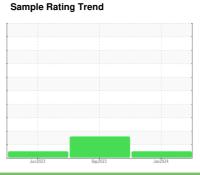


# **OIL ANALYSIS REPORT**

# (AY882H) Supermarket - Tractor FREIGHTLINER 107A3685

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

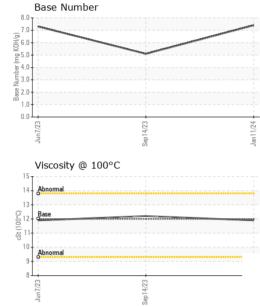
### **Fluid Condition**

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     Client Info     11 Jan 2024     14 Sep 2023     07 July       Machine Age     mls     Client Info     528879     513222     4933       Oil Age     mls     Client Info     15657     19865     2011       Oil Changed     Client Info     Changed     Changed     Not Clamped       Sample Status     NORMAL     ABNORMAL     NORMAL       CONTAMINATION     method     limit/base     current     history1       Fuel     WC Method     >5     <1.0     <1.0     <1       Water     WC Method     >0.2     NEG     NEG     NEG       Glycol     WC Method     NEG     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     recovered       Iron     ppm     ASTM D5185m     >80     26     79     53       Chromium     ppm     ASTM D5185m     >5     2     7     4       Nickel     ppm     ASTM D5185m     >3     0     0 <th></th> <th></th>		
Machine Age     mls     Client Info     528879     513222     4933       Oil Age     mls     Client Info     15657     19865     2011       Oil Changed     Client Info     Changed     Changed     Not Clamped       Sample Status     Normal     Normal     ABNORMAL     NOR       CONTAMINATION     method     limit/base     current     history1     introperation       Fuel     WC Method     >5     <1.0	PCA0111021 PCA0104089	PCA0099852
Oil Age     mls     Client Info     15657     19865     2011-       Oil Changed     Client Info     Changed     Changed     Not Canaged       Sample Status     Norman     Norman     ABNORMAL     Norman       CONTAMINATION     method     limit/base     current     history1     residence       Fuel     WC Method     >5     <1.0	<b>11 Jan 2024</b> 14 Sep 2023	07 Jun 2023
Oil Changed Sample Status     Client Info     Changed NORMAL     Changed ABNORMAL     NOT CAMPAR       CONTAMINATION     method     limit/base     current     history1     Property of the part of	<b>528879</b> 513222	493357
Sample Status     NORMAL     ABNORMAL     NORMAL       CONTAMINATION     method     limit/base     current     history1     fr       Fuel     WC Method     >5     <1.0     <1.0     <1       Water     WC Method     NEG     NEG     NEG       Glycol     WC Method     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     fr       Iron     ppm     ASTM D5185m     >80     26     79     53       Chromium     ppm     ASTM D5185m     >5     2     1     2     1       Nickel     ppm     ASTM D5185m     >2     <1     2     1     <1     <1       Silver     ppm     ASTM D5185m     >3     0     0     0     0     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1     <1	<b>15657</b> 19865	20114
CONTAMINATION     method     limit/base     current     history1     Full       Fuel     WC Method     >5     <1.0     <1.0     <1       Water     WC Method     NEG     NEG     NEG       NEG     NEG     NEG     NEG       NEG     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1       Iron     ppm     ASTM D5185m     >80     26     79     53       Chromium     ppm     ASTM D5185m     >5     2     4     7     4       Nickel     ppm     ASTM D5185m     >2     <1     2     1       Silver     ppm     ASTM D5185m     >3     0     0     0     0       Aluminum     ppm     ASTM D5185m     >30     13     32     17       Lead     ppm     ASTM D5185m     >30     <1     0     0       Copper     ppm     ASTM D5185m     >5     <1     1     <1 </th <th>Changed Changed</th> <th>Not Changd</th>	Changed Changed	Not Changd
Fuel     WC Method     >5     <1.0	NORMAL ABNORMAL	NORMAL
Water     WC Method     >0.2     NEG     NEG     NEG       Glycol     WC Method     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1       Iron     ppm     ASTM D5185m     >80     26     79     53       Chromium     ppm     ASTM D5185m     >5     2     △     7     4       Nickel     ppm     ASTM D5185m     >5     2     △     7     4       Silver     ppm     ASTM D5185m     >2     <1	current history1	history2
Glycol     WC Method     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     bit       Iron     ppm     ASTM D5185m     >80     26     79     53       Chromium     ppm     ASTM D5185m     >5     2     ▲ 7     4       Nickel     ppm     ASTM D5185m     >2     <1	<b>&lt;1.0</b> <1.0	<1.0
