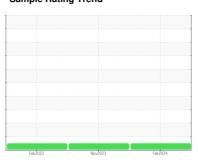


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id **613439**

Component **Diesel Engine**

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

DIAGNOSIS

Recommendation

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.

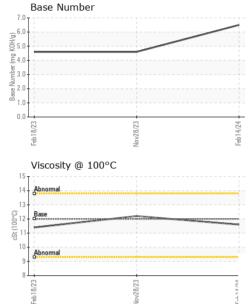
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

QTS)		Feb	2023	Nov2023 Feb202	14	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110668	PCA0097368	PCA0083846
Sample Date		Client Info		14 Feb 2024	28 Nov 2023	18 Feb 2023
Machine Age	mls	Client Info		259268	240280	165306
Oil Age	mls	Client Info		18988	74974	77202
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	25	52	31
Chromium	ppm	ASTM D5185m	>20	1	3	3
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		58	15	4
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m		8	13	10
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m		11	39	42
Tin	ppm	ASTM D5185m	>15	0	2	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm		2	52	3	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	50	21	56	25
Manganese	ppm	ASTM D5185m		<1	1	2
Magnesium	ppm	ASTM D5185m	950	693	996	431
Calcium	ppm	ASTM D5185m		2028	1364	594
Phosphorus	ppm	ASTM D5185m	995	1218	1097	433
Zinc Sulfur	ppm	ASTM D5185m ASTM D5185m	1180 2600	1570 4762	1332 2838	574 957
CONTAMINAN						history2
		method ASTM D5185m	limit/base	current	history1	·
Silicon Sodium	ppm	ASTM D5185m	>25	7	8	5 4
Potassium	ppm ppm	ASTM D5185m	>20	7	16	19
INFRA-RED	ррпп		limit/base			history2
	0/	method		current	history1	·
Soot % Nitration	% Abs/cm	*ASTM D7844 *ASTM D7624	>3 >20	1 9.7	2.5 12.9	2.3 15.1
Sulfation	Abs/.1mm	*ASTM D7624		9.7 21.8	27.7	29.8
FLUID DEGRAD			limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	21.5	23.9
Base Number (BN)	mg KOH/g	ASTM D2896		6.5	4.6	4.6



OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.6	12.2	11.4

V13C @ 100 C	COL	AOTIVI DTTO	12.00	11.0	12.2	11.7
GRAPHS						
Iron (ppm)				Lead (ppm)		
250 T				Severe		
				_ 60-		
Abnormal				Abnormal	***************************************	
50				20		
0 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	73		74	0 1 23		- 45
Feb 18/23	Nov28/23		Feb14/24	Feb18/23	Nov28/23	Feb14/24
Aluminum (ppm))			Chromium (ppm)	
50 T				Severe		
= 30				20		
20 Abnormal			-	Abnormal	***************************************	
10-				10		
0 1/23	1/23		1/24)733 To	- 1/23	124
Feb18/23	Nov28/23		Feb14/24	Feb18/23	Nov28/23	Feb14/24
Copper (ppm)				Silicon (ppm	1)	
400 T Severe				80 - Severe		
300+				60		
E 200				Abnormal	:	1
100				20		
123	123		124	7370	- 1/23	- 45/
Feb18/23	Nov28/23		Feb14/24	Feb18/23	Nov28/23	Feb14/24
Viscosity @ 100°	С			Base Numbe	er	
16 T				0.8 3E/8)		
Abnormal				0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		
000112 Base			-	a 4.0		
Abnormal				2.0		
/23 8	/23		724	0.0		724
Feb 18/23	Nov28/23		Feb14/24	Feb18/23	Nov28/23	Feb14/24





Laboratory Sample No.

Lab Number : 06106945 Unique Number : 10910442

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0110668

Received **Tested** Diagnosed

: 04 Mar 2024 : 04 Mar 2024 Test Package: MOB 1 (Additional Tests: TBN)

: 06 Mar 2024 - Sean Felton

66 KELLER AVENUE LANCASTER, PA

US 17601 Contact: RON ROBERTS rroberts@millertransgroup.com

T: (717)945-6205

MILLER TRUCK LEASING #123

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (717)945-5818 Contact/Location: RON ROBERTS - MILLAN

Report Id: MILLAN [WUSCAR] 06106945 (Generated: 03/06/2024 10:01:03) Rev: 1