

# **OIL ANALYSIS REPORT**



Machine Id

IMM122 Component Hydraulic System Fluid MOBIL DTE 10 EXCEL 46 (--- GAL)

### DIAGNOSIS

#### Recommendation

We recommend that you drain the oil from the component if this has not already been done.

#### A Wear

Copper and iron ppm levels are abnormal. Cylinder or oil pump wear indicated.

## Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. The system and fluid cleanliness is acceptable.

#### Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0887707	WCI2287361	
Sample Date		Client Info		12 Jan 2024	01 Feb 2018	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				ABNORMAL	ABNORMAL	
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<b>4</b> 1	<b>4</b> 21	
Chromium	ppm	ASTM D5185m	>20	1	<1	
Nickel	ppm	ASTM D5185m	>20	<1	<1	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m		0	0	
Aluminum	ppm	ASTM D5185m	>20	2	<1	
Lead	ppm	ASTM D5185m	>20	<1	3	
Copper	ppm	ASTM D5185m	>20	<u> </u>	<u> </u>	
Tin	ppm	ASTM D5185m	>20	<1	<1	
Antimony	ppm	ASTM D5185m			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	<1	
Barium	ppm	ASTM D5185m		8	5	
Molybdenum	ppm	ASTM D5185m		0	0	
Manganese	ppm	ASTM D5185m		<1	<1	
Magnesium	ppm	ASTM D5185m		1	0	
Calcium	ppm	ASTM D5185m		103	102	
Phosphorus	ppm	ASTM D5185m		510	456	
Zinc	ppm	ASTM D5185m		703	657	
Sulfur	ppm	ASTM D5185m		5574	5686	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	1	<1	
Sodium	ppm	ASTM D5185m		2	4	
Potassium	ppm	ASTM D5185m	>20	2	2	
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>6740</b>	🔺 116814	
Particles >6µm		ASTM D7647	>1300	569	<b>1</b> 7511	
Particles >14µm		ASTM D7647	>160	12	<b>4</b> 983	
Particles >21µm		ASTM D7647	>40	2	<b>A</b> 282	
Particles >38µm		ASTM D7647	>10	0	<b>A</b> 36	

ASTM D7647 >3

0

ISO 4406 (c) >19/17/14 **23/16/11** 

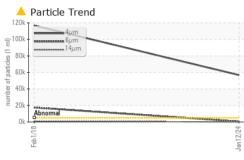
Particles >71µm

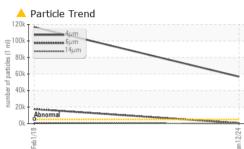
**Oil Cleanliness** 

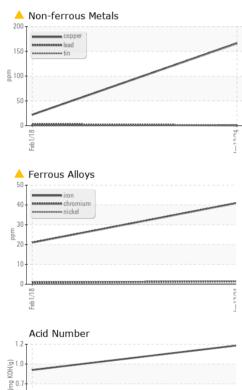
▲ 24/21/17

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umper 0.5 Pio 0.2 0.0 Feb1

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	Acid Number (AN)	mg KOH/g	ASTM D8045		1.185	0.888	
	VISUAL	3 9	method	limit/base	current	history1	history
	White Metal	cooler	*Visual	NONE		NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE NONE	NONE	
	Precipitate	scalar scalar	*Visual	NONE	NONE	NONE	
27.	Silt	scalar	*Visual	NONE	NONE	NONE	
Jan 12/24	Debris	scalar	*Visual	NONE	NONE	▲ MODER	
2	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	
	Free Water	scalar	*Visual		NEG	NEG	
-	FLUID PROPER	TIES	method	limit/base	current	history1	history
	Visc @ 40°C	cSt	ASTM D445	45.6	46.2	46.53	
2/24	SAMPLE IMAGE		method	limit/base	current	history1	history
Jan12/24	Color				. 60.		no image
	Bottom						no image
	GRAPHS						
4 C C F	Alloys				Particle Count	:	
	60 iron			491,520			
	40 - E. nickel			122,880	Severe		
	20-			30,720	1		-
	0			± = 7,680	Abnonnal		-
	Feb1/18			Jan 12/24 1066 1 ml			
		le.		Jan 12/24- 1301 (per 1 m) 480- 480-	1.		
	🔺 Non-ferrous Meta	15		E +00.			
	200 T					S	
				- uper of pa			
Part of the second s	200 Copper 1						
5 C C T - 1	200 - copper 150 - lead 50 - 50 - copper			120-			
A C C	200 150 50 0 0			20 120- 30. 8-			
40.01-1	200 - copper 150 - lead 50 - 50 - copper			120-			
ACC11	Viscosity @ 40°C			јо 120 120 30 67 72 120 30 8 8 72 72 120 30 30 8 72 7 2 4	Acid Number	14μ 21μ	
1-1204	Viscosity @ 40°C			јо 120 120 30 67 72 120 30 8 8 72 72 120 30 30 8 72 7 2 4	μ 6μ Acid Number	14μ 21μ	
	Viscosity @ 40°C			јо 120 120 30 67 72 120 30 8 8 72 72 120 30 30 8 72 7 2 4	بر قبل Acid Number	14μ 21μ	
40 C L 1	Viscosity @ 40°C			јо 120 120 30 67 72 120 30 8 8 72 72 120 30 30 8 72 7 2 4	بر قنام Acid Number	14μ 21μ	
and the second se	Viscosity @ 40°C			јо 120 120 30 67 72 120 30 8 8 72 72 120 30 30 8 72 7 2 4		14μ 21μ	
	Viscosity @ 40°C			Jo 120 Jo 120 10 mupped 120 120 120 120 120 120 120 120		14μ 21μ	
	Viscosity @ 40°C			јо 120 120 30 67 72 120 30 8 8 72 72 120 30 30 8 72 7 2 4	Acid Number	14μ 21μ	

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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