



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HL5631 Forward Fuel Oil Purifier
 Component
Lube System
 Fluid
ESSO NUTO H ISO 68 (4 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0807852	WC0552070	WC66002544
Sample Date		Client Info		25 May 2023	31 May 2021	09 May 2018
Machine Age	hrs	Client Info		0	4708	10345
Oil Age	hrs	Client Info		0	708	398
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Not Changd
Filter Changed		Client Info		N/A	N/A	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	<1	0	10
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	0
Lead	ppm	ASTM D5185(m)	>20	0	0	<1
Copper	ppm	ASTM D5185(m)	>20	0	<1	3
Tin	ppm	ASTM D5185(m)	>10	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

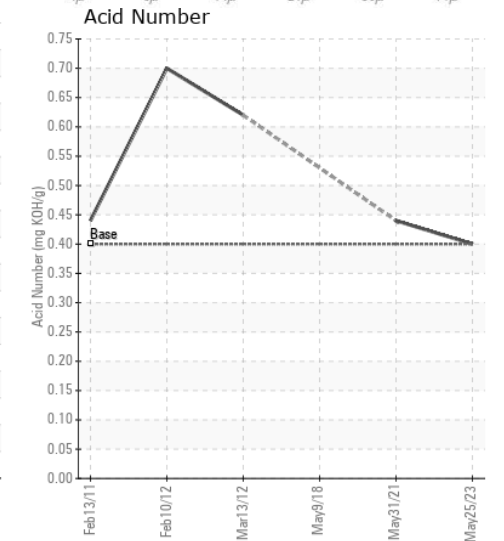
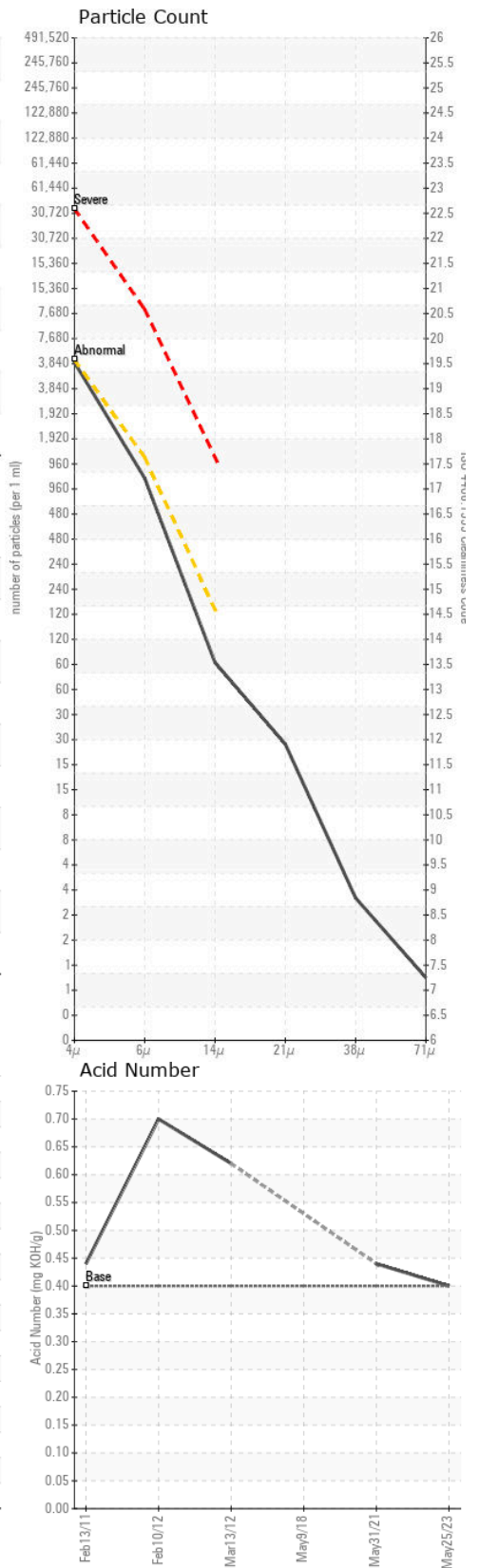
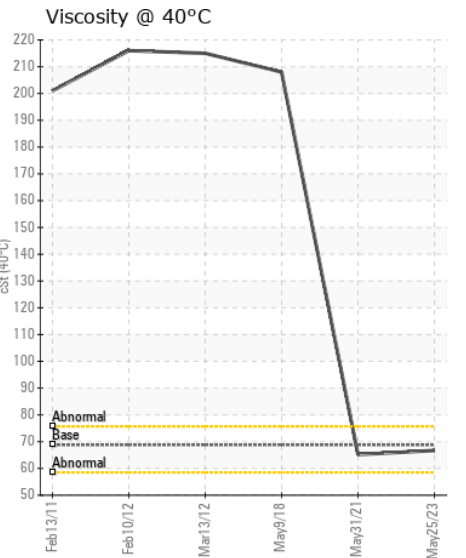
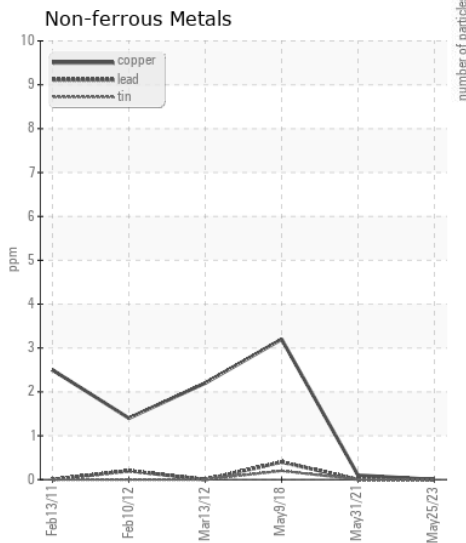
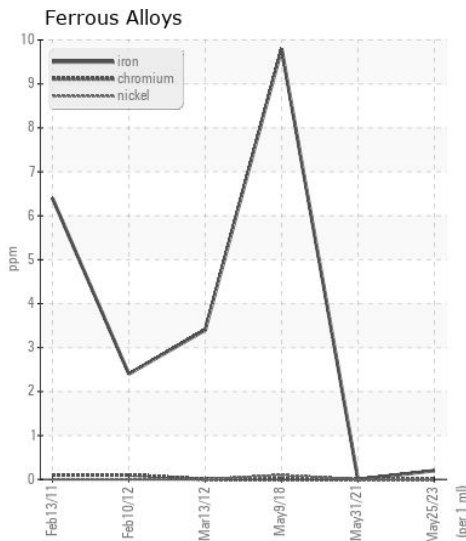
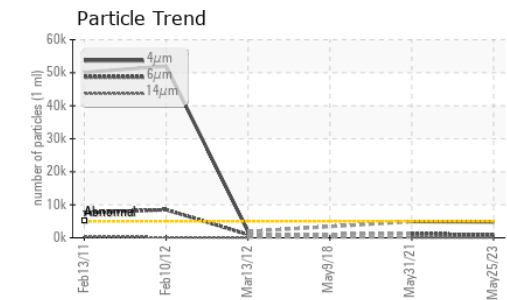
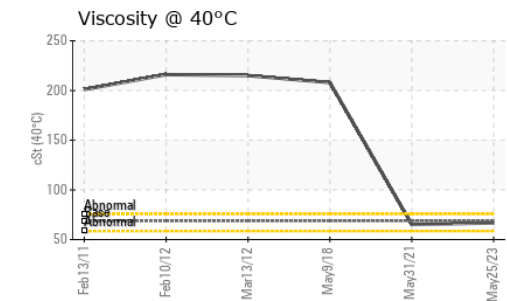
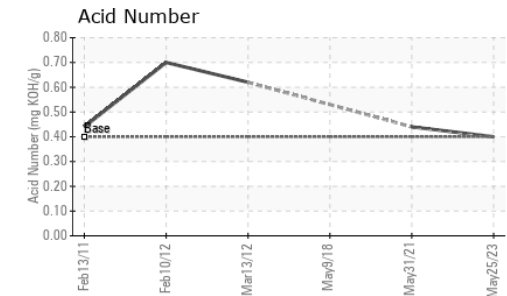
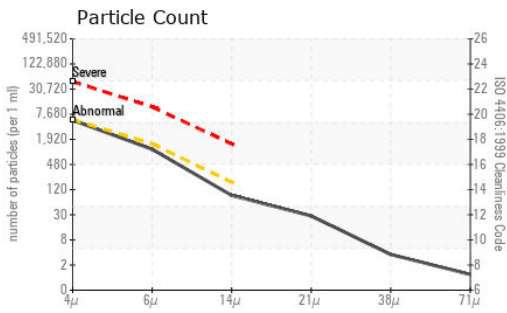
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	<1	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	0	0	<1
