

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 607 Component Diesel Engine Fluid DETERO CANADA DURON HR

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

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

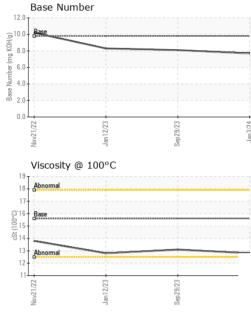
Fluid Condition

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

4L)		Nov202	2 Jan2023	Sep2023	an 2024	
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0878877	WC0792812	WC0727284
Sample Date		Client Info		03 Jan 2024	29 Sep 2023	12 Jan 2023
Machine Age	mls	Client Info		9854	95444	54491
Oil Age	mls	Client Info		5000	0	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	٨	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 METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	27	16	14
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	8	5	4
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		6	9	8
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		65	58	58
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		933	903	832
Calcium	ppm	ASTM D5185m		1134	1093	1228
Phosphorus	ppm	ASTM D5185m		1006	1010	954
Zinc	ppm	ASTM D5185m		1253	1255	1202
Sulfur	ppm	ASTM D5185m		3171	3096	3303
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	5	5
Sodium	ppm	ASTM D5185m		<1	<1	<1
Potassium	ppm	ASTM D5185m	>20	9	4	5
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.4	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.8	7.7	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0	18.6	18.4
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	14.7	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.7	8.1	8.3



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		VISUAL		method	limit/base	current	history1	history2
******		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
	Sep29/23	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Sep 2	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
		Free Water	scalar	*Visual		NEG	NEG	NEG
		FLUID PROPERT	TIES	method	limit/base	current	history1	history2
		Visc @ 100°C	cSt	ASTM D445	15.6	12.8	13.1	12.8
		GRAPHS						
		Iron (ppm)			1.07	Lead (ppm)		
		250 Severe			100	Severe		
	Sep 29/23	200			80	, - C		
	S	150 - <u>Abnormal</u> 100 - A			e 60			
		50-			20			
		0						
		vov21/22 Jan12/23		Sep29/23.	Jan3/24 .	Nov21/22	Jan 12/23 . Sen 29/23 .	40/5 uc
		Nov2 Jan1		Sep 2	Jan	Nov2	Jan 1 Sen 2	
		Aluminum (ppm)			50	Chromium (p	pm)	
		40 Severe			50	Severe		
		= ³⁰ -						
		20 - Abnormal			³⁰ 20	Abnormal		
		10-			10)+		
							~ ~ ~	
		Vov21/22 Jan 12/23		Sep29/23	Jan3/24	Nov21/22	Jan 12/23 Sep 29/23	40,5 me
		≝ ⊸ Copper (ppm)		S	-,	≝ Silicon (ppm)	P S	
		400			80	Sincon (ppin)	- ,	
		300			60)+		
		톱 200 -			톱 40			
						Abnormal		
		100-			20)		
				en	4			4
		Nov21/22 Jan 12/23		Sep 29/23	Jan3/24	Nov21/22	Jan 12/23 Sen 29/23	40,5 us
		≥ ¬ Viscosity @ 100°C	2	0		≥ Base Number		
		20 18 Abnormal				Base		
		10 4			(0) H0.(Bu) Page Wmmp action 4.(888 82.(
		00 16 Base		1		1		
		Abnormal			1.0 B 2.0			
		10			0.0) 		
		Nov21/22 Jan 12/23		Sep29/23	Jan3/24	Nov21/22	Jan 12/23	Jan 3/24
		Jan		Sep	Jai	Nov	Jan	n .
TESTING LABORATORY	Laboratory Sample No. Lab Number Unique Numbe Test Package	e : 06057238 er : 10823187 e : MOB 1 (Additional	Recieved Diagnose Diagnosti Tests: TB	l :10. ed :11. ician :We	ry, NC 27513 Jan 2024 Jan 2024 s Davis	3 WAYN		I CHURCH RE DSBORO, NO US 2753
		t, contact Customer Servi						ggs@wcps.org

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Contact/Location: BRANDON BRIGGS - WAYGOL