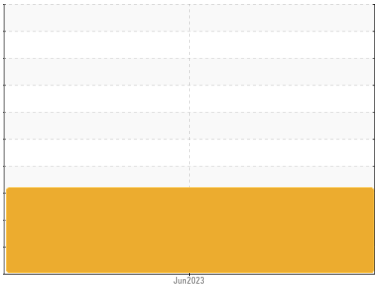
PROBLEM SUMMARY

Sample Rating Trend

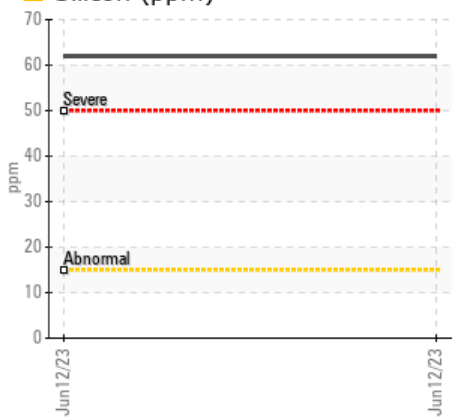


DIRT

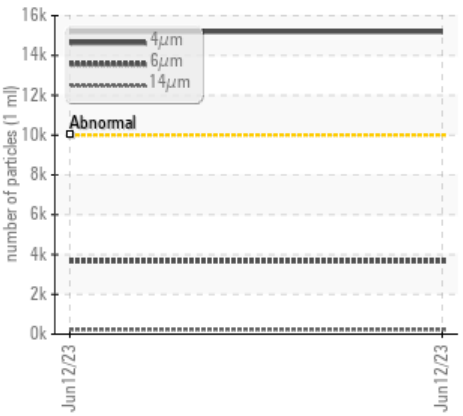
Machine Id
Z-HPU-1
Component
Hydraulic System
Fluid
CHEVRON HYDRAULIC OIL AW ISO 46 (100 GAL)

COMPONENT CONDITION SUMMARY

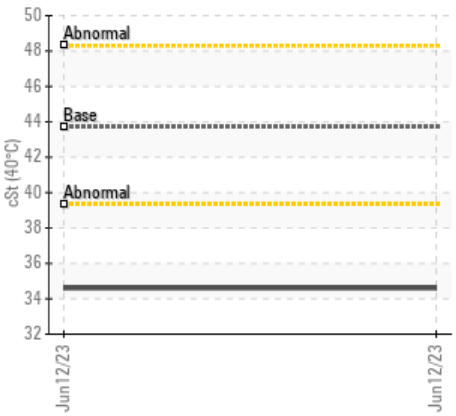
Silicon (ppm)



Particle Trend



Viscosity @ 40°C



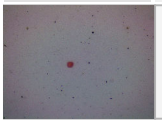
RECOMMENDATION

Check seals and/or filters for points of contaminant entry. Please confirm the lubricant listed in this report is the correct lubricant for replenishment of this system and is suggested by the OEM or overhaul facility. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	---	---
Silicon	ppm	ASTM D5185m	>15	▲ **62**	---	---
Particles >4µm		ASTM D7647	>10000	▲ **15196**	---	---
Particles >6µm		ASTM D7647	>2500	▲ **3666**	---	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	▲ **21/19/15**	---	---
Visc @ 40°C	cSt	ASTM D445	43.7	▲ **34.6**	---	---

PrtFilter



no image *no image*

Customer Id: ZEMCOM
Sample No.: PH0000611
Lab Number: 05876716
Test Package: PLANT

To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@wearcheckusa.com

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

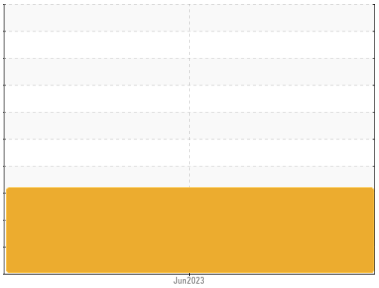
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Alert	---	---	?	Please confirm the lubricant listed in this report is the correct lubricant for replenishment of this system and is suggested by the OEM or overhaul facility.
Information Required	---	---	?	Please confirm the lubricant listed in this report is the correct lubricant for replenishment of this system and is suggested by the OEM or overhaul facility.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
Z-HPU-1
Component
Hydraulic System
Fluid
CHEVRON HYDRAULIC OIL AW ISO 46 (100 GAL)

DIAGNOSIS

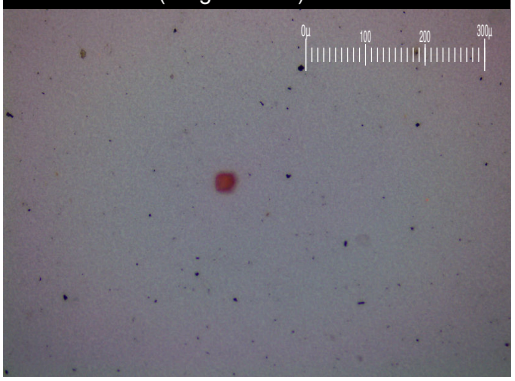
Recommendation
Check seals and/or filters for points of contaminant entry. Please confirm the lubricant listed in this report is the correct lubricant for replenishment of this system and is suggested by the OEM or overhaul facility. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of particulates present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
Viscosity of sample indicates oil is within ISO 32 range, advise investigate. Confirm oil type.

