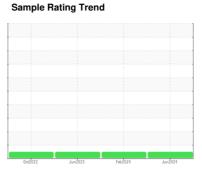


# **OIL ANALYSIS REPORT**

# (89687X) Walgreens - Tractor [Walgreens - Tractor] 136A67126

**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

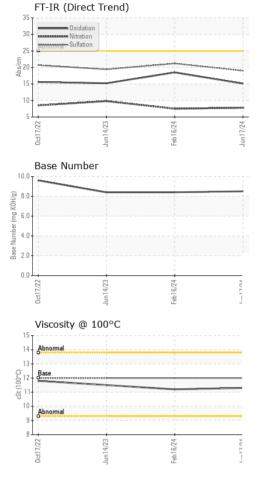
### **Fluid Condition**

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   PCA0128251   PCA0116448   PCA0097098   Sample Date   Client Info   17 Jun 2024   16 Feb 2024   14 Jun 2023   Machine Age   mls   Client Info   18702   16491   34962   01 Changed   Client Info   18702   16491   34962   Changed   Changed   Changed   Changed   NORMAL   N	SAMPLE INFORM	ΛΤΙΩΝ	method	limit/base	ourrent	bictory1	hictory
Sample Date		AHUN		IIIIII/Dase	current	history1	history2
Machine Age         mls         Client Info         477200         458498         442007           Oil Age         mis         Client Info         18702         16491         34962           Oil Changed         Client Info         Not Changed         Changed         Changed           Sample Status         Imit Mose         NoRMAL         NORMAL         NORMAL           VCONTAMINATION         method         Imit Dase         current         history1         history2           Fuel         WC Method         >5         <1.0							
Oil Age	·						
Cilient Info							
NORMAL   NORMAL   NORMAL   CONTAMINATION   method   limit/base   current   history1   history2	J	mls					
CONTAMINATION	-		Client Info			Ü	
Fuel	·				NORMAL	NORMAL	NORMAL
Water Glycol         WC Method         >0.2         NEG NEG NEG         NEG NEG         NEG NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >110         13         12         38           Chromium         ppm         ASTM D5185m         >4         0         <1	CONTAMINATIO	N	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         >4         0         <1         0           Nickel         ppm         ASTM D5185m         >2         1         0         0           Titanium         ppm         ASTM D5185m         >2         0         0         0           Sliver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >2         4         5         7           Lead         ppm         ASTM D5185m         >25         4         5         7           Lead         ppm         ASTM D5185m         >45         0         1         0           Copper         ppm         ASTM D5185m         >4         1         2         1           Tin         ppm         ASTM D5185m         0         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>110	13	12	38
Titanium	Chromium	ppm	ASTM D5185m	>4	0	<1	0
Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >25         4         5         7           Lead         ppm         ASTM D5185m         >45         0         1         0           Copper         ppm         ASTM D5185m         >4         1         2           Tin         ppm         ASTM D5185m         0         <1         0           Vanadium         ppm         ASTM D5185m         0         <1         0           Cadmium         ppm         ASTM D5185m         0         <1         0           Cadmium         ppm         ASTM D5185m         0         0         <1         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         <1         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         <1         0         <1           Barium         ppm<	Nickel	ppm	ASTM D5185m	>2	1	0	0
Aluminum         ppm         ASTM D5185m         >25         4         5         7           Lead         ppm         ASTM D5185m         >45         0         1         0           Copper         ppm         ASTM D5185m         >85         4         1         2           Tin         ppm         ASTM D5185m         >4         <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead         ppm         ASTM D5185m         >45         0         1         0           Copper         ppm         ASTM D5185m         >85         4         1         2           Tin         ppm         ASTM D5185m         >4         <1         0         0           Vanadium         ppm         ASTM D5185m         0         <1         0         0           Cadmium         ppm         ASTM D5185m         0         <1         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         <1         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         <1         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         <1         1         0           ADDITIVES         method         ppm         ASTM D5185m         0	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper         ppm         ASTM D5185m         >85         4         1         2           Tin         ppm         ASTM D5185m         >4         <1	Aluminum	ppm	ASTM D5185m	>25	4	5	7
Tin         ppm         ASTM D5185m         >4         <1         0         0           Vanadium         ppm         ASTM D5185m         0         <1         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         9         11         13           Barium         ppm         ASTM D5185m         0         0         <1         0           Molybdenum         ppm         ASTM D5185m         50         62         61         61           Mangaesium         ppm         ASTM D5185m         50         62         61         61           Magnesium         ppm         ASTM D5185m         950         928         923         905           Calcium         ppm         ASTM D5185m         1050         1112         1118         1373           Phosphorus         ppm         ASTM D5185m         995         1101         1088         1077           Zinc         ppm         ASTM D5185m         2600         3633         3250 <t< td=""><td>Lead</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;45</td><th>0</th><td>1</td><td>0</td></t<>	Lead	ppm	ASTM D5185m	>45	0	1	0
Vanadium         ppm         ASTM D5185m         0         <1         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         9         11         13           Barium         ppm         ASTM D5185m         0         0         <1         0           Molybdenum         ppm         ASTM D5185m         50         62         61         61           Manganese         ppm         ASTM D5185m         950         928         923         905           Calcium         ppm         ASTM D5185m         950         928         923         905           Calcium         ppm         ASTM D5185m         950         1112         1118         1373           Phosphorus         ppm         ASTM D5185m         995         1101         1088         1077           Zinc         ppm         ASTM D5185m         2600         3633         3250         3906           CONTAMINANTS         method         limit/base         current         history1	Copper	ppm	ASTM D5185m	>85	4	1	2
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         9         11         13           Barium         ppm         ASTM D5185m         0         0         <1	Tin	ppm	ASTM D5185m	>4	<1	0	0
