

Sample Rating Trend



Machine Id H-01 Component Hydraulic System Fluid MOBIL DTE 10 EXCEL 32 (45 GAL)

DIAGNOSIS

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Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

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

Sample Date Client Info 03 May 2024 27 Apr 2023 14 Feb 203 Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Sample Status Client Info N/A Not Changd Not Changd VerAR METALS method Imit/base current History1 History1 Iron ppm ASTM D585m >20 1 1 0 Chromium ppm ASTM D585m >20 1 1 0 Silver ppm ASTM D585m >20 0 <1 1 Copper ppm ASTM D585m >20 0 <1 1 0 Auminum ppm ASTM D585m >20 0 <1 1 1 0 Auminum ppm ASTM D585m >20 0 <1 1 1 1 1 1 1 1 1 1 1 <th>SAMPLE INFORM</th> <th>IATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A Not Changd Not Changd Sample Status nethod init/bass current history1 history1 Iron ppm ASTM D5185m >50 11 12 10 Chromium ppm ASTM D5185m >20 0 <1 -1 Nickel ppm ASTM D5185m >20 0 <1 0 Silver ppm ASTM D5185m 20 0 <1 1 0 Copper ppm ASTM D5185m >20 0 <1 1 1 0 Auminum ppm ASTM D5185m >20 0	Sample Number		Client Info		MHI026446	MHI021601	MHI023831
Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Sample Status Image Nor Change Nor Change Nor Change Sample Status Image Image Nor Change Nor Change Iron ppm ASTM D5185m >50 11 12 10 Chromium ppm ASTM D5185m >20 0 <1 -1 Nickel ppm ASTM D5185m >20 0 <1 0 Silver ppm ASTM D5185m >20 0 <1 1 0 Copper ppm ASTM D5185m >20 0 <1 1 1 Copper ppm ASTM D5185m >20 0 0 0 0 Antimony ppm ASTM D5185m 0 0 <1 0 1 0 1 1 0 1 0 1 1	Sample Date		Client Info		03 May 2024	27 Apr 2023	14 Feb 2020
Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A Not Changd Not Changd Sample Status method limit/base current history1 history1 Iron ppm ASTM D5185m >50 11 12 10 Chromium ppm ASTM D5185m >20 0 <1	Machine Age	hrs	Client Info		0		0
Oil Changed Sample Status Client Info N/A NORMAL Not Changd NORMAL Not Changd NORMAL WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m<>50 11 12 10 Chromium ppm ASTM D5185m<>20 0 <1	U	hrs	Client Info		0	0	0
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Nickel ppm ASTM D5185n >20 1 1 0 Titanium ppm ASTM D5185n 0 <-1	-						
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ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 <1							
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Barium ppm ASTM D5185m <1 0 <1 Molybdenum ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 <1 0 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		0	0	<1
Manganese ppm ASTM D5185m <1 <1 <1 <1 <1 Magnesium ppm ASTM D5185m 4 4 7 Calcium ppm ASTM D5185m 120 123 118 155 Phosphorus ppm ASTM D5185m 120 123 118 155 Phosphorus ppm ASTM D5185m 475 369 344 459 Zinc ppm ASTM D5185m 1275 1559 1550 1553 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+30 <1	Barium	ppm	ASTM D5185m		<1	0	<1
Magnesium ppm ASTM D5185m 4 4 7 Calcium ppm ASTM D5185m 120 123 118 155 Phosphorus ppm ASTM D5185m 475 369 344 459 Zinc ppm ASTM D5185m 32 8 31 Sulfur ppm ASTM D5185m 1275 1559 1550 1553 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+30 <1	Molybdenum	ppm	ASTM D5185m		0	<1	0
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Phosphorus ppm ASTM D5185m 475 369 344 459 Zinc ppm ASTM D5185m 1275 1559 1550 1553 Sulfur ppm ASTM D5185m 1275 1559 1550 1553 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+30 <1 <1 1 Sodium ppm ASTM D5185m >+30 <1 <1 1 Sodium ppm ASTM D5185m >+30 <1 <1 1 Potassium ppm ASTM D5185m >20 2 1 <1 Water % ASTM D6304 >0.1 0.002 0.011 0.003 ppm ASTM D7647 >5000 2152 2296 1651 Particles >4µm ASTM D7647 >100 19 38 33 Particles >14µm ASTM D7647 >10 1 0	Magnesium	ppm	ASTM D5185m		4	4	7
Zinc ppm ASTM D5185m 32 8 31 Sulfur ppm ASTM D5185m 1275 1559 1550 1553 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >+30 <1	Calcium	ppm	ASTM D5185m	120	123	118	155
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CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >+30 <1		ppm	ASTM D5185m		32	8	31
Silicon ppm ASTM D5185m >+30 <1 <1 1 Sodium ppm ASTM D5185m 3 <1	Sulfur			1275	1559	1550	1553
Sodium ppm ASTM D5185m 3 <1 1 Potassium ppm ASTM D5185m >20 2 1 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Sodium ppm ASTM D5185m 3 <1 1 Potassium ppm ASTM D5185m >20 2 1 <1	Silicon	ppm	ASTM D5185m	>+30	د1	<1	1
Potassium ppm ASTM D5185m >20 2 1 <1 Water % ASTM D6304 >0.1 0.002 0.011 0.003 ppm Water ppm ASTM D6304 >1000 25 110 37.9 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >5000 2152 2296 1651 Particles >6µm ASTM D7647 >1300 289 390 381 Particles >14µm ASTM D7647 >160 19 38 33 Particles >21µm ASTM D7647 >40 5 13 11 Particles >38µm ASTM D7647 >10 1 0 1 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 18/15/11 18/16/12 18/16/12							
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Particles >6μm ASTM D7647 >1300 289 390 381 Particles >14μm ASTM D7647 >160 19 38 33 Particles >21μm ASTM D7647 >40 5 13 11 Particles >21μm ASTM D7647 >40 5 13 11 Particles >38μm ASTM D7647 >10 1 0 1 Particles >38μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 18/15/11 18/16/12 18/16/12 FLUID DEGRADATION method limit/base current history1 history			ASTM D7647				
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Particles >21μm ASTM D7647 >40 5 13 11 Particles >38μm ASTM D7647 >10 1 0 1 Particles >38μm ASTM D7647 >10 1 0 1 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 18/15/11 18/16/12 18/16/12 FLUID DEGRADATION method limit/base current history1 history1	Particles >14µm		ASTM D7647	>160	19	38	33
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Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 18/15/11 18/16/12 18/16/12 FLUID DEGRADATION method limit/base current history1 history1	•						
Oil Cleanliness ISO 4406 (c) >19/17/14 18/15/11 18/16/12 18/16/12 FLUID DEGRADATION method limit/base current history1 history1							
							18/16/12
	FLUID DEGRADA	TIO <u>N</u>	method	limi <u>t/base</u>	current_	hi <u>story1</u>	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.192	0.09	0.111

