



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

parked

Machine Id

Chinook 81620H

Component

Diesel Engine

Fluid

ESSO 100% SYNTHETIC 10W30 (3 LTR)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0854854	WC0317028	WC0113090
Sample Date		Client Info		14 Jan 2024	06 Mar 2019	22 Sep 2002
Machine Age	hrs	Client Info		535	356	1290
Oil Age	hrs	Client Info		0	155	487
Filter Age	hrs	Client Info		0	155	487
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	1	9	52
Chromium	ppm	ASTM D5185(m)	>20	0	<1	6
Nickel	ppm	ASTM D5185(m)	>4	<1	0	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	1	2	18
Lead	ppm	ASTM D5185(m)	>40	0	<1	9
Copper	ppm	ASTM D5185(m)	>330	<1	1	137
Tin	ppm	ASTM D5185(m)	>15	0	0	3
Vanadium	ppm	ASTM D5185(m)		0	0	<1

CONTAMINATION

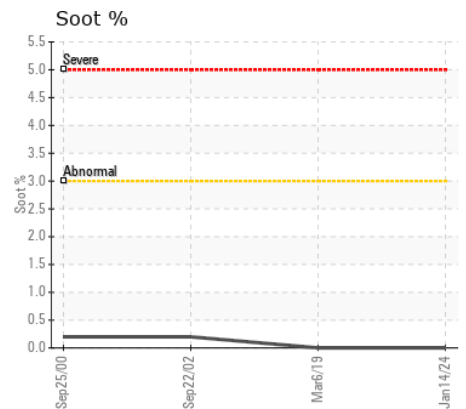
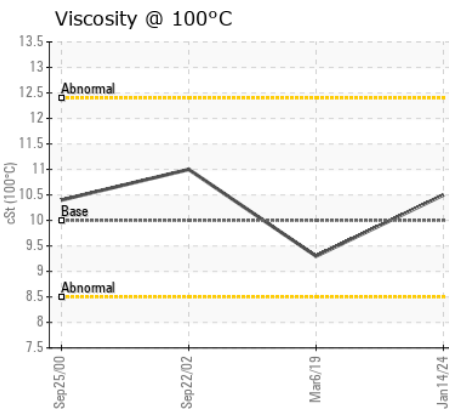
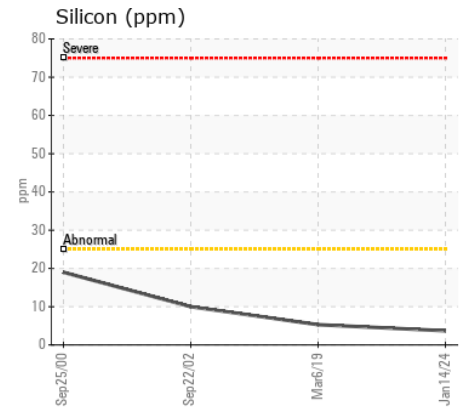
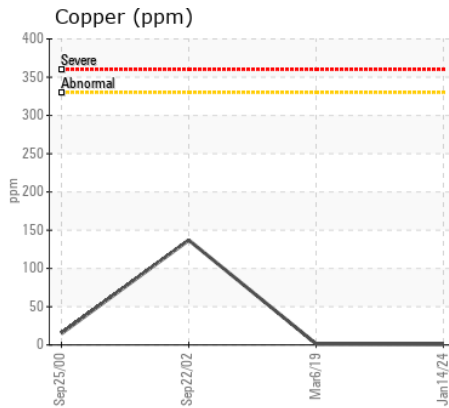
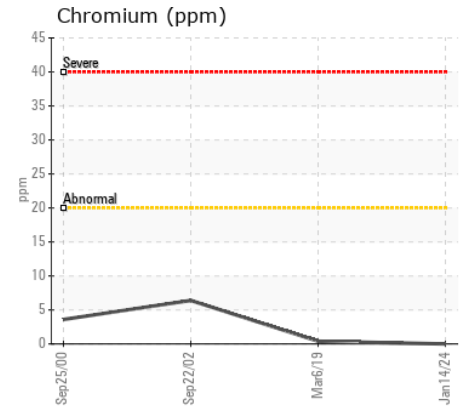
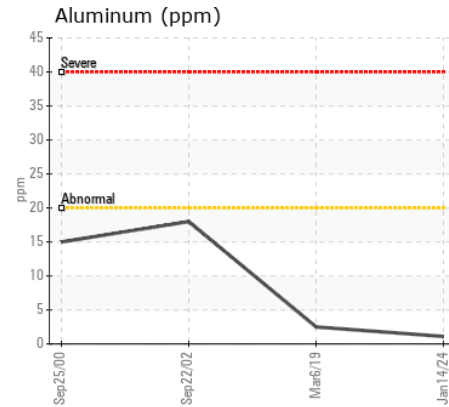
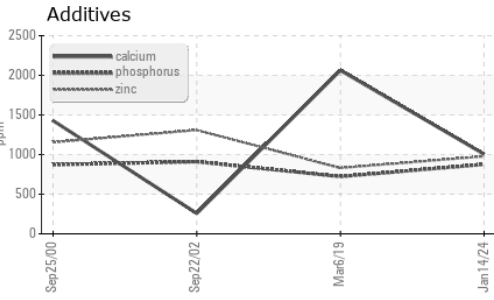
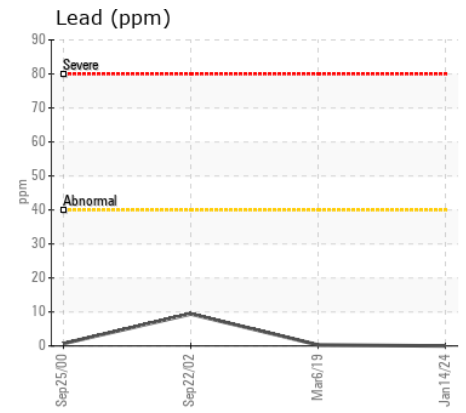
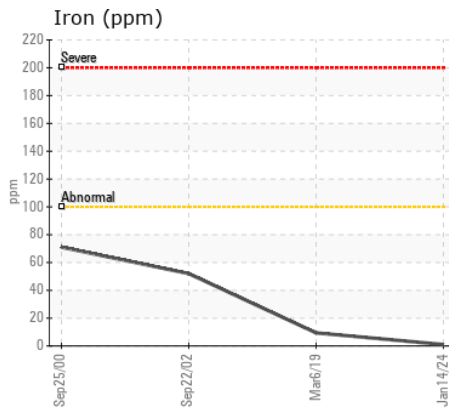
