



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
ENGEL IMM2000-4
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (1600 LTR)

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		ST43381	---	---
Sample Date		Client Info		28 Mar 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	<1	---	---
Chromium	ppm	ASTM D5185(m)	>20	0	---	---
Nickel	ppm	ASTM D5185(m)	>20	0	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	0	---	---
Lead	ppm	ASTM D5185(m)	>20	0	---	---
Copper	ppm	ASTM D5185(m)	>20	1	---	---
Tin	ppm	ASTM D5185(m)	>20	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

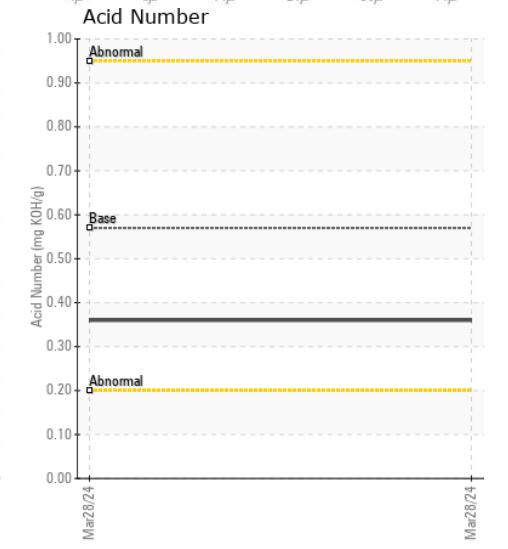
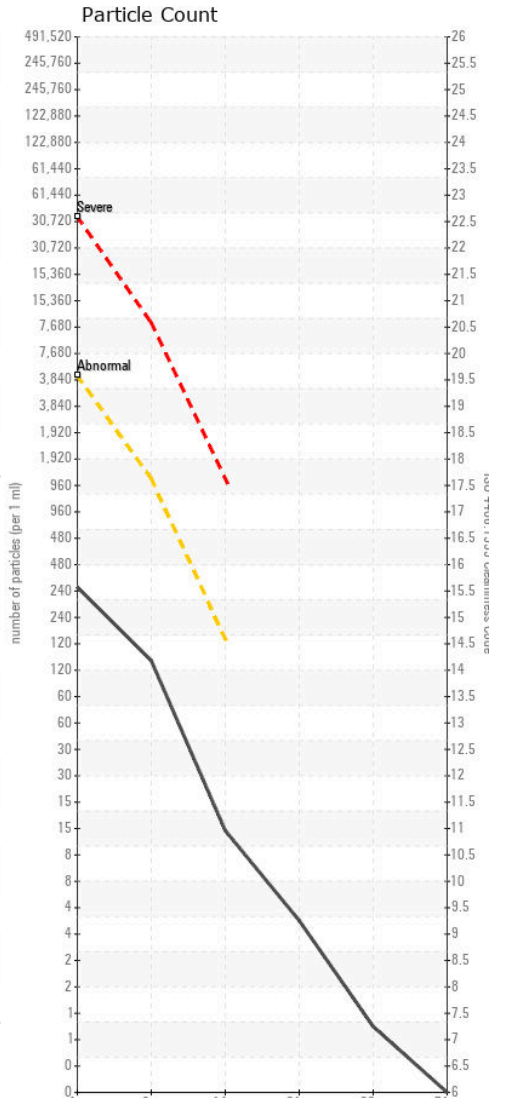
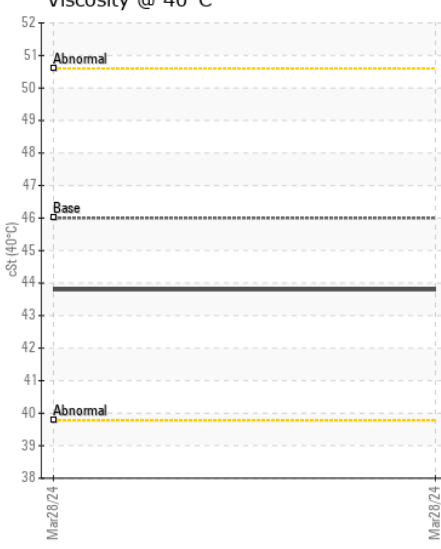
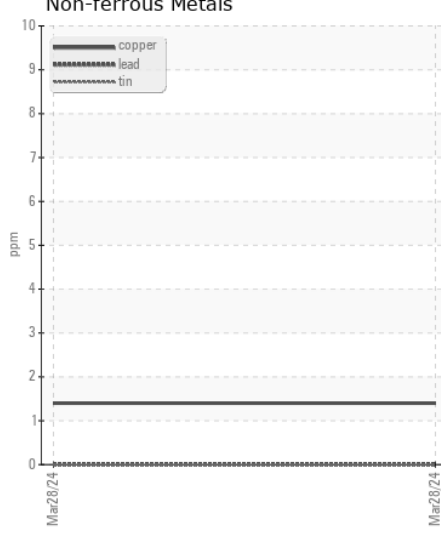
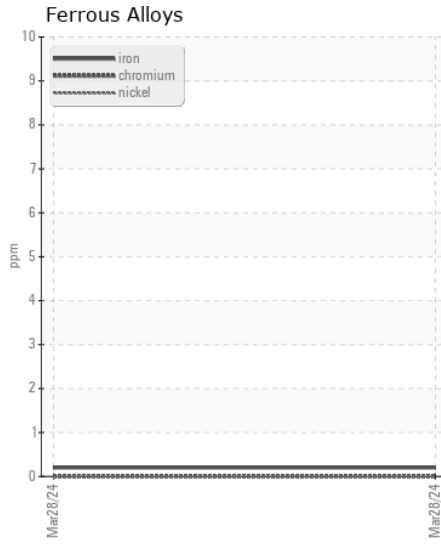
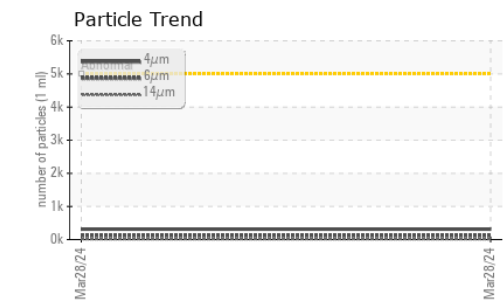
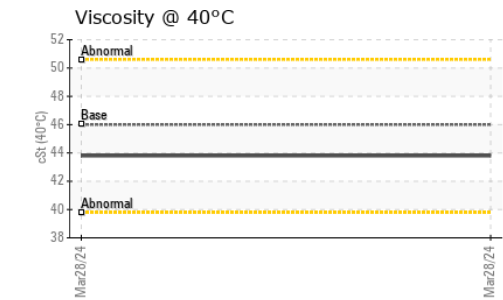
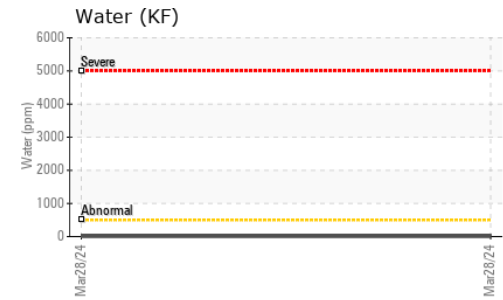
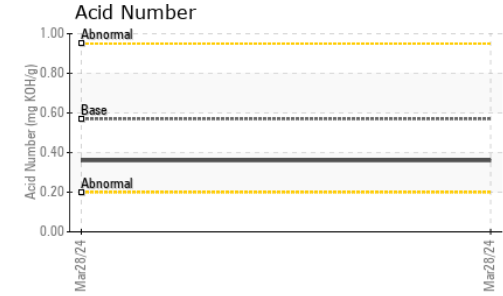
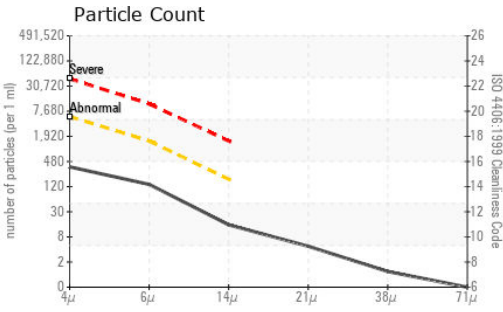
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	3	---	---
Potassium	ppm	ASTM D5185(m)	>20	0	---	---
Water	%	ASTM D6304*	>0.05	0.001	---	---
ppm Water	ppm	ASTM D6304*	>500	7	---	---
Particles >4µm		ASTM D7647	>5000	314	---	---
Particles >6µm		ASTM D7647	>1300	120	---	---
Particles >14µm		ASTM D7647	>160	13	---	---
Particles >21µm		ASTM D7647	>40	4	---	---
Particles >38µm		ASTM D7647	>10	1	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	15/14/11	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.05	NEG	---	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		0	---	---
Boron	ppm	ASTM D5185(m)	5	2	---	---
Barium	ppm	ASTM D5185(m)	5	0	---	---
Molybdenum	ppm	ASTM D5185(m)	5	0	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)	25	6	---	---
Calcium	ppm	ASTM D5185(m)	200	56	---	---
Phosphorus	ppm	ASTM D5185(m)	300	402	---	---
Zinc	ppm	ASTM D5185(m)	370	512	---	---
Sulfur	ppm	ASTM D5185(m)	2500	1343	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	0.36	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	46	43.8	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : ST43381 **Received** : 15 Apr 2024
Lab Number : 02628818 **Tested** : 16 Apr 2024
Unique Number : 5761950 **Diagnosed** : 16 Apr 2024 - Wes Davis
Test Package : IND 2 (Additional Tests: KF, TAN Man)

KUMI CANADA CORPORATION
 55 REAGENS INDUSTRIAL PKWY
 BRADFORD, ON
 CA L3Z 0Z9
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

T:
F: