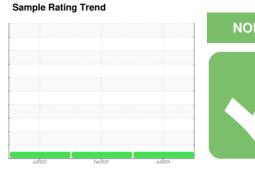


# **OIL ANALYSIS REPORT**

# (AU680W) Supermarket - Tractor FREIGHTLINER 107A1832

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

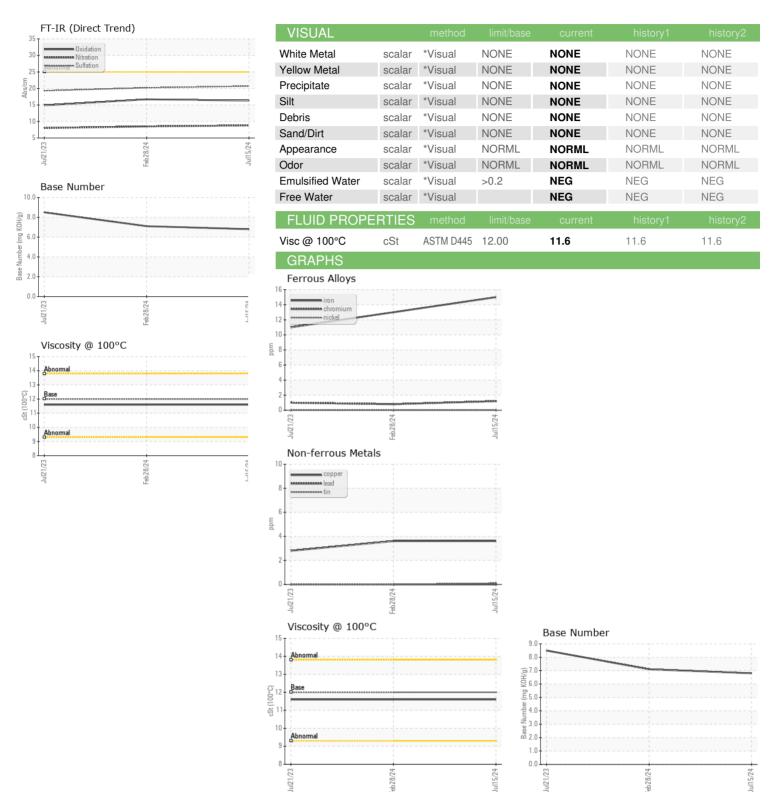
### **Fluid Condition**

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

SAMPLE INFORMATION   method   fimit/base   current   history1   history2	aal)		Ju	12023	F802024 Jul20.	4	
Sample Date	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age         mls         Client Info         426893         402622         355760           Oil Age         mis         Client Info         24271         0         15896           Oil Changed         Client Info         Changed         Changed         Changed         Changed           Sample Status         NORMAL         NORMAL         NORMAL         NORMAL         NORMAL           CONTAMINATION         method         Imitibase         current         history1         history2           Fuel         WC Method         >5         <1.0         <1.0         <1.0           Water         WC Method         >0.2         NEG         NEG         NEG           Glycol         WC Method         NEG         NEG         NEG         NEG           WEAR METALS         method         imitibase         current         history1         history2           Iron         ppm         ASTM 05185m         >80         15         13         11           Iron         ppm         ASTM 05185m         >2         0         0         0           Iron         ppm         ASTM 05185m         >3         0         0         0           Silver <td< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>PCA0124722</th><th>PCA0116490</th><th>PCA0100408</th></td<>	Sample Number		Client Info		PCA0124722	PCA0116490	PCA0100408
Oil Age         mls         Client Info         24271         0         15896           Oil Changed         Changed <td>Sample Date</td> <td></td> <td>Client Info</td> <td></td> <th>15 Jul 2024</th> <td>28 Feb 2024</td> <td>21 Jul 2023</td>	Sample Date		Client Info		15 Jul 2024	28 Feb 2024	21 Jul 2023
Oil Changed Sample Status         Client Info         Changed NORMAL         Changed NoRMAD         Changed NoRMAD         Changed NoRMAD         Changed NoRMAD         Changed NoRMAD         Changed NoRMAD         Changed NoRMAD         Changed NoRMAD         Change NoRMAD         Change NoRMAD         Change NoRMAD         Change NoRMAD         Cha	Machine Age	mls	Client Info		426893	402622	355760
NORMAL   NORMAL   NORMAL   CONTAMINATION   method   limit/base   current   history1   history2	Oil Age	mls	Client Info		24271	0	15896
CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0	Oil Changed		Client Info		Changed	Changed	Changed
Fuel   WC Method   S5   <1.0   <1.0   <1.0   <1.0   <1.0   Water   WC Method   >0.2   NEG   Ne	Sample Status				NORMAL	NORMAL	NORMAL
Water         WC Method         >0.2         NEG         NEG         NEG           Glycol         WC Method         Imitibase         Current         history1         history2           WEAR METALS         method         limitibase         current         history1         history2           Iron         ppm         ASTM D5185m         >5         1         <1         1           Nickel         ppm         ASTM D5185m         >5         1         <1         1           Nickel         ppm         ASTM D5185m         >2         0         0         0         0           Silver         ppm         ASTM D5185m         >30         0         0         0         0           Silver         ppm         ASTM D5185m         >30         0         0         0         0           Silver         ppm         ASTM D5185m         >30         0         0         0         0         0           Aluminum         ppm         ASTM D5185m         >30         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <td< th=""><th>CONTAMINA</th><th>TION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>	CONTAMINA	TION	method	limit/base	current	history1	history2
Section   Sec	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         1           Nickel         ppm         ASTM D5185m         >2         0         0         0           Titanium         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >30         9         8         7           Lead         ppm         ASTM D5185m         >30         0         0         0           Copper         ppm         ASTM D5185m         >30         0         0         0           Tin         ppm         ASTM D5185m         >5         <1	WEAR METAI	LS	method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >2         0         0         0           Titanium         ppm         ASTM D5185m         0         0         <1	Iron	ppm	ASTM D5185m	>80	15	13	11
Titanium         ppm         ASTM D5185m         0         0         <1           Silver         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >30         9         8         7           Lead         ppm         ASTM D5185m         >30         0         0         0           Copper         ppm         ASTM D5185m         >5         <1	Chromium	ppm	ASTM D5185m	>5	1	<1	1
Stiver	Nickel	ppm	ASTM D5185m	>2	0	0	0
Aluminum         ppm         ASTM D5185m         >30         9         8         7           Lead         ppm         ASTM D5185m         >30         0         0         0           Copper         ppm         ASTM D5185m         >150         4         4         3           Tin         ppm         ASTM D5185m         >5         <1	Titanium	ppm	ASTM D5185m		0	0	<1
