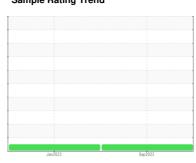


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



BM06 (S/N 016992)

Component
Hydraulic System

NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. Please note that this is a corrected copy for laboratory data updates for particle counts.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

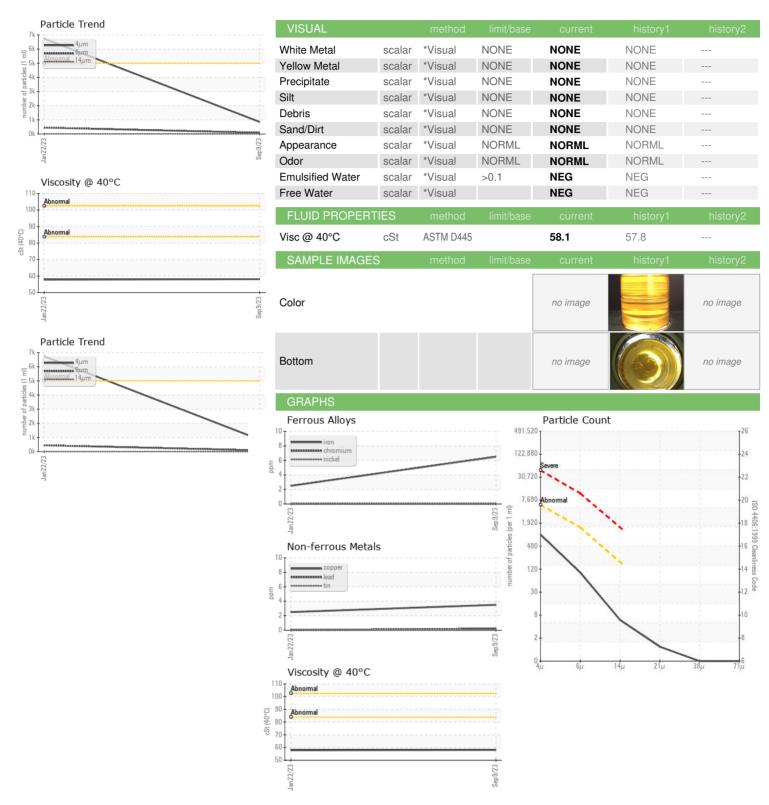
Fluid Condition

The condition of the oil is acceptable for the time in service.

