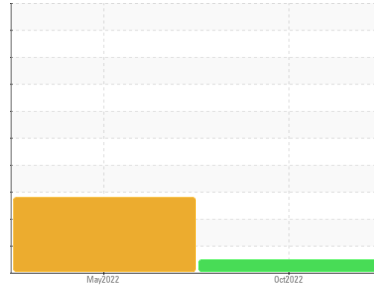


Machine Id
UNDERTUN CAL020 (S/N 230)
Component
Hydraulic System
Fluid
MOBIL DTE 10 EXCEL 32 (50 LTR)



DIAGNOSIS

Recommendation
Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.

Wear
All component wear rates are normal.

Contamination
There is no indication of any contamination in the component(unconfirmed).

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION method limit/base current history1 history2

Sample Number	Client Info	PC0011790	PC0052745	---
Sample Date	Client Info	09 Oct 2022	19 May 2022	---
Machine Age	hrs	0	0	---
Oil Age	hrs	0	0	---
Oil Changed	Client Info	N/A	Not Changd	---
Sample Status		NORMAL	SEVERE	---

CONTAMINATION method limit/base current history1 history2

Water	WC Method	>0.05	NEG	NEG	---
-------	-----------	-------	------------	-----	-----

WEAR METALS method limit/base current history1 history2

Iron	ppm	ASTM D5185(m)	>20	1	5	---
Chromium	ppm	ASTM D5185(m)	>10	0	<1	---
Nickel	ppm	ASTM D5185(m)	>10	<1	0	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		0	0	---
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	---
Lead	ppm	ASTM D5185(m)	>20	<1	<1	---
Copper	ppm	ASTM D5185(m)	>20	<1	<1	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Antimony	ppm	ASTM D5185(m)		<1	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
Beryllium	ppm	ASTM D5185(m)		0	0	---
Cadmium	ppm	ASTM D5185(m)		0	0	---

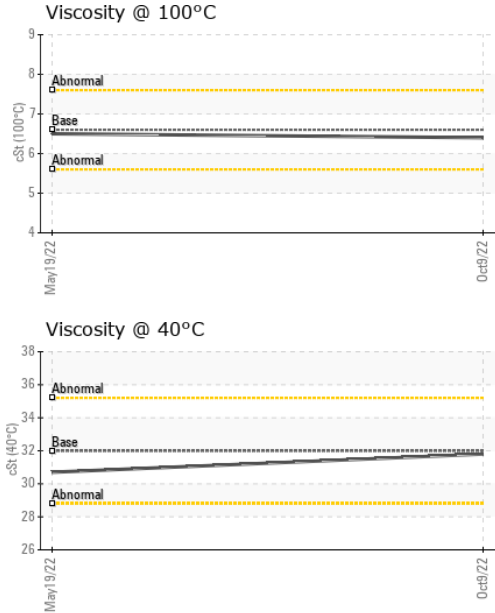
ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185(m)		<1	<1	---
Barium	ppm	ASTM D5185(m)		0	0	---
Molybdenum	ppm	ASTM D5185(m)		0	0	---
Manganese	ppm	ASTM D5185(m)		0	<1	---
Magnesium	ppm	ASTM D5185(m)		<1	<1	---
Calcium	ppm	ASTM D5185(m)	120	112	130	---
Phosphorus	ppm	ASTM D5185(m)	475	411	380	---
Zinc	ppm	ASTM D5185(m)		15	▲ 151	---
Sulfur	ppm	ASTM D5185(m)	1275	1290	▲ 2335	---
Lithium	ppm	ASTM D5185(m)		<1	<1	---

CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185(m)	>15	<1	<1	---
Sodium	ppm	ASTM D5185(m)		2	1	---
Potassium	ppm	ASTM D5185(m)	>20	0	<1	---

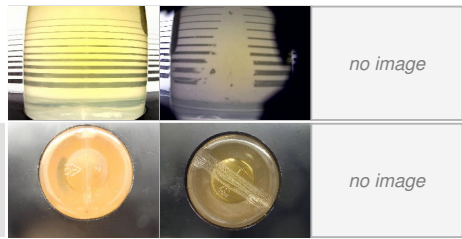
OIL ANALYSIS REPORT



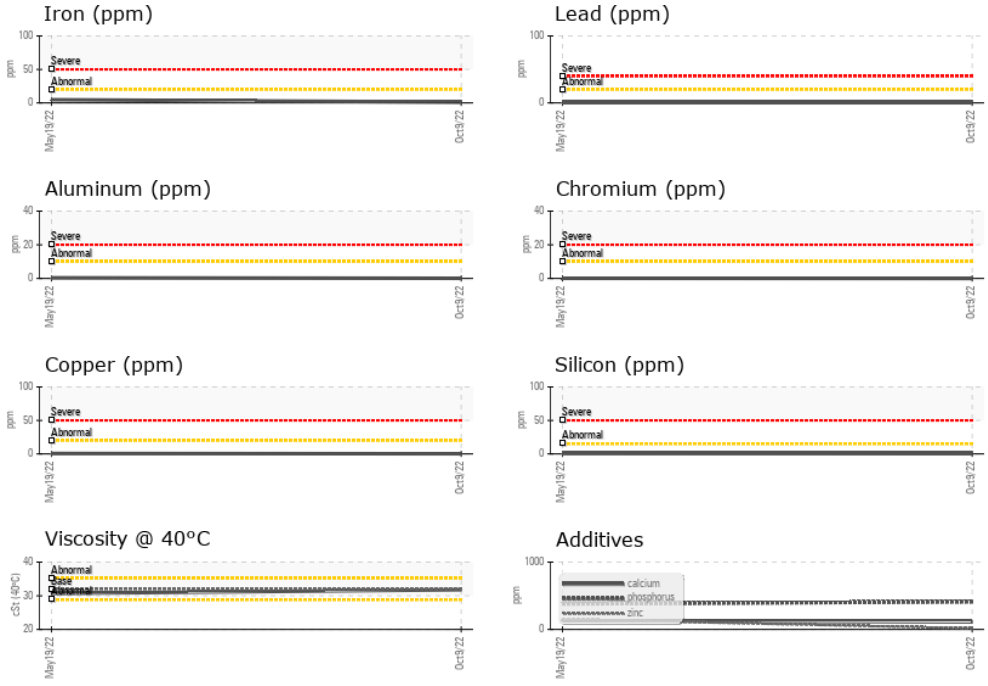
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.05	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32	30.7	---
Visc @ 100°C	cSt	ASTM D7279(m)	6.6	6.5	---
Viscosity Index (VI)	Scale	ASTM D2270*	164	172	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Ocean Choice International - MV Calvert**
Sample No. : PC0011790 **Received** : 10 Jan 2023 1315 Topsail Rd, P.O. Box 8190
Lab Number : 02532365 **Diagnosed** : 10 Jan 2023 St. John's, NL
Unique Number : 5513364 **Diagnostician** : Wes Davis CA A1B 3N4
Test Package : MOB 1 (Additional Tests: KV100, VI)

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.

Contact: Calvert Engine Control Room
 calvertengine@oceanchoice.com

T:
 F: