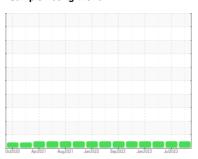


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id **8534** Component

Diesel Engine

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

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.

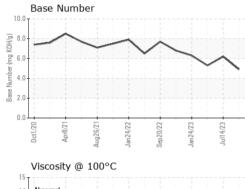
GAL)		0ct2020 A	pr2021 Aug2021 Jan	2022 Sep2022 Jan2023	Jul2023	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0051822	PCA0088601	PCA0073378
Sample Date		Client Info		21 Dec 2023	14 Jul 2023	22 May 2023
Machine Age	mls	Client Info		475606	436806	410900
Oil Age	mls	Client Info		35000	32000	29700
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	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 METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	22	19	37
Chromium	ppm	ASTM D5185m	>20	2	1	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	7	4	13
Copper	ppm	ASTM D5185m	>330	<1	0	1
Tin	ppm	ASTM D5185m	>15	0	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	12	10	0
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m	50	36	53	65
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	950	963	977	1044
Calcium	ppm	ASTM D5185m	1050	1441	1169	1187
Phosphorus	ppm	ASTM D5185m	995	960	992	1056
Zinc	ppm	ASTM D5185m	1180	1190	1277	1370
Sulfur	ppm	ASTM D5185m	2600	3180	3225	3126
CONTAMINAN		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	3	3
Sodium	ppm	ASTM D5185m	00	2	2	4
Potassium	ppm	ASTM D5185m		<1	<1	<1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	0.4	0.6
Nitration	Abs/cm	*ASTM D7624	>20	11.8	11.6	13.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.4	23.5	27.0
FLUID DEGRAD		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.2	20.4	25.3
Base Number (BN)	mg KOH/g	ASTM D2896		4.9	6.2	5.3

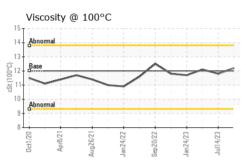
Contact/Location: FRANK DIETZ - MIDFAR



OIL ANALYSIS REPORT

GRAPHS





VISUAL		method				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
	DTIEO		Proc 24 /leanning		la fact a consider	la la va o

LLUID FUOF		memod			HISTOLAL	HISTOLYZ
Visc @ 100°C	cSt	ASTM D445	12.00	12.2	11.8	12.1

Iror	n (ppm)					Lead (ppm)
00 Sever	re						80 Severe
50 - Abno	ormal						E 40 Abnormal
50					ļļ		20
Oct1/20	Apr8/21	Aug26/21	Jan24/22 -	Sep20/22 -	Jan24/23	Jul14/23	Oct1/20 Aug26/21
	minum			0,	,		Chromium (ppm)
50 Sever	re						50 40 <u>Severe</u>
30 - Abno							E 30 Abnormal
20 Abno	imai		1				B 20 Abnormal
	21	21	22	22	23	23	
Oct1/20	Apr8/21	Aug26/21	Jan24/22	Sep20/22	Jan24/23	Jul14/23	Oct1/20 Apr8/21 Aug26/21 Jan24/22 Sep20/22 Jul14/23
	per (p	pm)					Silicon (ppm)
Sever Pabric	mal						60
10							ã 40 -
10							Abnormal 20
0ct1/20	Apr8/21-	3/21	1/22	1/22	- EZ/	1/23	Oct1/20 Apr6/21 ug26/21 an24/22 - ep20/22 -
		Aug26/21	Jan24/22	Sep20/22	Jan24/23	Jul14/23	4 7 8 7
Viso	cosity (a 100°	,C			,	Base Number
Abno	rmal					-	6.0 mm per (md 4.0)
2 - Base				_			E 6.0
			-				E





Certificate L2367

Laboratory Sample No.

Lab Number : 06094776 Unique Number: 10887629 Test Package : MOB1+

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0051822

Received : 20 Feb 2024 **Tested** Diagnosed

: 21 Feb 2024 : 21 Feb 2024 - Wes Davis

Jul14/23

2169 MUSTANG DR MOUNDS VIEW, MN

US 55112 Contact: FRANK DIETZ frank.dietz@mmeinc.com T: (763)225-6382

MIDWEST MOTOR EXPRESS

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: x: