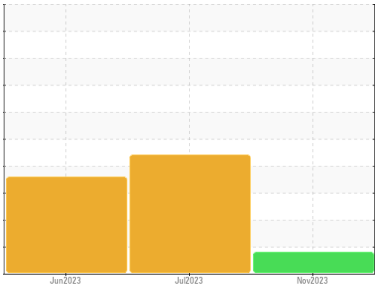
PROBLEM SUMMARY

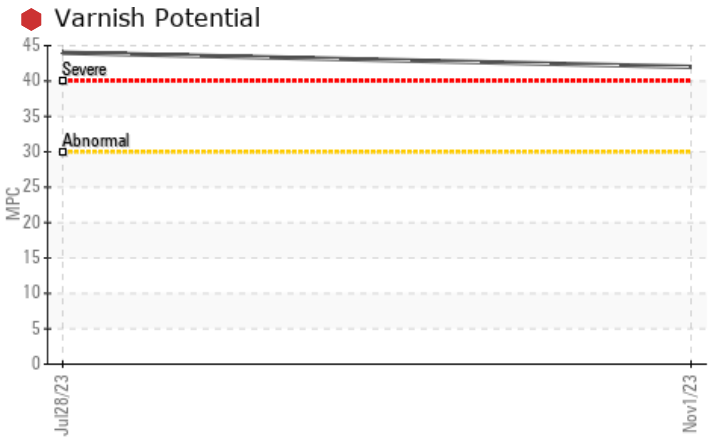
Sample Rating Trend



INSOLUBLES

Machine Id
FS CURTIS HEV1F22132 - SPECIALTY PRODUCTS
Component
Compressor
Fluid
NOT GIVEN (40 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend that you use depth filtration to remove insolubles from the oil and to reduce the levels of varnish in the system. Alternatively draining a percentage of the oil and topping up with fresh oil (sweetening the oil) may provide a reduction in the varnish potential level. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
MPC Varnish Potential	Scale	ASTM D7843	>15	**42**	44	---

Customer Id: AIRGREWC
Sample No.: WC0874261
Lab Number: 05996823
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@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
Resample	---	---	?	We recommend an early resample to monitor this condition.
Filter Fluid	---	---	?	We recommend that you use electrostatic filtration to remove insolubles from the oil and to reduce the levels of varnish in the system. Alternatively draining a percentage of the oil and topping up with fresh oil (sweetening the oil) may provide a reduction in the varnish potential level.

HISTORICAL DIAGNOSIS

28 Jul 2023 Diag: Jonathan Hester

DEGRADATION

We advise that you check for a possible overheat condition. Recommend drain oil if not already done and flush with cleaner before refilling with oil. We recommend an early resample to monitor this condition.All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is well above the recommended limit. The oil viscosity is higher than normal. The oil is no longer serviceable.

view report

23 Jun 2023 Diag: Jonathan Hester

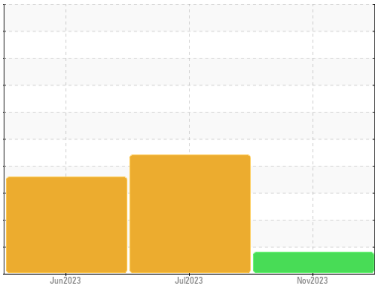
DEGRADATION

We advise that you check for a possible overheat condition. Recommend drain oil if not already done and flush with cleaner before refilling with oil. We recommend an early resample to monitor this condition.All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is above the recommended limit. The oil viscosity is higher than normal. TAN level indicates possible presence of varnish. The oil is no longer serviceable.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



INSOLUBLES

Machine Id
FS CURTIS HEV1F22132 - SPECIALTY PRODUCTS
Component
Compressor
Fluid
NOT GIVEN (40 GAL)

DIAGNOSIS

Recommendation
We recommend that you use depth filtration to remove insolubles from the oil and to reduce the levels of varnish in the system. Alternatively draining a percentage of the oil and topping up with fresh oil (sweetening the oil) may provide a reduction in the varnish potential level. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
MPC (Membrane Patch Colorimetry) test indicates a high concentration of varnish present.

