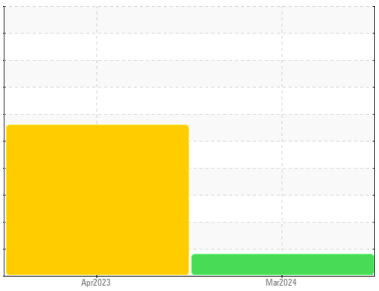
OIL ANALYSIS REPORT

Sample Rating Trend



CONTAMINANT

Area
TANK FARM
Machine Id
COOLING TOWER FAN CT1A
Component
Gearbox
Fluid
SHELL MORLINA S4 B 220 (--- LTR)

DIAGNOSIS

Recommendation
No corrective actions. Resample in 3 months.

Wear
Wear rate is low and steady.

Contamination
Particulate is typical for new oil conditions.
Moisture is nil.

Fluid Condition
Oil health indicators suggest the oil is acceptable for continued use.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PLS0000519**	PLS0000514	---
Sample Date		Client Info		**12 Mar 2024**	18 Apr 2023	---
Machine Age	hrs	Client Info		**0**	0	---
Oil Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**ATTENTION**	SEVERE	---

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

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**17**	9	---
Iron	ppm	ASTM D5185m	>200	**27**	70	---
Chromium	ppm	ASTM D5185m	>15	**<1**	<1	---
Nickel	ppm	ASTM D5185m	>15	**<1**	1	---
Titanium	ppm	ASTM D5185m		**<1**	0	---
Silver	ppm	ASTM D5185m		**0**	0	---
Aluminum	ppm	ASTM D5185m	>25	**2**	<1	---
Lead	ppm	ASTM D5185m	>100	**<1**	<1	---
Copper	ppm	ASTM D5185m	>200	**1**	<1	---
Tin	ppm	ASTM D5185m	>25	**<1**	<1	---
Vanadium	ppm	ASTM D5185m		**<1**	0	---
Cadmium	ppm	ASTM D5185m		**<1**	0	---

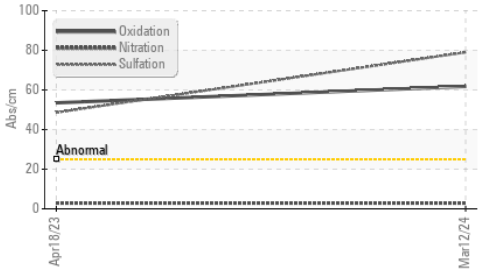
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**<1**	0	---
Manganese	ppm	ASTM D5185m		**<1**	<1	---
Magnesium	ppm	ASTM D5185m		**1**	2	---
Calcium	ppm	ASTM D5185m		**0**	2	---
Phosphorus	ppm	ASTM D5185m		**229**	▲ 187	---
Zinc	ppm	ASTM D5185m		**184**	▲ 214	---
Sulfur	ppm	ASTM D5185m		**587**	▲ 678	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**4**	3	---
Sodium	ppm	ASTM D5185m		**0**	<1	---
Potassium	ppm	ASTM D5185m	>20	**1**	1	---

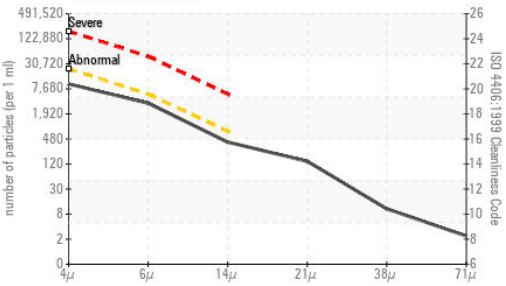
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0.1	---
Nitration	Abs/cm	*ASTM D7624		**2.9**	2.9	---
Sulfation	Abs/.1mm	*ASTM D7415		**79.0**	48.6	---

OIL ANALYSIS REPORT

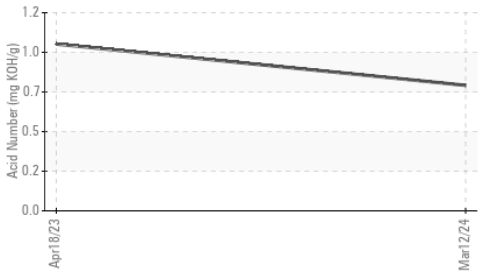
FT-IR (Direct Trend)



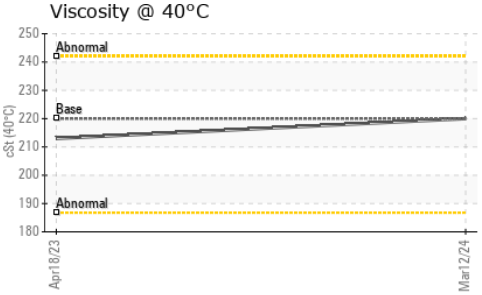
Particle Count



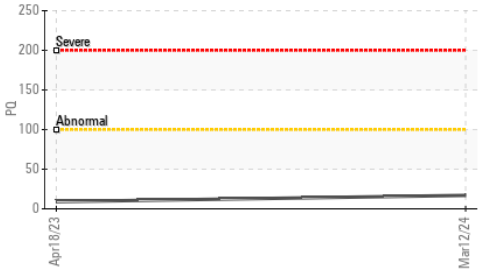
Acid Number



Viscosity @ 40°C



PQ

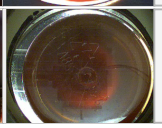


FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**8775**	2617	---
Particles >6µm		ASTM D7647	>5000	**3020**	659	---
Particles >14µm		ASTM D7647	>640	**356**	73	---
Particles >21µm		ASTM D7647	>160	**123**	16	---
Particles >38µm		ASTM D7647	>40	**9**	2	---
Particles >71µm		ASTM D7647	>10	**2**	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**20/19/16**	19/17/13	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**61.8**	53.5	---
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.76**	▲ 1.01	---

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	**220**	213	---

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

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PLS0000519 **Received** : 08 Apr 2024
Lab Number : 06141136 **Tested** : 09 Apr 2024
Unique Number : 10965944 **Diagnosed** : 30 May 2024 - Mike Johnson
Test Package : IND 2 (Additional Tests: FT-IR, PQ, PrtCount)

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)

HEXION INC - LULING PLANT
12513 QUEENIE RD
LULING, LA
US 70070
Contact: JEFF RENTFROW
jeff.rentfrow@hexion.com;mike.johnson@amrri.com
T:
F:

Report Id: HEXLUL [WUSCAR] 06141136 (Generated: 05/30/2024 22:21:07) Rev: 1
Contact/Location: JEFF RENTFROW - HEXLUL