

OIL ANALYSIS REPORT

Sample Rating Trend



Area (MC12199) 822028 Component Diesel Engine

PETRO CANADA DURON SHP 15W40 (35 QTS)

SAMPLE INFORMATION method

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR		methoa	iimit/base	current	nistory i	nistoryz
Sample Number		Client Info		GFL0108551		
Sample Date		Client Info		11 Mar 2024		
Machine Age	hrs	Client Info		8737		
Oil Age	hrs	Client Info		600		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
			Preside Manager		In the tax work	le'stan 0
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron		ASTM D5185m	>120	6		
Chromium	ppm	ASTM D5185m	>120	o <1		
Nickel	ppm					
	ppm	ASTM D5185m	>5	<1 <1		
Titanium Silver	ppm	ASTM D5185m	>2			
	ppm	ASTM D5185m	>2	<1 3		
Aluminum	ppm	ASTM D5185m ASTM D5185m	>20			
Lead	ppm		>40	0 4		
Copper	ppm	ASTM D5185m	>330	-		
Tin	ppm		>15	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		<1		
						le le transie o
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	current 3	history1	nistory2
	ppm ppm					nistory2
Boron		ASTM D5185m	0	3		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	3 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	3 0 61		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	3 0 61 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	3 0 61 0 923		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	3 0 61 0 923 1118		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	3 0 61 0 923 1118 1002	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	3 0 61 0 923 1118 1002 1232 2981		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	3 0 61 0 923 1118 1002 1232 2981 current		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	3 0 61 0 923 1118 1002 1232 2981 current 4	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 limit/base	3 0 61 0 923 1118 1002 1232 2981 current 4 2	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	3 0 61 0 923 1118 1002 1232 2981 current 4	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 limit/base	3 0 61 0 923 1118 1002 1232 2981 current 4 2	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20	3 0 61 0 923 1118 1002 1232 2981 current 4 2 5	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25 >20	3 0 61 0 923 1118 1002 1232 2981 current 4 2 5 5	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	3 0 61 0 923 1118 1002 1232 2981 current 4 2 5 5 current 0.3	 history1 history1 	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >4 >20	3 0 61 0 923 1118 1002 1232 2981 <u>current</u> 4 2 5 5 <u>current</u> 0.3 7.5 19.3	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >4 >20	3 0 61 0 923 1118 1002 1232 2981 <i>current</i> 4 2 5 <i>current</i> 0.3 7.5	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >4 >20	3 0 61 0 923 1118 1002 1232 2981 <u>current</u> 4 2 5 5 <u>current</u> 0.3 7.5 19.3	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 2260 225 220 220 imit/base >20 >20 >30 imit/base	3 0 61 0 923 1118 1002 1232 2981 <i>current</i> 4 2 2 5 <i>current</i> 0.3 7.5 19.3	 history1 history1 history1 history1	 history2 history2 history2 history2



OIL ANALYSIS REPORT

Image: Second Product	FT-IR (Direct Trend)		VISUAL		method	limit/base	current	history1	history2
Projective and a calar NONE NONE			White Metal	scalar	*Visual	NONE	NONE		
Precipitale scalar Visual NONE NONE	Sulfation								
Still Scalar Visual NONE									
Debris scalar Visual NONE The scalar Visual NORML NO									
Sand Dirit scalar Vesual NORE NORE									
Appearance coder Visual NORML WORML WORML									
Sees Number Free Water Social Visual NEG	24+	/24							
Sees Number Free Water Social Visual NEG	Marl 1	Mar11							
Image: Second State Sta									
Ferrous Alloys Viscosity @ 100°C						20.2			
Ferrous Alloys Viscosity @ 100°C	8.0		FLUID PROPI	ERTIES	method	limit/base	current	history1	history2
Ferrous Alloys Viscosity @ 100°C Viscosity @ 100°	6.0		Visc @ 100°C	cSt	ASTM D445	15.4	14.3		
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Sample No. : GFL0108551 Received : 19 Apr 2024 11888 & 11863 30th Avenu Chippewa Falls, V Lab Number : 06153978 Tested : 22 Apr 2024 Chippewa Falls, V Unique Number : 10989401 Diagnosed : 22 Apr 2024 - Wes Davis US 5472 Certificate L2367 Test Package : FLEET Contact: Andy Kar To discuss this sample report, contact Customer Service at 1-800-237-1369. T: (715)202-342 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (715)202-342			11 +2/				1/24		
To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (715)202-342			11 +2/				Mar11/24		
* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (715)202-342		Sample No. Lab Number Unique Number	: WearCheck USA - 5 : GFL0108551 : 06153978 : 10989401	Recei Teste	ved : 19 d : 22	47, NC 27513 9 Apr 2024 2 Apr 2024	GFL Env	11888 & 1186 Chip	h ippewa Falls H 3 30th Avenu pewa Falls, V US 5472
		Sample No. Lab Number Unique Number Test Package	: WearCheck USA - 5 : GFL0108551 : 06153978 : 10989401 : FLEET	Recei Teste Diagr	ved : 19 d : 22 losed : 22	47, NC 27513 9 Apr 2024 2 Apr 2024 2 Apr 2024 - W	GFL Env	11888 & 1186 Chip	h ippewa Falls H 3 30th Avenu pewa Falls, V US 5472

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Submitted By: See also GFL904,A,B,C, 927, 938 - Andy Kane