

OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
FG 220
Component
New (Unused) Oil
Fluid
{not provided} (--- QTS)

DIAGNOSIS

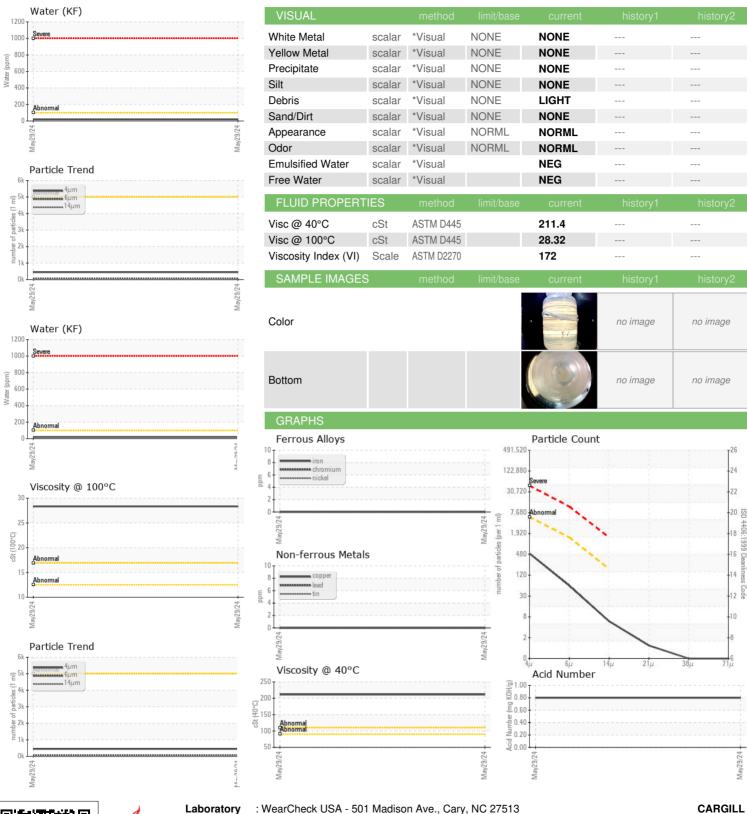
Recommendation

This is a baseline read-out on the submitted sample.

