

# **OIL ANALYSIS REPORT**



Machine Id

#### IMM120 Component Hydraulic System Fluid MOBIL DTE 10 EXCEL 46 (--- GAL)

# DIAGNOSIS

## A 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

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. 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	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0887703	WCI2287394	
Sample Date		Client Info		01 Mar 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	<mark>/</mark> 39	19	
Chromium	ppm	ASTM D5185m	>20	3	1	
Nickel	ppm	ASTM D5185m	>20	<1	<1	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m		0	0	
Aluminum	ppm	ASTM D5185m		2	<1	
Lead	ppm	ASTM D5185m	>20	<1	0	
Copper	ppm	ASTM D5185m	>20	<mark>/</mark> 83	15	
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		6	3	
Molybdenum	ppm	ASTM D5185m		0	0	
Manganese	ppm	ASTM D5185m		<1	<1	
Magnesium	ppm	ASTM D5185m		2	0	
Calcium	ppm	ASTM D5185m		131	104	
Phosphorus	ppm	ASTM D5185m		495	442	
Zinc	ppm	ASTM D5185m		707	646	
Sulfur	ppm	ASTM D5185m		5285	5187	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	1	<1	
Sodium	ppm	ASTM D5185m		1	2	
Potassium	ppm	ASTM D5185m	>20	1	2	
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	2820	<b>A</b> 28908	
Particles >6µm		ASTM D7647	>1300	85	<b>4</b> 417	
Particles >14µm		ASTM D7647	>160	3	215	
Particles >21µm		ASTM D7647	>40	1	<b>5</b> 0	
Particles >38µm		ASTM D7647	>10	0	3	

ASTM D7647 >3

ISO 4406 (c) >19/17/14

0

19/14/9

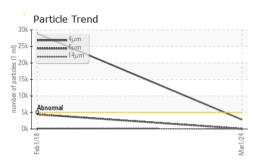
Particles >71µm

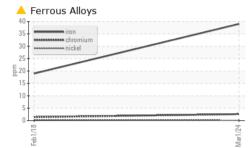
**Oil Cleanliness** 

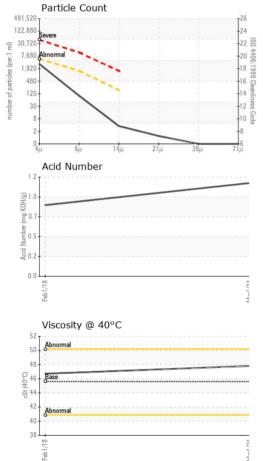
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	Acid Number (AN)	mg KOH/g	ASTM D8045		1.129	0.861	
	VISUAL		method	limit/base	current	history1	histor
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Ann bentlember of the state of	Precipitate	scalar	*Visual	NONE	NONE	NONE	
724	Silt	scalar	*Visual	NONE	NONE	NONE	
Mar1/24	Debris	scalar	*Visual	NONE	LIGHT	VLITE	
	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	histor
	Visc @ 40°C	cSt	ASTM D445	45.6	47.8	46.7	
Mar1/24	SAMPLE IMAGE	S	method	limit/base	current	history1	histor
126 124 122 25	Color				A		no imag
+22 [20 406] +20 406] +18 [99] +16 [20] +16 [20] +14 [20] +14 [20] +14 [20] +12 [20]	Bottom					2	no imag
-10 G	GRAPHS						
	Ferrous Alloys			491,520	Particle Count		
u 38µ 71µ	30- iron			122,880			
	a 20 - mickel				Severe		
	10			30,720	· · · · · · · · · · · · · · · · · · ·		
	0			52 (E 7,680	Abnormal		
	Feb1//			(per 1 m) 1/24		S	
	🔺 Non-ferrous Meta	ls		Mar1/24- 1720 Ma	1		
	100 T			120		S	
	copper			5			
¥ 67 1-	튭 50			= 30			
- U - U	0			8			
	Feb 1/18			Mar1/24	-		
				₩ 0	a Gu	14µ 21µ	38µ 7
	Viscosity @ 40°C				Acid Number	- ipi	50µ 1
	Alternation			¥1.5	Τ:		
	ි 50 – Abnormal පිනි දි 45 – Abnormal			40,100 40,100 40,0000 40,00000 40,00000000			
	ಕ್ಷ 40 <mark>Abnormal</mark>			g 0.5			
	35				L		
	Feb1/18			Mar1/24	Feb1/18		
Y C	Ľ			ž	ц		
PC 1-PP							

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

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Contact/Location: BILLY CARDER - SUMSCO

F: (270)237-9476