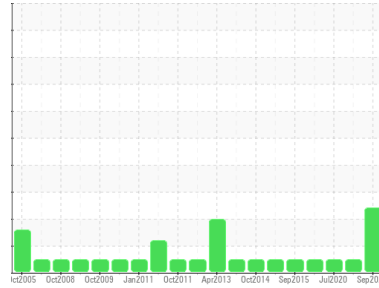




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
2 ID IB MOTOR

Component
Bearing

Fluid
CHEVRON RANDO HD 68 (--- QTS)

DIAGNOSIS

Recommendation

We recommend an early resample to monitor this condition.

Wear

The iron level is abnormal. Bearing and/or bushing wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0722114	WC0346600	WC0346596
Sample Date	Client Info		27 Sep 2023	14 Jul 2022	15 Jul 2020
Machine Age	mths	Client Info	0	32	8
Oil Age	mths	Client Info	0	1	0
Oil Changed	Client Info		N/A	Changed	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	▲ 277	<1	<1
Chromium	ppm	ASTM D5185m >5	2	0	0
Nickel	ppm	ASTM D5185m >5	0	0	<1
Titanium	ppm	ASTM D5185m >5	<1	0	0
Silver	ppm	ASTM D5185m	0	2	0
Aluminum	ppm	ASTM D5185m >25	<1	<1	0
Lead	ppm	ASTM D5185m >50	21	2	2
Copper	ppm	ASTM D5185m >150	▲ 108	35	27
Tin	ppm	ASTM D5185m >10	▲ 29	<1	0
Antimony	ppm	ASTM D5185m	---	---	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	<1	<1	0
Manganese	ppm	ASTM D5185m	5	0	0
Magnesium	ppm	ASTM D5185m	0	0	<1
Calcium	ppm	ASTM D5185m	39	56	78
Phosphorus	ppm	ASTM D5185m	340	363	323
Zinc	ppm	ASTM D5185m	401	446	398
Sulfur	ppm	ASTM D5185m	862	1055	1124

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	10	1	2
Sodium	ppm	ASTM D5185m	4	0	2
Potassium	ppm	ASTM D5185m >20	2	0	0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.26	0.28	0.309

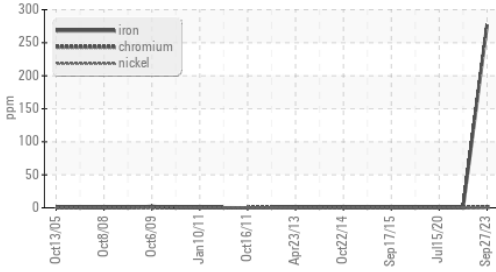
VISUAL

	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual NONE	NONE	NONE	VLITE
Precipitate	scalar	*Visual NONE	NONE	NONE	NONE
Silt	scalar	*Visual NONE	NONE	NONE	NONE
Debris	scalar	*Visual NONE	LIGHT	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

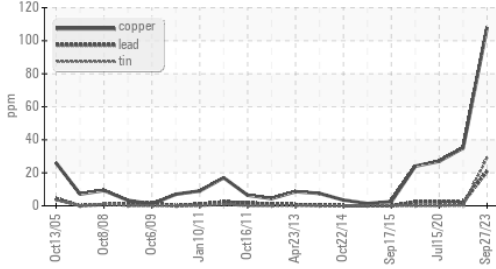


OIL ANALYSIS REPORT

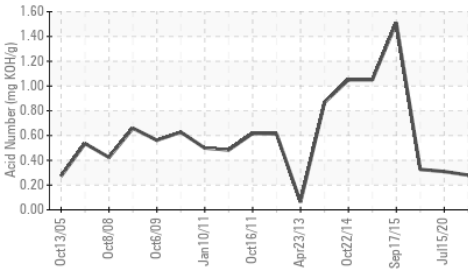
▲ Ferrous Alloys



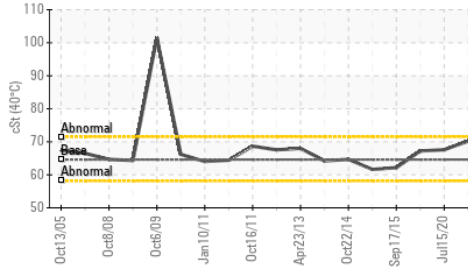
▲ Non-ferrous Metals



Acid Number



Viscosity @ 40°C



FLUID PROPERTIES

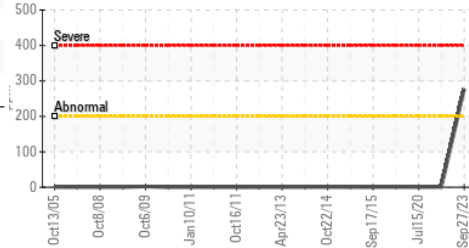
method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D445	64.6	66.53	70.2

