

# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**ENGEL IM-10 CSI**  
 Component  
**Hydraulic System**  
 Fluid  
**MOBIL DTE 10 EXCEL 46 (100 GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the fluid.

### Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCAI24524</b>	---	---
Sample Date	Client Info			<b>13 Feb 2024</b>	---	---
Machine Age	mths	Client Info		<b>0</b>	---	---
Oil Age	mths	Client Info		<b>7</b>	---	---
Oil Changed	Client Info			<b>N/A</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.1	<b>NEG</b>	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<b>2</b>	---	---
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m		<b>0</b>	---	---
Silver	ppm	ASTM D5185m		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	---	---
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m	>75	<b>2</b>	---	---
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	---	---

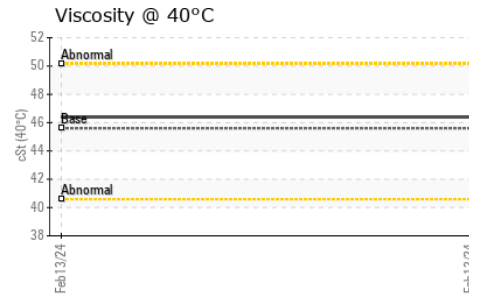
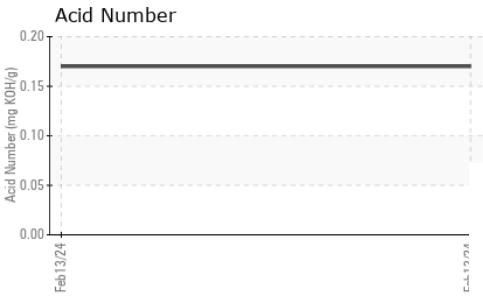
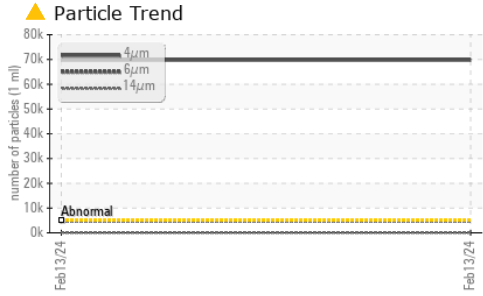
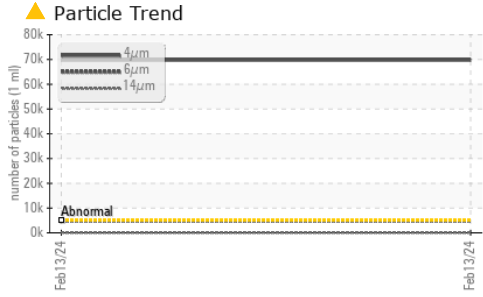
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	---	---
Barium	ppm	ASTM D5185m		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	---	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m		<b>2</b>	---	---
Calcium	ppm	ASTM D5185m		<b>94</b>	---	---
Phosphorus	ppm	ASTM D5185m		<b>124</b>	---	---
Zinc	ppm	ASTM D5185m		<b>8</b>	---	---
Sulfur	ppm	ASTM D5185m		<b>597</b>	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---	---
Sodium	ppm	ASTM D5185m		<b>1</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>▲ 69761</b>	---	---
Particles >6µm		ASTM D7647	>1300	<b>▲ 4874</b>	---	---
Particles >14µm		ASTM D7647	>160	<b>67</b>	---	---
Particles >21µm		ASTM D7647	>40	<b>15</b>	---	---
Particles >38µm		ASTM D7647	>10	<b>1</b>	---	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 23/19/13</b>	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.17</b>	---	---



# OIL ANALYSIS REPORT



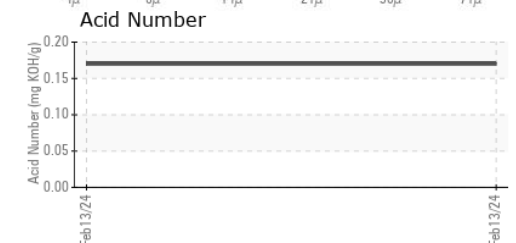
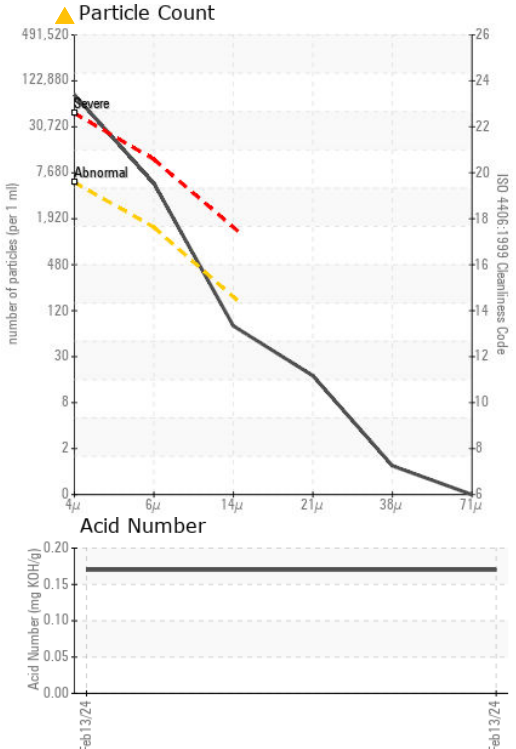
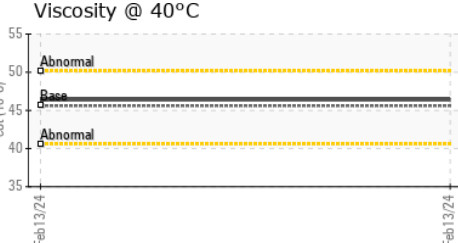
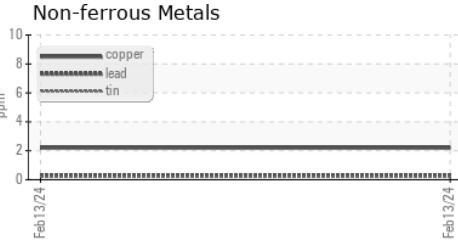
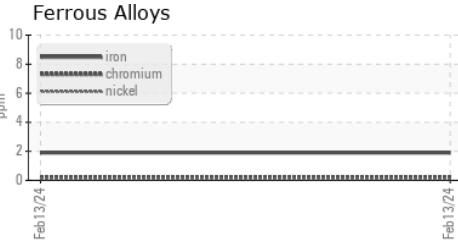
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>LIGHT</b>	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---
Debris	scalar	*Visual	NONE	<b>LIGHT</b>	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	---
Free Water	scalar	*Visual		<b>NEG</b>	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45.6	<b>46.4</b>	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color		no image	no image
Bottom		no image	no image

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCAI24524 **Received** : 16 Feb 2024  
**Lab Number** : **06091711** **Tested** : 19 Feb 2024  
**Unique Number** : 10884564 **Diagnosed** : 19 Feb 2024 - Don Baldrige  
**Test Package** : IND 2

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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)