

## **OIL ANALYSIS REPORT**

### Area (SPG405636) Air Gas - Tractor [Air Gas - Tractor] 314A314001

**Diesel Engine** 

Fluid PETRO CANADA DURON SHP 10W30 (11 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

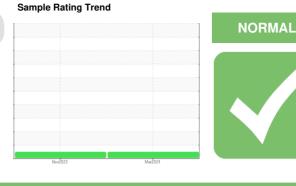
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

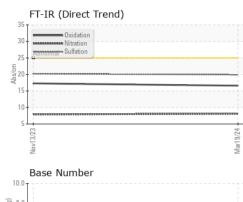
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

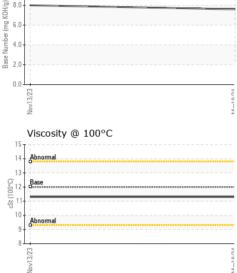


SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0120039	PCA0096897	
Sample Date		Client Info		19 Mar 2024	13 Nov 2023	
Machine Age	mls	Client Info		112039	29666	
Oil Age	mls	Client Info		25414	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT		method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	21	26	
Chromium	ppm	ASTM D5185m	>5	2	4	
Nickel	ppm	ASTM D5185m	>2	0	<1	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m	>3	0	<1	
Aluminum	ppm	ASTM D5185m	>30	11	18	
Lead	ppm	ASTM D5185m	>30	0	<1	
Copper	ppm	ASTM D5185m	>150	22	399	
Tin	ppm	ASTM D5185m	>5	<1	2	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
oddiniani	1-1-			Ū	0	
ADDITIVES	T- T-	method	limit/base	current	history1	history2
	ppm				-	history2
ADDITIVES		method	2	current	history1	
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 2	history1 13	
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0 50	current 2 0	history1 13 0	
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 2 0 61	history1 13 0 57	
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 2 0 61 <1	history1 13 0 57 1	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 2 0 61 <1 936	history1 13 0 57 1 911	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	current           2           0           61           <1           936           1097	history1 13 0 57 1 911 1291	   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	current           2           0           61           <1           936           1097           985	history1 13 0 57 1 911 1291 1056	   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 0 950 1050 995 1180	current           2           0           61           <1           936           1097           985           1244	history1 13 0 57 1 911 1291 1056 1325	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	Current 2 0 61 <1 936 1097 985 1244 2749	history1 13 0 57 1 911 1291 1056 1325 2767	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	current         2         0         61         <1         936         1097         985         1244         2749         current	history1 13 0 57 1 911 911 1291 1056 1325 2767 history1	     history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >20	current           2           0           61           <1           936           1097           985           1244           2749           current           3	history1           13           0           57           1           911           1291           1056           1325           2767           history1           4	     history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >20	current           2           0           61           <1           936           1097           985           1244           2749           current           3           <1	history1         13         0         57         1         911         1291         1056         1325         2767         history1         4         3	     history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >20	current         2         0         61         <1         936         1097         985         1244         2749         current         3         <1         19         current	history1         13         0         57         1         911         1291         1056         1325         2767         history1         4         3         47         history1	     history2  
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >20	current         2         0         61         <1         936         1097         985         1244         2749         current         3         <1         19         current         0.6	history1         13         0         57         1         911         1291         1056         1325         2767         history1         4         3         47         history1         0.4	     history2  
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20	current         2         0         61         <1         936         1097         985         1244         2749         current         3         <1         19         current	history1         13         0         57         1         911         1291         1056         1325         2767         history1         4         3         47         history1	     history2  history2  history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20	current         2         0         61         <1         936         1097         985         1244         2749         current         3         <1         19         current         0.6         8.1	history1         13         0         57         1         911         1291         1056         1325         2767         history1         4         3         47         history1         0.4         7.9	     history2   history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	method           ASTM D5185m           ASTM D7185M           ASTM D7624           *ASTM D7415           method	2 0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >30 imit/base	current         2         0         61         <1         936         1097         985         1244         2749         current         3         <1         19         current         0.6         8.1         19.9         current	history1         13         0         57         1         911         1291         1056         1325         2767         history1         4         3         47         history1         0.4         7.9         20.2         history1	     history2  history2  history2  history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b> >3 >20	current         2         0         61         <1         936         1097         985         1244         2749         current         3         <1         19         current         0.6         8.1         19.9	history1         13         0         57         1         911         1291         1056         1325         2767         history1         4         3         47         history1         0.4         7.9         20.2	     history2  history2  history2  history2

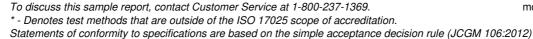


# **OIL ANALYSIS REPORT**





VISUAL NONE White Metal \*Visual NONE NONE scalar Yellow Metal \*Visual NONE NONE NONE scalar Precipitate scalar \*Visual NONE NONE NONE Silt scalar \*Visual NONE NONE NONE Debris NONE \*Visual NONE NONE scalar Sand/Dirt NONE NONE scalar \*Visual NONE NORML Appearance scalar \*Visual NORML NORML Odor \*Visual NORML NORML scalar NORML **Emulsified Water** scalar \*Visual >0.2 NEG NEG Free Water scalar \*Visual NEG NEG **FLUID PROPERTIES** Visc @ 100°C cSt ASTM D445 12.00 11.3 11.3 GRAPHS Ferrous Alloys 30 2! 20 la 15 10 Ο. Nov13/23 far19/74 Non-ferrous Metals 40 350 300 250 <u>특</u> 200 150 100 50 C Viscosity @ 100°C Base Number 9.0 14 8.0 (<u>₿</u>7.0 13 H 6.0 St (100°C) Ē 5.0 檀 4.0 3.0 ase 8 2.0 Abnorma 1.0 0.0 Mar19/24 -Nov13/23 Nov13/23 Mar19/24 : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Transervice - Shop 3140 - Platte River : PCA0120039 Received : 17 Apr 2024 2455 S Platte River Lab Number : 06151520 Tested : 18 Apr 2024 Denver, CO Diagnosed Unique Number : 10981598 : 18 Apr 2024 - Wes Davis US 80223



Report Id: TSV3140 [WUSCAR] 06151520 (Generated: 04/18/2024 04:34:59) Rev: 1

Certificate 12367

Laboratory

Sample No.

Test Package : FLEET

Submitted By: Mike Duran Page 2 of 2

mduran@transervice.com

Contact: Mike Duran

Т:

F: