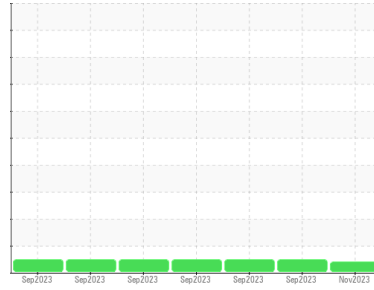


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
GE HSK 4

Component
Gas Turbine

Fluid
AMSOIL SYN TURB ISO VG 32 (--- GAL)

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Wear

{not applicable}

▲ Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target SAE AS4059 (replaces NAS 1638) cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

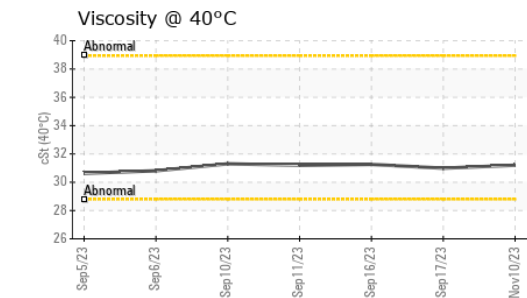
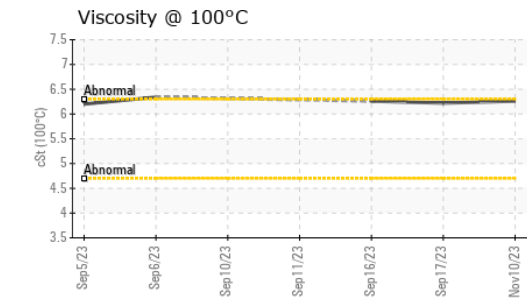
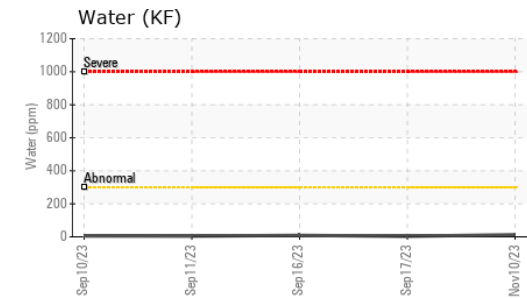
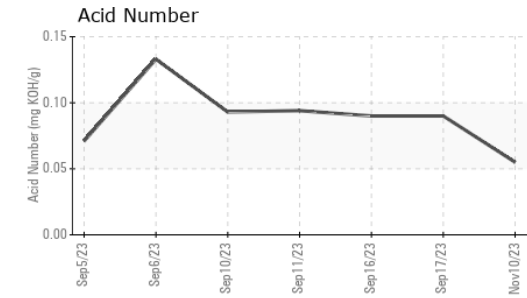
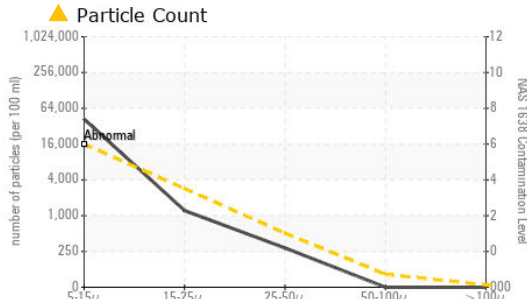
SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PCA0108266	PCA0099970	PCA0099979
Sample Date	Client Info			10 Nov 2023	17 Sep 2023	16 Sep 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

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

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		6	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		0	0	0
Calcium	ppm	ASTM D5185m		3	<1	2
Phosphorus	ppm	ASTM D5185m		42	23	23
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm	ASTM D5185m		750	669	680

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	0	<1	<1
Sodium	ppm	ASTM D5185m		0	<1	<1
Potassium	ppm	ASTM D5185m	>20	<1	2	3
Water	%	ASTM D6304	>0.03	0.001	0.001	0.001
ppm Water	ppm	ASTM D6304	>300	12.6	3.3	8.7

OIL ANALYSIS REPORT



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0108266 **Received** : 15 Nov 2023
Lab Number : 06009071 **Diagnosed** : 20 Nov 2023
Unique Number : 10742833 **Diagnostician** : Doug Bogart
Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCountNAS, VI)

MDU-HESKETT STATION
 2035 38TH ST
 MANDAN, ND
 US 58554
 Contact: DJ STOCKWELL
 dj.stockwell@mdu.com
 T: (406)931-3562
 F:

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)

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		---	---	---
Particles >6µm		ASTM D7647	>16000	---	---	---
Particles >14µm		ASTM D7647	>2850	---	---	---
Particles >21µm		ASTM D7647	>506	---	---	---
Particles >38µm		ASTM D7647	>90	---	---	---
Particles >71µm		ASTM D7647	>16	---	---	---
Oil Cleanliness		ISO 4406 (c)	>6	---	---	---
Particles 5-15µm	count	*NAS 1638	>16000	▲ 42115	11307	12029
Particles 15-25µm	count	*NAS 1638	>2850	1220	693	1218
Particles 25-50µm	count	*NAS 1638	>506	286	433	496
Particles 50-100µm	count	*NAS 1638	>90	0	42	0
Particles >100µm	count	*NAS 1638	>16	0	10	0
NAS 1638	Class	*NAS 1638	>6	8	6	6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.055	0.09	0.09

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		31.2	30.99	31.26
Visc @ 100°C	cSt	ASTM D445		6.26	6.22	6.26
Viscosity Index (VI)	Scale	ASTM D2270		155	155	155

SAMPLE IMAGES

