

# **OIL ANALYSIS REPORT**



#### Machine Id **341315** Component **Diesel Engine** Fluid **PETRO CANADA DURON SHP 10W30 (--- GAL)**

# DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

# Wear

All component wear rates are normal.

#### Contamination

Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

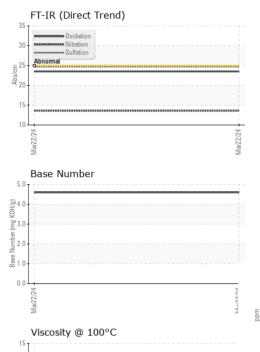
### Fluid Condition

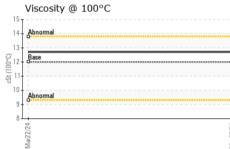
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

AL)				Mar2024		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0087331		
Sample Date		Client Info		22 Mar 2024		
Machine Age	mls	Client Info		17631		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	.S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	70		
Chromium	ppm	ASTM D5185m	>20	2		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	22		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	56		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	41		
Barium	ppm	ASTM D5185m	0	2		
Molybdenum	ppm	ASTM D5185m	50	108		
Manganese	ppm	ASTM D5185m	0	6		
Magnesium	ppm	ASTM D5185m	950	684		
Calcium	ppm	ASTM D5185m	1050	1263		
Phosphorus	ppm	ASTM D5185m	995	714		
Zinc	ppm	ASTM D5185m	1180	832		
Sulfur	ppm	ASTM D5185m	2600	2902		
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	25		
Sodium	ppm	ASTM D5185m		7		
Potassium	ppm	ASTM D5185m	>20	65		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.6		
Nitration	Abs/cm	*ASTM D7624	>20	13.6		
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.7		
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
FLUID DEGRA	DATION Abs/.1mm	method *ASTM D7414	limit/base >25	current 23.5	history1	history2



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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPE		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	12.7		
GRAPHS						
Iron (ppm)			10	Lead (ppm)		
200 Severe			8	30 - Severe		
150 100 - Abnormal			udd d	50 <b>-</b>		
a 100 - Abnormal			ā 4	+0 - Abnormal		
50				20		
0 4 1 0				724		
Mar22/24			Mar22/24	Mar22/24		
Aluminum (ppm)				Chromium (p	pm)	
50 40 Severe				Severe		
and a second sec			und 2	Abnormal		
				10 -		
0				0		
Mar22/24			Mar22/24	Mar22/24		
			Mar			
Copper (ppm)				Silicon (ppm)		
Aphiomat						
300				50		
틆 200 -			ud 4	Abnormal		
100-			2	20		
0				04		
Mar2/24			Mar22/24	Mar22/24		
≤ Viscosity @ 100°C			Ň	≊ Base Numbei	-	
<sup>16</sup> T			5	.0 <del>,</del> ,		
Abnormal			(b) 4. Hoy Bu 3. u aquin 2. equin 1.	.0		
(2-00) 12- 8ase			<u></u> 3	.0-		
			aquin 2	.0		
10 Abnormal			as 1.	.0 0 0		
24 74 8				.0		
2			Mar22/24	Mar22/24		
Mar2./24			5	5		



Unique Number : 10978335 Diagnosed : 16 Apr 2024 - Sean Felton Test Package : MOB 1 (Additional Tests: TBN) Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jkeen@millertransgroup.com \* - 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)

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> F: (856)696-5629 Contact/Location: JOHN KEEN - MILVIN

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Contact: JOHN KEEN