

OIL ANALYSIS REPORT

Sample Rating Trend





In 185835]
Machine Id 9119
Component
Diesel Engine

PETRO CANADA DURON SHP 15W40 (30 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

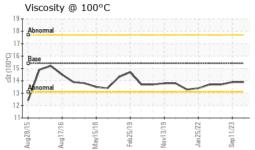
Fluid Condition

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

		ug2015 Au		52019 Nov2019 Jan2022	Sep2023	
SAMPLE INFORM	MOITA	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0875080	GFL0094220	GFL0091053
Sample Date		Client Info		28 Nov 2023	11 Sep 2023	11 Aug 2023
Machine Age	hrs	Client Info		16247	399210	399210
Oil Age	hrs	Client Info		558	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	10	5	13
Chromium	ppm	ASTM D5185(m)	>20	0	0	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	4	1	3
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	1	<1	2
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Antimony	ppm	ASTM D5185(m)		0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	2	2	4
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	60	58	57	60
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	930	939	978
Calcium	ppm	ASTM D5185(m)	1070	1025	1038	1046
Phosphorus	ppm	ASTM D5185(m)	1150	952	1036	1040
Zinc	ppm	ASTM D5185(m)	1270	1173	1158	1202
Sulfur	ppm	ASTM D5185(m)	2060	2381	2493	2372
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	3	4	3
Sodium	ppm	ASTM D5185(m)		3	2	8
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	0.7	0.3	0.6
Nitration	Abs/cm	ASTM D7624*	>20	8.6	6.1	8.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.3	18.9	21.8



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FLUID DEGRADA	method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.7	13.8	16.7	
VISUAL		method	limit/base	current	history1	history2	
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG	
Free Water	scalar	Visual*		NEG	NEG	NEG	
FLUID PROPERT	FLUID PROPERTIES		limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.9	13.9	13.7	

/ISC @ 100°C	cSt	ASTI	M D/2/9(m)	15.4	13.9		13.9		13.7	
GRAPHS										
Iron (ppm)					Lead (pp	m)				
Severe					Severe					
					60					
Abnormal					E Abrama					
		_^			20		THE			
Aug28/15 -	Feb25/19	Nov13/19 -	Jan25/22 -	Sep11/23	Aug28/15	May15/18	Feb25/19	Nov13/19	Jan25/22	Can11/73
	Feb2	Nov	Jan2	Sep1				Nov	Janž	Cen
Aluminum (ppm)					Chromiu 50 T	m (ppm)			
Severe					40 - Severe	1 1 1				
					30					
Abnormal					Abnormal					
		/`	L		10-		-1-1-1			
	_	_/_		~	0					
Aug28/15 Aug17/16 May15/18	Feb25/19	Nov13/19	Jan25/22	Sep11/23	Aug28/15	May15/18	Feb25/19	Nov13/19	Jan25/22	Con 11/22
ॡ है हैं Copper (ppm)	æ	Ž	J _e	Š	₹ ₹ Silicon (뽄	Ž	J _S	2
Severe (ppin)	7-7-7-		7-7-6-1		100	2011)				
Abnormal	+				80 - Severe			4		
					E 60-					
\					40+					
					20 - Abnormal	1-1-1-				
18	19	61	22	23	0 12 9	18	19	- E	722	22
Aug28/15-	Feb25/19	Nov13/19	Jan25/22	Sep11/23	Aug28/15	May15/18	Feb25/19	Nov13/19	Jan25/22	San11/23
Viscosity @ 100°0					Soot %	_				
Abnormal			1. [7.0 Severe		7777		7777	
					5.0					
					84.0 Abnormal					
Base	~									
Base	\wedge				2.0					
Apnormal	^				2.0					
	Feb25/19	Nov13/19	Jan 25/22	Sep11/23	2.0	May15/18	Feb25/19	Nov13/19	Jan25/22	Sen11/73



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5694013 Test Package : MOB 1

: WC0875080 : 02600928

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Received Diagnosed : 05 Dec 2023 Diagnostician : Wes Davis

: 05 Dec 2023

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 217 - Aurora 14131 BAYVIEW AVE, AURORA YARD AURORA, ON

CA L4G 0K6 Contact: Mike Havens MHavens@gflenv.com

F: (905)713-2445

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.