

# **OIL ANALYSIS REPORT**

Sample Rating Trend

DIRT

Machine Id 5109 Component

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (--- GAL)

## DIAGNOSIS

## Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material.

## **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 Number   Client Info   PCA0115266							
SAMPLE INFORMATION   method   limit/base   current   history1   history							
Cample Number   Client Info   PCA0115266	AL)				Dec2023		
Client Info   Client Info   S939   Client Info	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age   mls	Sample Number		Client Info		PCA0115266		
Dil Age	Sample Date		Client Info		26 Dec 2023		
Contamped   Client Info   Changed   ABNORMAL   CONTAMINATION   method   limit/base   current   history1   history   Contamination   Contamin	Machine Age	mls	Client Info		5939		
CONTAMINATION   method   fimit/base   current   history1   history	Dil Age	mls	Client Info		0		
CONTAMINATION	Oil Changed		Client Info				
Valer	Sample Status				ABNORMAL		
WEAR METALS   method   milit/base   current   mistory   mistory	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS   method   limit/base   current   history1   history1   history2   method   limit/base   current   history1   history3   limit/base   current   history4   history4   method   limit/base   current   history4   history5   method   limit/base   current   history4   history5   method   limit/base   current   history4   history5   method   limit/base   method   mitory4   method   method   mitory4   method   method   mitory4   meth	uel		WC Method	>5	<1.0		
WEAR METALS         method         limit/base         current         history1         history1           con         ppm         ASTM D5185m         >100         79             chromium         ppm         ASTM D5185m         >20         1             clickel         ppm         ASTM D5185m         >4         0             clickel         ppm         ASTM D5185m         >3         0             clitanium         ppm         ASTM D5185m         >20         14             cliver         ppm         ASTM D5185m         >20         14             clead         ppm         ASTM D5185m         >40         1             clead         ppm         ASTM D5185m         >30         72             clin         ppm         ASTM D5185m         0              A/anadium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current <td>Vater</td> <td></td> <td>WC Method</td> <td>&gt;0.2</td> <td>NEG</td> <td></td> <td></td>	Vater		WC Method	>0.2	NEG		
ASTM D5185m   >100   79	Glycol		WC Method		NEG		
Schromium   ppm	WEAR METAL	S	method	limit/base	current	history1	history2
Sickel	ron	ppm	ASTM D5185m	>100	79		
Description	Chromium	ppm	ASTM D5185m	>20	1		
Astronometric   Astronometr	Nickel	ppm	ASTM D5185m	>4	0		
Aluminum ppm ASTM D5185m > 20 14	Titanium	ppm	ASTM D5185m		0		
December   December	Silver	ppm	ASTM D5185m	>3	0		
Description	Aluminum	ppm	ASTM D5185m	>20	14		
Astronometrian   Astr	ead	ppm	ASTM D5185m	>40	1		
Alanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         2         185             Barium         ppm         ASTM D5185m         0         4             Manganese         ppm         ASTM D5185m         50         22             Magnesium         ppm         ASTM D5185m         0         3             Magnesium         ppm         ASTM D5185m         950         86             Calcium         ppm         ASTM D5185m         995         873             Phosphorus         ppm         ASTM D5185m         995         873             Phosphorus         ppm         ASTM D5185m         995         873             Phosphorus         ppm         ASTM D5185m         2600         2815	Copper	ppm	ASTM D5185m	>330	72		
Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history3           Boron         ppm         ASTM D5185m         2         185             Barium         ppm         ASTM D5185m         0         4             Molybdenum         ppm         ASTM D5185m         50         22             Manganese         ppm         ASTM D5185m         0         3             Magnesium         ppm         ASTM D5185m         950         86             Phosphorus         ppm         ASTM D5185m         1050         1024             Phosphorus         ppm         ASTM D5185m         995         873             Phosphorus         ppm         ASTM D5185m         995         873             Polasifur         ppm         ASTM D5185m         2600         2815             CONTAMINANTS         method         limit/base         cu	Γin	ppm	ASTM D5185m	>15	3		
ADDITIVES         method         limit/base         current         history1         history           Boron         ppm         ASTM D5185m         2         185             Barium         ppm         ASTM D5185m         0         4             Molybdenum         ppm         ASTM D5185m         50         22             Manganese         ppm         ASTM D5185m         0         3             Magnesium         ppm         ASTM D5185m         950         86             Calcium         ppm         ASTM D5185m         950         86             Phosphorus         ppm         ASTM D5185m         1050         1024             Phosphorus         ppm         ASTM D5185m         995         873             Zinc         ppm         ASTM D5185m         1180         1002             Sulfur         ppm         ASTM D5185m         2600         2815             CONTAMINANTS         method         limit/base	/anadium	ppm	ASTM D5185m		0		
Soron   ppm   ASTM D5185m   2   185	Cadmium	ppm	ASTM D5185m		0		
Description	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         50         22             Manganese         ppm         ASTM D5185m         0         3             Magnesium         ppm         ASTM D5185m         950         86             Calcium         ppm         ASTM D5185m         1050         1024             Phosphorus         ppm         ASTM D5185m         995         873             Zinc         ppm         ASTM D5185m         995         873             Sulfur         ppm         ASTM D5185m         2600         2815             CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         55             Potassium         ppm         ASTM D5185m         >20         4             Potassium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base </td <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>2</td> <td>185</td> <td></td> <td></td>	Boron	ppm	ASTM D5185m	2	185		
