

# **OIL ANALYSIS REPORT**

# Area (90322X) Walgreens Machine Id [Walgreens] 136A66160

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

#### Wear

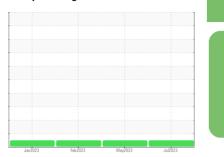
All component wear rates are normal.

#### 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 Rating Trend



NORMAL

		Jan202	3 Feb2023	May2023 Ju	12023	
SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0091554	PCA0091493	PCA0091527
Sample Date		Client Info		19 Jul 2023	23 May 2023	13 Feb 2023
Machine Age	mls	Client Info		673234	652362	619091
Oil Age	mls	Client Info		50000	33271	50000
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINA	TION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAI	LS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	11	9	14
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>25	3	1	4
Lead	ppm	ASTM D5185m	>45	<1	0	<1
Copper	ppm	ASTM D5185m	>85	2	2	2
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	1	0	<1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	65	58	55
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	950	943	1001	853
Calcium	ppm	ASTM D5185m	1050	1313	1136	1097
Phosphorus	ppm	ASTM D5185m	995	1071	1032	900
Zinc	ppm	ASTM D5185m	1180	1263	1265	1159
Sulfur	ppm	ASTM D5185m	2600	3493	3317	3208
CONTAMINA	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	12	11	21
Sodium	ppm	ASTM D5185m		3	3	2
Potassium	ppm	ASTM D5185m	>20	<1	2	2
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.5	8.7	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2	19.5	21.3
FLUID DEGRA		method	limit/base	current	history1	history2

16.9

6.7

Abs/.1mm \*ASTM D7414 >25

Base Number (BN) mg KOH/g ASTM D2896

Oxidation

16.1

6.7

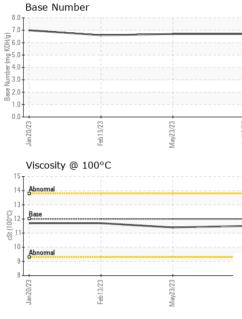
17.9

6.6



# **OIL ANALYSIS REPORT**

VISUAL



	15 - 14 - 13 - (2-00[]) ts 11 - 9 - 8 -	Viscosity @ 10 Abnormal Base Abnormal	_	May23/23 May	8.0 7.0 (0)A (0.0 (0)A (0.0 (0)A (0.0 (0)A (0.0 (0)A (0.0 (0)A (0.0 (0)A (0.0)A	] ] ] ] ] ] ] ]	er	
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			_	May				
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	8 -	copper lead						
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3/23 + -	12-	iron						
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					>0.2			NEG
May	0		scalar	*Visual	NORML	NORML	NORML	NORML
23/23	Aj	ppearance	scalar	*Visual	NORML	NORML	NORML	NORML
	S	and/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
								NONE
		-						NONE NONE
								NONE
			scalar	*Visual	NONE	NONE	NONE	NONE
			White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PRO Visc @ 100°C GRAPHS Ferrous Alloys	White Metal scalar Yellow Metal scalar Precipitate scalar Silt scalar Debris scalar Appearance scalar Odor scalar Emulsified Water scalar Free Water scalar Visc @ 100°C cSt CRAPHS Visc @ 100°C cSt CRAPHS Ferrous Alloys	Yellow Metal scalar *Visual Precipitate scalar *Visual Debris scalar *Visual Sand/Dirt scalar *Visual Sand/Dirt scalar *Visual Appearance scalar *Visual Odor scalar *Visual Emulsified Water scalar *Visual Free Water scalar *Visual Non-ferrous Alloys Non-ferrous Metals	White Metal scalar *Visual NONE Yellow Metal scalar *Visual NONE Precipitate scalar *Visual NONE Sitt scalar *Visual NONE Sand/Dirt scalar *Visual NONE Sand/Dirt scalar *Visual NONE Appearance scalar *Visual NORML Odor scalar *Visual NORML Odor scalar *Visual NORML Emulsified Water scalar *Visual NORML Stree Water scalar *Visual So.2 Free Water Scalar *Visual So.2 Non-ferrous Alloys Some ferrous Metals	White Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NOR	White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Sitt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual NORML NORML NORML Terrous Alloys Free Water scalar *Visual NO45 12.00 11.5 11.4 GRAPHS Ferrous Alloys Non-ferrous Metals Non-ferrous Metals