

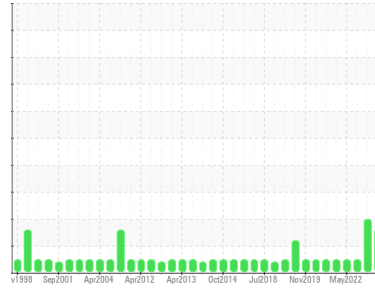


OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY

Area
PUMPHOUSE/AIR COMPRESSORS
 Machine Id
C - 1 Air Compressor Electric Drive Gearbox
 Component
Gearbox
 Fluid
ESSO SPARTAN EP 220 (15 GAL)



DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

Viscosity of sample indicates oil is within ISO 32 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. 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		WC0898677	WC0850104	WC0732720
Sample Date	Client Info		10 Jan 2024	16 Aug 2023	10 Aug 2022
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	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>5	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*	>DFLT	0	1	0
Iron	ppm	ASTM D5185(m) >200	2	2	45
Chromium	ppm	ASTM D5185(m) >15	0	0	0
Nickel	ppm	ASTM D5185(m) >15	0	<1	<1
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	0	0	0
Aluminum	ppm	ASTM D5185(m) >25	<1	<1	<1
Lead	ppm	ASTM D5185(m) >100	<1	0	2
Copper	ppm	ASTM D5185(m) >200	<1	2	<1
Tin	ppm	ASTM D5185(m) >25	0	0	0
Antimony	ppm	ASTM D5185(m) >5	0	0	<1
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) .5	<1	4	2
Barium	ppm	ASTM D5185(m)	▲ 315	▲ 325	<1
Molybdenum	ppm	ASTM D5185(m) 0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 0	<1	<1	<1
Calcium	ppm	ASTM D5185(m) 1.7	1	3	12
Phosphorus	ppm	ASTM D5185(m) 250	▲ <1	▲ 3	276
Zinc	ppm	ASTM D5185(m) .3	2	▲ 28	40
Sulfur	ppm	ASTM D5185(m)	▲ 121	▲ 182	9419
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

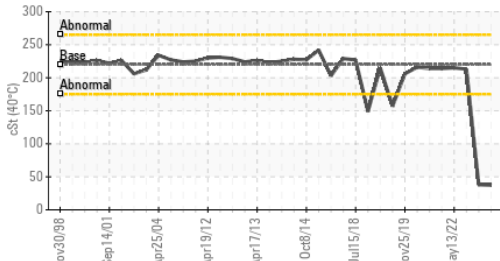
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >50	0	<1	10
Sodium	ppm	ASTM D5185(m)	2	13	5
Potassium	ppm	ASTM D5185(m) >20	2	4	0

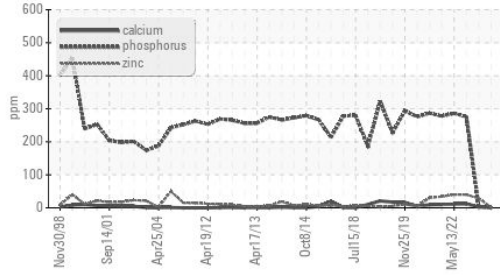


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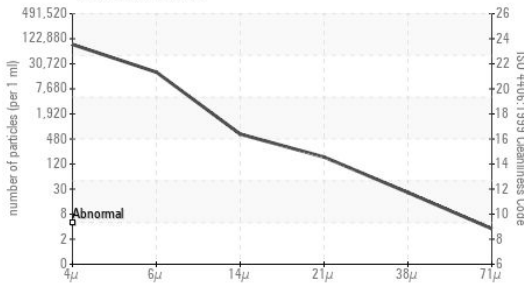
▲ Viscosity @ 40°C



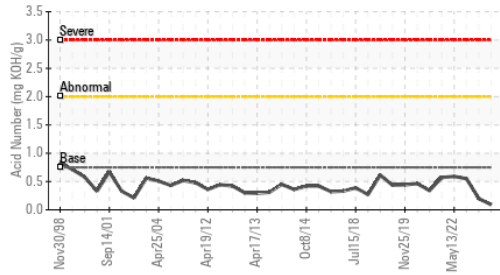
▲ Additives



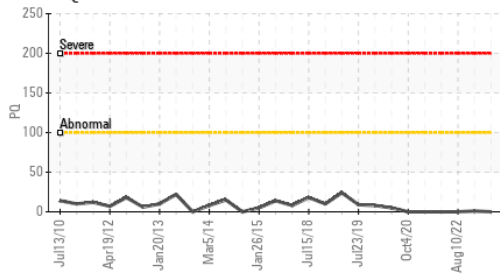
Particle Count



Acid Number



PQ



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		77455	72885	29943
Particles >6µm	ASTM D7647	>10240000	16799	20400	7131
Particles >14µm	ASTM D7647	>10240000	551	901	608
Particles >21µm	ASTM D7647	>25600000	156	169	114
Particles >38µm	ASTM D7647	>6400000	22	3	2
Particles >71µm	ASTM D7647	>1600000	3	0	0
Oil Cleanliness	ISO 4406 (c)	>--/30/30	23/21/16	23/22/17	22/20/16

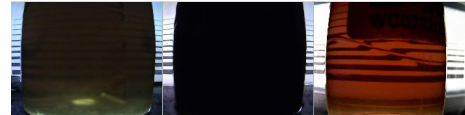
FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.75	0.09	0.20	0.55

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	VLITE	NONE
Debris	scalar Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar Visual*	NONE	VLITE	NONE	NONE
Appearance	scalar Visual*	NORML	NORML	NORML	NORML
Odor	scalar Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar Visual*	>5	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	220	▲ 37.1	▲ 38.0	213

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color



Bottom



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0898677
Lab Number : **02608054**
Unique Number : 5709140
Test Package : IND 2 (Additional Tests: PQ, PrtCount)

Received : 10 Jan 2024
Diagnosed : 15 Jan 2024
Diagnostician : Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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