Fluid Condition
The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0874261**	WC0745399	WC0831407
Sample Date		Client Info		**01 Nov 2023**	28 Jul 2023	23 Jun 2023
Machine Age	hrs	Client Info		**0**	5337	5032
Oil Age	hrs	Client Info		**6677**	305	5032
Oil Changed		Client Info		**N/A**	N/A	Not Changd
Sample Status				**SEVERE**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**0**	0	<1
Chromium	ppm	ASTM D5185m	>10	**0**	0	0
Nickel	ppm	ASTM D5185m		**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**0**	0	<1
Lead	ppm	ASTM D5185m	>25	**0**	0	0
Copper	ppm	ASTM D5185m	>50	**0**	<1	<1
Tin	ppm	ASTM D5185m	>15	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	2
Barium	ppm	ASTM D5185m		**172**	12	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	<1	0
Magnesium	ppm	ASTM D5185m		**<1**	2	4
Calcium	ppm	ASTM D5185m		**2**	<1	0
Phosphorus	ppm	ASTM D5185m		**30**	350	135
Zinc	ppm	ASTM D5185m		**11**	8	5
Sulfur	ppm	ASTM D5185m		**693**	564	63

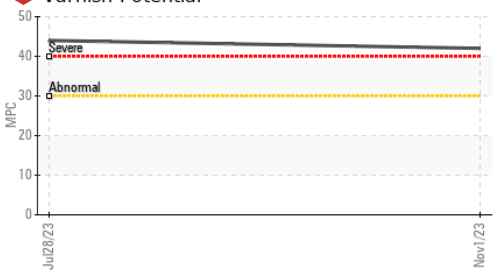
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**4**	4	3
Sodium	ppm	ASTM D5185m		**85**	30	26
Potassium	ppm	ASTM D5185m	>20	**6**	4	5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.90**	7.34	34.09
MPC Varnish Potential	Scale	ASTM D7843	>15	**42**	44	---

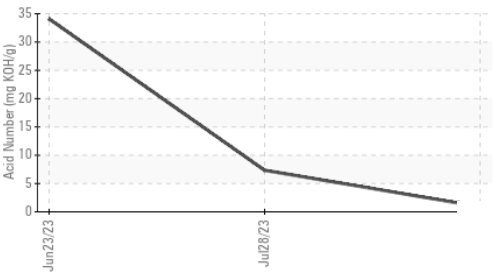
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

OIL ANALYSIS REPORT

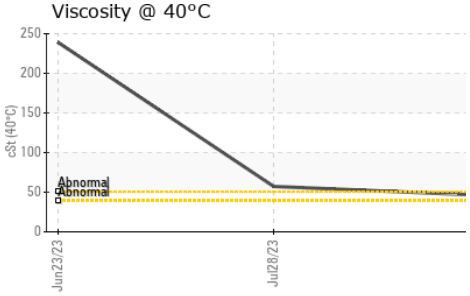
Varnish Potential



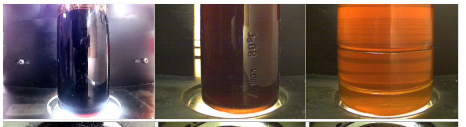
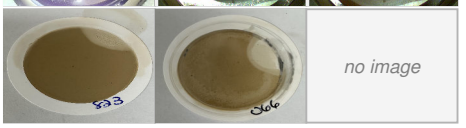
Acid Number



Viscosity @ 40°C

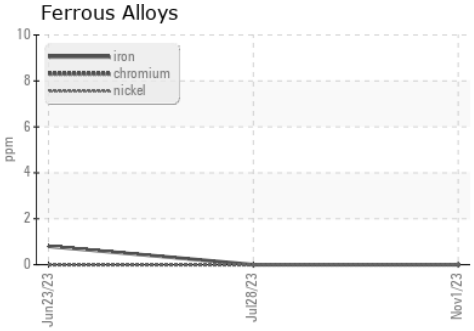


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**45.7**	▲ 57.3	▲ 239

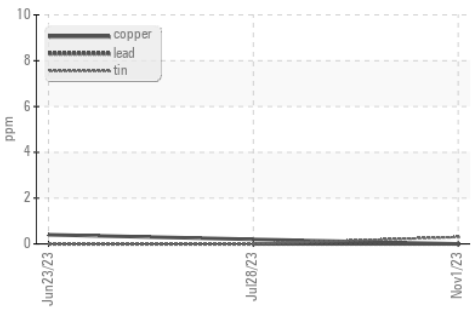
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
MPC					

GRAPHS

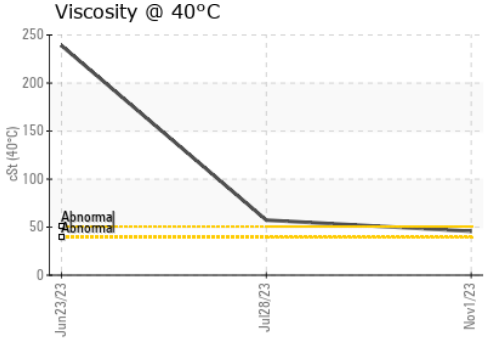
Ferrous Alloys



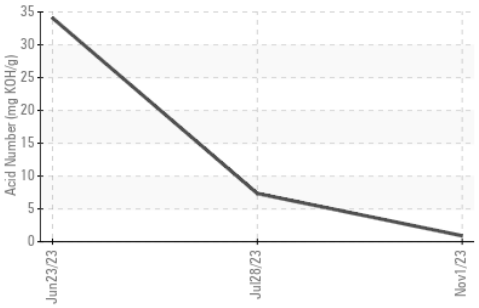
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



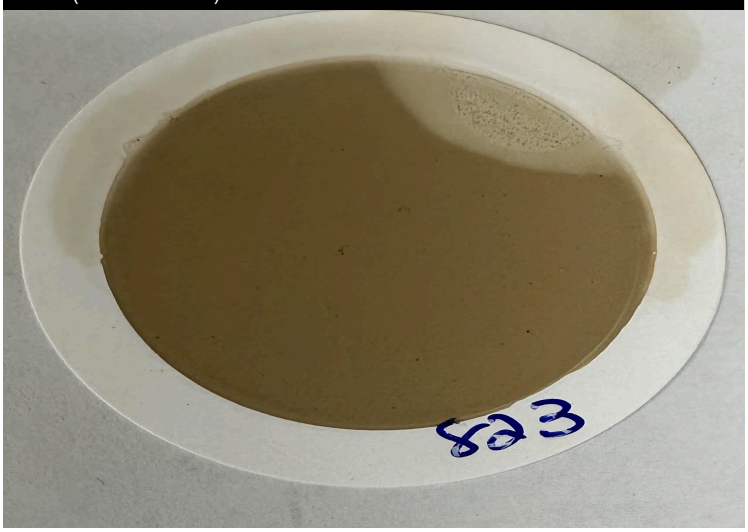
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0874261 **Received** : 02 Nov 2023
Lab Number : 05996823 **Diagnosed** : 07 Nov 2023
Unique Number : 10725183 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: MPC)

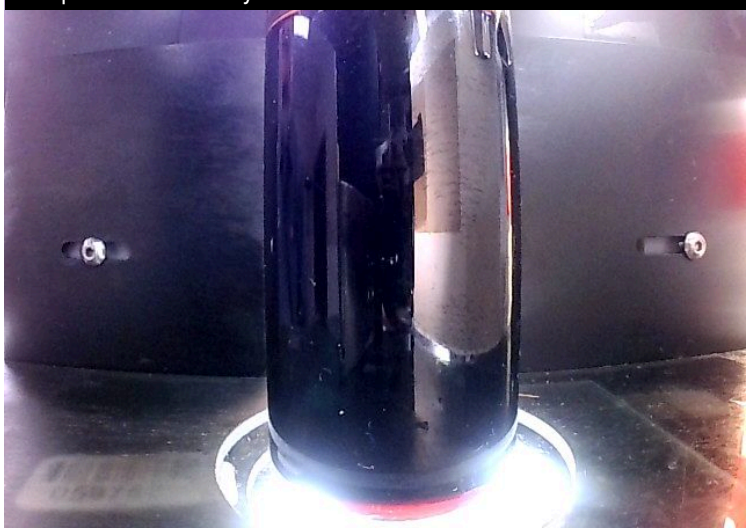
To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

FS-COMPRESSION CO, LLC
203 AERO COURT
GREENSBORO, NC
US 27409
Contact: Dallas Burcham
dallas.burcham@fs-compression.com
T: (336)605-9622
F: (336)605-9844

MPC (Varnish Test)



Sample Color & Clarity



This page left intentionally blank