



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**HED-E13**  
 Machine Id  
**367 367**  
 Component  
**Diesel Engine**  
 Fluid  
**NOT GIVEN (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. ( Customer Sample Comment: 1st Samole )

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of particulates present in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>KFS0004035</b>	---	---
Sample Date	Client Info		<b>10 Nov 2023</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.21	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	<b>19</b>	---
Chromium	ppm	ASTM D5185m	>11	<b>0</b>	---
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	---
Titanium	ppm	ASTM D5185m		<b>0</b>	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	---
Aluminum	ppm	ASTM D5185m	>31	<b>2</b>	---
Lead	ppm	ASTM D5185m	>26	<b>0</b>	---
Copper	ppm	ASTM D5185m	>26	<b>1</b>	---
Tin	ppm	ASTM D5185m	>4	<b>0</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>18</b>	---
Barium	ppm	ASTM D5185m		<b>0</b>	---
Molybdenum	ppm	ASTM D5185m		<b>85</b>	---
Manganese	ppm	ASTM D5185m		<b>0</b>	---
Magnesium	ppm	ASTM D5185m		<b>997</b>	---
Calcium	ppm	ASTM D5185m		<b>1130</b>	---
Phosphorus	ppm	ASTM D5185m		<b>1046</b>	---
Zinc	ppm	ASTM D5185m		<b>1275</b>	---
Sulfur	ppm	ASTM D5185m		<b>3224</b>	---

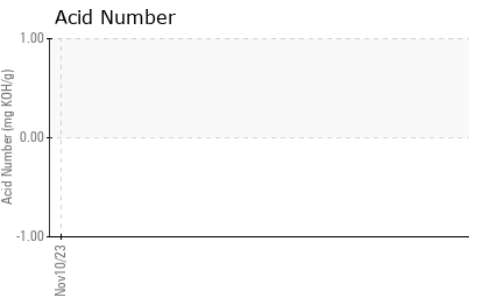
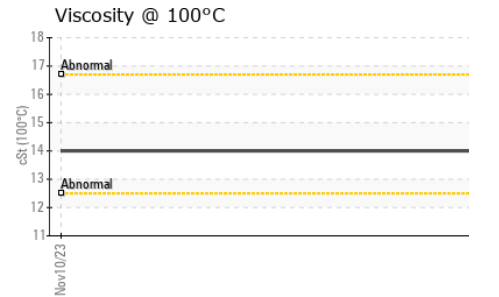
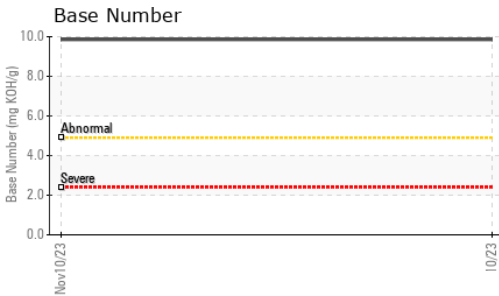
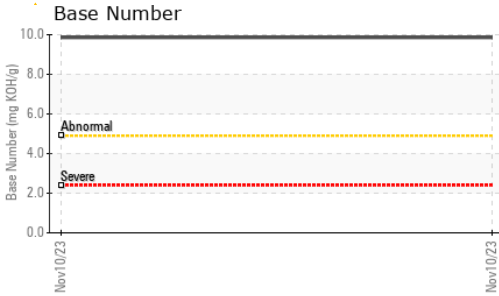
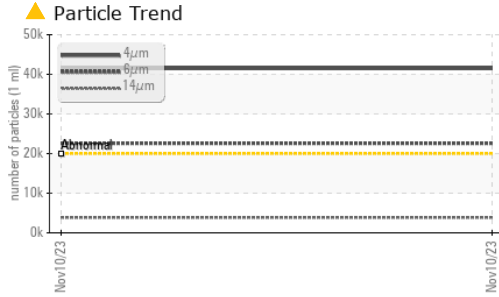
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	<b>4</b>	---
Sodium	ppm	ASTM D5185m	>31	<b>3</b>	---
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.6</b>	---
Sulfation	Abs./1mm	*ASTM D7415	>30	<b>18.8</b>	---

# OIL ANALYSIS REPORT



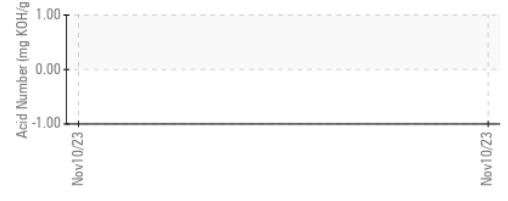
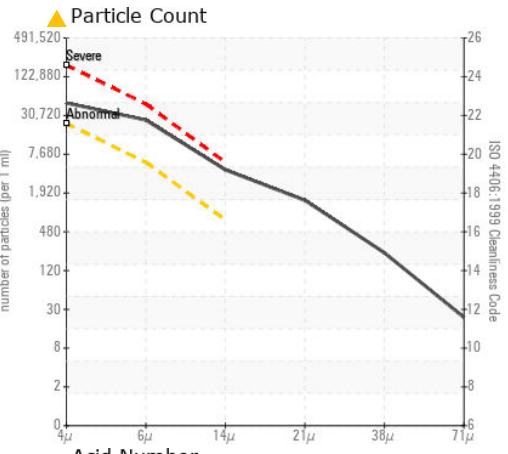
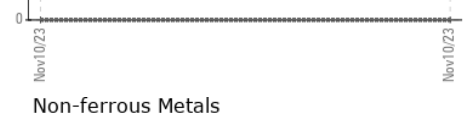
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ <b>41480</b>	---	---
Particles >6µm	ASTM D7647	>5000	▲ <b>22597</b>	---	---
Particles >14µm	ASTM D7647	>640	▲ <b>3846</b>	---	---
Particles >21µm	ASTM D7647	>160	▲ <b>1295</b>	---	---
Particles >38µm	ASTM D7647	>40	▲ <b>200</b>	---	---
Particles >71µm	ASTM D7647	>10	▲ <b>20</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ <b>23/22/19</b>	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm *ASTM D7414	>25	<b>14.8</b>	---	---
Base Number (BN)	mg KOH/g ASTM D2896		<b>9.86</b>	---	---

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar *Visual	NONE	<b>NONE</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>NONE</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	>0.21	<b>NEG</b>	---	---
Free Water	scalar *Visual		<b>NEG</b>	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445		<b>14.0</b>	---	---

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KFS0004035 **Received** : 14 Nov 2023  
**Lab Number** : **06007133** **Diagnosed** : 04 Dec 2023  
**Unique Number** : 10740895 **Diagnostician** : Doug Bogart  
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

**CONSTELLIUM**  
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 US 35661  
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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)