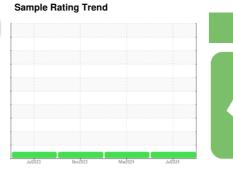


# **OIL ANALYSIS REPORT**

# (AU685W) Supermarket - Tractor **FREIGHTLINER 107A1846**

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

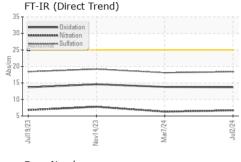
### **Fluid Condition**

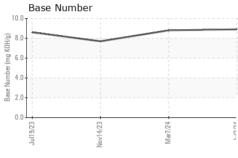
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

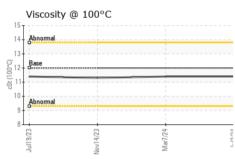
Sample Number   Client Info   PCA0124101   PCA0116978   PCA0111000	SAMPLE INFORM	ΛΤΙΩΝ	method	limit/base	Clurront	history	hictory?
Sample Date		AHUN		IIIIII/Dase		history1	history2
Machine Age   mls   Client Info   10639   8992   8958							
Oil Age							
Client Info   Changed   Changed   Changed   NORMAL   NORMAL   NORMAL							
NORMAL   NORMAL   NORMAL   CONTAMINATION   method   limit/base   current   history1   history2	ŭ	mis					
Fuel			Client Info			Ü	
Fuel					NORMAL	NORMAL	NORMAL
Water Glycol         WC Method WC Method         >0.2         NEG NEG NEG         NEG NEG         NEG NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >80         10         18         13           Chromium         ppm         ASTM D5185m         >5         <1	CONTAMINATIO	NC	method	limit/base	current	history1	history2
WEAR METALS	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         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>80	10	18	13
Titanium	Chromium	ppm	ASTM D5185m	>5	<1	<1	1
Silver         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >30         3         6         6           Lead         ppm         ASTM D5185m         >30         0         <1         0           Copper         ppm         ASTM D5185m         >150         2         2         4           Tin         ppm         ASTM D5185m         0         <1         <1            Vanadium         ppm         ASTM D5185m         0         0         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         <1         <1            Cadmium         ppm         ASTM D5185m         0         0         0         0         0         0           Boron         ppm         ASTM D5185m         0         0         0         0         0         0           Barium         ppm         ASTM D5185m         0         62         71         61         4	Nickel	ppm	ASTM D5185m	>2	0	<1	0
Aluminum         ppm         ASTM D5185m         >30         3         6         6           Lead         ppm         ASTM D5185m         >30         0         <1	Titanium	ppm	ASTM D5185m		<1	0	<1
Lead         ppm         ASTM D5185m         >30         0         <1         0           Copper         ppm         ASTM D5185m         >150         2         2         4           Tin         ppm         ASTM D5185m         >5         0         <1         <1           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           Barium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         ppm         ASTM D5185m         0	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper         ppm         ASTM D5185m         >150         2         2         4           Tin         ppm         ASTM D5185m         >5         0         <1	Aluminum	ppm	ASTM D5185m	>30	3	6	6
Tin	Lead	ppm	ASTM D5185m	>30	0	<1	0
Vanadium         ppm         ASTM D5185m         0         0         <1           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         5         7         4           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         62         71         61           Mangaese         ppm         ASTM D5185m         50         62         71         61           Magnesium         ppm         ASTM D5185m         950         942         979         882           Calcium         ppm         ASTM D5185m         1050         1104         1178         1040           Phosphorus         ppm         ASTM D5185m         995         996         1063         945           Zinc         ppm         ASTM D5185m         2600         3384         3297         2566           CONTAMINANTS         method         limit/base         current         history1 <th< td=""><td>Copper</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;150</td><th>2</th><td>2</td><td>4</td></th<>	Copper	ppm	ASTM D5185m	>150	2	2	4
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         5         7         4           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         50         62         71         61           Manganese         ppm         ASTM D5185m         0         <1	Tin	ppm	ASTM D5185m	>5	0	<1	<1
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         62         71         61           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         942         979         882           Calcium         ppm         ASTM D5185m         1050         1104         1178         1040           Phosphorus         ppm         ASTM D5185m         995         996         1063         945           Zinc         ppm         ASTM D5185m         2600         3384         3297         2566           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         <1         2         5           INFRA-RED         method         limit/base         current	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         50         62         71         61           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         942         979         882           Calcium         ppm         ASTM D5185m         1050         1104         1178         1040           Phosphorus         ppm         ASTM D5185m         1050         1104         1178         1040           Phosphorus         ppm         ASTM D5185m         995         996         1063         945           Zinc         ppm         ASTM D5185m         1180         1208         1279         1220           Sulfur         ppm         ASTM D5185m         2600         3384         3297         2566           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         <1         2         5           INFRA-RED         method         limit/bas	Boron	ppm	ASTM D5185m	2	5	7	4
Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         942         979         882           Calcium         ppm         ASTM D5185m         1050         1104         1178         1040           Phosphorus         ppm         ASTM D5185m         995         996         1063         945           Zinc         ppm         ASTM D5185m         1180         1208         1279         1220           Sulfur         ppm         ASTM D5185m         2600         3384         3297         2566           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         <1         2         5           Potassium         ppm         ASTM D5185m         >20         <1         2         5           INFRA-RED         method         limit/base         <	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium         ppm         ASTM D5185m         950         942         979         882           Calcium         ppm         ASTM D5185m         1050         1104         1178         1040           Phosphorus         ppm         ASTM D5185m         995         996         1063         945           Zinc         ppm         ASTM D5185m         1180         1208         1279         1220           Sulfur         ppm         ASTM D5185m         2600         3384         3297         2566           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         <1	Molybdenum	ppm	ASTM D5185m	50	62	71	61
Calcium         ppm         ASTM D5185m         1050         1104         1178         1040           Phosphorus         ppm         ASTM D5185m         995         996         1063         945           Zinc         ppm         ASTM D5185m         1180         1208         1279         1220           Sulfur         ppm         ASTM D5185m         2600         3384         3297         2566           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         <1	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus         ppm         ASTM D5185m         995         996         1063         945           Zinc         ppm         ASTM D5185m         1180         1208         1279         1220           Sulfur         ppm         ASTM D5185m         2600         3384         3297         2566           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         <1	Magnesium	ppm	ASTM D5185m	950	942	979	882
Zinc         ppm         ASTM D5185m         1180         1208         1279         1220           Sulfur         ppm         ASTM D5185m         2600         3384         3297         2566           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         <1         2         5           Potassium         ppm         ASTM D5185m         >20         <1         2         5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3         0.6           Nitration         Abs/cm         *ASTM D7624         >20         6.7         6.3         7.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         18.4         18.1         19.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D741	Calcium	ppm	ASTM D5185m	1050	1104	1178	1040
Sulfur         ppm         ASTM D5185m         2600         3384         3297         2566           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         >20         <1	Phosphorus	ppm	ASTM D5185m	995	996	1063	945
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         1         2         5           Potassium         ppm         ASTM D5185m         >20         <1	Zinc	ppm	ASTM D5185m	1180	1208	1279	1220
Silicon         ppm         ASTM D5185m         >20         3         6         6           Sodium         ppm         ASTM D5185m         1         2         5           Potassium         ppm         ASTM D5185m         >20         <1         2         5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3         0.6           Nitration         Abs/cm         *ASTM D7624         >20         6.7         6.3         7.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         18.4         18.1         19.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.7         13.8         14.6	Sulfur	ppm	ASTM D5185m	2600	3384	3297	2566
Sodium         ppm         ASTM D5185m         1         2         5           Potassium         ppm         ASTM D5185m         >20         <1         2         5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3         0.6           Nitration         Abs/cm         *ASTM D7624         >20         6.7         6.3         7.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         18.4         18.1         19.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.7         13.8         14.6	CONTAMINANT	S	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         <1         2         5           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3         0.6           Nitration         Abs/cm         *ASTM D7624         >20         6.7         6.3         7.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         18.4         18.1         19.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.7         13.8         14.6	Silicon	ppm	ASTM D5185m	>20	3	6	6
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3         0.6           Nitration         Abs/cm         *ASTM D7624         >20         6.7         6.3         7.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         18.4         18.1         19.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.7         13.8         14.6	Sodium	ppm	ASTM D5185m		1	2	5
Soot %         %         *ASTM D7844 >3         0.3         0.3         0.6           Nitration         Abs/cm         *ASTM D7624 >20         6.7         6.3         7.8           Sulfation         Abs/.1mm         *ASTM D7415 >30         18.4         18.1         19.2           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         13.7         13.8         14.6	Potassium	ppm	ASTM D5185m	>20	<1	2	5
Nitration         Abs/cm         *ASTM D7624         >20         6.7         6.3         7.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         18.4         18.1         19.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.7         13.8         14.6	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         18.4         18.1         19.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.7         13.8         14.6	Soot %	%	*ASTM D7844	>3	0.3	0.3	0.6
FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     13.7     13.8     14.6	Nitration	Abs/cm	*ASTM D7624	>20	6.7	6.3	7.8
Oxidation Abs/.1mm *ASTM D7414 >25 <b>13.7</b> 13.8 14.6	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	18.1	19.2
	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	13.8	14.6
					8.9		

