

## **OIL ANALYSIS REPORT**

Sample Number

Sample Date

Machine Age

Oil Changed

Sample Status

WEAR METALS

Oil Age

Fuel

Iron

Chromium

Glycol

Sample Rating Trend



#### Machine Id 411034

Component **Diesel Engine** 

### PETRO CANADA DURON SHP 10W30 (12 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### 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.



Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	9	5	7
Lead	ppm	ASTM D5185m	>40	<1	<1	<b>1</b> 05
Copper	ppm	ASTM D5185m	>330	0	<1	8
Tin	ppm	ASTM D5185m	>15	<1	1	2
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0

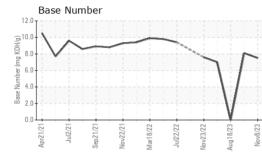
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	22	5	22
Barium	ppm	ASTM D5185m	0	0	44	0
Molybdenum	ppm	ASTM D5185m	50	83	59	149
Manganese	ppm	ASTM D5185m	0	<1	1	1
Magnesium	ppm	ASTM D5185m	950	879	853	843
Calcium	ppm	ASTM D5185m	1050	1090	963	1327
Phosphorus	ppm	ASTM D5185m	995	1006	901	906
Zinc	ppm	ASTM D5185m	1180	1202	1134	1245
Sulfur	ppm	ASTM D5185m	2600	2989	3058	2963

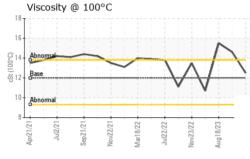
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	8	4	26
Sodium	ppm	ASTM D5185m		13	5	<b>1</b> 487
Potassium	ppm	ASTM D5185m	>20	2	12	<b>A</b> 375

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	0.9	1.6	4.3
Nitration	Abs/cm	*ASTM D7624	>20	8.8	9.0	23.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	21.1	41.7
FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	14.6	35.6
Base Number (BN)	mg KOH/g	ASTM D2896		7.5	8.1	▲ 0.0



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		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
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPER	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	12.5	▲ 14.6	▲ 15.5
GRAPHS						
Ferrous Alloys						
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Apr/21/21 Jui2/21 Sep 21/21	Mar18/22	Juic2/22 Nov23/22 Aug18/23	Nov8/23			
Nov-ferrors Wetals	-	Jul.23/22 Nov23/22 Aug 18/23	Nov8/23			
Apr21/21 Jul2/21 Sep21/21 Nov22/21	-		Nov8/23			
12/12/min 12/12/	-	22/22/02 22/22/02 22/22/02 23/22/02	Viov6/23			
12/12/14 12/12/14 12/12/14 12/12/14 12/12/14 12/12/14 12/12/14	-	22/22/02 22/22/02 22/22/04	EZ/Bvolv			
Non-ferrous Metals	-	22/22/00 22/22/00 22/22/00	CZ/Bvolv			
IZ712/dev IZ712/	-	22/22/20/2 22/22/20/	CZ/Bvolv			
Non-ferrous Metals	-	212/2010 2275/2010 2019/2019	EZ/Bvoh			
IZZZ/voW IZZIZ/m IZZIZ/M IZZIZ	-	14/23/23	EZIBVON			
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Non-ferrous Metals						
Non-ferrous Metals			EZIBVON			
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Non-ferrous Metals			Nov0/23	Base Numbe	r	
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Viscosity @ 100°C			ECONON 12.0		r	
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IZIIZION   Non-ferrous Metals     IZIIZION   0     IZIZINF   IZIIZION     IZIZINF   IZIIZION     IZIZINF   IZIIZION     Viscosity @ 100°C     7   5     4   3     2   100°C     7   5     4   3     2   100°C			EZJØVovN (0)HOX BUD 880 10.0 10.0 10.0 10.0 10.0 10.0 10.0		r	
IZIIZINF   IZIIZINF     IZZINF   IZZINF     IZZINF   IZZINF <tr< td=""><td></td><td></td><td>EZQ000W 12.0 (0)HOX Bul back back back back back back back back back</td><td></td><td>r</td><td></td></tr<>			EZQ000W 12.0 (0)HOX Bul back back back back back back back back back		r	
IZIIZION   Non-ferrous Metals     IZIIZION   0     IZIZINF   IZIIZION     IZIZINF   IZIIZION     IZIZINF   IZIIZION     Viscosity @ 100°C     7   5     4   3     2   100°C     7   5     4   3     2   100°C		Nov23/22 Aug 18/23	EZJØVovN (0)HOX BUD 880 10.0 10.0 10.0 10.0 10.0 10.0 10.0		Nov22211	Nov23/22 Aug 18/23

S Š 3 : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 102 - Morristown TN Laboratory Sample No. : GFL0073292 Received : 14 Nov 2023 415 Ryder Lane, PO Box 1894 Lab Number : 06007441 Diagnosed : 15 Nov 2023 Morristown, TN US 37813 Unique Number : 10741203 Diagnostician : Wes Davis Test Package : FLEET Contact: Ricky Dunlap Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. ricky.dunlap@gflenv.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (800)207-6618

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

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