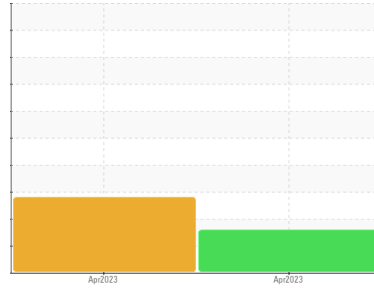




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
RIG 879
 Machine Id
R879-P-01
 Component
Pump Drive
 Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

▲ Contamination

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

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KL0009708	KL0011839	---
Sample Date	Client Info		19 Apr 2023	16 Apr 2023	---
Machine Age	days	Client Info	45035	45027	---
Oil Age	days	Client Info	0	0	---
Oil Changed	Client Info		Not Chngd	N/A	---
Sample Status			ABNORMAL	ABNORMAL	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >500	85	117	---
Chromium	ppm	ASTM D5185m >7	<1	<1	---
Nickel	ppm	ASTM D5185m	0	0	---
Titanium	ppm	ASTM D5185m	<1	<1	---
Silver	ppm	ASTM D5185m	0	0	---
Aluminum	ppm	ASTM D5185m >25	10	12	---
Lead	ppm	ASTM D5185m >35	0	0	---
Copper	ppm	ASTM D5185m >50	4	5	---
Tin	ppm	ASTM D5185m >5	0	0	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	4	---
Barium	ppm	ASTM D5185m	5	11	---
Molybdenum	ppm	ASTM D5185m	10	12	---
Manganese	ppm	ASTM D5185m	<1	1	---
Magnesium	ppm	ASTM D5185m	14	25	---
Calcium	ppm	ASTM D5185m	597	714	---
Phosphorus	ppm	ASTM D5185m	34	39	---
Zinc	ppm	ASTM D5185m	14	20	---
Sulfur	ppm	ASTM D5185m	9421	9304	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	50	▲ 63	---
Sodium	ppm	ASTM D5185m	383	430	---
Potassium	ppm	ASTM D5185m >20	4	5	---

FLUID CLEANLINESS

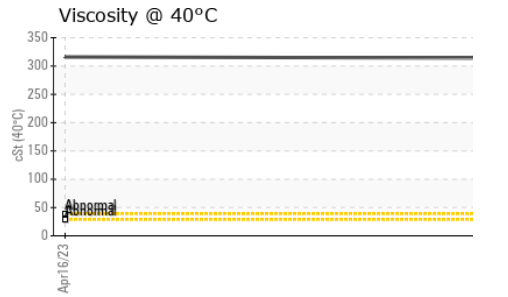
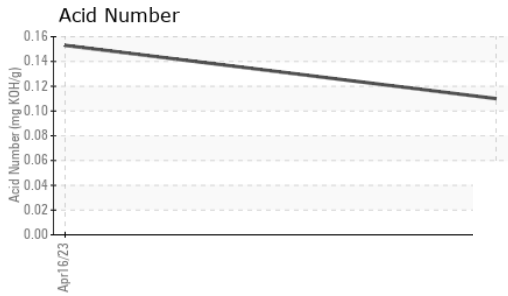
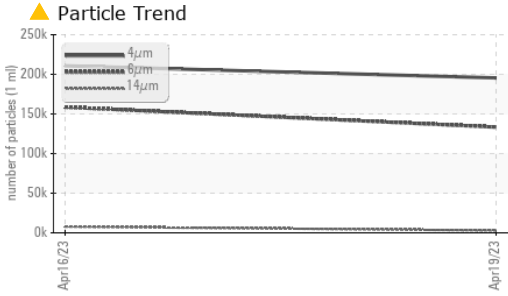
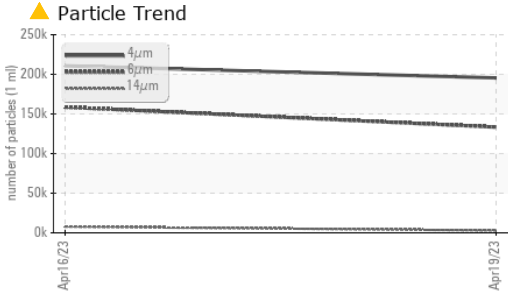
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		195447	210765	---
Particles >6µm	ASTM D7647	>1300	▲ 133368	▲ 158621	---
Particles >14µm	ASTM D7647	>160	▲ 2875	▲ 7757	---
Particles >21µm	ASTM D7647	>40	▲ 82	95	---
Particles >38µm	ASTM D7647	>10	1	1	---
Particles >71µm	ASTM D7647	>3	0	0	---
Oil Cleanliness	ISO 4406 (c)	>17/14	▲ 24/19	▲ 24/20	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.11	0.153	---



