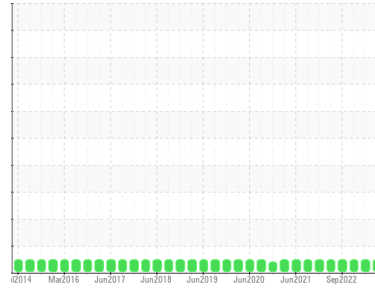




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
BOILER ROOM [1168466]
 Machine Id
ELLIOTT UTL05016 (S/N BIEU2E297)
 Component
Compressor
 Fluid
FSE TURBOCOOL (65 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the component. The amount and size of particulates present in the system 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	WC0882517	WC0847218	WC0741967	
Sample Date	Client Info	22 Mar 2024	27 Sep 2023	28 Dec 2022	
Machine Age	hrs	Client Info	78521	74372	67943
Oil Age	hrs	Client Info	0	17424	362
Oil Changed	Client Info	N/A	Not Changd	Not Changd	
Sample Status		NORMAL	NORMAL	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 >50	0	0	0
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	0	0
Lead	ppm	ASTM D5185m >25	0	0	0
Copper	ppm	ASTM D5185m >50	0	0	0
Tin	ppm	ASTM D5185m >15	0	0	0
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	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	0	0	0
Calcium	ppm	ASTM D5185m	0	0	0
Phosphorus	ppm	ASTM D5185m	376	385	378
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m	90	97	142

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	4	4	3
Sodium	ppm	ASTM D5185m	0	0	0
Potassium	ppm	ASTM D5185m >20	0	<1	0

FLUID CLEANLINESS

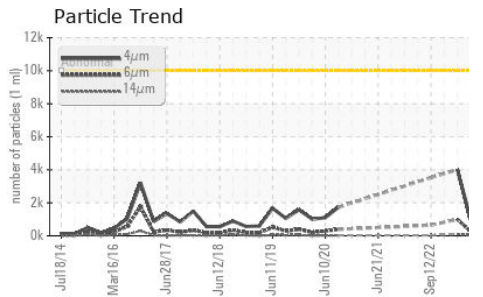
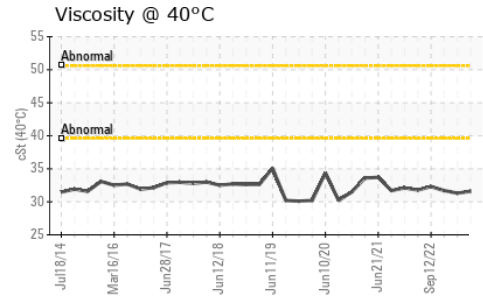
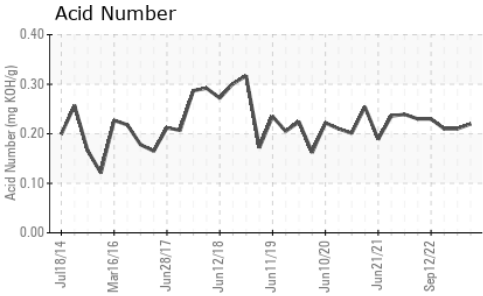
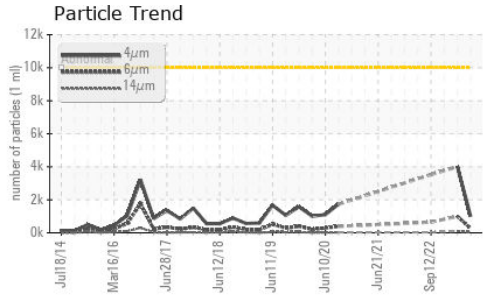
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	998	4008	---
Particles >6µm	ASTM D7647 >2500	270	1000	---
Particles >14µm	ASTM D7647 >320	29	90	---
Particles >21µm	ASTM D7647 >80	9	25	---
Particles >38µm	ASTM D7647 >20	0	1	---
Particles >71µm	ASTM D7647 >4	0	0	---
Oil Cleanliness	ISO 4406 (c) >20/18/15	17/15/12	19/17/14	---

