

# **OIL ANALYSIS REPORT**







Machine Id

#### Component **Diesel Engine**

Fluid PETRO CANADA DURON SHP 10W30 (--- LTR)

### 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 condition of the oil is acceptable for the time in service.

SAMPLE INFORM	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0085913		
Sample Date		Client Info		03 Jul 2023		
Machine Age	kms	Client Info		185712		
Oil Age	kms	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method	20	NEG		
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m)	>100	40		
Chromium	ppm	ASTM D5185(m)	>20	3		
Nickel	ppm	ASTM D5185(m)	>2	0		
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	0		
Copper	ppm	ASTM D5185(m)	>330	2		
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		
O e al ser la ser		AOTH DELOC( )		•		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES	ppm	method	limit/base	0 current	history 1	history 2
	ppm ppm	( )	limit/base	-		
ADDITIVES		method	2	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185(m)	2	current 2	history 1	history 2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185(m) ASTM D5185(m)	2 0 50	current 2 <1	history 1 	history 2 
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50	current 2 <1 56	history 1  	history 2  
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50 0	current 2 <1 56 <1	history 1   	history 2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50 0 950	current 2 <1 56 <1 913	history 1   	history 2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50 0 950 1050	current           2           <1           56           <1           913           1039	history 1    	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	2 0 50 0 950 1050 995 1180 2600	current           2           <1           56           <1           913           1039           1052	history 1	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	2 0 50 0 950 1050 995 1180 2600	current           2           <1           56           <1           913           1039           1052           1139	history 1	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	2 0 50 0 950 1050 995 1180 2600	current           2           <1           56           <1           913           1039           1052           1139           2482	history 1	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	2 0 50 950 1050 995 1180 2600 <b>limit/base</b>	current           2           <1           56           <1           913           1039           1052           1139           2482           <1           current	history 1	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	2 0 50 950 1050 995 1180 2600	current           2           <1           56           <1           913           1039           1052           1139           2482           <1           current           14	history 1	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	2 0 50 950 1050 995 1180 2600 limit/base >25	current           2           <1           56           <1           913           1039           1052           1139           2482           <1           current           14           3	history 1	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	current           2           <1           56           <1           913           1039           1052           1139           2482           <1           current           14           3           <1	history 1	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	2 0 50 0 950 1050 995 1180 2600 imit/base >25	current         2         <1         56         <1         913         1039         1052         1139         2482         <1         current         14         3         <1         current         14         3         <1	history 1                              history 1                  history 1                  history 1	history 2 history 2 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	method           ASTM D5185(m)	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3	current         2         <1         56         <1         913         1039         1052         1139         2482         <1         current         14         3         <1         current         0.2	history 1 history 1 history 1 history 1	history 2 history 2 history 2 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20	current         2         <1         56         <1         913         1039         1052         1139         2482         <1         current         14         3         <1         current         0.2         10.5	history 1  history 1                  history 1	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)           ASTM D5185(m)  <	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3	current         2         <1         56         <1         913         1039         1052         1139         2482         <1         current         14         3         <1         current         0.2	history 1 history 1 history 1 history 1	history 2 history 2 history 2 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)           ASTM D7844*           ASTM D7624*           ASTM D7415*           method	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20	current           2           <1           56           <1           913           1039           1052           1139           2482           <1           current           14           3           <1           current           0.2           10.5           20.6	history 1  history 1                  history 1	history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185(m)           ASTM D5185(m)  <	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 	current         2         <1         56         <1         913         1039         1052         1139         2482         <1         current         14         3         <1         current         0.2         10.5         20.6	history 1  history 1            history 1	history 2



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Contact/Location: Tim Greig - GFL554 Page 2 of 2