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	4812	4920	---
Particles >6µm		ASTM D7647	>1300	976	1133	---
Particles >14µm		ASTM D7647	>160	77	58	---
Particles >21µm		ASTM D7647	>40	25	16	---
Particles >38µm		ASTM D7647	>10	3	1	---
Particles >71µm		ASTM D7647	>3	1	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	19/17/13	19/17/13	---
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	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 D5185(m)		0	0	<1
Boron	ppm	ASTM D5185(m)	0	0	<1	10
Barium	ppm	ASTM D5185(m)	0	<1	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	5	0	<1	<1
Calcium	ppm	ASTM D5185(m)	50	56	52	21
Phosphorus	ppm	ASTM D5185(m)	330	402	356	271
Zinc	ppm	ASTM D5185(m)	420	469	460	8
Sulfur	ppm	ASTM D5185(m)	3100	7328	7257	7087
Acid Number (AN)	mg KOH/g	ASTM D974*	.40	0.40	0.44	---
Visc @ 40°C	cSt	ASTM D7279(m)	68.8	66.7	65.2	208



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0807852
Lab Number : 02560220
Unique Number : 5581260
Test Package : MAR 2 (Additional Tests: TAN Man)

Received : 29 May 2023
Tested : 30 May 2023
Diagnosed : 30 May 2023 - Wes Davis

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.

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