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.22	0.21	0.21



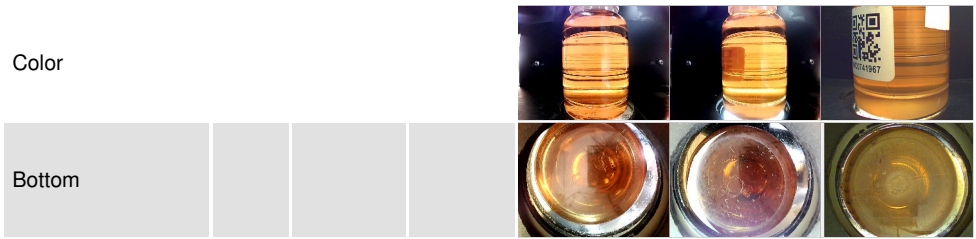
OIL ANALYSIS REPORT



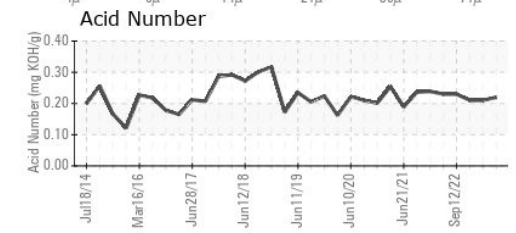
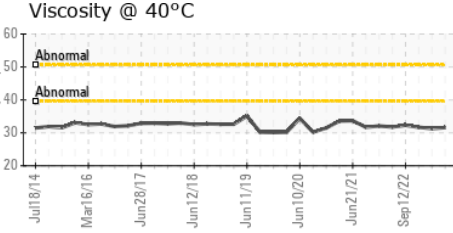
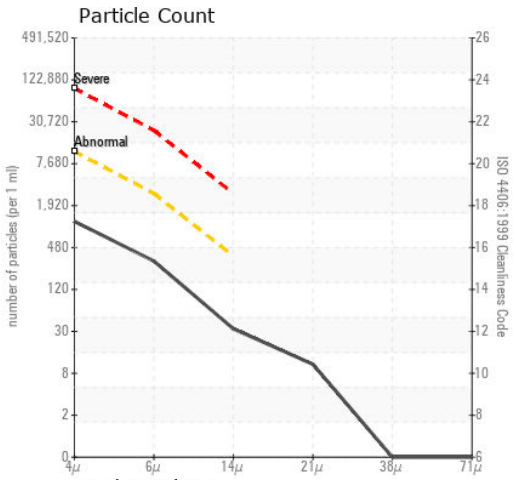
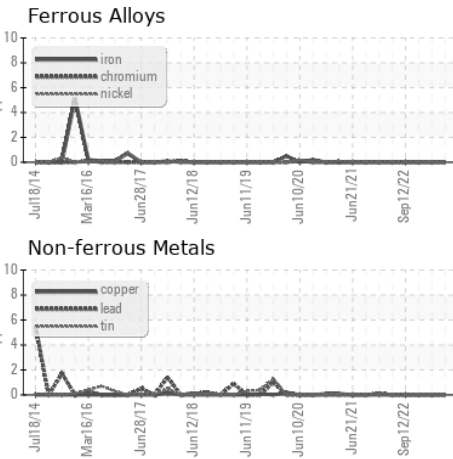
PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	31.6	31.3	31.7

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0882517
Lab Number : 06130595
Unique Number : 10950060
Test Package : IND 2 (Additional Tests: PrtCount)

3M - BROOKINGS
 PO BOX 5227
 BROOKINGS, SD
 US 57006
 Contact: MARK DYKHUSE
 mrdykhuse@mmm.com
 T: (605)696-1465
 F: (605)696-1679

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)