Lead         ppm         ASTM D5185m         >30         0         0         0           Copper         ppm         ASTM D5185m         >150         4         4         3           Tin         ppm         ASTM D5185m         >5         <1         0         0           Vanadium         ppm         ASTM D5185m         0         0         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0         <1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0         0           ADDITIVES         method         ppm         ASTM D5185m         0 </td <td>Silver</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;3</td> <th>0</th> <td>0</td> <td>0</td>	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper         ppm         ASTM D5185m         >150         4         4         3           Tin         ppm         ASTM D5185m         >5         <1	Aluminum	ppm	ASTM D5185m	>30	9	8	7
Tin	Lead	ppm	ASTM D5185m	>30	0	0	0
Vanadium         ppm         ASTM D5185m         0         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0         <1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         3         5         1           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0         0           Manganese         ppm         ASTM D5185m         0         0         0         <1         <1           Magnesium         ppm         ASTM D5185m         950         943         865         1004           Calcium         ppm         ASTM D5185m         950         943         865         1004           Calcium         ppm         ASTM D5185m         995         936         902         1068           Zinc         ppm         ASTM D5185m         995         936         902         1068           Zinc         ppm         ASTM D5185m         2600         2652	Copper	ppm	ASTM D5185m	>150	4	4	3
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         3         5         1           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         63         59         67           Manganese         ppm         ASTM D5185m         0         0         <1	Tin	ppm	ASTM D5185m	>5	<1	0	0
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	<1
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         63         59         67           Manganese         ppm         ASTM D5185m         0         0         <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         50         63         59         67           Manganese         ppm         ASTM D5185m         0         0         <1         <1           Magnesium         ppm         ASTM D5185m         950         943         865         1004           Calcium         ppm         ASTM D5185m         1050         1140         1137         1196           Phosphorus         ppm         ASTM D5185m         995         936         902         1068           Zinc         ppm         ASTM D5185m         1180         1230         1123         1295           Sulfur         ppm         ASTM D5185m         2600         2652         3028         3559           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         6         4         3           Sodium         ppm         ASTM D5185m         >20         2         2         <1           INFRA-RED         method         limit/base         current         history1         history2           Soot %         *ASTM D7844         >3 <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>2</td> <th>3</th> <td>5</td> <td>1</td>	Boron	ppm	ASTM D5185m	2	3	5	1
Manganese         ppm         ASTM D5185m         0         0         <1         <1           Magnesium         ppm         ASTM D5185m         950         943         865         1004           Calcium         ppm         ASTM D5185m         1050         1140         1137         1196           Phosphorus         ppm         ASTM D5185m         995         936         902         1068           Zinc         ppm         ASTM D5185m         1180         1230         1123         1295           Sulfur         ppm         ASTM D5185m         2600         2652         3028         3559           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         6         4         3           Sodium         ppm         ASTM D5185m         >20         2         2         <1           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7         0.7         0.6           Nitration         Abs/cm         *ASTM D7815	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium         ppm         ASTM D5185m         950         943         865         1004           Calcium         ppm         ASTM D5185m         1050         1140         1137         1196           Phosphorus         ppm         ASTM D5185m         995         936         902         1068           Zinc         ppm         ASTM D5185m         1180         1230         1123         1295           Sulfur         ppm         ASTM D5185m         2600         2652         3028         3559           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         6         4         3           Sodium         ppm         ASTM D5185m         >20         2         2         <1	Molybdenum	ppm	ASTM D5185m	50	63	59	67
Calcium         ppm         ASTM D5185m         1050         1140         1137         1196           Phosphorus         ppm         ASTM D5185m         995         936         902         1068           Zinc         ppm         ASTM D5185m         1180         1230         1123         1295           Sulfur         ppm         ASTM D5185m         2600         2652         3028         3559           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         6         4         3           Sodium         ppm         ASTM D5185m         >20         2         2         <1	Manganese	ppm	ASTM D5185m	0	0	<1	<1
