

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

Machine Id 815005 Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. No other corrective action is recommended at this time. (Customer Sample Comment: Unknown fluid age)

WEAR	

All component wear rates are normal.

CONTAMINATION

Light fuel dilution occurring. No other contaminants were detected in the oil.

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TestUOMMethodLimit/AmCurrentHistory1History2Sample NumberIClient InfoIGFL0095028Sample DateClient InfoU4 Nov 2023Machine AgehrsClient InfoI6439Oil AgehrsClient Info0Filter AgehrsClient InfoOOil ChangedCClient InfoChangedFilter ChangedIClient InfoNORMALFilter ChangedIClient InfoSample StatusSample StatusVVKTM D5185(m)>120633NickelppmASTM D5185(m)>20NickelppmASTM D5185(m)>20NickelppmASTM D5185(m)>205SilverppmASTM D5185(m)>205LeadppmASTM D5185(m)>302VanadiumppmASTM D5185(m)>201SiliconppmASTM D5185(m)>201VanadiumppmASTM D5185(m)>201VanadiumppmASTM D5185(m)>201 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>							
Sample Date Client Info 04 Nov 2023 Machine Age hrs Client Info 16439 Oil Age hrs Client Info 0 Filter Age hrs Client Info 0 Oil Changed Client Info 0 Filter Changed Client Info Changed Filter Changed Client Info Changed Sample Status Viant Client Info Changed Iron ppm ASTM D5185(m)<>120 63 Iron ppm ASTM D5185(m)<>20 <1 Nickel ppm ASTM D5185(m)<>22 0 Silver ppm ASTM D5185(m) >22 0 Lead ppm ASTM D5185(m) >	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age hrs Client Info 16439 Oil Age hrs Client Info 0 Filter Age hrs Client Info 0 Oil Changed Client Info 0 Oil Changed Client Info Changed Filter Changed Client Info Changed Sample Status View NORMAL Iron ppm ASTM D5185(m) >120 63 Nickel ppm ASTM D5185(m) >20 <1 Nickel ppm ASTM D5185(m) >2 0 Silver ppm ASTM D5185(m) >20 5 Lead ppm ASTM D5185(m) >30 2	Sample Number		Client Info		GFL0095028		
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Chromium ppm ASTM D5185(m) >20 <1	Sample Status				NORMAL		
Chromium ppm ASTM D5185(m) >20 <1							
Nickel ppm ASTM D5185(m) >5 <1	Iron	ppm	ASTM D5185(m)	>120	63		
Titanium ppm ASTM D5185(m) >2 0 Silver ppm ASTM D5185(m) >2 0 Aluminum ppm ASTM D5185(m) >20 5 Lead ppm ASTM D5185(m) >40 5 Copper ppm ASTM D5185(m) >40 5 Tin ppm ASTM D5185(m) >40 5 Tin ppm ASTM D5185(m) >330 2 Vanadium ppm ASTM D5185(m) >1 Silicon ppm ASTM D5185(m) >20 1 Fuel % ASTM D5185(m) >20 1 Water WC Method >0.2 NEG Glycol % ASTM D7624* >20	Chromium	ppm	ASTM D5185(m)	>20	<1		
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Tin ppm ASTM D5185(m) >15 1 Vanadium ppm ASTM D5185(m) >15 0 Silicon ppm ASTM D5185(m) >25 9 Potassium ppm ASTM D5185(m) >20 1 Fuel % ASTM D5185(m) >20 1 Water Q ASTM D5185(m) >20 1 Water WC Method >0.2 NEG Soot % % ASTM D7844* >4 0.9 Nitration Abs/cm ASTM D7624* >20 17.0 Sulfation Abs/.1mm ASTM D7415* >30 31.8 Emulsified Water scalar Visual* >0.2 NEG	Lead	ppm	ASTM D5185(m)	>40	5		
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Silicon ppm ASTM D5185(m) >25 9 Potassium ppm ASTM D5185(m) >20 1 Fuel % ASTM D5185(m) >20 1 Water % ASTM D7593* >3.0 2.9 Glycol WC Method >0.2 NEG Soot % % ASTM D7844* >4 0.9 Nitration Abs/cm ASTM D7624* >20 17.0 Sulfation Abs/.1mm ASTM D7415* >30 31.8	Tin	ppm	ASTM D5185(m)	>15	1		
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Glycol WC Method NEG Soot % % ASTM D7844* >4 0.9 Nitration Abs/cm ASTM D7624* >20 17.0 Sulfation Abs/.1mm ASTM D7614* >30 31.8 Emulsified Water scalar Visual* >0.2 NEG		70			-		
Soot % % ASTM D7844* >4 0.9 Nitration Abs/cm ASTM D7624* >20 17.0 Sulfation Abs/.1mm ASTM D7415* >30 31.8 Emulsified Water scalar Visual* >0.2 NEG				>0.2			
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Sulfation Abs/.1mm ASTM D7415* >30 31.8 Emulsified Water scalar Visual* >0.2 NEG		,.					
Emulsified Water scalar Visual* >0.2 NEG					-		
Sodium ppm ASTM D5185(m) 10	Emuisified water	scalar	visuai"	>0.2	NEG		
	Sodium	ppm	ASTM D5185(m)		10		
Boron ppm ASTM D5185(m) 0 25	Boron	ppm	ASTM D5185(m)	0	25		
Barium ppm ASTM D5185(m) 0 0	Barium	ppm	ASTM D5185(m)	0	0		
Molybdenum ppm ASTM D5185(m) 60 44	Molybdenum		ASTM D5185(m)	60	44		
Manganese ppm ASTM D5185(m) 0 <1	-		ASTM D5185(m)	0	<1		
Magnesium ppm ASTM D5185(m) 1010 492	-		ASTM D5185(m)	1010			
Calcium ppm ASTM D5185(m) 1070 1612	-						
Phosphorus ppm ASTM D5185(m) 1150 698	Phosphorus		ASTM D5185(m)		698		
Zinc ppm ASTM D5185(m) 1270 869	-						
Sulfur ppm ASTM D5185(m) 2060 1826							
Oxidation Abs/.1mm ASTM D7414* >25 41.3							
Visc @ 100°C cSt ASTM D7279(m) 15.4 13.3							

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Submitted By: Derek Jessop



