



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
JOHNSON CONTROLS [154159]

Machine Id
33197082

Component
Diesel Engine

Fluid
VALVOLINE PREMIUM BLUE 9200 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		CU0022778	CU0016073	CU0013885
Sample Date		Client Info		08 Mar 2024	10 Feb 2020	22 May 2018
Machine Age	hrs	Client Info		492	238	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>65	2	1	1
Chromium	ppm	ASTM D5185(m)	>3	0	<1	0
Nickel	ppm	ASTM D5185(m)	>2	0	<1	0
Titanium	ppm	ASTM D5185(m)	>2	0	<1	20
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>6	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>13	0	<1	0
Copper	ppm	ASTM D5185(m)	>65	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>2	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	<1
White Metal	scalar	Visual*	NONE	VLITE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

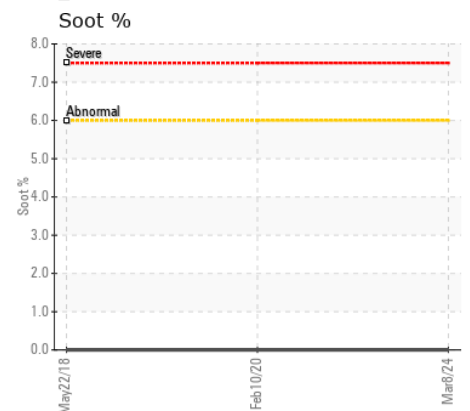
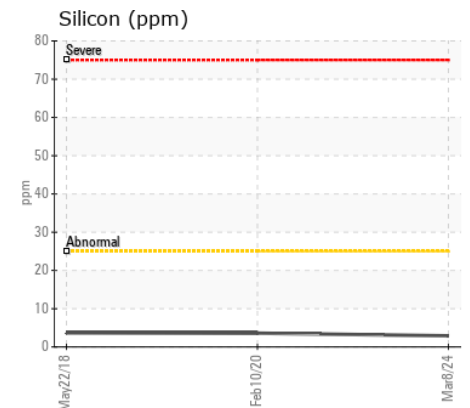
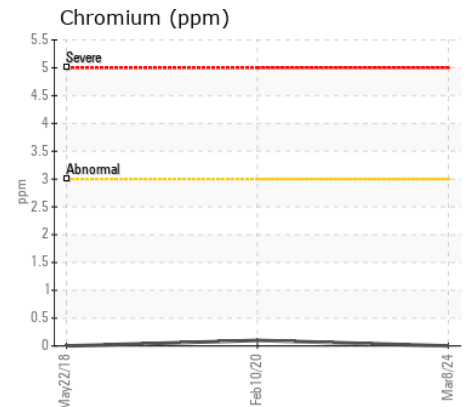
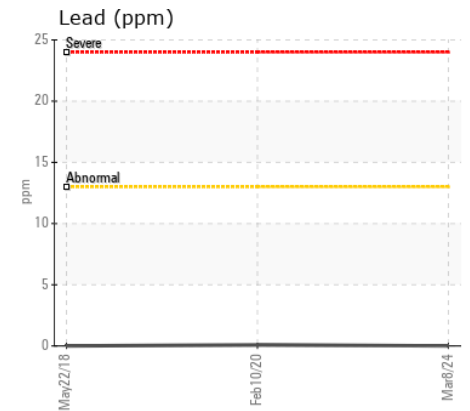
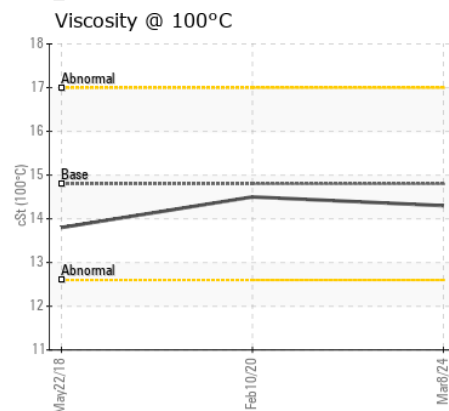
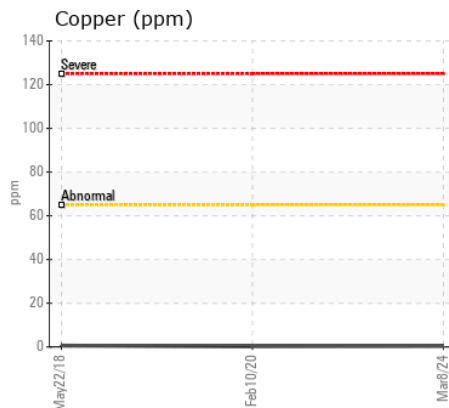
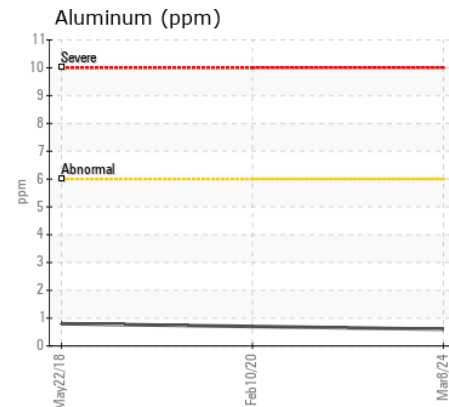
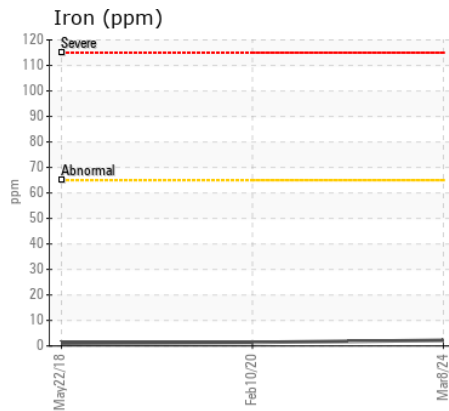
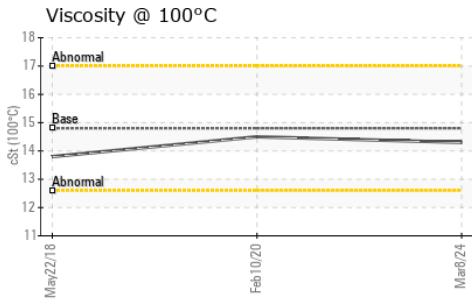
