

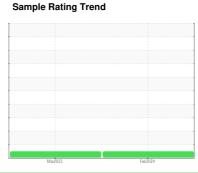
OIL ANALYSIS REPORT

PALASYN 45

PALATEK 1301220007 - TITAN MACHINERY MOOREHEAD

Component

Compressor





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

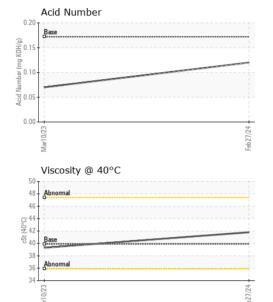
Fluid Condition

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

Machine Age hrs Client Info 23986 21838 Oil Age hrs Client Info 8000 4000 Oil Changed Client Info Changed Changed Sample Status NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m 0 0 Lead ppm ASTM D5185m >25 0 0 Copper ppm ASTM D5185m >50 0 0 Vanadium </th <th></th> <th></th> <th></th> <th>Marzuza</th> <th>F802U24</th> <th></th> <th></th>				Marzuza	F802U24		
Sample Date Client Info 27 Feb 2024 10 Mar 2023	SAMPLE INFORM	NOITAN	method				history2
Machine Age hrs Client Info 8000 4000 Accepted	Sample Number		Client Info		UCS06123848	UCS05809080	
Dil Age	Sample Date		Client Info		27 Feb 2024	10 Mar 2023	
Contamped Client Info Changed Normal Normal Normal Normal Contamped Normal Normal Contamped Normal Contamped Normal Contamped Normal Contamped Changed Changed	Machine Age	hrs	Client Info		23986	21838	
Contamped Client Info Changed Normal Normal Normal Normal Contamped Normal Normal Contamped Normal Contamped Normal Contamped Normal Contamped Changed Changed	Oil Age	hrs	Client Info		8000	4000	
NORMAL N					Changed	Changed	
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m 0 0 Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m >25 0 0						Ü	
Water WC Method >0.1 NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m 0 0 Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m >25 0 0 Aluminum ppm ASTM D5185m >25 0 0 Aluminum ppm ASTM D5185m >50 0 0 Lead ppm ASTM D5185m >50 0 0 Copper ppm ASTM D5185m >50 0 0 Vanadium ppm ASTM D5185m 0 0 0 <t< th=""><th>•</th><th>VI</th><th>method</th><th>limit/hase</th><th>current</th><th>history1</th><th>history2</th></t<>	•	VI	method	limit/hase	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m 0 <1 Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m >25 0 0 Aluminum ppm ASTM D5185m >25 0 0 Aluminum ppm ASTM D5185m >25 0 0 Lead ppm ASTM D5185m >50 0 0 Lead ppm ASTM D5185m >50 0 0 Copper ppm ASTM D5185m >50 0 0 Vanadium ppm ASTM D5185m 0 0 <t< th=""><th></th><th>N</th><th></th><th></th><th></th><th>•</th><th>,</th></t<>		N				•	,
Iron			WC Method	>0.1	NEG	NEG	
Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m 0 <1 Titanium ppm ASTM D5185m 0 0 Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m >25 0 0 Aluminum ppm ASTM D5185m >25 0 0 Lead ppm ASTM D5185m >25 0 0 Copper ppm ASTM D5185m >50 0 0 Tin ppm ASTM D5185m 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Barium<	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	0	0	
Titanium	Chromium	ppm	ASTM D5185m	>10	0	0	
Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m >25 0 0 Lead ppm ASTM D5185m >25 0 0 Copper ppm ASTM D5185m >50 0 0 Tin ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 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 0.0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0.0 0 0	Nickel	ppm	ASTM D5185m		0	<1	
Aluminum ppm ASTM D5185m >25 0 0 Lead ppm ASTM D5185m >25 0 0 Copper ppm ASTM D5185m >50 0 0 Tin ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0.0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0.0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0.0 0 0 Malpanese ppm ASTM D5185m 0.0 0 <1	Titanium	ppm	ASTM D5185m		0	0	
Lead ppm ASTM D5185m >25 0 0	Silver	ppm	ASTM D5185m		0	0	
Copper ppm ASTM D5185m >50 0 0 Tin ppm ASTM D5185m >15 0 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0.0 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 Manganese ppm ASTM D5185m 0.0 0 <1	Aluminum	ppm	ASTM D5185m	>25	0	0	
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Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 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 Manganese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m 0.0 0 <1 Calcium ppm ASTM D5185m 0.0 0 <1 Phosphorus ppm ASTM D5185m 0 0 <1 Sulfur ppm ASTM D5185m 0 0 <1 Sulfur ppm ASTM D5185m >25 1 2	Copper	ppm	ASTM D5185m	>50	0	0	
Cadmium ppm ASTM D5185m 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 Manganese ppm ASTM D5185m 0.0 0 <1	Tin	ppm	ASTM D5185m	>15	0	0	
