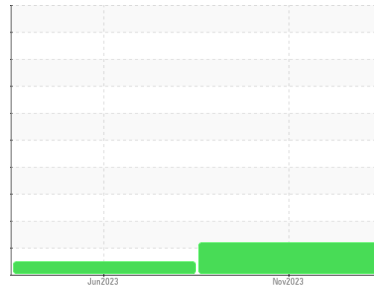




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
ESL METER

Component
Hydraulic System

Fluid
ROYAL PURPLE SYNFILM 32 (--- GAL)

DIAGNOSIS

Recommendation

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		RP0001286	RP0001289	---
Sample Date	Client Info		15 Nov 2023	29 Jun 2023	---
Machine Age	yrs	Client Info	0	0	---
Oil Age	yrs	Client Info	0	0	---
Oil Changed	Client Info		Not Changed	N/A	---
Sample Status			ABNORMAL	NORMAL	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	0	1	---
Chromium	ppm	ASTM D5185m >20	0	0	---
Nickel	ppm	ASTM D5185m >20	0	<1	---
Titanium	ppm	ASTM D5185m	0	0	---
Silver	ppm	ASTM D5185m	0	0	---
Aluminum	ppm	ASTM D5185m >20	0	<1	---
Lead	ppm	ASTM D5185m >20	0	<1	---
Copper	ppm	ASTM D5185m >20	6	7	---
Tin	ppm	ASTM D5185m >20	<1	0	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	<1	<1	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	---
Barium	ppm	ASTM D5185m	<1	0	---
Molybdenum	ppm	ASTM D5185m	0	0	---
Manganese	ppm	ASTM D5185m	<1	0	---
Magnesium	ppm	ASTM D5185m 90	9	15	---
Calcium	ppm	ASTM D5185m	2	0	---
Phosphorus	ppm	ASTM D5185m	19	17	---
Zinc	ppm	ASTM D5185m	21	15	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	2	15	---
Sodium	ppm	ASTM D5185m	2	0	---
Potassium	ppm	ASTM D5185m >20	2	<1	---
Water	%	ASTM D6304 >0.05	0.004	0.008	---
ppm Water	ppm	ASTM D6304 >500	50	84.8	---

FLUID CLEANLINESS

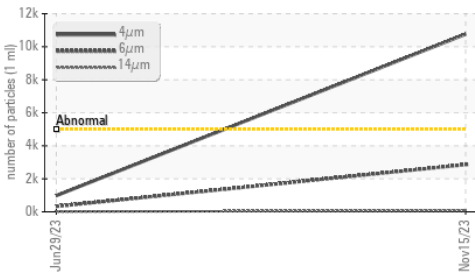
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 10763	981	---
Particles >6µm	ASTM D7647	>1300	▲ 2857	329	---
Particles >14µm	ASTM D7647	>160	69	12	---
Particles >21µm	ASTM D7647	>40	17	2	---
Particles >38µm	ASTM D7647	>10	0	0	---
Particles >71µm	ASTM D7647	>3	0	0	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 21/19/13	17/16/11	---

FLUID DEGRADATION

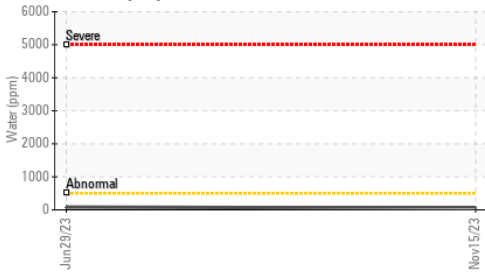
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.28	0.31	---

OIL ANALYSIS REPORT

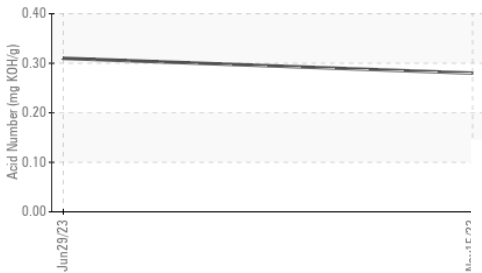
▲ Particle Trend



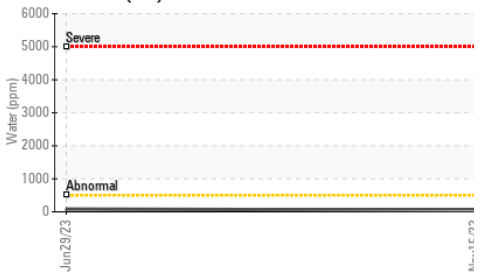
Water (KF)



