



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**ENGEL PRESS 42 (S/N 8494)**  
 Component  
**Hydraulic System**  
 Fluid  
**AW HYDRAULIC OIL ISO 46 (150 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0768407</b>	WC0768430	WC0477521
Sample Date		Client Info		<b>17 Oct 2023</b>	21 Mar 2023	23 Oct 2021
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>7</b>	6	7
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	0	0
Lead	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>20	<b>8</b>	6	7
Tin	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

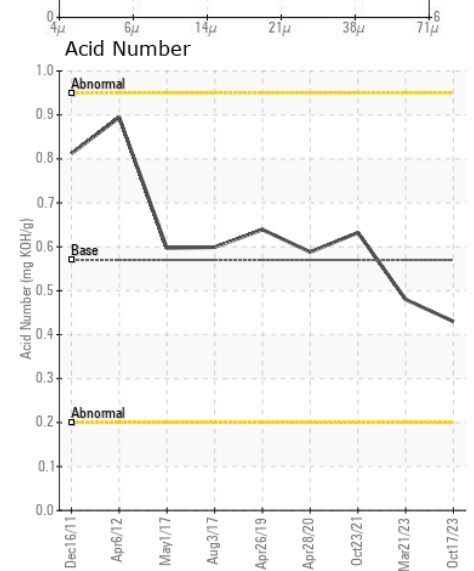
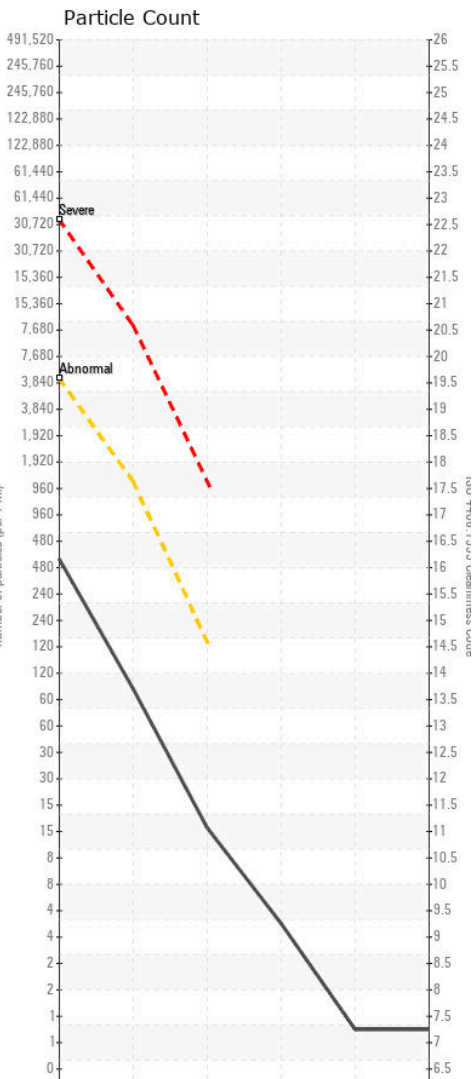
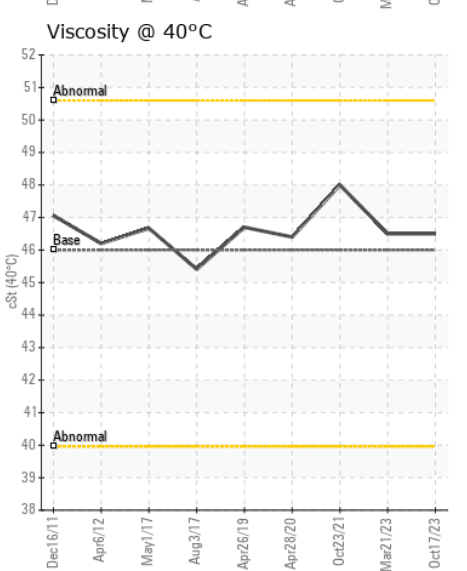
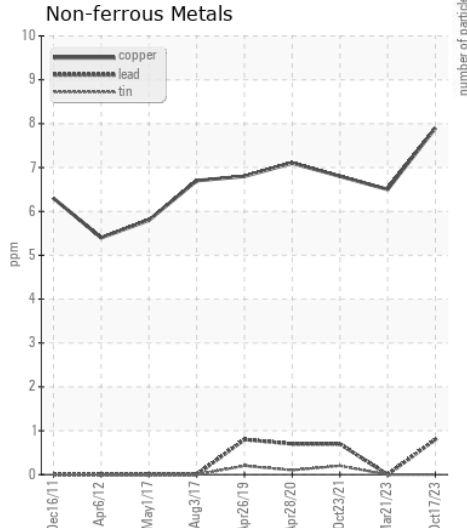
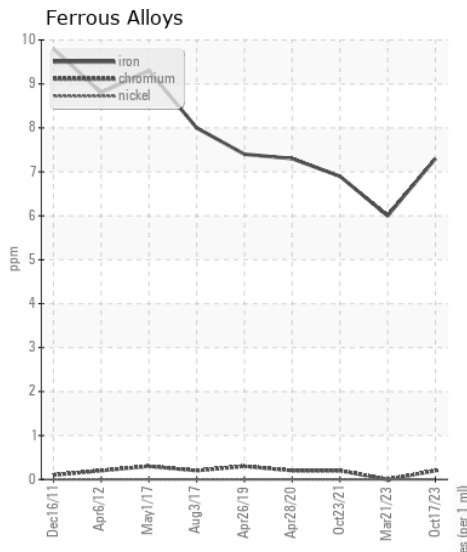
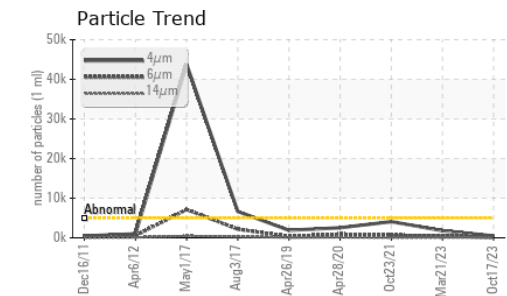
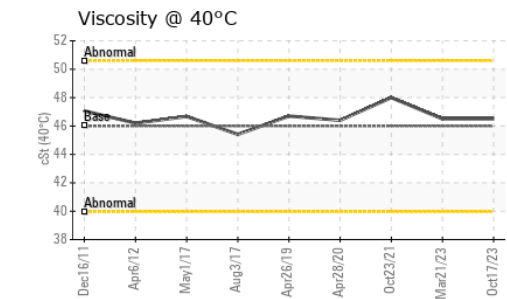
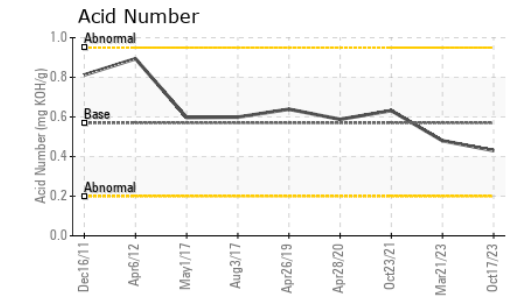
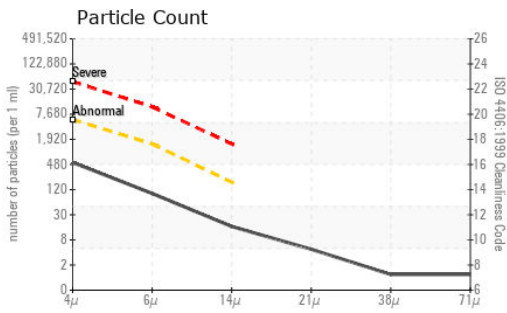
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>15	<b>&lt;1</b>	▲ 23	<1
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Water		WC Method	>0.05	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>471</b>	1801	4085
Particles >6µm		ASTM D7647	>1300	<b>86</b>	523	615