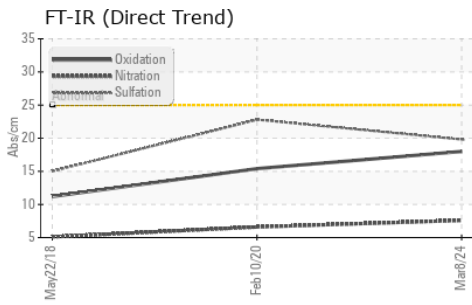
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	3	4	4
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>6	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	7.6	6.6	5.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.8	22.8	15.0
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	VLITE
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*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		3	3	3
Boron	ppm	ASTM D5185(m)		40	61	<1
Barium	ppm	ASTM D5185(m)		0	<1	0
Molybdenum	ppm	ASTM D5185(m)		47	42	42
Manganese	ppm	ASTM D5185(m)		<1	<1	0
Magnesium	ppm	ASTM D5185(m)		821	586	973
Calcium	ppm	ASTM D5185(m)		1196	1439	1198
Phosphorus	ppm	ASTM D5185(m)		719	973	1056
Zinc	ppm	ASTM D5185(m)		839	1160	1265
Sulfur	ppm	ASTM D5185(m)		1946	2551	2914
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.0	15.4	11.2
Visc @ 100°C	cSt	ASTM D7279(m)	14.8	14.3	14.5	13.8



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : CU0022778
Lab Number : 02640700
Unique Number : 5789862
Test Package : MOB 1 (Additional Tests: Visual)
Received : 10 Jun 2024
Tested : 10 Jun 2024
Diagnosed : 10 Jun 2024 - Wes Davis

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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.