

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



742M Component **Diesel Engine** Fluid PETRO CANADA DURON S

Base Number (BN) mg KOH/g ASTM D2896 9.8

N SHP 15W40 (·	GAL)	Apr2021	Jul2021 Sep2021 Dec20	021 Apr2023 Jun2023 Nov2023	3 Nov2023	
SAMPLE INFOF	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0089079	GFL0101496	GFL0081405
Sample Date		Client Info		20 Nov 2023	17 Nov 2023	08 Jun 2023
Machine Age	hrs	Client Info		22605	22592	21493
Dil Age	hrs	Client Info		0	21493	20981
Dil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINA	ΓΙΟΝ	method	limit/base	current	history1	history2
uel		WC Method	>5	<1.0	<1.0	<1.0
Vater		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>80	44	68	41
Chromium	ppm		>5	1	2	1
Nickel	ppm	ASTM D5185m		0	1	<1
Titanium		ASTM D5185m	>2	<1	<1	0
Silver	ppm ppm	ASTM D5185m	<u>_</u> 2	0	0	0
Numinum	ppm	ASTM D5185m	>30	3	4	1
.ead	ppm	ASTM D5185m	>30	3	4	2
Copper	ppm	ASTM D5185m		1	2	<1
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
/anadium	ppm	ASTM D5185m	20	<1	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	1	<1	4
Barium	ppm	ASTM D5185m		2	10	0
Nolybdenum	ppm	ASTM D5185m	60	57	71	58
/langanese	ppm	ASTM D5185m		<1	<1	<1
/lagnesium	ppm	ASTM D5185m	1010	1014	1055	831
Calcium	ppm	ASTM D5185m	1070	1083	1204	1025
Phosphorus	ppm	ASTM D5185m	1150	880	1138	921
Zinc	ppm	ASTM D5185m	1270	1265	1397	1158
Sulfur	ppm	ASTM D5185m	2060	2890	3319	2673
CONTAMINA	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	4	6	4
Sodium	ppm	ASTM D5185m		6	7	5
Potassium	ppm	ASTM D5185m	>20	2	2	1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	1	1.2	1.1
Nitration	Abs/cm	*ASTM D7624		10.4	12.2	11.0
Sulfation	Abs/.1mm	*ASTM D7415		22.5	24.1	23.0
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Dxidation	Abs/.1mm		>25	20.0	22.9	21.0
					-	-

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Recommendation

Resample at the next service interval to monitor.

Machine Id

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.

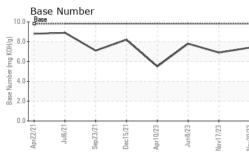
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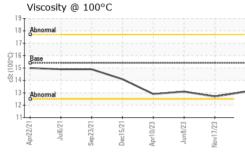
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OIL ANALYSIS REPORT

VISUAL





	*********************************	VISUAL		method	limit/base	current	history1	history2
		White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	\sim	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
\sim		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
/23	/23 - /23 -		scalar	*Visual	NORML	NORML	NORML	NORML
Apr10/23	Jun8/23 Nov17/23 Nov20/23	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	~ ~	Emulsified Water		*Visual				
			scalar		>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	15.4	13.1	12.7	13.1
		GRAPHS						
		Ferrous Alloys						
/23	23	iron		\wedge				
Apr10/23	Jun8/23 Nov17/23	50 - nickel						
4	2			/				
		법 ₃₀	\sim					
		30						
		20 -						
		10						
		Apr22/21 Jul6/21 Sep23/21	Dec15/21 Apr10/23	Jun8/23 Nov17/23	Nov20/23			
		Apri	Apr1	Jur Nov1	Nov2			
		Non-ferrous Meta	ls					
		¹⁰ T						
		copper 8-						
		0 measurement tin						
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			and the same of the					
		0						
		2/2	Dec15/21 Apr10/23	Jun8/23 Nov17/23	Nov20/23			
		122 123	b le	n va	70			
		Apr22/21 Jul6/21 Sep23/21	A D	Z	2			
		Viscosity @ 100°0		2	Z	Base Number		
		Viscosity @ 100°(2	2 10.0	Base Number		
		Viscosity @ 100°C		N	10.0	Base Number		
		Viscosity @ 100°(2	10.0	Base Number		\sim
		Viscosity @ 100°(2	10.0	Base Number		\sim
		Viscosity @ 100°(2	10.0	Base Number		\sim
		Viscosity @ 100°C		2	10.0	Base Number		\sim
		Viscosity @ 100°(~	10.0 (6,0) (0,0) (Base Number		\sim
		Viscosity @ 100°C			10.0	Base Number		~~~
		Viscosity @ 100°C			10.0 (0)HOX Buill aquinum 4.0 888 2.0 0.0	Base		
		Viscosity @ 100°C			10.0 (0)HOX Buill aquinum 4.0 888 2.0 0.0	Base	ci5/21	un8/23
		Viscosity @ 100°C		Jun523 +	10.0 (0,HOX B00) 10,0 (0,HOX B00) 10,0 (Base Number	Decifs/21	Jun823
	Laboratory	Viscosity @ 100°C	Dec15/21	Jun6/223 / / / / / / / / / / / / / / / /	10.0 (6)(HOX) Bul) Japane Mump asse Base Mump asse 2.0 0.0 52/02/00	Base 		~
	Laboratory Samula No	Viscosity @ 100°C	C 12/3100 12/3100 501 Madis	EZ/gunn EZ/gunn son Ave., Ca	10.0 (D)HOX Bul Jaquing Bul Jaquing CODZNNI Try, NC 27513	Base 	LIZSIJae ironmental - 415	- Michigan Ea
	Sample No.	Viscosity @ 100°C	C IZ/S100 IZ/S100 EZ/01/dV 501 Madis Received	EZ/gunn EZ/gunn soon Ave., Ca	10.0 (D)HOJ Bul Jaquing 4.0 (D)HOJ Bul Jaquin	Base 	ironmental - 415	- Michigan Ea 6200 Elmridg
	Sample No. Lab Number	Viscosity @ 100°0	C +IZISI people 501 Madia Received Diagnose	EZ/gunn EZ/gunn son Ave., Ca d : 22 l ed : 23 l	10.0 (D)HOX Bul Jaquing Bul Jaquing CODZNNI Try, NC 27513	Base 	ironmental - 415	- Michigan Ea 6200 Elmrido ing Heights, N
Fice L2367	Sample No.	Viscosity @ 100°C	C IZ/S100 IZ/S100 EZ/01/dV 501 Madis Received	EZ/gunn EZ/gunn son Ave., Ca d : 22 l ed : 23 l	10.0 (D)HOJ Bul aquing 4.0 (D)HOJ Bul aquing	Base 	ironmental - 415 Sterl	- Michigan Ea 6200 Elmrido ing Heights, I US 483
discuss this	Sample No. Lab Number Unique Number Test Package s sample report,	Viscosity @ 100°C	C 12/51040 501 Madia Received Diagnost vice at 1-8	son Ave., Ca d : 22 ed : 23 fician : We	10.0 (0)(HOX But) arguman (0)(HOX But) arg	Base 	ironmental - 415 Sterl Contac	- Michigan Ea 6200 Elmrido

