

# **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

#### 621540 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.

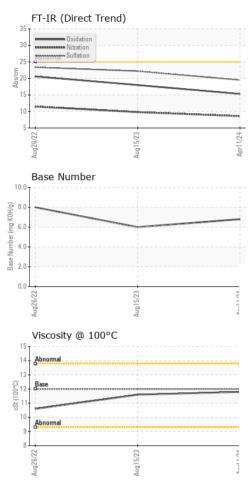
#### Fluid Condition

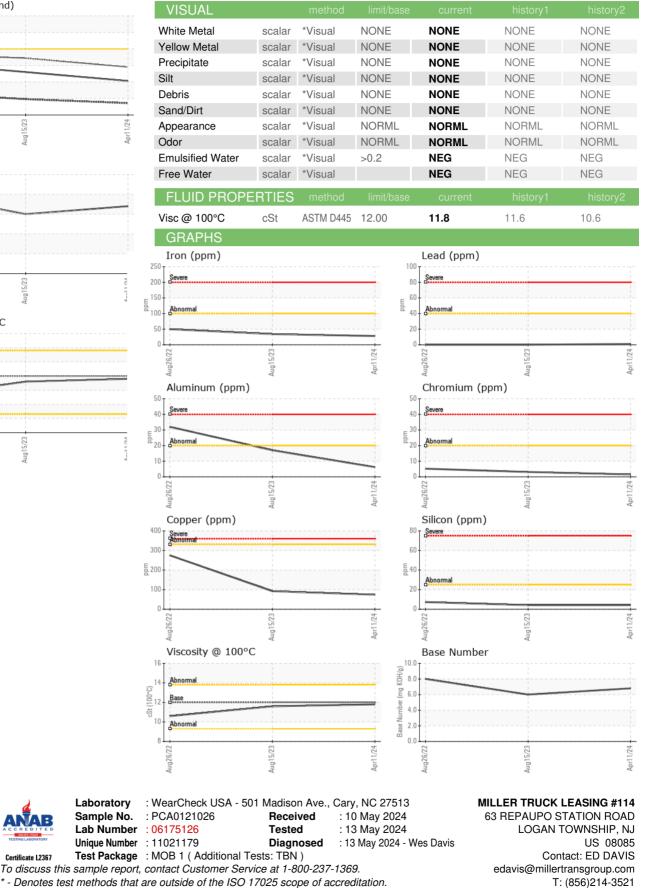
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0121026	PCA0100941	PCA0079674
Sample Date		Client Info		11 Apr 2024	15 Aug 2023	26 Aug 2022
Machine Age	mls	Client Info		90656	66905	34851
Oil Age	mls	Client Info		23751	0	34851
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	28	34	50
Chromium	ppm	ASTM D5185m	>20	2	3	5
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	17	32
Lead	ppm	ASTM D5185m	>40	1	0	0
Copper	ppm	ASTM D5185m	>330	74	92	275
Tin	ppm	ASTM D5185m	>15	1	4	7
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	0.0.00	AOTH DEADE		_	0	0
Gaumum	ppm	ASTM D5185m		0	0	0
ADDITIVES	рртт	method	limit/base	0 current	0 history1	0 history2
	ppm		limit/base	-	-	
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 9	history1 8	history2 21
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0 50	current 9 0	history1 8 0	history2 21 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 9 0 65	history1 8 0 64	history2 21 0 45
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current           9           0           65           <1	history1 8 0 64 2	history2 21 0 45 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995	current 9 0 65 <1 882	history1 8 0 64 2 866	history2 21 0 45 4 508
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	current           9           0           65           <1           882           1259	history1 8 0 64 2 866 1390	history2 21 0 45 4 508 1714
ADDITIVES 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 50 950 1050 995	current           9           0           65           <1           882           1259           983	history1 8 0 64 2 866 1390 874	history2 21 0 45 4 508 1714 708
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	current           9           0           65           <1           882           1259           983           1197	history1 8 0 64 2 866 1390 874 1259	history2 21 0 45 4 508 1714 708 924
ADDITIVES 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           9           0           65           <1           882           1259           983           1197           2845	history1 8 0 64 2 866 1390 874 1259 2956	history2 21 0 45 4 508 1714 708 924 2472
ADDITIVES 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 ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	current           9           0           65           <1           882           1259           983           1197           2845           current	history1  8  0  64  2  866  1390  874  1259  2956  history1	history2 21 0 45 4 508 1714 708 924 2472 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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 ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25	current           9           0           65           <1           882           1259           983           1197           2845           current           4	history1           8           0           64           2           866           1390           874           1259           2956           history1           4	history2         21         0         45         4         508         1714         708         924         2472         history2         7
ADDITIVES 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> >25	current           9           0           65           <1           882           1259           983           1197           2845           current           4           4	history1           8           0           64           2           866           1390           874           1259           2956           history1           4           2	history2         21         0         45         4         508         1714         708         924         2472         history2         7         6
ADDITIVES 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 ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	current           9           0           65           <1           882           1259           983           1197           2845           current           4           4           8	history1           8           0           64           2           866           1390           874           1259           2956           history1           4           2           29	history2         21         0         45         4         508         1714         708         924         2472         history2         7         6         82
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b>	current           9           0           65           <1           882           1259           983           1197           2845           current           4           8           current	history1         8         0         64         2         866         1390         874         1259         2956         history1         4         2         29         history1	history2         21         0         45         4         508         1714         708         924         2472         history2         7         6         82         history2
ADDITIVES 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>limit/base</b> >25 >20 <b>limit/base</b>	current           9           0           65           <1           882           1259           983           1197           2845           current           4           4           8           current           0.6	history1           8           0           64           2           866           1390           874           1259           2956           history1           4           2           29           history1           0.9	history2         21         0         45         4         508         1714         708         924         2472         history2         7         6         82         history2         0.1
ADDITIVES 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 imit/base >25 >20 imit/base >3 >20	current           9           0           65           <1           882           1259           983           1197           2845           current           4           4           8           current           0.6           8.6	history1           8           0           64           2           866           1390           874           1259           2956           history1           4           2           29           history1           0.9           9.8	history2         21         0         45         4         508         1714         708         924         2472         history2         7         6         82         history2         0.1         11.5
ADDITIVES 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 D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 20 <b>imit/base</b> >3 >20 >30	current           9           0           65           <1           882           1259           983           1197           2845           current           4           4           8           current           0.6           8.6           19.5	history1         8         0         64         2         866         1390         874         1259         2956         history1         4         2         29         history1         0.9         9.8         22.2	history2         21         0         45         4         508         1714         708         924         2472         history2         7         6         82         history2         0.1         11.5         23.4



# **OIL ANALYSIS REPORT**





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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Certificate 12367

Laboratory

Sample No.

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