

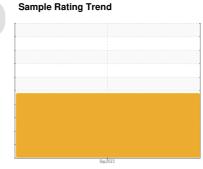
OIL ANALYSIS REPORT

SHARP BUS LINES **INTERNATIONAL 1159**

Component

Diesel Engine

PETRO CANADA DURON HP 15W40 (--- GAL)





DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. There is a light concentration of glycol present in the oil.

Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

AL)				Sep 2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0081454		
Sample Date		Client Info		21 Sep 2023		
Machine Age	kms	Client Info		286649		
Oil Age	kms	Client Info		10000		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
CONTAMINATI	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	<1.0		
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	40		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>4	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>3	<1		
Aluminum	ppm	ASTM D5185(m)	>20	16		
Lead	ppm	ASTM D5185(m)	>40	<1		
Copper	ppm	ASTM D5185(m)	>330	<1		
Tin	ppm	ASTM D5185(m)	>15	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current 4	history1	history2
	ppm ppm		0		,	,
Boron	• •	ASTM D5185(m)	0	4		
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	0	4 <1		
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60	4 <1 63		
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60 0	4 <1 63 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60 0 1010	4 <1 63 0 937		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m)	0 0 60 0 1010 1070	4 <1 63 0 937 1019		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 60 0 1010 1070 1150	4 <1 63 0 937 1019		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270 2060	4 <1 63 0 937 1019 996 1154		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270 2060	4 <1 63 0 937 1019 996 1154 2539		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270 2060	4 <1 63 0 937 1019 996 1154 2539 <1 current		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270 2060	4 <1 63 0 937 1019 996 1154 2539 <1 current		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270 2060	4 <1 63 0 937 1019 996 1154 2539 <1 current 6 ▲ 40		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270 2060	4 <1 63 0 937 1019 996 1154 2539 <1 current 6 40 63		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) MASTM D5185(m) MASTM D5185(m) ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	4 <1 63 0 937 1019 996 1154 2539 <1 current 6 40 63 0.022		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	4 <1 63 0 937 1019 996 1154 2539 <1 current 6 △ 40 △ 63 △ 0.022 current		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7922* method ASTM D7844*	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	4 <1 63 0 937 1019 996 1154 2539 <1 current 6 ▲ 40 ▲ 63 ▲ 0.022 current 0.4		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) MASTM D5185(m) MASTM D5185(m) ASTM D7844* ASTM D7624*	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	4 <1 63 0 937 1019 996 1154 2539 <1 current 6 40 63 0.022 current 0.4 7.9		history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7845 method ASTM D7922* method ASTM D7844* ASTM D7624* ASTM D7624*	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	4 <1 63 0 937 1019 996 1154 2539 <1 current 6 ▲ 40 ▲ 63 ▲ 0.022 current 0.4	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7845 method ASTM D7922* method ASTM D7844* ASTM D7624* ASTM D7624*	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	4 <1 63 0 937 1019 996 1154 2539 <1 current 6 40 63 0.022 current 0.4 7.9	history1 history1	history2 history2



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited

Laboratory Sample No. Lab Number Unique Number

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

: PC0081454 : 02591897 : 5668976

Received Diagnosed

: 25 Oct 2023 : 25 Oct 2023

Diagnostician : Wes Davis Test Package : MOB 1 (Additional Tests: Glycol, KV40, VI)

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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