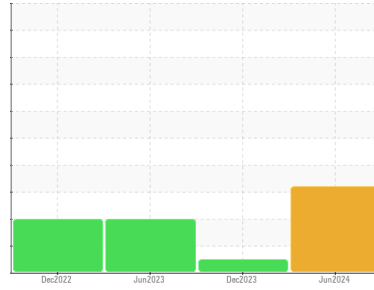




OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id
CUMMINS LO BLACK START (S/N 30100277)
 Component
Turbine
 Fluid
MOBIL PEGASUS SP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We recommend drain/flush system. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil.

Fluid Condition

The AN level is above the recommended limit. Confirmed.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		USP0013364	USP0004409	USP05869417
Sample Date	Client Info		10 Jun 2024	18 Dec 2023	08 Jun 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	NORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >15	21	17	17
Chromium	ppm	ASTM D5185m >4	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	<1	0
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >10	2	1	0
Lead	ppm	ASTM D5185m	<1	0	0
Copper	ppm	ASTM D5185m >5	<1	<1	0
Tin	ppm	ASTM D5185m >5	<1	<1	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	57	50	55
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	45	43	43
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m	577	573	640
Calcium	ppm	ASTM D5185m	1586	1574	1659
Phosphorus	ppm	ASTM D5185m	722	786	835
Zinc	ppm	ASTM D5185m	964	936	1039
Sulfur	ppm	ASTM D5185m	2740	2891	3446

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	4	4	4
Sodium	ppm	ASTM D5185m	5	5	4
Potassium	ppm	ASTM D5185m >20	2	2	<1
Water	%	ASTM D6304 >0.03	0.043	0.014	0.025
ppm Water	ppm	ASTM D6304 >300	438	143	259.8

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		3654	644	4776
Particles >6µm	ASTM D7647 >1300		▲ 1990	351	▲ 2602
Particles >14µm	ASTM D7647 >160		▲ 339	60	▲ 443
Particles >21µm	ASTM D7647 >40		▲ 114	20	▲ 149
Particles >38µm	ASTM D7647 >10		▲ 18	3	▲ 23
Particles >71µm	ASTM D7647 >3		2	0	2
Oil Cleanliness	ISO 4406 (c)	>--/17/14	▲ 19/18/16	17/16/13	▲ 19/19/16

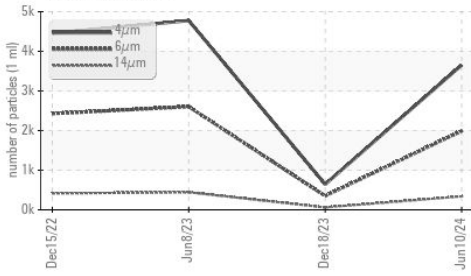
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	▲ 6.076	1.61	2.23

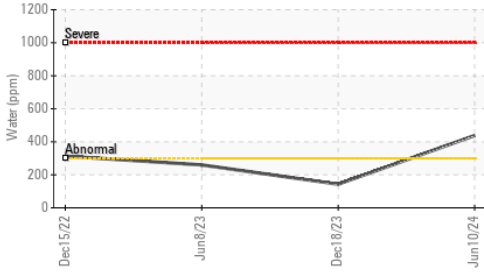


OIL ANALYSIS REPORT

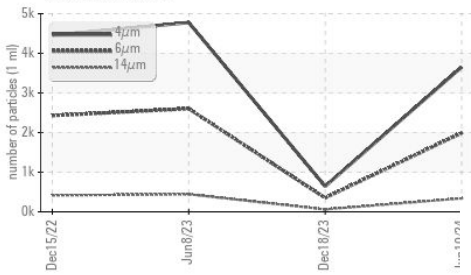
Particle Trend



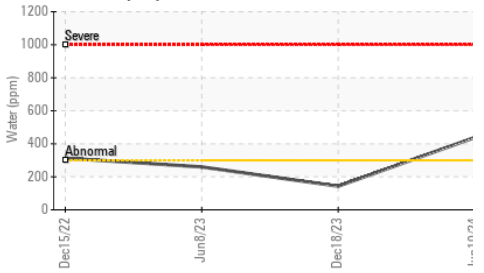
Water (KF)



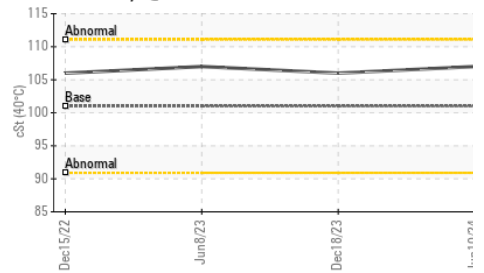
Particle Trend



Water (KF)



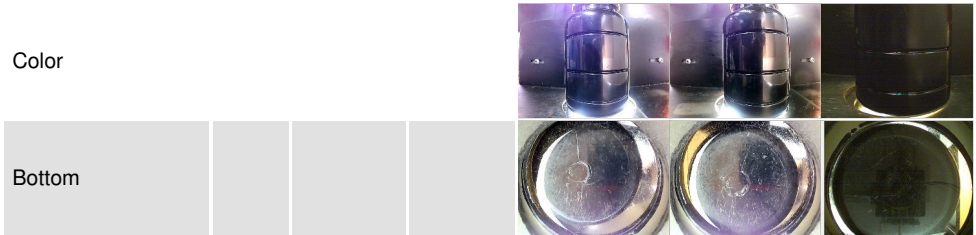
Viscosity @ 40°C



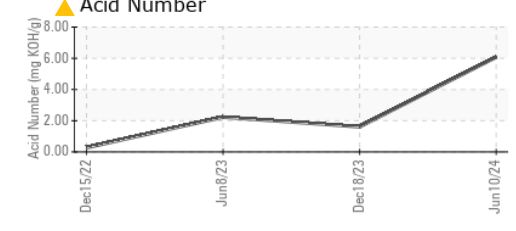
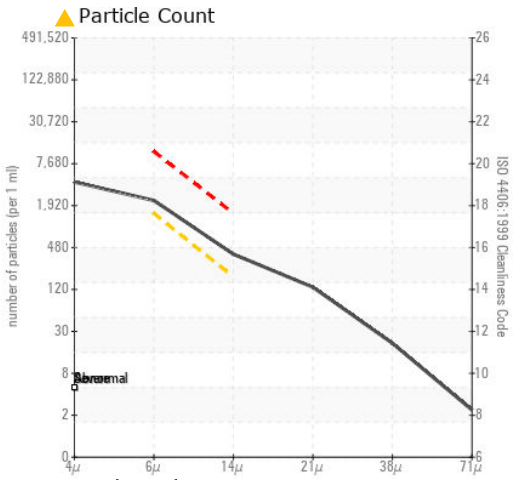
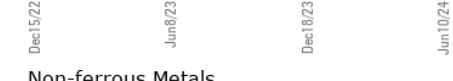
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.03	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	101	107	107

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP0013364
Lab Number : 06207858
Unique Number : 11075319
Test Package : IND 2

Received : 12 Jun 2024
Tested : 19 Jun 2024
Diagnosed : 19 Jun 2024 - Doug Bogart

LINCOLN ELECTRIC SVGS - LESLINMAI
 7707 BLUFF RD
 LINCOLN, NE
 US 68517
 Contact: VERN COCHRAN
 vcochran@les.com
 T: (402)465-6305
 F: (402)465-0395

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)