

## Machine Id **51896M** Component **Diesel Engine** Filuid **PETRO CANADA DURON SHP 10W30 (--- LTR)**

RECOMMENDATION	
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Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

WEAR	

All component wear rates are normal.

## CONTAMINATION

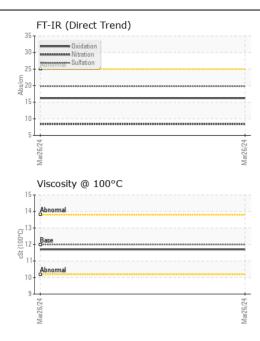
There is no indication of any contamination in the oil.

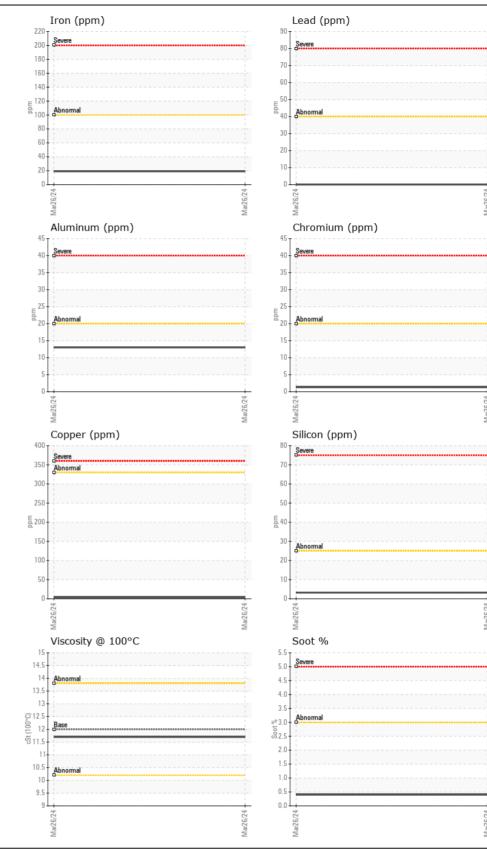
## FLUID CONDITION

The condition of the oil is acceptable for the time in service.