Particles >14µm		ASTM D7647	>160	<b>14</b>	56	36
Particles >21µm		ASTM D7647	>40	<b>4</b>	13	7
Particles >38µm		ASTM D7647	>10	<b>1</b>	1	0
Particles >71µm		ASTM D7647	>3	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>16/14/11</b>	18/16/13	19/16/12
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<b>0</b>	3	0
Boron	ppm	ASTM D5185m	5	<b>0</b>	0	<1
Barium	ppm	ASTM D5185m	5	<b>4</b>	0	<1
Molybdenum	ppm	ASTM D5185m	5	<b>&lt;1</b>	<1	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	25	<b>4</b>	4	4
Calcium	ppm	ASTM D5185m	200	<b>55</b>	52	66
Phosphorus	ppm	ASTM D5185m	300	<b>316</b>	296	341
Zinc	ppm	ASTM D5185m	370	<b>351</b>	333	424
Sulfur	ppm	ASTM D5185m	2500	<b>2795</b>	2867	2719
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.43</b>	0.48	0.632
Visc @ 40°C	cSt	ASTM D445	46	<b>46.5</b>	46.5	48.0



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0768407  
**Lab Number** : 05989119  
**Unique Number** : 10711781  
**Test Package** : IND 2  
**Received** : 25 Oct 2023  
**Tested** : 26 Oct 2023  
**Diagnosed** : 26 Oct 2023 - Wes Davis

**VIKING PLASTICS**  
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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)