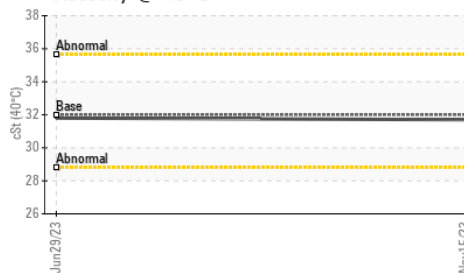
Acid Number



Water (KF)



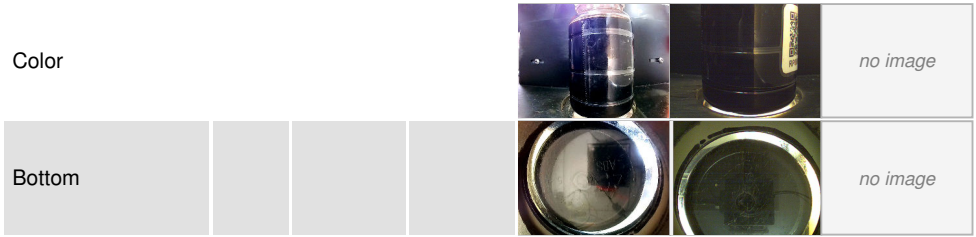
Viscosity @ 40°C



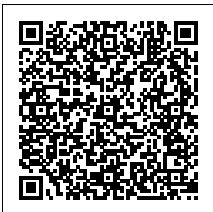
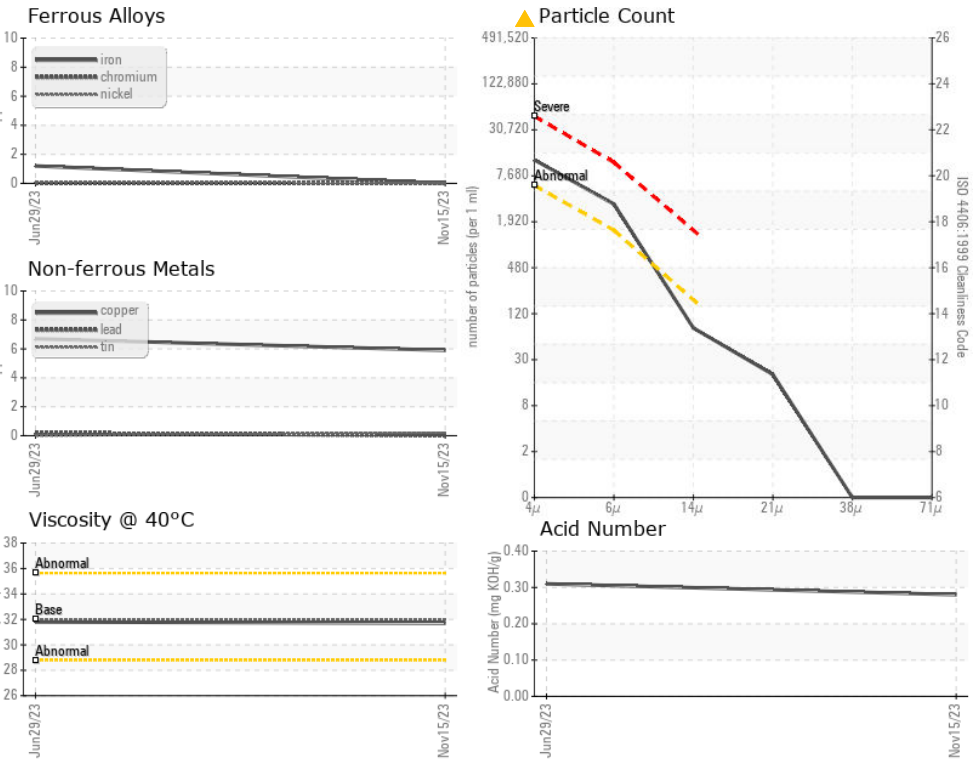
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.05	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	31.8	---

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. : RP0001286
Lab Number : 06204613
Unique Number : 11072074
Test Package : IND 2
Received : 10 Jun 2024
Tested : 11 Jun 2024
Diagnosed : 11 Jun 2024 - Wes Davis

EXPLORER PIPELINE
 1355 ROBBINS RD
 HARTFORD, IL
 US 62048
 Contact: ROGELIO BERUMEN
 rberumen@expl.com

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)

F: (618)251-0270