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         50         62         61         61           Manganese         ppm         ASTM D5185m         0         <1         <1         0           Magnesium         ppm         ASTM D5185m         950         928         923         905           Calcium         ppm         ASTM D5185m         1050         1112         1118         1373           Phosphorus         ppm         ASTM D5185m         995         1101         1088         1077           Zinc         ppm         ASTM D5185m         995         1101         1088         1077           Zinc         ppm         ASTM D5185m         2600         3633         3250         3906           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         5         4         5           Sodium         ppm         ASTM D5185m         20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         *ASTM D7624         >20	Boron	ppm	ASTM D5185m	2	9	11	13
Manganese         ppm         ASTM D5185m         0         <1         <1         0           Magnesium         ppm         ASTM D5185m         950         928         923         905           Calcium         ppm         ASTM D5185m         1050         1112         1118         1373           Phosphorus         ppm         ASTM D5185m         995         1101         1088         1077           Zinc         ppm         ASTM D5185m         1180         1253         1229         1391           Sulfur         ppm         ASTM D5185m         2600         3633         3250         3906           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         5         4         5           Sodium         ppm         ASTM D5185m         >20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7815	Barium	ppm	ASTM D5185m	0	0	<1	0
Magnesium         ppm         ASTM D5185m         950         928         923         905           Calcium         ppm         ASTM D5185m         1050         1112         1118         1373           Phosphorus         ppm         ASTM D5185m         995         1101         1088         1077           Zinc         ppm         ASTM D5185m         1180         1253         1229         1391           Sulfur         ppm         ASTM D5185m         2600         3633         3250         3906           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         5         4         5           Sodium         ppm         ASTM D5185m         20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/:nm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/:nm	Molybdenum	ppm	ASTM D5185m	50	62	61	61
Calcium         ppm         ASTM D5185m         1050         1112         1118         1373           Phosphorus         ppm         ASTM D5185m         995         1101         1088         1077           Zinc         ppm         ASTM D5185m         1180         1253         1229         1391           Sulfur         ppm         ASTM D5185m         2600         3633         3250         3906           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         5         4         5           Sodium         ppm         ASTM D5185m         20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION <t< td=""><td>Manganese</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><th>&lt;1</th><td>&lt;1</td><td>0</td></t<>	Manganese	ppm	ASTM D5185m	0	<1	<1	0
Phosphorus         ppm         ASTM D5185m         995         1101         1088         1077           Zinc         ppm         ASTM D5185m         1180         1253         1229         1391           Sulfur         ppm         ASTM D5185m         2600         3633         3250         3906           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         5         4         5           Sodium         ppm         ASTM D5185m         2         2         2           Potassium         ppm         ASTM D5185m         >20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION         method         li	Magnesium	ppm	ASTM D5185m	950	928	923	905
Zinc         ppm         ASTM D5185m         1180         1253         1229         1391           Sulfur         ppm         ASTM D5185m         2600         3633         3250         3906           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         5         4         5           Sodium         ppm         ASTM D5185m         2         2         2         2           Potassium         ppm         ASTM D5185m         >20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm	Calcium	ppm	ASTM D5185m	1050	1112	1118	1373
Sulfur         ppm         ASTM D5185m         2600         3633         3250         3906           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         5         4         5           Sodium         ppm         ASTM D5185m         2         2         2           Potassium         ppm         ASTM D5185m         >20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.1         18.5         15.2	Phosphorus	ppm	ASTM D5185m	995	1101	1088	1077
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         5         4         5           Sodium         ppm         ASTM D5185m         2         2         2           Potassium         ppm         ASTM D5185m         >20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.1         18.5         15.2	Zinc	ppm	ASTM D5185m	1180	1253	1229	1391
Silicon         ppm         ASTM D5185m         >30         5         4         5           Sodium         ppm         ASTM D5185m         2         2         2         2           Potassium         ppm         ASTM D5185m         >20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.1         18.5         15.2	Sulfur	ppm	ASTM D5185m	2600	3633	3250	3906
Sodium         ppm         ASTM D5185m         2         2         2         2           Potassium         ppm         ASTM D5185m         >20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.1         18.5         15.2	CONTAMINANT	S	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         5         3         3           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.1         18.5         15.2	Silicon	ppm	ASTM D5185m	>30	5	4	5
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624         >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.1         18.5         15.2	Sodium	ppm	ASTM D5185m		2	2	2
Soot %         %         *ASTM D7844 >3         0.4         0.4         0.5           Nitration         Abs/cm         *ASTM D7624 >20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415 >30         19.0         21.2         19.4           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         15.1         18.5         15.2	Potassium	ppm	ASTM D5185m	>20	5	3	3
Nitration         Abs/cm         *ASTM D7624 > 20         7.8         7.5         9.8           Sulfation         Abs/.1mm         *ASTM D7415 > 30         19.0         21.2         19.4           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 > 25         15.1         18.5         15.2	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.0         21.2         19.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.1         18.5         15.2	Soot %	%	*ASTM D7844	>3	0.4	0.4	0.5
FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     15.1     18.5     15.2	Nitration	Abs/cm	*ASTM D7624	>20	7.8	7.5	9.8
Oxidation Abs/.1mm *ASTM D7414 >25 <b>15.1</b> 18.5 15.2	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0	21.2	19.4
	FLUID DEGRADA	NOITA	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	18.5	15.2
					8.5		