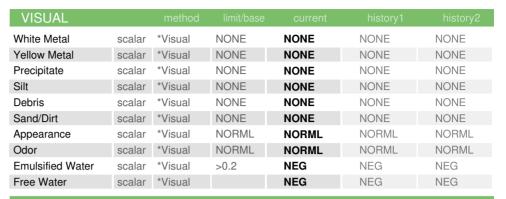


## **OIL ANALYSIS REPORT**



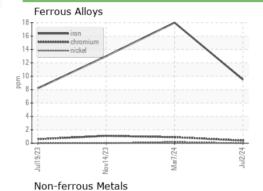


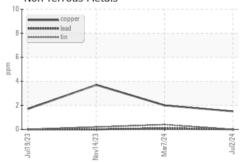


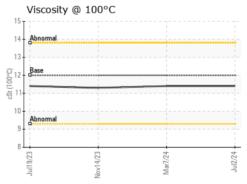


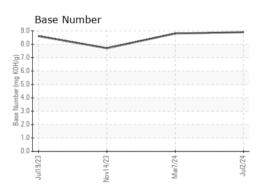
FLUID PROPI	ERHES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.4	11.4	11.3

### **GRAPHS**













Certificate 12367

Laboratory Sample No.

: PCA0124101 Lab Number : 06238865

Unique Number : 11127699 Test Package : FLEET

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

Received **Tested** Diagnosed

: 17 Jul 2024 : 17 Jul 2024 - Wes Davis

: 17 Jul 2024

Transervice - Shop 1071 - Supermarket-Dayton 60 A Tower Road

US 08810 Contact: Brian Quinn bquinn@transervice.com

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)

Report Id: TSV1071 [WUSCAR] 06238865 (Generated: 07/17/2024 16:29:49) Rev: 1

Submitted By: Brian Quinn

Dayton, NJ

T:

F: