



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[13975799]

Machine Id

CAHE-HPU518110 DRILLING HPU UNIT

Component

2 Hydraulic System

Fluid

MOBIL DTE EXCEL ISO 32 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PP	PP	PP13954052
Sample Date		Client Info		12 Apr 2024	31 Dec 2023	26 Sep 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	<1	<1	<1
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	0	0
Lead	ppm	ASTM D5185(m)	>20	0	0	<1
Copper	ppm	ASTM D5185(m)	>20	<1	<1	<1
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

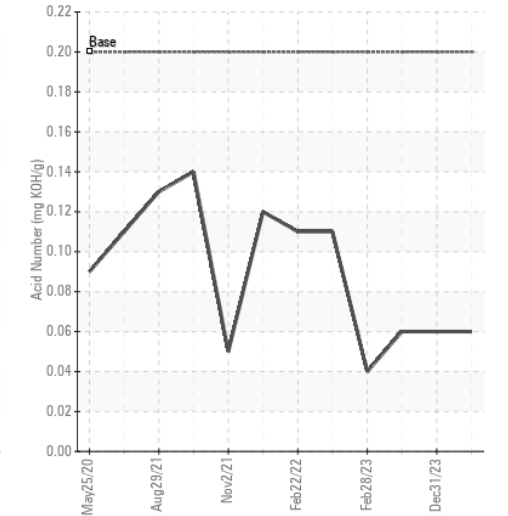
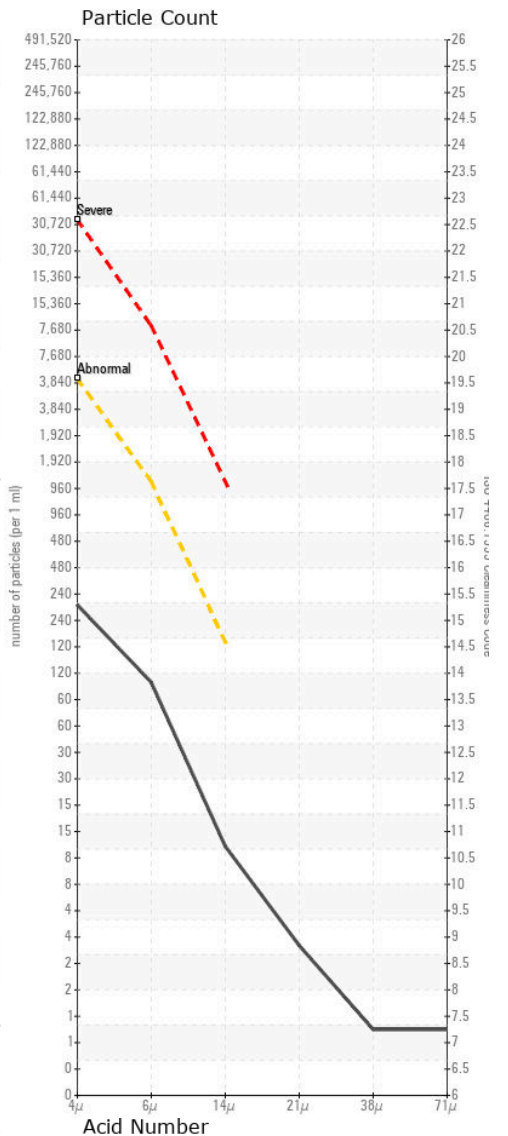
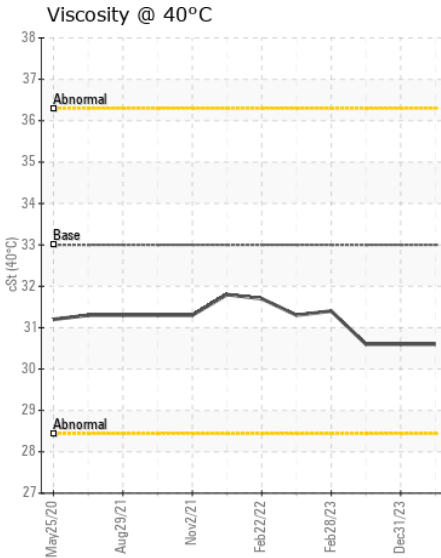
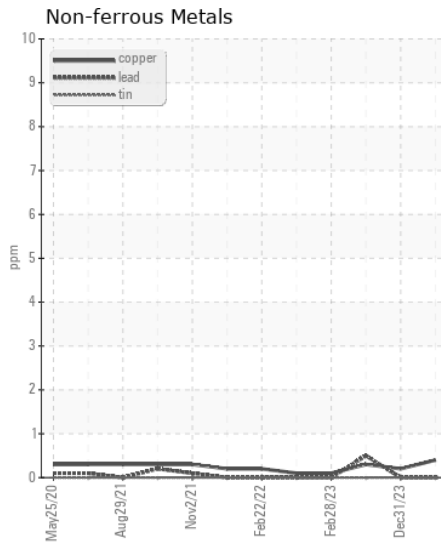
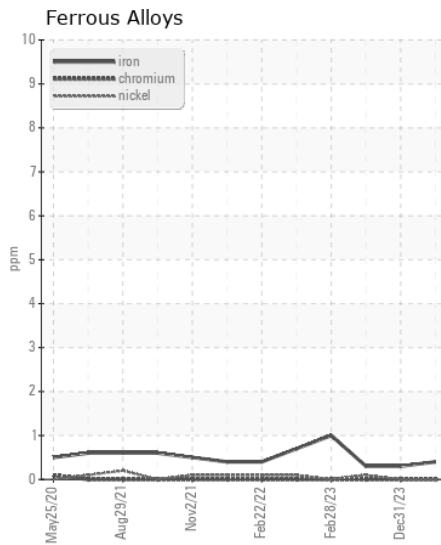
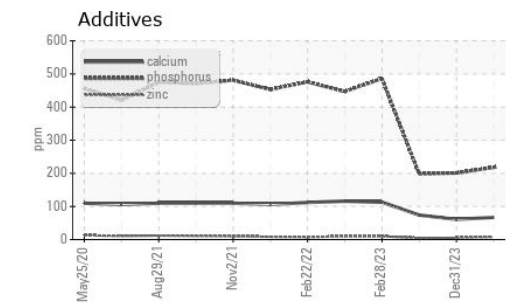
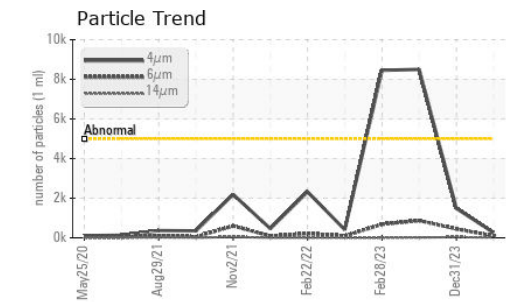
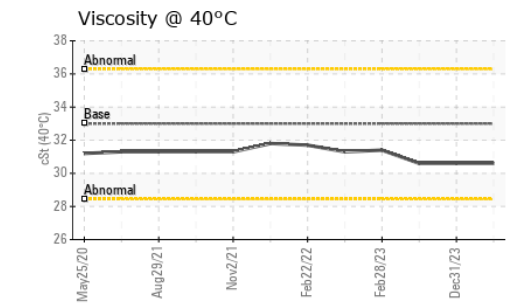
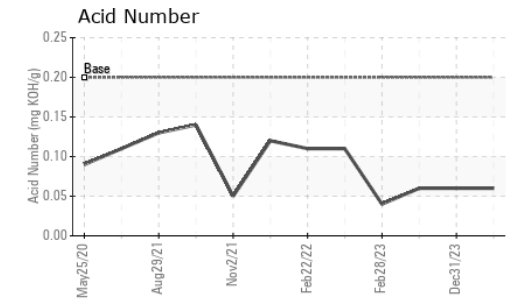
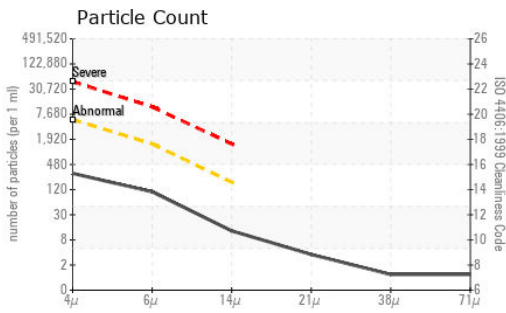
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	3	<1	1
Potassium	ppm	ASTM D5185(m)	>20	<1	0	0
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	259	1481	8501
Particles >6µm		ASTM D7647	>1300	94	445	870
Particles >14µm		ASTM D7647	>160	11	36	13
Particles >21µm		ASTM D7647	>40	3	11	2
Particles >38µm		ASTM D7647	>10	1	2	0
Particles >71µm		ASTM D7647	>3	1	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	15/14/11	18/16/12	20/17/11
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	HAZY
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	NEG

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. 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)		0	0	<1
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		<1	<1	0
Calcium	ppm	ASTM D5185(m)		67	61	74
Phosphorus	ppm	ASTM D5185(m)		218	201	198
Zinc	ppm	ASTM D5185(m)		8	5	5
Sulfur	ppm	ASTM D5185(m)		742	688	703
Acid Number (AN)	mg KOH/g	ASTM D974*	.2	0.06	0.06	0.06
Visc @ 40°C	cSt	ASTM D7279(m)	33.0	30.6	30.6	30.6



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP
Lab Number : 02631675
Unique Number : 5772828
Test Package : MAR 2
Received : 26 Apr 2024
Tested : 29 Apr 2024
Diagnosed : 29 Apr 2024 - Kevin Marson

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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.