

OIL ANALYSIS REPORT

Area (54076Z) Walgreens Machine Id [Walgreens] 136A63421 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

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 suitable for further service.

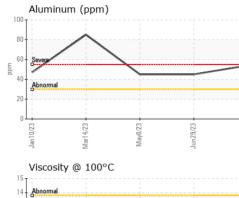
AL)		Jan2023	Mar2023	May2023 Jun2023	Jui/023	
SAMPLE INFORM	/IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0100238	PCA0100259	PCA0094661
Sample Date		Client Info		13 Jul 2023	29 Jun 2023	08 May 2023
Machine Age	mls	Client Info		120044	114490	90353
Oil Age	mls	Client Info		57983	52429	28292
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	2	mothod	limit/base	ourropt	history1	history2
		method		current		
lron	ppm	ASTM D5185m	>80	44	39	28
Chromium	ppm	ASTM D5185m	>5	4	4	3
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>30	54	45	45
Lead	ppm	ASTM D5185m	>30	<1	<1	1
Copper	ppm	ASTM D5185m	>150	66	65	98
Tin	ppm	ASTM D5185m	>5	1	1	1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	3	3	6
Barium	ppm	ASTM D5185m	0	0	<1	0
Molybdenum	ppm	ASTM D5185m	50	62	60	60
Manganese	ppm	ASTM D5185m	0	2	2	2
Magnesium	ppm	ASTM D5185m	950	979	930	973
Calcium	ppm	ASTM D5185m	1050	1452	1396	1417
Phosphorus	ppm	ASTM D5185m	995	960	922	992
Zinc	ppm	ASTM D5185m	1180	1252	1194	1301
Sulfur	ppm	ASTM D5185m	2600	2487	2357	2779
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm		>20	7	7	6
Sodium	ppm	ASTM D5185m		4	5	3
Potassium	ppm	ASTM D5185m	>20	105	96	73
INFRA-RED		method	limit/base	current	history1	history2
	%	*ASTM D7844	>3	0.9	0.8	0.5
Soot %		*AOTM D7004	>20	11.4	10.4	8.7
	Abs/cm	*ASTM D7624	20			
Soot % Nitration Sulfation	Abs/cm Abs/.1mm	*ASTM D7624 *ASTM D7415		23.8	23.1	21.0
Nitration	Abs/.1mm	*ASTM D7415				21.0 history2
Nitration Sulfation	Abs/.1mm	*ASTM D7415	>30 limit/base	23.8	23.1	

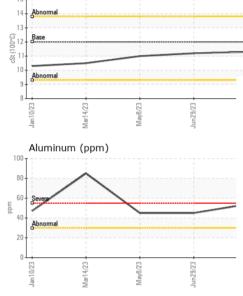
Sample Rating Trend

NORMAL



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		*Visual	NONE	NONE	NONE	NONE
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris		*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
May6/23 Jun29/23 Jul13/23	Appearance		*Visual	NORML	NORML	NORML	NORML
May Jun2 Jul1	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water		*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	11.3	11.2	11.0
	GRAPHS						
	Ferrous Alloys						
/23	50- iron						
May6/23 Jun29/23	nickel						
	40						
	§ 30 -						
	20-						
	10						
	0/23	May8/23 -	9/23 -	3/23			
	Jan 10/23 Mar1 4/23	May	Jun29/23	Jul13/23			
	Non-ferrous Metal	s					
May6/23 Jun29/23	200 copper		1				
,	sessesses lead						
	150 tin		· · · · · · · · · · · · · · · · · · ·				
E							
칍	100-						
	50 -						
	50-						
	0						
	Jan 10/23 Mar1 4/23	May8/23	Jun29/23	Jul13/23			
	Jan j	Mar	Jun	յու			
	Vienzeih (@ 10000						
	Viscosity @ 100°C				Base Number		
	15	•		9.0	Base Number		
				8.0			
	15 14 Abnormal 13			8.0			
	15 14 Abnormal 13			8.0		\frown	
	15 14 Abnormal 13			8.0		\frown	
10-0011-400	15 14 Abnormal 13 14 Base 11 10 11 10			8.0		\frown	
	15 14 Abnormal 13 5 12 Base			8.0 (0,7.0 U) HO 6.0 U) J 5.0 du 1, 1 du 1, 1 see 8 2.0		~	
	15 14 Abnormal 13 14 Base 11 12 Base 11 10 Abnormal 11 10 Abnormal			8.0 (9,7.0 (9)(4,0)(5,0) (9)(5,0) (9)(5,0) (1,0)(4,0) (1,0)(4,0) (1,0)(4,0)(4,0)(4,0)(4,0)(4,0)(4,0)(4,0)(4			
1,1,1000 J 7,800	15 14 Abnormal 13 14 Base 11 10 Abnormal 9 8		9/23	8.0 (0)7.0 (0)1HO, 6.0 (0) S.0 (0) S.0		B23	923
10000 FT ASA	15 14 Abnormal 13 14 Base 11 12 Base 11 10 Abnormal 11 10 Abnormal	May8/23	Jun29/23	8.0 (9,7.0 (9)(4,0)(5,0) (9)(5,0) (9)(5,0) (1,0)(4,0) (1,0)(4,0) (1,0)(4,0)(4,0)(4,0)(4,0)(4,0)(4,0)(4,0)(4		May8/23	Jun29/23
	15 14 Abnormal 13 14 Abnormal 13 14 Base E2001 ter 10 00 10 10 10 10 10 10 10 10	May8/23	-	8.0 (b)HOX bit bit bit bit bit bit bit bit bit bit	Jan 10/23		
Laboratory	Abnormal Abnormal Base ECOPI In Base ECOPI IN ECOPI	EZ8/lew 501 Madisc	on Ave., Ca	8.0 (0,17.0 UHUX 6.0 UHUX 6.0	Jan 10/23	e - Shop 1364 - Be	erkeley-Mt. Vern
	Abnormal Abnormal Base ECOLUE WearCheck USA - 5 : PCA0100238	May8/23	on Ave., Ca : 18 .	8.0 (b)HOX bit bit bit bit bit bit bit bit bit bit	Jan 10/23	e - Shop 1364 - Be	
Laboratory Sample No.	Abnormal Abnormal Base Base COULE Base COULE	501 Madisc Received	on Ave., Ca : 18 . d : 18 .	8.0 (), 7.0 (), 7.0 (), 7.0 (), 7.0 (), 0.0 (), 0.0	Jan 10/23	e - Shop 1364 - Be	erkeley-Mt. Vern ake Terrace N

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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