



Machine Id
13180
Component
Front Diesel Engine
Fluid
CASTROL HYPURON ADVANCED FORMULA (40 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0071327	PC0071334	PC0071878
Sample Date		Client Info		02 Jul 2024	05 Mar 2024	28 Aug 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	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	10	25	18
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	3	1
Lead	ppm	ASTM D5185(m)	>40	<1	2	<1
Copper	ppm	ASTM D5185(m)	>330	2	10	8
Tin	ppm	ASTM D5185(m)	>15	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

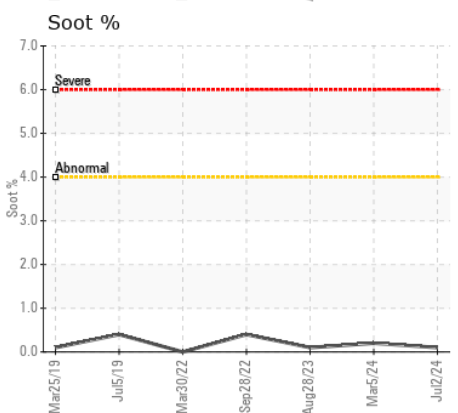
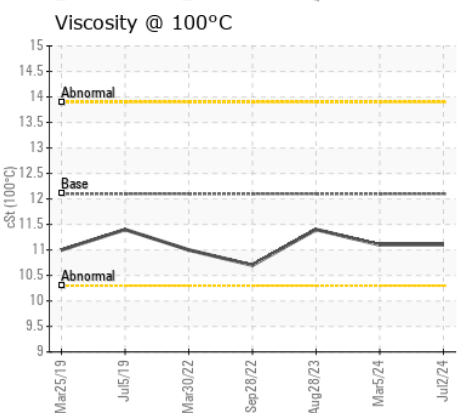
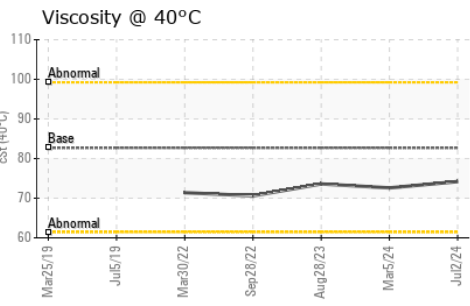
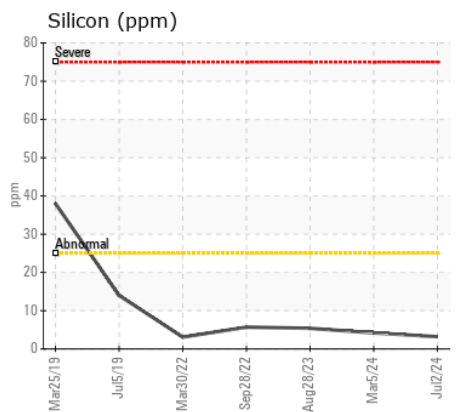
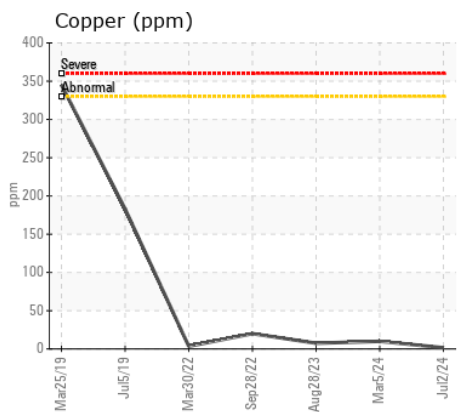
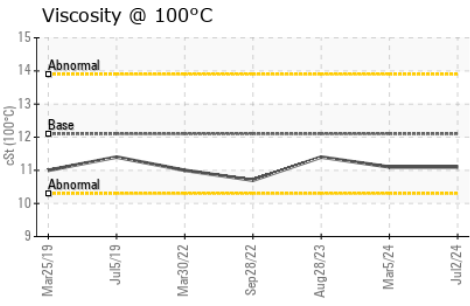
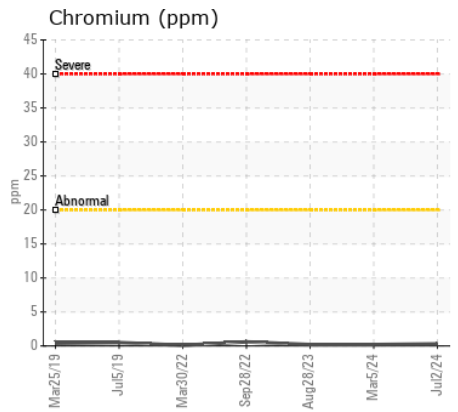
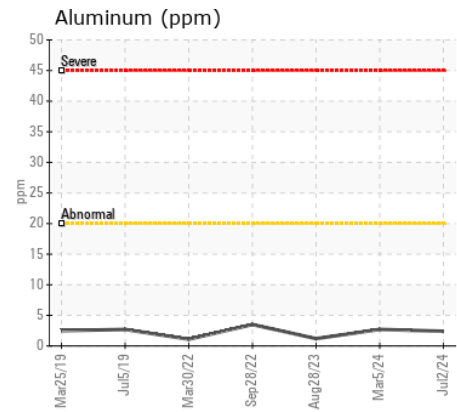
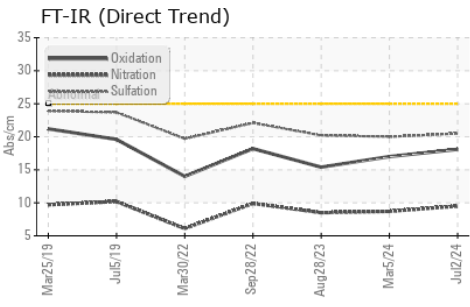
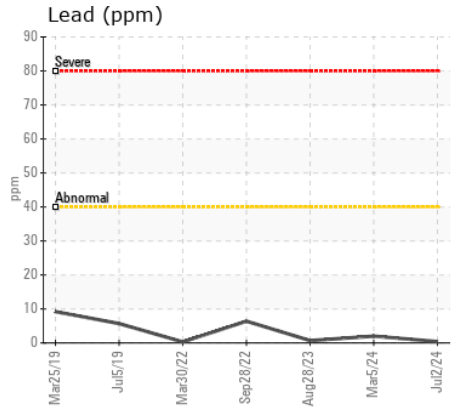
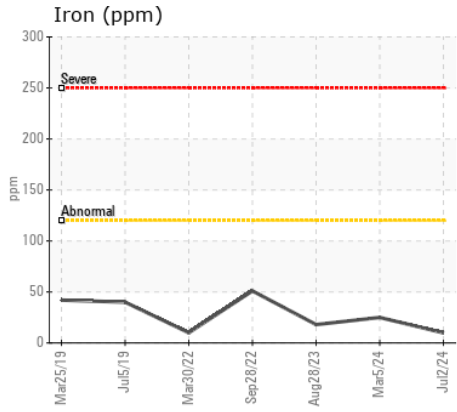
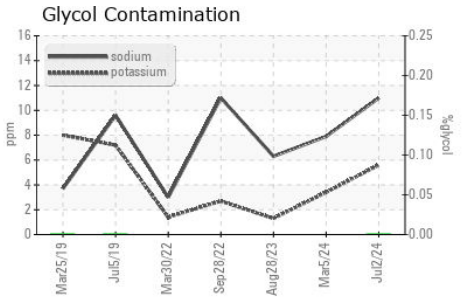
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	3	4	5
Potassium	ppm	ASTM D5185(m)	>20	6	3	1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.1	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.5	8.7	8.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.5	20.0	20.2
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	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		11	8	6
Boron	ppm	ASTM D5185(m)		4	3	4
Barium	ppm	ASTM D5185(m)		0	<1	<1
Molybdenum	ppm	ASTM D5185(m)		58	60	59
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		924	968	964
Calcium	ppm	ASTM D5185(m)		1040	1067	1031
Phosphorus	ppm	ASTM D5185(m)		944	999	1041
Zinc	ppm	ASTM D5185(m)		1163	1176	1174
Sulfur	ppm	ASTM D5185(m)		2369	2505	2495
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.1	17.0	15.4
Visc @ 40°C	cSt	ASTM D7279(m)	82.7	74.2	72.6	73.6
Visc @ 100°C	cSt	ASTM D7279(m)	12.1	11.1	11.1	11.4
Viscosity Index (VI)	Scale	ASTM D2270*	142	139	143	147



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0071327 **Received** : 03 Jul 2024
Lab Number : **02645211** **Tested** : 03 Jul 2024
Unique Number : 5802750 **Diagnosed** : 03 Jul 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Glycol, KV40, VI, Visual)

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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.