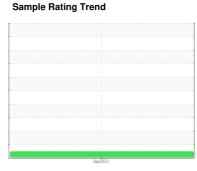


OIL ANALYSIS REPORT



NORMAL



BM05 (S/N 16132)

Component **Hydraulic System**

NOT GIVEN (--- GAL)

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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.

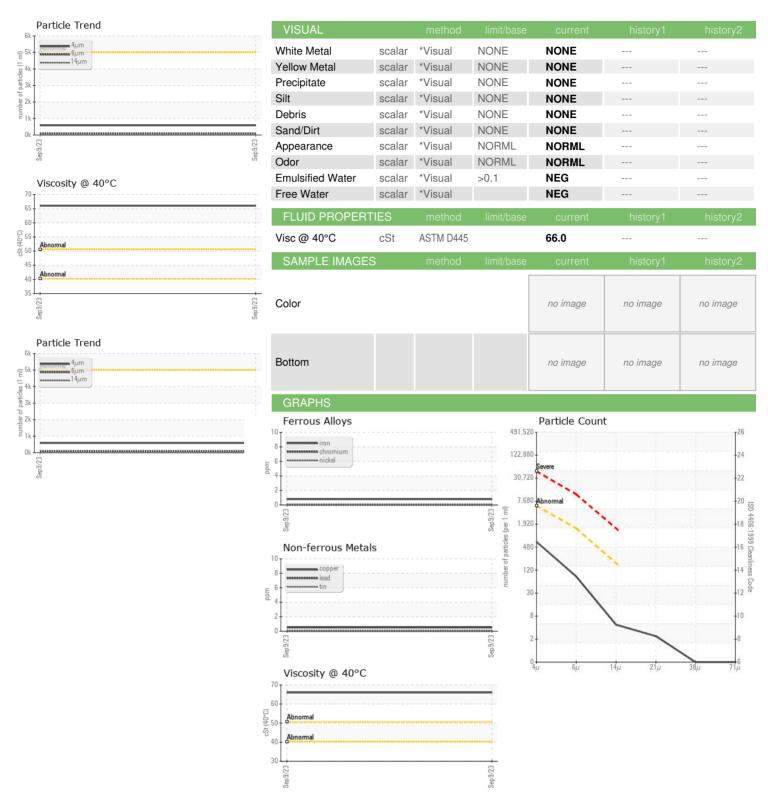
Fluid Condition

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

Sample Number Client Info KLM1F00654 Sample Date Client Info 09 Sep 2023							
Sample Number Client Info KLM1F00654 Sample Date Client Info 09 Sep 2023			Sep.2023				
Sample Date Client Info O9 Sep 2023 Machine Age hrs Client Info O O O O O O	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Collect Info	Sample Number		Client Info		KLM1F00654		
Machine Age hrs Client Info 0 Client Info 0 Client Info 0 Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info N/A Client Info Client Info N/A Client Info N/A Client Info Client Info N/A Client Info Client Info N/A Client Info Client			Client Info		09 Sep 2023		
Oil Age hrs Client Info N/A Oil Changed Client Info N/A Sample Status NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1 Chromium ppm ASTM D5185m >10 0 Nickel ppm ASTM D5185m >10 0 Riturium ppm ASTM D5185m >10 0 Aluminum ppm ASTM D5185m >10 0 Aluminum ppm ASTM D5185m >10 0 Lead ppm ASTM D5185m >10 0 Copper ppm ASTM D5185m >10 0 Vanadium ppm	•	hrs	Client Info		-		
Oil Changed Sample Status Client Info N/A	•	hrs	Client Info		0		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1			Client Info				
Iron	Sample Status				NORMAL		
Chromium ppm ASTM D5185m >10 0 Nickel ppm ASTM D5185m >10 0 Titanium ppm ASTM D5185m 0 Silver ppm ASTM D5185m 0 Aluminum ppm ASTM D5185m >10 0 Lead ppm ASTM D5185m >10 0 Copper ppm ASTM D5185m >10 0 Tin ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 Boron ppm ASTM D5185m 2 Barium ppm ASTM D5185m 2 Magnesium ppm <t< td=""><td>WEAR METALS</td><td></td><td>method</td><td>limit/base</td><td>current</td><td>history1</td><td>history2</td></t<>	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>20	<1		
Titanium	Chromium	ppm	ASTM D5185m	>10	0		
Silver	Nickel	ppm	ASTM D5185m	>10	0		
Silver	Titanium	ppm	ASTM D5185m		0		
Aluminum	Silver				0		
Lead	Aluminum			>10			
Copper ppm ASTM D5185m >75 <1 Tin ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 2 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 71 Calcium ppm ASTM D5185m 293 Phosphorus ppm ASTM D5185m 373 Sulfur ppm ASTM D5185m 794 Sulfur ppm ASTM D5185m 20	Lead				-		
Tin					<1		
Vanadium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 2 Molybdenum ppm ASTM D5185m 2 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 71 Calcium ppm ASTM D5185m 293 Phosphorus ppm ASTM D5185m 293 Zinc ppm ASTM D5185m 373 Sulfur ppm ASTM D5185m 794 CONTAMINANTS method limit/base current history1 history2 Sodium ppm ASTM D5185m >20 <1							
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 2 Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 71 Calcium ppm ASTM D5185m 293 Phosphorus ppm ASTM D5185m 293 Zinc ppm ASTM D5185m 373 Sulfur ppm ASTM D5185m 794 CONTAMINANTS method limit/base current history1 history2 Sodium ppm ASTM D5185m >20 <1				7 10			
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 2 Molybdenum ppm ASTM D5185m <1					_		
Boron ppm ASTM D5185m 0		ррпп	AOTIVI DOTOSIII		•		
Barium ppm ASTM D5185m 2 Molybdenum ppm ASTM D5185m <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		0		
Manganese ppm ASTM D5185m 0 Calcium ppm ASTM D5185m 71 Phosphorus ppm ASTM D5185m 293 Zinc ppm ASTM D5185m 373 Sulfur ppm ASTM D5185m 794 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1	Barium	ppm	ASTM D5185m		2		
