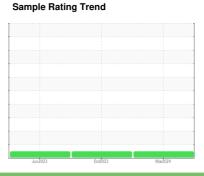


# **OIL ANALYSIS REPORT**

# (AU755S) Supermarket - Tractor FREIGHTLINER 107A8813

Component **Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (11 GAL)





# DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

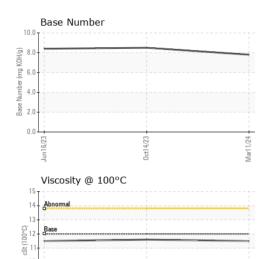
### **Fluid Condition**

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

Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age         mls         Client Info         225408         205055         193983           Oil Age         mls         Client Info         20353         11072         12213           Oil Changed         Client Info         Changed         Changed         Not Ch           Sample Status         Image: Changed         NorMAL	Sample Number		Client Info		PCA0116979	PCA0104070	PCA0099859
Oil Age         mls         Client Info         20353         11072         12213           Oil Changed         Client Info         Changed         Changed         Not Ch           Sample Status         NormAL         NORMAL <t< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>11 Mar 2024</th><th>14 Oct 2023</th><th>16 Jun 2023</th></t<>	Sample Date		Client Info		11 Mar 2024	14 Oct 2023	16 Jun 2023
Oil Changed Sample Status         Client Info         Changed NORMAL         Changed NORMAL         1.0         4.0         1.0         4.0         1.0         4.0         1.0         4.0         1.0 <th>Machine Age</th> <th>mls</th> <th>Client Info</th> <th></th> <th>225408</th> <th>205055</th> <th>193983</th>	Machine Age	mls	Client Info		225408	205055	193983
Sample Status	Oil Age	mls	Client Info		20353	11072	12213
CONTAMINATION         method         limit/base         current         history1         his           Fuel         WC Method         >5         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         <1.0         NEG         N	Oil Changed		Client Info		Changed	Changed	Not Changd
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water         WC Method         >0.2         NEG         NEG         NEG           Glycol         WC Method         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5185m         >80         12         5         14           Chromium         ppm         ASTM D5185m         >5         1         <1	CONTAMINATI	ON	method	limit/base	current	history1	history2
Second   S	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >5         1         <1	WEAR METALS	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>80	12	5	14
Nickel	Chromium	ppm	ASTM D5185m	>5	1	<1	1
Titanium         ppm         ASTM D5185m         0         <1         0           Silver         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >30         5         2         5           Lead         ppm         ASTM D5185m         >30         <1         0         0           Copper         ppm         ASTM D5185m         >150         3         2         6           Tin         ppm         ASTM D5185m         >5         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1	Nickel			>2	<1	0	<1
Silver         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >30         5         2         5           Lead         ppm         ASTM D5185m         >30         <1         0         0           Copper         ppm         ASTM D5185m         >150         3         2         6           Tin         ppm         ASTM D5185m         >5         <1         <1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0         0           ADDITIVES         method         limit/base         current         history1         his           Boron         ppm         ASTM D5185m         2         7         32         15           Barium         ppm         ASTM D5185m         0         0         0         0         0           Magnesium         ppm         ASTM D5185m         50         68         59         68           Magnesium         ppm         ASTM D5185m	Titanium		ASTM D5185m		0	<1	0
Aluminum         ppm         ASTM D5185m         >30         5         2         5           Lead         ppm         ASTM D5185m         >30         <1	Silver		ASTM D5185m	>3	0	0	0
Lead	Aluminum		ASTM D5185m	>30	5	2	5
Copper         ppm         ASTM D5185m         >150         3         2         6           Tin         ppm         ASTM D5185m         >5         <1	Lead			>30	<1	0	0
Tin         ppm         ASTM D5185m         >5         <1         <1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         his           Boron         ppm         ASTM D5185m         2         7         32         15           Barium         ppm         ASTM D5185m         0         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         68         59         68           Manganese         ppm         ASTM D5185m         0         <1         0         <1           Magnesium         ppm         ASTM D5185m         950         968         827         878           Calcium         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         2600<	Copper		ASTM D5185m	>150	3	2	6
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         his           Boron         ppm         ASTM D5185m         2         7         32         15           Barium         ppm         ASTM D5185m         0         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         68         59         68           Manganese         ppm         ASTM D5185m         50         68         59         68           Magnesium         ppm         ASTM D5185m         950         968         827         878           Calcium         ppm         ASTM D5185m         995         1068         943         998           Phosphorus         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1 <td></td> <td></td> <td></td> <td></td> <th>&lt;1</th> <td>&lt;1</td> <td>&lt;1</td>					<1	<1	<1
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         his           Boron         ppm         ASTM D5185m         2         7         32         15           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         68         59         68           Manganese         ppm         ASTM D5185m         0         <1	Vanadium		ASTM D5185m		0	0	0
Boron         ppm         ASTM D5185m         2         7         32         15           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         68         59         68           Manganese         ppm         ASTM D5185m         0         <1         0         <1           Magnesium         ppm         ASTM D5185m         950         968         827         878           Calcium         ppm         ASTM D5185m         1050         1188         1068         1129           Phosphorus         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         >20	Cadmium				0		0
Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         68         59         68           Manganese         ppm         ASTM D5185m         0         <1         0         <1           Magnesium         ppm         ASTM D5185m         950         968         827         878           Calcium         ppm         ASTM D5185m         1050         1188         1068         1129           Phosphorus         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         >20         2         2         0           Potassium         ppm         ASTM D5185m         >20	ADDITIVES		method	limit/base	current	history1	history2
Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         68         59         68           Manganese         ppm         ASTM D5185m         0         <1	Boron	ppm	ASTM D5185m	2	7	32	15
Manganese         ppm         ASTM D5185m         0         <1         0         <1           Magnesium         ppm         ASTM D5185m         950         968         827         878           Calcium         ppm         ASTM D5185m         1050         1188         1068         1129           Phosphorus         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         1180         1275         1150         1197           Sulfur         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         2         2         2         0           Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         *ASTM D7844         >3         0.	Barium		ASTM D5185m	0	0	0	0
Magnesium         ppm         ASTM D5185m         950         968         827         878           Calcium         ppm         ASTM D5185m         1050         1188         1068         1129           Phosphorus         ppm         ASTM D5185m         1995         1068         943         998           Zinc         ppm         ASTM D5185m         1180         1275         1150         1197           Sulfur         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         20         2         2         2           Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20 </td <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>50</td> <th>68</th> <td>59</td> <td>68</td>	Molybdenum	ppm	ASTM D5185m	50	68	59	68
Magnesium         ppm         ASTM D5185m         950         968         827         878           Calcium         ppm         ASTM D5185m         1050         1188         1068         1129           Phosphorus         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         1180         1275         1150         1197           Sulfur         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         20         2         2         0           Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20 <td>·</td> <td></td> <td>ASTM D5185m</td> <td>0</td> <th>&lt;1</th> <td>0</td> <td>&lt;1</td>	·		ASTM D5185m	0	<1	0	<1
Calcium         ppm         ASTM D5185m         1050         1188         1068         1129           Phosphorus         ppm         ASTM D5185m         995         1068         943         998           Zinc         ppm         ASTM D5185m         1180         1275         1150         1197           Sulfur         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         >20         2         2         0           Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         "ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         "ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         "ASTM D7415         >30 <t< td=""><td>Magnesium</td><td></td><td>ASTM D5185m</td><td>950</td><th>968</th><td>827</td><td>878</td></t<>	Magnesium		ASTM D5185m	950	968	827	878
Zinc         ppm         ASTM D5185m         1180         1275         1150         1197           Sulfur         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         2         2         2         0           Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	-		ASTM D5185m	1050	1188	1068	1129
Zinc         ppm         ASTM D5185m         1180         1275         1150         1197           Sulfur         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         2         2         0           Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	Phosphorus		ASTM D5185m	995	1068	943	998
Sulfur         ppm         ASTM D5185m         2600         3269         2809         2916           CONTAMINANTS         method         limit/base         current         history1         his           Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         2         2         2         0           Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0			ASTM D5185m	1180	1275	1150	1197
Silicon         ppm         ASTM D5185m         >20         5         4         4           Sodium         ppm         ASTM D5185m         2         2         2         0           Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	Sulfur		ASTM D5185m	2600	3269	2809	2916
Sodium         ppm         ASTM D5185m         2         2         0           Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	CONTAMINAN <sup>*</sup>	TS	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	Silicon	ppm	ASTM D5185m	>20	5	4	4
Potassium         ppm         ASTM D5185m         >20         2         2         7           INFRA-RED         method         limit/base         current         history1         his           Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	Sodium		ASTM D5185m			2	0
Soot %         %         *ASTM D7844         >3         0.7         0.2         0.7           Nitration         Abs/cm         *ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	Potassium	ppm	ASTM D5185m	>20	2	2	7
Nitration         Abs/cm         *ASTM D7624         >20         7.8         5.0         7.7           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	Soot %	%	*ASTM D7844	>3	0.7	0.2	0.7
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         17.3         20.0	Nitration	Abs/cm	*ASTM D7624	>20	7.8	5.0	7.7
FLUID DEGRADATION method limit/base current history1 his	Sulfation	Abs/.1mm	*ASTM D7415	>30			20.0
		ΑΤΙΟΝ	method	limit/base	current	history1	history2
Oxidation	FLUID DEGRAD	ALION					
Base Number (BN) mg KOH/g   ASTM D2896   7.8   8.5   8.4	FLUID DEGRAD Oxidation	Abs/.1mm		>25	15.0	12.6	14.9