Report Id: MITWHI [WUSCAR] 06204603 (Generated: 06/12/2024 12:28:30) Rev: 1

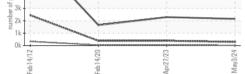
Contact/Location: WESLEY CAMPBELL - MITWHI

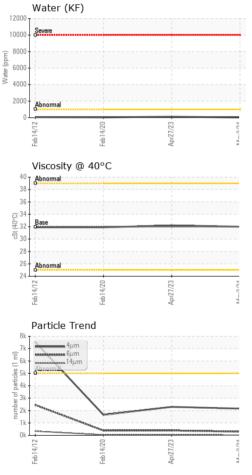


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OIL ANALYSIS REPORT

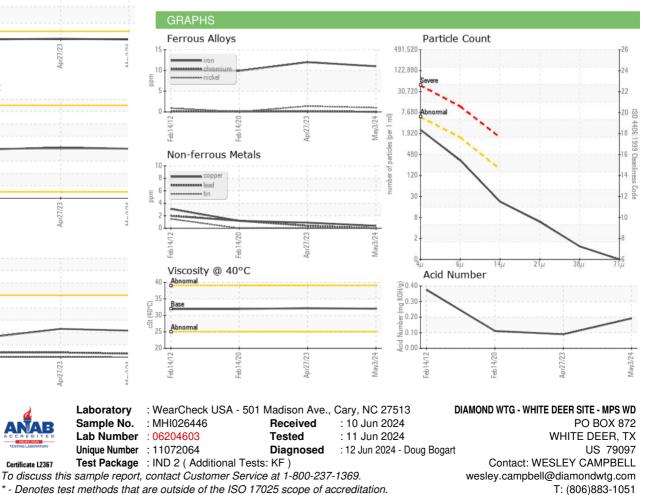
12000 -	Water (KF)		VISUAL
10000-	Severe		White Metal
8000-			Yellow Meta
6000			Precipitate
4000			Silt
2000-	Abnormal		Debris
0	Abnormai		Sand/Dirt
	Feb14/12 Feb14/20	Apr27/23 May3/24	Appearance
	Feb 1	Aprí	Odor
	Particle Trend		Emulsified \
^{8k} 1			Free Water
7k	4μm 4μm 4μm 4μm		FLUID PF
mber of particles (1 ml) 38 A S A S A S A S A S A S A S A S A S A			Visc @ 40°
Jo 3k			SAMPLE





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
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	NONE	NONE	VLITE
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	32	32.0	32.2	31.9
SAMPLE IMAGES		method				history2
Color						

Bottom



* - 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)

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Certificate 12367

Contact/Location: WESLEY CAMPBELL - MITWHI

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