SAMPLE IMAGES

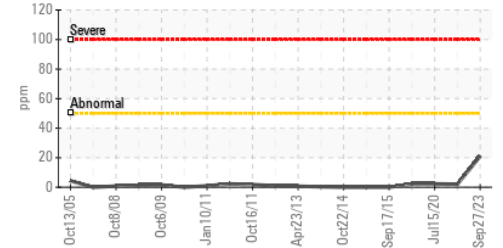
method	limit/base	current	history1	history2
Color			no image	no image
Bottom			no image	no image

GRAPHS

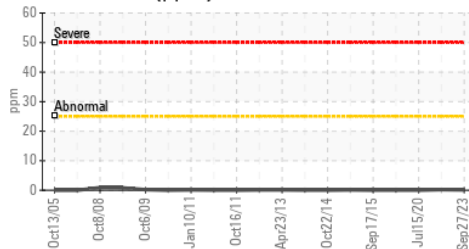
▲ Iron (ppm)



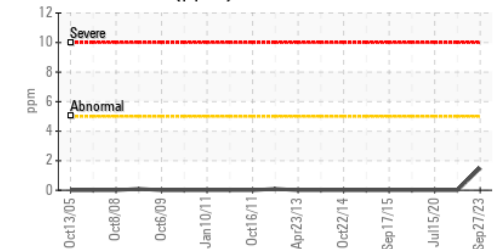
▲ Lead (ppm)



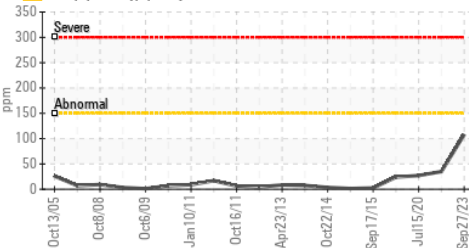
▲ Aluminum (ppm)



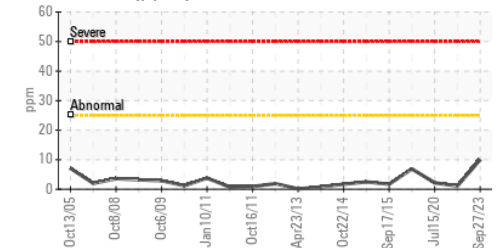
▲ Chromium (ppm)



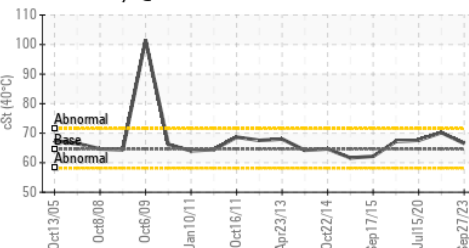
▲ Copper (ppm)



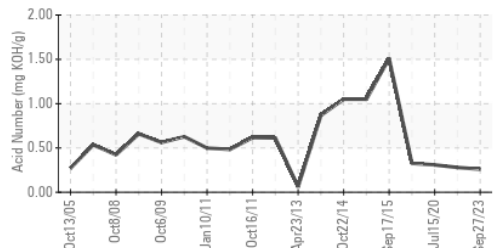
▲ Silicon (ppm)



▲ Viscosity @ 40°C



▲ Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0722114 **Received** : 02 Oct 2023
Lab Number : 05966480 **Diagnosed** : 06 Oct 2023
Unique Number : 10673031 **Diagnostician** : Jonathan Hester
Test Package : MOB 2

T.E.S. FILER CITY STATION
 700 MEE ST.
 FILER CITY, MI
 US 49634
 Contact: CLARK JOHNSON
 clark.johnson@cmsenergy.com
 T: (231)723-6573
 F: (231)723-6630

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)