

Machine Id

WEAR NORMAL CONTAMINATION ABNORMAL FLUID CONDITION ATTENTION

8406 Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. 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 an early resample to monitor this condition.

VA/		
VV	EA	Б

All component wear rates are normal.

CONTAMINATION

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

FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0112506	GFL0102671	GFL0097607
Sample Date		Client Info		22 May 2024	11 Mar 2024	02 Nov 2023
Machine Age	hrs	Client Info		281009	1067	259149
Oil Age	hrs	Client Info		0	0	25750
Filter Age	hrs	Client Info		0	0	25750
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Not Changd	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>50	18	22	29
Chromium	ppm	ASTM D5185(m)	>4	<1	<1	1
Nickel	ppm	ASTM D5185(m)	>2	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>9	1	2	2
Lead	ppm	ASTM D5185(m)	>30	0	<1	2
Copper	ppm	ASTM D5185(m)	>35	<1	1	1
Tin	ppm	ASTM D5185(m)	>4	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>+100	3	3	6
Potassium	ppm	ASTM D5185(m)	>20	4 24	4 4	4 6
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol	%	ASTM D7922*		A 0.05	A 0.01	▲ 0.029
				<u> </u>	0.01	
Soot %	%	ASTM D7844*		0.05	0	0
Soot % Nitration	% Abs/cm	ASTM D7844* ASTM D7624*	>20	0.05 0 12.2	0 12.1	0 11.8
Soot % Nitration Sulfation	% Abs/cm Abs/.1mm	ASTM D7844* ASTM D7624* ASTM D7415*	>20 >30	0 12.2 22.3	0 12.1 24.7	0 11.8 23.5
Soot % Nitration Sulfation Emulsified Water	% Abs/cm Abs/.1mm scalar	ASTM D7844* ASTM D7624* ASTM D7415* Visual*	>20 >30 >0.1	0.03 0 12.2 22.3 NEG	0 12.1 24.7 NEG	0 11.8 23.5 NEG
Soot % Nitration Sulfation Emulsified Water Sodium	% Abs/cm Abs/.1mm scalar ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m)	>20 >30 >0.1	0.03 0 12.2 22.3 NEG 350	0 12.1 24.7 NEG 461	0 11.8 23.5 NEG 501
Soot % Nitration Sulfation Emulsified Water Sodium Boron	% Abs/cm Abs/.1mm scalar ppm ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1	0.03 0 12.2 22.3 NEG 350 2	0 12.1 24.7 NEG 461 2	0 11.8 23.5 NEG 501 2
Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium	% Abs/cm Abs/.1mm scalar ppm ppm ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1 50 5	0.03 0 12.2 22.3 NEG 350 2 0	0 12.1 24.7 NEG 461 2 0	0 11.8 23.5 NEG 501 2 <1
Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium Molybdenum	% Abs/cm Abs/.1mm scalar ppm ppm ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1 50 50 50	0.03 0 12.2 22.3 NEG 350 2 0 60	0 12.1 24.7 NEG 461 2 0 65	0 11.8 23.5 NEG 501 2 <1 67
Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium Molybdenum Manganese	% Abs/cm Abs/.1mm scalar ppm ppm ppm ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1 50 5 50 0	0.03 0 12.2 22.3 NEG 350 2 0 60 <1	0 12.1 24.7 NEG 461 2 0 65 0	0 11.8 23.5 NEG 501 2 <1 67 <1
Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	% Abs/cm Abs/.1mm scalar ppm ppm ppm ppm ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1 50 5 50 0 560	0.03 0 12.2 22.3 NEG 350 2 0 60 <1 495	0 12.1 24.7 NEG 461 2 0 65 0 524	0 11.8 23.5 NEG 501 2 <1 67 <1 485
Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	% Abs/cm Abs/.1mm scalar ppm ppm ppm ppm ppm ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1 50 5 50 5 50 0 560 1510	0.03 0 12.2 22.3 NEG 350 2 0 60 <1 495 1456	0 12.1 24.7 NEG 461 2 0 65 0 524 1461	0 11.8 23.5 NEG 501 2 <1 67 <1 485 1452
Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	% Abs/cm Abs/.1mm scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1 50 5 50 6 5 0 560 1510 780	0.03 0 12.2 22.3 NEG 350 2 0 60 <1 495 1456 568	0 12.1 24.7 NEG 461 2 0 65 0 524 1461 601	0 11.8 23.5 NEG 501 2 <1 67 <1 485 1452 578
Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc	% Abs/cm Abs/.1mm scalar ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1 50 5 50 0 500 0 560 1510 780 870	0.03 0 12.2 22.3 NEG 350 2 0 60 <1 495 1456 568 798	0 12.1 24.7 NEG 461 2 0 65 0 524 1461 601 813	0 11.8 23.5 NEG 501 2 <1 67 <1 67 <1 485 1452 578 793
Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium Malybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	% Abs/cm Abs/.1mm scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D7844* ASTM D7624* ASTM D7415* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1 50 5 50 5 50 0 5 60 1510 780 870 2040	0.03 0 12.2 22.3 NEG 350 2 0 60 <1 495 1456 568 798 1818	0 12.1 24.7 NEG 461 2 0 65 0 524 1461 601 813 1929	0 11.8 23.5 NEG 501 2 <1 67 <1 67 <1 485 1452 578 793 1856
Soot % Nitration Sulfation Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation	% Abs/cm Abs/.1mm scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D7844* ASTM D7624* ASTM D7615* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >30 >0.1 50 50 50 0 500 560 1510 780 870 2040 >25	0.03 0 12.2 22.3 NEG 350 2 0 60 <1 495 1456 568 798 1818 18.5	0 12.1 24.7 NEG 461 2 0 65 0 524 1461 601 813 1929 20.7	0 11.8 23.5 NEG 501 2 <1 67 <1 485 1452 578 793 1856 19.3



: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 554 - Edmonton SW Laboratory CALA Sample No. Received 8409 -15th Street NW : GFL0112506 : 23 May 2024 Edmonton, AB Lab Number : 02637108 Tested : 24 May 2024 ISO 17025:2017 Accredited Laboratory Unique Number : 5786270 : 24 May 2024 - Kevin Marson CA T6P 0B8 Diagnosed Test Package : MOB 1 (Additional Tests: Glycol) Contact: Tim Greig To discuss this sample report, contact Customer Service at 1-800-268-2131. tgreig@gflenv.com T: (780)231-0521 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. F: Validity of results and interpretation are based on the sample and information as supplied.