

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Io 

Wear

oil

729088-13027 Component

**Diesel Engine** Fluic

PETRO CANADA DURON SHP 15W40 (--- GAL)

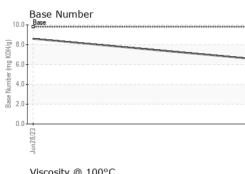
## DIAGNOSIS SAMPLE INFORMATION method GFL0085343 GFL0085365 Sample Number **Client Info** Recommendation Resample at the next service interval to monitor. Sample Date Client Info 02 Jan 2024 28 Jun 2023 26380 Machine Age hrs Client Info 25533 All component wear rates are normal. Oil Age hrs Client Info 26380 0 Oil Changed **Client Info** Changed Changed Contamination NORMAL Sample Status NORMAL There is no indication of any contamination in the CONTAMINATION Fluid Condition Fuel >3.0 WC Method <1.0 <1.0 The BN result indicates that there is suitable Water WC Method >0.2 NEG NEG alkalinity remaining in the oil. The condition of the oil is suitable for further service. Glycol WC Method NEG NEG WEAR METALS >120 19 13 Iron ppm ASTM D5185m ASTM D5185m >20 Chromium ppm <1 <1 2 2 Nickel >5 ppm ASTM D5185m Titanium ppm ASTM D5185m >2 0 <1 Silver ASTM D5185m 0 0 >2 ppm 2 >20 0 Aluminum ppm ASTM D5185m 2 Lead ASTM D5185m >40 <1 ppm ASTM D5185m >330 2 Copper ppm 1 2 Tin ppm ASTM D5185m >15 1 Vanadium ppm ASTM D5185m 0 <1 Cadmium 0 0 ASTM D5185m ppm ADDITIVES Boron mag ASTM D5185m 0 4 9 Barium ASTM D5185m 0 0 0 ppm Molybdenum ASTM D5185m 60 63 60 ppm ASTM D5185m 0 Manganese ppm <1 <1 Magnesium ASTM D5185m 1010 1008 971 ppm Calcium ppm ASTM D5185m 1070 1100 1115 Phosphorus ASTM D5185m 1150 1106 1019 ppm Zinc ppm ASTM D5185m 1270 1395 1265 Sulfur ASTM D5185m 2060 3405 3699 ppm CONTAMINANTS 6 Silicon ASTM D5185m >25 4 ppm Sodium ASTM D5185m 6 4 ppm Potassium ASTM D5185m >20 1 2 ppm **INFRA-RED** % 0.8 0.5 Soot % \*ASTM D7844 >4 Nitration Abs/cm \*ASTM D7624 >20 11.6 9.2 Sulfation \*ASTM D7415 >30 23.0 21.2 Abs/.1mm FLUID DEGRADATION Abs/.1mm \*ASTM D7414 >25 21.1 18.5 Oxidation Base Number (BN) mg KOH/g ASTM D2896 9.8 6.6 8.6

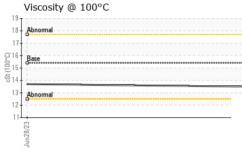
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## **OIL ANALYSIS REPORT**

VISUAL





White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys		NONE NONE NONE NONE NONE NONE NONE NONE	NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NORML NORML NORML NORML NORML NORML NORML NORML NEG NEG Current history1	
Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys	scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual	NONE NONE NONE NONE NONE NONE NONE NORML	NONE NONE NONE NONE NONE NONE NONE NONE NORML NORML NORML NORML NEG NEG NEG NEG	     history2
Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys	scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual	NONE NONE NONE NONE NONE NORML	NONE NONE NONE NONE NORE NORM NORML NORML NORML NORML NEG NEG NEG NEG Current history1	<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> </ul>
Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys	scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual	NONE NONE NONE NORML NOR	NONE NONE NONE NONE NORML NORML NORML NORML NEG NEG NEG NEG current history1	    history2
Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys	scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual	NONE NORML N	NONE NONE NORML NORML NORML NORML NEG NEG NEG NEG current history1	   history2
Appearance Odor Emulsified Water Free Water FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys	scalar *Visual scalar *Visual scalar *Visual scalar *Visual scalar *Visual	NORML	NORML NORML NORML NORML NEG NEG NEG NEG current history1	   history2
Emulsified Water Free Water FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys	scalar *Visual scalar *Visual scalar *Visual ERTIES metho	NORML N >0.2 N od limit/base	NORML         NORML           NEG         NEG           NEG         NEG           current         history1	  history2
Emulsified Water Free Water FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys	scalar *Visual scalar *Visual ERTIES metho	>0.2	NEG NEG NEG NEG current history1	  history2
Free Water FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys 15	scalar *Visual ERTIES metho	od limit/base	NEG NEG current history1	 history2
FLUID PROPI Visc @ 100°C GRAPHS Ferrous Alloys	ERTIES metho	od limit/base	current history1	history2
Visc @ 100°C GRAPHS Ferrous Alloys				
GRAPHS Ferrous Alloys	cSt ASTM D	445 15.4 1	<b>13.5</b> 13.7	
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Base		9 6.0		
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<sup>3</sup> 14		4.0-		
13 Abnormal		Base		
12 -		2.0-		
11		0.0		
28/2:		n2/2 <sup>4</sup>		
	Viscosity @ 1000 Base Abnomal Abnomal	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals

Report Id: GFL958A [WUSCAR] 06054604 (Generated: 01/09/2024 16:18:46) Rev: 1

\* - 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)

Submitted By: DREW MOOBERRY

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