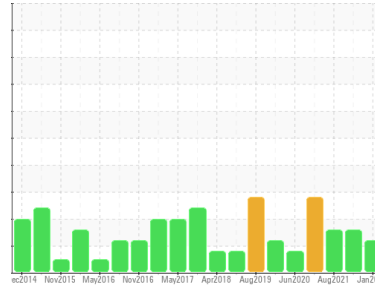




PROBLEM SUMMARY

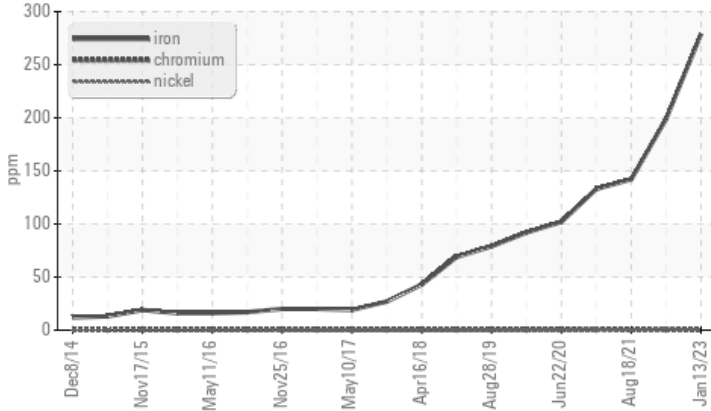
Sample Rating Trend



Area
Hauser
 Machine Id
HAU00 Waste Gate Hydraulic Tank
 Component
Case Drain Hydraulic System
 Fluid
LUBRICATION ENG 4046 QUINPLEX SYN FOOD 46 (15 GAL)

COMPONENT CONDITION SUMMARY

▲ Ferrous Alloys



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>20	▲ 279	▲ 199	▲ 142
Debris	scalar	*Visual	NONE	▲ MODER	NONE	NONE

Customer Id: PPLBUT
 Sample No.: WC0757699
 Lab Number: 05748966
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.

HISTORICAL DIAGNOSIS

24 Jan 2022 Diag: Jonathan Hester

WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. The iron level is abnormal. All other component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



18 Aug 2021 Diag: Don Baldrige

WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. The iron level is abnormal. All other component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



11 May 2021 Diag: Angela Borella

WEAR



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. The iron level is abnormal. All other component wear rates are normal. There is a moderate amount of particulates present in the oil. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

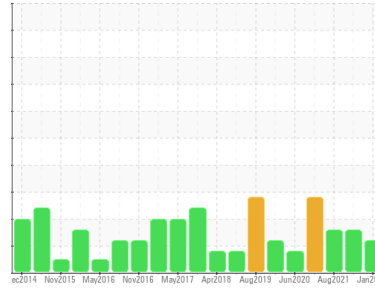
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
Hauser
 Machine Id
HAU00 Waste Gate Hydraulic Tank

Component
Case Drain Hydraulic System
 Fluid
LUBRICATION ENG 4046 QUINPLEX SYN FOOD 46 (15 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

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

Contamination

Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0757699	WC0551730	WC0551724
Sample Date	Client Info		13 Jan 2023	24 Jan 2022	18 Aug 2021
Machine Age	yrs	Client Info	0	0	0
Oil Age	yrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.05	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	▲ 279	▲ 199	▲ 142
Chromium	ppm	ASTM D5185m >20	0	<1	0
Nickel	ppm	ASTM D5185m >20	0	1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	3	2
Lead	ppm	ASTM D5185m >20	<1	<1	0
Copper	ppm	ASTM D5185m >20	2	10	9
Tin	ppm	ASTM D5185m >20	0	0	<1
Antimony	ppm	ASTM D5185m	---	<1	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	2	0
Barium	ppm	ASTM D5185m	1	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	<1	0	0
Calcium	ppm	ASTM D5185m	<1	1	0
Phosphorus	ppm	ASTM D5185m	267	286	253
Zinc	ppm	ASTM D5185m	12	18	19
Sulfur	ppm	ASTM D5185m	1859	1540	1494

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	6	8	10
Sodium	ppm	ASTM D5185m	0	<1	0
Potassium	ppm	ASTM D5185m >20	<1	1	0

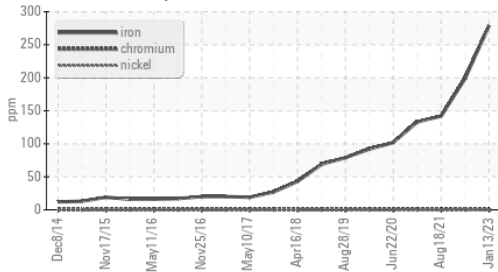
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	---	▲ 4722	▲ 4572
Particles >6µm	ASTM D7647	>640	---	▲ 1207	▲ 1000
Particles >14µm	ASTM D7647	>80	---	70	39
Particles >21µm	ASTM D7647	>20	---	10	10
Particles >38µm	ASTM D7647	>4	---	0	0
Particles >71µm	ASTM D7647	>3	---	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	---	▲ 19/17/13	▲ 19/17/12

