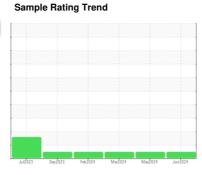


# **OIL ANALYSIS REPORT**

# Walgreens - Yard Horse [Walgreens - Yard Horse] 136A82254

**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

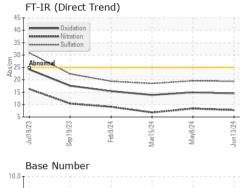
### **Fluid Condition**

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   PCA0128248   PCA0128388   PCA011645   Sample Date   Client Info   13 Jun 2024   08 May 2024   15 Mar 2024   Machine Age   hrs   Client Info   4169   3901   3560   356	SAMPLE INFORM	ATI <u>ON</u>	method	limit/base	current	history1	history2
Sample Date						•	PCA0116430
Machine Age   hrs   Client Info   268   341   192							15 Mar 2024
Oil Age         hrs         Client Info         268         341         192           Oil Changed         Client Info         Changed         Changed<		hrs				,	
Client Info							
NORMAL   NORMAL   NORMAL   NORMAL	-						
Fuel	-					Ü	_
Water         WC Method         >0.2         NEG         NEG         NEG           Glycol         WC Method         Imit Mose         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5185m         >100         14         14         10           Chromium         ppm         ASTM D5185m         >20         <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
Irron	Glycol		WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >20         <1         <1         <1           Nickel         ppm         ASTM D5185m         >4         0         0         0           Titanium         ppm         ASTM D5185m         >0         0         0           AsIwminium         ppm         ASTM D5185m         >20         2         2         2           Aluminium         ppm         ASTM D5185m         >20         2         2         2         2           Lead         ppm         ASTM D5185m         >40         0         0         0         0         0         0         1         2         8 <td< td=""><td>WEAR METALS</td><td></td><td>method</td><td>limit/base</td><th>current</th><td>history1</td><td>history2</td></td<>	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	14	14	10
Description	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Titanium         ppm         ASTM D5185m         0         0         0         0           Silver         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >20         2         2         2         2           Lead         ppm         ASTM D5185m         >330         <1         0         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1	Nickel	ppm	ASTM D5185m	>4	0	0	0
Aluminum         ppm         ASTM D5185m         220         2         330         <1         0 <td>Titanium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>0</th> <td>0</td> <td>0</td>	Titanium	ppm	ASTM D5185m		0	0	0
Lead	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper         ppm         ASTM D5185m         >330         <1         0         <1           Tin         ppm         ASTM D5185m         >15         <1	Aluminum	ppm	ASTM D5185m	>20	2	2	2
Tin	Lead	ppm	ASTM D5185m	>40	0	0	0
Tin			ASTM D5185m	>330	<1	0	<1
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         8         4         9           Barium         ppm         ASTM D5185m         0         0         1         0           Molybdenum         ppm         ASTM D5185m         0         63         59         60           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         910         906         882           Calcium         ppm         ASTM D5185m         950         910         906         882           Calcium         ppm         ASTM D5185m         995         1131         1094         990           Zinc         ppm         ASTM D5185m         2600         3773         3452         3422           CONTAMINANTS         method         limit/base         current         history1         history	Tin	ppm			<1	<1	<1
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         8         4         9           Barium         ppm         ASTM D5185m         0         0         1         0           Molybdenum         ppm         ASTM D5185m         50         63         59         60           Manganese         ppm         ASTM D5185m         0         <1			ASTM D5185m		0	0	0
Boron   ppm   ASTM D5185m   2   8   4   9			ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         1         0           Molybdenum         ppm         ASTM D5185m         50         63         59         60           Manganese         ppm         ASTM D5185m         0         <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         50         63         59         60           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         910         906         882           Calcium         ppm         ASTM D5185m         1050         1157         1031         1029           Phosphorus         ppm         ASTM D5185m         995         1131         1094         990           Zinc         ppm         ASTM D5185m         995         1131         1094         990           Zinc         ppm         ASTM D5185m         2600         3773         3452         3422           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         >20         19         <1         2           INFRA-RED         method         limit/base         <	Boron	ppm	ASTM D5185m	2	8	4	9
Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         910         906         882           Calcium         ppm         ASTM D5185m         1050         1157         1031         1029           Phosphorus         ppm         ASTM D5185m         995         1131         1094         990           Zinc         ppm         ASTM D5185m         1180         1278         1216         1196           Sulfur         ppm         ASTM D5185m         2600         3773         3452         3422           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         15         <1         <1         <1           Potassium         ppm         ASTM D5185m         >20         19         <1         2           INFRA-RED         method         limit/base         current         history1         history1           Soot %         %         *ASTM D7844         <	Barium	ppm	ASTM D5185m	0	0	1	0
Magnesium         ppm         ASTM D5185m         950         910         906         882           Calcium         ppm         ASTM D5185m         1050         1157         1031         1029           Phosphorus         ppm         ASTM D5185m         995         1131         1094         990           Zinc         ppm         ASTM D5185m         1180         1278         1216         1196           Sulfur         ppm         ASTM D5185m         2600         3773         3452         3422           CONTAMINANTS         method         limit/base         current         history1         history3           Silicon         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         >20         19         <1	Molybdenum	ppm	ASTM D5185m	50	63	59	60
Calcium         ppm         ASTM D5185m         1050         1157         1031         1029           Phosphorus         ppm         ASTM D5185m         995         1131         1094         990           Zinc         ppm         ASTM D5185m         1180         1278         1216         1196           Sulfur         ppm         ASTM D5185m         2600         3773         3452         3422           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         >20         19         <1	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus         ppm         ASTM D5185m         995         1131         1094         990           Zinc         ppm         ASTM D5185m         1180         1278         1216         1196           Sulfur         ppm         ASTM D5185m         2600         3773         3452         3422           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         >25         4         3         3           Potassium         ppm         ASTM D5185m         >20         19         <1	Magnesium	ppm	ASTM D5185m	950	910	906	882
Zinc         ppm         ASTM D5185m         1180         1278         1216         1196           Sulfur         ppm         ASTM D5185m         2600         3773         3452         3422           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         15         <1	Calcium	ppm	ASTM D5185m	1050	1157	1031	1029
Sulfur         ppm         ASTM D5185m         2600         3773         3452         3422           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         15         <1         <1         <1           Potassium         ppm         ASTM D5185m         >20         19         <1         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.9         1.1         0.6           Nitration         Abs/cm         *ASTM D7624         >20         7.8         8.4         6.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.4         19.6         18.5           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.5         14.9         13.9	Phosphorus	ppm	ASTM D5185m	995	1131	1094	990
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         15         <1	Zinc	ppm	ASTM D5185m	1180	1278	1216	1196
Silicon         ppm         ASTM D5185m         >25         4         3         3           Sodium         ppm         ASTM D5185m         15         <1         <1           Potassium         ppm         ASTM D5185m         >20         19         <1         2           INFRA-RED         method         limit/base         current         history1         history1           Soot %         %         *ASTM D7844         >3         0.9         1.1         0.6           Nitration         Abs/cm         *ASTM D7624         >20         7.8         8.4         6.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.4         19.6         18.5           FLUID DEGRADATION         method         limit/base         current         history1         history1           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.5         14.9         13.9	Sulfur	ppm	ASTM D5185m	2600	3773	3452	3422
Sodium         ppm         ASTM D5185m         15         <1         <1           Potassium         ppm         ASTM D5185m         >20         19         <1	CONTAMINANT	S	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         19         <1         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.9         1.1         0.6           Nitration         Abs/cm         *ASTM D7624         >20         7.8         8.4         6.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.4         19.6         18.5           FLUID DEGRADATION method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.5         14.9         13.9	Silicon	ppm	ASTM D5185m	>25	4	3	3
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.9         1.1         0.6           Nitration         Abs/cm         *ASTM D7624         >20         7.8         8.4         6.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.4         19.6         18.5           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.5         14.9         13.9	Sodium	ppm	ASTM D5185m		15	<1	<1
Soot %         %         *ASTM D7844         >3         0.9         1.1         0.6           Nitration         Abs/cm         *ASTM D7624         >20         7.8         8.4         6.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.4         19.6         18.5           FLUID DEGRADATION method limit/base current history1         history1         history1           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.5         14.9         13.9	Potassium	ppm	ASTM D5185m	>20	19	<1	2
Nitration         Abs/cm         *ASTM D7624         >20         7.8         8.4         6.8           Sulfation         Abs/.1mm         *ASTM D7615         >30         19.4         19.6         18.5           FLUID DEGRADATION method limit/base current         history1         history1         history1           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.5         14.9         13.9	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.4         19.6         18.5           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.5         14.9         13.9	Soot %	%	*ASTM D7844	>3	0.9	1.1	0.6
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.4         19.6         18.5           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.5         14.9         13.9	Nitration	Abs/cm	*ASTM D7624	>20	7.8	8.4	6.8
Oxidation							
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	14.9	13.9
Date Frances (DIT) lighting form Decode 0.5		mg KOH/g	ASTM D2896		8.5	8.5	8.4