TestUOMMethodLimit/AbnCurrentHistory1History2Sample NumberClient InfoWC0915464Sample DateClient Info26 Mar 2024Machine AgemlsClient Info653640Oil AgemlsClient Info30696Filter AgemlsClient Info30696Oil ChangedClient InfoMcChangedFilter ChangedClient InfoMcChangedSample StatusClient InfoMcChangedIronppmASTM D5185(m)>1019NickelppmASTM D5185(m)>201NickelppmASTM D5185(m)>30SilverppmASTM D5185(m)>304LeadppmASTM D5185(m)>304SiliconppmASTM D5185(m)>201SiliconppmASTM D5185(m)>201SiliconppmASTM D5185(m)>201SiliconppmASTM D5185(m)>201SiliconppmASTM D5185(m)>201SiliconppmASTM D5185(							
Sample DateClient Info26 Mar 2024Machine AgemlsClient Info653640Oil AgemlsClient Info30696Filter AgemlsClient InfoMose96Oil ChangedClient InfoChangedFilter ChangedQuiter Client InfoChangedFilter ChangedQuiter Client InfoChangedSample StatusClient InfoChangedIronppmASTM D5185(m) >10019NickelppmASTM D5185(m) >201NickelppmASTM D5185(m) >30SilverppmASTM D5185(m) >400AluminumppmASTM D5185(m) >150LeadppmASTM D5185(m) >150SiliconppmASTM D5185(m) >253SiliconppmASTM D5185(m) >201SiliconppmASTM D5185(m) >253FuelWC Method>0.2NEGWaterique Mit D5185(m) >201SiliconppmASTM D5185(m) >253SiliconppmASTM D5185(m) >201FuelWC Method <t< th=""><th>Test</th><th>UOM</th><th>Method</th><th>Limit/Abn</th><th>Current</th><th>History1</th><th>History2</th></t<>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age     mls     Client Info     653640         Oil Age     mls     Client Info     30696         Filter Age     mls     Client Info     30696         Oil Changed     Client Info     Changed          Oil Changed     Client Info     Changed          Filter Changed     Client Info     Changed          Sample Status     NORMAL           Iron     ppm     ASTM D5185(m)     >100     19         Chromium     ppm     ASTM D5185(m)     >20     1         Nickel     ppm     ASTM D5185(m)     >20     13         Silver     ppm     ASTM D5185(m)     >30          Aluminum     ppm     ASTM D5185(m)     >20     13 <tr< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>WC0915464</th><th></th><th></th></tr<>	Sample Number		Client Info		WC0915464		
Oil AgemlsClient Info30696Filter AgemlsClient Info30696Oil ChangedClient InfoChangedFilter ChangedQlient InfoChangedSample StatusVVNORMALIronppmASTM D5185(m)>10019ChromiumppmASTM D5185(m)>201NickelppmASTM D5185(m)>40SilverppmASTM D5185(m)>30AluminumppmASTM D5185(m)>2013LeadppmASTM D5185(m)>304VanadiumppmASTM D5185(m)>3304SiliconppmASTM D5185(m)>201SiliconppmASTM D5185(m)>201SiliconppmASTM D5185(m)>201FuelWC Method>21WaterWC Method>0.2NEGGlycolWC Method>0.2NEGSoot %%%ASTM D7844*>30.4Soot %%Soot %%So	Sample Date		Client Info		26 Mar 2024		
Filter Age     mls     Client Info     30696         Oil Changed     Client Info     Changed         Filter Changed     Client Info     Changed         Sample Status     NORMAL         Iron     ppm     ASTM D5185(m)     >100     19        Chromium     ppm     ASTM D5185(m)     >20     1        Nickel     ppm     ASTM D5185(m)     >4     0        Titanium     ppm     ASTM D5185(m)     >4     0        Silver     ppm     ASTM D5185(m)     >3     0        Aluminum     ppm     ASTM D5185(m)     >3     0        Lead     ppm     ASTM D5185(m)     >330     4        Vanadium     ppm     ASTM D5185(m)     >15     0        Silicon     ppm     ASTM D5185(m)     >20     1        Vanadium     ppm	Machine Age	mls	Client Info		653640		
Oil ChangedClient InfoChangedFilter ChangedClient InfoChangedSample StatusVNORMALIronppmASTM D5185(m) >10019ChromiumppmASTM D5185(m) >201NickelppmASTM D5185(m) >40TitaniumppmASTM D5185(m) >30SilverppmASTM D5185(m) >400LeadppmASTM D5185(m) >400CopperppmASTM D5185(m) >150TinppmASTM D5185(m) >150SiliconppmASTM D5185(m) >223SiliconppmASTM D5185(m) >253FuelVC Method >5<1.0WaterjpmASTM D5185(m) >221SiliconppmASTM D5185(m) >253FuelVC Method >5<1.0WaterjpmASTM D5185(m) >22NEGGlycol%ASTM D5184>30.4Soot %%ASTM D7844'>30.4	Oil Age	mls	Client Info		30696		
Filter Changed     Client Info     Changed         Sample Status     NORMAL          Iron     ppm     ASTM D5185(m)     >100     19         Chromium     ppm     ASTM D5185(m)     >20     1         Nickel     ppm     ASTM D5185(m)     >20     1         Titanium     ppm     ASTM D5185(m)     >20     1         Silver     ppm     ASTM D5185(m)     >4     0         Aluminum     ppm     ASTM D5185(m)     >3     0         Lead     ppm     ASTM D5185(m)     >40     0         Tin     ppm     ASTM D5185(m)     >10         Vanadium     ppm     ASTM D5185(m)     >15     0        Silicon     ppm     ASTM D5185(m)     >25     3	Filter Age	mls	Client Info		30696		