Phosphorus         ppm         ASTM D5185m         995         936         902         1068           Zinc         ppm         ASTM D5185m         1180         1230         1123         1295           Sulfur         ppm         ASTM D5185m         2600         2652         3028         3559           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         6         4         3           Sodium         ppm         ASTM D5185m         >20         2         2         <1	Magnesium	ppm	ASTM D5185m	950	943	865	1004
Zinc         ppm         ASTM D5185m         1180         1230         1123         1295           Sulfur         ppm         ASTM D5185m         2600         2652         3028         3559           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         6         4         3           Sodium         ppm         ASTM D5185m         >20         2         2         <1	Calcium	ppm	ASTM D5185m	1050	1140	1137	1196
Sulfur         ppm         ASTM D5185m         2600         2652         3028         3559           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         6         4         3           Sodium         ppm         ASTM D5185m         20         1         2         2           Potassium         ppm         ASTM D5185m         >20         2         2         <1	Phosphorus	ppm	ASTM D5185m	995	936	902	1068
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         6         4         3           Sodium         ppm         ASTM D5185m         1         2         2           Potassium         ppm         ASTM D5185m         >20         2         2         <1	Zinc	ppm	ASTM D5185m	1180	1230	1123	1295
Silicon         ppm         ASTM D5185m         >20         6         4         3           Sodium         ppm         ASTM D5185m         1         2         2           Potassium         ppm         ASTM D5185m         >20         2         2         <1           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         8.8         8.5         8.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.2         19.3           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.3         16.7         14.9	Sulfur	ppm	ASTM D5185m	2600	2652	3028	3559
Sodium         ppm         ASTM D5185m         1         2         2           Potassium         ppm         ASTM D5185m         >20         2         2         <1           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         8.8         8.5         8.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.2         19.3           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.3         16.7         14.9	CONTAMINA	NTS	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         2         2         <1           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         8.8         8.5         8.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.2         19.3           FLUID DEGRADATION method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.3         16.7         14.9	Silicon	ppm	ASTM D5185m	>20	6	4	3
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.7         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         8.8         8.5         8.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.2         19.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.3         16.7         14.9	Sodium	ppm	ASTM D5185m		1	2	2
Soot %         %         *ASTM D7844 >3         0.7         0.7         0.6           Nitration         Abs/cm         *ASTM D7624 >20         8.8         8.5         8.0           Sulfation         Abs/.1mm         *ASTM D7415 >30         20.7         20.2         19.3           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         16.3         16.7         14.9	Potassium	ppm	ASTM D5185m	>20	2	2	<1
Nitration         Abs/cm         *ASTM D7624         >20         8.8         8.5         8.0           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.2         19.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.3         16.7         14.9	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.2         19.3           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.3         16.7         14.9	Soot %	%	*ASTM D7844	>3	0.7	0.7	0.6
FLUID DEGRADATION method limit/base current history1 history2  Oxidation Abs/.1mm *ASTM D7414 >25 16.3 16.7 14.9	Nitration	Abs/cm	*ASTM D7624	>20	8.8	8.5	8.0
Oxidation Abs/.1mm *ASTM D7414 >25 <b>16.3</b> 16.7 14.9	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.7	20.2	19.3
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Base Number (BN)         mg KOH/g         ASTM D2896         6.8         7.1         8.5	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	16.7	14.9
	Base Number (BN)	mg KOH/g	ASTM D2896		6.8	7.1	8.5



## **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No.

Lab Number : 06241150 Unique Number : 11129984 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0124722

Received : 18 Jul 2024 **Tested** : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Wes Davis

505 Division Street Elizabeth, NJ US 07207 Contact: Normand Brizak

nbrizak@transervice.com T:

Transervice - Shop 1072 - Supermarket-Elizabeth

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