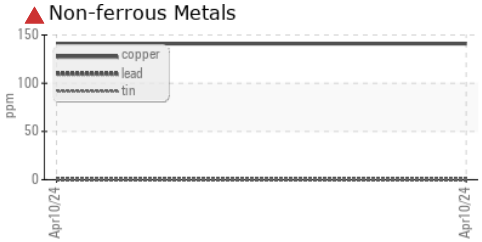
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

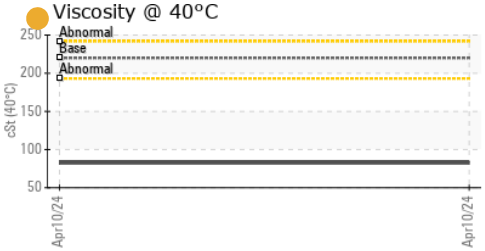
Ferrous Alloys



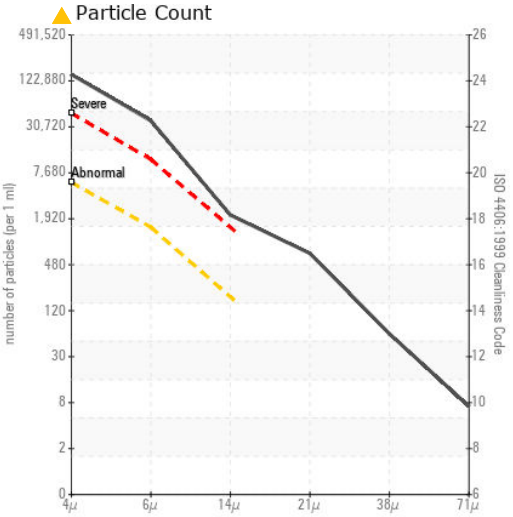
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0121157
Lab Number : 06150304
Unique Number : 10980382
Test Package : PLANT

Received : 16 Apr 2024
Tested : 22 Apr 2024
Diagnosed : 22 Apr 2024 - Jonathan Hester

RAYBESTOS POWERTRAIN
1204 DARLINGTON AVE
CRAWFORDSVILLE, IN
US 47933
Contact: DON B.
T:
F:

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)