Sample Status     NORMAL         Iron     ppm     ASTM D5185(m)     >100     19         Chromium     ppm     ASTM D5185(m)     >20     1         Nickel     ppm     ASTM D5185(m)     >4     0         Titanium     ppm     ASTM D5185(m)     >4     0         Silver     ppm     ASTM D5185(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >20     13         Lead     ppm     ASTM D5185(m)     >40     0         Copper     ppm     ASTM D5185(m)     >330     4         Vanadium     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >25     3         Silicon     ppm     ASTM D5185(m)     >20     1	Oil Changed		Client Info		Changed		
Iron     ppm     ASTM D5185(m)     >100     19         Chromium     ppm     ASTM D5185(m)     >20     1         Nickel     ppm     ASTM D5185(m)     >4     0         Titanium     ppm     ASTM D5185(m)     >4     0         Silver     ppm     ASTM D5185(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >3     0         Lead     ppm     ASTM D5185(m)     >20     13         Copper     ppm     ASTM D5185(m)     >40     0         Vanadium     ppm     ASTM D5185(m)     >330     4         Silicon     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >20     1         Fuel     WC Method <td< th=""><th>Filter Changed</th><th></th><th>Client Info</th><th></th><th>Changed</th><th></th><th></th></td<>	Filter Changed		Client Info		Changed		
Chromium     ppm     ASTM D5185(m)     >20     1         Nickel     ppm     ASTM D5185(m)     >4     0         Titanium     ppm     ASTM D5185(m)     >4     0         Silver     ppm     ASTM D5185(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >20     13         Lead     ppm     ASTM D5185(m)     >20     13         Copper     ppm     ASTM D5185(m)     >40     0         Vanadium     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >20     1         Fuel     WC Method     >5     <1.0         Water     WC Method     >0.2 <td< th=""><th>Sample Status</th><th></th><th></th><th></th><th>NORMAL</th><th></th><th></th></td<>	Sample Status				NORMAL		
Chromium     ppm     ASTM D5185(m)     >20     1         Nickel     ppm     ASTM D5185(m)     >4     0         Titanium     ppm     ASTM D5185(m)     >4     0         Silver     ppm     ASTM D5185(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >20     13         Lead     ppm     ASTM D5185(m)     >20     13         Copper     ppm     ASTM D5185(m)     >40     0         Vanadium     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >20     1         Fuel     WC Method     >5     <1.0         Water     WC Method     >0.2 <td< th=""><th></th><th></th><th></th><th>400</th><th>40</th><th></th><th></th></td<>				400	40		
Nickel     ppm     ASTM D5185(m)     >4     0         Titanium     ppm     ASTM D5185(m)     0     0         Silver     ppm     ASTM D5185(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >20     13         Lead     ppm     ASTM D5185(m)     >40     0         Copper     ppm     ASTM D5185(m)     >40     0         Tin     ppm     ASTM D5185(m)     >40     0         Vanadium     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >25     3         Silicon     ppm     ASTM D5185(m)     >20     1         Fuel     WC Method     >5     <1.0	-				-		
Titanium     ppm     ASTM D5185(m)     O         Silver     ppm     ASTM D5185(m)     >3     O         Aluminum     ppm     ASTM D5185(m)     >20     13         Lead     ppm     ASTM D5185(m)     >20     13         Copper     ppm     ASTM D5185(m)     >40     O         Tin     ppm     ASTM D5185(m)     >330     4         Vanadium     ppm     ASTM D5185(m)     >15     O         Silicon     ppm     ASTM D5185(m)     >25     3         Fuel     WC Method     >20     1          Water     WC Method     >0.2     NEG         Glycol     WC Method     >0.4							
Silver     ppm     ASTM D5185(m)     >3     0         Aluminum     ppm     ASTM D5185(m)     >20     13         Lead     ppm     ASTM D5185(m)     >40     0         Copper     ppm     ASTM D5185(m)     >40     0         Tin     ppm     ASTM D5185(m)     >15     0         Vanadium     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >25     3         Fuel     WC Method     >20     1         Water     WC Method     >20     1         Glycol     WC Method     >0.2     NEG         Soot %     %     ASTM D7844*     >3     0.4				>4			
