OIL ANALYSIS REPORT

WEAR

Sample Rating Trend

May 2024

Area
MINING
Machine Id
ME-71 CATERPILLAR 349L HPD01020
Component
Right Final Drive
Fluid
SHELL Spirax S4 CX 30 (--- GAL)

DIAGNOSIS

⚠️ **Recommendation**
No corrective action is recommended at this time. Resample at the next service interval to monitor.

⚠️ **Wear**
Gear wear is indicated.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0938475**	---	---
Sample Date		Client Info		**16 May 2024**	---	---
Machine Age	hrs	Client Info		**8534**	---	---
Oil Age	hrs	Client Info		**815**	---	---
Oil Changed		Client Info		**Not Changd**	---	---
Sample Status				**ABNORMAL**	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>800	⚠️ **951**	---	---
Chromium	ppm	ASTM D5185m	>10	⚠️ **10**	---	---
Nickel	ppm	ASTM D5185m	>5	**0**	---	---
Titanium	ppm	ASTM D5185m	>15	**<1**	---	---
Silver	ppm	ASTM D5185m	>2	**<1**	---	---
Aluminum	ppm	ASTM D5185m	>75	**3**	---	---
Lead	ppm	ASTM D5185m	>10	**2**	---	---
Copper	ppm	ASTM D5185m	>75	**<1**	---	---
Tin	ppm	ASTM D5185m	>8	**<1**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	---	---
Cadmium	ppm	ASTM D5185m		**<1**	---	---

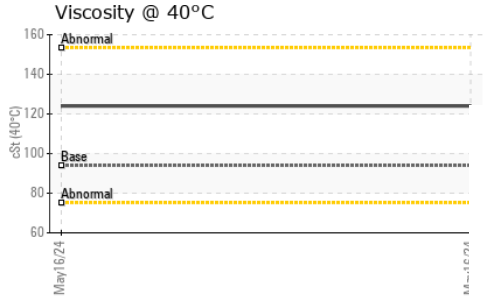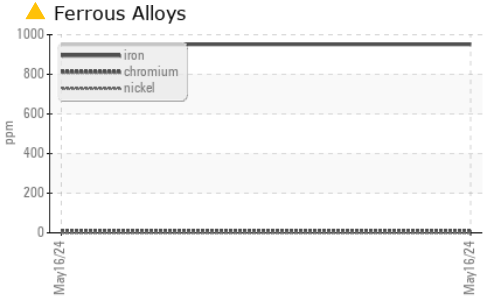| ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**8**	---	---
Barium	ppm	ASTM D5185m		**<1**	---	---
Molybdenum	ppm	ASTM D5185m		**5**	---	---
Manganese	ppm	ASTM D5185m		**12**	---	---
Magnesium	ppm	ASTM D5185m		**16**	---	---
Calcium	ppm	ASTM D5185m		**3322**	---	---
Phosphorus	ppm	ASTM D5185m		**915**	---	---
Zinc	ppm	ASTM D5185m		**988**	---	---
Sulfur	ppm	ASTM D5185m		**6140**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>400	**17**	---	---
Sodium	ppm	ASTM D5185m		**3**	---	---
Potassium	ppm	ASTM D5185m	>20	**2**	---	---

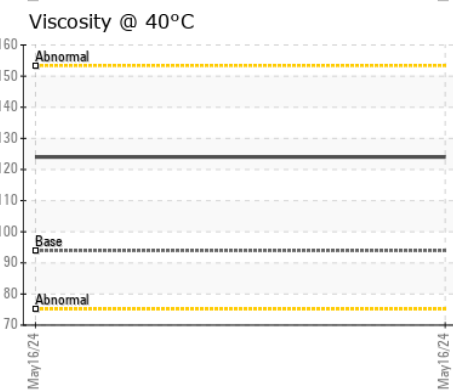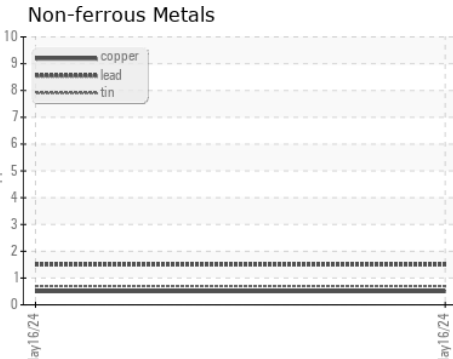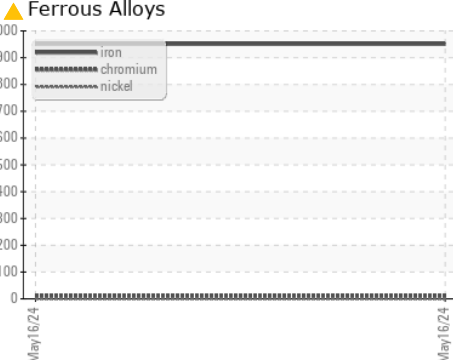| VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**MODER**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

OIL ANALYSIS REPORT

Ferrous Alloys

Viscosity @ 40°C

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	93.9	**124**	---	---

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

GRAPHS

Ferrous Alloys

Non-ferrous Metals

Viscosity @ 40°C