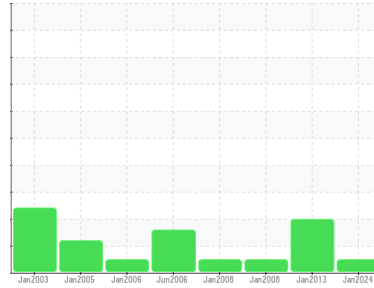




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id HYD OIL TURBINE

Component
Hydraulic System

Fluid
CHEVRON GST OIL ISO 32 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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			WC0722115	WC03214934	WCM2072460
Sample Date	Client Info			05 Jan 2024	18 Jan 2013	23 Jan 2008
Machine Age	yrs	Client Info		33	0	0
Oil Age	yrs	Client Info		5	0	0
Oil Changed	Client Info			N/A	N/A	Not Changd
Sample Status				NORMAL	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.1	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	1	2
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	<1	0
Lead	ppm	ASTM D5185m	>10	0	2	1
Copper	ppm	ASTM D5185m	>75	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	0	2
Antimony	ppm	ASTM D5185m		---	2	2
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		0	0	0
Calcium	ppm	ASTM D5185m		0	<1	3
Phosphorus	ppm	ASTM D5185m		100	21	6
Zinc	ppm	ASTM D5185m		37	6	6
Sulfur	ppm	ASTM D5185m		877	235	162

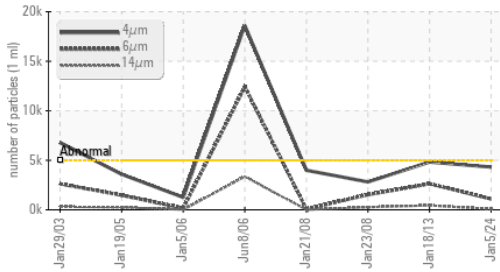
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	<1	<1	0
Sodium	ppm	ASTM D5185m		<1	<1	1
Potassium	ppm	ASTM D5185m	>20	0	0	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	4318	4826	2814
Particles >6µm		ASTM D7647	>1300	1102	▲ 2629	▲ 1533
Particles >14µm		ASTM D7647	>160	72	▲ 447	▲ 261
Particles >21µm		ASTM D7647	>40	21	▲ 151	▲ 88
Particles >38µm		ASTM D7647	>10	2	▲ 23	▲ 13
Particles >71µm		ASTM D7647	>3	0	▲ 2	▲ 1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	19/17/13	▲ 19/19/16	▲ 19/18/15

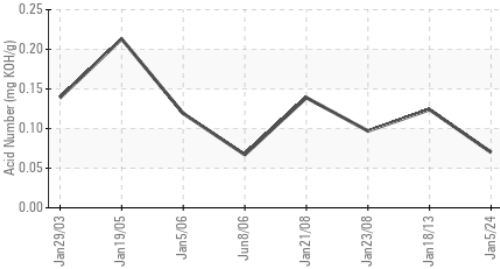


OIL ANALYSIS REPORT

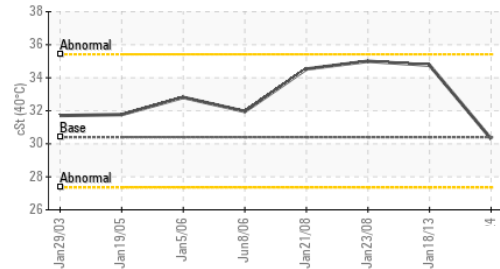
Particle Trend



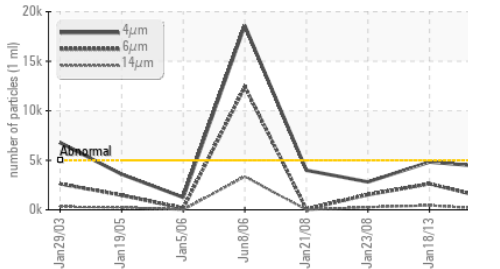
Acid Number



Viscosity @ 40°C



Particle Trend



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.07	0.124	0.097

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	LIGHT	LIGHT
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

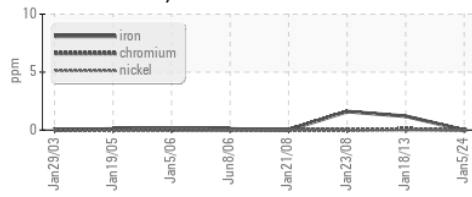
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	30.4	30.3	34.76	35.00

SAMPLE IMAGES

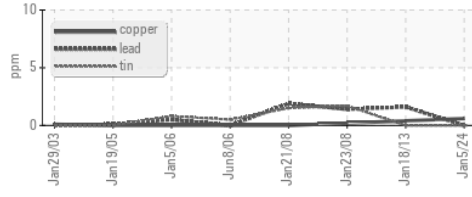
method	limit/base	current	history1	history2
Color			<i>no image</i>	<i>no image</i>
Bottom			<i>no image</i>	<i>no image</i>

GRAPHS

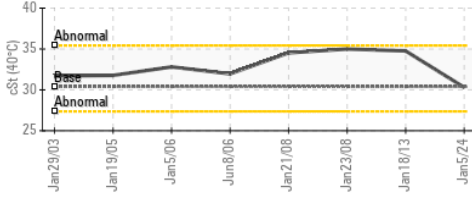
Ferrous Alloys



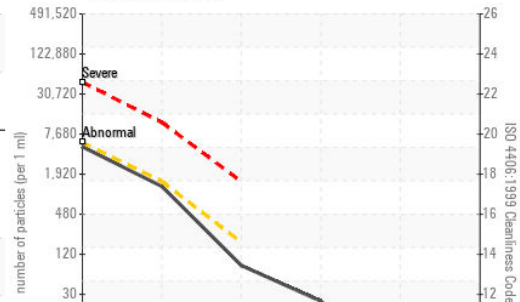
Non-ferrous Metals



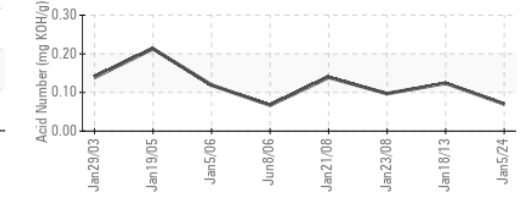
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0722115 **Received** : 10 Jan 2024
Lab Number : 06056627 **Diagnosed** : 11 Jan 2024
Unique Number : 10822576 **Diagnostician** : Wes Davis
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)