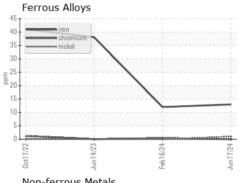
# **OIL ANALYSIS REPORT**

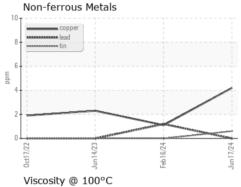


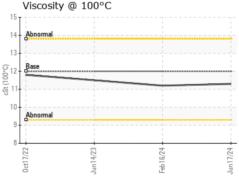
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

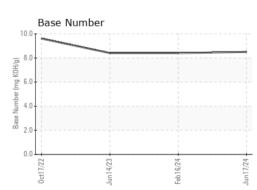
FLUID FROFI		method			HISTOLAL	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	12.00	11.3	11.2	11.5

### **GRAPHS**













Certificate 12367

Laboratory Sample No.

: PCA0128251 Lab Number : 06214142 Unique Number : 11087006 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 18 Jun 2024

**Tested** : 20 Jun 2024 Diagnosed : 20 Jun 2024 - Wes Davis

Transervice - Shop 1373 - Berkeley-Anderson/Pendergrass 101 Alliance Parkway Willamston, SC

US 29697 Contact: Sonny Boucher sboucher@transervice.com T: (864)226-2304

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)

Report Id: TSV1373 [WUSCAR] 06214142 (Generated: 06/21/2024 19:14:50) Rev: 1

Submitted By: Sonny Boucher

F: (864)226-2329