## **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

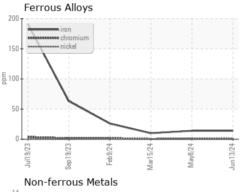
11.9

11.4

11.4

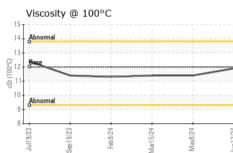
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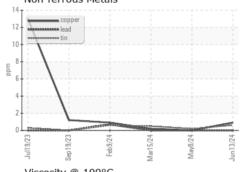


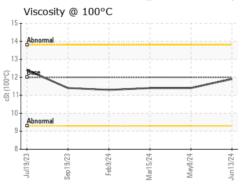


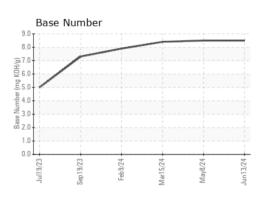
cSt

ASTM D445 12.00













Report Id: TSV1373 [WUSCAR] 06214141 (Generated: 06/21/2024 19:15:12) Rev: 1

Laboratory Sample No.

: PCA0128248 Lab Number : 06214141 Unique Number : 11087005

: 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

Page 2 of 2

Test Package : FLEET Certificate 12367 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.

sboucher@transervice.com T: (864)226-2304 F: (864)226-2329

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: Sonny Boucher