WEAR METALS     method     limit/base     current     history1       Iron     ppm     ASTM D5185m     >80     26     79     53       Chromium     ppm     ASTM D5185m     >5     2     ▲ 7     4       Nickel     ppm     ASTM D5185m     >2     <1	<b>NEG</b> NEG	NEG
Iron	<b>NEG</b> NEG	NEG
Chromium     ppm     ASTM D5185m     >5     2     4     7     4       Nickel     ppm     ASTM D5185m     >2     <1     2     1       Titanium     ppm     ASTM D5185m     >3     0     0     0       Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >30     13     32     17       Lead     ppm     ASTM D5185m     >30     <1     0     0       Copper     ppm     ASTM D5185m     >150     5     15     11       Tin     ppm     ASTM D5185m     >5     <1     1     <1       Vanadium     ppm     ASTM D5185m     0     0     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     th       Boron     ppm     ASTM D5185m     0     0     0	current history1	history2
Nickel     ppm     ASTM D5185m     >2     <1     2     1       Titanium     ppm     ASTM D5185m     0     <1	<b>26</b> 79	53
Titanium     ppm     ASTM D5185m     0     <1     <1       Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >30     13     ▲ 32     17       Lead     ppm     ASTM D5185m     >30     <1	<b>2</b>	4
Titanium     ppm     ASTM D5185m     0     <1     <1       Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >30     13     ▲ 32     17       Lead     ppm     ASTM D5185m     >30     <1	<b>&lt;1</b> 2	1
Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >30     13     ▲ 32     17       Lead     ppm     ASTM D5185m     >30     <1     0     0       Copper     ppm     ASTM D5185m     >150     5     15     11       Tin     ppm     ASTM D5185m     >5     <1     1     <1       Vanadium     ppm     ASTM D5185m     0     0     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     <1       Boron     ppm     ASTM D5185m     2     17     11     22       Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     50     59     61     56       Manganese     ppm     ASTM D5185m     950     850     877     79       Calcium     ppm     ASTM D5185m     1050     1101     141	<b>0</b> <1	<1
Aluminum     ppm     ASTM D5185m     >30     13     ▲ 32     17       Lead     ppm     ASTM D5185m     >30     <1	0 0	0
Lead     ppm     ASTM D5185m     >30     <1     0     0       Copper     ppm     ASTM D5185m     >150     5     15     11       Tin     ppm     ASTM D5185m     >5     <1     1     <1     <1       Vanadium     ppm     ASTM D5185m     0     0     0     <1     <1     <1       Cadmium     ppm     ASTM D5185m     0     0     0     0     0       ADDITIVES     method     limit/base     current     history1     b       Boron     ppm     ASTM D5185m     2     17     11     22       Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     50     59     61     56       Manganese     ppm     ASTM D5185m     950     850     877     79       Calcium     ppm     ASTM D5185m     1050     1101     1419     13       Phosphorus     ppm	<b>13</b> $\triangle$ 32	17
Copper     ppm     ASTM D5185m     >150     5     15     11       Tin     ppm     ASTM D5185m     >5     <1	<b>&lt;1</b> 0	0
Tin     ppm     ASTM D5185m     >5     <1     1     <1       Vanadium     ppm     ASTM D5185m     0     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0       ADDITIVES     method     limit/base     current     history1     history1       Boron     ppm     ASTM D5185m     2     17     11     22       Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     50     59     61     56       Manganese     ppm     ASTM D5185m     0     <1	<b>5</b> 15	11
Vanadium     ppm     ASTM D5185m     0     0     <1       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     h       Boron     ppm     ASTM D5185m     2     17     11     22       Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     50     59     61     56       Manganese     ppm     ASTM D5185m     0     <1     1     <1       Magnesium     ppm     ASTM D5185m     950     850     877     79       Calcium     ppm     ASTM D5185m     1050     1101     1419     13       Phosphorus     ppm     ASTM D5185m     995     1066     1040     97       Zinc     ppm     ASTM D5185m     1180     1256     1331     11	<b>&lt;1</b> 1	<1