Manganese         ppm         ASTM D5185m         0         3             Magnesium         ppm         ASTM D5185m         950         86             Calcium         ppm         ASTM D5185m         1050         1024             Phosphorus         ppm         ASTM D5185m         995         873             Zinc         ppm         ASTM D5185m         1180         1002             Sulfur         ppm         ASTM D5185m         2600         2815             CONTAMINANTS         method         limit/base         current         history1         history           Solicon         ppm         ASTM D5185m         >25         55             Sodium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history           Soot %         *ASTM D7844         >3         0.3             Soot %         *ASTM D7624         >20         6.8         <	Barium	ppm	ASTM D5185m	0	4		
Magnesium         ppm         ASTM D5185m         950         86             Calcium         ppm         ASTM D5185m         1050         1024             Phosphorus         ppm         ASTM D5185m         995         873             Zinc         ppm         ASTM D5185m         1180         1002             Sulfur         ppm         ASTM D5185m         2600         2815             CONTAMINANTS         method         limit/base         current         history1         history           Solicon         ppm         ASTM D5185m         >25         55             Solium         ppm         ASTM D5185m         >20         4             Potassium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.3             Witration         Abs/cm         *ASTM D7624	Molybdenum	ppm	ASTM D5185m	50	22		
Calcium         ppm         ASTM D5185m         1050         1024             Phosphorus         ppm         ASTM D5185m         995         873             Zinc         ppm         ASTM D5185m         1180         1002             Sulfur         ppm         ASTM D5185m         2600         2815             CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         55             Sodium         ppm         ASTM D5185m         >20         4             Potassium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.3             Witration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/cm         *ASTM D7615	Manganese	ppm	ASTM D5185m	0	3		
Phosphorus         ppm         ASTM D5185m         995         873             Zinc         ppm         ASTM D5185m         1180         1002             Sulfur         ppm         ASTM D5185m         2600         2815             CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         55             Sodium         ppm         ASTM D5185m         3             Potassium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.3             Siliration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/cm         *ASTM D7415         >30         20.4	Magnesium	ppm	ASTM D5185m	950	86		
Zinc         ppm         ASTM D5185m         1180         1002             Sulfur         ppm         ASTM D5185m         2600         2815             CONTAMINANTS         method         limit/base         current         history1         history           Silicon         ppm         ASTM D5185m         >25         55             Godium         ppm         ASTM D5185m         3              Potassium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history           Soot %         *ASTM D7844         >3         0.3             Siltration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.4	Calcium	ppm	ASTM D5185m	1050	1024		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         ▲ 55             Sodium         ppm         ASTM D5185m         3             Potassium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.3             Witration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.4	Phosphorus	ppm	ASTM D5185m	995	873		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         ▶ 55             Sodium         ppm         ASTM D5185m         3             Potassium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.3             Witration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.4	Zinc	ppm	ASTM D5185m	1180	1002		
Solition   ppm   ASTM D5185m   >25   ▲ 55	Sulfur	ppm	ASTM D5185m	2600	2815		
Sodium         ppm         ASTM D5185m         3             Potassium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history           Soot %         %         *ASTM D7844         >3         0.3             Vitration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.4	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history2           Goot %         %         *ASTM D7844         >3         0.3             Vitration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.4	Silicon	ppm	ASTM D5185m	>25	<u> </u>		
INFRA-RED         method         limit/base         current         history1         history           Goot %         %         *ASTM D7844         >3         0.3             Nitration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.4	Sodium	ppm	ASTM D5185m		3		
Soot %         %         *ASTM D7844         >3         0.3             Nitration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.4	Potassium	ppm	ASTM D5185m	>20	4		
Vitration         Abs/cm         *ASTM D7624         >20         6.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         20.4	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 <b>20.4</b>	Soot %	%	*ASTM D7844	>3	0.3		
	Nitration	Abs/cm	*ASTM D7624	>20	6.8		
FLUID DEGRADATION method limit/base current history1 history	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4		
taran da antara da a	FLUID DEGRAI	OATION	method	limit/base	current	history1	history2

