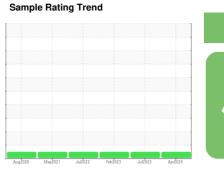


OIL ANALYSIS REPORT

NOT GIVEN

SULLIVAN PALATEK 19KE000591 - ASPEN WASTE SYSTEMS

Component





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

Fluid Condition

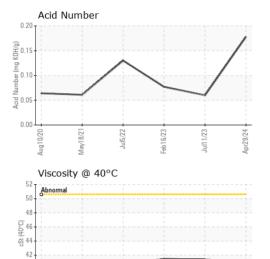
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 5950 4395 3769 Oil Age hrs Client Info 1555 2313 1687 Oil Changed Client Info Changed Changed Not Changed Sample Status NORMAL 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 <1	Sample Number		Client Info		UCS06174678	UCS05911326	UCS05777563
Oil Age hrs Client Info 1555 2313 1687 Oil Changed Sample Status Client Info Changed Changed NORMAL Not Changed NoRMAL	Sample Date		Client Info		29 Apr 2024	11 Jul 2023	16 Feb 2023
Oil Changed Sample Status Client Info Changed NORMAL Changed NORMAL Not Change NoRMAL Not Change NoRMAL Not Change NoRMAL Not Change NoRMAL<	Machine Age	hrs	Client Info		5950	4395	3769
NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2	Oil Age	hrs	Client Info		1555	2313	1687
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 <1 0 Chromium ppm ASTM D5185m >50 0 <1 0 Nickel ppm ASTM D5185m 0 0 0 0 Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 0 Lead ppm ASTM D5185m >50 0 0 0 Copper ppm ASTM D5185m >50 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 <	Oil Changed		Client Info		Changed	Changed	Not Changd
Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 <1 0 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m 0 0 0 0 Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 0 Aluminum ppm ASTM D5185m >50 0 0 <1 Lead ppm ASTM D5185m >15 0 0 <1 Copper ppm ASTM D5185m 0 0 0 <1 Cadrium ppm ASTM D5185m 0 0 0 <1	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 <1	CONTAMINATION	V	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.1	NEG	NEG	NEG
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 >50 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Barium ppm	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	0	<1	0
Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 <1	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver	Nickel	ppm	ASTM D5185m		0	0	0
Aluminum ppm ASTM D5185m >25 0 0 <1 Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >50 0 0 <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >50 0 0 <1 Tin ppm ASTM D5185m >15 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 <1 Cadmium ppm ASTM D5185m 0 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 Magnesium ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m 0 0 0 Phosphorus ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 25	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >50 0 0 <1 Tin ppm ASTM D5185m >15 0 0 0 Vanadium ppm ASTM D5185m 0 0 <1	Aluminum	ppm	ASTM D5185m	>25	0	0	<1
Tin ppm ASTM D5185m >15 0 0 0 Vanadium ppm ASTM D5185m 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 <1 Magnesium ppm ASTM D5185m 0 0 0 6 Calcium ppm ASTM D5185m 0 0 0 0 Phosphorus ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 225 1 <1 1 1	Lead	ppm	ASTM D5185m	>25	0	0	0
Vanadium ppm ASTM D5185m 0 0 <1 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 <1 Magnesium ppm ASTM D5185m 0 0 0 Calcium ppm ASTM D5185m 0 0 0 Phosphorus ppm ASTM D5185m 683 711 585 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2	Copper	ppm	ASTM D5185m	>50	0	0	<1
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 0 0 0 Phosphorus ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2	Tin	ppm	ASTM D5185m	>15	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 6 Calcium ppm ASTM D5185m 0 0 0 Phosphorus ppm ASTM D5185m 683 711 585 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1	Vanadium	ppm	ASTM D5185m		0	0	<1
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 <1 Magnesium ppm ASTM D5185m 0 0 6 Calcium ppm ASTM D5185m 0 0 0 Phosphorus ppm ASTM D5185m 683 711 585 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1 1 Sodium ppm ASTM D5185m >20 <1 0 0 FLUID DEGRADATION method limit/base current history1 <td>Cadmium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>0</th> <td>0</td> <td>0</td>	Cadmium	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 4 Magnesium ppm ASTM D5185m 0 0 6 Calcium ppm ASTM D5185m 0 0 0 Phosphorus ppm ASTM D5185m 683 711 585 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1 1 Sodium ppm ASTM D5185m >20 <1 0 0 FLUID DEGRADATION method limit/base current history1 history2	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m 0 0 6 Calcium ppm ASTM D5185m 0 0 0 Phosphorus ppm ASTM D5185m 683 711 585 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1 1 Sodium ppm ASTM D5185m >20 <1 0 1 Potassium ppm ASTM D5185m >20 <1 0 0	Boron	ppm	ASTM D5185m		0	0	0
Manganese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m 0 0 6 Calcium ppm ASTM D5185m 0 0 0 Phosphorus ppm ASTM D5185m 683 711 585 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1 1 Sodium ppm ASTM D5185m >20 <1 0 1 Potassium ppm ASTM D5185m >20 <1 0 0 FLUID DEGRADATION method limit/base current history1 history2	Barium	ppm	ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m 0 0 6 Calcium ppm ASTM D5185m 0 0 0 Phosphorus ppm ASTM D5185m 683 711 585 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1 1 Sodium ppm ASTM D5185m >20 <1 0 0 FLUID DEGRADATION method limit/base current history1 history2	Molybdenum	ppm	ASTM D5185m		0	0	0
Calcium ppm ASTM D5185m 0 0 0 Phosphorus ppm ASTM D5185m 683 711 585 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1	Manganese	ppm	ASTM D5185m		0	0	<1
Phosphorus ppm ASTM D5185m 683 711 585 Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1 1 Sodium ppm ASTM D5185m <1 0 1 Potassium ppm ASTM D5185m >20 <1 0 0 FLUID DEGRADATION method limit/base current history1 history2	Magnesium	ppm	ASTM D5185m		0	0	6
Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1 1 Sodium ppm ASTM D5185m <1 0 1 Potassium ppm ASTM D5185m >20 <1 0 0 FLUID DEGRADATION method limit/base current history1 history2	Calcium	ppm	ASTM D5185m		0	0	0
Sulfur ppm ASTM D5185m 1218 925 651 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1	Phosphorus	ppm	ASTM D5185m		683	711	585
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 <1	Zinc	ppm	ASTM D5185m		0	0	0
Silicon ppm ASTM D5185m >25 1 <1 1 Sodium ppm ASTM D5185m <1 0 1 Potassium ppm ASTM D5185m >20 <1 0 0 FLUID DEGRADATION method limit/base current history1 history2	Sulfur	ppm	ASTM D5185m		1218	925	651
Sodium ppm ASTM D5185m <1 0 1 Potassium ppm ASTM D5185m >20 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 0 0 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185m	>25	1	<1	1
Potassium ppm ASTM D5185m >20 <1 0 0 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		<1	0	1
	Potassium		ASTM D5185m	>20	<1	0	0
Acid Number (AN) mg KOH/g ASTM D8045 0.178 0.06 0.077	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.178	0.06	0.077

