

Machine Id 741002-310091 Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		GFL0121912	GFL0106917	GFL0092176
	Sample Date		Client Info		12 Jun 2024	02 Apr 2024	29 Jan 2024
	Machine Age	hrs	Client Info		496	625	52
	Oil Age	hrs	Client Info		600	600	0
	Filter Age	hrs	Client Info		600	600	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185m	>110	7	8	4
	Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
	Nickel	ppm	ASTM D5185m	>2	<1	0	<1
	Titanium	ppm	ASTM D5185m		0	<1	<1
	Silver	ppm	ASTM D5185m	>2	0	0	0
	Aluminum	ppm	ASTM D5185m	>25	2	2	2
	Lead	ppm	ASTM D5185m	>45	0	0	<1
	Copper	ppm	ASTM D5185m	>85	<1	<1	<1
	Tin	ppm	ASTM D5185m	>4	0	0	<1
	Vanadium	ppm	ASTM D5185m		0	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	<u>\</u> 30	4	3	2
OONTAMINATION	Potassium	ppm	ASTM D5185m		3	2	2
There is no indication of any contamination in the oil.	Fuel	ppiii	WC Method		<1.0	<1.0	<1.0
	Water		WC Method		NEG	NEG	NEG
	Glycol		WC Method	20.2	NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0	0	0
	Nitration	Abs/cm	*ASTM D7624	>20	10.6	10.9	10.6
	Sulfation	Abs/.1mm	*ASTM D7415		21.7	21.8	20.5
	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		*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium		ASTM D5185m		8	7	4
FLUID CONDITION		ppm		0		7	
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron Barium	ppm	ASTM D5185m ASTM D5185m		13 0	0	10 0
	Molybdenum	ppm	ASTM D5185m		55	55	56
		ppm	ASTM D5185m			<1	0
	Manganese	ppm	ASTM D5185m		<1 584	576	535
	Magnesium Calcium	ppm	ASTM D5185m		564 1639	1776	1579
		ppm				687	719
	Phosphorus	ppm	ASTM D5185m ASTM D5185m		714		
	Zinc Sulfur	ppm	ASTM D5185m ASTM D5185m		945 2704	1017 2971	966 2478
	Oxidation	ppm	*ASTM D5185m		2794		
		Abs/.1mm			18.3	19.1	17.9
	Base Number (BN)	ng kOH/g	ASTIM D2896	9.8	5.2	4.2	5.2

Visc @ 100°C cSt

ASTM D445 15.4

14.8

14.9

14.8



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