Cadmium     ppm     ASTM D5185m     0     0     0       ADDITIVES     method     limit/base     current     history1     history1     history1       Boron     ppm     ASTM D5185m     2     17     11     22       Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     50     59     61     56       Manganese     ppm     ASTM D5185m     0     <1	0 0	<1
Boron     ppm     ASTM D5185m     2     17     11     22       Barium     ppm     ASTM D5185m     0     0     0     0     0       Molybdenum     ppm     ASTM D5185m     50     59     61     56       Manganese     ppm     ASTM D5185m     0     <1     1     <1       Magnesium     ppm     ASTM D5185m     950     850     877     79       Calcium     ppm     ASTM D5185m     1050     1101     1419     13       Phosphorus     ppm     ASTM D5185m     995     1066     1040     97       Zinc     ppm     ASTM D5185m     1180     1256     1331     11	0 0	0
Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     50     59     61     56       Manganese     ppm     ASTM D5185m     0     <1     1     <1       Magnesium     ppm     ASTM D5185m     950     850     877     79       Calcium     ppm     ASTM D5185m     1050     1101     1419     13       Phosphorus     ppm     ASTM D5185m     995     1066     1040     97       Zinc     ppm     ASTM D5185m     1180     1256     1331     11	current history1	history2
Barium     ppm     ASTM D5185m     0     0     0     0       Molybdenum     ppm     ASTM D5185m     50     59     61     56       Manganese     ppm     ASTM D5185m     0     <1	<b>17</b> 11	22
Manganese     ppm     ASTM D5185m     0     <1     1     <1       Magnesium     ppm     ASTM D5185m     950     850     877     79       Calcium     ppm     ASTM D5185m     1050     1101     1419     13       Phosphorus     ppm     ASTM D5185m     995     1066     1040     97       Zinc     ppm     ASTM D5185m     1180     1256     1331     11	0 0	0
Magnesium     ppm     ASTM D5185m     950     850     877     79       Calcium     ppm     ASTM D5185m     1050     1101     1419     13       Phosphorus     ppm     ASTM D5185m     995     1066     1040     97       Zinc     ppm     ASTM D5185m     1180     1256     1331     11	<b>59</b> 61	56
Magnesium     ppm     ASTM D5185m     950     850     877     79       Calcium     ppm     ASTM D5185m     1050     1101     1419     13       Phosphorus     ppm     ASTM D5185m     995     1066     1040     97       Zinc     ppm     ASTM D5185m     1180     1256     1331     11	<b>&lt;1</b> 1	<1
Calcium     ppm     ASTM D5185m     1050     1101     1419     13       Phosphorus     ppm     ASTM D5185m     995     1066     1040     97       Zinc     ppm     ASTM D5185m     1180     1256     1331     11	<b>850</b> 877	792
Zinc     ppm     ASTM D5185m     1180     1256     1331     11	<b>1101</b> 1419	1357
<b>Zinc</b> ppm ASTM D5185m 1180 <b>1256</b> 1331 11	<b>1066</b> 1040	978
Sulfur     ppm     ASTM D5185m     2600     2932     3316     33	<b>1256</b> 1331	1195
		3382
CONTAMINANTS method limit/base current history1 h	current history1	history2
<b>Silicon</b> ppm ASTM D5185m >20 <b>5</b> 8 5	<b>5</b> 8	5
Sodium     ppm     ASTM D5185m     <1     2     2		2
Potassium     ppm     ASTM D5185m     >20     2     4     2	<b>2</b> 4	2
INFRA-RED method limit/base current history1 h	current history1	history2
Soot % % *ASTM D7844 >3 <b>0.7</b> 1.2 0.6	<b>0.7</b> 1.2	0.6
<b>Nitration</b> Abs/cm *ASTM D7624 >20 <b>8.8</b> 10.6 8.8	<b>8.8</b> 10.6	8.8
		21.0
	current history1	history2
FLUID DEGRADATION method limit/base current history1 h	<b>15.9</b> 20.0	16.5



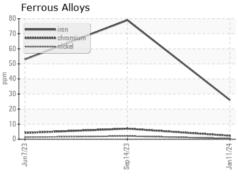
## **OIL ANALYSIS REPORT**

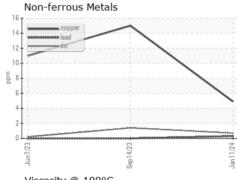


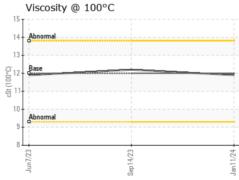
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

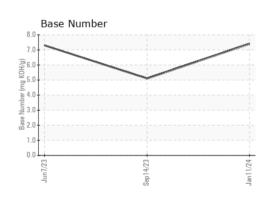
	EHILO	method			riistory i	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	12.00	11.9	12.2	11.9

### **GRAPHS**











Certificate L2367

Laboratory Sample No.

Lab Number Unique Number : 10835538 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0111021 : 06064156

Recieved : 18 Jan 2024 Diagnosed

: 19 Jan 2024 Diagnostician : Wes Davis

60 A Tower Road Dayton, NJ US 08810

Transervice - Shop 1071 - Supermarket-Dayton

Contact: Brian Quinn bquinn@transervice.com T:

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: