

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id 606480

#### Component Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (--- QTS)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### 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 INFORI		method	limit/bass	ourroat	biotoryd	biotom/0
	VIATION		limit/base	current	history1	history2
Sample Number		Client Info		PCA0079249	PCA0099678	
Sample Date		Client Info		12 Mar 2024	27 Jul 2023	
Machine Age	mls	Client Info		112376	90782	
Oil Age	mls	Client Info		27571	77000	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	31	40	
Chromium	ppm	ASTM D5185m	>20	0	<1	
Nickel	ppm	ASTM D5185m	>4	0	<1	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	0	<1	
Aluminum	ppm	ASTM D5185m	>20	4	4	
Lead	ppm	ASTM D5185m	>40	0	<1	
Copper	ppm	ASTM D5185m	>330	4	5	
Tin	ppm	ASTM D5185m	>15	<1	1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
				U	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron			limit/base		-	history2
	ppm	method		current	history1	
Boron Barium	ppm ppm	method ASTM D5185m	2	current 10	history1 13	
Boron	ppm	method ASTM D5185m ASTM D5185m	2 0	current 10 <1	history1 13 0	
Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 10 <1 61	history1 13 0 60	
Boron Barium Molybdenum	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 10 <1 61 <1	history1 13 0 60 1	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 10 <1 61 <1 822	history1 13 0 60 1 817	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	current           10           <1           61           <1           822           1130	history1 13 0 60 1 817 1270	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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           10           <1           61           <1           822           1130           982	history1 13 0 60 1 817 1270 1019	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180	current           10           <1           61           <1           822           1130           982           1180	history1 13 0 60 1 817 1270 1019 1223	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	current           10           <1           61           <1           822           1130           982           1180           3182	history1 13 0 60 1 817 1270 1019 1223 2762	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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         10         <1         61         <1         822         1130         982         1180         3182         current	history1 13 0 60 1 817 1270 1019 1223 2762 history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600	current           10           <1           61           <1           822           1130           982           1180           3182           current           6	history1           13           0           60           1           817           1270           1019           1223           2762           history1           9	      history2
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 0 950 1050 995 1180 2600 <b>limit/base</b>	current           10           <1           61           <1           822           1130           982           1180           3182           current           6           2	history1           13           0           60           1           817           1270           1019           1223           2762           history1           9           4	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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 >20	current         10         <1         61         <1         822         1130         982         1180         3182         current         6         2         <1	history1           13           0           60           1           817           1270           1019           1223           2762           history1           9           4	     history2  
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         10         <1         61         <1         822         1130         982         1180         3182         current         6         2         <1         0.6	history1         13         0         60         1         817         1270         1019         1223         2762         history1         9         4         4         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 ppm ppm	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	current         10         <1         61         <1         822         1130         982         1180         3182         current         6         2         <1         current         cal         current         current         current	history1         13         0         60         1         817         1270         1019         1223         2762         history1         9         4         4         history1         0.7	     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	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	current         10         <1         61         <1         822         1130         982         1180         3182         current         6         2         <1         ourrent         0         0.6         10.0	history1         13         0         60         1         817         1270         1019         1223         2762         history1         9         4         history1         0.7         11.3	     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 TS ppm ppm ppm ppm	method           ASTM D5185m           ASTM D7185m           ASTM D7624           *ASTM D7624           *ASTM D7415	2 0 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 20 >20 >30 >30 <b>imit/base</b>	current         10         <1         61         <1         822         1130         982         1180         3182         current         6         2         <1         current         0.6         10.0         20.8	history1         13         0         60         1         817         1270         1019         1223         2762         history1         9         4         history1         0.7         11.3         22.6         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	method         ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	current         10         <1         61         <1         822         1130         982         1180         3182         current         6         2         <1         0.6         10.0         20.8	history1         13         0         60         1         817         1270         1019         1223         2762         history1         9         4         history1         0.7         11.3         22.6	     history2  history2  history2  history2



3

31

چ <sup>25</sup>

15

10

8.0

(b/H0J Bu)

u 4.0 1 aquin 1 3.0

age 2.0

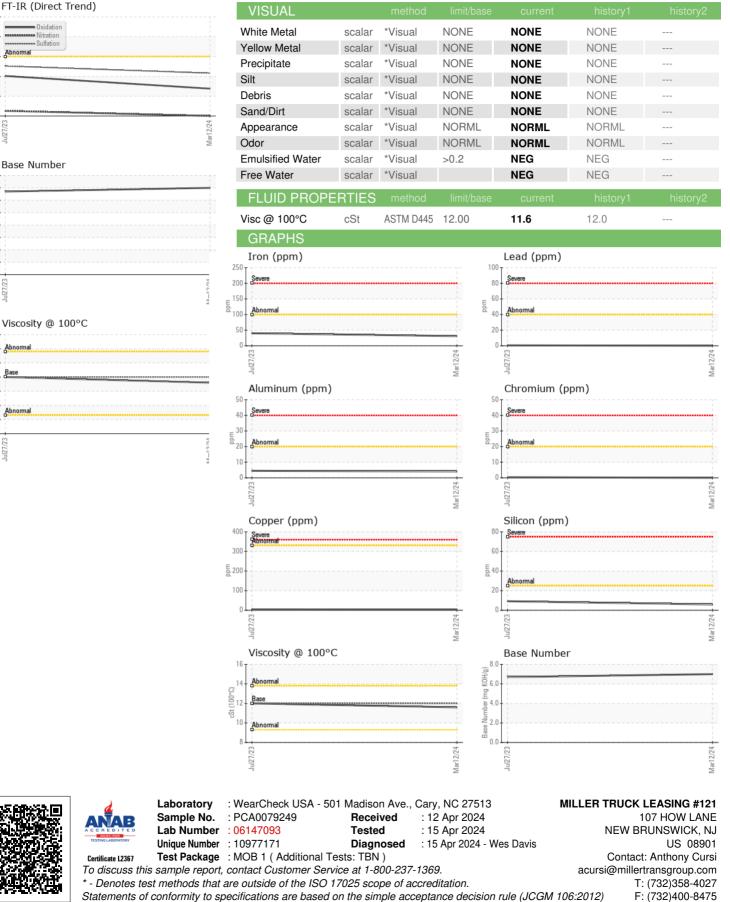
0.0

15 14

13 cSt (100°C)

Abs

# **OIL ANALYSIS REPORT**



Report Id: MILNEW [WUSCAR] 06147093 (Generated: 04/15/2024 17:45:01) Rev: 1

Contact/Location: Anthony Cursi - MILNEW