

OIL ANALYSIS REPORT

Area (89686X) Walgreens Machine Id [Walgreens] 136A67125 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: resample) $% \label{eq:commutative}$

Wear

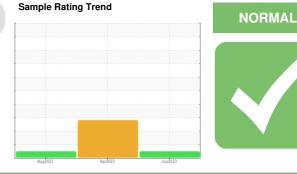
All component wear rates are normal.

Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

Fluid Condition

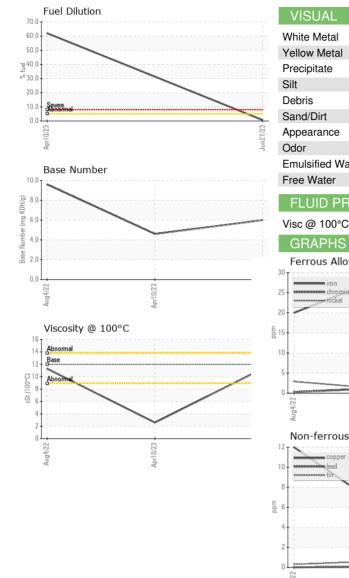
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



SAMPLE INFORM	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0097090	PCA0095121	PCA0078505
Sample Date		Client Info		27 Jun 2023	10 Apr 2023	04 Aug 2022
Machine Age	mls	Client Info		443367	451920	409920
Oil Age	mls	Client Info		8447	30000	409920
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	SEVERE	NORMAL
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>110	8	30	20
Chromium	ppm	ASTM D5185m	>4	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	3
Titanium	ppm	ASTM D5185m		0	1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	11	4
Lead	ppm	ASTM D5185m	>45	<1	<1	0
Copper	ppm	ASTM D5185m	>85	1	5	12
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	2	2	<1	12
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	62	23	58
Manganese	ppm	ASTM D5185m	0	<1	2	<1
Magnesium	ppm	ASTM D5185m	950	901	287	849
Calcium	ppm	ASTM D5185m	1050	1071	352	1059
Phosphorus	ppm	ASTM D5185m	995	1019	301	924
Zinc	ppm	ASTM D5185m	1180	1219	370	1148
Sulfur	ppm	ASTM D5185m	2600	3402	805	2930
CONTAMINAN	TS	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>30	4	16	5
Sodium	ppm	ASTM D5185m		0	47	0
Potassium	ppm	ASTM D5185m	>20	2	12	<1
Fuel	%	ASTM D3524	>5	0.6	62.0	<1.0
INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	1.5	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	12.7	6.9	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.3	12.6	19.6
FLUID DEGRAD	DATION	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.4	7.7	15.3
Base Number (BN)	mg KOH/g	ASTM D2896		6.0	4.6	9.6



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	VISUAL		method	limit/base	current	history 1	history 2
	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
Jun 27/23	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
2 Unit	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	BTIES	method	limit/base	current	history 1	history 2
	Visc @ 100°C	cSt	ASTM D445		11.3	2.6	11.3
	GRAPHS			. 2.00			
	Ferrous Alloys						
	30 iron						
Apr10/23	25 - chromium						
Ar	20						
	톨 15						
	10-						
	5						
				Sterner,			
	Aug4/22	Apr10/23		Jun27/23			
\checkmark				ղոր			
	Non-ferrous Meta	ls					
Apr10/23	12 copper						
Ap	10 - management lead						
	8-						
	Ē 6						
	4						
	2						
				-			
	Aug4/22	Apr10/23		Jun27/23			
	3nv	Apri		Juni			
	4						
	⊲ Viscosity @ 100°	C			Base Numbe	ar.	
	Viscosity @ 100°(С		10.0	Base Numbe	er	
	Viscosity @ 100°	C				er	
	Viscosity @ 100°(14 Abnormal 12 Base	C				؛r	
	Viscosity @ 100°(14 Abnormal 12 Base	C				917	
	Viscosity @ 100°(14 Abnormal 12 Base						
	Viscosity @ 100°	C					
	Viscosity @ 100°(14 Abnormal 12 Base		/	(b)HOJ Bull 4.0		er	
	Viscosity @ 100°(14 Abnormal 12 Base		/			217	
	Viscosity @ 100°C			(0, 8.0 (0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0			
	Viscosity @ 100°C			(0, 8.0 (0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0			
	Viscosity @ 100°C	Aprilo23		(0)HOX Buy Jack Kon Hox Base Mumber Aron Base State 2.0		err Apritorza	
l shorstory	Viscosity @ 100°C	Aprio(23		(0)HOX Bull Hard 4.0 Bull Hard 4.0 EZ/LZUMP	Aug4/22	Apr10/23	
Laboratory Sample No.	Viscosity @ 100°C	ET Madis		(0)HOX Bu) Jaquiny Beg 2.0 c2/L2 uny ry, NC 27513	Aug4/22	ECOLOGY ce - Shop 1373 - Berkeley-J	Anderson/Pendergra
Sample No.	Viscosity @ 100°C	EZODIJudy 501 Madia Received	d : 30 .	(0)HOX Bull Hard 4.0 Bull Hard 4.0 EZ/LZUMP	Aug4/22	ce - Shop 1373 - Berkeley- 101 All	iance Parkwa
	Viscosity @ 100°0	501 Madia Received Diagnose Diagnose	d : 30 . ed : 04 . tician : Dor	(0)HOX BU JAGE 2.0 CULTURY, NC 27513 Jun 2023 Jul 2023	Aug4/22	ce - Shop 1373 - Berkeley- 101 All	Anderson/Pendergra
Sample No. Lab Number Unique Number tificate 12367 Test Package	Viscosity @ 100°0	501 Madia Received Diagnose Diagnose Tests: Pe	d : 30 c ed : 04 c tician : Dor ercentFuel)	(0)Hoy bu) Jaquing eee (0)Hoy bu) Jaquing eee 2.0 0.0 FZ/ZZUNY NC 27513 Jun 2023 Jun 2023 Jul 2023 a Baldridge	Aug4/22	ce - Shop 1373 - Berkeley- 101 All	Anderson/Pendergra iance Parkwa Villamston, S US 2969 Sonny Bouche
Sample No. Lab Number Unique Number	Viscosity @ 100°C	501 Madia Received Diagnost Tests: Pe vice at 1-8	d : 30 . ed : 04 . tician : Dor ercentFuel) 800-237-1369	ry, NC 27513 Jun 2023 Baldridge	Aug4/22	ce - Shop 1373 - Berkeley- 101 All Contact: S sboucher@tr	Anderson/Pendergra iance Parkwa Villamston, S US 2969

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