Sample Number Client Info USP0012860							
Sample Date Client Info 29 May 2024	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0	Sample Number		Client Info		USP0012860		
Oil Age hrs Client Info N/A	Sample Date		Client Info		29 May 2024		
Oil Changed Sample Status Method MoRMAL Sample Status Method Method Status MoRMAL Sample Status Method MoRMAL Sample Status Method Method Status Method Status	Machine Age	hrs	Client Info		0		
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >5 0	Oil Age	hrs	Client Info		0		
WEAR METALS	Oil Changed		Client Info		N/A		
Irron	Sample Status				NORMAL		
Chromium ppm ASTM D5185m >5 0 Nickel ppm ASTM D5185m >5 0 Titanium ppm ASTM D5185m >5 0 Silver ppm ASTM D5185m >5 0 Aluminum ppm ASTM D5185m >5 0 Lead ppm ASTM D5185m >5 0 Lead ppm ASTM D5185m >5 0 Copper ppm ASTM D5185m >5 0 Vanadium ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 Boron ppm ASTM D5185m 0 </td <td>WEAR METALS</td> <td></td> <td>method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td>	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>5	0		
Titanium	Chromium	ppm	ASTM D5185m	>5	0		
ASTM D5185m >5 0	Nickel	ppm	ASTM D5185m	>5	0		
ASTM D5185m S	Titanium	ppm	ASTM D5185m		0		
Lead	Silver	ppm	ASTM D5185m	>5	0		
Copper ppm ASTM D5185m >5 0 Tin ppm ASTM D5185m >5 <1	Aluminum	ppm	ASTM D5185m	>5	0		
Copper ppm ASTM D5185m >5 Q Vanadium ppm ASTM D5185m >5 <1	Lead		ASTM D5185m	>5	0		
Tin ppm ASTM D5185m >5 <1	Copper		ASTM D5185m	>5	0		
Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 3 Calcium ppm ASTM D5185m 3 Phosphorus ppm ASTM D5185m 691 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 708 CONTAMINANTS method limit/base current history1 <th< td=""><td></td><td></td><td></td><td></td><td><1</td><td></td><td></td></th<>					<1		
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 3 Calcium ppm ASTM D5185m 691 Zinc ppm ASTM D5185m 0 Phosphorus ppm ASTM D5185m 708 Zinc ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 708 Sodium ppm ASTM D5185m >15 2	Vanadium		ASTM D5185m		0		
ADDITIVES					-		
Boron ppm ASTM D5185m Q		PP		limit/bass		historyd	hiotomyO
Barium				iimivbase		nistory i	nistoryz
Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m <1		ppm					
Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m <1		ppm					
Magnesium ppm ASTM D5185m <1 Calcium ppm ASTM D5185m 3 Phosphorus ppm ASTM D5185m 691 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 708 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >15 2 Sodium ppm ASTM D5185m >20 <1	•	ppm	ASTM D5185m		_		
Calcium ppm ASTM D5185m 3 Phosphorus ppm ASTM D5185m 691 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 708 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >15 2 Sodium ppm ASTM D5185m >20 <1	-	ppm					
Phosphorus ppm ASTM D5185m 691 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 708 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >15 2 Sodium ppm ASTM D5185m >15 2 Potassium ppm ASTM D5185m >20 <1 Water % ASTM D6304 0.002 Water % ASTM D6304 20 Particles >4μm ASTM D6304 20 Particles >4μm ASTM D7647 >5000 447 Particles >14μm ASTM D7647 >160 5 Particles >21μm ASTM D7647 >40	•	ppm	ASTM D5185m				
Zinc ppm ASTM D5185m 708 Sulfur ppm ASTM D5185m 708 Sulfur ppm ASTM D5185m 708 Sulfur ppm ASTM D5185m >15 2 Sodium ppm ASTM D5185m >15 2 Sodium ppm ASTM D5185m >20 <1 Sulfur State Sulfur Potassium ppm ASTM D6304 0.002 Putassium ppm ASTM D6304 20 Putassium ASTM D6304 20 Putassium ASTM D7647 >5000 447 Putassium ASTM D7647 >1300 53 Putassium ASTM D7647 >160 5 Putassium ASTM D7647 >160 5 Putassium ASTM D7647 >40 1 Putassium ASTM D7647 >10 0 Putassium ASTM D7647 >10 0 Putassium ASTM D7647 >3 0 Putassium ASTM D7647 >3 0 Putassium ASTM D7647 >3 0 Putassium ASTM D7647 >3 0 Putassium ASTM D7647 >3 0 Putassium ASTM D7647 >3 0	Calcium	ppm	ASTM D5185m		3		
Sulfur ppm ASTM D5185m 708 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >15 2 Sodium ppm ASTM D5185m >20 <1	Phosphorus	ppm	ASTM D5185m		691		
CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >15 2 Sodium ppm ASTM D5185m >20 <1	Zinc	ppm	ASTM D5185m		0		
Silicon ppm ASTM D5185m >15 2	Sulfur	ppm	ASTM D5185m		708		
Sodium ppm ASTM D5185m <1 Potassium ppm ASTM D5185m >20 <1 Water % ASTM D6304 0.002 ppm Water ppm ASTM D6304 20 ppm Water ppm ASTM D6304 20 Particles >4μm ASTM D7647 >5000 447 Particles >6μm ASTM D7647 >1300 53 Particles >14μm ASTM D7647 >160 5 Particles >21μm ASTM D7647 >40 1 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 histo	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 Water % ASTM D6304 0.002 ppm Water ppm ASTM D6304 20 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4μm ASTM D7647 >5000 447 Particles >6μm ASTM D7647 >1300 53 Particles >14μm ASTM D7647 >160 5 Particles >21μm ASTM D7647 >40 1 Particles >71μm ASTM D7647 >3 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	Silicon	ppm	ASTM D5185m	>15	2		
Water % ASTM D6304 0.002 ppm Water ppm ASTM D6304 20 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4μm ASTM D7647 >5000 447 Particles >6μm ASTM D7647 >1300 53 Particles >14μm ASTM D7647 >160 5 Particles >21μm ASTM D7647 >40 1 Particles >38μm ASTM D7647 >3 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	Sodium	ppm	ASTM D5185m		<1		
Oppm Water ppm ASTM D6304 20 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 447 Particles >6μm ASTM D7647 >1300 53 Particles >14μm ASTM D7647 >160 5 Particles >21μm ASTM D7647 >40 1 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Particles >71μm ASTM D7647 >3 0 Poil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	Potassium	ppm	ASTM D5185m	>20	<1		
ppm Water ppm ASTM D6304 20 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4μm ASTM D7647 >5000 447 Particles >6μm ASTM D7647 >1300 53 Particles >14μm ASTM D7647 >160 5 Particles >21μm ASTM D7647 >40 1 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	Water	%	ASTM D6304		0.002		
Particles >4μm ASTM D7647 >5000 447 Particles >6μm ASTM D7647 >1300 53 Particles >14μm ASTM D7647 >160 5 Particles >21μm ASTM D7647 >40 1 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	ppm Water	ppm	ASTM D6304		20		
Particles >6μm ASTM D7647 >1300 53 Particles >14μm ASTM D7647 >160 5 Particles >21μm ASTM D7647 >40 1 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >160 5 Particles >21μm ASTM D7647 >40 1 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	Particles >4μm		ASTM D7647	>5000	447		
Particles >21μm ASTM D7647 >40 1 Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	Particles >6µm		ASTM D7647	>1300	53		
Particles >38μm ASTM D7647 >10 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	Particles >14µm		ASTM D7647	>160	5		
Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history1	Particles >21µm		ASTM D7647	>40	1		
Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history	Particles >38µm		ASTM D7647	>10	0		
Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/10 FLUID DEGRADATION method limit/base current history1 history	Particles >71µm		ASTM D7647	>3	0		
	·		ISO 4406 (c)	>19/17/14	16/13/10		
Acid Number (AN) mg KOH/g ASTM D8045 0.80	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.80		



OIL ANALYSIS REPORT





Laboratory Sample No.

Lab Number Unique Number : 11056646

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : USP0012860 Received : 29 May 2024 : 06194523 Tested

: 04 Jun 2024 : 04 Jun 2024 - Jonathan Hester Diagnosed

LAKE ODESSA, MI Contact: Service Manager

Test Package: IND 2 (Additional Tests: FT-IR, KV100, VI) Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

 st - 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)

Contact/Location: Service Manager - CARLAKMI

Report Id: CARLAKMI [WUSCAR] 06194523 (Generated: 06/04/2024 08:18:47) Rev: 1

3100 BONAZA RD

US 48849

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