

### **OIL ANALYSIS REPORT**



# FORD 176808

Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (12 QTS)

#### 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.

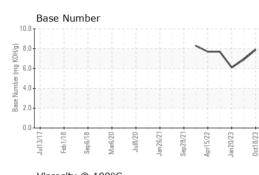
#### Fluid Condition

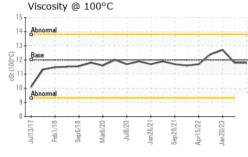
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		mothed	limit/le e co	ou we cal	bietewst	bioterryO
SAMPLE INFOR	VIATION		limit/base	current	history1	history2
Sample Number		Client Info		PCA0097381	PCA0083807	PCA0083864
Sample Date		Client Info		18 Oct 2023	07 Apr 2023	20 Jan 2023
Machine Age	mls	Client Info		144113	129401	117780
Oil Age	mls	Client Info		7652	11621	4301
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	32	20	62
Chromium	ppm		>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		1	25	75
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m		4	3	7
Lead	ppm	ASTM D5185m	>40	0	0	, <1
Copper	ppm	ASTM D5185m		2	<1	4
Tin	ppm		>15	- <1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES		method		current	history1	history2
Boron	ppm	method ASTM D5185m	2	current 3	history1 21	history2 34
Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 3 0	history1 21 0	history2 34 0
Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 3 0 60	history1 21 0 48	history2 34 0 18
Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 3 0 60 <1	history1 21 0 48 <1	history2 34 0 18 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 3 0 60 <1 988	history1 21 0 48 <1 882	history2 34 0 18 <1 543
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	current     3     0     60     <1     988     1152	history1 21 0 48 <1 882 1396	history2 34 0 18 <1 543 1694
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	current     3     0     60     <1     988     1152     1019	history1 21 0 48 <1 882 1396 1103	history2 34 0 18 <1 543 1694 987
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	current     3     0     60     <1     988     1152	history1 21 0 48 <1 882 1396	history2 34 0 18 <1 543 1694
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 0 950 1050 995 1180	current     3     0     60     <1     988     1152     1019     1370	history1 21 0 48 <1 882 1396 1103 1259	history2   34   0   18   <1   543   1694   987   1245
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 950 1050 995 1180 2600	current     3     0     60     <1     988     1152     1019     1370     3150	history1   21   0   48   <1   882   1396   1103   1259   3950	history2   34   0   18   <1   543   1694   987   1245   4015
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	current     3     0     60     <1     988     1152     1019     1370     3150     current     6	history1 21 0 48 <1 882 1396 1103 1259 3950 history1	history2   34   0   18   <1   543   1694   987   1245   4015   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	current   3   0   60   <1   988   1152   1019   1370   3150   current	history1   21   0   48   <1   882   1396   1103   1259   3950   history1   5	history2   34   0   18   <1   543   1694   987   1245   4015   history2   8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	current     3     0     60     <1     988     1152     1019     1370     3150     current     6     3	history1   21   0   48   <1   882   1396   1103   1259   3950   history1   5   3	history2   34   0   18   <1   543   1694   987   1245   4015   history2   8   17
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 >20	current   3   0   60   <1   988   1152   1019   1370   3150   current   6   3   4   current	history1   21   0   48   <1   882   1396   1103   1259   3950   history1   5   3   3   history1	history2   34   0   18   <1   543   1694   987   1245   4015   history2   8   17   14
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20 <b>Imit/base</b> >3	current   3   0   60   <1   988   1152   1019   1370   3150   current   6   3   4   current   0.9	history1   21   0   48   <1   882   1396   1103   1259   3950   history1   5   3   history1   0.4	history2   34   0   18   <1   543   1694   987   1245   4015   history2   8   17   14   history2   1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 -20 <b>limit/base</b>	current   3   0   60   <1   988   1152   1019   1370   3150   current   6   3   4   current	history1   21   0   48   <1   882   1396   1103   1259   3950   history1   5   3   3   history1	history2   34   0   18   <1   543   1694   987   1245   4015   history2   8   17   14   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 <b>TS</b> ppm ppm ppm	method     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	3   0   60   <1   988   1152   1019   1370   3150   current   6   3   4   current   0.9   11.1   21.0	history1   21   0   48   <1   882   1396   1103   1259   3950   history1   5   3   history1   0.4   9.2   18.1	history2   34   0   18   <1   543   1694   987   1245   4015   history2   8   17   14   history2   1   13.5   27.6
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	method   ASTM D5185m   ASTM D78144   *ASTM D7624   *ASTM D7415   method	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b> >3 >20 >30	3   0   60   <1   988   1152   1019   1370   3150   current   6   3   4   current   0.9   11.1   21.0   current	history1   21   0   48   <1   882   1396   1103   1259   3950   history1   5   3   history1   0.4   9.2   18.1   history1	history2   34   0   18   <1   543   1694   987   1245   4015   history2   8   17   14   history2   1   13.5   27.6   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 <b>TS</b> ppm ppm ppm	method     ASTM D5185m     ASTM D7185M     *ASTM D7624     *ASTM D7624     *ASTM D7415     method	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	3   0   60   <1   988   1152   1019   1370   3150   current   6   3   4   current   0.9   11.1   21.0	history1   21   0   48   <1   882   1396   1103   1259   3950   history1   5   3   history1   0.4   9.2   18.1	history2   34   0   18   <1   543   1694   987   1245   4015   history2   8   17   14   history2   1   13.5   27.6



## **OIL ANALYSIS REPORT**







Certificate L2367

Laboratory

Sample No.

Lab Number

Contact/Location: RON ROBERTS - MILLAN