Magnesium ppm ASTM D5185m 71 Calcium ppm ASTM D5185m 11 Phosphorus ppm ASTM D5185m 293 Zinc ppm ASTM D5185m 373 Sulfur ppm ASTM D5185m 794 Sulfur ppm ASTM D5185m >20 <1	Molybdenum	ppm	ASTM D5185m		<1		
Calcium ppm ASTM D5185m 11 Phosphorus ppm ASTM D5185m 293 Zinc ppm ASTM D5185m 373 Sulfur ppm ASTM D5185m 794 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1	Manganese	ppm	ASTM D5185m		0		
Phosphorus ppm ASTM D5185m 293 Zinc ppm ASTM D5185m 373 Sulfur ppm ASTM D5185m 794 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1	Magnesium	ppm	ASTM D5185m		71		
Zinc ppm ASTM D5185m 373 Sulfur ppm ASTM D5185m 794 Sulfur ppm ASTM D5185m 794 Sulfur ppm ASTM D5185m >20 <1 Sodium ppm ASTM D5185m >20 <1 Sulfur Potassium ppm ASTM D5185m >20 <1 Sulfur State	Calcium	ppm	ASTM D5185m		11		
Sulfur ppm ASTM D5185m 794 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1	Phosphorus	ppm	ASTM D5185m		293		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1 Sodium ppm ASTM D5185m >20 <1 Potassium ppm ASTM D5185m >20 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 582 Particles >6µm ASTM D7647 >1300 72 Particles >14µm ASTM D7647 >160 4 Particles >21µm ASTM D7647 >40 2 Particles >38µm ASTM D7647 >10 0 Particles >71µm ASTM D7647 >3 0	Zinc	ppm	ASTM D5185m		373		
Silicon ppm ASTM D5185m >20 <1 Sodium ppm ASTM D5185m <1 Potassium ppm ASTM D5185m >20 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 582 Particles >6µm ASTM D7647 >1300 72 Particles >14µm ASTM D7647 >160 4 Particles >21µm ASTM D7647 >40 2 Particles >38µm ASTM D7647 >10 0 Particles >71µm ASTM D7647 >3 0	Sulfur		ASTM D5185m		794		
Sodium ppm ASTM D5185m <1 Potassium ppm ASTM D5185m >20 <1	CONTAMINANTS	;	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 582 Particles >6μm ASTM D7647 >1300 72 Particles >14μm ASTM D7647 >160 4 Particles >21μm ASTM D7647 >40 2 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0	Silicon	ppm	ASTM D5185m	>20	<1		
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 582 Particles >6μm ASTM D7647 >1300 72 Particles >14μm ASTM D7647 >160 4 Particles >21μm ASTM D7647 >40 2 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0	Sodium	ppm	ASTM D5185m		<1		
Particles >4μm ASTM D7647 >5000 582 Particles >6μm ASTM D7647 >1300 72 Particles >14μm ASTM D7647 >160 4 Particles >21μm ASTM D7647 >40 2 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0	Potassium	ppm	ASTM D5185m	>20	<1		
Particles >6μm ASTM D7647 >1300 72 Particles >14μm ASTM D7647 >160 4 Particles >21μm ASTM D7647 >40 2 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14µm ASTM D7647 >160 4 Particles >21µm ASTM D7647 >40 2 Particles >38µm ASTM D7647 >10 0 Particles >71µm ASTM D7647 >3 0	Particles >4µm		ASTM D7647	>5000	582		
Particles >14µm ASTM D7647 >160 4 Particles >21µm ASTM D7647 >40 2 Particles >38µm ASTM D7647 >10 0 Particles >71µm ASTM D7647 >3 0	Particles >6µm		ASTM D7647	>1300	72		
Particles >21μm ASTM D7647 >40 2 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0	Particles >14µm		ASTM D7647	>160			
Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0	Particles >21µm				2		
Particles >71μm ASTM D7647 >3 0	•						
	•						
	Oil Cleanliness		ISO 4406 (c)	>19/17/14	16/13/9		



OIL ANALYSIS REPORT





Certificate L2367

Laboratory Sample No. Lab Number Unique Number

: 10670908

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : KLM1F00654 : 05964357

Received Diagnosed

: 28 Sep 2023 : 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

T: F:

Report Id: CREBAR [WUSCAR] 05964357 (Generated: 10/23/2023 15:36:05) Rev: 2

Contact/Location: RICK CAMARGO - CREBAR