

Machine Id
KENWORTH 946079
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for faulty combustion and a possible overheat condition. We advise that you check the engine tuning and timing. We advise that you check the fuel injection system. We advise that you check for the source of the coolant leak. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

WEAR

We have assumed that the oil was taken hot, according to the sampling instructions. Iron ppm levels are abnormal. Aluminum ppm levels are noted. Cylinder, crank, or cam shaft wear is indicated.

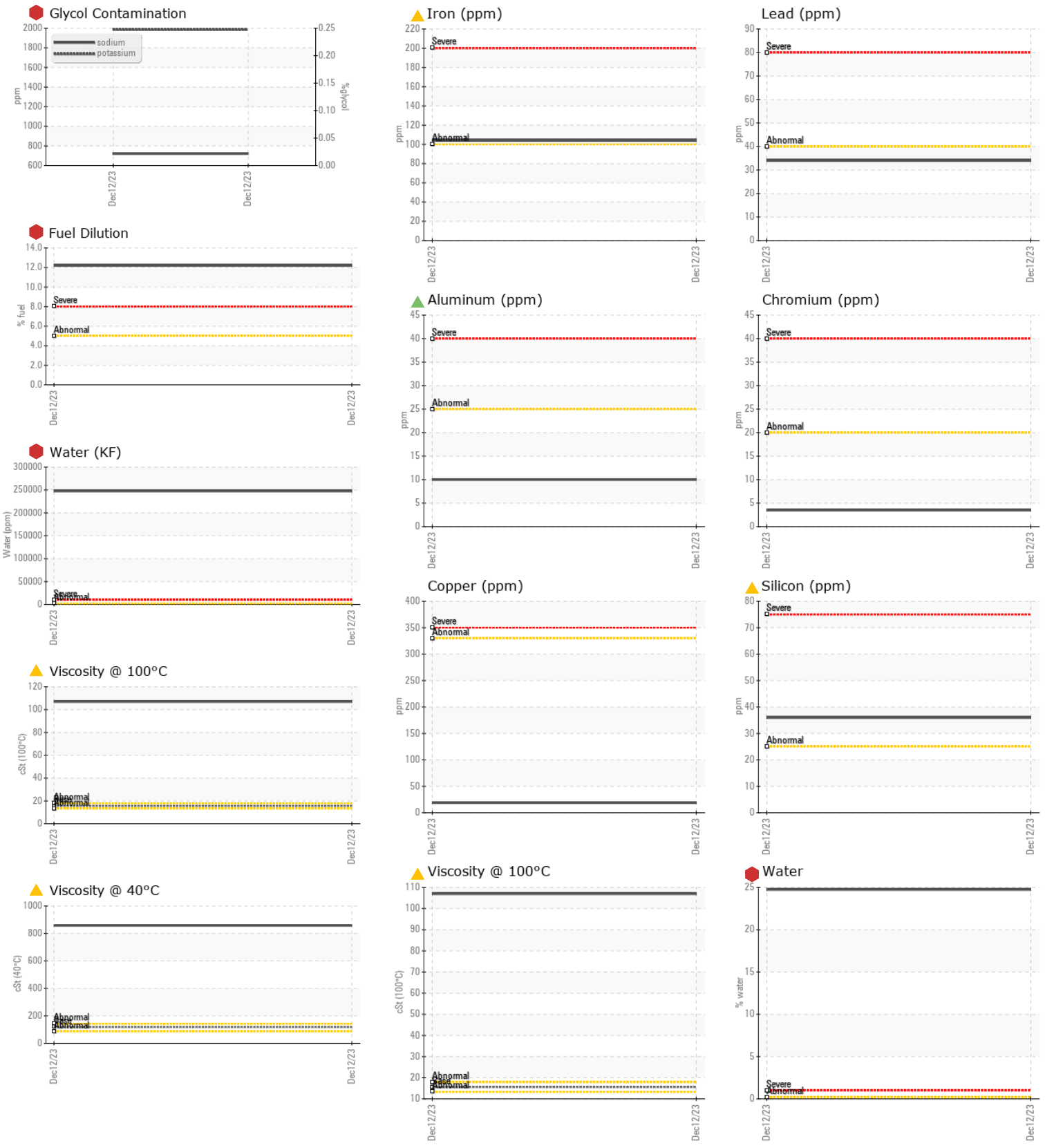
CONTAMINATION

There is an abnormal level of nitration indicated. Test for glycol is positive. There is a high amount of fuel present in the oil. There is a high concentration of glycol present in the oil. There is a high concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Tests confirm the presence of fuel in the oil. High amount of ingressed dirt has caused abrasive wear to the component.

FLUID CONDITION

A small degree of oil oxidation was indicated. Viscosity of sample indicates oil is within ISO 1000 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC348120	---	---
Sample Date		Client Info		12 Dec 2023	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				SEVERE	---	---
PQ		ASTM D8184*		29	---	---
Iron	ppm	ASTM D5185(m)	>100	▲ 104	---	---
Chromium	ppm	ASTM D5185(m)	>20	4	---	---
Nickel	ppm	ASTM D5185(m)	>2	<1	---	---
Titanium	ppm	ASTM D5185(m)	>2	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>25	▲ 10	---	---
Lead	ppm	ASTM D5185(m)	>40	34	---	---
Copper	ppm	ASTM D5185(m)	>330	19	---	---
Tin	ppm	ASTM D5185(m)	>15	2	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
Silicon	ppm	ASTM D5185(m)	>25	▲ 36	---	---
Potassium	ppm	ASTM D5185(m)	>20	▲ 1984	---	---
Fuel	%	ASTM D7593*	>5	● 12.2	---	---
Water	%	ASTM D6304*	>0.2	● 24.75	---	---
ppm Water	ppm	ASTM D6304*	>2000	● 247590	---	---
Glycol	%	ASTM D7922*		● >.70	---	---
Soot %	%	ASTM D7844*	>3	1.3	---	---
Nitration	Abs/cm	ASTM D7624*	>20	▲ 100.0	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	0.0	---	---
Emulsified Water	scalar	Visual*	>0.2	▲ .2%	---	---
Sodium	ppm	ASTM D5185(m)		▲ 721	---	---
Boron	ppm	ASTM D5185(m)	0	6	---	---
Barium	ppm	ASTM D5185(m)	0	<1	---	---
Molybdenum	ppm	ASTM D5185(m)	60	314	---	---
Manganese	ppm	ASTM D5185(m)	0	2	---	---
Magnesium	ppm	ASTM D5185(m)	1010	422	---	---
Calcium	ppm	ASTM D5185(m)	1070	643	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	553	---	---
Zinc	ppm	ASTM D5185(m)	1270	630	---	---
Sulfur	ppm	ASTM D5185(m)	2060	1022	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	▲ 104.2	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	▲ 858	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	▲ 107	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	139	▲ 223	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC348120 **Received** : 02 Jan 2024
Lab Number : 02605857 **Diagnosed** : 05 Jan 2024
Unique Number : 5706943 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FUELDILUTION, Glycol, KF, KV40, PercentFuel, PQ, VI)

CENTENNIAL FARM SUPPLY LTD
 BOX 1480, 526 CENTENNIAL ST.
 WINKLER, MB
 CA R6W 4B4
 Contact: KEVIN

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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