



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HL812 Valve Actuating
Component
Hydraulic Power Pack
Fluid
ESSO UNIVIS N 22 (250 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0929747	WC0807856	WC0552059
Sample Date		Client Info		30 May 2024	25 May 2023	17 Oct 2021
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	0
Filter Age	mths	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	<1	<1	0
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	0	<1	0
Lead	ppm	ASTM D5185(m)	>20	0	<1	<1
Copper	ppm	ASTM D5185(m)	>20	2	2	2
Tin	ppm	ASTM D5185(m)	>20	0	0	0
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

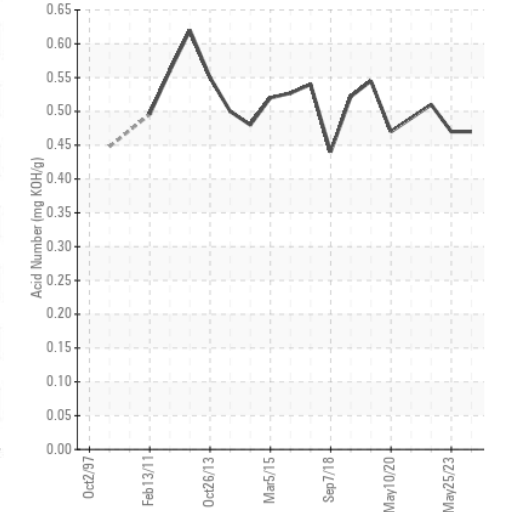
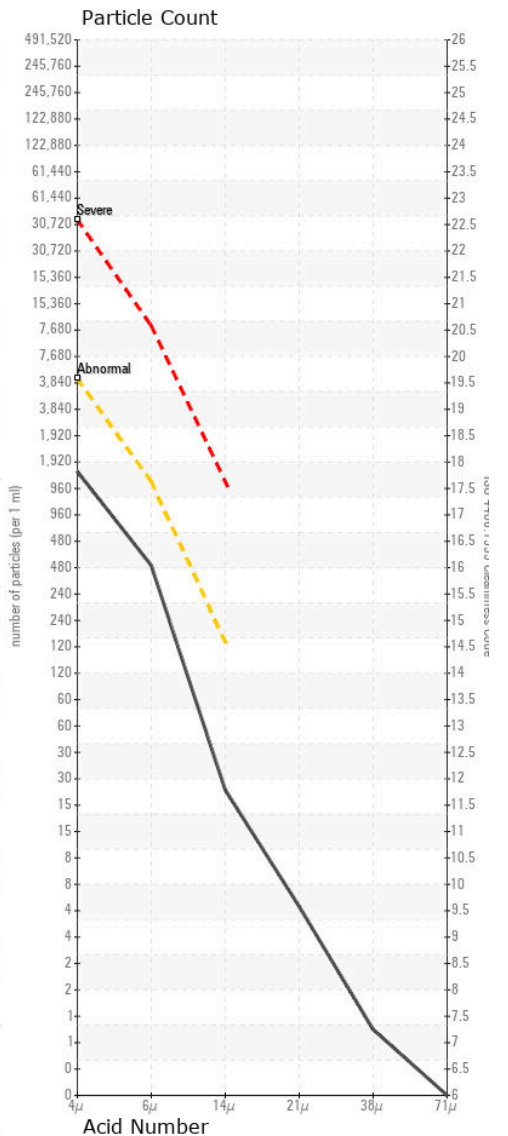
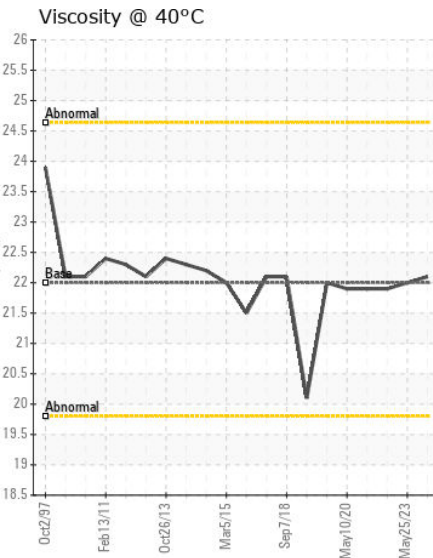
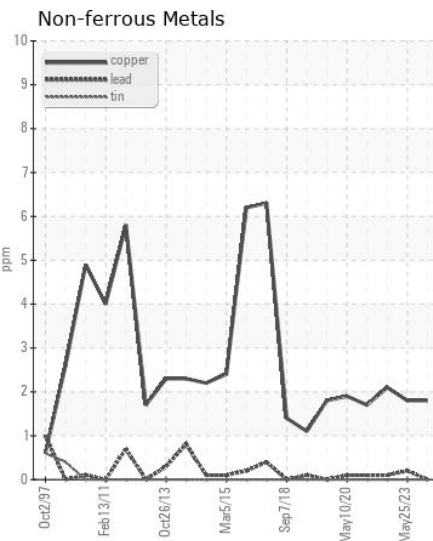
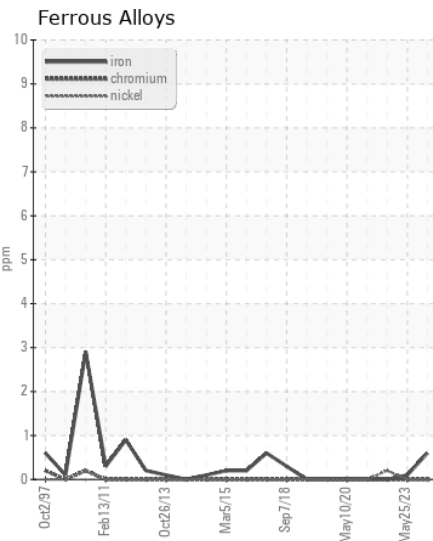
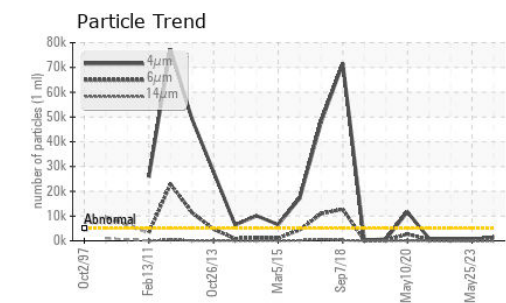
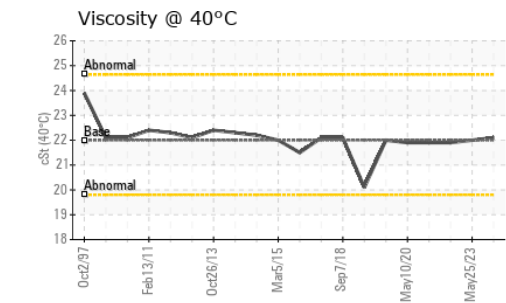
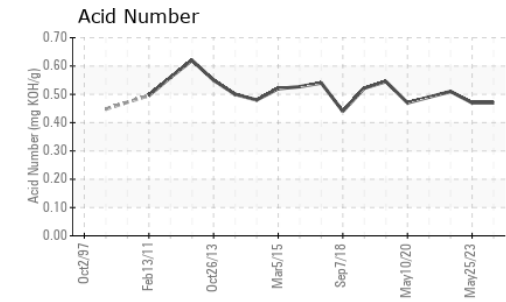
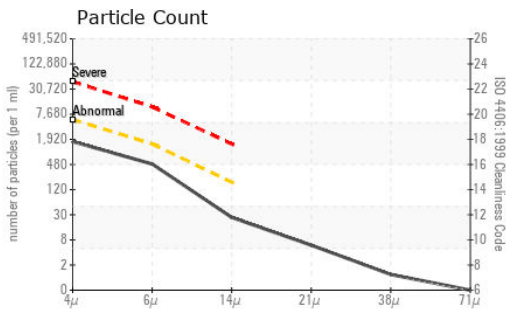
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	0	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	1484	542	885
Particles >6µm		ASTM D7647	>1300	433	186	256
Particles >14µm		ASTM D7647	>160	23	18	26
Particles >21µm		ASTM D7647	>40	5	5	6
Particles >38µm		ASTM D7647	>10	1	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/16/12	16/15/11	17/15/12
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)		<1	<1	<1
Boron	ppm	ASTM D5185(m)	.3	0	0	<1
Barium	ppm	ASTM D5185(m)		<1	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	0	0
Calcium	ppm	ASTM D5185(m)	49	38	40	39
Phosphorus	ppm	ASTM D5185(m)	192	336	357	341
Zinc	ppm	ASTM D5185(m)	237	412	437	448
Sulfur	ppm	ASTM D5185(m)		1149	1253	1253
Acid Number (AN)	mg KOH/g	ASTM D974*		0.47	0.47	0.51
Visc @ 40°C	cSt	ASTM D7279(m)	22	22.1	22.0	21.9



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0929747
Lab Number : 02639883
Unique Number : 5789045
Test Package : MAR 2
Received : 05 Jun 2024
Tested : 06 Jun 2024
Diagnosed : 06 Jun 2024 - Wes Davis

CANADIAN COAST GUARD
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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.