Aluminum     ppm     ASTM D5185(m)     >20     13         Lead     ppm     ASTM D5185(m)     >40     0         Copper     ppm     ASTM D5185(m)     >40     0         Tin     ppm     ASTM D5185(m)     >15     0         Vanadium     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >25     3         Silicon     ppm     ASTM D5185(m)     >25     3         Fuel     WC Method     >5     <1.0         Water     WC Method     >0.2     NEG         Glycol     WC Method     >0.2     NEG         Soot %     %     ASTM D7844*     >3     0.4			· · /	-	-		
Lead     ppm     ASTM D5185(m)     >40     0         Copper     ppm     ASTM D5185(m)     >330     4         Tin     ppm     ASTM D5185(m)     >15     0         Vanadium     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >25     3         Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     WC Method     >5     <1.0			( )		-		
Copper     ppm     ASTM D5185(m)     >330     4         Tin     ppm     ASTM D5185(m)     >15     0         Vanadium     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >25     3         Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     WC Method     >5     <1.0         Water     WC Method     >0.2     NEG         Glycol     WC Method     >0.2     NEG         Soot %     %     ASTM D7844*     >3     0.4			· · · ·				
Tin     ppm     ASTM D5185(m)     >15     0         Vanadium     ppm     ASTM D5185(m)     >15     0         Silicon     ppm     ASTM D5185(m)     >25     3         Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     WC Method     >5     <1.0					-		
Vanadium     ppm     ASTM D5185(m)     0         Silicon     ppm     ASTM D5185(m)     >25     3         Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     WC Method     >5     <1.0         Water     WC Method     >0.2     NEG         Glycol     WC Method     >0.2     NEG         Soot %     %     ASTM D7844*     >3     0.4		ppm	· · · ·				
Silicon     ppm     ASTM D5185(m)     >25     3        Potassium     ppm     ASTM D5185(m)     >20     1         Fuel     WC Method     >5     <1.0		ppm	( )	>15	0		
Potassium     ppm     ASTM D5185(m)     >20     1        Fuel     WC Method     >5     <1.0         Water     WC Method     >0.2     NEG         Glycol     WC Method     >0.2     NEG         Soot %     %     ASTM D7844*     >3     0.4	Vanadium	ppm	ASTM D5185(m)		0		
Potassium     ppm     ASTM D5185(m)     >20     1        Fuel     WC Method     >5     <1.0         Water     WC Method     >0.2     NEG         Glycol     WC Method     >0.2     NEG         Soot %     %     ASTM D7844*     >3     0.4	Silicon	maa	ASTM D5185(m)	>25	3		
Fuel     WC Method     >5     <1.0			( )				
Glycol     WC Method     NEG        Soot %     %     ASTM D7844*     >3     0.4				>5	<1.0		
Glycol     WC Method     NEG        Soot %     %     ASTM D7844*     >3     0.4	Water		WC Method	>0.2	NEG		
Soot % % ASTM D7844* >3 0.4	Glycol		WC Method		NEG		
		%	ASTM D7844*	>3	0.4		
Nitration Abs/cm ASTM D7624* >20 8.4	Nitration	Abs/cm	ASTM D7624*	>20	8.4		
Sulfation Abs/.1mm ASTM D7415* >30 19.8	Sulfation	Abs/.1mm	ASTM D7415*	>30	19.8		
Emulsified Water scalar Visual* >0.2 NEG	Emulsified Water	scalar		>0.2	NEG		
Sodium ppm ASTM D5185(m) 2		ppm			2		
Boron     ppm     ASTM D5185(m)     2     2	Boron	ppm	ASTM D5185(m)	2	2		
Barium ppm ASTM D5185(m) 0 0	Barium	ppm		0	0		
Molybdenum     ppm     ASTM D5185(m)     50     59	Molybdenum	ppm	ASTM D5185(m)	50	59		
Manganese     ppm     ASTM D5185(m)     0     0	Manganese	ppm	ASTM D5185(m)	0			
Magnesium     ppm     ASTM D5185(m)     950     987	-	ppm		950	987		
Calcium     ppm     ASTM D5185(m)     1050     1058	Calcium	ppm	ASTM D5185(m)		1058		
Phosphorus     ppm     ASTM D5185(m)     995     979	Phosphorus	ppm	ASTM D5185(m)	995	979		
Zinc ppm ASTM D5185(m) 1180 1179	Zinc	ppm		1180	1179		
Sulfur     ppm     ASTM D5185(m)     2600     2393	Sulfur	ppm	ASTM D5185(m)	2600	2393		
Oxidation     Abs/.1mm     ASTM D7414*     >25     16.2	Oxidation	Abs/.1mm	ASTM D7414*	>25	16.2		
Visc @ 100°C cSt ASTM D7279(m) 12.00 11.7	Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.7		

Contact/Location: Todd Smith - MANLIV





MANITOULIN TRANSPORT Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. Received 75 MUMFORD ROAD : WC0915464 : 05 Apr 2024 Lab Number : 02626912 Tested LIVELY, ON : 05 Apr 2024 ISO 17025:2017 Accredited Laboratory Diagnosed Unique Number : 5760044 : 05 Apr 2024 - Wes Davis CA P3Y 1L1 Test Package : MOB 1 Contact: Todd Smith To discuss this sample report, contact Customer Service at 1-800-268-2131. tosmith@manitoulintransport.com T: (705)562-3302 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied. F: x:

Contact/Location: Todd Smith - MANLIV Page 2 of 2