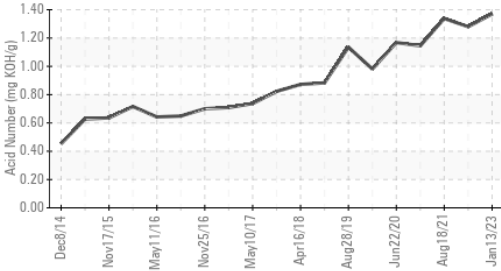


OIL ANALYSIS REPORT

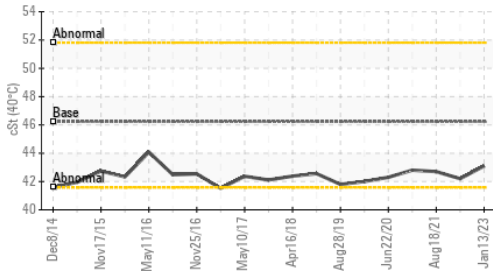
▲ Ferrous Alloys



Acid Number



Viscosity @ 40°C



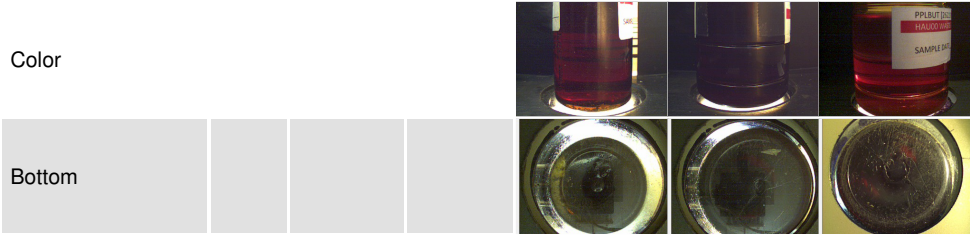
FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D8045	1.37	1.28	1.338
VISUAL				
method	limit/base	current	history1	history2
White Metal scalar	*Visual	NONE	LIGHT	NONE
Yellow Metal scalar	*Visual	NONE	NONE	NONE
Precipitate scalar	*Visual	NONE	NONE	NONE
Silt scalar	*Visual	NONE	NONE	NONE
Debris scalar	*Visual	▲ MODER	NONE	NONE
Sand/Dirt scalar	*Visual	NONE	NONE	NONE
Appearance scalar	*Visual	NORML	NORML	NORML
Odor scalar	*Visual	NORML	NORML	NORML
Emulsified Water scalar	*Visual	>0.05	NEG	NEG
Free Water scalar	*Visual		NEG	NEG

FLUID PROPERTIES

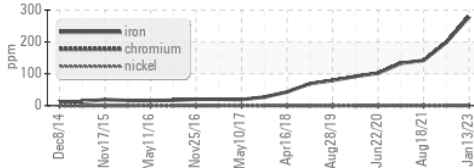
method	limit/base	current	history1	history2
Visc @ 40°C cSt	ASTM D445	43.1	42.2	42.7

SAMPLE IMAGES

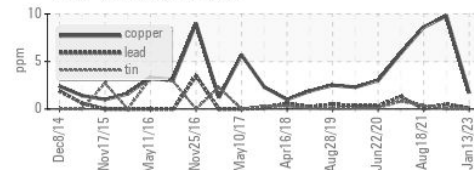


GRAPHS

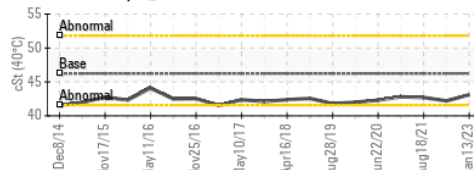
▲ Ferrous Alloys



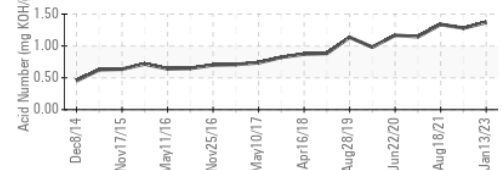
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0757699 Recieved : 24 Jan 2023
 Lab Number : 05748966 Diagnosed : 26 Jan 2023
 Unique Number : 10308570 Diagnostician : Don Baldrige
 Test Package : IND 2

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 6700 RAINBOW DAM RD
 GREAT FALLS, MT
 US 59404
 Contact: BRIAN WARD
 brian.ward@northwestern.com
 T:
 F: (406)533-3401

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)