

# **OIL ANALYSIS REPORT**

Sample Rating Trend



737101 Component

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (--- 0

### 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

All component wear rates are normal.

#### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

### **Fluid Condition**

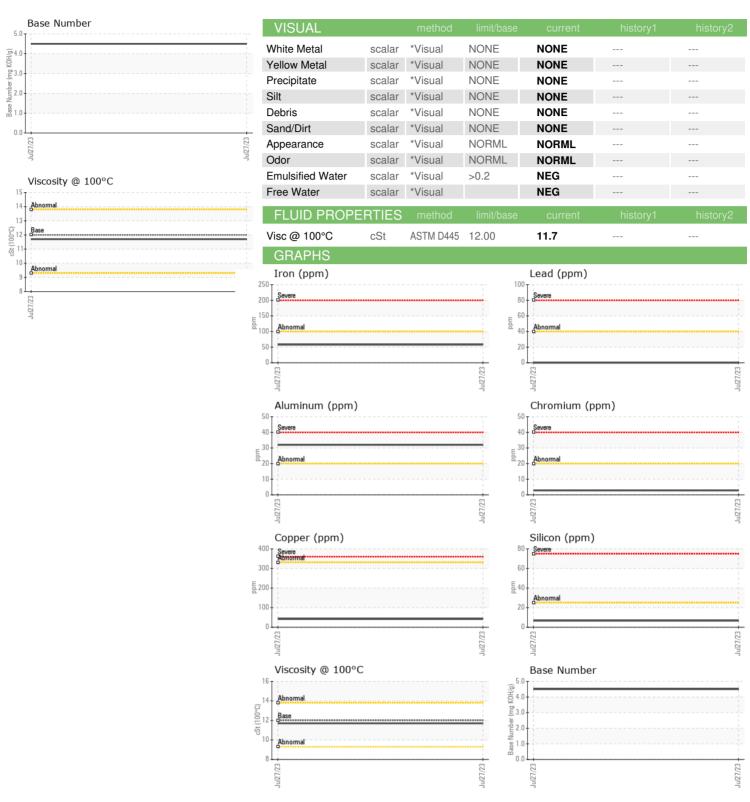
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION   method   limit/base   current   history1   history2							· •
SAMPLE INFORMATION   method   limit/base   current   history1   history2	iAL)				bi/2022		
Client Info   PCA0100788   .	SAMPLE INFOR	MATION	method	limit/hase		history1	history2
Company   Comp		IIVI/ TTIOT		mmbasc			,
Machine Age   mls   Client Info   S1471			0.101.10				
Oil Changed	•	la					
Contained   Client Info   Changed   Client Info   NORMAL   Contained   Conta							
CONTAMINATION	•	11115			_		
CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0			Ciletit IIIIO				
WC Method   WC Method   WC Method   NEG	·						
WEAR METALS		ION				history1	history2
WEAR METALS         method         limit/base         current         history1         history2           ron         ppm         ASTM D5185m         >10         58				>5			
Chromium	Glycol		WC Method		NEG		
ASTM D5185m   >20   3	WEAR METAL	_S	method	limit/base	current	history1	history2
Silver	ron	ppm	ASTM D5185m	>100	58		
Silver	Chromium	ppm	ASTM D5185m	>20	3		
Astroper	Nickel	ppm	ASTM D5185m	>4	<1		
Aluminum	Titanium	ppm	ASTM D5185m		1		
December   December	Silver	ppm	ASTM D5185m	>3	0		
ASTM D5185m   Sand D5185m	Aluminum	ppm	ASTM D5185m	>20	32		
Time	_ead	ppm	ASTM D5185m	>40	0		
Anadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         3             Barium         ppm         ASTM D5185m         0         2             Molybdenum         ppm         ASTM D5185m         50         59             Magnesium         ppm         ASTM D5185m         50         59             Magnesium         ppm         ASTM D5185m         950         865             Calcium         ppm         ASTM D5185m         950         1292             Phosphorus         ppm         ASTM D5185m         995         979             Picinc         ppm         ASTM D5185m         2600         2290             Contactium         ppm         ASTM D5185m         >25         7 <th< td=""><td>Copper</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;330</td><td>42</td><td></td><td></td></th<>	Copper	ppm	ASTM D5185m	>330	42		
ADDITIVES	Γin	ppm	ASTM D5185m	>15	1		
ADDITIVES   method   limit/base   current   history1   history2	/anadium	ppm	ASTM D5185m		0		
Soron   ppm   ASTM D5185m   2   3       Sarium   ppm   ASTM D5185m   0   2       Sarium   ppm   ASTM D5185m   50   59       Sufface   ppm   ASTM D5185m   0   1         Maganese   ppm   ASTM D5185m   950   865         Maganesium   ppm   ASTM D5185m   950   865         Maganesium   ppm   ASTM D5185m   1050   1292         Phosphorus   ppm   ASTM D5185m   995   979         Phosphorus   ppm   ASTM D5185m   1180   1215         Sulfur   ppm   ASTM D5185m   2600   2290           Sulfur   ppm   ASTM D5185m   2600   2290         Phosphorus   ppm   ASTM D5185m   22         Phosphorus   ppm   ASTM D5185m   23   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4           Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus   Ppm   ASTM D7844   >3   1.4         Phosphorus	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         50         59             Manganese         ppm         ASTM D5185m         0         1             Magnesium         ppm         ASTM D5185m         950         865             Calcium         ppm         ASTM D5185m         1050         1292             Phosphorus         ppm         ASTM D5185m         1180         1215             Zinc         ppm         ASTM D5185m         2600         2290             Sulfur         ppm         ASTM D5185m         2600         2290             CONTAMINANTS         method         limit/base         current         history1         history2           Solicon         ppm         ASTM D5185m         >25         7             Solicon         ppm         ASTM D5185m         >20         64             Potassium         ppm         ASTM D5185m         >20         64             Soot %         %         *ASTM D7844	Boron	ppm	ASTM D5185m	2	3		
Manganese         ppm         ASTM D5185m         0         1             Magnesium         ppm         ASTM D5185m         950         865             Calcium         ppm         ASTM D5185m         1050         1292             Phosphorus         ppm         ASTM D5185m         995         979             Zinc         ppm         ASTM D5185m         2600         2290             Sulfur         ppm         ASTM D5185m         2600         2290             CONTAMINANTS         method         limit/base         current         history1         history2           Solicon         ppm         ASTM D5185m         >25         7             Solicon         ppm         ASTM D5185m         >20         64             Potassium         ppm         ASTM D5185m         >20         64             INFRA-RED         method         limit/base         current         history1         history2           Solf %         *ASTM D7844         >3	Barium	ppm	ASTM D5185m	0	2		
Magnesium         ppm         ASTM D5185m         950         865             Calcium         ppm         ASTM D5185m         1050         1292             Phosphorus         ppm         ASTM D5185m         995         979             Zinc         ppm         ASTM D5185m         1180         1215             Sulfur         ppm         ASTM D5185m         2600         2290             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         64             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.4             Sulfation         Abs/.1mm         *ASTM D7815         >30	Molybdenum	ppm	ASTM D5185m	50	59		
Description	Manganese	ppm	ASTM D5185m	0	1		
Phosphorus         ppm         ASTM D5185m         995         979             Zinc         ppm         ASTM D5185m         1180         1215             Sulfur         ppm         ASTM D5185m         2600         2290             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         64             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.4             Nitration         Abs/cm         *ASTM D7624         >20         13.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Dxidation         Abs/.1mm         *ASTM D7414         >	Magnesium	ppm	ASTM D5185m	950	865		
Zinc   ppm   ASTM D5185m   1180   1215	Calcium	ppm	ASTM D5185m	1050	1292		
Sulfur         ppm         ASTM D5185m         2600         2290             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7             Sodium         ppm         ASTM D5185m         2              Potassium         ppm         ASTM D5185m         >20         64             INFRA-RED         method         limit/base         current         history1         history2           Goot %         %         *ASTM D7844         >3         1.4             Sulfration         Abs/cm         *ASTM D7624         >20         13.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Dxidation         Abs/.1mm         *ASTM D7414         >25         27.2	Phosphorus	ppm	ASTM D5185m	995	979		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         64             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.4             Nitration         Abs/cm         *ASTM D7624         >20         13.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.9             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         27.2	-	ppm	ASTM D5185m		1215		
Solition   ppm   ASTM D5185m   >25   7	Sulfur	ppm	ASTM D5185m	2600	2290		
Sodium	CONTAMINAN	NTS	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         64             INFRA-RED         method         limit/base         current         history1         history2           Goot %         %         *ASTM D7844         >3         1.4             Nitration         Abs/cm         *ASTM D7624         >20         13.8             Gulfation         Abs/.1mm         *ASTM D7415         >30         25.9             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         27.2	Silicon	ppm	ASTM D5185m	>25	7		
INFRA-RED	Sodium	ppm	ASTM D5185m		2		
Soot %	Potassium	ppm	ASTM D5185m	>20	64		
Nitration         Abs/cm         *ASTM D7624         >20         13.8             Sulfation         Abs/.1mm         *ASTM D7615         >30         25.9             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         27.2	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         25.9             FLUID DEGRADATION         method         limit/base         current         history1         history2           Dxidation         Abs/.1mm         *ASTM D7414         >25         27.2	Soot %	%	*ASTM D7844	>3	1.4		
FLUID DEGRADATION method limit/base current history1 history2  Dxidation Abs/.1mm *ASTM D7414 >25 27.2	Nitration	Abs/cm	*ASTM D7624	>20	13.8		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	25.9		
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	27.2		
	Base Number (BN)	mg KOH/g	ASTM D2896		4.5		

Contact/Location: ROSTY VITER - MILPHINE



## **OIL ANALYSIS REPORT**







Laboratory Sample No. Lab Number

**Unique Number** 

: 05921257 : 10593171

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0100788 Received

: 10 Aug 2023 Diagnosed : 11 Aug 2023

Diagnostician : Sean Felton

Test Package : MOB 1 ( Additional Tests: TBN ) 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 #118** 

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