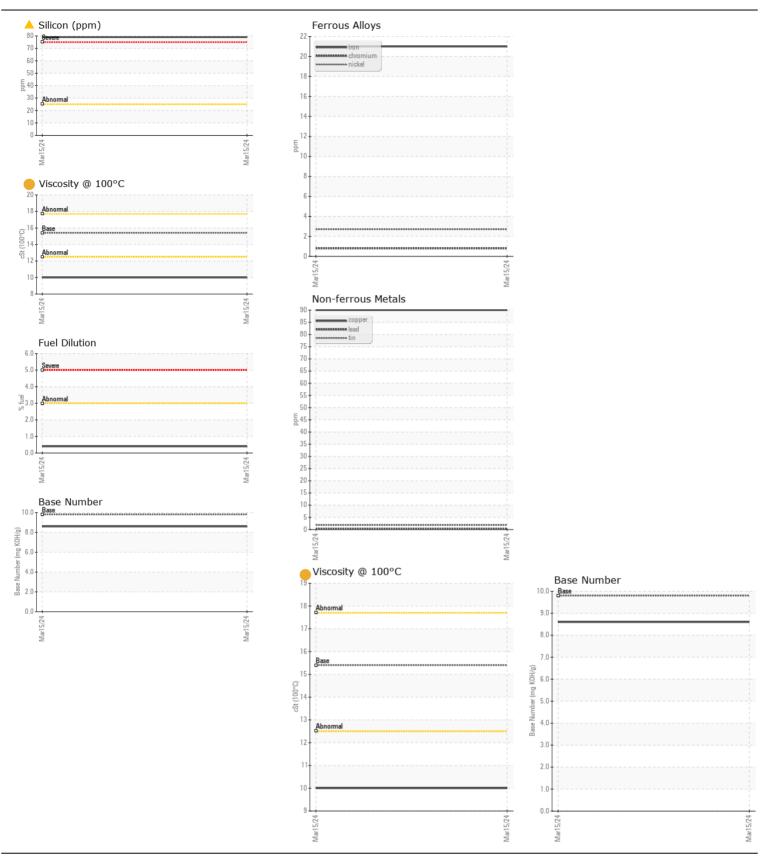


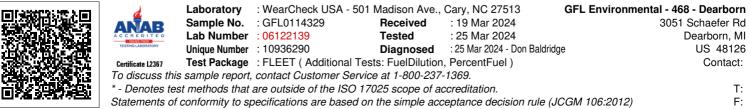
WEAR NORMAL CONTAMINATION ABNORMAL FLUID CONDITION ATTENTION

Machine Id 714041 Component Diesel Engine

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

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RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Number		Client Info		GFL0114329		
	Sample Date		Client Info		15 Mar 2024		
	Machine Age	hrs	Client Info		331		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Not Changd		
	Filter Changed		Client Info		Not Changd		
	Sample Status				ABNORMAL		
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185m	>120	21		
	Chromium	ppm	ASTM D5185m	>20	<1		
	Nickel	ppm	ASTM D5185m	>5	3		
	Titanium	ppm	ASTM D5185m	>2	<1		
	Silver	ppm	ASTM D5185m	>2	<1		
	Aluminum	ppm	ASTM D5185m	>20	6		
	Lead	ppm	ASTM D5185m	>40	<1		
	Copper	ppm	ASTM D5185m	>330	90		
	Tin	ppm	ASTM D5185m	>15	2		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.	Silicon	ppm	ASTM D5185m	>25	<b>A</b> 79		
	Potassium	ppm	ASTM D5185m	>20	9		
	Fuel	%	ASTM D3524	>3.0	0.4		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>4	0.2		
	Nitration	Abs/cm	*ASTM D7624	>20	7.6		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	24.8		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	Appearance	scalar	*Visual	NORML	NORML		
	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		2		
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.	Boron	ppm	ASTM D5185m	0	324		
	Barium	ppm	ASTM D5185m	0	0		
	Molybdenum	ppm	ASTM D5185m	60	118		
	Manganese	ppm	ASTM D5185m	0	3		
	Magnesium	ppm	ASTM D5185m	1010	697		
	Calcium	ppm	ASTM D5185m	1070	1344		
	Phosphorus	ppm	ASTM D5185m	1150	720		
	Zinc	ppm	ASTM D5185m	1270	881		
	Sulfur	ppm	ASTM D5185m	2060	2609		
	Oxidation	Abs/.1mm	*ASTM D7414		20.6		
	Base Number (BN)	mg KOH/g	ASTM D2896		8.6		
	Visc @ 100°C	cSt	ASTM D445		10.0		





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