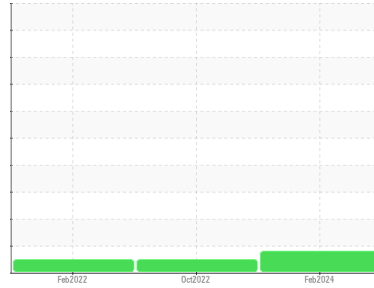




Machine Id
KENWORTH 2039

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

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			PC0083174	PC0066014	PC0046916
Sample Date	Client Info			07 Feb 2024	31 Oct 2022	07 Feb 2022
Machine Age	kms	Client Info		16132	15689	15000
Oil Age	kms	Client Info		500	0	500
Oil Changed	Client Info			Not Chngd	Not Chngd	N/A
Sample Status				MARGINAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	NEG	NEG	NEG

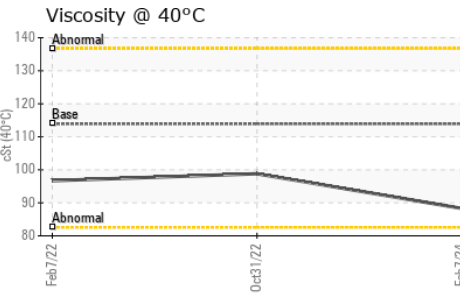
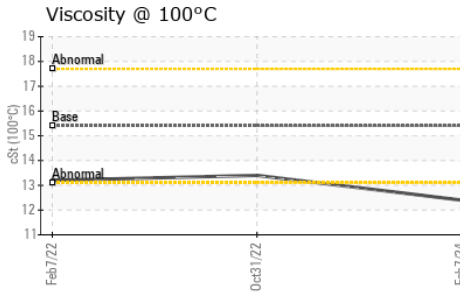
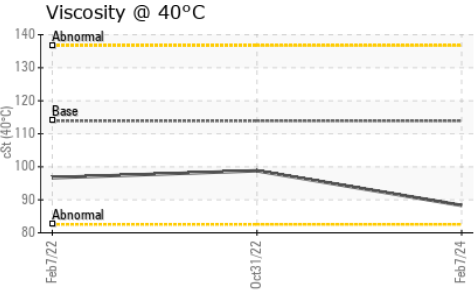
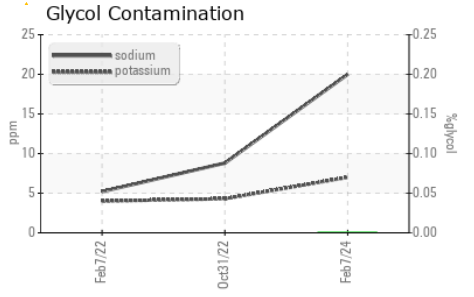
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	17	10	10
Chromium	ppm	ASTM D5185(m)	>20	1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	6	3	3
Lead	ppm	ASTM D5185(m)	>40	3	15	3
Copper	ppm	ASTM D5185(m)	>330	2	1	1
Tin	ppm	ASTM D5185(m)	>15	1	2	2
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	7	8	20
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	60	58	51
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	975	940	833
Calcium	ppm	ASTM D5185(m)	1070	1200	1198	1386
Phosphorus	ppm	ASTM D5185(m)	1150	1060	1099	1082
Zinc	ppm	ASTM D5185(m)	1270	1252	1210	1265
Sulfur	ppm	ASTM D5185(m)	2060	2742	2652	2678
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	8	5	6
Sodium	ppm	ASTM D5185(m)		20	9	5
Potassium	ppm	ASTM D5185(m)	>20	7	4	4
Fuel	%	ASTM D7593*	>5	▲ 2	<1.0	<1.0
Glycol	%	ASTM D7922*		0.0	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.5	8.5	9.0
Sulfation	Abs./1mm	ASTM D7415*	>30	20.7	21.1	21.7

OIL ANALYSIS REPORT

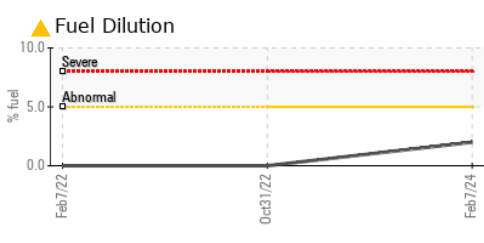
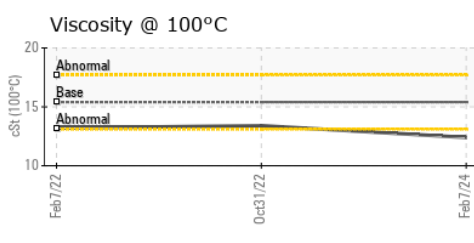
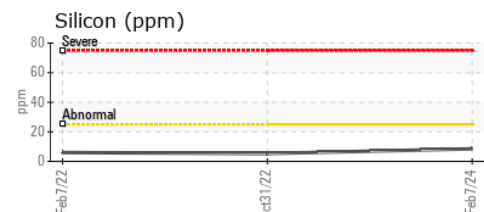
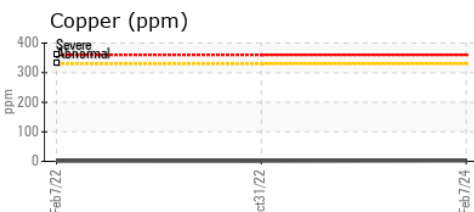
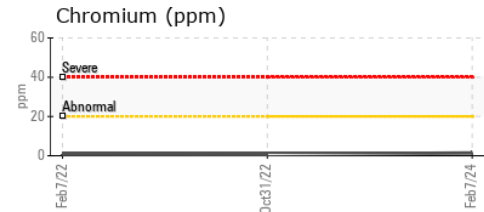
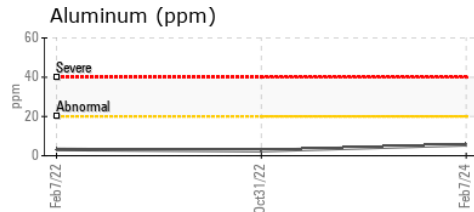
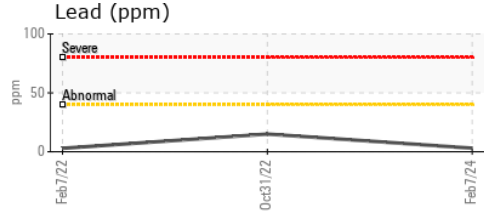
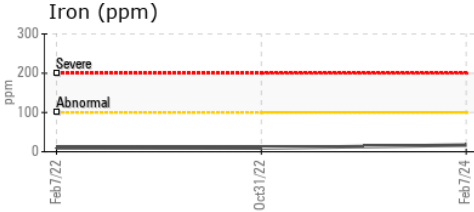


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	17.2	16.8	17.9

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	VLITE	---	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	---	NONE
Precipitate	scalar	Visual*	NONE	NONE	---	NONE
Silt	scalar	Visual*	NONE	NONE	---	NONE
Debris	scalar	Visual*	NONE	NONE	---	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	---	NONE
Appearance	scalar	Visual*	NORML	NORML	---	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	113.9	88.3	98.8	96.7
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	12.4	13.4	13.2
Viscosity Index (VI)	Scale	ASTM D2270*	142	135	134	135

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0083174
Lab Number : 02614374
Unique Number : 5723469
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, KV40, PercentFuel, VI, Visual)

B FREGEAU & FILS INC
 402 RUE ST DENIS
 ST ALEXANDRE, QC
 CA J0J 1S0
 Contact: Steve M.
 stevem@bfregeau.com

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.

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