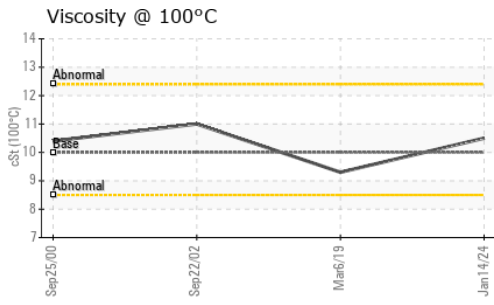
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	4	5	10
Potassium	ppm	ASTM D5185(m)	>20	<1	0	0
Fuel		WC Method	>5	<1.0	<1.0	0.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0.2
Nitration	Abs/cm	ASTM D7624*	>20	4.2	5.3	9
Sulfation	Abs/.1mm	ASTM D7415*	>30	16.9	15.5	21
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		1	2	9
Boron	ppm	ASTM D5185(m)		28	206	86
Barium	ppm	ASTM D5185(m)		0	<1	<1
Molybdenum	ppm	ASTM D5185(m)		55	73	<1
Manganese	ppm	ASTM D5185(m)		0	<1	2
Magnesium	ppm	ASTM D5185(m)		800	81	1190
Calcium	ppm	ASTM D5185(m)		1005	2062	258
Phosphorus	ppm	ASTM D5185(m)		876	722	910
Zinc	ppm	ASTM D5185(m)		977	830	1309
Sulfur	ppm	ASTM D5185(m)		2524	2675	1833
Oxidation	Abs/.1mm	ASTM D7414*	>25	12.2	8.9	17
Visc @ 100°C	cSt	ASTM D7279(m)	10.0	10.5	9.3	11.0



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0854854
Lab Number : 02609654
Unique Number : 5710740
Test Package : MOB 1

MANITOU LIN TRANSPORT
 75 MUMFORD ROAD
 LIVELY, ON
 CA P3Y 1L1
 Contact: Devin Mayer
 dmayer@manitoulintransport.com
 T: (705)282-4102
 F: (705)692-9303

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.