# **OIL ANALYSIS REPORT**

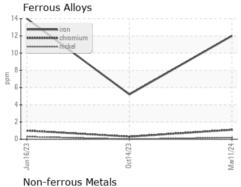


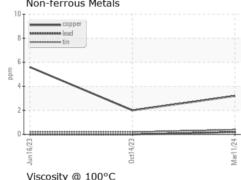
Oct14/23

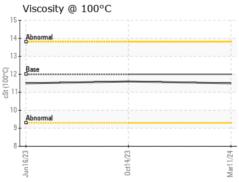
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

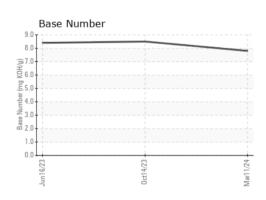
FLUID PROPE	RHES	method	ilmit/base		nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	12.00	11.5	11.6	11.5

## **GRAPHS**











Certificate L2367

Laboratory Sample No. Lab Number : 06120714

Test Package : FLEET

: PCA0116979

Unique Number: 10929547

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 18 Mar 2024 **Tested** : 19 Mar 2024 Diagnosed

: 19 Mar 2024 - Wes Davis

Transervice - Shop 1071 - Supermarket-Dayton

60 A Tower Road Dayton, NJ US 08810

Contact: Brian Quinn bquinn@transervice.com

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)

T:

F: