

OIL ANALYSIS REPORT

Sample Rating Trend





DIAGNOSIS

Recommendation

Contamination

Fluid Condition

Wear

oil

923051 **Diesel Engine**

Machine Id

PETRO CANADA DURON SHP 15W40 (11 GAL)

SAMPLE INFORMATION method GFL0108606 GFL0066023 Sample Number **Client Info** Resample at the next service interval to monitor. 29 Mar 2024 Sample Date Client Info 15 Nov 2023 10002 0 Machine Age hrs **Client Info** All component wear rates are normal. Oil Age hrs Client Info 10002 0 Oil Changed Client Info Changed N/A NORMAL Sample Status NORMAL There is no indication of any contamination in the CONTAMINATION 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 8 Iron >120 7 ppm ASTM D5185m Chromium ASTM D5185m >20 0 0 ppm 0 0 Nickel >5 ppm ASTM D5185m Titanium ppm ASTM D5185m >2 0 0 Silver ASTM D5185m >2 0 0 ppm 2 Aluminum ASTM D5185m >20 3 ppm >40 0 0 Lead ASTM D5185m ppm ASTM D5185m >330 2 2 Copper ppm Tin ppm ASTM D5185m >15 <1 <1 Vanadium ppm ASTM D5185m 0 <1 Cadmium 0 0 ASTM D5185m ppm ADDITIVES Boron maa ASTM D5185m 0 5 4 Barium ASTM D5185m 0 0 0 ppm 56 55 Molybdenum ASTM D5185m 60 ppm 0 ASTM D5185m 0 Manganese ppm <1 Magnesium ASTM D5185m 1010 919 914 ppm Calcium ppm ASTM D5185m 1070 1085 1065 Phosphorus ASTM D5185m 1150 1008 997 ppm 1270 Zinc ppm ASTM D5185m 1217 1142 Sulfur ASTM D5185m 2060 3279 2640 ppm CONTAMINANTS 4 Silicon ASTM D5185m >25 4 ppm Sodium ASTM D5185m 6 4 ppm Potassium ASTM D5185m >20 0 0 ppm **INFRA-RED** 0.2 % 0.3 Soot % *ASTM D7844 >4 Nitration Abs/cm *ASTM D7624 >20 8.6 8.3 19.0 Sulfation *ASTM D7415 >30 19.4 Abs/.1mm FLUID DEGRADATION *ASTM D7414 >25 15.8 15.7 Oxidation Abs/.1mm

Base Number (BN) mg KOH/g ASTM D2896 9.8

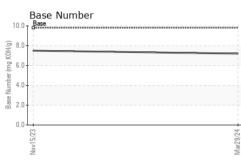
7.5

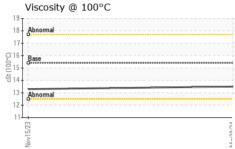
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OIL ANALYSIS REPORT

VISUAL





		VISUAL		method	limit/base	current	history1	history
	١	White Metal	scalar	*Visual	NONE	NONE	NONE	
	`	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
		Precipitate	scalar	*Visual	NONE	NONE	NONE	
		Silt	scalar	*Visual	NONE	NONE	NONE	
	ſ	Debris	scalar	*Visual	NONE	NONE	NONE	
		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
		Appearance	scalar	*Visual	NORML	NORML	NORML	
		Odor	scalar	*Visual	NORML	NORML	NORML	
		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
		Free Water	scalar	*Visual	20.L	NEG	NEG	
		FLUID PROPE		method	limit/base	current	history1	history
	,	Visc @ 100°C	cSt	ASTM D445		13.5	13.3	
		GRAPHS	001	NOTIN DITIO	10.4	10.0	10.0	
		Ferrous Alloys						
	10)T						
	8	iron chromium						
	0	nickel						
	6	,						
	bpm							
	4	+						
	2	,						
	2							
	0]						
		Nov15/23			Mar29/24			
		Nov1			Mar2			
		Non-ferrous Meta	s					
	10							
	-	copper						
	8	annennennen tin						
	6							
	bpm							
	4	+						
	~							
	2							
	0							
		23			Mar29/24			
		2			ar2			
		Nov15/23			\geq			
		Viscosity @ 100°C	2		Z	Da as Norra		
	19	Viscosity @ 100°C	2			Base Numb	er	
	19 18	Viscosity @ 100°C			≥ 10.0		er	
		Viscosity @ 100°C	2		10.0		er	
	18 17	Viscosity @ 100°C	:		10.0		er	
	18 17	Viscosity @ 100°C			10.0		er	
	18 17	Viscosity @ 100°C			10.0		er	
	18 17 (200°C) 10 (100°C) 15 14	Viscosity @ 100°C			10.0		er	
	18 17 (2.001) 15 53 14 13	Viscosity @ 100°C			0.0 8.0 HOX Bu get		er	
	18 17 (2.001) 15 14 13 12	Viscosity @ 100°C	2		10.0 (0)HOX B0U B0U B0U B0U B0U B0U B0U B0U B0U B0U		er	
	18 17 (2.001) 15 53 14 13	Viscosity @ 100°C			10.0 (0,0,00) Bull aquing 4.0 888 2.0 0.0	Base	er	
	18 17 (2.001) 15 14 13 12	Viscosity @ 100°C			10.0 (0,0,00) Bull aquing 4.0 888 2.0 0.0	Base	er	
	18 17 (2.001) 15 14 13 12	Viscosity @ 100°C			10.0 (0)HOX B0U B0U B0U B0U B0U B0U B0U B0U B0U B0U		er	
	18 17 (2000) 15 14 13 12 11	Viscosity @ 100°C			10.0 8.0 0.0 8 Base Mumber (mg KOH(0) 4.0 4.0 4.0 0.0	EZ/SINON		40.11
	18 17 (2-001) 55 14 13 12 11	Viscosity @ 100°C	1 Madiso		10.0 (0)HOX Bull action 4.0 F2/62Per W , NC 27513	EZ/SINON	Environmental - 90	
	18 17 [2-00]] 53 14 13 12 11 11 : W : Gi	Viscosity @ 100°C	1 Madiso Recei	ved : 03	10.0 (0)HO3 Bull Jaquing 4.0 (0)HO3 Bull Jaquing 4.0 (0)HO3 Bull Jaquing 4.0 (0.0 (0.0) (0.0) (0.0) (0.0) (0)HO3 Bull Jaquing 4.0 (0.0) (0)HO3 Bull Jaquing 4.0 (0)HO3 Bull Ja	EZ/SINON	Environmental - 90	6 MIDWAY
r	18 17 (2-001) t5 14 13 12 11 11 : W : GI : 06	Viscosity @ 100°C	1 Madiso Recei Teste	ved : 03 d : 03	10.0 (0)HO3 Bull Jaquing 4.0 (0)HO3 Bull Jaquing 4.0 (0)HO3 Bull Jaquing 4.0 (0.0 (0.0) (0.0) (0.0) (0.0) (0.0) (0)HO3 Bull Jaquing 4.0 (0.0) (0)HO3 Bull Jaquing 4.0 (0)HO3 B	EZISINON GFL I	Environmental - 90	06 MIDWAY
r	18 17 16 16 15 15 14 13 12 11 11 : W : Gil : 06 : 10	Viscosity @ 100°C	1 Madiso Recei	ved : 03 d : 03	10.0 (0)HO3 Bull Jaquing 4.0 (0)HO3 Bull Jaquing 4.0 (0)HO3 Bull Jaquing 4.0 (0.0 (0.0) (0.0) (0.0) (0.0) (0)HO3 Bull Jaquing 4.0 (0.0) (0)HO3 Bull Jaquing 4.0 (0)HO3 Bull Ja	EZISION GFL I	Environmental - 90 17C ME	6 MIDWAY

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)

Certificate L2367