Oxidation

Abs/.1mm \*ASTM D7414 >25

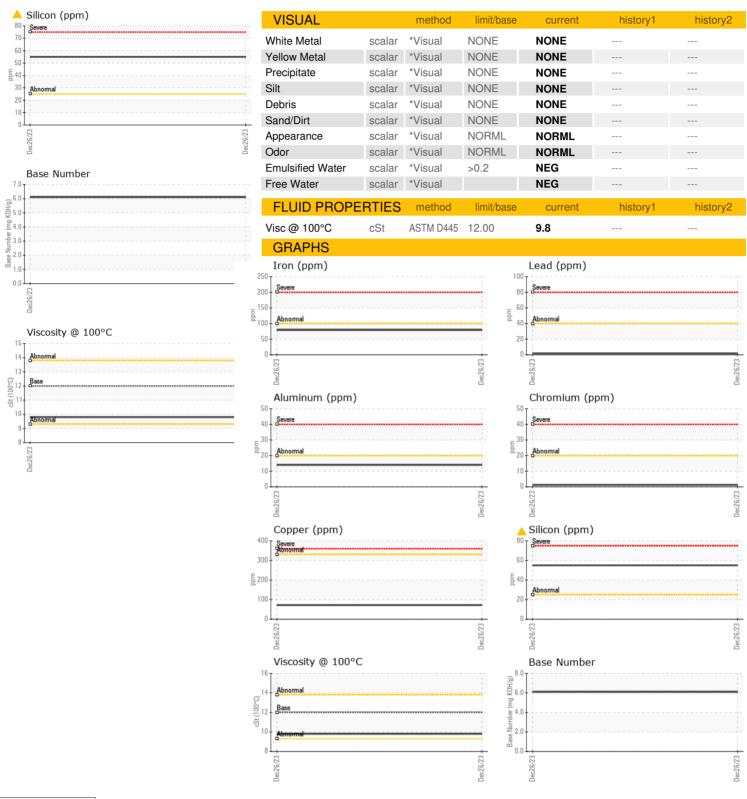
Base Number (BN) mg KOH/g ASTM D2896

17.4

6.1



## **OIL ANALYSIS REPORT**







Laboratory Sample No. Lab Number

**Unique Number** 

: PCA0115266 : 06052548 : 10818497 Test Package : MOB 1 ( Additional Tests: TBN )

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 05 Jan 2024 Recieved Diagnosed

: 08 Jan 2024 Diagnostician : Don Baldridge

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

**MILLER TRUCK LEASING #119** 

39 INDUSTRIAL AVE HASBROUCK HEIGHTS, NJ US 07604

Contact: MIKE LONGETTE

mlongette@millertransgroup.com T:

F: (201)528-7053