

# **OIL ANALYSIS REPORT**

Sample Rating Trend





# Component

Diesel Engine

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

## 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

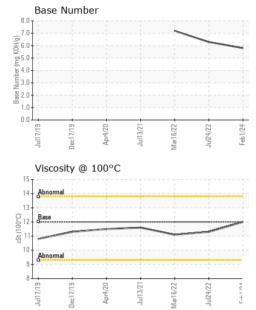
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110659	PCA0071751	PCA0061087
Sample Date		Client Info		01 Feb 2024	24 Jul 2022	16 Mar 2022
Machine Age	mls	Client Info		267385	162853	141665
Oil Age	mls	Client Info		46256	56072	34884
Oil Changed		Client Info		Not Changd	Changed	Not Changd
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	47	45	33
Chromium	ppm	ASTM D5185m	>20	2	4	3
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		15	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	24	28	23
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	9	22	21
Tin	ppm		>15	<1	2	2
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	4	7	11
Barium	ppm	ASTM D5185m	0	25	0	0
Molybdenum	ppm	ASTM D5185m	50	54	56	60
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	950	803	853	923
Calcium	ppm	ASTM D5185m	1050	1162	1078	1134
Phosphorus	ppm	ASTM D5185m	995	1010	793	889
Zinc	ppm	ASTM D5185m	1180	1163	1054	1181
Sulfur	ppm	ASTM D5185m	2600	2936	2349	2342
CONTAMINAN		method	limit/base	current	history1	history2
Silicon	ppm		>25	6	6	6
Sodium	ppm	ASTM D5185m		0	4	2
Potassium	ppm	ASTM D5185m		20	38	36
INFRA-RED		method	limit/base	current	history1	history2
INFRA-RED Soot %	%	method *ASTM D7844	limit/base >3	current 2.1	history1 1.6	history2 1
INFRA-RED Soot % Nitration	% Abs/cm	method *ASTM D7844 *ASTM D7624	limit/base >3	current 2.1 10.8	history1 1.6 11.8	history2 1 9.8
INFRA-RED Soot %	%	method *ASTM D7844	limit/base >3	current 2.1	history1 1.6	history2 1
INFRA-RED Soot % Nitration	% Abs/cm Abs/.1mm	method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >3 >20	current 2.1 10.8	history1 1.6 11.8	history2 1 9.8
INFRA-RED Soot % Nitration Sulfation	% Abs/cm Abs/.1mm	method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >3 >20 >30	current 2.1 10.8 25.3	history1 1.6 11.8 26.3	history2 1 9.8 22.3
INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	% Abs/cm Abs/.1mm DATION	method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	limit/base >3 >20 >30 limit/base	current 2.1 10.8 25.3 current	history1 1.6 11.8 26.3 history1	history2 1 9.8 22.3 history2

Contact/Location: RON ROBERTS - MILLAN



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				Free Water FLUID PF Visc @ 100°C	;	scalar RTIES cSt	*Visual method ASTM D445	limit/bas 12.00	NEG cur 12.0	rrent	NEG history1 11.3		NEG histor 11.1	ry2
100 ETT	Juli 3/21	Jui24/22	250 200 150 150 50 50 50	Abnormal	Apr4/20	Juli 3/21	Mart 6/22 +	Feb1/24	Lead (		Juli321-	Mar16/22	Jul24/22	Feb1/24
			50 40 <u>5</u> 20 10 0	Abnormal	Apr4/20	12/E LIN	Mart 6/22 +	Feb1/24	Severe 30 40 30 40 30 40 50 40 50 60//10 60	nium (pp		Mar16/22	Jul24/22 +	Feb1/24
			500 400 500 200 100 0	Severe Schoomal	m)	Jult3/21+	lar16/22	Feb1/24	Silicon 60 40 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(ppm)	12/E Linc	lar16/22 + 1	Jul24/22 +	Feb1/24
			16 (3-001) 75 10 10	Viscosity @ Abnormal Base Abnormal	100°C				Base 1 6.0 4.0 2.0	Number		/		Feb1/24
TEING	TABLE L2367	Laborato Sample I Lab Nun Unique Nu Test Pacl	bry : W No. : Pr ber : 06 mber : 10	Viscosity @	100°C	1 Madisco Recei Teste Diagr	Tossed 122	Feb1/24 Base Number (mo KOHio)	Base M 6.0 4.0 0.0 0.0 0.0 0.0 0.0	Number 66(1/1/10 66(1/1/10 000 000 000 000 000 000 000 000 0	-12/EIIInf	KELLE LANC	ASING F R AVE ASTEF US 1	#12 NU 3, P

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