

# **OIL ANALYSIS REPORT**

DT

Sample Rating Trend

NORMAL



BM-209

Component **Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (10 GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil

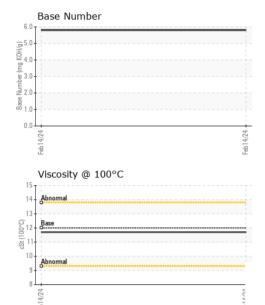
### **Fluid Condition**

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

Client Info   PCA0110792   Client Info   PCA0110792   Client Info   14 Feb 2024   Client Info   14 Feb 2024   Client Info   31642   Client Info   31642   Client Info   31642   Client Info   Changed   Client   Changed   Client   Clie							
Client Info   PCA0110792   Client Info   PCA0110792   Client Info   14 Feb 2024   Client Info   14 Feb 2024   Client Info   31642   Client Info   31642   Client Info   31642   Client Info   Changed   Client   Changed   Client   Clie	iAL)				Feb 2024		
Sample Date   Client Info   14 Feb 2024	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age   mls   Client Info   293192	Sample Number		Client Info		PCA0110792		
Dil Changed	Sample Date		Client Info		14 Feb 2024		
Contained   Client Info   Changed   Client Info   NORMAL   Contained   Conta	Machine Age	mls	Client Info		293192		
CONTAMINATION   method   minit/base   current   history1   history2   history3   history4   history4   history4   history5   histo	Oil Age	mls	Client Info		31642		
CONTAMINATION	Oil Changed		Client Info		Changed		
Water	Sample Status				NORMAL		
Water         WC Method         >0.2         NEG             Glycol         WC Method         NEG             WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5185m         >100         38             Chromium         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >4         0             Silver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >20         10             Silver         ppm         ASTM D5185m         >40         0             Aluminum         ppm         ASTM D5185m         >40         0             Copper         ppm         ASTM D5185m         >15         <1             Vanadium         ppm         ASTM D5185m         >0         0 <td>CONTAMINA</td> <td>ΓΙΟΝ</td> <td>method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td>	CONTAMINA	ΓΙΟΝ	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0		
WEAR METALS	Water		WC Method	>0.2	NEG		
Chromium	Glycol		WC Method		NEG		
ASTM D5185m   >20	WEAR METAI	_S	method	limit/base	current	history1	history2
Since   Strain   St	ron	ppm	ASTM D5185m	>100	38		
Description		ppm	ASTM D5185m	>20	<1		
Aluminum	Nickel	ppm	ASTM D5185m	>4	0		
Aluminum	Titanium	ppm	ASTM D5185m		0		
December   December	Silver	ppm	ASTM D5185m	>3	0		
Copper	Aluminum	ppm	ASTM D5185m	>20	10		
Vanadium	Lead	ppm	ASTM D5185m	>40	0		
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         5             Barium         ppm         ASTM D5185m         0         0             Molybdenum         ppm         ASTM D5185m         0         62             Manganese         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         950         923             Calcium         ppm         ASTM D5185m         950         923             Phosphorus         ppm         ASTM D5185m         995         1034             Zinc         ppm         ASTM D5185m         2600         2816             CONTAMINANTS         method         limit/base         current         history1	Copper	ppm	ASTM D5185m	>330	<1		
ADDITIVES	Tin	ppm	ASTM D5185m	>15	<1		
ADDITIVES	Vanadium	ppm	ASTM D5185m		0		
Boron	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         50         62             Manganese         ppm         ASTM D5185m         0         <1	Boron	ppm	ASTM D5185m	2	5		
Manganese         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         950         923             Calcium         ppm         ASTM D5185m         1050         1136             Phosphorus         ppm         ASTM D5185m         995         1034             Zinc         ppm         ASTM D5185m         1180         1284             Sulfur         ppm         ASTM D5185m         2600         2816             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         10             Sodium         ppm         ASTM D5185m         >20         9             Potassium         ppm         ASTM D5185m         >20         9             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844	Barium	ppm	ASTM D5185m	0	0		
Magnesium         ppm         ASTM D5185m         950         923             Calcium         ppm         ASTM D5185m         1050         1136             Phosphorus         ppm         ASTM D5185m         995         1034             Zinc         ppm         ASTM D5185m         1180         1284             Sulfur         ppm         ASTM D5185m         2600         2816             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         10             Sodium         ppm         ASTM D5185m         >20         9             Potassium         ppm         ASTM D5185m         >20         9             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7             Sulfation         Abs/cm         *ASTM D7624	Molybdenum	ppm	ASTM D5185m	50	62		
Calcium         ppm         ASTM D5185m         1050         1136             Phosphorus         ppm         ASTM D5185m         995         1034             Zinc         ppm         ASTM D5185m         1180         1284             Sulfur         ppm         ASTM D5185m         2600         2816             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         10             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         9             Potassium         ppm         ASTM D5185m         >20         9             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7             Sulfation         Abs/.1mm         *ASTM D7415         >30	Manganese	ppm	ASTM D5185m	0	<1		
Phosphorus         ppm         ASTM D5185m         995         1034             Zinc         ppm         ASTM D5185m         1180         1284             Sulfur         ppm         ASTM D5185m         2600         2816             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         10             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         9             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7             Sulfation         Abs/.1mm         *ASTM D7415         >30         21.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Dxidation         Abs/.1mm         *ASTM D7414 <t< td=""><td>Magnesium</td><td>ppm</td><td>ASTM D5185m</td><td>950</td><td>923</td><td></td><td></td></t<>	Magnesium	ppm	ASTM D5185m	950	923		
Zinc   ppm   ASTM D5185m   1180   1284	Calcium	ppm	ASTM D5185m	1050	1136		
The color of the	Phosphorus	ppm	ASTM D5185m	995	1034		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         10             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         9             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7             Nitration         Abs/cm         *ASTM D7624         >20         10.4             Sulfation         Abs/.1mm         *ASTM D7415         >30         21.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.5	Zinc	ppm	ASTM D5185m	1180	1284		
Solition   ppm   ASTM D5185m   >25   10	Sulfur	ppm	ASTM D5185m	2600	2816		
Sodium	CONTAMINA	NTS	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         9             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7             Nitration         Abs/cm         *ASTM D7624         >20         10.4             Sulfation         Abs/.1mm         *ASTM D7415         >30         21.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.5	Silicon	ppm	ASTM D5185m	>25	10		
INFRA-RED	Sodium	ppm	ASTM D5185m		2		
Soot %	Potassium	ppm	ASTM D5185m	>20	9		
Nitration         Abs/cm         *ASTM D7624         >20         10.4             Sulfation         Abs/.1mm         *ASTM D7415         >30         21.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.5	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         21.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.5	Soot %	%	*ASTM D7844	>3	0.7		
Sulfation         Abs/.1mm         *ASTM D7415         >30         21.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.5	Vitration	Abs/cm	*ASTM D7624	>20	10.4		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30			
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
	 Oxidation	Abs/.1mm	*ASTM D7414	>25	18.5		
	Base Number (BN)				5.8		



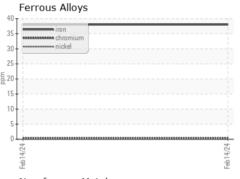
# **OIL ANALYSIS REPORT**

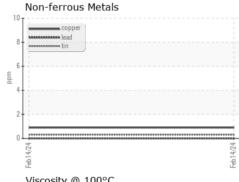


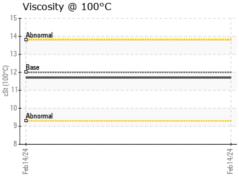
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
ELLUD DDODE						

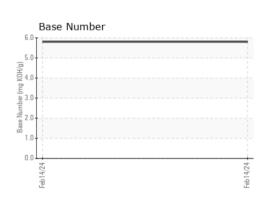
FLUID PROPE	ERITES	method	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	12.00	11.7		

# GRAPHS













Laboratory Sample No.

Lab Number : 06097578 Unique Number : 10890431

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0110792

Test Package : FLEET

Received : 22 Feb 2024 : 23 Feb 2024 **Tested** 

: 23 Feb 2024 - Wes Davis Diagnosed

**BLUE MAX TRUCKING** 1015 E. WESTINGHOUSE BLVD.

CHARLOTTE, NC US 28273

Contact: Jody Greer jgreer@bluemaxtrucking.com

T: (980)225-9968

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) F: (704)588-2901