Particle Filter (Magn: 200 x)



SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PH0000611**	---	---
Sample Date		Client Info		**12 Jun 2023**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**Filtered**	---	---
Sample Status				**ABNORMAL**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**<1**	---	---
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	**<1**	---	---
Copper	ppm	ASTM D5185m	>20	**1**	---	---
Tin	ppm	ASTM D5185m	>20	**2**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Cadmium	ppm	ASTM D5185m		**<1**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	---	---
Barium	ppm	ASTM D5185m		**0**	---	---
Molybdenum	ppm	ASTM D5185m		**<1**	---	---
Manganese	ppm	ASTM D5185m		**0**	---	---
Magnesium	ppm	ASTM D5185m		**1**	---	---
Calcium	ppm	ASTM D5185m		**97**	---	---
Phosphorus	ppm	ASTM D5185m		**420**	---	---
Zinc	ppm	ASTM D5185m		**395**	---	---
Sulfur	ppm	ASTM D5185m		**1222**	---	---

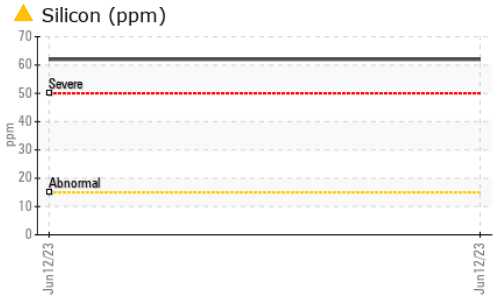
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	▲ **62**	---	---
Sodium	ppm	ASTM D5185m		**0**	---	---
Potassium	ppm	ASTM D5185m	>20	**2**	---	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **15196**	---	---
Particles >6µm		ASTM D7647	>2500	▲ **3666**	---	---
Particles >14µm		ASTM D7647	>320	**231**	---	---
Particles >21µm		ASTM D7647	>80	**45**	---	---
Particles >38µm		ASTM D7647	>20	**3**	---	---
Particles >71µm		ASTM D7647	>4	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	▲ **21/19/15**	---	---

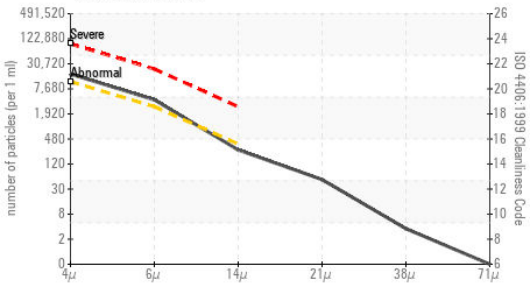
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.28**	---	---

OIL ANALYSIS REPORT

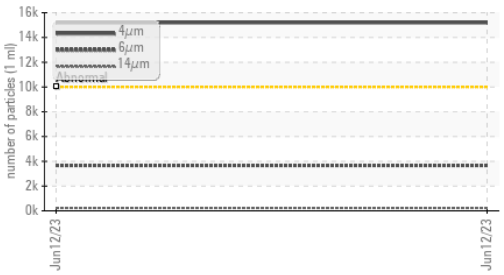
Silicon (ppm)



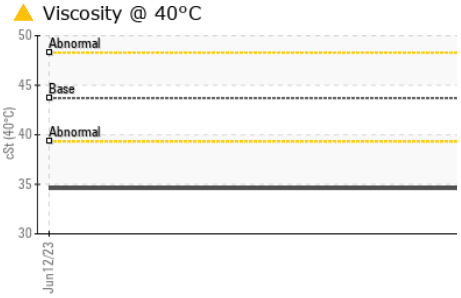
Particle Count



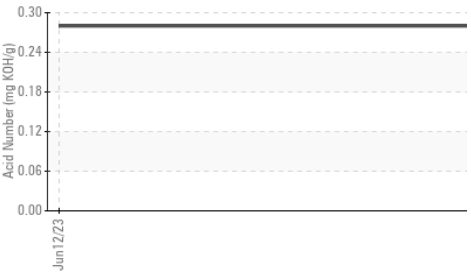
Particle Trend



Viscosity @ 40°C

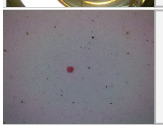


Acid Number



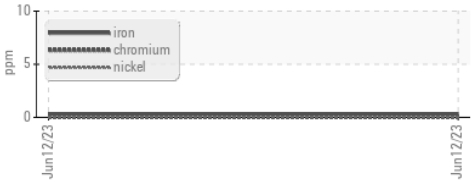
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*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	43.7	▲ **34.6**	---	---

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

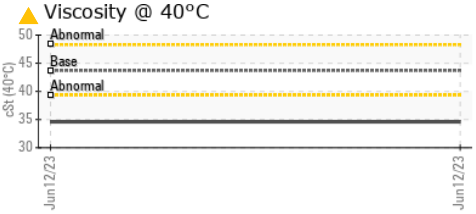
GRAPHS

Ferrous Alloys

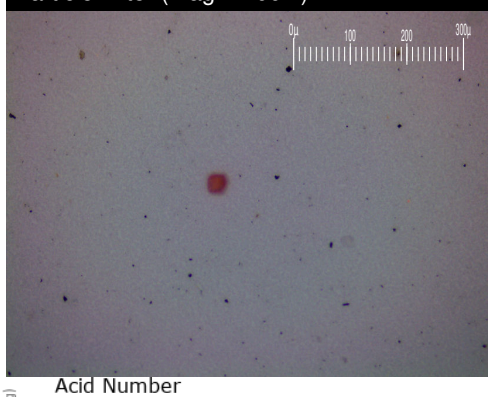


Non-ferrous Metals

Viscosity @ 40°C



Particle Filter (Magn: 200 x)



Acid Number

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PH0000611 **Received** : 19 Jun 2023
Lab Number : 05876716 **Diagnosed** : 23 Jun 2023
Unique Number : 10521819 **Diagnostician** : Angela Borella
Test Package : PLANT (Additional Tests: PrtFilter, PrtFilterPic)

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)

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