

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id L-7 Component Diesel Engine Fluid PETRO CANADA DURON HP 15W40 (--- 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.

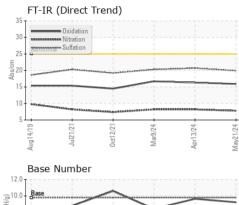
Fluid Condition

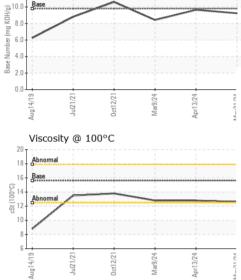
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0123719	PCA0123787	PCA0118519
Sample Date		Client Info		21 May 2024	13 Apr 2024	09 Mar 2024
Machine Age	hrs	Client Info		41847	41594	41286
Oil Age	hrs	Client Info		253	0	360
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	20	33	22
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	4	2
Lead	ppm	ASTM D5185m	>40	0	2	2
Copper	ppm	ASTM D5185m	>330	20	23	16
Tin	ppm	ASTM D5185m	>15	0	<1	0
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		1	0	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		53	58	58
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		862	922	937
Calcium	ppm	ASTM D5185m		1176	1319	1284
Phosphorus	ppm	ASTM D5185m		1019	1085	1109
Zinc	ppm	ASTM D5185m		1211	1271	1347
Sulfur	ppm	ASTM D5185m		3015	3705	3761
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3	4	3
Sodium	ppm	ASTM D5185m		<1	2	2
Potassium	ppm	ASTM D5185m	>20	0	0	<1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.3	0.5	0.4
Nitration	Abs/cm	*ASTM D7624		7.8	8.2	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.9	20.7	20.3
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	16.3	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.24	9.66	8.42
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OIL ANALYSIS REPORT





					method				history2
		White Me	etal	scalar	*Visual	NONE	NONE	NONE	NONE
18 × 1 × × × × × × × × × × × × × × × × ×		Yellow M	etal	scalar	*Visual	NONE	NONE	NONE	NONE
		Precipitat	te	scalar	*Visual	NONE	NONE	NONE	NONE
		Silt		scalar	*Visual	NONE	NONE	NONE	NONE
		Debris		scalar	*Visual	NONE	NONE	NONE	NONE
		Sand/Dirt	t	scalar	*Visual	NONE	NONE	NONE	NONE
Mar9/24	Apr1 3/24 May2 1/24	Appearar	nce	scalar	*Visual	NORML	NORML	NORML	NORML
W	May	Odor		scalar	*Visual	NORML	NORML	NORML	NORML
		Emulsifie	d Water	scalar	*Visual	>0.2	NEG	NEG	NEG
		Free Wat	er	scalar	*Visual		NEG	NEG	NEG
				PERTIES		limit/base	current	history1	history2
		Visc @ 1		cSt	ASTM D445	15.6	12.6	12.8	12.8
		GRAP							
		Iron (p	pm)			10	Lead (ppm)		
0ct12/21 + Mar9/24 + Apr13/24 +	9/24 -	200 - Severe				8	0 - Severe		
Mar	Аргі 5/24	Abnormal				E C	0 -		
		a 100 - Abnormal				¹² 4	0 - Abnormal		
		50	_				0 -		
		0 	1/21-	2/21-	124		61/1	2/21-	/24 -
		Aug14/19.	Jul21/21	Oct12/21 Mar9/24	Apr13/24	May21/24	Aug14/19 . Jul21/21	0ct12/21 Mar9/24	Apr13/24 Mav21/24
1			um (ppm	ı)		_	Chromium (ppm)	
		50 Severe					Severe		
		40					T i		
24 -	47	20 Abnormal				und 2	Abnormal		
Mar9/24	Аргі 3/24	10					0		
	-	0					0		
		Aug14/19	Jul21/21	0ct12/21 Mar9/24	Apr13/24	May21/24	Aug14/19 . Jul21/21.	0ct12/21 Mar9/24	Apr13/24
		Copper		0 2	Ar	Ma	∛ Silicon (ppm		As
		800	(PP)			8	⁰ Severe		
		600				e	0 -		
		400 SEVERIDAL					0 -		
		200					Abnormal		
		0					0		
		Aug14/19	Jul21/21	0ct12/21	Apr13/24	May21/24.	Aug14/19. Jul21/21.	0ct12/21 Mar9/24	Apr13/24
					Ap	May			Ap
			y @ 100					:I	
		Base				Base Number (mg KOH) 8 8 8 9 8 8			
		(2) 15 Abnormal				er (m			
		र्खें 10				quint 4	0		
						88 2			
		- 61/t	Jul21/21+	0ct12/21+ Mar9/24_	3/24	0		0ct12/21+ Mar9/24 +	3/24 +
		Aug14/19	Jul2	0ct12/21 Mar9/24	Apr13/24	May21/24	Aug14/19 Jul21/21	0ct12/21 Mar9/24	Apr13/24 Mav21/24
	aboratory			501 Madiso Rece		Cary, NC 27513 SCRAP N : 03 Jun 2024 : 04 Jun 2024 : 04 Jun 2024 - Wes Davis		IETAL SERVICES (SMS Mill Services LLC 1500 COMMERCIAL AVE MINGO JUNCTION, OH US 43938	
Sa C R E D I T E D TESTING LABORATORY Un	ample No. ab Number hique Number	: 11060014		Teste Diag			Ves Davis		JUNCTION, OF US 43938
Sa CCREDITED La La Un	ample No. ab Number nique Number est Package	: 06197891 : 11060014 : MOB 2		Diag	nosed : 04	4 Jun 2024 - V		Contac	JUNCTION, OF

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

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