Sample Number Client Info KLM1F00655 PTK0001236							
Sample Number				Jan 2023	Sep2023		
Sample Date Client Info 09 Sep 2023 22 Jan 2023	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 0 Oil Changed Client Info 0 0 Sample Status NORMAL NVA WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 6 2 Iron ppm ASTM D5185m >10 0 0 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m >10 0 0 Aluminum ppm ASTM D5185m >10 0 0 Aluminum ppm ASTM D5185m >10 0 0 Lead ppm ASTM D5185m >10 0 0 Vanadium ppm ASTM D5185m >10 0 0 Vanadium ppm	Sample Number		Client Info		KLM1F00655	PTK0001236	
Oil Age hrs Client Info N/A N/A	Sample Date		Client Info		09 Sep 2023	22 Jan 2023	
Oil Changed Sample Status Client Info N/A N/A WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 6 2 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m >10 0 0 Silver ppm ASTM D5185m >10 0 0 Silver ppm ASTM D5185m >10 0 0 Aluminum ppm ASTM D5185m >10 0 0 Aluminum ppm ASTM D5185m >10 0 0 Copper ppm ASTM D5185m >10 0 0 Tin ppm ASTM D5185m >10 0 0 Vanadium ppm ASTM D5185m >10 0 <td>Machine Age</td> <td>hrs</td> <td>Client Info</td> <td></td> <th>0</th> <td>0</td> <td></td>	Machine Age	hrs	Client Info		0	0	
WEAR METALS method limit/base current history2 Iron ppm ASTM D5185m >20 6 2	Oil Age	hrs	Client Info		0	0	
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 6 2	Oil Changed		Client Info		N/A	N/A	
Iron	Sample Status				NORMAL	NORMAL	
Chromium ppm ASTM D5185m >10 0 0	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>20	6	2	
Titanium ppm ASTM D5185m 0 0 Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m >10 0 0 Lead ppm ASTM D5185m >75 4 2 Tin ppm ASTM D5185m >10 0 0 Vanadium ppm ASTM D5185m 0 0 0 Vanadium ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDTIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 <1	Chromium	ppm	ASTM D5185m	>10	0	0	
Silver	Nickel	ppm	ASTM D5185m	>10	0	0	
Aluminum	Titanium	ppm	ASTM D5185m		0	0	
Lead	Silver	ppm	ASTM D5185m		0	0	
Copper ppm ASTM D5185m >75 4 2 Tin ppm ASTM D5185m >10 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 Barium ppm ASTM D5185m 2 <1	Aluminum	ppm	ASTM D5185m	>10	0	0	
Tin	Lead	ppm	ASTM D5185m	>10	<1	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 Barium ppm ASTM D5185m 2 <1 Molybdenum ppm ASTM D5185m 2 <1 0 Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 58 53 0 Manganese ppm ASTM D5185m 58 53 0 Manganesium ppm ASTM D5185m 58 53 0 Calcium ppm ASTM D5185m 269 263 Zinc ppm ASTM D5185m 331 3	Copper	ppm	ASTM D5185m	>75	4	2	
Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 Barium ppm ASTM D5185m 2 <1	Tin	ppm		>10	0	0	
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 Barium ppm ASTM D5185m 2 <1	Vanadium	ppm	ASTM D5185m		0	0	
Boron ppm ASTM D5185m 0 0 Barium ppm ASTM D5185m 2 <1	Cadmium	ppm	ASTM D5185m		0	0	
Barium ppm ASTM D5185m 2 <1 Molybdenum ppm ASTM D5185m <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m <1 0 Manganese ppm ASTM D5185m 0 0 Magnesium ppm ASTM D5185m 58 53 Calcium ppm ASTM D5185m 14 13 Phosphorus ppm ASTM D5185m 269 263 Zinc ppm ASTM D5185m 331 320 Sulfur ppm ASTM D5185m 713 659 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1 Sodium ppm ASTM D5185m >20 0 <1 Potassium ppm ASTM D5185m >20 0 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >6µm ASTM D764	Boron	ppm	ASTM D5185m		0	0	
Manganese ppm ASTM D5185m 0 0 Magnesium ppm ASTM D5185m 58 53 Calcium ppm ASTM D5185m 14 13 Phosphorus ppm ASTM D5185m 269 263 Zinc ppm ASTM D5185m 331 320 Sulfur ppm ASTM D5185m 713 659 CONTAMINANTS method limit/base current history1 history2 Sodium ppm ASTM D5185m >20 2 <1		ppm	ASTM D5185m		2	<1	
Magnesium ppm ASTM D5185m 58 53 Calcium ppm ASTM D5185m 14 13 Phosphorus ppm ASTM D5185m 269 263 Zinc ppm ASTM D5185m 331 320 Sulfur ppm ASTM D5185m 713 659 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1	Molybdenum	ppm	ASTM D5185m		<1	0	
Calcium ppm ASTM D5185m 14 13 Phosphorus ppm ASTM D5185m 269 263 Zinc ppm ASTM D5185m 331 320 Sulfur ppm ASTM D5185m 713 659 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1	-	ppm	ASTM D5185m		0	0	
Phosphorus ppm ASTM D5185m 269 263 Zinc ppm ASTM D5185m 331 320 Sulfur ppm ASTM D5185m 713 659 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1							
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Sulfur ppm ASTM D5185m 713 659 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1	· ·						
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1	-						
Silicon ppm ASTM D5185m >20 2 <1 Sodium ppm ASTM D5185m 0 0 Potassium ppm ASTM D5185m >20 0 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 849 6734 Particles >6μm ASTM D7647 >1300 86 449 Particles >14μm ASTM D7647 >160 5 10 Particles >21μm ASTM D7647 >40 1 3 Particles >38μm ASTM D7647 >10 0 0 Particles >71μm ASTM D7647 >3 0 0			ASTM D5185m		713	659	
Sodium ppm ASTM D5185m 0 0 Potassium ppm ASTM D5185m >20 0 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 849 6734 Particles >6μm ASTM D7647 >1300 86 449 Particles >14μm ASTM D7647 >160 5 10 Particles >21μm ASTM D7647 >40 1 3 Particles >38μm ASTM D7647 >10 0 0 Particles >71μm ASTM D7647 >3 0 0	Silicon	ppm	ASTM D5185m	>20	2		
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 849 6734 Particles >6μm ASTM D7647 >1300 86 449 Particles >14μm ASTM D7647 >160 5 10 Particles >21μm ASTM D7647 >40 1 3 Particles >38μm ASTM D7647 >10 0 0 Particles >71μm ASTM D7647 >3 0 0	Sodium	ppm	ASTM D5185m		0	0	
Particles >4μm ASTM D7647 >5000 849 6734 Particles >6μm ASTM D7647 >1300 86 449 Particles >14μm ASTM D7647 >160 5 10 Particles >21μm ASTM D7647 >40 1 3 Particles >38μm ASTM D7647 >10 0 0 Particles >71μm ASTM D7647 >3 0 0	Potassium	ppm	ASTM D5185m	>20	0	<1	
Particles >6μm ASTM D7647 >1300 86 449 Particles >14μm ASTM D7647 >160 5 10 Particles >21μm ASTM D7647 >40 1 3 Particles >38μm ASTM D7647 >10 0 0 Particles >71μm ASTM D7647 >3 0 0	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >160 5 10 Particles >21μm ASTM D7647 >40 1 3 Particles >38μm ASTM D7647 >10 0 0 Particles >71μm ASTM D7647 >3 0 0							
Particles >21μm ASTM D7647 >40 1 3 Particles >38μm ASTM D7647 >10 0 0 Particles >71μm ASTM D7647 >3 0 0	•		ASTM D7647	>1300			
Particles >38μm ASTM D7647 >10 0 0 Particles >71μm ASTM D7647 >3 0 0							
Particles >71μm ASTM D7647 >3 0						3	
	•						
Oil Cleanliness ISO 4406 (c) >19/17/14 17/14/10 20/16/10	•						
	Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/14/10	20/16/10	



OIL ANALYSIS REPORT





Certificate L2367

Laboratory Sample No. Lab Number Unique Number

: KLM1F00655 : 05964355 : 10670906

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 28 Sep 2023 Diagnosed : 23 Oct 2023

Diagnostician : Doug Bogart Test Package : FLEET (Additional Tests: PRTCOUNT)

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)

CREATIVE WERKS 1350 MUNGER RD BARTLETT, IL US 60103

Contact: RICK CAMARGO rcamargo@cwerksglobal.com

F:

Contact/Location: RICK CAMARGO - CREBAR

T: