

Machine Id FREIGHTLINER 50141M Component

Component Diesel Engine

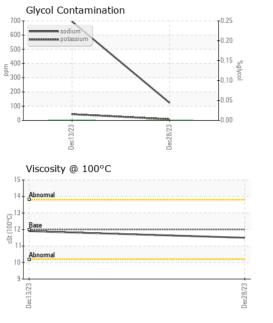
PETRO CANADA DURON SHP 10W30 (--- LTR)

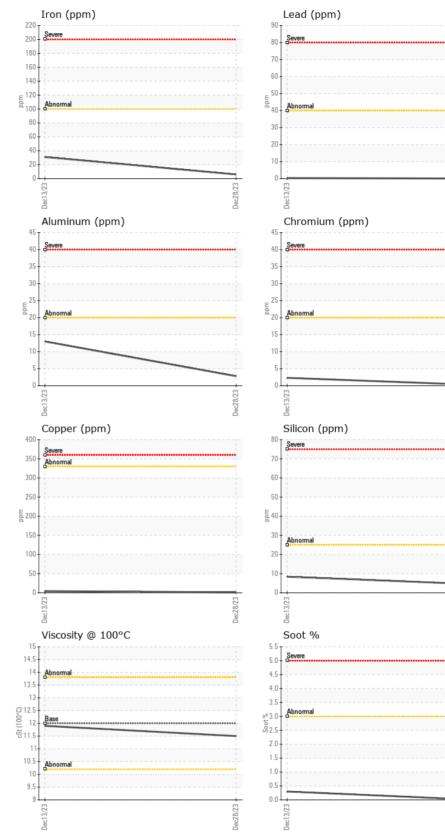
PETRO CANADA DURON SHP 10W30 (LTR)	 						
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		WC0854811	WC0879057	
Resample at the next service interval to monitor.	Sample Date		Client Info		28 Dec 2023	13 Dec 2023	
	Machine Age	kms	Client Info		996249	995583	
	Oil Age	kms	Client Info		0	0	
	Filter Age	kms	Client Info		0	0	
	Oil Changed		Client Info		Not Changd	Changed	
	Filter Changed		Client Info		Not Changd	Changed	
	Sample Status				NORMAL	ATTENTION	
WEAR	Iron	ppm	ASTM D5185(m)	>100	6	31	
All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)	>20	<1	2	
	Nickel	ppm	ASTM D5185(m)	>4	<1	<1	
	Titanium	ppm	ASTM D5185(m)		0	0	
	Silver	ppm	ASTM D5185(m)	>3	0	<1	
	Aluminum	ppm	ASTM D5185(m)	>20	3	13	
	Lead	ppm	ASTM D5185(m)	>40	0	<1	
	Copper	ppm	ASTM D5185(m)	>330	1	4	
	Tin	ppm	ASTM D5185(m)	>15	0	0	
	Vanadium	ppm	ASTM D5185(m)		0	0	
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>25	4	8	
Test for glycol is negative. There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)	>20	8	43	
	Fuel		WC Method	>2.0	<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol	%	ASTM D7922*		0.0	0.0	
	Soot %	%	ASTM D7844*	>3	0	0.3	
	Nitration	Abs/cm	ASTM D7624*	>20	5.1	10.5	
	Sulfation	Abs/.1mm	ASTM D7415*	>30	18.2	21.6	
	Silt	scalar	Visual*	NONE	NONE		
	Debris	scalar	Visual*	NONE	VLITE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance	scalar	Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML	NORML	
	Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		123	6 95	
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)		8	26	
	Barium	ppm	ASTM D5185(m)		0	<1	
	Molybdenum	ppm	ASTM D5185(m)		60	93	
	Manganese	ppm	ASTM D5185(m)		0	0	
	Magnesium	ppm	ASTM D5185(m)		945	1144	
	Calcium	ppm	ASTM D5185(m)		1001	1007	
	Phosphorus	ppm	ASTM D5185(m)		1000	1029	
	Zinc	ppm	ASTM D5185(m)		1143	1261	
	Sulfur	ppm	ASTM D5185(m)		2779	2788	
	Oxidation	Abs/.1mm	ASTM D7414*	>25	13.4	17.5	

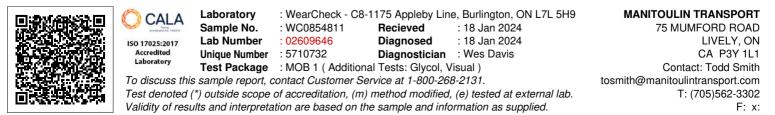
Visc @ 100°C cSt ASTM D7279(m) 12.00

11.9

11.5







Contact/Location: Todd Smith - MANLIV

Page 2 of 2

PC/8/73