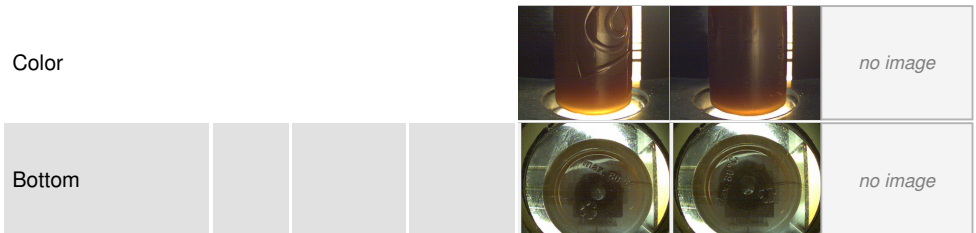
OIL ANALYSIS REPORT



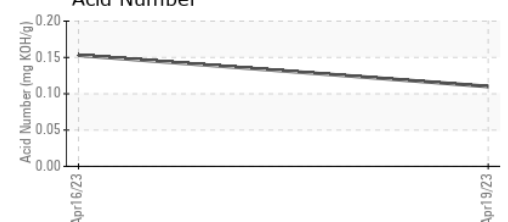
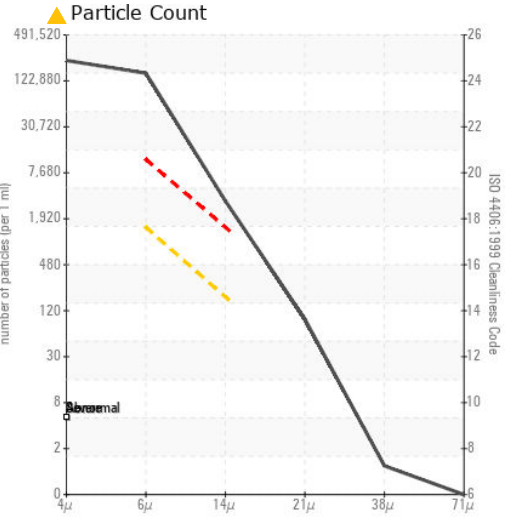
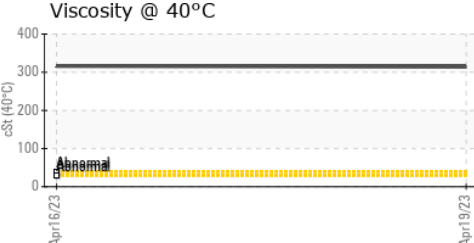
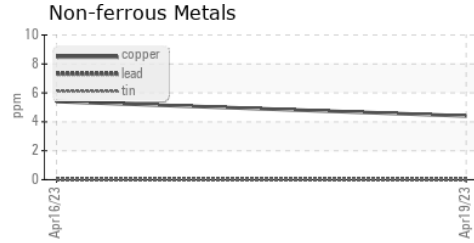
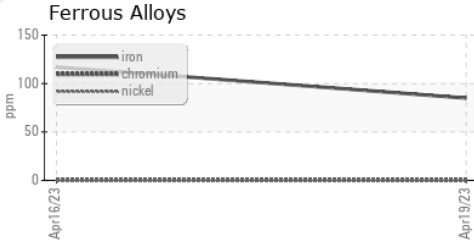
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	314	316	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0009708 **Received** : 24 Apr 2023
Lab Number : 05827592 **Diagnosed** : 26 Apr 2023
Unique Number : 10441085 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: PrtCount)

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 micheal.eastman@patenergy.com
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 F: (432)561-9388

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)