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	
Boron ppm ASTM D5185m 0.0 0 0 Barium ppm ASTM D5185m 0.0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m 0.0 0 2 Calcium ppm ASTM D5185m 0.0 0 <1 Phosphorus ppm ASTM D5185m 966 720 664 Zinc ppm ASTM D5185m 0 0 <1 Sulfur ppm ASTM D5185m 1309 768 337 CONTAMINANTS method limit/base current history1 history2 Sodium ppm ASTM D5185m >25 1 2 FLUID DEGRADATION method limit/base <t< td=""><td>Cadmium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>0</th><td>0</td><td></td></t<>	Cadmium	ppm	ASTM D5185m		0	0	
Barium ppm ASTM D5185m 0.0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m 0.0 0 2 Calcium ppm ASTM D5185m 0.0 0 <1 Phosphorus ppm ASTM D5185m 966 720 664 Zinc ppm ASTM D5185m 0 0 <1 Sulfur ppm ASTM D5185m 1309 768 337 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 2 Sodium ppm ASTM D5185m >20 0 <1 FLUID DEGRADATION method limit/base current	ADDITIVES		method	limit/base	current	history1	history2
Barium ppm ASTM D5185m 0.0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 <1	Boron	ppm	ASTM D5185m	0.0	0	0	
Manganese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m 0.0 0 2 Calcium ppm ASTM D5185m 0.0 0 <1 Phosphorus ppm ASTM D5185m 966 720 664 Zinc ppm ASTM D5185m 0 0 <1 Sulfur ppm ASTM D5185m 1309 768 337 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 2 Sodium ppm ASTM D5185m >20 0 <1 FLUID DEGRADATION method limit/base current history1 history2	Barium		ASTM D5185m	0.0	0	0	
Magnesium ppm ASTM D5185m 0.0 0 2 Calcium ppm ASTM D5185m 0.0 0 <1 Phosphorus ppm ASTM D5185m 966 720 664 Zinc ppm ASTM D5185m 0 0 <1 Sulfur ppm ASTM D5185m 1309 768 337 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 2 Sodium ppm ASTM D5185m >20 0 <1 FLUID DEGRADATION method limit/base current history1 history2	Molybdenum	ppm	ASTM D5185m	0	0	0	
Magnesium ppm ASTM D5185m 0.0 0 2 Calcium ppm ASTM D5185m 0.0 0 <1 Phosphorus ppm ASTM D5185m 966 720 664 Zinc ppm ASTM D5185m 0 0 <1 Sulfur ppm ASTM D5185m 1309 768 337 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 2 Sodium ppm ASTM D5185m >20 0 <1 FLUID DEGRADATION method limit/base current history1 history2	Manganese	ppm	ASTM D5185m	0	0	<1	
Phosphorus ppm ASTM D5185m 966 720 664 Zinc ppm ASTM D5185m 0 0 <1		ppm	ASTM D5185m	0.0	0	2	
Zinc ppm ASTM D5185m 0 0 <1 Sulfur ppm ASTM D5185m 1309 768 337 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 2 Sodium ppm ASTM D5185m <1	Calcium	ppm	ASTM D5185m	0.0	0	<1	
Zinc ppm ASTM D5185m 0 0 <1 Sulfur ppm ASTM D5185m 1309 768 337 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 2 Sodium ppm ASTM D5185m <1	Phosphorus	ppm	ASTM D5185m	966	720	664	
Sulfur ppm ASTM D5185m 1309 768 337 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 1 2 Sodium ppm ASTM D5185m <1	Zinc		ASTM D5185m	0	0	<1	
Silicon ppm ASTM D5185m >25 1 2 Sodium ppm ASTM D5185m <1 2 Potassium ppm ASTM D5185m >20 0 <1 FLUID DEGRADATION method limit/base current history1 history2	Sulfur	ppm	ASTM D5185m	1309	768	337	
Sodium ppm ASTM D5185m <1	CONTAMINANTS	;	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185m <1 2 Potassium ppm ASTM D5185m >20 0 <1 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185m	>25	1	2	
Potassium ppm ASTM D5185m >20 0 <1 FLUID DEGRADATION method limit/base current history1 history2	Sodium		ASTM D5185m		<1		
·	Potassium			>20	0	<1	
Acid Number (AN) mg KOH/g ASTM D8045 0.172 0.12 0.07	FLUID DEGRADA	ATION_	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.172	0.12	0.07	

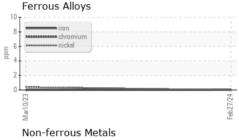
Sullivan

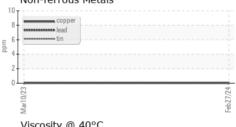
OIL ANALYSIS REPORT

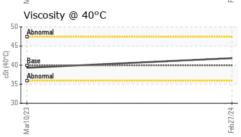


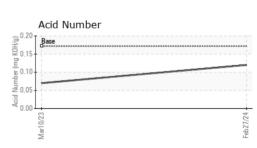


GRAPHS













Certificate L2367

Laboratory Sample No.

Test Package : IND 2

: UCS06123848 Lab Number : 06123848 Unique Number: 10937999

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 20 Mar 2024 **Tested**

Diagnosed

: 21 Mar 2024 : 22 Mar 2024 - Don Baldridge WEST FARGO, ND US 58078 Contact: DALE K

JEMCO-MAXAIR

dalek@jemco-maxair.com T: (701)281-0362

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)

Report Id: UCJEMWES [WUSCAR] 06123848 (Generated: 03/22/2024 19:24:11) Rev: 1

Contact/Location: DALE K - UCJEMWES

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