



Machine Id
MACK 6319
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (32 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0083006	PC0071914	PC0060914
Sample Date		Client Info		01 Mar 2024	14 Aug 2023	08 Mar 2023
Machine Age	hrs	Client Info		27257	26264	25453
Oil Age	hrs	Client Info		993	811	773
Filter Age	hrs	Client Info		993	811	773
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	35	17	25
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	0	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	1	<1	2
Lead	ppm	ASTM D5185(m)	>40	2	4	6
Copper	ppm	ASTM D5185(m)	>330	2	2	3
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

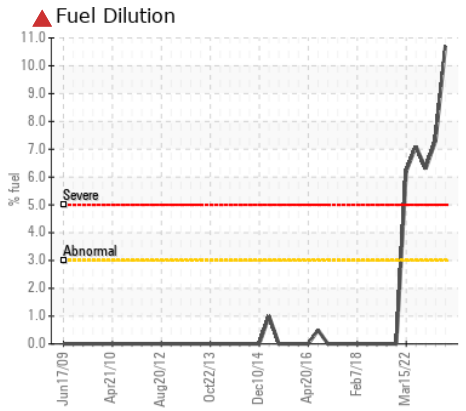
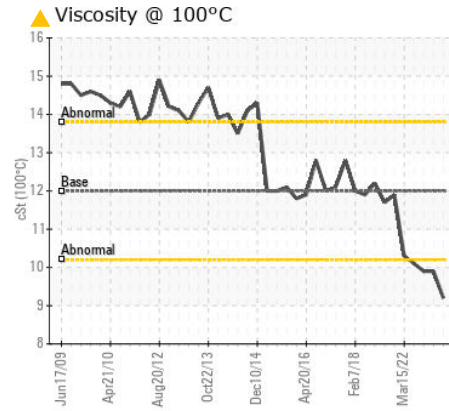
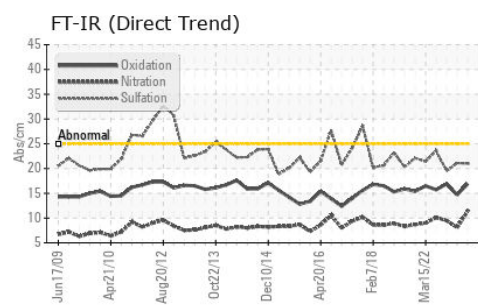
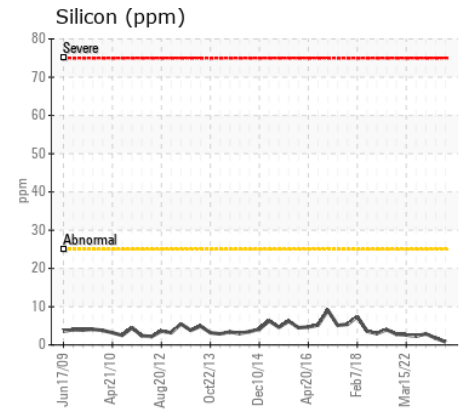
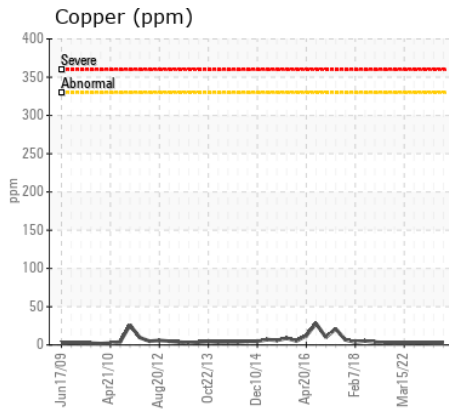
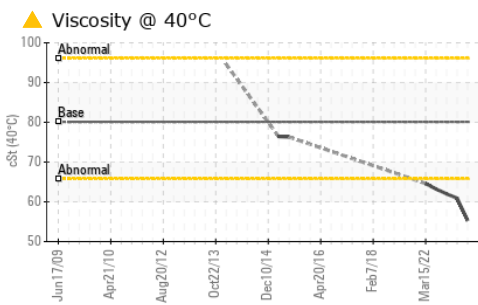
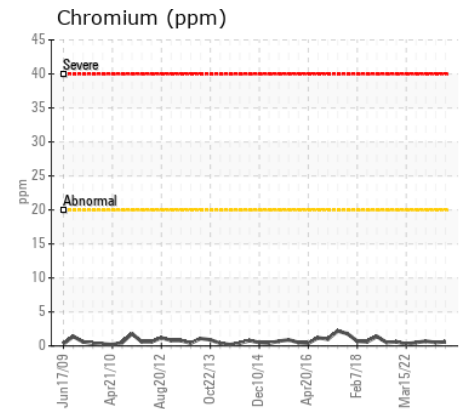
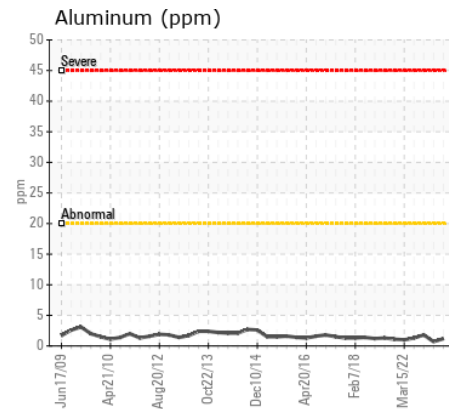
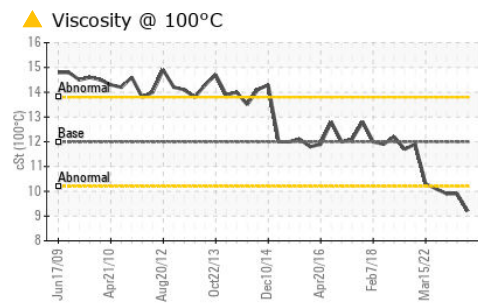
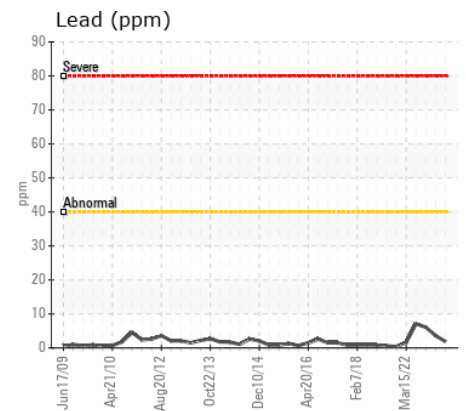
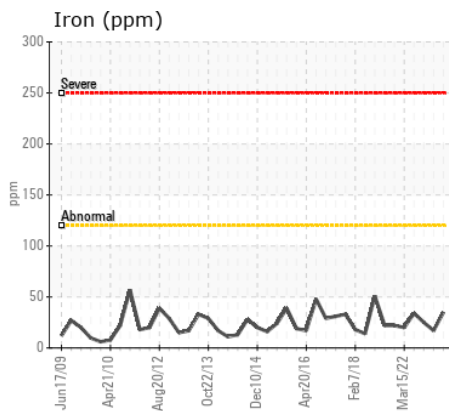
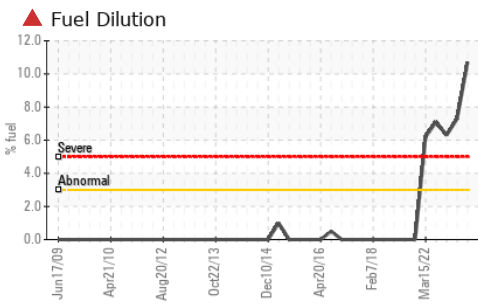
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<1	2	3
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Fuel	%	ASTM D7593*	>3.0	▲ 10.7	▲ 7.3	▲ 6.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	1.5	1	0.3
Nitration	Abs/cm	ASTM D7624*	>20	11.4	8.1	9.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.0	21.1	19.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		2	2	4
Boron	ppm	ASTM D5185(m)	2	3	3	7
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	56	53	57
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	890	890	925
Calcium	ppm	ASTM D5185(m)	1050	968	942	1029
Phosphorus	ppm	ASTM D5185(m)	995	894	950	1006
Zinc	ppm	ASTM D5185(m)	1180	1070	1078	1114
Sulfur	ppm	ASTM D5185(m)	2600	2248	2284	2463
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.9	14.7	16.9
Visc @ 40°C	cSt	ASTM D7279(m)	80.1	▲ 55.3	60.9	62.0
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	▲ 9.2	9.9	9.9
Viscosity Index (VI)	Scale	ASTM D2270*	144	147	147	144



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0083006 **Received** : 16 Apr 2024
Lab Number : 02629123 **Tested** : 17 Apr 2024
Unique Number : 5762255 **Diagnosed** : 17 Apr 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: KV40, PercentFuel, VI)

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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.