Sullivan

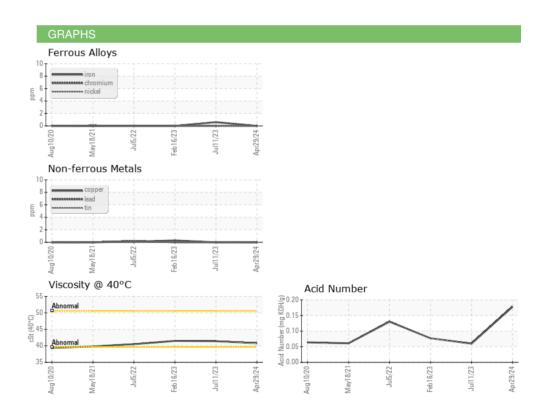
40

OIL ANALYSIS REPORT



Jul11/23

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
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	LIGHT	MODER	LIGHT
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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		40.8	41.4	41.5
SAMPLE IMAGES	3	method	limit/base	current	history1	history2
Color				no image		
Bottom				no image		







Certificate 12367

Sample No.

Lab Number : 06174678

Test Package : IND 2

: UCS06174678 Unique Number : 11020731

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 09 May 2024

Tested : 10 May 2024

Diagnosed

: 13 May 2024 - Sean Felton

LAKEVILLE, MN US 55044 Contact: SCOTT HARPER sc@appliedairsystems.com T: (952)388-3122

APPLIED AIR SYSTEMS

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: