

## **OIL ANALYSIS REPORT**

Sample Rating Trend



#### Machine Id **PR5105** Component **Diesel Engine** Fluid **PETRO CANADA DURON SHP 10W30 (--- GAL)**

### DIAGNOSIS

#### Recommendation

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

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

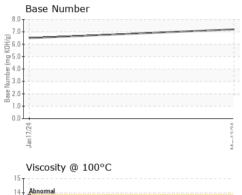
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

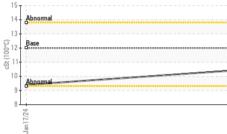
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0126966	PCA0116996	
Sample Date		Client Info		13 May 2024	17 Jan 2024	
Machine Age	mls	Client Info		2837	505	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
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	7	4	
Chromium	ppm	ASTM D5185m	>20	0	<1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	4	6	
Lead	ppm	ASTM D5185m	>40	0	<1	
Copper	ppm	ASTM D5185m	>330	9	31	
Tin	ppm	ASTM D5185m	>15	0	0	
Vanadium	ppm	ASTM D5185m		0	<1	
Cadmium	ppm	ASTM D5185m		0	0	
oddinidini	ppm	AGTIM DJ10JII		U	0	
ADDITIVES	ppin	method	limit/base	current	history1	history2
	ppm		limit/base	-	-	
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 22	history1 150	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 22 0	history1 150 <1	history2 
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 22 0 68	history1 150 <1 122	history2  
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 22 0 68 2	history1 150 <1 122 6	history2   
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 0 950	current 22 0 68 2 881	history1 150 <1 122 6 395 1218 675	history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 0 950 1050	current           22           0           68           2           881           1048	history1 150 <1 122 6 395 1218 675 771	history2     
ADDITIVES 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           22           0           68           2           881           1048           1023	history1 150 <1 122 6 395 1218 675	history2
ADDITIVES 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           22           0           68           2           881           1048           1023           1167	history1 150 <1 122 6 395 1218 675 771	history2
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 0 950 1050 995 1180 2600	Current 22 0 68 2 881 1048 1023 1167 3383	history1 150 <1 122 6 395 1218 675 771 3021	history2
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	2 0 50 950 1050 995 1180 2600	current           22           0           68           2           881           1048           1023           1167           3383           current	history1 150 <1 122 6 395 1218 675 771 3021 history1	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	2 0 50 950 1050 995 1180 2600	current           22           0           68           2           881           1048           1023           1167           3383           current           15	history1           150           <1           122           6           395           1218           675           771           3021           history1           36	history2 history2
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 50 950 1050 995 1180 2600 <b>limit/base</b>	current           22           0           68           2           881           1048           1023           1167           3383           current           15           2	history1         150         <1         122         6         395         1218         675         771         3021         history1         36         4	history2
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	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	current           22           0           68           2           881           1048           1023           1167           3383           current           15           2           1	history1           150           <1           122           6           395           1218           675           771           3021           history1           36           4	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 -20 <b>Imit/base</b>	current           22           0           68           2           881           1048           1023           1167           3383           current           15           2           1           current	history1         150         <1         122         6         395         1218         675         771         3021         history1         36         4         4         history1	history2 history2 history2 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 <b>TS</b> 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           22           0           68           2           881           1048           1023           1167           3383           current           15           2           1           current           0.1	history1         150         <1         122         6         395         1218         675         771         3021         history1         36         4         4         history1         0	history2                        history2                           history2                           history2         history2
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           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	current           22           0           68           2           881           1048           1023           1167           3383           current           15           2           1           current           0.1           6.8	history1         150         <1         122         6         395         1218         675         771         3021         history1         36         4         history1         0         4.8	history2 <tr tr=""></tr>
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 <b>imit/base</b> >3 >20	current           22           0           68           2           881           1048           1023           1167           3383           current           15           2           1           current           0.1           6.8           17.6	history1         150         <1         122         6         395         1218         675         771         3021         history1         36         4         history1         0         4.8         14.3	history2                                 history2                  history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	method         ASTM D5185m         ASTM D7844         *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	current         22         0         68         2         881         1048         1023         1167         3383         current         15         2         1         current         0.1         6.8         17.6         current	history1         150         <1         122         6         395         1218         675         771         3021         history1         36         4         history1         0         4.8         14.3         history1	history2   history2            history2            history2            history2            history2            history2



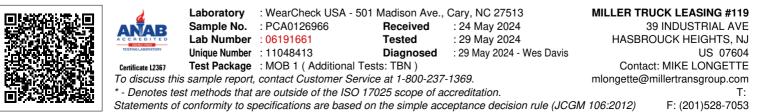
# **OIL ANALYSIS REPORT**







VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	
FLUID PROPE	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	10.4	9.4	
GRAPHS						
Iron (ppm)			100	Lead (ppm)		
Severe			100	Severe		
			80			
50 00 - Abnormal			E 40	Abaranal		
50				Ĩ		
0			20			
						8/24
Jan 17/24			May13/24	Jan 17/24		Mav13/24
Aluminum (ppm)			-	Chromium (p	(ma	-
<sup>50</sup> T			50	T ;	. ,	
40 - Severe			40	Severe		
30 20 <mark>Abnormal</mark>			E 30			
20 - Abnormal			20	Abnormal		
10			10	-		
04						4
Jan 17/24			May13/24	Jan 17/24		Mav13/74
-			W			2
Copper (ppm)			80	Silicon (ppm)		
Severe Pabriormal			60	-		
00 -			E 40	Abnormal		
00-			20	-		
0						
Jan 17/24			May13/24	Jan 17/24		Mav13/24
بة Viscosity @ 100°	_		Ma	Base Number	r	Mai
<sup>16</sup>	-		8.0			
14 Abnormal			(D)HO) Bayes Number Base State			
12 - Base			 த 4.0			
10	_		Mumb 3			
			e Z.U ase B			
54+6				L.		24
Jan 17/24			May13/24	Jan 17/24		Mav13/24
-			×	7		ž
WearCheck USA - 50	)1 Madiso	n Ave. Carv	NC 27513	м	ILLER TRUCK I	EASING #110
	1 10100100		, 100 27010	141		



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

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Contact/Location: MIKE LONGETTE - MILRUT